GIS REGISTRY
Cover Sheet

March, 2010
(RR 5367)

Source Property Information

CLOSURE DATE: Nov 30, 2010

BRRTS #: **02-41-001115**

FID #: 241697060

ACTIVITY NAME: BETZ ESTATE

DATCP #:

PROPERTY ADDRESS: 7132 W Bradley Rd

COMM #:

MUNICIPALITY: Milwaukee

PARCEL ID #: 0699992100

***WTM COORDINATES:**

X: **682679** Y: **301039**

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

WTM COORDINATES REPRESENT:

- ○ Approximate Center Of Contaminant Source
- ◉ Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

Contaminated Media:

☐ Groundwater Contamination > ES *(236)*

- ☐ Contamination in ROW
- ☐ Off-Source Contamination

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

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

- ☐ Contamination in ROW
- ☐ Off-Source Contamination

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

Land Use Controls:

☐ N/A (*Not Applicable*)

☒ Soil: maintain industrial zoning *(220)*

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

☐ Structural Impediment *(224)*

☐ Site Specific Condition *(228)*

☒ Cover or Barrier *(222)*

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

☐ Vapor Mitigation *(226)*

☐ Maintain Liability Exemption *(230)*

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

Monitoring Wells:

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

◉ Yes ○ No ○ N/A

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

GIS Registry Checklist

Form 4400-245 (R 3/10)

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

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

BRRTS #: 02-41-001115 PARCEL ID #: 0699992100

ACTIVITY NAME: BETZ ESTATE WTM COORDINATES: X: 682679 Y: 301039

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

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

SOURCE LEGAL DOCUMENTS

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

  Figure #: 1 **Title: Survey Map**
- [x] **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

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

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

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

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

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

  Figure #: 7 **Title: Soil Quality Map**

BRRTS #: 02-41-001115 ACTIVITY NAME: BETZ ESTATE

MAPS (continued)

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

Figure #: **Title:**

Figure #: **Title:**

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

Figure #: **Title:**

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

Figure #: **Title:**

Figure #: 4 **Title: Figure 4 Groundwater Contour Map (4/20/10)**

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

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

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

Table #: 1 **Title: Soil Quality Results - UST Area**

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

Table #: 3 **Title: Groundwater Quality Results**

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

Table #: 2 **Title: Groundwater Elevation Data**

IMPROPERLY ABANDONED MONITORING WELLS

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

☒ **Not Applicable**

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

Figure #: **Title:**

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

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

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

BRRTS #: 02-41-001115 ACTIVITY NAME: BETZ ESTATE

NOTIFICATIONS

Source Property

☒ **Not Applicable**

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

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

Off-Source Property

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

☒ **Not Applicable**

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

Number of "Off-Source" Letters:

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

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

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

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

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Region Headquarters
2300 N. Dr. Martin Luther King, Jr. Drive
PO Box 12436
Milwaukee, Wisconsin 53212-0436
Telephone 414-263-8500
FAX 414-263-8716
TTY 414-263-8713

November 30, 2010

Ms. Karen Dettmer
REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE
809 North Broadway, Milwaukee, WI 53202

Subject: Final Closure, with requirements to achieve final closure, Betz Trust Property, 7132 West Bradley Road, Wisconsin 53223 FID # 241697060, BRRTs # 02-41-001115

Dear Ms. Dettmer::

On November 30, 2010 the Department reviewed the above referenced case for closure. The Department reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. On July 14, 2010, you were notified that the department had granted conditional closure to this case.

On 08/18/2010 the Department received information or documentation indicating that you have complied with the requirements for final closure. The condition of closure was to abandon the monitoring wells on-site and submit the montoring wells abandonment forms

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

GIS Registry

This site will be listed on the Remediation and Redevelopment Program's GIS Registry. The specific reasons are summarized below:

- Residual soil contamination exists that must be properly managed should it be excavated or
- removed
- Before the land use may be changed from industrial to non-industrial, additional environmental work
- must be completed
- A soil barrier must be maintained over contaminated soil and the state must approve any changes
- to this barrier

This letter and information that was submitted with your closure request application will be included on the GIS Registry. To review the sites on the GIS Registry web page, visit the RR Sites Map page at http://dnr.wi.gov/org/aw/rr/gis/index.htm. If the property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line http://dnr.wi.gov/org/water/dwg/3300254.pdf or at the web address listed above for the GIS Registry.

Closure Conditions

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

Cover or Barrier

Barrier to Prevent Direct Contact Only
Pursuant to s. 292.12(2)(a), Wis. Stats., the soil cover that currently exists in the location shown on the attached map shall be maintained in compliance with the attached maintenance plan in order to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health.

Residual Soil Contamination

Residual soil contamination remains at SB-103, SB-105, SB-112, SB-115, SB-116, SB-118 and SB-119, as indicated on attached Figure 1, Drawing number 9319-019 and shown on Figure 7 Drawing Number 9319-006 in the information submitted to the Department of Natural Resources. If soil in the specific locations described above is excavated in the future, then pursuant to ch. NR 718 or, if applicable, ch. 289, Stats., and chs. 500 to 536, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable 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.

Prohibited Activities

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

Dewatering Permits

The Department's Watershed Management Program regulates point source discharges of contaminated water, including discharges to surface waters, storm sewers, pits or to the ground surface. This

surface. This includes discharges from construction related dewatering activities, including utility and building construction.

Based on the concentrations of contaminants remaining in groundwater at this location, it appears likely that dewatering activities would require a permit from the Watershed Management Program. If you or any other person plan to conduct such activities, you or that person must contact that program, and if necessary, apply for the necessary discharge permit. Additional information regarding discharge permits is available at http://www.dnr.state.wi.us/org/water/wm/ww/

Post-Closure Notification Requirements

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

- Development, construction or other changes, including zoning changes, that change the land use from industrial to non-industrial
- Disturbance, construction on, change or removal in whole or part of pavement, an engineered cover or a soil barrier that must be maintained over contaminated soil

Please send written notifications in accordance with the above requirements to SER, RR Office, Milwaukee, to the attention of SER, RR Program Assistant, Milwaukee, Milwaukee County, WI 53212

The following DNR fact sheet, RR-819, "Continuing Obligations for Environmental Protection" has been included with this letter, to help explain a property owner's responsibility for continuing obligations on their property. If the fact sheet is lost, you may obtain a copy at http://dnr.wi.gov/org/aw/rr/archives/pubs/RR819.pdf.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Binyoti F. Amungwafor at 414-263-8607

Sincerely,

James A. Schmidt

James A, Schmidt, Team Supervisor
SER Remediation & Redevelopment Program

Attachments: Site Map Showing Remaining Soil Contamination Location
Maintenance Plan & Soil Cover and Inspection Log
RR 819

cc: Mr. Stephen Meer, Sigma Environmental Services, Inc.
Case File

BARRIER MAINTENANCE PLAN
MAY 2010
PROPERTY LOCATED AT:
7132 WEST BRADLEY ROAD
MILWAUKEE, WISCONSIN

FID#241697060
BRRTS# 02-41-001115
03-41-003895

Legal Description: That part of the East ½ of the Southwest ¼ of Section Ten (10), Town Eight (8) North, Range Twenty-one East, in the City of Milwaukee, bounded and described as follows: Commencing at a point in the South line of said ¼ Section which is 690.00 feet West of the South East corner thereof, running thence West along the South line of said ¼ Section 123.5 feet to a point, thence North 49° 46'50" West 665.93 feet to a point in the West line of the East ½ of said ¼ Section, said point being 430.00 feet North of the South line thereof and said last named course being the center line of a 100 foot railroad right-of-way, thence North 0° 01'39" East along the West line of the East ½ of said ¼ Section 230.00 feet to a point, thence East and parallel to the South line of said ¼ Section 441.88 feet to a point, thence South at right angles to the South line of said ¼ Section 375.00 feet to a point, thence South 33° 41'20" East, 342.5 feet to the point of beginning, the last named courses being the center line of a 60.0 foot right of way.
Except that part conveyed in Award of Damages recorded February 15, 1985, on Reel 1726, Image 176, as Document No. 5787817.

Parcel ID Number: 0699992100

Introduction: This document is the Maintenance Plan for a barrier at the above referenced property in accordance with the requirements of Ch. NR 724.13(2), Wis. Admin. Code. The maintenance activities relate to the existing clean soil cap at the site 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 DNR Southeast regional office
- BRRTS on the Web (DNR's internet based data base of contaminated sites): http://botw.dnr.state.wi.us/botw/SetUpBasicSearchForm.do
- GIS Registry PDF file for further information on the nature and extent of contamination: http://dnrmaps.wisconsin.gov/imf/imfApplyTheme.jsp?index=1; and
- The DNR 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 to 5 feet beneath the clean soil cap at the the property located at 7132 West Bradley Road, Milwaukee, Wisconsin. The extent of the soil contamination is shown on the attached Figure 1.

Description of the Barrier and System to be Maintained: The Barrier consists of a geotextile fabric warning layer covered by one foot of clean soil. The Barrier covers the entire site.

Cover Barrier Purpose: 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.

Annual Inspection: The clean soil cap overlying the contaminated soil will be inspected once a year, normally in the spring after all snow and ice is gone, for deterioration, cracks and other potential problems that can cause exposure to underlying soils. The inspections will be performed by the property owner or their designated representative. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where the geotextile warning layer has become or are likely to become exposed will be documented. A log of the inspections and any repairs will be maintained by the property owner and is included as Exhibit B, Cap Inspection Log. The log will include recommendations for necessary repair of any areas where the warning layer 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 be available for submittal or inspection by Wisconsin Department of Natural Resources ("WDNR") representatives upon their request.

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

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

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

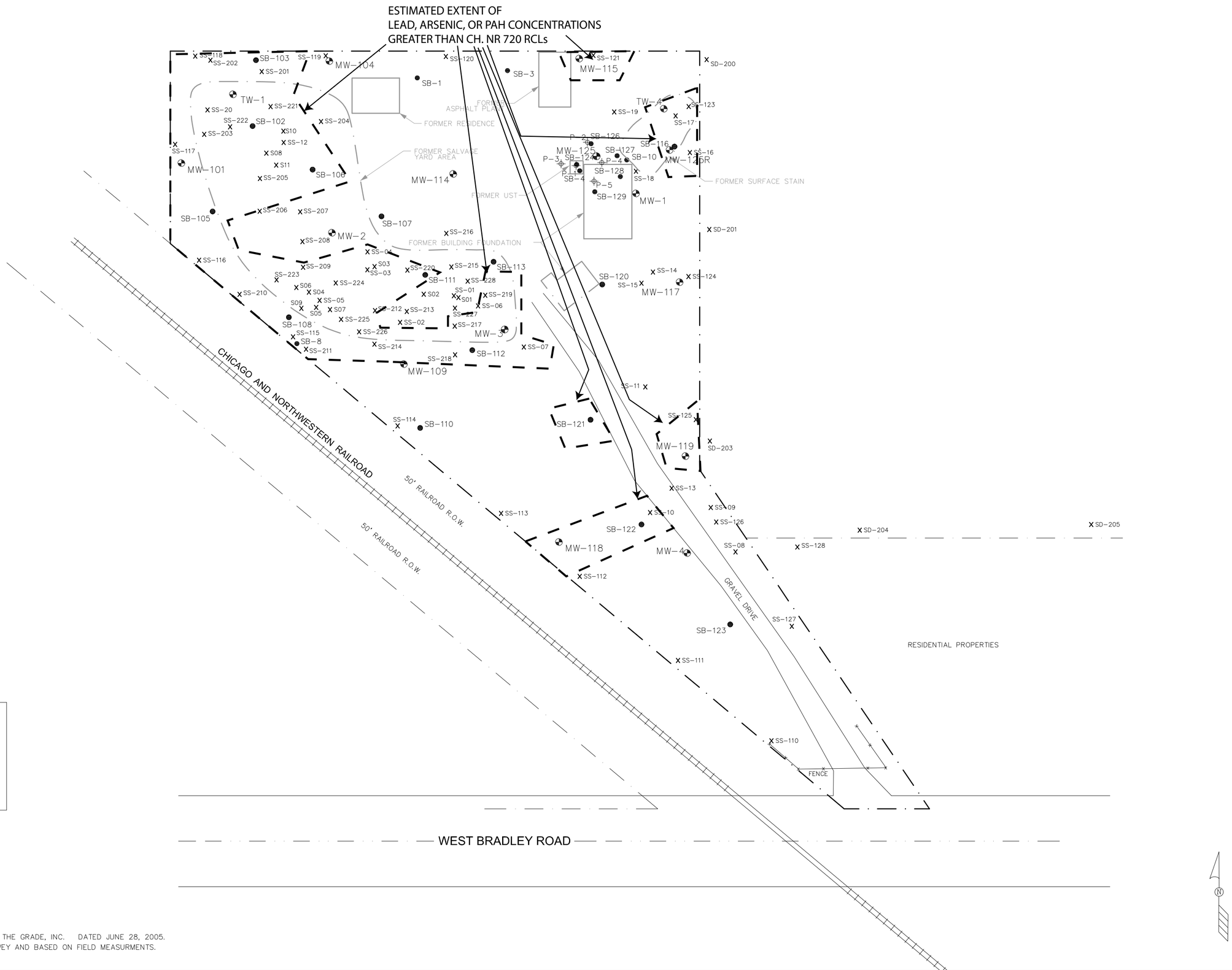
Prohibition of Activities and Notification of DNR Prior to Actions Affecting a Cover or Cap: The following activities are prohibited on any portion of the property where the clean soil cap is to be maintained as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources: 1) removal of the

existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped areas; 5) plowing for agricultural cultivation; or 6) construction or placement of a building or other structure.

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

Contact Information
May 2010

Site Owner:	7132 W. Bradley Road Redevelopment Authority of the City of Milwaukee Attention: Ms. Karen Dettmer, P.E. 809 N. Broadway Milwaukee, WI 53202 Phone: (414) 286-5642
Consultant:	Stephen Meer, P.E. Sigma Environmental Services, Inc. 1300 W. Canal Street Milwaukee, WI 53233 Phone: (414) 643-4200
WDNR:	Mr. Binyoti Amungwafor Wisconsin Department of Natural Resources Bureau of Remediation and Redevelopment 2300 N. Dr. Martin Luther King Jr. Drive Milwaukee, WI 53212 Phone: (414) 263-8500



LEGEND

- P = GEOPROBE SOIL BORING
- SB = SOIL BORING
- MW = MONITORING WELL
- TW = TEMPORARY MONITORING WELL
- SS X = SURFACE SOIL SAMPLE
- SD X = SEDIMENT SOIL SAMPLE
- = PROPERTY LINE

GRAPHIC SCALE

0' 30' 60' 120'

NOTES:
1. MAP BASED ON SURVEY COMPLETED BY MAKING THE GRADE, INC. DATED JUNE 28, 2005.
2. SOIL SAMPLE LOCATIONS NOT INCLUDED IN SURVEY AND BASED ON FIELD MEASURMENTS.

THE SIGMA GROUP
Single Source. Sound Solutions.
1300 W. CANAL STREET
MILWAUKEE, WISCONSIN 53233
PHONE : (414) 643-4200

	NAME:	DATE:
DRAWN BY:	BEB	3-7-06
REVISED:	KAS	4-23-10
CHECKED BY:		
APPROVED BY:		

CITY OF MILWAUKEE – BETZ PROPERTY
7132 WEST BRADLEY ROAD, MILWAUKEE, WI
SOIL QUALITY MAP

DRAWING NUMBER
9319-019

FIGURE 1

Exhibit B

Barrier Inspection Log

Inspection Date	Inspector	Condition of Cap	Recommendations	Have recommendations from previous inspection been implemented? Who did work, what was done & when?

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Region Headquarters
2300 N. Dr. Martin Luther King, Jr. Drive
PO Box 12436
Milwaukee, Wisconsin 53212-0436
Telephone 414-263-8500
FAX 414-263-8716
TTY 414-263-8713

July 14, 2010

MS. Karen Dettmer
REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE
809 North Broadway, Milwaukee, WI 53202

Subject: Conditional Closure, with requirements to achieve final closure, Betz Trust Property, 7132 West Bradley Road, Wisconsin 53223 FID # 241697060, BRRTs # 02-41-001115

Dear Ms. Dettmer:

On July 14, 2010, your request for closure of the case described above was reviewed by the Department of Natural Resources (Department). The Department reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. Information submitted to the Department for closure request include soil data with cap maintenance plan for GIS registry and groundwater data for ch. NR 140 Wis. Adm. Code – Preventive Action Limit exemption. After a careful review of the closure request, the department has determined that the RCRA metals and PAH contamination on the p5roperty resulting from previous site use appear to have been remediated to the extent practicable under site conditions. Your case will be closed under s. NR 726.05. Adm. Code if the following condition satisfied.

MONITORING WELL ABANDONMENT

The monitoring wells at the site must be properly abandoned in compliance with ch. NR 141 Wis. Adm. Code. Documentation of well abandonment must be submitted to the Department on Form 3300-5B found at www.dnr.state.wi.us/org/water/dwg/gw or provided by the Department. When the indicated condition has been satisfied, please submit a letter to the program assistant about having met the condition and your case will be closed.
Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites. Information that was submitted with your closure request application will be included on the registry. To review the sites on the GIS Registry Web page, visit http://maps.dnr.state.wi.us/brrts.
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 the environment.

We appreciate your efforts to restore the environment at this site to productive use. If you have any questions regarding this letter, please contact me at (414)263-8607.

Sincerely,

Binyoti F. Amungwafor
Hydrogeologist

CC: Mr. Stephen Meer, Sigma Environmental Services, Inc.
Case File

(2)

Document Number

QUIT CLAIM DEED

09399405

DOC.# 09399405

REGISTER'S OFFICE | SS
Milwaukee County, WI|

RECORDED 03/13/2007 01:49PM

JOHN LA FAVE
REGISTER OF DEEDS

AMOUNT: 13.00

Name and Return Address
Redevelopment Authority of the City of Milwaukee
Attn Real Estate Section (Miller)
P O Box 324
Milwaukee, WI 53201

Tax Key No 314-0293-000 -7, 069-9992-100-9, 433-9983-000-2 and 433-9998-000-4

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 2nd Day of March, 2007, 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 ($1 00) 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, the following described real estate

Lots 1, 2 and 3, Block 7, Humboldt Park in the Northwest 1/4 of Section 16, Town 7 North, Range 22 East, in the City and County of Milwaukee, State of Wisconsin
Address 821-33 East Locust Street

That part of the East 1/2 of the Southwest 1/4 of Section Ten (10), Town Eight (8) North, Range Twenty-one (21) East, in the City of Milwaukee, bounded and described as follows
Commencing at a point in the South line of said 1/4 Section which is 690 00 feet West of the South East corner thereof, running thence West along the South line of said 1/4 Section 123 5 feet to a point, thence North 49° 46' 50" West 665 93 feet to a point in the West line of the East 1/2 of said 1/4 Section, said point being 430 00 feet North of the South line thereof and said last named course being the center line of a 100 foot railroad right-of-way, thence North 0° 01' 39" East along the West line of the East 1/2 of said 1/4 Section 230 00 feet to a point, thence East and parallel to the South line of said 1/4 Section 441 88 feet to a point, thence South at right angles to the South line of said 1/4 Section 375 00 feet to a point, thence South 33° 41' 20" East, 342 5 feet to the point of beginning, the last named courses being the center line of a 60 0 foot right of way
EXCEPT that part conveyed in Award of Damages recorded February 15, 1985, on Reel 1726, Image 176, as Document No 5787817
Address 7132 West Bradley Road

The West 58 feet of the East 100 feet of the West 179 feet of a piece of land in the Southeast 1/4 of Section 31, Town 7 North, Range 22 East, in the City of Milwaukee, County of Milwaukee, State of Wisconsin, described as follows
Commencing at a point where a line drawn 279 feet West of and parallel with the East line of said Southeast 1/4 intersects the Northwesterly line of West National Avenue, thence North on a line 279 feet West of and parallel with the East line of said 1/4 Section 150 feet to a point, thence East on a line and parallel with the Northwesterly line of West National Avenue to the East line of said 1/4 Section, thence South on said East line of said 1/4 Section to the North line of West National Avenue, thence West on and along the North line of West National Avenue to the place of commencement EXCEPT the West 18 feet thereof
Address 1320-22 West National Avenue

All that part of the Southeast 1/4 of Section 31, Town 7 North, Range 22 East, in the City of Milwaukee, County of Milwaukee, State of Wisconsin, bounded and described as follows
Commencing at a point on the South line of South Pierce Street which is 76 feet West of the East line of said 1/4 Section, thence South, on a line 76 feet West of and parallel with said East, 144 44 feet, to a point 150 feet North of the North line of West National Avenue, thence South 86° 06' West, on a line and parallel with the North line of West National Avenue, 31 77 feet to a point, thence South 85° 49' West, on a line 150 feet North of and parallel with the North line of West National Avenue, to a point which is 279 feet West of said East line, running thence North, parallel with said East line, 30 feet to a point, running thence West, parallel with the North line West National Avenue, 40 11 feet to a point which is 319 feet West of said East line, running thence North, parallel with said East line, 126 60 feet to a point in the South line of South Pierce Street, which is 319 feet West of said East line, running thence East along said South line to the place of commencement
ALSO,
The West 18 feet of the East 100 feet of the West 179 feet of a piece of land in the Southeast 1/4 of Section 31, Town 7 North, Range 22 East, in the City of Milwaukee, County of Milwaukee, State of Wisconsin, described as follows
Commencing at a point where a line drawn 279 feet West of and parallel with the East line of said Southeast 1/4 intersects the Northwesterly line of West National Avenue, thence North on a line 279 feet West of and parallel with the East line of said 1/4 Section 150 feet to a point, thence East on a line and parallel with the Northwesterly line of West National Avenue to the East line of said 1/4 Section, thence South on said East line of said 1/4 Section to the North line of West National Avenue, thence West on and along the North line of West National Avenue to the place of commencement
Address 1333 West Pierce Street

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 2nd Day of March, 2007

CITY OF MILWAUKEE

Elaine M Miller
Special Deputy Commissioner
Department of City Development

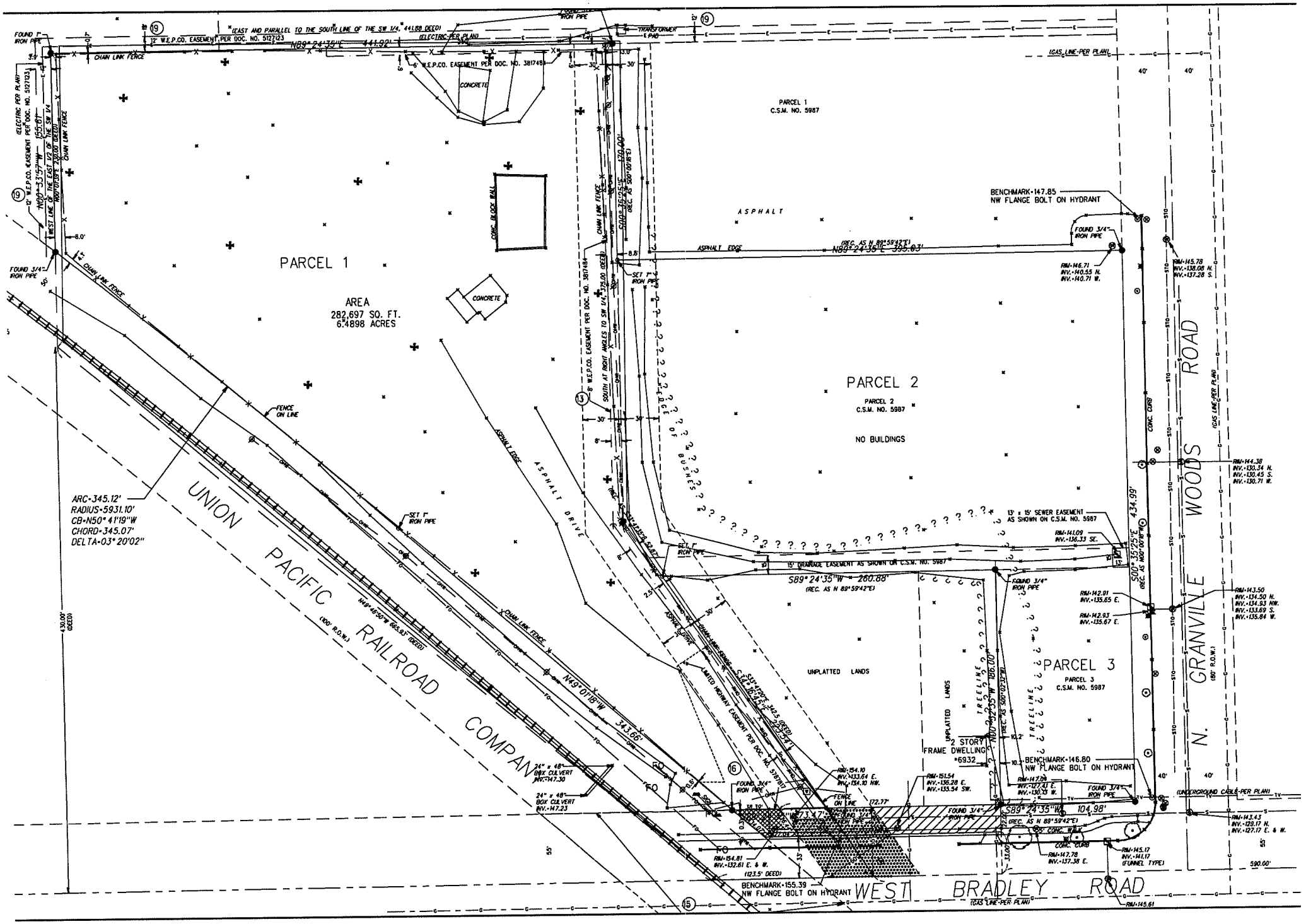
STATE OF WISCONSIN)
)SS
COUNTY OF MILWAUKEE)

Personally came before me this 2nd Day of March, 2007, Elaine 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 051559 adopted by its Common Council on April 11, 2006

RHONDA G. SZALLAI NOTARY PUBLIC STATE OF WISCONSIN

Notary Public
Milwaukee County, Wisconsin
My commission November 2, 2008

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



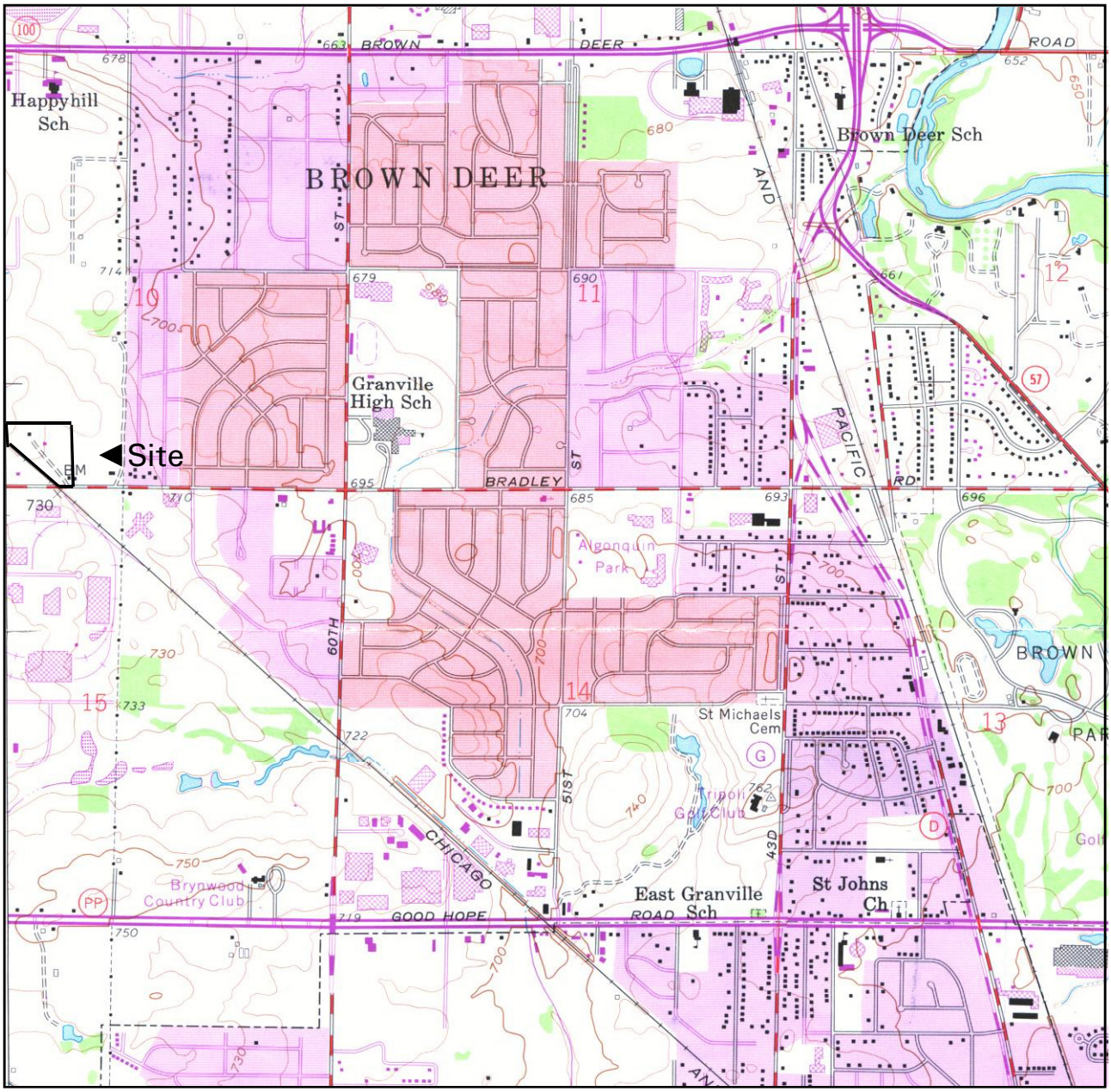
Survey Map- Figure 1

STATEMENT BY RESPONSIBLE PARTY

The Redevelopment Authority of the City of Milwaukee, the responsible party for the property located at 7132 W. Bradley Road, Milwaukee, Wisconsin, states that the legal description for each property within the contaminated site boundaries for case file references 02-41-001115 and 03-41-003898 is attached.

Signature of Representative for Responsible Party

5/14/10
Date



SE ¼ of SW ¼ Sec. 10, T8N R21E. Adapted from U.S.G.S. 7.5 minute series, Thiensville, dated 1958 (photorevised 1971 and 1976) Wisconsin, quadrangle.

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

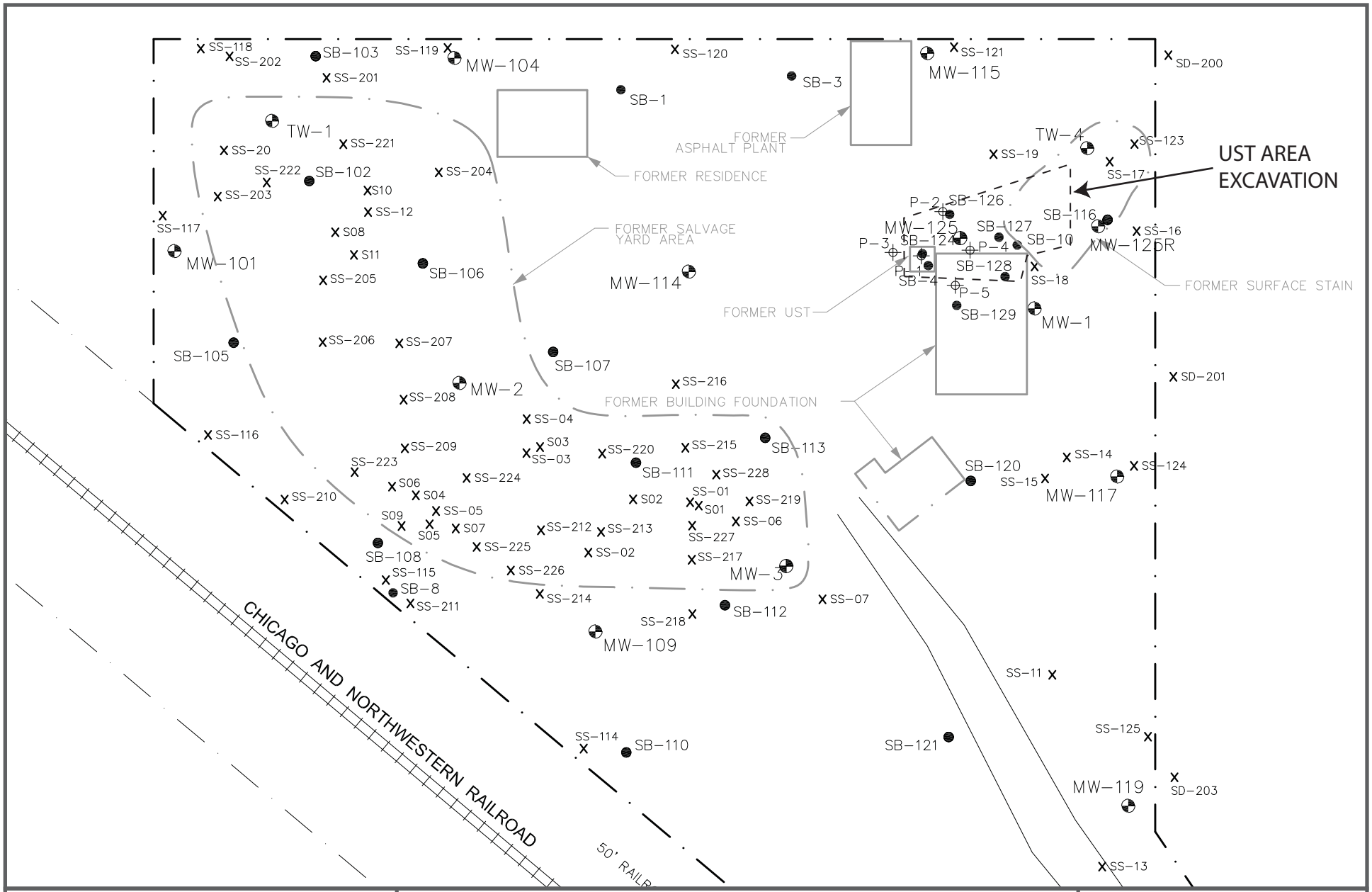
CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

N

Figure 1. Site Location Map
7132 W. Bradley Road
Milwaukee, Wisconsin

THE SIGMA GROUP
SIGMA ENVIRONMENTAL SERVICES, INC.
SIGMA DEVELOPMENT, INC.
SIGMA LEASING, INC.

RACM9319ig1.ppt



THE SIGMA GROUP
Single Source. Sound Solutions.

www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
414-643-4200

0 60 ft.

Site Name: Betz Trust Property

Address: 7132 W. Bradley Road
Milwaukee, WI

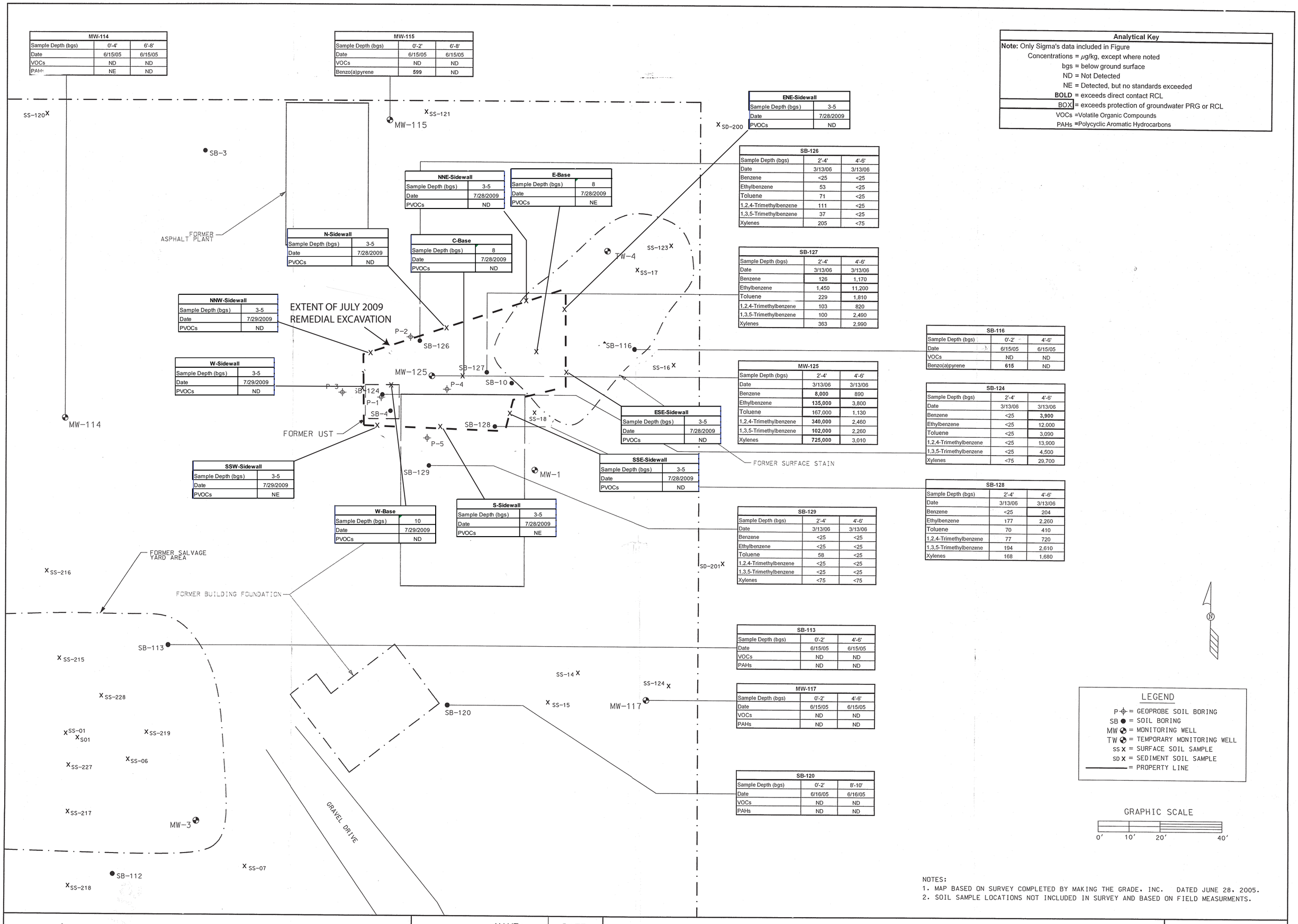
Project: #9319

N

FIGURE 3
SITE PLAN MAP

9319-016-F10 PREX-062306.PLT, plotted 8/8/2007

K:\CITYOFMIL\9319\9319-016.dwg, FIG 10, 8/8/2007 3:03:52 PM, ANSI C (17 x 22 Inches), 1:1



MW-114		
Sample Depth (bgs)	0'-4'	6'-8'
Date	6/15/05	6/15/05
VOCs	ND	ND
PAHs	NE	ND

MW-115		
Sample Depth (bgs)	0'-2'	6'-8'
Date	6/15/05	6/15/05
VOCs	ND	ND
Benzo(a)pyrene	**599**	ND

ENE-Sidewall	
Sample Depth (bgs)	3-5
Date	7/28/2009
PVOCs	ND

NNE-Sidewall	
Sample Depth (bgs)	3-5
Date	7/28/2009
PVOCs	ND

E-Base	
Sample Depth (bgs)	8
Date	7/28/2009
PVOCs	NE

N-Sidewall	
Sample Depth (bgs)	3-5
Date	7/28/2009
PVOCs	ND

C-Base	
Sample Depth (bgs)	8
Date	7/28/2009
PVOCs	ND

NNW-Sidewall	
Sample Depth (bgs)	3-5
Date	7/29/2009
PVOCs	ND

W-Sidewall	
Sample Depth (bgs)	3-5
Date	7/29/2009
PVOCs	ND

SSW-Sidewall	
Sample Depth (bgs)	3-5
Date	7/29/2009
PVOCs	NE

W-Base	
Sample Depth (bgs)	10
Date	7/29/2009
PVOCs	ND

S-Sidewall	
Sample Depth (bgs)	3-5
Date	7/28/2009
PVOCs	NE

ESE-Sidewall	
Sample Depth (bgs)	3-5
Date	7/28/2009
PVOCs	ND

SSE-Sidewall	
Sample Depth (bgs)	3-5
Date	7/28/2009
PVOCs	ND

SB-126		
Sample Depth (bgs)	2'-4'	4'-6'
Date	3/13/06	3/13/06
Benzene	<25	<25
Ethylbenzene	53	<25
Toluene	71	<25
1,2,4-Trimethylbenzene	111	<25
1,3,5-Trimethylbenzene	37	<25
Xylenes	205	<75

SB-127		
Sample Depth (bgs)	2'-4'	4'-6'
Date	3/13/06	3/13/06
Benzene	126	1,170
Ethylbenzene	1,450	11,200
Toluene	229	1,810
1,2,4-Trimethylbenzene	103	820
1,3,5-Trimethylbenzene	100	2,490
Xylenes	363	2,990

MW-125		
Sample Depth (bgs)	2'-4'	4'-6'
Date	3/13/06	3/13/06
Benzene	**8,000**	890
Ethylbenzene	**135,000**	3,800
Toluene	167,000	1,130
1,2,4-Trimethylbenzene	**340,000**	2,460
1,3,5-Trimethylbenzene	**102,000**	2,260
Xylenes	**725,000**	3,010

SB-129		
Sample Depth (bgs)	2'-4'	4'-6'
Date	3/13/06	3/13/06
Benzene	<25	<25
Ethylbenzene	<25	<25
Toluene	58	<25
1,2,4-Trimethylbenzene	<25	<25
1,3,5-Trimethylbenzene	<25	<25
Xylenes	<75	<75

SB-113		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/15/05	6/15/05
VOCs	ND	ND
PAHs	ND	ND

MW-117		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/15/05	6/15/05
VOCs	ND	ND
PAHs	ND	ND

SB-120		
Sample Depth (bgs)	0'-2'	8'-10'
Date	6/16/05	6/16/05
VOCs	ND	ND
PAHs	ND	ND

SB-116		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/15/05	6/15/05
VOCs	ND	ND
Benzo(a)pyrene	**615**	ND

SB-124		
Sample Depth (bgs)	2'-4'	4'-6'
Date	3/13/06	3/13/06
Benzene	<25	**3,900**
Ethylbenzene	<25	12,000
Toluene	<25	3,090
1,2,4-Trimethylbenzene	<25	13,900
1,3,5-Trimethylbenzene	<25	4,500
Xylenes	<75	29,700

SB-128		
Sample Depth (bgs)	2'-4'	4'-6'
Date	3/13/06	3/13/06
Benzene	<25	204
Ethylbenzene	177	2,260
Toluene	70	410
1,2,4-Trimethylbenzene	77	720
1,3,5-Trimethylbenzene	194	2,610
Xylenes	168	1,680

Analytical Key
Note: Only Sigma's data included in Figure
Concentrations = µg/kg, except where noted
bgs = below ground surface
ND = Not Detected
NE = Detected, but no standards exceeded
BOLD = exceeds direct contact RCL
BOX = exceeds protection of groundwater PRG or RCL
VOCs = Volatile Organic Compounds
PAHs = Polycyclic Aromatic Hydrocarbons

LEGEND

- P = GEOPROBE SOIL BORING
- SB = SOIL BORING
- MW = MONITORING WELL
- TW = TEMPORARY MONITORING WELL
- SS X = SURFACE SOIL SAMPLE
- SD X = SEDIMENT SOIL SAMPLE
- = PROPERTY LINE

GRAPHIC SCALE

0' 10' 20' 40'

NOTES:
1. MAP BASED ON SURVEY COMPLETED BY MAKING THE GRADE, INC. DATED JUNE 28, 2005.
2. SOIL SAMPLE LOCATIONS NOT INCLUDED IN SURVEY AND BASED ON FIELD MEASURMENTS.

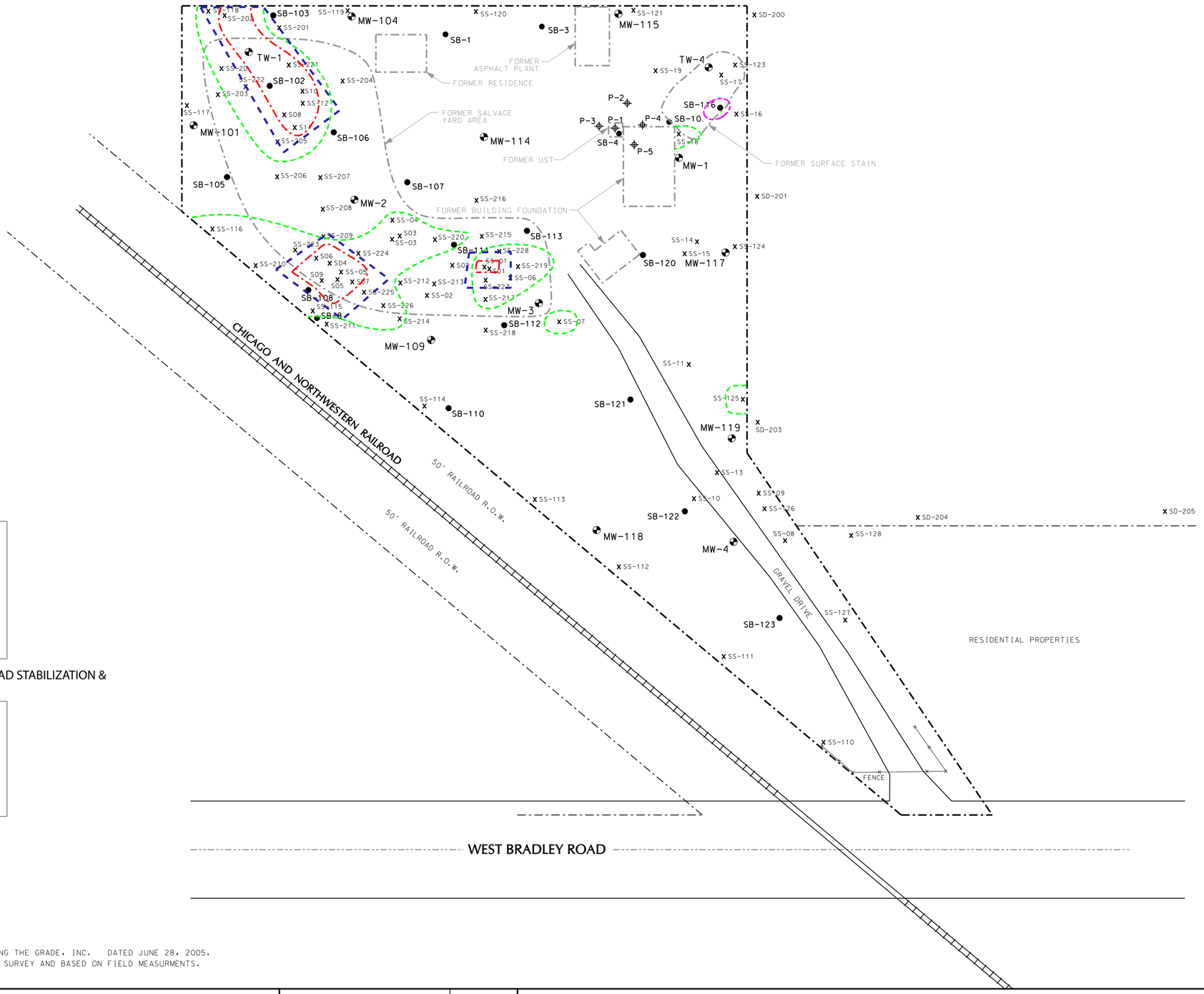
THE SIGMA GROUP
SIGMA ENVIRONMENTAL SERVICES, INC.
SIGMA DEVELOPMENT, INC.
SIGMA LEASING, INC.
1300 W. CANAL STREET
MILWAUKEE, WISCONSIN 53233
PHONE : (414) 643-4200
1-800-732-4671

	NAME:	DATE:
DRAWN BY:	BEB	6-23-06
DESIGNED BY:		
CHECKED BY:		
APPROVED BY:		

CITY OF MILWAUKEE – BETZ PROPERTY
7132 WEST BRADLEY ROAD, MILWAUKEE, WI
REMEDIAL EXCAVATION–UST AREA

DRAWING NUMBER
9319-016

FIGURE 1



ANALYTICAL KEY

- = RCRA CHARCTERISTICALLY HAZARDOUS (TCLP LEAD > 5mg/L)
- = TOTAL ARSENIC EXCEEDING (TOATAL ARSENIC > 1.6 ppm)
- = TOTAL LEAD EXCEEDING NR 720 (TOTAL LEAD > 500 ppm)

= LIMITS OF IN-SITU LEAD STABILIZATION & DISPOSAL

LEGEND

- P = GEOPROBE SOIL BORING
- SB = SOIL BORING
- MW = MONITORING WELL
- TW = TEMPORARY MONITORING WELL
- SS x = SURFACE SOIL SAMPLE
- SD x = SEDIMENT SOIL SAMPLE
- = PROPERTY LINE

GRAPHIC SCALE

0' 30' 60' 120'

NOTES:
1. MAP BASED ON SURVEY COMPLETED BY MAKING THE GRADE, INC. DATED JUNE 28, 2005.
2. SOIL SAMPLE LOCATIONS NOT INCLUDED IN SURVEY AND BASED ON FIELD MEASURMENTS.

THE SIGMA GROUP
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SIGMA DEVELOPMENT, INC.
SIGMA LEASING, INC.

1300 W. CANAL STREET
MILWAUKEE, WISCONSIN 53233
PHONE : (414) 643-4200
1-800-732-4671

	NAME:	DATE:
DRAWN BY:	BEB	3-6-06
DESIGNED BY:		
CHECKED BY:		
APPROVED BY:		

CITY OF MILWAUKEE - BETZ PROPERTY
7132 WEST BRADLEY ROAD, MILWAUKEE, WI
LEAD REMEDIATION LOCATION MAP

DRAWING NUMBER
9319-002

FIGURE 2

AREAS CONTAINING PAH CONCENTRATIONS GREATER THAN APPLICABLE DIRECT CONTACT RCLs

SB-103		
Sample Depth (bgs)	0'-2'	10'-12'
Date	6/13/05	6/13/05
VOCs	NE	ND
Benzo(a)anthracene	**16,700**	237
Benzo(a)pyrene	**12,500**	191
Indeno(123cd)pyrene	**4,420**	83
Naphthalene	***1,110***	<45
Phenanthrene	***31,900***	414

SB/MW-104		
Sample Depth (bgs)	0'-2'	10'-12'
Date	6/13/05	6/13/05
VOCs	ND	ND
PAHs	ND	ND

SB/MW-114		
Sample Depth (bgs)	0'-4'	6'-8'
Date	6/15/05	6/15/05
VOCs	ND	ND
PAHs	NE	ND

SB/MW-115		
Sample Depth (bgs)	0'-2'	6'-8'
Date	6/15/05	6/15/05
VOCs	ND	ND
Benzo(a)pyrene	**599**	ND

Analytical Key
Note: Only Sigma's data included in Figure
Concentrations = µg/kg, except where noted
bgs = below ground surface
ND = Not Detected
NE = Detected, but no standards exceeded
BOLD = exceeds direct contact RCL
BOLD, ITALICS = exceeds protection of groundwater PRG or RCL
VOCs = Volatile Organic Compounds
PAHs = Polycyclic Aromatic Hydrocarbons

SB-102		
Sample Depth (bgs)	0'-2'	12'-14'
Date	6/13/05	6/13/05
Benzene	***32 "J"***	<15
PAHs	NE	ND

SB-109		
Sample Depth (bgs)	0'-2'	10'-12'
Date	6/14/05	6/14/05
VOCs	NE	ND
PAHs	NE	ND

SB/MW-101		
Sample Depth (bgs)	0'-2'	10'-12'
Date	6/13/05	6/13/05
VOCs	ND	ND
PAHs	ND	ND

SB-105		
Sample Depth (bgs)	0'-2'	12'-14'
Date	6/13/05	6/13/05
VOCs	NE	ND
Benzo(a)pyrene	**2,840**	<68
Naphthalene	***7,510***	<23

SB-113		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/15/05	6/15/05
VOCs	ND	ND
PAHs	ND	ND

SB-111		
Sample Depth (bgs)	0'-4'	6'-8'
Date	6/14/05	6/14/05
VOCs	ND	ND
PAHs	ND	ND

SB-108		
Sample Depth (bgs)	2'-4'	6'-8'
Date	6/14/05	6/14/05
VOCs	NE	ND
PAHs	ND	ND

SB/MW-109		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/14/05	6/14/05
Benzene	***74***	<15
PAHs	ND	ND

SB-112		
Sample Depth (bgs)	0'-2'	6'-8'
Date	6/15/05	6/15/05
VOCs	ND	ND
Benzo(a)pyrene	**3,380**	<21
Indeno(123cd)pyrene	**874**	<37
Phenanthrene	***2,280***	<23

SB-110		
Sample Depth (bgs)	0'-2'	6'-8'
Date	6/14/05	6/14/05
VOCs	NE	ND
PAHs	ND	ND

SB/MW-118		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/16/05	6/16/05
VOCs	ND	ND
Benzo(a)anthracene	**13,300**	212
Benzo(a)pyrene	**12,300**	233
Dibenz(ah)anthracene	**2,050**	45 "J"
Indeno(123cd)pyrene	**5,430**	122
Phenanthrene	***15,400***	253

SB-116		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/15/05	6/15/05
VOCs	ND	ND
Benzo(a)pyrene	**615**	ND

SB-107		
Sample Depth (bgs)	0'-2'	6'-8'
Date	6/14/05	6/14/05
VOCs	ND	ND
PAHs	NE	ND

SB/MW-117		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/15/05	6/15/05
VOCs	ND	ND
PAHs	ND	ND

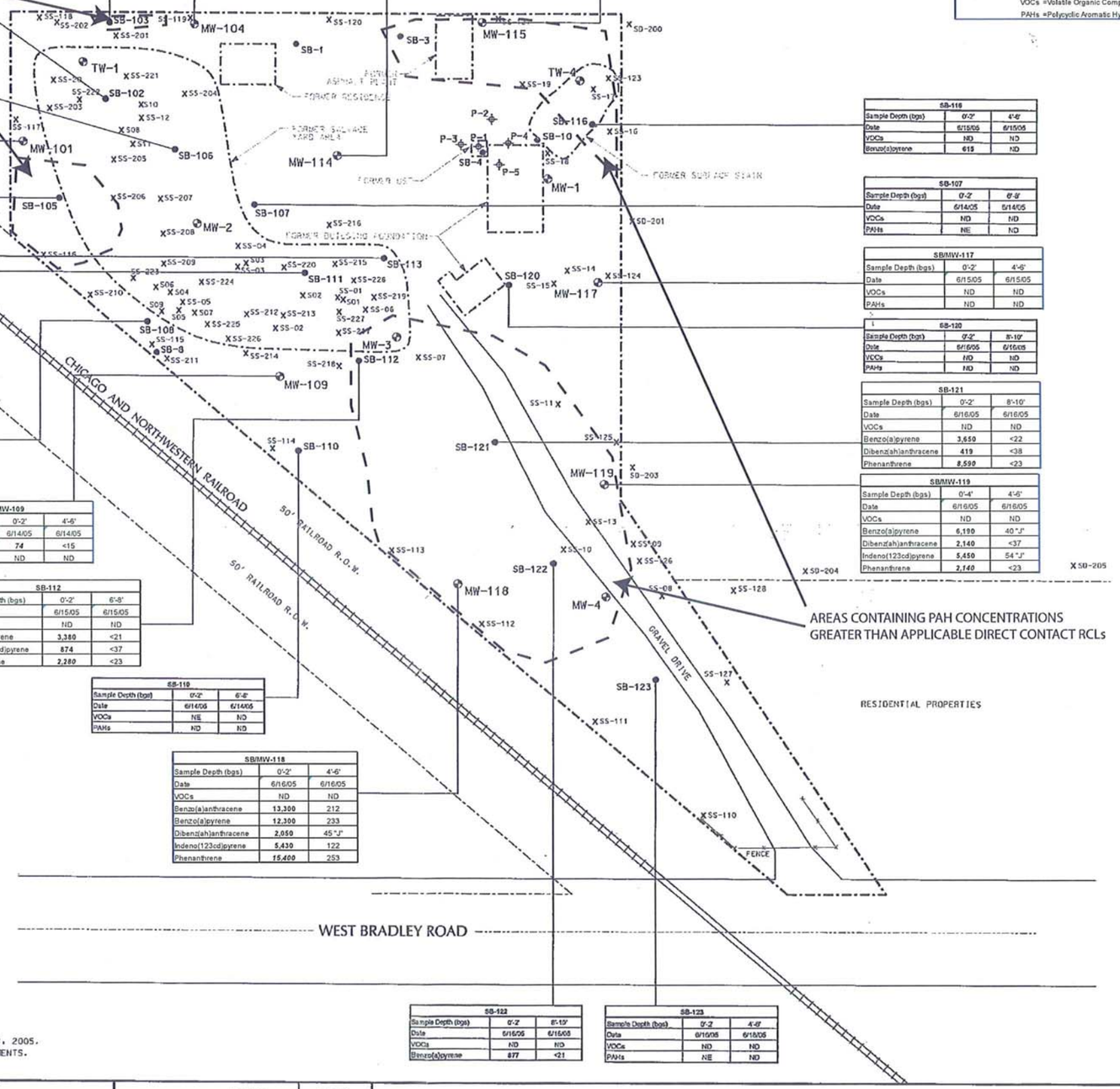
SB-120		
Sample Depth (bgs)	0'-2'	8'-10'
Date	6/16/05	6/16/05
VOCs	ND	ND
PAHs	ND	ND

SB-121		
Sample Depth (bgs)	0'-2'	8'-10'
Date	6/16/05	6/16/05
VOCs	ND	ND
Benzo(a)pyrene	**3,650**	<22
Dibenz(ah)anthracene	**419**	<38
Phenanthrene	***8,590***	<23

SB/MW-119		
Sample Depth (bgs)	0'-4'	4'-6'
Date	6/16/05	6/16/05
VOCs	ND	ND
Benzo(a)pyrene	**6,190**	40 "J"
Dibenz(ah)anthracene	**2,140**	<37
Indeno(123cd)pyrene	**5,450**	54 "J"
Phenanthrene	***2,140***	<23

SB-122		
Sample Depth (bgs)	0'-2'	8'-10'
Date	6/16/05	6/16/05
VOCs	ND	ND
Benzo(a)pyrene	**877**	<21

SB-123		
Sample Depth (bgs)	0'-2'	4'-6'
Date	6/16/05	6/16/05
VOCs	ND	ND
PAHs	NE	ND



LEGEND

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- SB = SOIL BORING
- MW = MONITORING WELL
- TW = TEMPORARY MONITORING WELL
- SS X = SURFACE SOIL SAMPLE
- SD X = SEDIMENT SOIL SAMPLE
- = PROPERTY LINE

GRAPHIC SCALE

0' 30' 60' 120'

NOTES:
1. MAP BASED ON SURVEY COMPLETED BY MAKING THE GRADE, INC. DATED JUNE 28, 2005.
2. SOIL SAMPLE LOCATIONS NOT INCLUDED IN SURVEY AND BASED ON FIELD MEASURMENTS.

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1300 W. CANAL STREET
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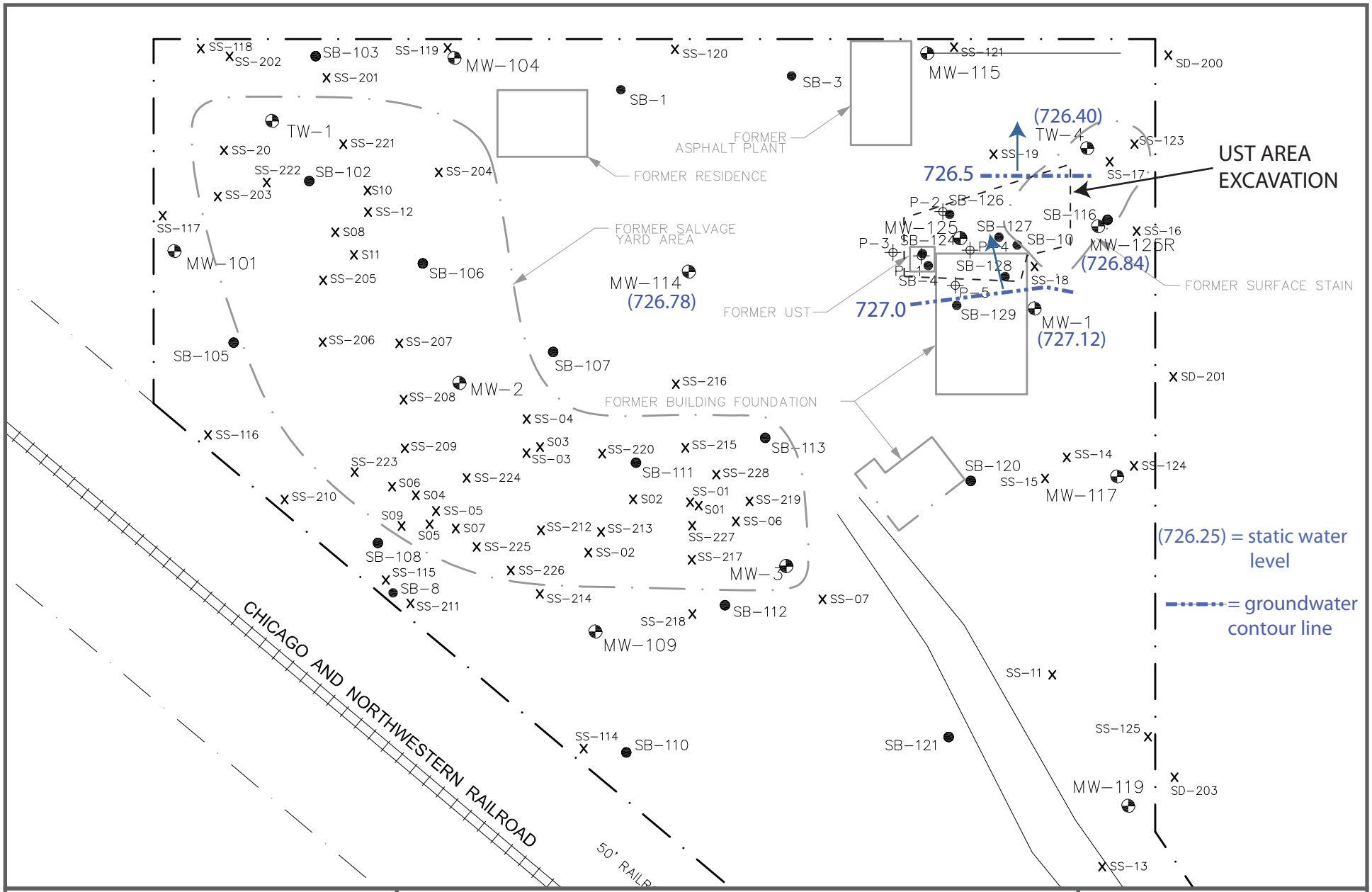
PHONE : (414) 643-4200
1-800-732-4671

	NAME:	DATE:
DRAWN BY:	BEB	3-7-06
DESIGNED BY:		
CHECKED BY:		
APPROVED BY:		

CITY OF MILWAUKEE - BETZ PROPERTY
7132 WEST BRADLEY ROAD, MILWAUKEE, WI
SOIL QUALITY MAP (VOCs & PAHs)

DRAWING NUMBER
9319-006

FIGURE 7



THE SIGMA GROUP
Single Source. Sound Solutions.

www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
414-643-4200

0 60 ft.

Site Name: Betz Trust Property

Address: 7132 W. Bradley Road
Milwaukee, WI

Project: #9319

N

FIGURE 4

GROUNDWATER CONTOUR MAP (4/20/2010)

Table 1
Soil Quality Results - Betz Property - UST Area - 7132 W. Bradley Road
Milwaukee, Wisconsin
Sigma Project No.9319

Soil Boring Identification:		E-Base	NNE-Sidewall	ENE-Sidewall	ESE-Sidewall	C-Base	SSE-Sidewall	N-Sidewall	S-Sidewall	W-Base	NNW-Sidewall	SSW-Sidewall	W-Sidewall	NR 720.09
	Date	07/28/09	07/28/09	07/28/09	07/28/09	07/28/09	07/28/09	07/28/09	07/28/09	07/29/09	07/29/09	07/29/09	07/29/09	
Analytes	Depth	8	3-5	3-5	3-5	8	3-5	3-5	3-5	10	3-5	3-5	3-5	RCL GW Protection
PVOCs/Detected VOCs														
Benzene	µg/kg	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	5.5
Ethylbenzene	µg/kg	40	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	2,900
Methyl-tert-butyl-ether	µg/kg	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	NS
Toluene	µg/kg	46	<25	<25	<25	<25	<25	<25	27.8	<25	<25	58	<25	1,500
1,2,4-Trimethylbenzene	µg/kg	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	NS
1,3,5-Trimethylbenzene	µg/kg	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	NS
Xylenes, Total	µg/kg	<75	<75	<75	<75	<75	<75	<75	<75	<75	<75	<75	<75	4,100

Notes:
1. J = between limit of detection and limit of quantitation
2. L = common lab solvent
3. NS = no standard
4. µg/kg = micrograms per kilogram (equivalent to parts per billion, ppb)
5. mg/kg = milligrams per kilogram (equivalent to parts per million, ppm)
6. NA = Not Analyzed
7. Exceedances: box = exceeds groundwater protection standard
   bold = exceeds direct contact pathway standard
   bold, box = exceeds both groundwater protection and direct contact standard

Table 3 (page 1 of 2)
Groundwater Quality Results - Betz Property - 7132 W. Bradley Road Site
Milwaukee, Wisconsin
Sigma Project No. 9319

Well ID:		MW-1							MW-2			MW-3			MW-4			TW-4							MW-101			MW-104			NR 140	NR 140
Analytes	Date	07/05/05	10/05/05	01/03/06	03/21/06	06/21/06	01/21/10	04/20/10	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	03/21/06	06/21/06	01/21/10	04/20/10	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	ES	PAL
RCRA Metals - Soluble																																
Arsenic	µg/L	<2.0	**2.4**	**0.79 J**	NA	NA	NA	NA	**2.5 J**	**4**	**1.9**	**5.2 J**	**9.1**	**1.4**	<2.0	**0.6 J**	**0.59 J**	**9.8**	**7**	**3.9**	NA	NA	NA	NA	<2.0	**0.93**	**0.51 J**	NA	NA	NA	10	1
Barium	µg/L	**280**	**323**	**165**	NA	NA	NA	NA	**150**	**189**	**146**	**190**	**364**	**100**	**130**	**77**	**55**	**280**	**271**	**363**	NA	NA	NA	NA	**110**	**96**	**66**	NA	NA	NA	2,000	400
Cadmium	µg/L	<0.50	<0.040	<0.40	NA	NA	NA	NA	<0.50	<0.040	<0.40	<0.50	<0.040	<0.40	<0.50	<0.040	<0.40	<0.50	<0.040	<0.40	NA	NA	NA	NA	<0.50	<0.040	<0.40	NA	NA	NA	5	0.5
Chromium	µg/L	<10	<8.0	<7.8	NA	NA	NA	NA	<10	<8.0	<7.8	<10	<8.0	<7.8	<10	<8.0	<7.8	<10	<8.0	<7.8	NA	NA	NA	NA	<10	<8.0	<7.8	NA	NA	NA	100	10
Lead	µg/L	<2.0	**0.45 J**	<0.40	NA	NA	NA	NA	<2.0	**0.84 J**	<0.40	<2.0	**0.73 J**	**0.54 J**	<2.0	**9.4**	**1.5**	<2.0	**0.45 J**	<0.40	NA	NA	NA	NA	<2.0	**0.43 J**	<0.40	NA	NA	NA	15	1.5
Mercury	µg/L	<0.20	<0.2	<0.12	NA	NA	NA	NA	<0.20	<0.20	<0.12	<0.20	<0.20	<0.12	<0.20	<0.20	<0.12	<0.20	<0.20	<0.12	NA	NA	NA	NA	<0.20	<0.20	<0.12	NA	NA	NA	2	0.2
Selenium	µg/L	<2.0	**4**	<4.0	NA	NA	NA	NA	<2.0	**3.3**	<4.0	<2.0	**3.2**	<4.0	<2.0	**1.4**	<4.0	<2.0	**3.6**	<0.40	NA	NA	NA	NA	<2.0	**3.3**	<4.0	NA	NA	NA	50	10
Silver	µg/L	<5.0	<2.0	<1.8	NA	NA	NA	NA	<5.0	<2.0	<1.8	<5.0	<2.0	<1.8	<5.0	<2.0	<1.8	<5.0	<2.0	<1.8	NA	NA	NA	NA	<5.0	<2.0	<1.8	NA	NA	NA	50	10
PVOCs/Detected VOCs																																
Benzene	µg/L	<0.27	<0.27	<0.27	<0.12	<0.17	<0.45	<0.4	<0.27	<0.27	<0.27	<0.27	<0.27	NA	<0.27	<0.27	NA	<0.27	<0.27	<0.27	<0.12	<0.17	<0.45	<0.4	<0.27	<0.27	<0.27	NA	<0.27	NA	5	0.5
Chloroform	µg/L	<0.24	**0.34 J**	<0.24	NA	NA	NA	NA	<0.24	**0.26 J**	<0.24	<0.24	<0.24	NA	<0.24	<0.24	NA	<0.24	<0.24	<0.24	NA	NA	NA	NA	<0.24	<0.24	<0.24	NA	<0.24	NA	6	0.6
Ethylbenzene	µg/L	<0.25	<0.25	<0.25	<0.5	<1.0	<0.76	<0.65	<0.25	<0.25	<0.25	<0.25	<0.25	NA	<0.25	<0.25	NA	<0.25	<0.25	<0.25	<0.5	<1.0	<0.76	<0.65	**2.2**	<0.25	<0.25	NA	<0.25	NA	700	140
Methylene Chloride	µg/L	<0.3	***6.73***	**3.4**	NA	NA	NA	NA	<0.3	***14***	***11***	<0.3	<0.3	NA	<0.3	<0.3	NA	<0.3	***7.08***	***5.12***	NA	NA	NA	NA	<0.3	**1.41**	**3.74**	NA	**1.42**	NA	5	0.5
Methyl-tert-butyl-ether	µg/L	<0.39	<0.39	<0.39	<0.11	<0.52	<0.42	<0.49	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.11	<0.52	<0.42	<0.49	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	60	12
Naphthalene	µg/L	<0.75	<0.75	<0.75	NA	NA	NA	NA	<0.75	<0.75	<0.75	<0.75	<0.75	NA	<0.75	<0.75	NA	<0.75	<0.75	<0.75	NA	NA	NA	NA	**1.4 J**	<0.75	<0.75	NA	<0.75	NA	40	8
n-Propylbenzene	µg/L	<0.28	<0.28	<0.28	NA	NA	NA	NA	<0.28	<0.28	<0.28	<0.28	<0.28	NA	<0.28	<0.28	NA	<0.28	<0.28	<0.28	NA	NA	NA	NA	**0.78**	<0.28	<0.28	NA	<0.28	NA	NS	NS
Toluene	µg/L	<0.29	<0.29	<0.29	<0.13	<0.78	<0.53	<0.86	<0.29	<0.29	<0.29	<0.29	<0.29	NA	<0.29	<0.29	NA	**0.4 J**	<0.29	<0.29	<0.13	<0.78	<0.53	<0.86	**6.8**	<0.29	<0.29	NA	<0.29	NA	1,000	200
Trichloroethene	µg/L	<0.34	<0.34	<0.34	NA	NA	NA	NA	<0.34	<0.34	<0.34	<0.34	<0.34	NA	<0.34	<0.34	NA	**0.4 J**	<0.34	<0.34	NA	NA	NA	NA	<0.34	<0.34	<0.34	NA	<0.34	NA	5	0.5
1,2,4-Trimethylbenzene	µg/L	<0.3	<0.3	<0.3	<0.58	<0.85	<0.52	<0.76	<0.3	<0.3	<0.3	<0.3	<0.3	NA	<0.3	<0.3	NA	**0.3**	<0.3	<0.3	<0.58	<0.85	<0.52	<0.76	**5.4**	<0.3	<0.3	NA	<0.3	NA	NS	NS
1,3,5-Trimethylbenzene	µg/L	<0.34	<0.34	<0.34	<0.53	<1.1	<0.61	<0.73	<0.34	<0.34	<0.34	<0.34	<0.34	NA	<0.34	<0.34	NA	<0.34	<0.34	<0.34	<0.53	<1.1	<0.61	<0.73	**1.7**	<0.34	<0.34	NA	<0.34	NA	NS	NS
Total Trimethylbenzene	µg/L	<0.64	<0.64	<0.64	<1.11	<1.95	<1.13	<1.49	<0.64	<0.64	<0.64	<0.64	<0.64	NA	<0.64	<0.64	NA	<0.64	<0.64	<0.64	<1.11	<1.95	<1.13	<1.49	**7.1**	<0.64	<0.64	NA	<0.64	NA	480	96
Total Xylenes	µg/L	<0.78	<0.78	<0.78	<2.0	<2.84	<1.58	<2.15	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<2.0	<2.84	<1.58	<2.15	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	10,000	1,000
PAHs																																
Acenaphthene	µg/L	<0.13	<0.011	NA	NA	NA	NA	NA	<0.13	<0.011	NA	<0.13	<0.011	NA	<0.13	<0.011	NA	<0.13	<0.011	NA	NA	NA	NA	NA	<0.13	<0.011	<0.0086	NA	NA	NA	NS	NS
Acenaphthylene	µg/L	<0.11	<0.0069	NA	NA	NA	NA	NA	<0.11	<0.0069	NA	<0.11	<0.0069	NA	<0.11	<0.0069	NA	<0.11	<0.0069	NA	NA	NA	NA	NA	<0.11	<0.0069	<0.0086	NA	NA	NA	NS	NS
Anthracene	µg/L	<0.022	<0.0093	NA	NA	NA	NA	NA	<0.022	<0.0093	NA	<0.022	<0.0093	NA	<0.022	<0.0093	NA	<0.022	<0.0093	NA	NA	NA	NA	NA	<0.022	<0.0093	<0.012	NA	NA	NA	3000	600
Benz(a)anthracene	µg/L	<0.003	<0.021	NA	NA	NA	NA	NA	<0.003	<0.021	NA	<0.003	<0.021	NA	<0.003	<0.021	NA	<0.003	<0.021	NA	NA	NA	NA	NA	<0.003	<0.021	<0.017	NA	NA	NA	NS	NS
Benzo(b)fluoranthene	µg/L	<0.009	<0.0066	NA	NA	NA	NA	NA	<0.009	<0.0066	NA	<0.009	<0.0066	NA	<0.009	<0.0066	NA	<0.009	<0.0066	NA	NA	NA	NA	NA	**0.074**	<0.0066	<0.017	NA	NA	NA	0.2	0.02
Benzo(k)fluoranthene	µg/L	<0.009	<0.0074	NA	NA	NA	NA	NA	<0.009	<0.0074	NA	<0.009	<0.0074	NA	<0.009	<0.0074	NA	<0.009	<0.0074	NA	NA	NA	NA	NA	**0.02 J**	<0.0074	<0.020	NA	NA	NA	NS	NS
Benzo(a)pyrene	µg/L	<0.01	<0.011	NA	NA	NA	NA	NA	<0.01	<0.011	NA	<0.01	<0.011	NA	<0.01	<0.011	NA	<0.01	<0.011	NA	NA	NA	NA	NA	<0.01	<0.011	<0.019	NA	NA	NA	0.2	0.02
Benzo(ghi)perylene	µg/L	<0.021	<0.019	NA	NA	NA	NA	NA	<0.021	<0.019	NA	<0.021	<0.019	NA	<0.021	<0.019	NA	<0.021	<0.019	NA	NA	NA	NA	NA	<0.021	<0.019	<0.020	NA	NA	NA	NS	NS
Chrysene	µg/L	<0.052	<0.011	NA	NA	NA	NA	NA	<0.052	<0.011	NA	<0.052	<0.011	NA	<0.052	<0.011	NA	<0.052	<0.011	NA	NA	NA	NA	NA	<0.052	<0.011	<0.020	NA	NA	NA	0.2	0.02
Dibenz(a,h)anthracene	µg/L	<0.059	<0.016	NA	NA	NA	NA	NA	<0.059	<0.016	NA	<0.059	<0.016	NA	<0.059	<0.016	NA	<0.059	<0.016	NA	NA	NA	NA	NA	<0.059	<0.016	<0.020	NA	NA	NA	NS	NS
Fluoranthene	µg/L	<0.01	<0.0085	NA	NA	NA	NA	NA	<0.01	<0.0085	NA	<0.01	<0.0085	NA	<0.01	<0.0085	NA	<0.01	<0.0085	NA	NA	NA	NA	NA	**0.073**	<0.0085	<0.016	NA	NA	NA	400	80
Fluorene	µg/L	<0.061	<0.0093	NA	NA	NA	NA	NA	<0.061	<0.0093	NA	<0.061	<0.0093	NA	<0.061	<0.0093	NA	<0.061	<0.0093	NA	NA	NA	NA	NA	<0.061	<0.0093	<0.0096	NA	NA	NA	400	80
Indeno(1,2,3-cd)pyrene	µg/L	<0.024	<0.015	NA	NA	NA	NA	NA	<0.024	<0.015	NA	<0.024	<0.015	NA	<0.024	<0.015	NA	<0.024	<0.015	NA	NA	NA	NA	NA	<0.024	<0.015	<0.020	NA	NA	NA	NS	NS
1-Methylnaphthalene	µg/L	<0.1	<0.0080	NA	NA	NA	NA	NA	<0.1	<0.0080	NA	<0.1	<0.0080	NA	<0.1	<0.0080	NA	<0.1	<0.0080	NA	NA	NA	NA	NA	<0.1	<0.0080	<0.011	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/L	<0.12	<0.0066	NA	NA	NA	NA	NA	<0.12	<0.0066	NA	<0.12	<0.0066	NA	<0.12	<0.0066	NA	<0.12	<0.0066	NA	NA	NA	NA	NA	<0.12	<0.0066	<0.012	NA	NA	NA	NS	NS
Naphthalene	µg/L	0.36	<0.0090	NA	NA	NA	NA	NA	<0.097	<0.0090	NA	<0.097	<0.0090	NA	<0.097	<0.0090	NA	<0.097	<0.0090	NA	NA	NA	NA	NA	***77 "4"***	<0.0090	**0.025 J**	NA	NA	NA	40	8
Phenanthrene	µg/L	<0.035	<0.0085	NA	NA	NA	NA	NA	<0.035	<0.0085	NA	<0.035	<0.0085	NA	<0.035	<0.0085	NA	<0.035	<0.0085	NA	NA	NA	NA	NA	**0.041 J**	<0.0085	<0.012	NA	NA	NA	NS	NS
Pyrene	µg/L	<0.03	< 0.0093	NA	NA	NA	NA	NA	<0.03	< 0.0093	NA	<0.03	< 0.0093	NA	<0.03	< 0.0093	NA	<0.03	< 0.0093	NA	NA	NA	NA	NA	**0.058 J**	< 0.0093	<0.015	NA	NA	NA	250	50
Biofeasibility Measurements																																
pH	IU	7	7	7	9.3	7	6.67	NM	7	7	7	7	7	7	7	7	7	7	7	7	8.7	7	6.74	NM	7	7	7	NA	7	NA	NS	NS
Temperature	° C	11.2	15.5	10.5	5.2	10.7	9.4	NM	11.0	15.5	10.7	10.7	14.1	9.9	12.7	17.4	9.8	11.2	13.9	10.1	6.6	10.9	7.7	NM	12.0	16.2	10.6	NA	16.6	NA	NS	NS
Ferrous Iron	mg/l	0.0	0.0	0.0	0.2	1.6	1.0	NM	4.0	4.4	3.6	4.0	4.8	3.4	0.0	0.0	0.0	3.8	3.2	2.8	1.2	5.4	1.0	NM	0.0	0.0	0.0	NA	0.0	NA	NS	NS
Dissolved Oxygen	mg/l	0.50	0.48	0.38	0.78	0.29	1.20	NM	0.65	0.23	0.26	0.85	0.26	0.28	0.34	0.47	0.43	0.44	0.33	0.27	0.86	0.23	0.60	NM	3.26	0.54	0.43	NA	0.42	NA	NS	NS
Redox Potential	mV	97.0	218.0	139.0	11.0	-6.0	94.4	NM	-13.6	-60	-72	-69.3	-46	-21	207.4	151	112	-11.7	-18	-31	-23.0	-36.0	86.2	NM	259.3	197	142	NA	204	NA	NS	NS

Notes:
NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard.
NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit.
NS = no standard
µg/L = micrograms per liter (equivalent to parts per billion, ppb)
mg/L = milligrams per liter (equivalent to parts per million, ppm)
NA = Not Analyzed
"4" = Laboratory contamination
J = Results are qualified due to the uncertainty of the parameter concentration between the Limit of Detection and Limit of Quantitation.
Exceedances: **bold** = Concentration exceeds NR 140 PAL
bold = Concentration exceeds method detection limits
bold, italics = Concentration exceeds NR 140 ES

Table 3 (page 2 of 2)
Groundwater Quality Results - Betz Property - 7132 W. Bradley Road Site
Milwaukee, Wisconsin
Sigma Project No. 9319

Well ID:		MW-109			MW-114							MW-115			MW-117			MW-118			MW-119			MW-125		MW-125R		NR 140	NR 140
Analytes	Date	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	03/21/06	06/21/06	01/21/10	04/20/10	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	07/05/05	10/05/05	01/03/06	03/21/06	06/21/06	01/21/10	04/20/10	ES	PAL
RCRA Metals - Soluble																													
Arsenic	µg/L	<2.0	**3.8**	**1.5**	<2.0	**1.9**	**1 J**	NA	NA	NA	NA	<2.0	**0.91**	**0.81 J**	<2.0	**0.92**	**0.97 J**	<2.0	**0.63**	<0.40	<2.0	**1.1**	**0.56 J**	NA	NA	NA	NA	10	1
Barium	µg/L	**190**	**204**	**156**	**95**	**188**	**70**	NA	NA	NA	NA	**150**	**107**	**106**	**130**	**139**	**108**	**110**	**133**	**99**	**210**	**192**	**194**	NA	NA	NA	NA	2,000	400
Cadmium	µg/L	<0.50	<0.040	<0.40	<0.50	<0.040	<0.40	NA	NA	NA	NA	<0.50	<0.040	<0.40	<0.50	<0.040	<0.40	<0.50	<0.040	<0.40	<0.50	<0.040	<0.40	NA	NA	NA	NA	5	0.5
Chromium	µg/L	<10	<8.0	<7.8	<10	<8.0	<7.8	NA	NA	NA	NA	<10	<8.0	<7.8	<10	<8.0	<7.8	<10	<8.0	<7.8	<10	<8.0	<7.8	NA	NA	NA	NA	100	10
Lead	µg/L	<2.0	**0.81 J**	<0.40	<2.0	**0.47 J**	<0.40	NA	NA	NA	NA	<2.0	**0.42 J**	<0.40	<2.0	**0.46 J**	<0.40	<2.0	**0.83 J**	<0.40	<2.0	**0.49 J**	<0.40	NA	NA	NA	NA	15	1.5
Mercury	µg/L	<0.20	<0.20	<0.12	<0.20	<0.20	<0.12	NA	NA	NA	NA	<0.20	<0.20	<0.12	<0.20	<0.20	<0.12	<0.20	<0.20	<0.12	<0.20	<0.20	<0.12	NA	NA	NA	NA	2	0.2
Selenium	µg/L	<2.0	**5.7**	<4.0	<2.0	**5.2**	**4.6 J**	NA	NA	NA	NA	<2.0	**3**	<4.0	<2.0	**4.1**	<4.0	<2.0	**2.5**	<4.0	<2.0	**3**	<4.0	NA	NA	NA	NA	50	10
Silver	µg/L	<5.0	<2.0	<1.8	<5.0	<2.0	<1.8	NA	NA	NA	NA	<5.0	<2.0	<1.8	<5.0	<2.0	<1.8	<5.0	<2.0	<1.8	<5.0	<2.0	<1.8	NA	NA	NA	NA	50	10
PVOCs/Detected VOCs																													
Benzene	µg/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.12	<0.17	<0.45	<0.4	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	***850***	***820***	<0.45	<0.4	5	0.5
Ethylbenzene	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.5	<1.0	<0.76	<0.65	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	***1,260***	***1,200***	2.55	2.25	700	140
Methylene Chloride	µg/L	**0.9 J**	***11***	**3.34**	<0.3	<0.3	**2.41**	NA	NA	NA	NA	<0.3	<0.3	**1.94**	<0.3	**1.77**	**3.49**	<0.3	**1.53**	**2.84**	**0.9 J**	**1.9**	**2.88**	NA	NA	NA	NA	5	0.5
Methyl-tert-butyl-ether	µg/L	<0.39	**0.41 J**	**0.46 J**	<0.39	<0.39	<0.39	<0.11	<0.52	<0.42	<0.49	<0.39	<0.39	<0.39	**0.5 J**	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<1.1	<26	<0.42	<0.49	60	12
Toluene	µg/L	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	<0.13	<0.78	<0.53	<0.86	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	**0.4 J**	<0.29	<0.29	<0.29	<0.29	<0.29	***2,340***	**800**	<0.53	<0.86	1,000	200
1,2,4-Trimethylbenzene	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.58	<0.85	<0.52	<0.76	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.3**	<0.3	<0.3	<0.3	<0.3	<0.3	1,230	1,280	<0.52	<0.76	NS	NS
1,3,5-Trimethylbenzene	µg/L	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.53	<1.1	<0.61	<0.73	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	301	360	<0.61	<0.73	NS	NS
Total Trimethylbenzene	µg/L	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<1.11	<1.95	<1.13	<1.49	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	**0.3**	<0.64	<0.64	<0.64	<0.64	<0.64	***1,531***	***1,640***	<1.13	<1.49	480	96
Xylenes	µg/L	<0.78	<0.78	<0.78	<0.78	**0.78 J**	<0.78	<2.0	<2.84	<1.58	<2.15	<0.78	**1.82**	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	**5,680**	**5,030**	<1.58	<2.15	10,000	1,000
PAHs																													
Acenaphthene	µg/L	<0.13	<0.011	NA	<0.13	<0.011	<0.0086	NA	NA	NA	NA	<0.13	<0.011	NA	<0.13	<0.011	NA	<0.13	<0.011	<0.0086	<0.13	<0.011	<0.0087	NA	NA	NA	NA	NS	NS
Acenaphthylene	µg/L	<0.11	<0.0069	NA	<0.11	<0.0069	<0.0086	NA	NA	NA	NA	<0.11	<0.0069	NA	<0.11	<0.0069	NA	<0.11	<0.0069	<0.0086	<0.11	<0.0069	<0.0087	NA	NA	NA	NA	NS	NS
Anthracene	µg/L	<0.022	<0.0093	NA	<0.022	<0.0093	<0.012	NA	NA	NA	NA	<0.022	<0.0093	NA	<0.022	<0.0093	NA	<0.022	<0.0093	<0.012	<0.022	<0.0093	**0.016 J**	NA	NA	NA	NA	3000	600
Benz(a)anthracene	µg/L	<0.003	<0.021	NA	<0.003	<0.021	<0.017	NA	NA	NA	NA	<0.003	<0.021	NA	<0.003	<0.021	NA	<0.003	<0.021	<0.017	<0.003	<0.021	<0.017	NA	NA	NA	NA	NS	NS
Benzo(b)fluoranthene	µg/L	<0.009	<0.0066	NA	<0.009	<0.0066	<0.017	NA	NA	NA	NA	<0.009	<0.0066	NA	<0.009	<0.0066	NA	<0.009	<0.0066	<0.017	<0.009	<0.0066	<0.017	NA	NA	NA	NA	0.2	0.02
Benzo(k)fluoranthene	µg/L	<0.009	<0.0074	NA	<0.009	<0.0074	<0.020	NA	NA	NA	NA	<0.009	<0.0074	NA	<0.009	<0.0074	NA	<0.009	<0.0074	<0.020	<0.009	<0.0074	<0.021	NA	NA	NA	NA	NS	NS
Benzo(a)pyrene	µg/L	<0.01	<0.011	NA	<0.01	<0.011	<0.019	NA	NA	NA	NA	<0.01	<0.011	NA	<0.01	<0.011	NA	<0.01	<0.011	<0.019	<0.01	<0.011	<0.020	NA	NA	NA	NA	0.2	0.02
Benzo(ghi)perylene	µg/L	<0.021	<0.019	NA	<0.021	<0.019	<0.020	NA	NA	NA	NA	<0.021	<0.019	NA	<0.021	<0.019	NA	<0.021	<0.019	<0.020	<0.021	<0.019	<0.021	NA	NA	NA	NA	NS	NS
Chrysene	µg/L	<0.052	<0.011	NA	<0.052	<0.011	<0.020	NA	NA	NA	NA	<0.052	<0.011	NA	<0.052	<0.011	NA	**0.1 J**	<0.011	<0.020	<0.052	<0.011	<0.020	NA	NA	NA	NA	0.2	0.02
Dibenz(a,h)anthracene	µg/L	<0.059	<0.016	NA	<0.059	<0.016	<0.020	NA	NA	NA	NA	<0.059	<0.016	NA	<0.059	<0.016	NA	<0.059	<0.016	<0.020	<0.059	<0.016	<0.020	NA	NA	NA	NA	NS	NS
Fluoranthene	µg/L	<0.01	<0.0085	NA	<0.01	<0.0085	<0.016	NA	NA	NA	NA	<0.01	<0.0085	NA	<0.01	<0.0085	NA	<0.01	<0.0085	<0.016	**0.024 J**	<0.0085	<0.017	NA	NA	NA	NA	400	80
Fluorene	µg/L	<0.061	<0.0093	NA	<0.061	<0.0093	<0.0096	NA	NA	NA	NA	<0.061	<0.0093	NA	<0.061	<0.0093	NA	<0.061	<0.0093	<0.0096	<0.061	<0.0093	<0.0097	NA	NA	NA	NA	400	80
Indeno(1,2,3-cd)pyrene	µg/L	<0.024	<0.015	NA	<0.024	<0.015	<0.020	NA	NA	NA	NA	<0.024	<0.015	NA	<0.024	<0.015	NA	<0.024	<0.015	<0.020	<0.024	<0.015	<0.020	NA	NA	NA	NA	NS	NS
1-Methylnaphthalene	µg/L	<0.1	<0.0080	NA	<0.1	**0.011 J**	<0.011	NA	NA	NA	NA	<0.1	<0.0080	NA	<0.1	<0.0080	NA	<0.1	**0.0091 J**	<0.011	<0.1	<0.0080	<0.011	NA	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/L	<0.12	<0.0066	NA	<0.12	<0.0066	<0.012	NA	NA	NA	NA	<0.12	<0.0066	NA	<0.12	<0.0066	NA	<0.12	**0.012 J**	**0.014 J**	<0.12	<0.0066	<0.012	NA	NA	NA	NA	NS	NS
Naphthalene	µg/L	<0.097	<0.0090	NA	<0.097	<0.0090	**0.016 J**	NA	NA	NA	NA	<0.097	<0.0090	NA	<0.097	<0.0090	NA	<0.097	**0.010 J**	**0.026 J**	***67 "4"***	<0.0090	**0.019 J**	NA	NA	NA	NA	40	8
Phenanthrene	µg/L	<0.035	<0.0085	NA	<0.035	<0.0085	<0.012	NA	NA	NA	NA	<0.035	<0.0085	NA	<0.035	<0.0085	NA	<0.035	<0.0085	<0.012	**0.043 J**	<0.0085	<0.012	NA	NA	NA	NA	NS	NS
Pyrene	µg/L	<0.03	< 0.0093	NA	<0.03	< 0.0093	<0.015	NA	NA	NA	NA	<0.03	< 0.0093	NA	<0.03	< 0.0093	NA	**0.04 J**	< 0.0093	<0.015	**0.057 J**	< 0.0093	<0.016	NA	NA	NA	NA	250	50
Biofeasibility Measurements																													
pH	IU	7	7	7	7	7	7	8.7	7	6.79	NM	7	7	7	7	7	7	7	7	7	7	7	7	8.6	7	6.67	NM	NS	NS
Temperature	° C	11.4	16.1	10.1	10.8	15.6	10.8	7.9	10.4	8.9	NM	10.9	15.1	10.1	10.9	14	9.6	9.6	12.8	10.4	10.5	14.6	10.0	5.4	10.6	7.6	NM	NS	NS
Ferrous Iron	mg/l	0.0	1.6	1.2	0.0	1.8	1.2	0.0	0.0	0.0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.0	0.0	2.0	2.0	1.0	NM	NS	NS
Dissolved Oxygen	mg/l	5.60	0.29	0.27	0.90	0.40	0.34	6.79	0.41	4.10	NM	1.23	0.35	0.37	0.97	0.46	0.4	4.50	0.48	0.38	7.10	0.37	0.34	6.94	0.2	12.9	NM	NS	NS
Redox Potential	mV	148.6	3.0	-16.0	231.0	169.0	98.0	160.0	43.0	153.8	NM	247.3	149	102	131.8	223	138	198.6	175	142	100.8	216	160	-53	-117	87.3	NM	NS	NS

Notes:
NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard.
NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit.
NS = no standard
µg/L = micrograms per liter (equivalent to parts per billion, ppb)
mg/L = milligrams per liter (equivalent to parts per million, ppm)
NA = Not Analyzed
J = Results are qualified due to the uncertainty of the parameter concentration between the Limit of Detection and Limit of Quantitation.
"4" = Laboratory contamination
Exceedances: **bold** = Concentration exceeds NR 140 PAL ***bold, italics*** = Concentration exceeds NR 140 ES
bold = Concentration exceeds method detection limits

Table 2
Groundwater Elevation Data
Betz Property - 7132 West Bradley Road
Milwaukee Wisconsin
Sigma Project #9319

Well Identification	Ground Surface Elevation (MSL)	Top of Casing Elevation (MSL)	Screen Interval (feet bgs)	Depth to Groundwater (feet toc)	Depth to Groundwater (feet bgs)	Groundwater Elevation (MSL)	Date
MW-1	729.00	731.18 Stick-up	3-13	7.08	4.90	724.10	10/02/1998
				5.07	2.89	726.11	07/05/2005
				8.12	5.94	723.06	10/05/2005
				2.60	0.42	728.58	01/03/2006
				2.87	0.69	728.31	03/21/2006
				5.43	3.25	725.75	06/21/2006
				5.33	3.15	725.85	01/21/2010
				4.06	1.88	727.12	04/20/2010
MW-2	734.26	736.79 Stick-up	3-13	7.39	4.86	729.40	10/02/1998
				4.10	1.57	732.69	07/05/2005
				6.52	3.99	730.27	10/05/2005
				3.61	1.08	733.18	01/03/2006
MW-3	730.73	733.05 Stick-up	3-13	6.96	4.64	726.09	10/02/1998
				7.57	5.25	725.48	07/05/2005
				11.49	9.17	721.56	10/05/2005
				2.51	0.19	730.54	01/03/2006
MW-4	728.58	731.05 Stick-up	3-13	8.15	5.68	722.90	10/02/1998
				6.16	3.69	724.89	07/05/2005
				8.71	6.24	722.34	10/05/2005
				2.71	0.24	728.34	01/03/2006
TW-1	738.08	739.97 Stick-up		9.16	7.27	730.81	10/02/1998
				blocked			07/05/2005
TW-4	727.63	729.68 Stick-up		6.48	4.43	723.20	10/02/1998
				5.54	3.49	724.14	07/05/2005
				7.29	5.24	722.39	10/05/2005
				2.21	0.16	727.47	01/03/2006
				2.60	0.55	727.08	03/21/2006
				5.83	3.78	723.85	06/21/2006
				4.51	2.46	725.17	01/21/2010
				3.28	1.23	726.40	04/20/2010
MW-101	736.98	740.30 Stick-up	5-15	8.84	5.52	731.46	06/20/2005
				9.70	6.38	730.60	07/05/2005
				15.79	12.47	724.51	10/05/2005
				6.83	3.51	733.47	01/03/2006
MW-104	739.29	742.95 Stick-up	6-16	dry			06/20/2005
				18.16	14.50	724.79	07/05/2005
				19.37	15.71	723.58	10/05/2005
				dry			01/03/2006
MW-109	732.38	736.04 Stick-up	4-14	8.16	4.50	727.88	06/20/2005
				8.24	4.58	727.80	07/05/2005
				10.03	6.37	726.01	10/05/2005
				5.28	1.62	730.76	01/03/2006
MW-114	732.19	735.84 Stick-up	5-15	11.91	8.26	723.93	06/20/2005
				12.45	8.80	723.39	07/05/2005
				16.14	12.49	719.70	10/05/2005
				10.18	6.53	725.66	01/03/2006
				8.02	4.37	727.82	03/21/2006
				10.98	7.33	724.86	06/21/2006
	734.15	737.42		12.71	9.44	723.13	01/21/2010
				9.06	5.79	726.78	04/20/2010
MW-115	732.76	734.99 Stick-up	8-18	8.72	6.49	726.27	06/20/2005
				9.27	7.04	725.72	07/05/2005
				13.64	11.41	721.35	10/05/2005
				7.48	5.25	727.51	01/03/2006
MW-117	728.25	731.87 Stick-up	5-15	7.87	4.25	724.00	06/20/2005
				6.78	3.16	725.09	07/05/2005
				12.19	8.57	719.68	10/05/2005
				5.07	1.45	726.80	01/03/2006
MW-118	731.98	735.18 Stick-up	6-16	9.37	6.17	725.81	06/20/2005
				10.05	6.85	725.13	07/05/2005
				13.47	10.27	721.71	10/05/2005
				6.73	3.53	728.45	01/03/2006
MW-119	727.86	731.69 Stick-up	4-14	7.98	4.15	723.71	06/20/2005
				7.65	3.82	724.04	07/05/2005
				10.41	6.58	721.28	10/05/2005
				5.98	2.15	725.71	01/03/2006
MW-125	728.84	732.14 Stick-up	2-12	3.91	2.02	736.06	03/21/2006
				7.02	5.13	732.95	06/21/2006
MW-125R	728.23	731.59 Stick-up	3-13	5.64	2.28	725.95	01/21/2010
				4.75	1.39	726.84	04/20/2010

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