

Source Property Information

CLOSURE DATE: 02/07/2014

BRRTS #: 02-41-560104
ACTIVITY NAME: GRAY IRON FOUNDRY FMR (PARKING LOT PARCEL)
PROPERTY ADDRESS: 1501 S 83rd St
MUNICIPALITY: West Allis
PARCEL ID #: 4520711000 - (PARKING LOT Parcel ID#: 4520710000)

FID #: 241006370
DATCP #:
PECFA#:

***WTM COORDINATES:**

X: 681665 Y: 284349

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

WTM COORDINATES REPRESENT:

- Approximate Center Of Contaminant Source
 Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

CONTINUING OBLIGATIONS

Contaminated Media for Residual Contamination:

Groundwater Contamination > ES (236)

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

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

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

Site Specific Obligations:

Soil: maintain industrial zoning (220)

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

Structural Impediment (224)

Site Specific Condition (228)

Cover or Barrier (222)

Direct Contact

Soil to GW Pathway

Vapor Mitigation (226)

Maintain Liability Exemption (230)

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

Monitoring Wells:

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

Yes No N/A

** Residual Contaminant Level*

***Site Specific Residual Contaminant Level*

SER COPY

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



February 7, 2014

Mr. John Stibal
Community Development Authority
City of West Allis
7525 West Greenfield Avenue
West Allis, WI 53214

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure with Continuing Obligations
Gray Iron Foundry Former (Parking Lot Parcel), 1501 South 83rd St., West Allis WI
DNR BRRTS Activity #: 02-41-560104
FID #: 241006370

Dear Mr. Stibal:

The Department of Natural Resources (DNR) considers Gray Iron Foundry Former (Parking Lot Parcel) closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The Southeast Region (SER) Project Manager reviewed the request for closure on January 6, 2014. The Project Manager reviewed this environmental remediation case for compliance with state laws and standards to maintain consistency in the closure of these cases.

This parcel is a component of the Gray Iron Foundry Property. This parcel has formerly housed a warehouse and more recently has been used as a parking lot. Soil within the parcel is contaminated with metals and Polycyclic Aromatic Hydrocarbons (PAHs). Fill material, including foundry sand, is also present. A "Material Handling Plan and Cap Maintenance Plan" has been developed to address remaining contamination. The conditions of closure and continuing obligations required were based on the property being used for commercial purposes.

Continuing Obligations

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

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- Pavement must be maintained over contaminated soil and the DNR must approve any changes to this barrier.

The DNR fact sheet, "Continuing Obligations for Environmental Protection", RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/clean.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

All site information is also on file at the SER Regional DNR office, at 2300 N. Dr. Martin Luther King, Jr. Drive, Milwaukee, WI 53212-3128. This letter and information that was submitted with your closure request application, including any maintenance plan and maps, can be found as a Portable Document Format (PDF) in BRRTS on the Web.

Prohibited Activities

Certain activities are prohibited at closed sites because maintenance of a barrier is intended to prevent contact with any remaining contamination. When a barrier is required, the condition of closure requires notification of the DNR before making a change, in order to determine if further action is needed to maintain the protectiveness of the remedy employed. The following activities are prohibited on any portion of the property where pavement is required, as shown on **Figure D.1, Location Map (June 2013)**, unless prior written approval has been obtained from the DNR:

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

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter and the attached maintenance plan are met. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wis. Stats. to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources
Attn: Victory Stovall
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee, WI 53212-3128

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

Soil contamination remains on the western two-thirds of the parcel as indicated on **Figure B.2.c., Pre/Post Remedial Soil Contamination (December 2012)**. If soil in the specific locations described above is excavated in the future, the property owner or right-of-way holder at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner or right-of-way holder at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval.

In addition, all current and future owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Cover or Barrier (s. 292.12 (2) (a), Wis. Stats., s. NR 726.15, s. NR 727.07 Wis. Adm. Code)

The pavement that exists in the location shown on **Figure D.1, Location Map (June, 2013)** shall be maintained in compliance with the attached "**Material Handling Plan and Cap Maintenance Plan**" in order to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health.

A cover or barrier for industrial land uses, or certain types of commercial land uses may not be protective if the use of the property were to change such that a residential exposure would apply. This may include, but is not limited to single or multiple family residences, a school, day care, senior center, hospital or similar settings. In addition, a cover or barrier for multi-family residential housing use may not be appropriate for use at a single family residence.

The cover approved for this closure was designed to be protective for a commercial or industrial use setting. Before using the property for residential purposes, you must notify the DNR at least 45 days before taking an action, to determine if additional response actions are warranted.

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

The attached **Annual Cap Inspection Forms** are to be kept up-to-date and in the possession of the current property owner. Inspections forms should be kept on site if the Property is developed in the future. Inspections shall be conducted annually, in accordance with the attached maintenance plan. Submit the inspection log to the DNR only upon request.

Sites with an Exemption for Development at a Historic Fill Site or Licensed Landfill

Information presented in the site investigation report indicates that subsurface materials consist of historic fill material. An approval for development at a Historic Fill Site or Licensed Landfill was approved by the DNR on September 19, 2011 for the construction of a hotel, grocery store, brew pub, and paved parking lot. Any redevelopment of this property will require compliance with the approved exemption. Any changes from the September 19, 2011 exemption will require prior DNR approval in writing. Please refer to the Development at Historic Fill Site or Licensed Landfill guidances for further information at <http://dnr.wi.gov/topic/landfills/development.html>.

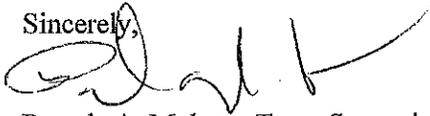
In Closing

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- if the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats, or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Steve Mueller at (414) 263-8631, or at StephenD.Mueller@wisconsin.gov.

Sincerely,



Pamela A. Mylotta, Team Supervisor
SER Remediation & Redevelopment Program

Attachments:

- **Figure B.2.c., Pre/Post Remedial Soil Contamination, December 2012**
- **Figure D.1, Location Map, June 2013**
- **Material Handling Plan and Cap Maintenance Plan, June 2013**
- **Annual Cap Inspection Form, June 2013**

cc: Mr. Ben Verburg, ARCADIS, 126 North Jefferson Street, Suite 400, Milwaukee, WI 53202 (electronic, without attachments)
SER File

Material Handling Plan and Cap Maintenance Plan

FORMER GRAY IRON PARKING LOT
PARCEL
1502 SOUTH 83rd SREET
WEST ALLIS, WISCONSIN

JUNE 2013

Table of Contents

Introduction	1
Cap Maintenance Plan	1
Required Inspection and Repair Activities	1
Annual Cap Inspections	1
Repairs of Engineered Barriers	2
Replacement of Engineered Barriers	2
Material Handling Plan	2
Request for WDNR Approval	6
Request for Deviations	6

Figures

- 1 Site Location Map, Former Gray Iron Facility, West Allis, Wisconsin.
- 2 Aerial Extent of Cap, Former Gray Iron Facility, West Allis, Wisconsin.

Appendix

- A Cap Maintenance Inspection Form and Cap Maintenance Corrective Action Form.

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

Introduction

This Material Handling Plan and Cap Maintenance Plan are applicable to the Former Gray Iron Parking Lot Parcel located at 1502 South 83rd Street in the city of West Allis, Milwaukee County, Wisconsin ("site"). Figure 1 is a Site Location Map. Residual soil contamination remains onsite that exceed the direct contact residual contaminant levels (RCLs) for total lead and polycyclic aromatic hydrocarbons (PAHs) which resulted from historic spills and releases.

A copy of this Plan shall be kept on file in the offices of: (1) the Wisconsin Department of Natural Resources (WDNR), Southeast Region; (2) the owner of the Site, its successors and assigns (hereinafter identified collectively as the "Owner"); (3) the Site manager, if any; and (4) the Site. The Plan shall be made available by the Owner to future developers, contractors, utilities and maintenance personnel, and any other public or private persons or entities authorized to perform underground excavation work at the Site.

Cap Maintenance Plan

The cap elements which are the subject of this Plan are approved engineered barriers which may consist of buildings and concrete or asphalt pavement over the soils that exceed the direct contact RCLs. Figure 2 is a plan view which presents the location and extent of the engineered barrier requirements.

The purpose of the Cap Maintenance Plan is to describe the procedures and controls that shall be followed to maintain the function of the engineered barriers. Maintaining the function of the engineered barriers will provide continued protection of human health and the environment by minimizing potential exposure to the residual contamination.

Required Inspection and Repair Activities

The following activities will be conducted, at a minimum at the frequency specified. WDNR approval is not required to complete the activities.

Annual Cap Inspections

Not less than annually, the Site shall be inspected by the Owner to ensure that the integrity of the engineered barriers is maintained and that no significant fissures or

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

cracks develop in the gravel or concrete caps, which could allow potential exposure to the residual contamination. Disturbances of the engineered barriers or significant fissures or cracks in the gravel or concrete cap shall be noted by the Owner on the "Annual Cap Inspection Form" (attached). All inspection reports shall be maintained on file by the Owner, the Site manager, if any, and at the Site.

Repairs of Engineered Barriers

If, during the annual inspections or other routine inspections of the Site, the engineered barriers are observed to have been disturbed or significant fissures or cracks are observed in the gravel or concrete caps, the Owner shall arrange to have repairs made to such areas, in a manner consistent with this Plan. Such repairs shall be carried out within a reasonable period of time, not to exceed 120 days, subject to weather and seasonal considerations. The Owner shall document the repairs to capped areas on the "Corrective Action Form" (attached). All Corrective Action Forms shall be maintained on file by the Owner, the Property manager, if any, and at the Property. A copy of the completed Corrective Action Form shall be filed with the WDNR.

Replacement of Engineered Barriers

WDNR approval is required prior to replacement of any portion of the engineered barrier. The replaced engineered barrier shall conform to the design requirements provided in this document. Earth work required to replace the engineered barrier shall conform to the requirements given in the Material Handling Plan.

Material Handling Plan

The Material Handling Plan specifies the requirements to be followed when performing earth work, groundwater, or surface water management. These activities are generally associated with construction.

Activities Requiring WDNR Approval

The WDNR must be notified and approval obtained prior to conducting the following activities:

- 1. Construction or Installation of Buildings, Structures or Other Improvements.** Buildings, structures or other improvements may be

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis Wisconsin

constructed or installed on the Site using footings or other foundations that are placed into the area of residual contamination in the following manner:

- A) The contractor performing the work shall be provided a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.
- B) Soils that are excavated shall be separated and segregated to the extent practicable so that they may be replaced upon completion of the work. All excavated contaminated soil shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.
- C) Upon completion of the work, previously excavated soil may be backfilled, provided, however, that the backfilled soil maintains the compaction characteristics of the surrounding soil. The soil, as well as any additional clean soil or granular fill material necessary to backfill to grade, shall be backfilled in such a manner as to maintain the original depth of the contaminated soil. The backfill area shall be restored in a manner consistent with the original cap condition. If groundwater is recovered, it shall be managed and disposed of as a contaminated material in accordance with state and federal requirements.
- D) A memorandum or report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file by the Owner and the Property manager, if any, and shall be submitted to the WDNR.

2. Replacement of Engineered Barriers. If it becomes necessary or desirable to replace the engineered barrier, WDNR approval will be required and the replacement shall be undertaken in the following manner:

- A) The contractor performing the work shall be provided a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis Wisconsin

- B) Contaminated soil that is excavated shall be separated and segregated to the extent practicable so that they may be replaced upon completion of the work. Any such excavation of contaminated soil shall be conducted in accordance with the health and safety plan. All excavated contaminated soils shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.
 - C) Upon completion of the work, previously excavated soil may be backfilled, provided, however, that the backfilled soil maintains the compaction characteristics of the surrounding soil. The soil, as well as any additional clean soil or granular fill material necessary to backfill to grade, shall be backfilled in such a manner as to maintain the original depth of the contaminated soil. The backfill area shall be restored in a manner consistent with the original cap condition. If groundwater is recovered, it shall be managed and disposed of as a contaminated material in accordance with state and federal requirements.
 - D) A memorandum report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file by the Owner, the Property manager, if any, and at the Property, and shall be submitted to the WDNR.
- 3. Utility Installations or Repairs.** No utility repairs or installation of new or replacement utilities shall be conducted on the Site until after the utility and any contractor(s) for the utility have acknowledged receipt of a copy of this Plan. The utility repairs or installation(s) shall be conducted in strict conformance with the standards set forth below with respect to excavations into and/or beneath the engineered barrier, and such excavations are to be undertaken in the following manner:
- A) The contractor performing the work shall be provided with a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.
 - B) Contaminated soil that is excavated for purposes of utility installation or repair shall be separated and segregated to the extent practicable

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

so that they may be replaced upon completion of the work. All excavated contaminated soil shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.

- C) Upon completion of such work, the excavated contaminated soil may be placed back into the excavation, provided, however, that any excavated soil placed back into the excavation shall maintain the compaction characteristics of the surrounding soil. The area of the excavation shall be restored in a manner consistent with the original cap condition.
- D) Any excavation of contaminated soil beneath the engineered barriers shall be conducted in accordance with the health and safety plan. Any other soils which have been commingled, mixed or otherwise have come into contact with soils excavated from beneath the engineered barrier shall be properly characterized and managed in accordance with state law with notice to the WDNR. Any groundwater affected by such activities shall be managed in accordance with state law after notice to the WDNR.
- E) If the utility installation or construction involves any disturbance of the seals used to seal the entrance of utility lines and the structures on the Site, such seals shall be replaced with new seals of like or superior quality.
- F) A memorandum report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file with the utility, the Owner, the Site manager, if any, and at the Site and shall be filed with the WDNR.

4. **Emergency Repairs to Underground Utilities.** In emergency instances, utility repairs may be made without prior approval from the WDNR. However, the employee/worker notifications, material management procedures, and reporting requirements shall follow those given in Section 3 of the Material Handling Plan.

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis Wisconsin

- 5. Offsite Disposal of Excavated Soils.** If it becomes necessary or desirable to dispose of excavated soils from the allowed construction, repair, and installation activities, the excavation and resulting soils shall be managed in accordance with NR 718.13.

Request for WDNR Approval

The WDNR shall be notified at least five business days prior to completing work activities that require approval. The WDNR Project Manager (at the time of this submittal Mr. Stephen Mueller) shall be notified by mail or email. Mr. Mueller's contact information follows:

Mr. Stephen Mueller
Wisconsin Department of Natural Resources
Southeast Region Office
2300 North Martin Luther King Drive
Milwaukee, Wisconsin 53212
(414) 263-8531
StephenD.Mueller@wisconsin.gov

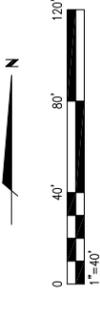
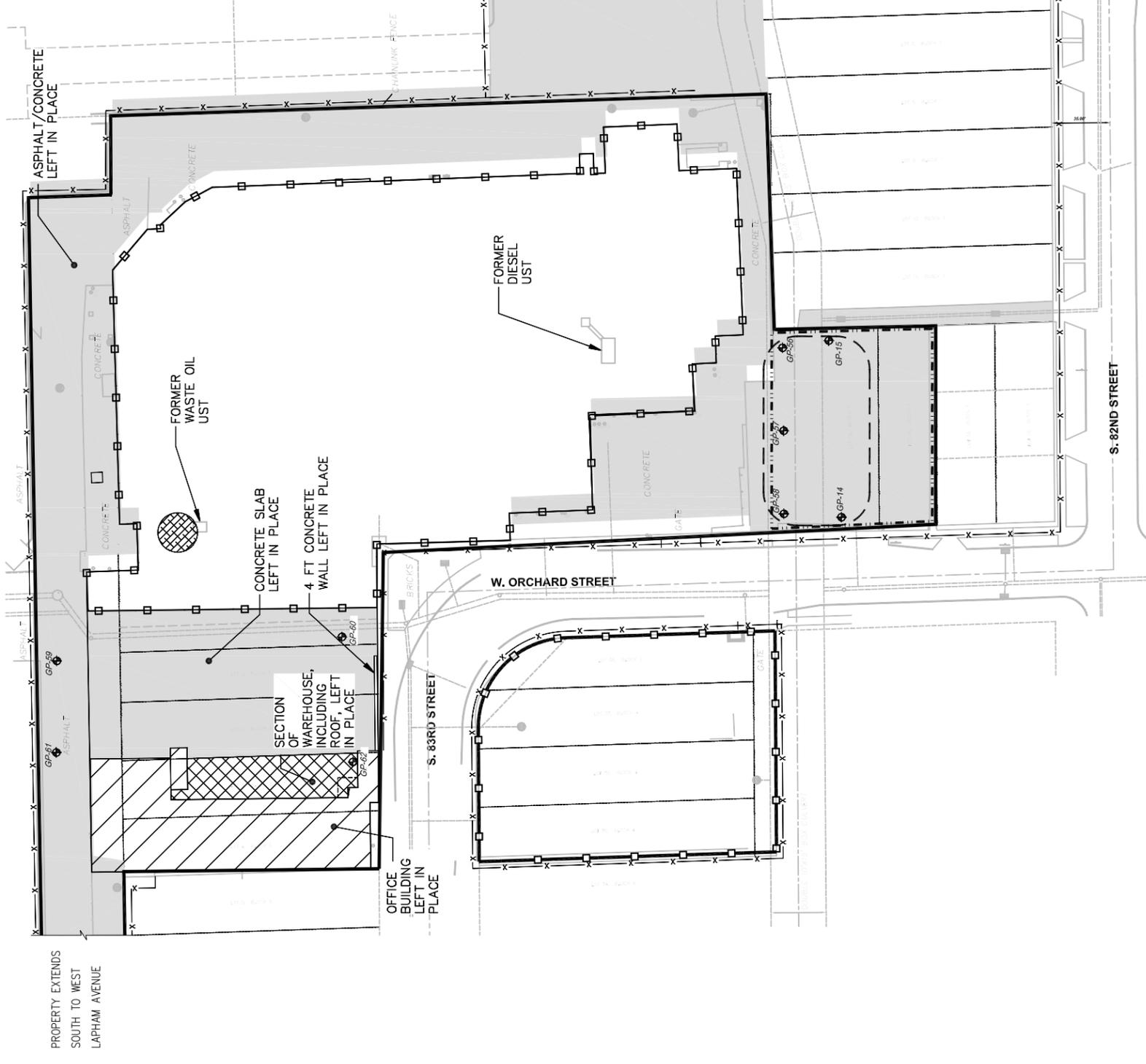
Request for Deviations

Owner shall not conduct any activities at the Site that are not in compliance with this Plan, unless written approval to do so is obtained from the WDNR.

D.5 Contact Information

Contact:

Ben Verburg
ARCADIS
126 North Jefferson Street, Suite 400
Milwaukee, WI 53202
414-276-7742



LEGEND

- DIRECT PUSH SOIL BORING
- PROPERTY LINE
- FOOT PRINT OF FORMER BUILDING
- FENCE
- OFFICE BUILDING LEFT IN PLACE
- SECTION OF WAREHOUSE, INCLUDING ROOF, LEFT IN PLACE
- ASPHALT / CONCRETE TO BE LEFT IN PLACE
- LOCATION OF SOIL CUTTINGS PILE
- EXTENT OF PROPOSED PARKING LOT PARCEL
- APPROXIMATE EXTENT OF METALS AND PAHs ABOVE GENERIC RCL NON-INDUSTRIAL DIRECT CONTACT CRITERIA.

NOTES

1. FORMER MILWAUKEE GRAY IRON 1501 S. 83RD ST. BUILDING WAS DEMOLISHED TO 6 FT BGS AND THE BASE OF ANY PIT FOUND BELOW 6 FT BGS WAS BROKEN UP FOR DRAINAGE PURPOSES. PITS WERE BACKFILLED AND COMPACTED TO SPECIFICATIONS WITH CRUSHED CONCRETE FROM THE SITE. ANY EXCESS NATIVE MATERIAL AND CRUSHED CONCRETE FROM THE SITE WAS USED TO COVER THE SITE AND DIRECT STORMWATER RUNOFF TOWARD EXISTING CATCHBASINS.
2. THE FORMER MILWAUKEE GRAY IRON OFFICE BUILDING AT 1501 S. 83RD ST., ALONG WITH A SECTION OF CONCRETE SLAB AND PORTIONS OF THE ROOF AND EAST WALL FROM THE FORMER WAREHOUSE BUILDING TO THE NORTH OF THE OFFICE WAS LEFT IN PLACE.

FORMER MILWAUKEE GRAY IRON
 WEST ALLIS, WISCONSIN
 CLOSURE REPORT

LOCATION MAP

D.4 Inspection Log

Annual Cap Inspection Form

Name of Inspector: _____

Company: _____

Date: _____

Time: _____

Weather:

Temperature _____ °F sunny cloudy windy rainy snowy

Ground Conditions: wet dry snow

Is this a scheduled inspection? yes no

If no, explain: _____

Inspection Results

Cap Condition

- Fissures or Cracking: _____
- Erosion/deterioration: _____
- Ponded water: _____
- Freeze/thaw damage: _____
- Surface disturbances from vehicles or other physical actions: _____
- Animal burrows: _____
- Other: _____

If any of the above conditions were observed, note area and explain. Sketch extent and location of observed damage below:

D.4 Inspection Log

Corrective Action Form

Report Number: _____

Date of Initial Inspection: _____

Name of Inspector: _____

Note: If Corrective Action cannot be completed within 120 days of the Initial Inspection Date, a Corrective Action Plan must be prepared and maintained in the operating record.

Corrective Action Work Order

Type of problem: _____

Required upgrade: _____

Corrective action assigned to: _____

Name

Date

Corrective Action Completion Report

Received on: _____ By: _____

Completed on: _____

Comments: _____

By: _____

Name

Date

Re-Inspection Report

Observations: _____

Comments: _____

Inspector: _____

Signature

Date

Send completed form to the Wisconsin Department of Natural Resources. Maintain maintenance records with the Property Owner, Property manager (if any), and at the Property.

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 former Gray Iron Property Parking Lot Parcel (hereinafter site) is a small parcel that is a component of the larger Gray Iron Property primarily located at 1501 South 83rd Street and 8222R West Orchard Street in the city of West Allis, Milwaukee County, Wisconsin (Figure 1). The site is located in the northeast ¼ of Section 4, Township 6 North, Range 21 East. The site is north of West Lapham Street, South of West Greenfield Avenue, west of South 82th Street, and east of 84th Street. The site is generally level. The site is a parking lot associated with the Former Gray Iron Facility

The site is part of the 84th and Greenfield Redevelopment that is comprised of several contiguous properties totaling approximately 7.7 acres:

- Former Gray Iron facility – 1501 & 1502 South 83rd Street, 4.9 acres of which 0.3 acres is the site.
- Former Mykonos Restaurant – 8201 West Greenfield Avenue, 1.8 acres.
- Residential Properties - 1427-29, 1433-35, 1443-45, 1451-53, 1459, 1463, and 1469 South 82nd Street; total of 1.0 acres.

The site is also known as the former 8222R parcel of the Former Gray Iron Facility, currently designated as the “Parking Lot”, consists of a rectangular area approximately 120 feet by 95 feet on the southern end of the former Gray Iron facility along West Orchard Street (Figure 2).

B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use.

The historical use of the site was a parking lot for the Former Gray Iron Facility. The Former Gary Iron Facility was a foundry since the early 1900s. The site was operated by Metal Technologies as an automatic green sand gray iron plant producing parts for the small engine, automotive, and other end users. The facility was shut down in June 2008. Currently the site is being redeveloped by the Community Development Authority of the City of West Allis that will include commercial buildings, parking lots, and landscaped green spaces.

C. Describe how and when site contamination was discovered.

AECOM conducted a Phase I Environmental Site Assessment (March 21, 2010) and a Phase II Environmental Site Assessment (May 28, 2010) for the site.

D. Describe the type(s) and source(s) or suspected source(s) of contamination.

Polycyclic aromatic hydrocarbons (PAHs) and Metals (lead) from general foundry operations and foundry sand. Arsenic was found in soil at background concentrations.

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

The site is being redeveloped by the Community Development Authority of the City of West Allis that will include commercial buildings, parking lots, and landscaped green spaces.

F. List BRRTS activity site name and number for all other BRRTS activities at this property, including closed cases.

None

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.**Properties Immediately Adjacent:**

Former Gray Iron Property (Waste Oil UST) 03-41-557288

Former Gray Iron Property (Diesel UST) 03-41-557527

West Allis Gray Iron 02-41-552810

West Allis Gray Iron 03-41-525254

Milwaukee Gray Iron LLC 02-41-556160

Milwaukee Gray Iron LLC 07-41-557491

Briggs & Stratton 03-41-001576

Briggs & Stratton 03-41-002252

Briggs & Stratton 05-41-291489

1501 S 83rd St 04-41-052558

Meurer Bakery 03-41-000032

Meurer Bakeries of Milwaukee 03-41-107761

Mykonos Resturant-Former 07-41-550582

Mykonos Resturant-Former 03-41-557084

Properties impacted by site:

None.

H. **Current zoning** (e.g. industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).

C-3 Community Commercial District/surrounding areas are residential or commercial verified by the City of West Allis GIS system.

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.
Asphalt underlain by fill consisting of brown to gray clay with traces of slag to approximately 4 ft bgs. Fill underlain by brown to gray silty clay to greater than 15 ft bgs.
- ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
Fill consists of brown to gray clay with traces of slag to approximately 4 ft bgs across the parcel.
- iii. Depth to bedrock, bedrock type, and whether or not it was encountered during the investigation.
No bedrock encountered. Based on regional geology bedrock consists of dolomite at a depth of 100 ft bgs or less.
- 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).
Asphalt parking lot cover.

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.
Groundwater encountered at approximately 5 ft bgs.
- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.
Not Applicable. No monitoring wells installed.
- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.
Not Applicable. No monitoring wells installed.
- iv. Identify and describe locations/distance of potable and/or municipal Wells within 1200 feet of the site.
None.

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.

In March 2010, AECOM conducted a Phase I Environmental Site Assessment (ESA) on the former Gray Iron property. Based on the results of the Phase I ESA, Phase II ESA investigation activities were completed on the property in April 2010. The investigation activities included a geophysical survey and completion of 23 direct push soil borings (GP-1 to GP-23) to depths of approximately 16 feet below ground surface (ft bgs) and placement of temporary groundwater monitoring wells in each soil boring. Of these soil borings, two are on the Parking Lot parcel (GP-14 and GP-15). Forty-six soil samples were collected from the soil borings and analyzed for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAH), and resource conservation and recovery act (RCRA) metals. The soil samples from GP-14 and 15 are representative of the Parking Lot parcel.

In addition, 13 soil samples were collected for analysis of polychlorinated biphenyls (PCBs), although none of these were from the Parking Lot parcel. Twenty-two groundwater samples were collected from the temporary monitoring wells and analyzed for VOCs. The groundwater samples from GP-14 and 15 are representative of the Parking Lot parcel.

In 2011, ARCADIS became involved with the 84th and Greenfield Redevelopment and the site. In July 2012, ARCADIS completed three additional direct push soil borings (GP-56 to GP-58) on the site. Three soil samples were collected from the soil borings for analyses of VOCs, PAH, and RCRA metals.

Other reports include:

Phase I Environmental Site Assessment Report, Former Gray Iron Site, 1501 and 1502 South 83rd Street, West Allis, WI, AECOM, March 21, 2010.

Phase II Environmental Site Assessment Report, Former Gray Iron Site, 1501 and 1502 South 83rd Street, West Allis, WI, AECOM, May 28, 2010.

Remedial Action Plan/Design Report, Former Gray Iron Site, 1501 South 83rd Street and 8222R West Orchard Avenue, West Allis, WI, AECOM, June 20, 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.
Contamination confined to source property boundary.
- 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.

No impediments to site investigation. Asphalt parking lot over the parcel serves as a performance standard barrier.

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.

Soil contamination consists of PAHs and metals in soil defined by five geoprobe locations (GP-14, GP-15, GP-56, GP-57, GP-58) in an area approximately 100 ft by 60 ft to a depth generally less than 6 ft bgs. The contamination is the result of previous foundry operations. Direct contact on the site is the primary pathway identified. Several metals were present at concentrations above the groundwater pathway standard.

- ii. Describe the level and types of **soil contaminants** found in the upper four feet of the soil column.

The analytical results from the soil samples collected from Soil Borings GP-14, GP-15, GP-56, GP-57, and GP-58 indicated the presence of some metals and PAH in concentrations above the generic RCLs for industrial and non-industrial direct contact. The PAH constituents included benzo(a)anthracene (248-510 micrograms per kilogram (ug/kg)), benzo(a)pyrene (26.5-460 ug/kg), benzo(b)fluoranthene (370-680 ug/kg), dibenzo(a,h)anthracene (46-81 ug/kg), and indeno (1,2,3-cd)pyrene (149-274 ug/kg). All other PAH constituents detected were at concentrations below the generic RCLs for direct contact. The PAH concentrations detected were generally in the interval from 2-4 ft bgs.

The metal constituents above the generic RCLs included arsenic (1.3-9.6 milligrams per kilogram (mg/kg)) and lead (59.7-130 mg/kg). All other metal constituents detected were at concentrations below the generic RCLs for direct contact. Arsenic (1.3-9.6 mg/kg) and selenium (6.2-6.8 mg/kg) were above the groundwater pathway standards.

- 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 VOC and metal results were compared to the generic Residual Contamination Levels (RCLs) calculated using the US EPA Soil Screening Level Web Page and the default values contained in "Determining Residual Contamination Levels using the EPA Soil Screening Level Web Site" - WDNR Pub-RR-682, in accordance with Wisconsin Administrative Code (WAC) Chapter (ch.) NR720. Soil PAH results were compared to the recommended generic RCLs provided in "Soil Cleanup Levels for PAH Interim Guidance", WDNR PUB-RR-519-97, also in accordance with WAC Ch. NR 720.

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.

Not Applicable, groundwater was not part of the Site investigation.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations.

Not Applicable, groundwater was not part of the Site investigation and product was never observed in the soil borings.

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.

Not Applicable. Historical investigation work at the Former Gray Iron Facility indicates that contamination is limited to PAHs and metals.

- 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).

Not Applicable, vapor was not assessed as part of this investigation.

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.

Not Applicable, there are no areas of surface water or sediment near the Site.

- 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.

Not Applicable, there are no areas of surface water or sediment near the Site.

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.

The remediation objective for the Parking Lot parcel is to mitigate direct contact with contaminated soil. The remedy for PAH/metal-affected soil at the parking lot parcel consisted of the following elements:

- Use of the existing site features as an engineered barrier to reduce direct contact with residual constituents in soil.
- A cap maintenance plan and soil management plan to manage residual constituents in soil.
- Recording of the site on the WDNR Geographic Information System (GIS) registry of closed sites.

A similar remediation objective is being undertaken for other parcels of the former Gray Iron property adjacent to the parking lot parcel.

"Remedial Action Plan/Design Report, Former Gray Iron Site, 1501 South 83rd Street and 8222R West Orchard Avenue, West Allis, WI", AECOM, June 20,2011.

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

None.

- 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.

None

- 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.

Some metals and PAH in concentrations above the generic RCLs for non-industrial direct contact will remain at the site. The PAH constituents included benzo(a)anthracene (248-510 micrograms per kilogram (ug/kg)), benzo(a)pyrene (26.5-460 ug/kg), benzo(b)fluoranthene (370-680 ug/kg), dibenzo(a,h)anthracene (46-81 ug/kg), and indeno (1,2,3-cd)pyrene (149-274 ug/kg). All other PAH constituents detected were at concentrations below the generic RCLs for direct contact. The PAH concentrations detected were generally in the interval from 2-4 ft bgs.

The metal constituents above the generic RCLs included arsenic (1.3-9.6 milligrams per kilogram (mg/kg)) and lead (59.7-130 mg/kg). However the arsenic is attributable to background. The soil at the Site consists of backfill material and no other constituents of concern are present to indicate a release. All other metal constituents detected were at concentrations below the generic RCLs for direct contact. Selenium (6.2-6.8 mg/kg) were above the groundwater pathway standards.

The extent is an area approximately 100 ft by 60 ft to a depth generally less than 6 ft bgs, limited to the site.

- 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.

The analytical results from the soil samples collected from Soil Borings GP-14, GP-15, GP-56, GP-57, and GP-58 indicated the presence of some metals and PAH in concentrations above the generic RCLs for industrial and non-industrial direct contact. The PAH constituents included benzo(a)anthracene (248-510 micrograms per kilogram (ug/kg)), benzo(a)pyrene (26.5-460 ug/kg), benzo(b)fluoranthene (370-680 ug/kg), dibenzo(a,h)anthracene (46-81 ug/kg), and indeno (1,2,3-cd)pyrene (149-274 ug/kg). All other PAH constituents detected were at concentrations below the generic RCLs for direct contact. The PAH concentrations detected were generally in the interval from 2-4 ft bgs.

The metal constituents above the generic RCLs included arsenic (1.3-9.6 milligrams per kilogram (mg/kg)) and lead (59.7-130 mg/kg). All other metal constituents detected were at concentrations below the generic RCLs for direct contact.

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

Arsenic in concentrations ranging from 1.3 to 9.6 mg/kg and Selenium in concentrations ranging from 6.2-6.8 mg/kg.

- 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.

The remediation objective for the site is mitigation of direct contact with contaminated soil. The remedy for PAH/metal-affected soil at the parking lot parcel consisted of the following elements:

- Use of the existing site features as an engineered barrier to reduce direct contact with residual constituents in soil.
- A cap maintenance plan and soil management plan to manage residual constituents in soil.
- Recording of the site on the WDNR Geographic Information System (GIS) registry of closed sites.

A similar remediation objective is being undertaken for other parcels of the former Gray Iron property adjacent to the parking lot parcel.

- 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, there was no groundwater investigation at this Site.

- 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 only exposure pathway for the Site is through direct contact. this pathway has been removed through the use of a cap and soil management plan.

- J. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
No system hardware will be left on the Site.

- 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.

Not Needed.

- 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.

Not Needed.

BRRTS No.

Activity (Site) Name

- 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 Needed.

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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Engineering Control/Barrier for Direct Contact	✓	✓
ii.	<input type="checkbox"/>	<input type="checkbox"/>	Engineering Control/Barrier for Groundwater Infiltration	✓	✓
iii.	<input type="checkbox"/>	<input type="checkbox"/>	Vapor Mitigation - post closure passive system	✓	✓
iv.	<input type="checkbox"/>	<input type="checkbox"/>	Vapor Mitigation - post closure active system	✓	✓
v.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination exceeds ch. NR 720 generic or site-specific RCLs	✓
ii.	<input type="checkbox"/>	<input type="checkbox"/>	Sites with groundwater contamination equal to or greater than the ch. NR 140, enforcement standards (ES)	✓
iii.	<input type="checkbox"/>	<input type="checkbox"/>	Monitoring wells: lost, transferred or remaining in use	✓
iv.	<input type="checkbox"/>	<input type="checkbox"/>	Structural Impediment (not as a performance standard)	✓
v.	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination remaining at ch. NR 720 Industrial Use levels	✓
vi.	<input type="checkbox"/>	<input type="checkbox"/>	Vapor intrusion may be future, post-closure issue if building use or land use changes	✓
vii.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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):** Table(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 Contaminant 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.

Notification 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/r/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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual groundwater contamination exceeds Ch. NR 140 Wis. Administrative Code enforcement standards.
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An engineered cover or a soil barrier (e.g. pavement) must be maintained over contaminated soil for direct contact or groundwater infiltration concerns.
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Industrial land use soil standards were used for the clean-up standard.
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A vapor mitigation system (or other specific vapor protection) must be operated and maintained.
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vapor assessment needed if use changes.
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structural impediment.
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lost, transferred or open monitoring wells.
9.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	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, _____ (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.

[X] 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, Ben Verburg 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."

Ben Verburg

Printed Name

Principal Engineer

Title BENJAMIN J. VERBURG

31794

MAUIWATOSA

P.E. Stamp and Number

[Handwritten Signature]

Signature

2-5-2014

Date

Hydrogeologist Certification

I, _____ 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."

Printed Name

Title

Signature

Date

Attachment A Data Tables

Attachments:

- A.1 Groundwater Analytical Tables - Included
- A.2 Pre-Remedial Soil Analytical Tables - Included
- A.3 Post-Remedial Soil Analytical Tables - Included
- A.4 Pre and Post Remaining Soil Contamination Soil Analytical Tables - Included
- A.5 Vapor Analytical Table – Not included. There is no risk for vapor migration at the Site so no vapor analytical samples were collected.
- A.6 Other Media of Concern – Not included. There are no other medias of concern at the Site.
- A.7 Water Level Elevations – Not Included. There are no monitoring wells at the Site.
- A.8 Other – Not included. There is no calculated natural attenuation data needed for the Site. There are no historical system operations at the Site or any other relevant data tables.

A.1. Groundwater Analytical



ORGANICS
GROUNDWATER LABORATORY ANALYTICAL RESULTS
Former Gray Iron Facility
1501 South 83rd Street
West Allis, Wisconsin
AECOM Project 60139814

Parameters	ES ¹	PAL ²	GP-1	GP-2	GP-3	GP-4	GP-6	GP-7	GP-8	GP-9	GP-10	GP-11	GP-12	GP-13
			04/29/10	04/29/10	04/29/10	04/29/10	04/21/10	04/29/10	04/21/10	04/21/10	04/29/10	04/21/10	04/21/10	04/21/10
VOCs (µg/kg)														
Acetone	1,000	200	14J *	31J *	<8.9	33J *	<8.9	<8.9	<8.9	14J *	9.4J *	25J *	9J *	<8.9
sec-Butylbenzene	—	—	<0.22	<0.22	<0.22J5, J3	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.46J	<0.22	<0.22
1,1-Dichloroethane	850	85	<0.31	<0.31	<0.31J3	<0.31	<0.31	0.54J	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31
Toluene	1,000	200	<0.27	<0.27	<0.27J3	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
1,1,1-Trichloroethane	200	40	<0.27	<0.27	<0.27J3	<0.27	1.9	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27

Parameters	ES ¹	PAL ²	GP-14	GP-15	GP-16	GP-17	GP-18	GP-19	GP-20	GP-21	GP-22	GP-23	GP-13 FD	GP-18FD	Trip Blank
			04/29/10	04/29/10	04/21/10	04/21/10	04/29/10	04/29/10	04/21/10	04/21/10	04/29/10	04/21/10	04/21/10	04/21/10	04/21/10
VOCs (µg/kg)															
Acetone	1,000	200	<8.9	19 J *	16 J *	<8.9	14J *	15 J *	<8.9	12 J *	<8.9	<8.9 J3	<8.9	13J *	<0.22
sec-Butylbenzene	—	—	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22 J3	<0.22	<0.22	<0.31
1,1-Dichloroethane	850	85	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31 J3	<0.31	<0.31	<0.27
Toluene	1,000	200	<0.27	<0.27	0.36 J	0.33 J	<0.27	1.8 J	<0.27	<0.27	<0.27	<0.27 J3	<0.27	<0.27	<0.27
1,1,1-Trichloroethane	200	40	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27 J3	<0.27	<0.27	<0.27

Notes:

VOCs = Volatile Organic Compounds

— No toxicity criteria established for analyte.

* = Probable laboratory contaminant.

¹ Wisconsin Administrative Code Chapter NR 140 Enforcement Standard (January 2008).

² Wisconsin Administrative Code Chapter NR 140 Preventive Action Limit (January 2008).

J = (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

J3 = The associated batch QC was outside the established quality control range for precision.

**A.2. Pre-Remedial Soil Analytical
ORGANICS
SOIL LABORATORY ANALYTICAL RESULTS**
Former Gray Iron Facility
1501 South 83rd Street
West Allis, Wisconsin
AECOM Project 60139814



Parameters	Generic RCLs				Groundwater Pathway	GP-12	GP-12	GP-13	GP-13	GP-14	GP-14	GP-15	GP-15	GP-16	GP-16	GP-17	GP-17	GP-18	GP-18	GP-19	GP-19	GP-20	GP-20	GP-21	GP-21	GP-22	GP-22
	Direct Contact (Ingestion)		Direct Contact (Volatile Inhalation)			4-6FT	8-10FT	2-4FT	8-6FT	0.5-2.0FT	8-10FT	2-4FT	8-6FT	2-4FT	8-10FT	1.3-3.5FT	8-6FT	2-4FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT
	Non-Industrial	Industrial	Non-Industrial	Industrial		04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10
PID					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil Type					Clay	Clay	Fill	Clay	Clay	Clay	Fill	Clay	Clay	Clay	Clay	Fill	Clay	Fill/Fnd Sand	Clay	Clay							
VOCs (µg/kg)					533	<850	1100 J *	<830	1100 J *	<850	<840	<1100	<840	<850	<850	<990	<850	<860	<870	<840	<860	<860	<850	<860	<850	<860	<870
Acetone	14,100,000	920,000,000	140,000,000	140,000,000	—	<12	<12	<12	<12	<12	<15	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	
n-Butylbenzene	—	—	—	—	—	<10	<9.9	<9.8	<9.9	<10	<9.9	<12	<9.9	<10	<9.9	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
sec-Butylbenzene	—	—	—	—	—	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	
Chloromethane	4,910	220,000	410	6,900	1.0	<28	<28	<28	<28	<28	<35	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	
1,1-Dichloroethane	3,130,000	204,000,000	490,000	1,800,000	349	<13	<13	<13	<13	<13	<16	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	
Ethylbenzene	1,560,000	102,000,000	—	—	2,900	<11	<11	<11	<11	<11	<14	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	
p-Isopropyltoluene	—	—	—	—	—	<8.7	<8.6	<8.5	<8.6	<8.7	<8.6	<11	<8.6	<8.7	<8.6	<8.7	<8.6	<8.7	<8.6	<8.8	<8.8	<8.7	<8.8	<8.7	<8.8	<8.9	
2-Butanone	9,390,000	613,000,000	19,000,000	32,000,000	245	480 J, J4 *	530 J, J4 *	420 J, J4 *	680 J4 *	<130	<130	<170	<130	<130	<130	<130	<130	<160	<130	<140	<130	<140	<130	<140	<130	<140	
Naphthalene	60,000	4,000,000	65,000	460,000	400	<20	<20	<19	<20	<20	<25	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
n-Propylbenzene	—	—	—	—	—	<10	<9.8	<9.8	<9.8	<10	<9.8	<12	<9.8	<10	<9.8	<10	<9.8	<10	<10	<10	<10	<10	<10	<10	<10	<10	
1,1,1,2-Tetrachloroethane	2,460	110,000	1,300	21,000	157	<10	<9.8	<9.8	<9.8	<10	<9.8	<12	<9.8	<10	<9.8	<10	<9.8	<10	<10	<10	<10	<10	<10	<10	<10	<10	
1,1,1-Trichloroethane	3,130,000	204,000,000	1,200,000	1,200,000	280	<26	<26	<25	<26	<26	<32	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	
1,2,3-Trimethylbenzene ¹	782,000	51,100,000	47,000	330,000	7,573	<8.5	<8.4	<8.3	<8.4	<8.5	<8.4	<11	<8.4	<8.5	<8.4	<8.5	<8.5	<8.5	<8.5	<8.6	<8.7	<8.4	<8.6	<8.6	<8.5	<8.6	
1,3,5-Trimethylbenzene ¹	782,000	51,100,000	—	—	—	<10	<9.8	<9.8	<9.8	<10	<9.8	<12	<9.8	<10	<9.8	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Xylenes, total	313,000	204,000,000	270,000	1,900,000	4,100	<23	<23	<22	<23	<23	<23	<29	<23	<23	<23	<23	<23	<27	<23	<23	<23	<23	<23	<23	<23	<23	
PAHs (µg/kg) 2					38,000	<11	<11	<11	<11	<11	<11	<11	<11	15 J	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	
Acenaphthene	900,000	60,000,000	—	—	700	<11	<11	<11	<11	<11	<11	<11	<11	110	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	
Acenaphthylene	18,000	360,000	—	—	3,000,000	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	64	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	
Anthracene	5,000,000	300,000,000	—	—	17,000	<7.7	<7.7	<7.7	<7.7	<7.7	<7.7	<7.7	<7.7	22 J	<7.7	<7.7	<7.7	<7.7	52	<7.7	<7.7	<7.7	<7.7	<7.7	<7.7	<7.7	
Benzo(a)anthracene	88	3,900	—	—	48,000	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4	92	<7.4	<7.4	<7.4	<7.4	43	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4	
Benzo(a)pyrene	8.8	390	—	—	360,000	<7.8	<7.8	35 J	<7.8	9.5 J	<7.8	<7.8	<7.8	150	<7.8	<7.8	<7.8	<7.8	92	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8	
Benzo(b)fluoranthene	8.8	390	—	—	6,800,000	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	16 J	<9.5	<9.5	<9.5	<9.5	14 J	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	
Benzo(g)herylene	1,800	39,000	—	—	870,000	<12	<12	<12	<12	<12	<12	<12	<12	44	<12	<12	<12	<12	27 J	<12	<12	<12	<12	<12	<12	<12	
Benzo(k)fluoranthene	880	39,000	—	—	37,000	<9.1	<9.1	<9.1	<9.1	<9.1	<9.1	<9.1	<9.1	97	<9.1	<9.1	<9.1	<9.1	45	<9.1	<9.1	<9.1	<9.1	<9.1	<9.1	<9.1	
Chrysene	8,800	390,000	—	—	38,000	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	
Dibenzo(a,h)anthracene	8.8	390	Not Volatile	Not Volatile	500,000	<7.9	<7.9	17 J	<7.9	23 J	<7.9	18 J	<7.9	280	<7.9	<7.9	<7.9	<7.9	62	<7.9	57	<7.9	<7.9	<7.9	<7.9	<7.9	
Fluoranthene	600,000	40,000,000	—	—	100,000	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	42	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	
Pyrene	600,000	40,000,000	—	—	680,000	<11	<11	<11	<11	<11	<11	<11	<11	19 J	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	
Indeno(1,2,3-cd)pyrene	88	3,900	—	—	400	<16	<16	<16	<16	<16 J4, J3	<16 J4, J3	<16 J4, J3	<16 J4, J3	<16 J4, J3	<16 J4, J3	<16 J4, J3	<16 J4, J3	<16 J4, J3									
Naphthalene	20,000	110,000	—	—	1,800	<7.3	<7.3	24 J	<7.3	10 J	<7.3	8.7 J	<7.3	250	<7.3	<7.3	<7.3	<7.3	50	<7.3	26 J	<7.3	<7.3	<7.3	<7.3	<7.3	
Phenanthrene	18,000	390,000	—	—	8,700,000	<8.9	<8.9	15 J	<8.9	18 J	<8.9	15 J	<8.9	180	<8.9	<8.9	<8.9	<8.9	61	<8.9	42	<8.9	<8.9	<8.9	<8.9	<8.9	
Pyrene	500,000	30,000,000	—	—	—	NS	NS	<34.8	<34.8	NS	NS	NS	NS	NS	NS	NS	NS	NS									
PCBs	—	—	—	—	—	NS	NS	<34.8	<34.8	NS	NS	NS	NS	NS	NS	NS	NS	NS									

Notes:
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
PCBs = Polychlorinated Biphenyls (included individual analysis of isomers 1016, 1221, 1232, 1242, 1248, 1254, 1260)
* = Probable laboratory contaminant.
¹ Standards are for 1,2,4- and 1,3,5-Trimethylbenzene combined.
² Generic RCLs provided in Soil Cleanup Levels for PAHs Interim Guidance, WDNR RR-5 1997
Outlined values exceed NR 720 Generic RCL for Non-Industrial Direct Contact.
Outlined and *italics* values exceed NR 720 Generic RCL for Industrial Direct Contact.
Bold values exceeds NR 720 Generic RCL for Groundwater Pathway.
— No Generic RCL established.
Generic RCLs not included in Wisconsin Administrative Code or Guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in *Determining Residual Contaminant Levels using the EPA Soil Screening Level Web Site* WDNR PUB-RR-682 on May 12, 2006
NA = Not analyzed
NS = Analyte not sampled.
J = (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3 = The associated batch QC was outside the established quality control range for precision.
J4 = The associated batch QC was outside the established quality control range for accuracy.
J8 = The internal standard associated with this data responded abnormally low. The data is likely to show a high bias concerning the result.
O = (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

A.2. Pre-Remedial Soil Analytical
 INORGANICS
 SOIL LABORATORY ANALYTICAL RESULTS
 Former Gray Iron Facility
 1501 South 83rd Street
 West Allis, Wisconsin
 AECOM Project 60139814

Parameters	Generic RCLs			GP-1	GP-1	GP-2	GP-2	GP-3	GP-3	GP-4	GP-4	GP-5	GP-5	GP-6	GP-6	GP-7	GP-7	GP-8	GP-8	GP-9	GP-9	GP-10	GP-11	GP-11
	Direct Contact (Ingestion)		Groundwater Pathway	2-4FT	8-10FT	2-4FT	8-10FT	4-6FT	10-12FT	2-4FT	8-10FT	0.5-2.0FT	8-10FT	0.5-2.0FT	8-10FT	10-12FT	2-4FT	2-4FT	8-10FT	4-6FT	8-10FT	0.5-2FT	4-5FT	8-10FT
	Non-Industrial	Industrial		04/20/10	04/20/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/20/10
PID	--			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil Type	--			Fill	Clay	Fill	Clay	Clay	Clay	Fill/Fnd Sand	Clay	Fill/Fnd Sand	Fill/Fnd Sand	Fill/Fnd Sand	Fill	Fill	Clay	Fill/Fnd Sand	Clay	Clay	Clay	Fill/Fnd Sand	Fill	Clay
Metals (mg/kg)				0.012 J	<0.010	0.026	0.013 J	0.018 J	0.013 J	0.021 J	<0.010	0.028	0.08	<0.010	0.018 J, J3, P1	0.014 J	<0.010	<0.010	0.015 J	<0.010	0.029	<0.010	0.012 J	0.012 J
Mercury	2.9 ¹	2.9 ¹	0.02	3.2	3.5	7.7	6.7	5.2 J	7	1.8	4.6	18	7.7	<1.6 O	6	5 J	70	5.4	70	6.8	6	2.7	4.4	4.4
Arsenic	0.039	1.6	0.58	53	53	25	53	62	72	240	120	68	70	21	16	87	31	44	38	56	46	56	7.4	61
Barium	3,130	204,000	330	<0.20 O	<0.20 O	0.24 J	<0.040	0.43	0.45	2.5	<0.20 O	4.2	1.4	0.42	0.32	<0.20 O	0.32	<0.20 O	<0.340	14	20	19	16	<0.20 O
Cadmium	15.6	510	1.5	21	20	7.4	18	28	25	36	30	35	20	31	12	27	7.4	<0.85 O	14	20	19	16	4.6	26
Chromium	16,000	NA	360	11	11	32	7.3	6.1	6.6	130	17	32	23	4.4	19	6.4	4.2	21	5.4	8.5	7.2	110	7.4	13
Lead	50	500	--	<0.32	<0.32	<0.32	2.3 J	5.9	5.8	<0.32	<0.32	50	6.5	15	4.6	6.2	4.2	<3.2 O	<0.32	<1.6 O	<1.6 O	<0.32	<0.32	<0.32
Selenium	78.2	5,110	1	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	0.79	0.35 J	5	0.21 J	1.2	<0.16	<0.16	<0.16	<0.82 O	<0.16	<0.16	<0.16	0.44 J	<0.16	<0.16
Silver	78.2	5,110	1.7																					

Parameters	Generic RCLs			GP-12	GP-12	GP-13	GP-13	GP-14	GP-14	GP-15	GP-15	GP-16	GP-16	GP-17	GP-17	GP-18	GP-18	GP-19	GP-19	GP-20	GP-20	GP-21	GP-21
	Direct Contact (Ingestion)		Groundwater Pathway	4-6FT	8-10FT	2-4FT	6-8FT	0.5-2.0FT	8-10FT	2-4FT	6-8FT	2-4FT	8-10FT	1.3-3.5FT	6-8FT	2-4FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT	2-4FT	6-8FT
	Non-Industrial	Industrial		04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10
PID	--			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil Type	--			Clay	Clay	Fill	Clay	Clay	Clay	Fill	Clay	Clay	Clay	Fill	Clay	Fill/Fnd Sand	Clay						
Metals (mg/kg)				0.013 J, P1	<0.010	0.02 J	<0.010	0.013 J	<0.010	<0.010	<0.010	0.014 J	0.013 J	<0.010	0.012 J	0.015 J	<0.010	0.027	<0.010	<0.010	<0.010	<0.010	0.013 J
Mercury	2.9 ¹	2.9 ¹	0.02	7.7	7.7	3.8	2.6	9.3	7.7	6	9.6	7.7	7.7	8	6.3	4.5	6	3.3	4.4	4.8	5.4	6.7	6.7
Arsenic	0.039	1.6	0.58	38	51	50	16	67	68	7.2	82	65	88	130	95	26	64	32	49	50	56	71	65
Barium	3,130	204,000	330	<0.040	<0.040	<0.20 O	<0.20 O	0.39	0.43	0.19 J, J3	0.49	0.41	0.46	0.4	0.48	0.31	0.22 J	<0.20 O	0.49	0.22 J	0.22 J	<0.20 O	<0.040
Cadmium	15.6	510	1.5	14	19	20	7.4	22	27	3.6 P1	28	26	24	27	26	7.1	20	17	19	18	18	27	27
Chromium	16,000	--	360	6.3	7.8	24	8.8	6.5	6.5	2.4	9.1	6.7	6.2	6.5	6.5	27	8.5	15	12	7.8	7.1	14	14
Lead	50	500	--	2.4 J, P1	<1.6 O	<0.32	<0.32	6.6	6.2	4.4	6.8	7.1	6.6	6.5	6.9	<0.32	<1.6 O	<0.32	<1.6 O	<1.6 O	<1.6 O	27	19
Selenium	78.2	5,110	1	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	0.3 J	<0.16	<0.16	<0.16	<0.16	<0.16
Silver	78.2	5,110	1.7																				

Parameters	Generic RCLs			GP-22	GP-22	GP-23	GP-23	GP-3 DUP	GP-4 DUP
	Direct Contact (Ingestion)		Groundwater Pathway	2-4FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT
	Non-Industrial	Industrial		04/20/10	04/20/10	04/19/10	04/19/10	04/19/10	04/20/10
PID	--			0	0	0	0	0	0
Soil Type	--			Clay	Clay	Clay	Clay		
Metals (mg/kg)				0.012 J	<0.010	0.026	0.013 J	0.013 J	0.018 J
Mercury	2.9 ¹	2.9 ¹	0.02	3.2	3.5	7.7	6.7	7	5.2 J
Arsenic	0.039	1.6	0.58	53	53	25	53	72	62
Barium	3,130	204,000	330	<0.20 O	<0.20 O	0.24 J	<0.040	0.45	0.43
Cadmium	15.6	510	1.5	21	20	7.4	18	25	28
Chromium	16,000	--	360	11	11	32	7.3	6.6	6.1
Lead	50	500	--	<0.32	<0.32	<0.32	2.3 J	5.8	5.9
Selenium	78.2	5,110	1	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Silver	78.2	5,110	1.7						

Notes:
¹ Value protective of the inhalation pathway.
 Outlined values exceed NR 720 Generic RCL for Non-Industrial Direct Contact.
 Outlined and *italics* values exceed NR 720 Generic RCL for Industrial Direct Contact.
 Bold values exceeds NR 720 Generic RCL for Groundwater Pathway.
 -- No Generic RCL established.
 Generic RCLs not included in Wisconsin Administrative Code or Guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in *Determining Residual Contaminant Levels using the EPA Soil Screening Level Web Site* WDNR PUB-RR-682 on May 12, 2006
 J = (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
 J3 = The associated batch QC was outside the established quality control range for precision.
 J6 = The sample matrix interfered with the ability to make any accurate determination; spike value is low
 O = (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
 P1 = RPD value not applicable for sample concentrations less than 5 times the reporting limit.



Table A.2. Pre-remedial Soil Analytical, Parking Lot Parcel, Former Gray Iron Site, West Allis, Wisconsin.

Sample Name	Generic RCLs			GP-56	GP-57	GP-58
	Direct Contact Non-Industrial	Direct Contact Industrial	Groundwater Pathway	2-3' 07/13/12	2-3' 07/13/12	3-4' 07/13/12
PAH (µg/kg)						
Acenaphthene	900,000	60,000,000	38,000	32 J	26.2 J	<16.4
Acenaphthylene	18,000	360,000	700	51 J	40 J	<21
Anthracene	5,000,000	300,000,000	3,000,000	141	77	<18.9
Benzo(a)anthracene	88	3,900	17,000	510	248	42 J
Benzo(a)pyrene	8.8	390	48,000	460	233	26.5 J
Benzo(b)fluoranthene	88	3,900	360,000	680	370	42 J
Benzo(g,h,i)perylene	1,800	39,000	6,800,000	320	182	27.6 J
Benzo(k)fluoranthene	880	39,000	870,000	211	114	<18
Chrysene	8,800	390,000	37,000	550	259	38 J
Dibenzo(a,h)anthracene	8.8	390	38,000	81	46 J	<24.4
Fluoranthene	600,000	40,000,000	500,000	1,170	520	73
Fluorene	600,000	40,000,000	100,000	50 J	20.8 J	<20.3
Indeno(1,2,3-cd)pyrene	88	3,900	680,000	274	149	<23.7
Phenanthrene	18,000	390,000	1,800	570	223	42 J
Pyrene	500,000	30,000,000	8,700,000	930	440	62 J
Metals (mg/kg)						
Arsenic, Total	0.039	1.6	0.58	2.1 J	<0.72	1.3 J
Lead, Total	50	500	--	59.7	<1.5	6.02
Solids Percent	--	--	--	82.3	86.3	87.7

Generic RCLs not included in Wisconsin Administrative Code or guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in "Determining Residual Contaminant Levels using the US EPA Soil Screening Level Web Site" - WDNR PUB-RR-682 on May 12, 2006

Only detected constituents are shown

100 Exceeds Industrial Direct Contact.

100 Exceeds Groundwater Pathway.

-- No generic RCL established.

J Estimated value below the lowest calibration point.

µg/kg Micrograms per kilogram.

mg/kg Milligrams per kilogram.

PAH Polynuclear Aromatic Hydrocarbons

A.3 Post-remedial Soil Analytical

ORGANICS SOIL LABORATORY ANALYTICAL RESULTS Former Gray Iron Facility 1501 South 83rd Street West Allis, Wisconsin AECOM Project 60139814

AECOM

Parameters	Generic RCLs					GP-12	GP-12	GP-13	GP-13	GP-14	GP-14	GP-15	GP-15	GP-16	GP-16	GP-17	GP-17	GP-18	GP-18	GP-19	GP-19	GP-20	GP-20	GP-21	GP-21	GP-22	GP-22
	Direct Contact (Ingestion)		Direct Contact (Volatile Inhalation)		Groundwater Pathway	4-6FT	8-10FT	2-4FT	6-8FT	0.5-2.0FT	8-10FT	2-4FT	6-8FT	2-4FT	8-10FT	1.3-3.5FT	6-8FT	2-4FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT	2-4FT	6-8FT	4-6FT	10-12FT
	Non-Industrial	Industrial	Non-Industrial	Industrial		04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10
PID						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil Type						Clay	Clay	Fill	Clay	Clay	Clay	Fill	Clay	Clay	Clay	Fill	Clay	Clay	Fill/Fnd Sand	Clay							
VOCs (µg/kg)																											
Acetone	14,100,000	920,000,000	140,000,000	140,000,000	533	<850	1100 J *	<830	1100 J *	<850	<840	<1100	<840	<850	<840	<850	<850	<850	<990	<850	<860	<870	<840	<860	<850	<850	<870
n-Butylbenzene	—	—	—	—	—	<12	<12	<12	<12	<12	<12	<15	<12	<12	<12	<12	<12	<12	<14	<12	<12	<12	<12	<12	<12	<12	<12
sec-Butylbenzene	—	—	—	—	—	<10	<9.9	<9.8	<9.9	<10	<9.9	<12	<9.9	<10	<9.9	<10	<10	<10	<12	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	3,130,000	204,000,000	490,000	1,800,000	349	<28	<28	<28	<28	<28	<28	<35	<28	<28	<28	<28	<28	<28	<32	<28	<28	<28	<28	<28	<28	<28	<28
1,1-Dichloroethane	1,560,000	102,000,000	400,000	400,000	2,900	<11	<11	<11	<11	<11	<11	<14	<11	<11	<11	<11	<11	<11	<13	<11	<11	<11	<11	<11	<11	<11	<11
Ethylbenzene	—	—	—	—	—	<8.7	<8.6	<8.5	<8.6	<8.7	<8.6	<11	<8.6	<8.7	<8.6	<8.7	<8.7	<8.7	<10	<8.7	<8.8	<8.6	<8.8	<8.8	<8.7	<8.8	<8.9
p-Isopropyltoluene	9,390,000	613,000,000	19,000,000	32,000,000	245	480 J, J4 *	530 J, J4 *	420 J, J4 *	880 J4 *	<130	<130	<170	<130	<130	<130	<130	<130	<130	<160	<130	<140	<130	<140	<140	<130	<140	<140
2-Butanone	60,000	4,000,000	65,000	460,000	400	<20	<20	<19	<20	<20	<20	<25	<20	<20	<20	<20	<20	<20	<23	<20	<20	<20	<20	<20	<20	<20	<20
Naphthalene	—	—	—	—	—	<10	<9.8	<9.8	<9.8	<10	<9.8	<12	<9.8	<10	<9.8	<10	<10	<10	<12	<10	<10	<10	<10	<10	<10	<10	<10
n-Propylbenzene	2,460	110,000	1,300	21,000	157	<10	<9.8	<9.8	<9.8	<10	<9.8	<12	<9.8	<10	<9.8	<10	<10	<10	<12	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Tetrachloroethane	3,130,000	204,000,000	1,200,000	1,200,000	280	<26	<26	<25	<26	<26	<26	<32	<26	<26	<26	<26	<26	<26	<30	<26	<26	<26	<26	<26	<26	<26	<26
1,1,1-Trichloroethane	782,000	51,100,000	47,000	330,000	7,573	<8.5	<8.4	<8.3	<8.4	<8.5	<8.4	<11	<8.4	<8.5	<8.4	<8.5	<8.5	<8.5	<8.9	<8.5	<8.6	<8.7	<8.4	<8.6	<8.6	<8.5	<8.6
1,2,4-Trimethylbenzene ¹	—	—	—	—	—	<10	<9.8	<9.8	<9.8	<10	<9.8	<12	<9.8	<10	<9.8	<10	<10	<10	<12	<10	<10	<10	<10	<10	<10	<10	<10
1,2,3-Trimethylbenzene ¹	782,000	51,100,000	27,000	190,000	3,520	<11	<11	<10	<11	<11	<11	<14	<11	<11	<11	<11	<11	<11	<12	<11	<11	<11	<11	<11	<11	<11	<11
1,3,5-Trimethylbenzene ¹	313,000	204,000,000	270,000	1,900,000	4,100	<23	<23	<22	<23	<23	<23	<29	<23	<23	<23	<23	<23	<23	<27	<23	<23	<23	<23	<23	<23	<23	<23
Xylenes, total																											
PAHs (µg/kg) 2																											
Acenaphthene	900,000	60,000,000	38,000	38,000	700	<11	<11	<11	<11	<11	<11	<11	<11	<11	15 J	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Acenaphthylene	18,000	360,000	700	700	700	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11
Anthracene	5,000,000	300,000,000	3,000,000	3,000,000	3,000,000	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3	<9.3
Benzo(a)anthracene	88	3,900	17,000	17,000	17,000	<7.7	<7.7	<7.7	<7.7	<7.7	<7.7	110	<7.7	<7.7	110	<7.7	<7.7	<7.7	52	<7.7	36 J	<7.7	<7.7	<7.7	<7.7	<7.7	<7.7
Benzo(a)pyrene	8.8	390	48,000	48,000	48,000	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4	92	<7.4	<7.4	92	<7.4	<7.4	<7.4	43	<7.4	31 J	<7.4	<7.4	<7.4	<7.4	<7.4	
Benzo(b)fluoranthene	88	3,900	360,000	360,000	360,000	<7.8	<7.8	35 J	<7.8	9.5 J	<7.8	150	<7.8	<7.8	150	<7.8	<7.8	<7.8	92	<7.8	63	<7.8	<7.8	<7.8	<7.8	<7.8	
Benzo(ghi)perylene	1,800	39,000	6,800,000	6,800,000	6,800,000	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	16 J	<9.5	<9.5	16 J	<9.5	<9.5	<9.5	14 J	<9.5	11 J	<9.5	<9.5	<9.5	<9.5	<9.5	
Benzo(k)fluoranthene	880	39,000	870,000	870,000	870,000	<12	<12	<12	<12	<12	<12	44	<12	<12	44	<12	<12	<12	27 J	<12	25 J	<12	<12	<12	<12	<12	
Chrysene	8,800	390,000	37,000	37,000	37,000	<9.1	<9.1	<9.1	<9.1	<9.1	<9.1	97	<9.1	<9.1	97	<9.1	<9.1	<9.1	45	<9.1	31 J	<9.1	<9.1	<9.1	<9.1	<9.1	
Dibenzo(a,h)anthracene	8.8	390	38,000	38,000	38,000	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	
Fluoranthene	600,000	40,000,000	500,000	500,000	500,000	<7.9	<7.9	17 J	<7.9	23 J	<7.9	18 J	<7.9	<7.9	280	61	<7.9	<7.9	62	<7.9	57	<7.9	<7.9	<7.9	<7.9	<7.9	
Fluorene	600,000	40,000,000	100,000	100,000	100,000	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	42	<9.5	<9.5	42	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	
Indeno(1,2,3-cd)pyrene	88	3,900	680,000	680,000	680,000	<11	<11	<11	<11	<11	<11	<11	<11	<11	19 J	<11	<11	<11	<11	<11	14 J	<11	<11	<11	<11	<11	
Naphthalene	20,000	110,000	400	400	400	<16	<16	<16	<16	<16 J, J3	<16	<16	<16	<16	<16	<16	<16	<16									
Phenanthrene	18,000	390,000	1,800	1,800	1,800	<7.3	<7.3	24 J	<7.3	10 J	<7.3	8.7 J	<7.3	<7.3	250	27 J	<7.3	<7.3	50	<7.3	26 J	<7.3	<7.3	<7.3	<7.3	<7.3	
Pyrene	500,000	30,000,000	8,700,000	8,700,000	8,700,000	<8.9	<8.9	15 J	<8.9	16 J	<8.9	15 J	<8.9	<8.9	180	51	<8.9	<8.9	61	<8.9	42	<8.9	<8.9	<8.9	<8.9	<8.9	
PCBs	—	—	—	—	—	NS	NS	<34.6	<34.6	NS	NS	NS	NS	NS	NS	NS	NS										

Notes:
VOCs = Volatile Organic Compounds
PAHs = Polynuclear Aromatic Hydrocarbons
PCBs = Polychlorinated Biphenyls (included individual analysis of alodors 1016, 1221, 1232, 1242, 1248, 1254, 1260)
* = Probable laboratory contaminant.
¹ Standards are for 1,2,4- and 1,3,5-Trimethylbenzene combined.
² Generic RCLs provided in Soil Cleanup Levels for PAHs Interim Guidance, WDNR RR-5 1997
Outlined values exceed NR 720 Generic RCL for Non-Industrial Direct Contact.
Outlined and Italics values exceed NR 720 Generic RCL for Industrial Direct Contact.
Bold values exceeds NR 720 Generic RCL for Groundwater Pathway.
— No Generic RCL established.
Generic RCLs not included in Wisconsin Administrative Code or Guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in Determining Residual Contaminant Levels using the EPA Soil Screening Level Web Site WDNR PUB-RR-682 on May 12, 2008
NA = Not analyzed
NS = Analyte not sampled.
J = (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3 = The associated batch QC was outside the established quality control range for precision.
J4 = The associated batch QC was outside the established quality control range for accuracy.
J8 = The internal standard associated with this data responded abnormally low. The data is likely to show a high bias concerning the result.
O = (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

A.3 Post-remedial Soil Analytical
INORGANICS
SOIL LABORATORY ANALYTICAL RESULTS
Former Gray Iron Facility
1501 South 83rd Street
West Allis, Wisconsin
AECOM Project 60139814

Parameters	Generic RCLs			GP-1	GP-1	GP-2	GP-2	GP-3	GP-3	GP-4	GP-4	GP-5	GP-5	GP-6	GP-6	GP-7	GP-7	GP-8	GP-8	GP-9	GP-9	GP-10	GP-10	GP-11	GP-11
	Direct Contact (Ingestion)		Groundwater Pathway	3-4FT	8-10FT	2-4FT	8-10FT	4-6FT	10-12FT	2-4FT	8-10FT	0.5-2.0FT	8-10FT	0.5-2.0FT	8-10FT	10-12FT	2-4FT	2-4FT	8-10FT	4-6FT	8-10FT	0.5-2FT	4-5FT	8-10FT	8-10FT
	Non-Industrial	Industrial		04/20/10	04/20/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/20/10
PID --				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil Type --				Fill	Clay	Fill	Clay	Clay	Clay	Fill/Fnd Sand	Clay	Fill/Fnd Sand	Fill/Fnd Sand	Fill/Fnd Sand	Fill	Fill	Clay	Fill/Fnd Sand	Clay	Clay	Clay	Fill/Fnd Sand	Fill	Clay	
Metals (mg/kg)																									
Mercury	2.9 ¹	2.9 ¹	0.02	0.012 J	<0.010	0.026	0.013 J	0.019 J	0.013 J	0.021 J	<0.010	0.028	0.06	<0.010	0.018 J, J3, P1	0.014 J	<0.010	<0.010	<0.010	0.015 J	<0.010	0.029	<0.010	0.012 J	
Arsenic	0.039	1.6	0.58	3.2	3.5	7.7	6.7	5.2 J	7	7.8	4.6	7.8	1.7		6	5.7	10	31	5.4	10	6.8	6	2.7	4.4	
Barium	3,130	204,000	330	53	53	25	53	62	72	240	120	68	70	21	16	87	31	44	38	56	46	56	7.4	61	
Cadmium	15.6	510	1.5	<0.20 O	<0.20 O	0.24 J	<0.040	0.43	0.45	2.5	<0.20 O	4.2	1.4	1.8	0.27 J	0.42	0.32	<0.20 O	<0.040	<0.040	<0.040	1.3	<0.20 O	<0.20 O	
Chromium	16,000	NA	360	21	20	7.4	18	28	25	36	30	35	20	31	12	27	7.4	<0.85 O	14	20	19	18	4.6	26	
Lead	50	500	—	11	11	32	7.3	6.1	6.6	130	17	32	23	4.4	19	6.4	4.2	21	5.4	8.5	7.2	110	7.4	13	
Selenium	78.2	5,110	1	<0.32	<0.32	<0.32	2.3 J	6.9	5.8	<0.32	<0.32	5	6.5	15	4.8	6.2	4.2	<3.2 O	<0.32	<1.6 O	<1.5 O	<3.32	<0.32	<0.32	
Silver	78.2	5,110	1.7	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	0.79	0.36 J	50	0.21 J	1.2	<0.16	<0.16	<0.16	<0.82 O	<0.16	<0.16	0.44 J	<0.16	<0.16	<0.16	

Parameters	Generic RCLs			GP-12	GP-12	GP-13	GP-13	GP-14	GP-14	GP-15	GP-15	GP-16	GP-16	GP-17	GP-17	GP-18	GP-18	GP-19	GP-19	GP-20	GP-20	GP-21	GP-21	
	Direct Contact (Ingestion)		Groundwater Pathway	4-6FT	8-10FT	2-4FT	8-10FT	0.5-2.0FT	8-10FT	2-4FT	8-10FT	2-4FT	8-10FT	1.3-3.5FT	8-10FT	2-4FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT	2-4FT	8-10FT	8-10FT
	Non-Industrial	Industrial		04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/19/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10	04/20/10
PID --				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil Type --				Clay	Clay	Fill	Clay	Clay	Clay	Fill	Clay	Clay	Clay	Fill	Clay	Fill/Fnd Sand	Clay							
Metals (mg/kg)																								
Mercury	2.9 ¹	2.9 ¹	0.02	0.013 J, P1	<0.010	0.02 J	<0.010	0.013 J	<0.010	<0.010	<0.010	0.014 J	0.013 J	<0.010	0.012 J	0.015 J	<0.010	0.027	<0.010	<0.010	<0.010	<0.010	0.013 J	
Arsenic	0.039	1.6	0.58	7.7	7.7	3.8	2.6	3.3	7.7	6	3.6	7.7	7.7	8	6.3	4.6	6	3.3	2.3	4.4	4.8	5.4	6.7	
Barium	3,130	204,000	330	38	51	50	16	67	68	7.2	82	65	88	130	95	26	64	32	49	50	56	71	65	
Cadmium	15.6	510	1.5	<0.040	<0.040	<0.20 O	<0.20 O	0.39	0.43	0.19 J, J3	0.49	0.41	0.46	0.4	0.48	0.31	0.22 J	<0.20 O	<0.20 O	<0.20 O	0.22 J	0.22 J	<0.20 O	<0.040
Chromium	16,000	—	360	14	19	20	7.4	22	27	3.6 P1	28	26	24	27	26	7.1	20	17	19	18	18	27	27	
Lead	50	500	—	6.3	7.8	2.4	8.6	6.5	6.5	2.4	9.1	6.7	6.2	6.6	6.6	27	8.6	15	12	7.8	7.1	14	14	
Selenium	78.2	5,110	1	2.4 J, P1	<1.6 O	<0.32	<0.32	6.6	6.2	4.4	6.8	7.1	8.6	6.6	6.9	<0.32	<1.5 O	<0.32	<0.32	<1.6 O	<1.5 O	<1.6 O	<1.6 O	<1.6 O
Silver	78.2	5,110	1.7	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	0.3 J	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16

Parameters	Generic RCLs			GP-22	GP-22	GP-23	GP-23	GP-3 DUP	GP-4 DUP
	Direct Contact (Ingestion)		Groundwater Pathway	2-4FT	8-10FT	4-6FT	8-10FT	4-6FT	8-10FT
	Non-Industrial	Industrial		04/20/10	04/20/10	04/19/10	04/19/10	04/19/10	04/20/10
PID --				0	0	0	0	0	0
Soil Type --				Clay	Clay	Clay	Clay		
Metals (mg/kg)									
Mercury	2.9 ¹	2.9 ¹	0.02	0.012 J	<0.010	0.026	0.013 J	0.013 J	0.018 J
Arsenic	0.039	1.6	0.58	3.2	3.5	7.7	6.7	7	5.2 J
Barium	3,130	204,000	330	53	53	25	53	72	62
Cadmium	15.6	510	1.5	<0.20 O	<0.20 O	0.24 J	<0.040	0.45	0.43
Chromium	16,000	—	360	21	20	7.4	18	25	28
Lead	50	500	—	11	11	32	7.3	6.6	6.1
Selenium	78.2	5,110	1	<0.32	<0.32	<0.32	2.3 J	5.8	5.9
Silver	78.2	5,110	1.7	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16

Notes:
¹ Value protective of the inhalation pathway.
 Outlined values exceed NR 720 Generic RCL for Non-Industrial Direct Contact.
 Outlined and *italics* values exceed NR 720 Generic RCL for Industrial Direct Contact.
 Bold values exceed NR 720 Generic RCL for Groundwater Pathway.
 — No Generic RCL established.
 Generic RCLs not included in Wisconsin Administrative Code or Guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in *Determining Residual Contaminant Levels using the EPA Soil Screening Level Web Site* WDNRR-PUB-RR-682 on May 12, 2006
 J = (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
 J3 = The associated batch QC was outside the established quality control range for precision.
 J6 = The sample matrix interfered with the ability to make any accurate determination; spike value is low
 O = (EPC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
 P1 = RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Table A.3. Post-remedial Soil Analytical, Parking Lot Parcel, Former Gray Iron Site, West Allis, Wisconsin.

Sample Name	Generic RCLs			GP-56	GP-57	GP-58
	Direct Contact	Direct Contact	Groundwater	2-3'	2-3'	3-4'
Sample Depth	Non-Industrial	Industrial	Pathway	07/13/12	07/13/12	07/13/12
Sample Date	Non-Industrial	Industrial	Pathway	07/13/12	07/13/12	07/13/12
PAH (µg/kg)						
Acenaphthene	900,000	60,000,000	38,000	32 J	26.2 J	<16.4
Acenaphthylene	18,000	360,000	700	51 J	40 J	<21
Anthracene	5,000,000	300,000,000	3,000,000	141	77	<18.9
Benzo(a)anthracene	88	3,900	17,000	510	248	42 J
Benzo(a)pyrene	8.8	390	48,000	460	233	26.5 J
Benzo(b)fluoranthene	88	3,900	360,000	680	370	42 J
Benzo(g,h,i)perylene	1,800	39,000	6,800,000	320	182	27.6 J
Benzo(k)fluoranthene	880	39,000	870,000	211	114	<18
Chrysene	8,800	390,000	37,000	550	259	38 J
Dibenzo(a,h)anthracene	8.8	390	38,000	81	46 J	<24.4
Fluoranthene	600,000	40,000,000	500,000	1,170	520	73
Fluorene	600,000	40,000,000	100,000	50 J	20.8 J	<20.3
Indeno(1,2,3-cd)pyrene	88	3,900	680,000	274	149	<23.7
Phenanthrene	18,000	390,000	1,800	570	223	42 J
Pyrene	500,000	30,000,000	8,700,000	930	440	62 J
Metals (mg/kg)						
Arsenic, Total	0.039	1.6	0.58	2.1 J	<0.72	1.3 J
Lead, Total	50	500	--	59.7	<1.5	6.02
Solids Percent	--	--	--	82.3	86.3	87.7

Generic RCLs not included in Wisconsin Administrative Code or guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in "Determining Residual Contaminant Levels using the US EPA Soil Screening Level Web Site" - WDNR PUB-RR-682 on May 12, 2006

Only detected constituents are shown

100 Exceeds Industrial Direct Contact.

100 Exceeds Groundwater Pathway.

-- No generic RCL established.

J Estimated value below the lowest calibration point.

µg/kg Micrograms per kilogram.

mg/kg Milligrams per kilogram.

PAH Polynuclear Aromatic Hydrocarbons

Table A.4. Pre and Post Remaining Soil Contamination Soil Analytical, Parking Lot Parcel, Former Gray Iron Site, West Allis, Wisconsin.

Sample Name	Generic RCLs			GP-56	GP-57	GP-58	GP-14		GP-15	
	Direct Contact Non-Industrial	Direct Contact Industrial	Groundwater Pathway	2-3' 07/13/12	2-3' 07/13/12	3-4' 07/13/12	0.5-2' 04/19/10	8-10' 04/19/10	2-4' 04/19/10	6-8' 04/19/10
PAH (µg/kg)										
Benzo(a)anthracene	88	3,900	17,000	510	248					
Benzo(a)pyrene	8.8	390	48,000	460	233	26.5 J				
Benzo(b)fluoranthene	88	3,900	360,000	680	370					
Dibenzo(a,h)anthracene	8.8	390	38,000	81	46 J					
Indeno(1,2,3-cd)pyrene	88	3,900	680,000	274	149					
Metals (mg/kg)										
Arsenic, Total	0.039	1.6	0.58	2.1 J		1.3 J	9.3	7.1	6	9.6
Lead, Total	50	500	--	59.7						
Selenium	78.2	5,110	1				<u>6.6</u>	<u>6.2</u>		<u>6.8</u>

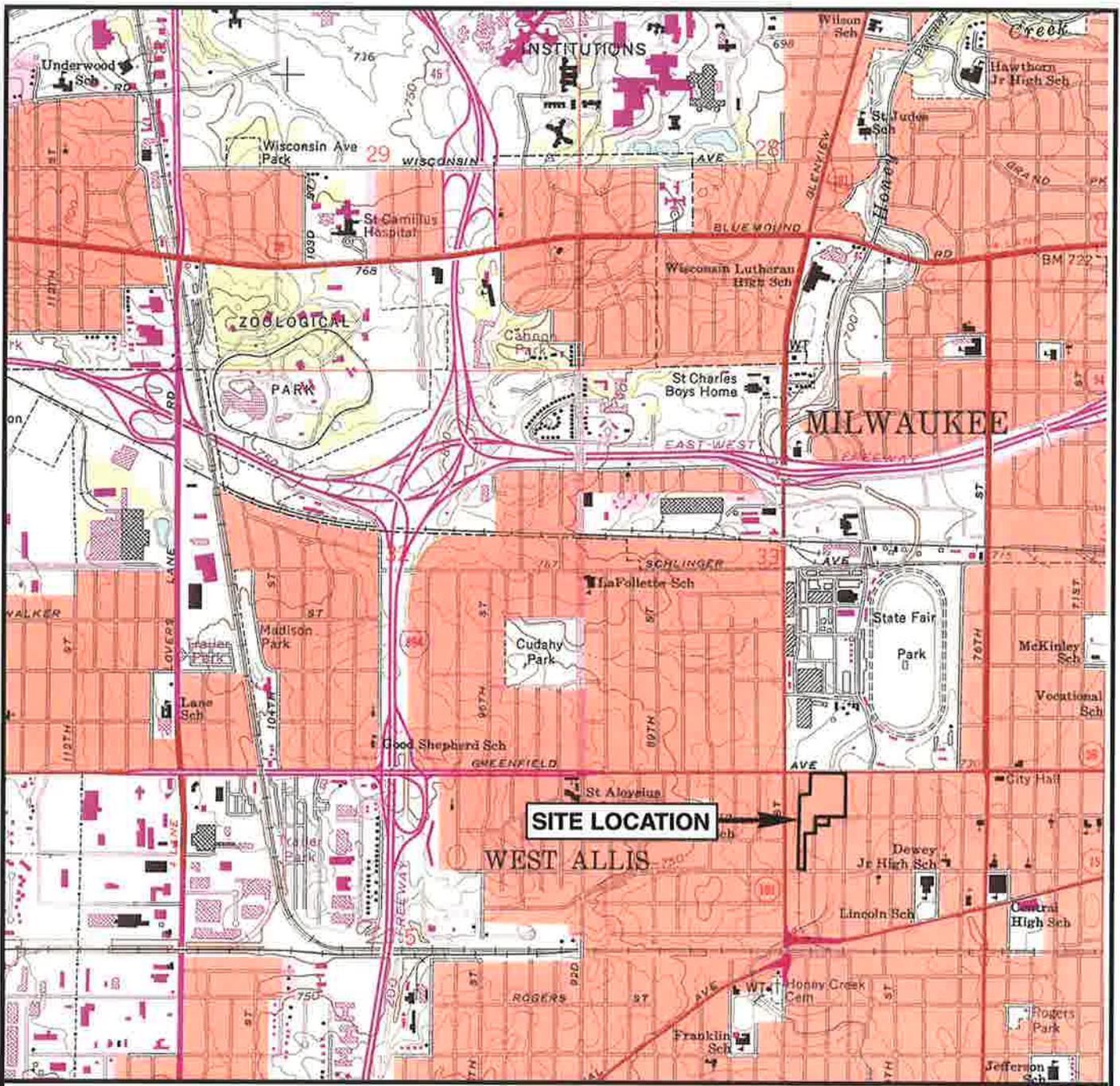
Generic RCLs not included in Wisconsin Administrative Code or guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in "Determining Residual Contaminant Levels using the US EPA Soil Screening Level Web Site" - WDNR PUB-RR-682 on May 12, 2006.

- 100 Exceeds Groundwater Pathway.
- 100** Exceeds Non-Industrial Direct Contact.
- 100** Exceeds Industrial Direct Contact.
- No generic RCL established.
- µg/kg Micrograms per kilogram.
- mg/kg Milligrams per kilogram.
- PAH Polynuclear Aromatic Hydrocarbons

Attachment B Maps and Figures

Attachments:

- B.1.a Location Map - Included
- B.1.b Detailed Site Map - Included
- B.1.c RR Site Map - Included
- B.2.a Pre-remedial Soil Contamination - Included
- B.2.b Post-remedial Soil Contamination - Included
- B.2.c Pre/Post Remaining Soil Contamination - Included
- B.3.a Geologic Cross Section Figure – Not Included. Not necessary with limited number of borings and shallow depths
- B.3.b Groundwater Isoconcentration – Not Included. There are no monitoring wells.
- B.3.c Groundwater Flow Direction – Not Included. There are no monitoring wells.
- B.3.d Monitoring Wells – Not Included. There are no monitoring wells.
- B.4.a Vapor Intrusion Map – Not included. There is no risk for vapor intrusion at the Site so no map has been created.
- B.4.b Other media of concern – Not included. There are no other media of concern at the Site.



SOURCE: USGS 7.5 Minute Topographic Map, Wauwatosa, WISCONSIN, 1958 revised 1994.

10NVOV10\ENVIRONMENT\CKLMB
C\WAW125\9\GRAY IRON\GRAPHICS\SITE LOCATION MAP.AI



0 1000 2000 4000

SCALE IN FEET



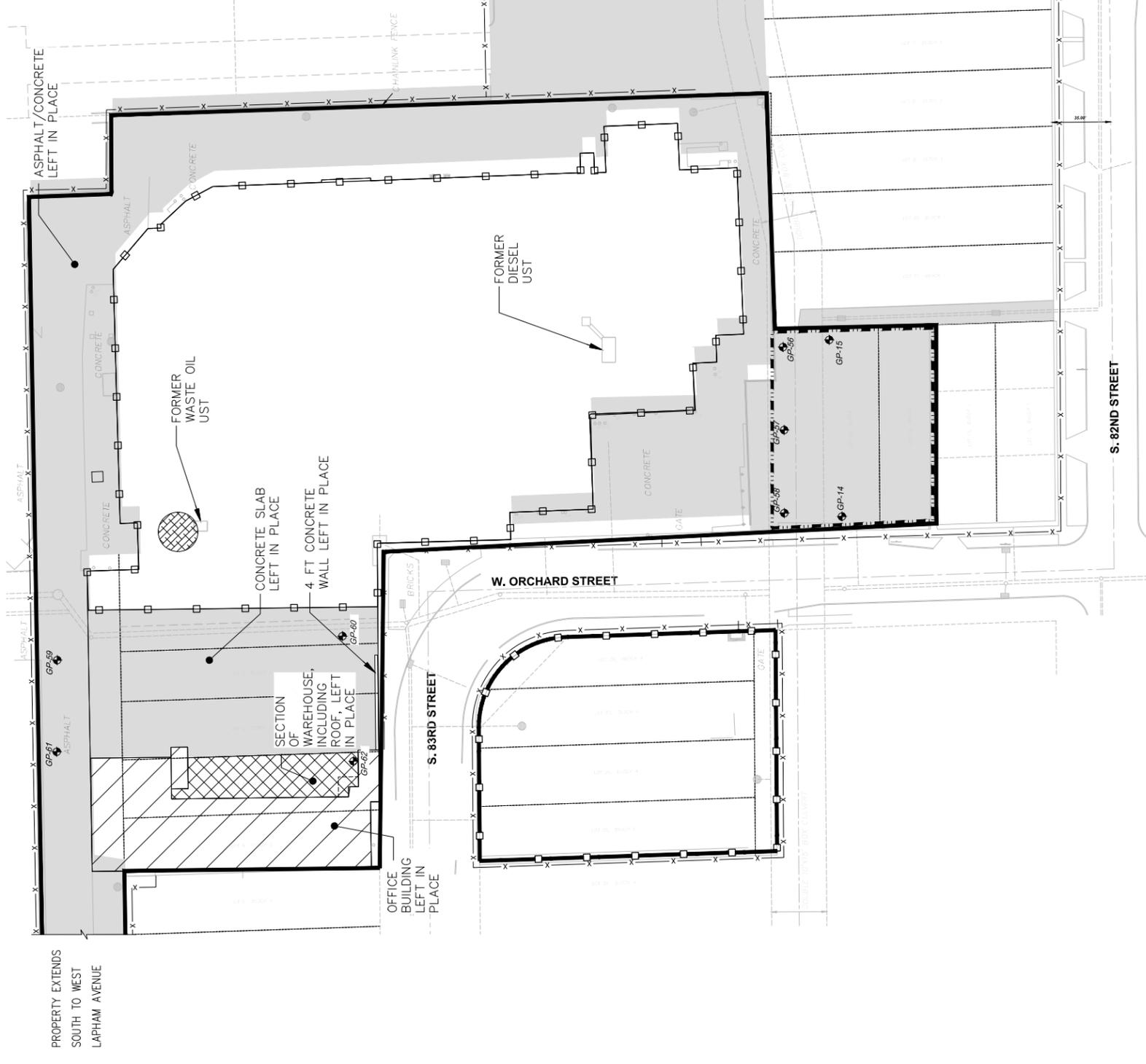
WISCONSIN

FORMER WEST ALLIS GRAY IRON SITE
WEST ALLIS, WISCONSIN

LOCATION MAP



FIGURE
B.1.a

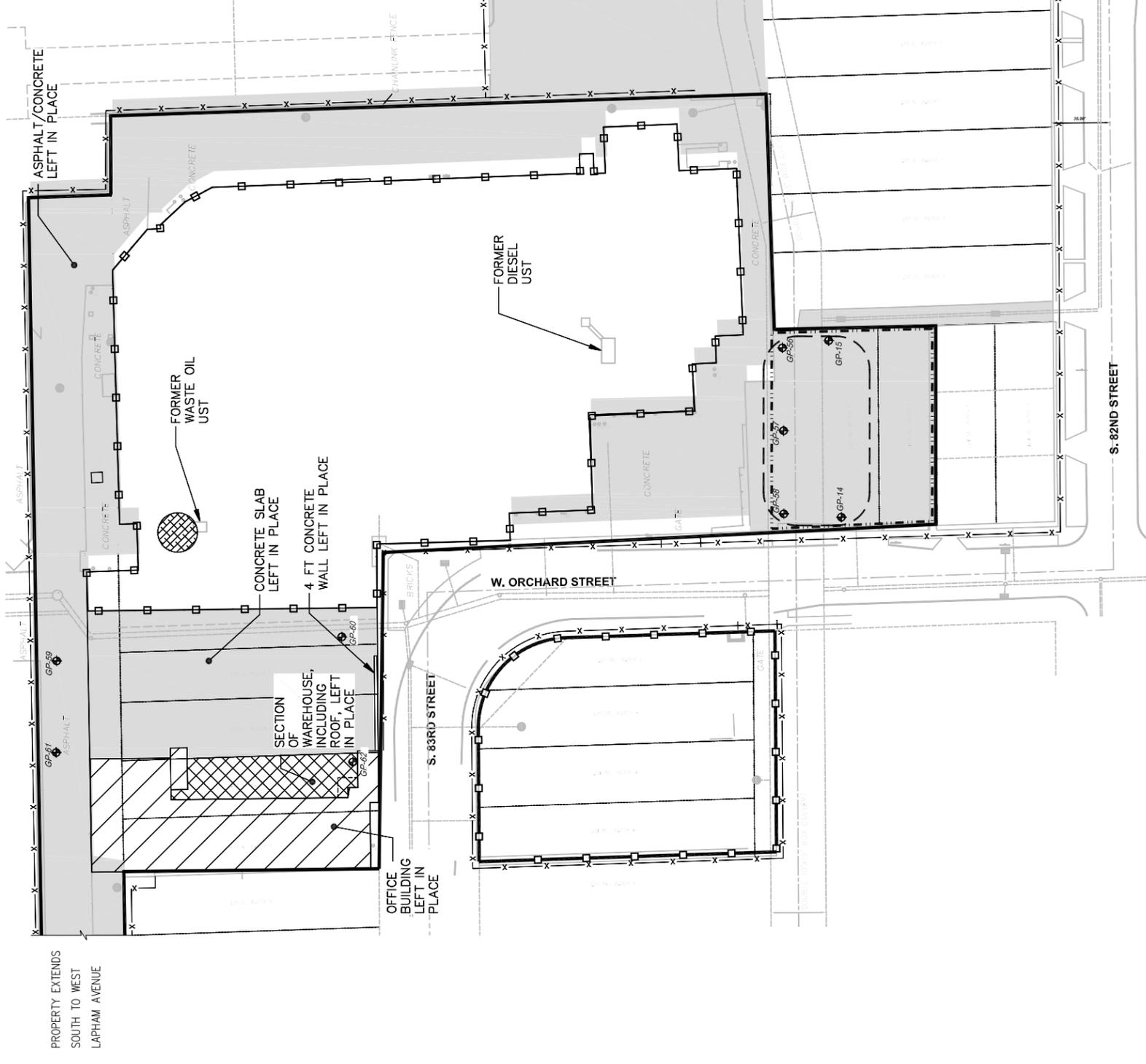


FORMER MILWAUKEE GRAY IRON
 WEST ALLIS, WISCONSIN
 CLOSURE REPORT

DETAILED SITE MAP



FIGURE
B.1.b

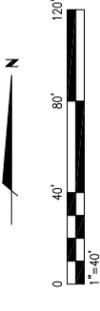


LEGEND

- DIRECT PUSH SOIL BORING
- PROPERTY LINE
- FOOT PRINT OF FORMER BUILDING
- FENCE
- OFFICE BUILDING LEFT IN PLACE
- SECTION OF WAREHOUSE, INCLUDING ROOF, LEFT IN PLACE
- ASPHALT / CONCRETE TO BE LEFT IN PLACE
- LOCATION OF SOIL CUTTINGS PILE
- EXTENT OF PROPOSED PARKING LOT PARCEL
- APPROXIMATE EXTENT OF METALS AND PAHs ABOVE GENERIC RCL NON-INDUSTRIAL DIRECT CONTACT CRITERIA.

NOTES

1. FORMER MILWAUKEE GRAY IRON 1501 S. 83RD ST. BUILDING WAS DEMOLISHED TO 6 FT BGS AND THE BASE OF ANY PIT FOUND BELOW 6 FT BGS WAS BROKEN UP FOR DRAINAGE PURPOSES. PITS WERE BACKFILLED AND COMPACTED TO SPECIFICATIONS WITH CRUSHED CONCRETE FROM THE SITE. ANY EXCESS NATIVE MATERIAL AND CRUSHED CONCRETE FROM THE SITE WAS USED TO COVER THE SITE AND DIRECT STORMWATER RUNOFF TOWARD EXISTING CATCHBASINS.
2. THE FORMER MILWAUKEE GRAY IRON OFFICE BUILDING AT 1501 83RD ST., ALONG WITH A SECTION OF CONCRETE SLAB AND PORTIONS OF THE ROOF AND EAST WALL FROM THE FORMER WAREHOUSE BUILDING TO THE NORTH OF THE OFFICE WAS LEFT IN PLACE.



FORMER MILWAUKEE GRAY IRON
WEST ALLIS, WISCONSIN
CLOSURE REPORT

**PRE/POST-REMEDIAL SOIL
CONTAMINATION**



FIGURE
B.2.c

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.

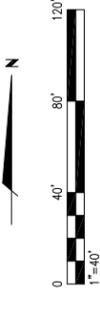
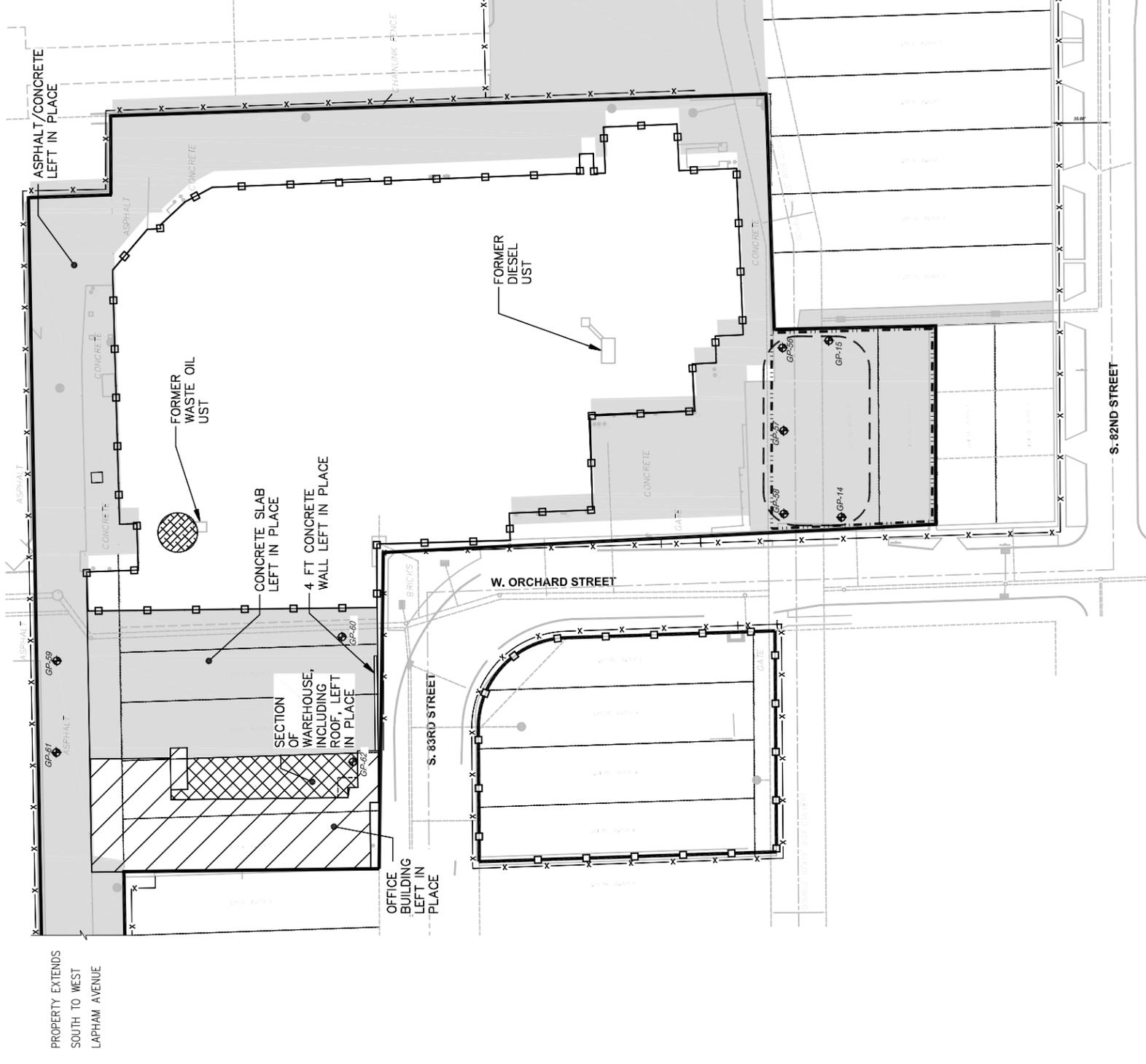
For information on how to obtain a copy or to review the file, please contact the Remediation & Redevelopment (RR) Environmental Program Associate (EPA) at dnr.wi.gov/topic/Brownfields/Contact.html



Attachment D Maintenance Plans

Attachments:

- D.1 Location Maps - Included
- D.2 Brief Descriptions - Included
- D.3 Description of maintenance actions - Included
- D.4 Inspection Log - Included
- D.5 Contact Information - Included



LEGEND

- DIRECT PUSH SOIL BORING
- PROPERTY LINE
- FOOT PRINT OF FORMER BUILDING
- FENCE
- OFFICE BUILDING LEFT IN PLACE
- SECTION OF WAREHOUSE, INCLUDING ROOF, LEFT IN PLACE
- ASPHALT / CONCRETE TO BE LEFT IN PLACE
- LOCATION OF SOIL CUTTINGS PILE
- EXTENT OF PROPOSED PARKING LOT PARCEL
- APPROXIMATE EXTENT OF METALS AND PAHs ABOVE GENERIC RCL NON-INDUSTRIAL DIRECT CONTACT CRITERIA.

NOTES

1. FORMER MILWAUKEE GRAY IRON 1501 S. 83RD ST. BUILDING WAS DEMOLISHED TO 6 FT. BGS AND THE BASE OF ANY PIT FOUND BELOW 6 FT. BGS WAS BROKEN UP FOR DRAINAGE PURPOSES. PITS WERE BACKFILLED AND COMPACTED TO SPECIFICATIONS WITH CRUSHED CONCRETE FROM THE SITE. ANY EXCESS NATIVE MATERIAL AND CRUSHED CONCRETE FROM THE SITE WAS USED TO COVER THE SITE AND DIRECT STORMWATER RUNOFF TOWARD EXISTING CATCHBASINS.
2. THE FORMER MILWAUKEE GRAY IRON OFFICE BUILDING AT 1501 S. 83RD ST., ALONG WITH A SECTION OF CONCRETE SLAB AND PORTIONS OF THE ROOF AND EAST WALL FROM THE FORMER WAREHOUSE BUILDING TO THE NORTH OF THE OFFICE WAS LEFT IN PLACE.

FORMER MILWAUKEE GRAY IRON
 WEST ALLIS, WISCONSIN
 CLOSURE REPORT

LOCATION MAP

D.2 Brief Description

Soil contamination consists of PAHs and metals in soil defined by five geoprobe locations (GP-14, GP-15, GP-56, GP-57, GP-58) in an area approximately 100 ft by 60 ft to a depth less than 6 ft bgs.

Material Handling Plan and Cap Maintenance Plan

FORMER GRAY IRON PARKING LOT
PARCEL
1502 SOUTH 83rd SREET
WEST ALLIS, WISCONSIN

JUNE 2013

Table of Contents

Introduction	1
Cap Maintenance Plan	1
Required Inspection and Repair Activities	1
Annual Cap Inspections	1
Repairs of Engineered Barriers	2
Replacement of Engineered Barriers	2
Material Handling Plan	2
Request for WDNR Approval	6
Request for Deviations	6

Figures

- 1 Site Location Map, Former Gray Iron Facility, West Allis, Wisconsin.
- 2 Aerial Extent of Cap, Former Gray Iron Facility, West Allis, Wisconsin.

Appendix

- A Cap Maintenance Inspection Form and Cap Maintenance Corrective Action Form.

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

Introduction

This Material Handling Plan and Cap Maintenance Plan are applicable to the Former Gray Iron Parking Lot Parcel located at 1502 South 83rd Street in the city of West Allis, Milwaukee County, Wisconsin ("site"). Figure 1 is a Site Location Map. Residual soil contamination remains onsite that exceed the direct contact residual contaminant levels (RCLs) for total lead and polycyclic aromatic hydrocarbons (PAHs) which resulted from historic spills and releases.

A copy of this Plan shall be kept on file in the offices of: (1) the Wisconsin Department of Natural Resources (WDNR), Southeast Region; (2) the owner of the Site, its successors and assigns (hereinafter identified collectively as the "Owner"); (3) the Site manager, if any; and (4) the Site. The Plan shall be made available by the Owner to future developers, contractors, utilities and maintenance personnel, and any other public or private persons or entities authorized to perform underground excavation work at the Site.

Cap Maintenance Plan

The cap elements which are the subject of this Plan are approved engineered barriers which may consist of buildings and concrete or asphalt pavement over the soils that exceed the direct contact RCLs. Figure 2 is a plan view which presents the location and extent of the engineered barrier requirements.

The purpose of the Cap Maintenance Plan is to describe the procedures and controls that shall be followed to maintain the function of the engineered barriers. Maintaining the function of the engineered barriers will provide continued protection of human health and the environment by minimizing potential exposure to the residual contamination.

Required Inspection and Repair Activities

The following activities will be conducted, at a minimum at the frequency specified. WDNR approval is not required to complete the activities.

Annual Cap Inspections

Not less than annually, the Site shall be inspected by the Owner to ensure that the integrity of the engineered barriers is maintained and that no significant fissures or

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

cracks develop in the gravel or concrete caps, which could allow potential exposure to the residual contamination. Disturbances of the engineered barriers or significant fissures or cracks in the gravel or concrete cap shall be noted by the Owner on the "Annual Cap Inspection Form" (attached). All inspection reports shall be maintained on file by the Owner, the Site manager, if any, and at the Site.

Repairs of Engineered Barriers

If, during the annual inspections or other routine inspections of the Site, the engineered barriers are observed to have been disturbed or significant fissures or cracks are observed in the gravel or concrete caps, the Owner shall arrange to have repairs made to such areas, in a manner consistent with this Plan. Such repairs shall be carried out within a reasonable period of time, not to exceed 120 days, subject to weather and seasonal considerations. The Owner shall document the repairs to capped areas on the "Corrective Action Form" (attached). All Corrective Action Forms shall be maintained on file by the Owner, the Property manager, if any, and at the Property. A copy of the completed Corrective Action Form shall be filed with the WDNR.

Replacement of Engineered Barriers

WDNR approval is required prior to replacement of any portion of the engineered barrier. The replaced engineered barrier shall conform to the design requirements provided in this document. Earth work required to replace the engineered barrier shall conform to the requirements given in the Material Handling Plan.

Material Handling Plan

The Material Handling Plan specifies the requirements to be followed when performing earth work, groundwater, or surface water management. These activities are generally associated with construction.

Activities Requiring WDNR Approval

The WDNR must be notified and approval obtained prior to conducting the following activities:

- 1. Construction or Installation of Buildings, Structures or Other Improvements.** Buildings, structures or other improvements may be

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

constructed or installed on the Site using footings or other foundations that are placed into the area of residual contamination in the following manner:

- A) The contractor performing the work shall be provided a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.
- B) Soils that are excavated shall be separated and segregated to the extent practicable so that they may be replaced upon completion of the work. All excavated contaminated soil shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.
- C) Upon completion of the work, previously excavated soil may be backfilled, provided, however, that the backfilled soil maintains the compaction characteristics of the surrounding soil. The soil, as well as any additional clean soil or granular fill material necessary to backfill to grade, shall be backfilled in such a manner as to maintain the original depth of the contaminated soil. The backfill area shall be restored in a manner consistent with the original cap condition. If groundwater is recovered, it shall be managed and disposed of as a contaminated material in accordance with state and federal requirements.
- D) A memorandum or report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file by the Owner and the Property manager, if any, and shall be submitted to the WDNR.

2. Replacement of Engineered Barriers. If it becomes necessary or desirable to replace the engineered barrier, WDNR approval will be required and the replacement shall be undertaken in the following manner:

- A) The contractor performing the work shall be provided a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

- B) Contaminated soil that is excavated shall be separated and segregated to the extent practicable so that they may be replaced upon completion of the work. Any such excavation of contaminated soil shall be conducted in accordance with the health and safety plan. All excavated contaminated soils shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.
 - C) Upon completion of the work, previously excavated soil may be backfilled, provided, however, that the backfilled soil maintains the compaction characteristics of the surrounding soil. The soil, as well as any additional clean soil or granular fill material necessary to backfill to grade, shall be backfilled in such a manner as to maintain the original depth of the contaminated soil. The backfill area shall be restored in a manner consistent with the original cap condition. If groundwater is recovered, it shall be managed and disposed of as a contaminated material in accordance with state and federal requirements.
 - D) A memorandum report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file by the Owner, the Property manager, if any, and at the Property, and shall be submitted to the WDNR.
- 3. Utility Installations or Repairs.** No utility repairs or installation of new or replacement utilities shall be conducted on the Site until after the utility and any contractor(s) for the utility have acknowledged receipt of a copy of this Plan. The utility repairs or installation(s) shall be conducted in strict conformance with the standards set forth below with respect to excavations into and/or beneath the engineered barrier, and such excavations are to be undertaken in the following manner:
- A) The contractor performing the work shall be provided with a copy of this Plan by Owner and shall prepare a health and safety plan, appropriate to the work being performed.
 - B) Contaminated soil that is excavated for purposes of utility installation or repair shall be separated and segregated to the extent practicable

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

so that they may be replaced upon completion of the work. All excavated contaminated soil shall be, at a minimum, placed onto plastic sheeting and covered, or placed into a watertight container such as a covered roll-off box.

- C) Upon completion of such work, the excavated contaminated soil may be placed back into the excavation, provided, however, that any excavated soil placed back into the excavation shall maintain the compaction characteristics of the surrounding soil. The area of the excavation shall be restored in a manner consistent with the original cap condition.
 - D) Any excavation of contaminated soil beneath the engineered barriers shall be conducted in accordance with the health and safety plan. Any other soils which have been commingled, mixed or otherwise have come into contact with soils excavated from beneath the engineered barrier shall be properly characterized and managed in accordance with state law with notice to the WDNR. Any groundwater affected by such activities shall be managed in accordance with state law after notice to the WDNR.
 - E) If the utility installation or construction involves any disturbance of the seals used to seal the entrance of utility lines and the structures on the Site, such seals shall be replaced with new seals of like or superior quality.
 - F) A memorandum report shall be prepared describing the work performed, identifying the person(s) performing the work and the date of the work, and confirming that the Plan was adhered to in completion of the work. A copy of the report shall be kept on file with the utility, the Owner, the Site manager, if any, and at the Site and shall be filed with the WDNR.
4. **Emergency Repairs to Underground Utilities.** In emergency instances, utility repairs may be made without prior approval from the WDNR. However, the employee/worker notifications, material management procedures, and reporting requirements shall follow those given in Section 3 of the Material Handling Plan.

Material Handling Plan and Cap Maintenance Plan

Former Gray Iron Parking Lot
Parcel
1502 South 83rd Street
West Allis, Wisconsin

- 5. Offsite Disposal of Excavated Soils.** If it becomes necessary or desirable to dispose of excavated soils from the allowed construction, repair, and installation activities, the excavation and resulting soils shall be managed in accordance with NR 718.13.

Request for WDNR Approval

The WDNR shall be notified at least five business days prior to completing work activities that require approval. The WDNR Project Manager (at the time of this submittal Mr. Stephen Mueller) shall be notified by mail or email. Mr. Mueller's contact information follows:

Mr. Stephen Mueller
Wisconsin Department of Natural Resources
Southeast Region Office
2300 North Martin Luther King Drive
Milwaukee, Wisconsin 53212
(414) 263-8531
StephenD.Mueller@wisconsin.gov

Request for Deviations

Owner shall not conduct any activities at the Site that are not in compliance with this Plan, unless written approval to do so is obtained from the WDNR.

Appendix A

Cap Maintenance Inspection Form
and Cap Maintenance Corrective
Action Form

D.4 Inspection Log

Annual Cap Inspection Form

Name of Inspector: _____

Company: _____

Date: _____

Time: _____

Weather:

Temperature _____ °F sunny cloudy windy rainy snowy

Ground Conditions: wet dry snow

Is this a scheduled inspection? yes no

If no, explain: _____

Inspection Results

Cap Condition

- Fissures or Cracking: _____
- Erosion/deterioration: _____
- Ponded water: _____
- Freeze/thaw damage: _____
- Surface disturbances from vehicles or other physical actions: _____
- Animal burrows: _____
- Other: _____

If any of the above conditions were observed, note area and explain. Sketch extent and location of observed damage below:

D.4 Inspection Log

Corrective Action Form

Report Number: _____

Date of Initial Inspection: _____

Name of Inspector: _____

Note: If Corrective Action cannot be completed within 120 days of the Initial Inspection Date, a Corrective Action Plan must be prepared and maintained in the operating record.

Corrective Action Work Order

Type of problem: _____

Required upgrade: _____

Corrective action assigned to: _____
Name Date

Corrective Action Completion Report

Received on: _____ By: _____

Completed on: _____

Comments: _____

By: _____
Name Date

Re-Inspection Report

Observations: _____

Comments: _____

Inspector: _____
Signature Date

Send completed form to the Wisconsin Department of Natural Resources. Maintain maintenance records with the Property Owner, Property manager (if any), and at the Property.

D.5 Contact Information

Contact:

Ben Verburg
ARCADIS
126 North Jefferson Street, Suite 400
Milwaukee, WI 53202
414-276-7742

Attachment E

Monitoring Well Information

Not Applicable (No monitoring wells were required as part of this response action)

Attachment F

Notification to Owners of Impacted Properties

Not Applicable (No Offsite Contamination)

Attachment G
Source Legal Documents

Attachments:

- G.1 Deeds - Included
- G.2 Certified Survey Map - Included
- G.3 Verification of Zoning - Included
- G.4 Signed Statement - Included

G.1 Deeds

DOC.# 09914540

Document Number

Warranty Deed
Title of Document

RECORDED
09/14/2010 08:28AM

JOHN LA FAVE
REGISTER OF DEEDS
Milwaukee County, WI
AMOUNT: \$30.00

FEE EXEMPT #: 12
1KN5Q

***This document has been
electronically recorded and
returned to the submitter.***

Recording Area

Name and Return Address

Community Development Authority of City of West
Allis

Attn: John F. Stibal
7525 W. Greenfield Ave.
West Allis, WI 53214

Parcel Identification Number (PIN)

SPECIAL WARRANTY DEED

Document Number

Document Name

THIS DEED, made between **MILWAUKEE GRAY IRON, LLC**, an Indiana limited liability company ("Grantor", whether one or more), and **THE COMMUNITY DEVELOPMENT AUTHORITY OF THE CITY OF WEST ALLIS**, a Wisconsin body politic ("Grantee", whether one more). Grantor for a valuable consideration, conveys to Grantee the following described real estate, together with the rents, profits, fixtures and other appurtenant interests, in Milwaukee County, State of Wisconsin ("Property") (if more space is needed, please attached addendum):

PARCEL 1:

Lots 36, 37 and 38, in Block 4, in Henderson Park, in the Northeast 1/4 of Section 4, Township 6 North, Range 21 East, in the City of West Allis, County of Milwaukee, and State of Wisconsin, together with the West 1/2 of vacant Honey Creek adjoining on the East (now a vacated alley pursuant to a Resolution recorded in Reel 4672, Image 1503, as Document No. 7217), exception therefrom that part of Lots 37 and 38 conveyed to the City of West Allis by Deed recorded July 16, 1993, on Reel 3077, Image 1358, as Document No. 6795531, bounded and described as follows: Commencing at the Southwest corner of said Lot 36; thence North 00° 24' 15" West along the East right-of-way line of North 83rd Street 46.42 feet to a point of curvature; thence Northeasterly along an arc of a curve and the Southeasterly right-of-way line of said street, whose center lies to the East, whose radius is 55.00 feet, whose chord bears North 43° 50' 56" East 76.76 feet, a distance of 84.96 feet to a point of tangency; thence North 88° 06' 07" East, along the South right-of-way line of West Orchard Street 123.00 feet; thence South 00° 24' 15" East 100.00 feet; thence South 88° 06' 07" West 178.00 feet to the point of beginning.

Tax Key No.: 452-0417-001
Property Address: 1502 South 83rd Street

Recording Area

Name and Return Address

(See body of Deed)

Parcel Identification Number (PIN)

This is not homestead property

PARCEL 2:

That part of the Northeast 1/4 of Section 4, in Town 6 North, Range 21 East, which was formerly a part of a Chicago and North Western Railway Company Spur Track right of way, Lots 1, 2, 3 and 4, in Block 5, and Lots 14, 15, 16, 17, 18 and 19, in Block 1, and vacated Honey Creek in Henderson Park, in the Northeast 1/4 of Section 4, in Township 6 North, Range 21 East, and Lots 3 and 4, in Block 3, in Assessor's Plat No. 257, being a part of the Northwest 1/4 of Section 4 and a part of the Northeast 1/4 of Section 4, in Town 6 North, Range 21 East, all in the City of West Allis, County of Milwaukee, and State of Wisconsin, bounded and described as follows:

Commencing at a point in the North line of West Orchard Street, said point being the Southeast corner of Lot 14, Block 1, Henderson Park; thence Westerly along the North line of West Orchard Street 336.00 feet to its intersection with the West line of South 83rd Street, thence southerly along the West line of South 83rd Street, 195.00 feet to a point; said point being the Southeast corner of Lot 4, Block 5, Henderson Park; thence Westerly along the South line of Lot 4, 152.83 feet to the Southwest corner of Lot 4, said point also being the Northwest corner of Lot 5; thence Southerly along the West line of Lot 5, Block 5, Henderson Park 35.00 feet to the Southwest corner of Lot 5; thence Westerly on the extension of the Southerly line of Lot 5, 20.00 feet to a point; thence Northerly and parallel to the West line of Henderson Park 352.29 feet to a point; thence Northeasterly 46.75 feet to a point in the West line of said Lot 4, Block 3, Assessor's Plat No. 257; thence Northerly along the West line of said Lot 4, 97.40 feet to a point, said point being 310.60 feet South of the North line of the Northeast 1/4 of Section 4, in Township 6 North, Range 21 East; thence Easterly and parallel to the North line of said 1/4 Section 395.73 feet to a point in the vacated Honey Creek in Block 1 of Henderson Park; thence Southerly on a line 168 feet from and parallel to the West line of South 82nd Street, 142.40 feet to a point in the Westerly extension of the North line of Lots 14 and 15, Block 1, Henderson Park; thence Easterly along said line 98.00 feet to the Northeast corner of Lot 14, Block 1, thence Southerly along the East line of said Lot 14, 120.00 feet to the point of commencement.

Tax Key No.: 452-0419-002
Property Address: 1501 S. 83rd Street

PARCEL 3:

Easement for the benefit of Parcel 2 created by Easement dated December 18, 1984 and recorded on January 8, 1995, on Reel 1715, Image 1422, as Document No. 5778899 for the purpose of storm sewer main and appurtenances.

PARCEL 4:

That part of the West 1/2 of the Northeast 1/4 of Section 4, Township 6 North, Range 21 East of the Fourth Principal Meridian, bounded and described as follows:

Commencing at a point on the South line of Greenfield Avenue, distant 25 feet Easterly, measured at right angles, from the centerline of a spur track (now relocated) of the Chicago and North Western Railway Company (now the Chicago and North Western Transportation Company), running from North-Greenfield station to "proposed fair grounds", as described by Warranty Deed dated December 2, 1891, between Mary A. Abbott and the Chicago and North Western Railway Company, recorded February 23, 1892, in the Milwaukee County Register of Deeds office in Volume 284 of Deeds at Pages 492, 493 and 494; thence Southerly parallel with said spur track centerline a distance of 325 feet to the point of beginning of the tract of land herein described; thence continuing Southerly parallel with said spur track centerline, said parallel line being also the Westerly line of Assessor's Plat No. 257, a distance of 105 feet, more or less, to a point distant 359.25 feet Northerly from the Southwest corner of Lot 4, Block 5, of Henderson Park; thence Southwesterly along a straight line a distance of 46.75 feet to a point distant 20 feet Westerly measured at right angles, from the West line of said Assessor's Plat No. 257; thence Southerly parallel with said West line of Assessor's Plat No. 257, and the West line of said Block 5 of Henderson Park, a distance of 352.29 feet to a point on the Westerly extension of the South line of Lot 5 in said Block 5; thence Easterly along said South line, extended, of Lot 5, a distance of 20 feet, more or less, to the Southwest corner of said lot 5; thence Southerly along the West line of said Block 5 a distance of 500 feet, more or less, to a point on the North line of West Lapham Avenue; thence Westerly along said North line of West Lapham Avenue to a point distant 50 feet Westerly, measured at right angles, from the West line of said Block 5; thence Northerly parallel with the West line of said Block 5, and the West line of said Assessor's Plat No. 257, a distance of 1,000 feet, more or less, to a point on a line drawn parallel with the North line of said Section 4 through the point of beginning; thence Easterly along said last described parallel line a distance of 50 feet, more or less, to the point of beginning.

Tax Key No.: 452-0419-002
Property Address: 1501 S. 83rd Street

PARCEL 5:

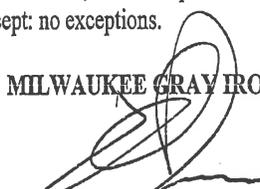
Lot 35, in Block 4, in Henderson Park, in the Northeast 1/4 of Section 4, Township 6 North, Range 21 East, in the City of West Allis, County of Milwaukee and State of Wisconsin, together with the West 1/2 of vacant Honey Creek adjoining on the East (now a vacated alley pursuant to a Resolution recorded in Reel 4672, Image 1503, as Document No. 7217).

Tax Key No.: 452-0415-000
Property Address: Unassigned

Grantor warrants that the title to the Property is good, indefeasible, in fee simple and free and clear of encumbrances arising by, through, or under Grantor, except: no exceptions.

Dated May 6, 2010

MILWAUKEE GRAY IRON, LLC

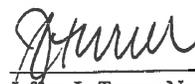

Rick L. James, Sole Manager

ACKNOWLEDGEMENT

STATE OF INDIANA)
) SS:
COUNTY OF DEKALB)

Personally came before me on May 6, 2010, the above-named Rick L. James, sole Manager of Milwaukee Gray Iron, LLC, to me known to be the person who executed the foregoing instrument and acknowledged the same.

My Commission Expires: 6-15-2016


Jeffrey L. Turner, Notary Public
Resident of DeKalb County, Indiana



G.2 Certified Survey Map

FORM NO. 985-A



Stock No. 26273

REEL 4297 IMAG 1582

CERTIFIED SURVEY MAP NO. 6516
BEING PART OF THE NW¹/₄ OF THE NE¹/₄ OF SECTION 4,
TOWNSHIP 6 NORTH, RANGE 21 EAST, CITY OF WEST ALLIS,
MILWAUKEE COUNTY, WISCONSIN

SURVEYORS CERTIFICATE:

I, BRADFORD L. SPENCER, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT I HAVE SURVEYED, DIVIDED AND MAPPED THE FOLLOWING LAND BOUNDED AND DESCRIBED AS FOLLOWS:

THAT PART OF THE NW¹/₄ OF THE NE¹/₄ OF SECTION 4, TOWNSHIP 6 NORTH, RANGE 21 EAST, IN THE CITY OF WEST ALLIS, MILWAUKEE COUNTY, WISCONSIN, BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTH¹/₄ CORNER OF SECTION 4, TOWN 6 NORTH, RANGE 21 EAST; THENCE WITH THE NORTH LINE OF THE NORTHEAST 1/4, N88°07'04"E, A DISTANCE OF 71.21' TO A POINT; THENCE S01°52'56"E, A DISTANCE OF 33.00' TO THE POINT OF BEGINNING; THENCE FROM THE POINT OF BEGINNING AND WITH THE EASTERLY RIGHT-OF-WAY OF SOUTH 84TH STREET, S43°25'03"W, A DISTANCE OF 21.33' TO A POINT; THENCE S04°55'20"E, A DISTANCE OF 98.03' TO A POINT; THENCE S01°16'22"E, A DISTANCE OF 31.00' TO A POINT; THENCE S02°43'52"W, A DISTANCE OF 165.41' TO A POINT; THENCE S01°16'22"E, A DISTANCE OF 241.14' TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY, N88°07'04"E, A DISTANCE OF 102.95' TO A POINT; THENCE N00°59'40"W, A DISTANCE OF 224.74' TO A POINT; THENCE N88°08'06"E, A DISTANCE OF 49.95' TO A POINT; THENCE N00°59'40"W, A DISTANCE OF 47.51' TO A POINT; THENCE N88°05'51"E, A DISTANCE OF 390.00' TO A POINT; THENCE N00°14'19"E, A DISTANCE OF 79.71' TO A POINT; THENCE N88°07'04"E, A DISTANCE OF 174.54' TO A POINT ON THE WESTERLY RIGHT-OF-WAY OF SOUTH 82ND STREET; THENCE WITH SAID RIGHT-OF-WAY, N00°03'30"W, A DISTANCE OF 198.00' TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY OF WEST GREENFIELD AVENUE, (S.T.H. 59); THENCE WITH SAID RIGHT-OF-WAY, S88°07'04"W, A DISTANCE OF 704.75' TO THE POINT OF BEGINNING, CONTAINING 4.9312 ACRES, MORE OR LESS.

I FURTHER CERTIFY THAT I HAVE MADE THIS SURVEY, LAND DIVISION AND MAP BY THE DIRECTION OF MEURER REALTY, OWNER OF SAID LAND.

THAT SUCH PLAT IS A CORRECT REPRESENTATION OF ALL THE EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND THE LAND DIVISION THEREOF MADE.

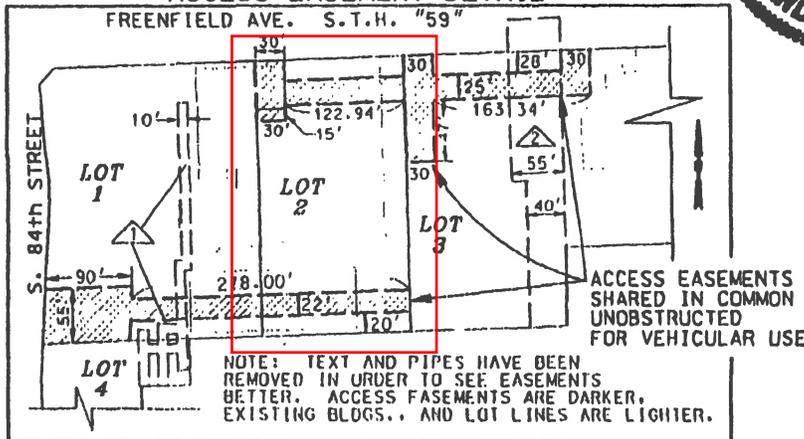
THAT I HAVE FULLY COMPLIED WITH THE PROVISIONS OF CHAPTER 236 OF THE STATE STATUTES AND THE SUBDIVISION REGULATIONS OF THE CITY OF WEST ALLIS IN SURVEYING, DIVIDING AND MAPPING THE SAID LAND.

DATED THIS 12th DAY OF MARCH, 1998.


BRADFORD L. SPENCER, R.L.S. 2069



ACCESS EASEMENT DETAIL



INSTRUMENT DRAFTED BY BRADFORD L. SPENCER

3/12/98
PAGE 2 OF 4
RSV#7364CSM.DGN



Stock No. 26273

REEL 4297 IMAG 1583

CERTIFIED SURVEY MAP NO. 6510
BEING PART OF THE NW¹/₄ OF THE NE¹/₄ OF SECTION 4,
TOWNSHIP 6 NORTH, RANGE 21 EAST, CITY OF WEST ALLIS,
MILWAUKEE COUNTY, WISCONSIN

OWNERS CERTIFICATE:

AS OWNERS, MEURER REALTY, HEREBY CERTIFY THAT WE HAVE CAUSED THE LAND DESCRIBED ON THIS MAP TO BE SURVEYED, DIVIDED, AND MAPPED AS REPRESENTED ON THIS MAP.

AS OWNERS, MEURER REALTY, FURTHER CERTIFIES THAT THIS MAP IS REQUIRED BY S.236.10 OR S.236.12 TO BE SUBMITTED TO THE FOLLOWING FOR APPROVAL OR OBJECTION TO THE CITY OF WEST ALLIS.

IN WITNESS WHEREOF, MEURER REALTY HAS CAUSED THESE PRESENTS TO BE SIGNED BY FRANCIS H. MEURER, RICHARD F. MEURER AND ROBERT W. MEURER, GENERAL PARTNERS, THIS 18th DAY OF March, 1998.

Francis H. Meurer
FRANCIS H. MEURER, GENERAL PARTNER
MEURER REALTY, A WISCONSIN GENERAL PARTNERSHIP

Richard F. Meurer
RICHARD F. MEURER, GENERAL PARTNER
MEURER REALTY, A WISCONSIN GENERAL PARTNERSHIP

Robert W. Meurer
ROBERT W. MEURER, GENERAL PARTNER
MEURER REALTY, A WISCONSIN GENERAL PARTNERSHIP

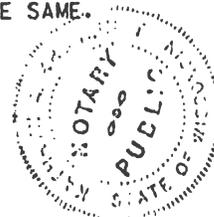


STATE OF WISCONSIN)
MILWAUKEE COUNTY) ss

PERSONALLY CAME BEFORE ME THIS 18th DAY OF March, 1998. THE ABOVE NAMED FRANCIS H., RICHARD F., AND ROBERT W. MEURER, GENERAL PARTNERS OF MEURER REALTY, TO ME KNOWN TO BE THE PERSONS EXECUTED THE FORGOING INSTRUMENT AND ACKNOWLEDGED THE SAME.

MY COMMISSION ~~EXPIRES~~ is permanent

Kathleen A. Kongiust
NOTARY PUBLIC



COMMON COUNCIL RESOLUTION:

BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF WEST ALLIS, THAT THE CERTIFIED SURVEY MAP OF A PARCEL OF LAND IN THE NE¹/₄ OF SECTION 4, TOWNSHIP 6 NORTH, RANGE 21 EAST, IN THE CITY OF WEST ALLIS, COUNTY OF MILWAUKEE, BE AND THE SAME IS HEREBY APPROVED.

APPROVED: April 9th, 1998 ADOPTED: April 7th, 1998

Jeannette Bell
JEANNETTE BELL
MAYOR

Jerry A. White
JERRY A. WHITE
CITY CLERK/TREASURER

3/12/98
PAGE 3 OF 4
RSV#7364CSM.DGN

INSTRUMENT DRAFTED BY BRADFORD L. SPENCER



Stock No. 26273

REEL 4297 IMAG 1584

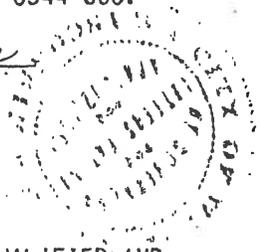
CERTIFIED SURVEY MAP NO. 6510
BEING PART OF THE NW¹/₄ OF THE NE¹/₄ OF SECTION 4,
TOWNSHIP 6 NORTH, RANGE 21 EAST, CITY OF WEST ALLIS,
MILWAUKEE COUNTY, WISCONSIN

CITY CLERK/TREASURER'S CERTIFICATE:

I, Dorothy E. Steinke, ^{Deputy} DO HEREBY CERTIFY THAT I AM THE DULY APPOINTED, QUALIFIED AND ACTING CITY CLERK/TREASURER OF THE CITY OF WEST ALLIS AND THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF A RESOLUTION ADOPTED BY THE COMMON COUNCIL OF THE CITY OF WEST ALLIS, WISCONSIN, ON THIS 28 DAY OF April, 1998. FURTHERMORE, I DO HEREBY CERTIFY THAT IN ACCORDANCE WITH RECORDS IN MY OFFICE THERE ARE NO UNPAID TAXES OR UNPAID SPECIAL ASSESSMENTS AS OF April 28, 1998 ON ANY LANDS INCLUDED IN THIS CERTIFIED SURVEY MAP. TAX KEY NO. 451-0641-000, 451-0642-003, 451-0644-003, 452-0344-000.

April 28, 1998
DATE:

Dorothy E. Steinke
Dorothy E. Steinke, Deputy
CITY CLERK/TREASURER



CERTIFICATE OF COUNTY TREASURER:
STATE OF WISCONSIN)
MILWAUKEE COUNTY) ss

I, THOMAS W. MEAUX, BEING THE DULY ELECTED, QUALIFIED AND ACTING COUNTY TREASURER OF THE COUNTY OF MILWAUKEE, DO HEREBY CERTIFY THAT THE RECORDS IN MY OFFICE SHOW NO UNREDEEMED TAX SALES AND NO UNPAID TAXES OR SPECIAL ASSESSMENTS AS OF April 28, 1998, 1998 ON ANY LANDS INCLUDED IN THIS CERTIFIED SURVEY MAP. TAX KEY NO. 451-0641-000, 451-0642-003, 451-0644-003, 452-0344-000.

April 28th 1998
DATE:

Thomas W. Meaux
THOMAS W. MEAUX
COUNTY TREASURER

7524884

7524884

REGISTER'S OFFICE
Milwaukee County, WI
RECORDED AT 3 10 PM
APR 29 1998

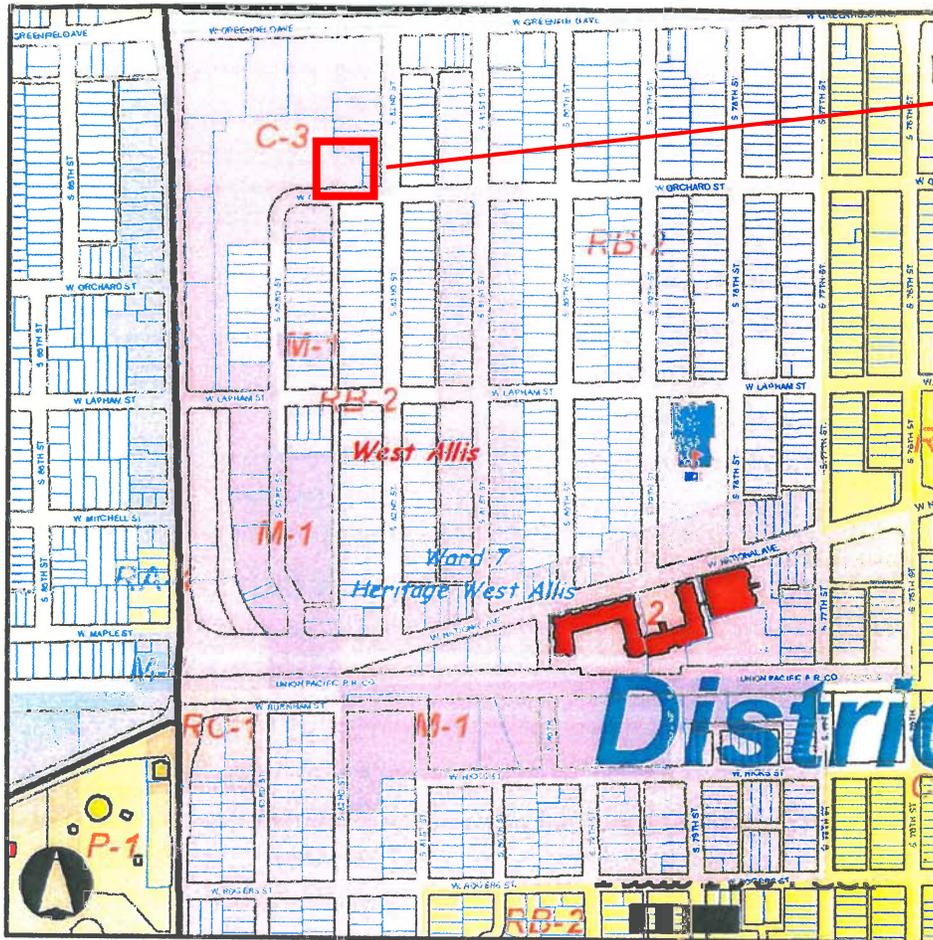
REEL 4297 IMAGE 1581 to 1584
Wanna copy? REGISTER OF DEEDS incl.



RECORD 16.00



Former Milwaukee Gray Iron



Site

City Structures



West Allis Boundary



Right of Way



Tax Key Parcel Values



Polling Structures



Aldermanic District 2011 Bdry



Aldermanic Ward 2011

- Ward 1
- Ward 2
- Ward 3
- Ward 4

Zoning

- RE Residential Estate District
- RA-1 Residence District
- RA-2 Residence District
- RA-3 Residence District
- RA-4 Residence District
- RB-1 Residence District
- RB-2 Residence District
- RC-2 Residence District
- RC-1 Residence District
- C-1 Central Business District
- C-2 Neighborhood Commercial Dist
- C-3 Community Commercial District
- C-4 Regional Commercial District
- M-1 Manufacturing
- SF State Fair Park District

Waukesha Civil Divisions (continued)

- Village of Dousman
- Village of Eagle
- Village of Elm Grove
- Village of Hartland
- Village of Lac La Belle
- Village of Lannon
- Village of Menomonee Falls
- Village of Merton
- Village of Mukwanago
- Village of Nashotah
- Village of North Prairie
- Village of Oconomowoc Lake
- Village of Pewaukee
- Village of Susses
- Village of Wales

- Ward 5
 - Ward 6
 - Ward 7
 - Ward 8
 - Ward 9
 - Ward 10
 - Ward 11
 - Ward 12
 - Ward 13
 - Ward 14
 - Ward 15
 - Ward 16
 - Ward 17
 - Ward 18
 - Ward 19
 - Ward 20
 - Ward 21
 - Ward 22
 - Ward 23
 - Ward 24
 - Ward 25
- Schools
- 
- School Structures
- 
- Zoning Overlay Planned Developments
- PDD-1 Planned Development Residential
 - PDD-2 Planned Development Commercial
- P-1 Park District
 - PDD-1 Planned Development Residential
 - PDD-2 Planned Development Commercial
- Waukesha Civil Divisions
- City of Brookfield
 - City of Delafield
 - City of Milwaukee
 - City of Muskego
 - City of New Berlin
 - City of Oconomowoc
 - City of Pewaukee
 - City of Waukesha
 - Town of Brookfield
 - Town of Delafield
 - Town of Eagle
 - Town of Genesee
 - Town of Lisbon
 - Town of Merton
 - Town of Mukwanago
 - Town of Oconomowoc
 - Town of Ottawa
 - Town of Summit
 - Town of Vernon
 - Town of Waukesha
 - Village of Big Bend
 - Village of Butler
 - Village of Chenequa
- West Milw Parcels
- 
- Milwaukee County Boundary
- 
- Minor Civil Divisions
- Bayside
 - Brown Deer
 - Cudahy
 - Fox Point
 - Franklin
 - Glendale
 - Greendale
 - Greenfield
 - Hales Corners
 - Milwaukee
 - Oak Creek
 - River Hills
 - Shorewood
 - South Milwaukee
 - St Francis
 - Wauwatosa
 - West Allis
 - West Milwaukee
 - Whitefish Bay

West Allis, WI

Updated February 10, 2012

GeoWeb_Property_Map

Act_43_Assembly_Districts: Legislative Technology Services Bureau, Legislative Reference Bureau.

Act_43_Senate_Districts: Legislative Technology Services Bureau, Legislative Reference Bureau.

Act_44_Congressional_Districts: Legislative Technology Services Bureau, Legislative Reference Bureau.

G.4 Signed Statement

Certification of Legal Description

Parcel Identification No. 452-0419-002
1501 South 83rd Street
West Allis, Wisconsin

PARCEL 1:

Lots 36, 37 and 38, Block 4, in Henderson Park, in the Northeast $\frac{1}{4}$ of Section 4, Township 6 North, Range 21 East, in the City of West Allis, County of Milwaukee, and State of Wisconsin, together with the West $\frac{1}{2}$ of vacant Honey Creek adjoining on the East (now a vacated alley pursuant to a Resolution recorded in Reel 4672, Image 1503, as Document No. 7217), exception therefrom that part of Lots 37 and 38 conveyed to the City of West Allis by Deed recorded July 16, 1993, on Reel 3077, Image 1358, as Document No. 6795531, bounded and described as follows: Commencing at the Southwest corner of said Lot 36; thence North $00^{\circ} 24' 15''$ West along the East right-of-way line of North 83rd Street 46.42 feet to a point of curvature; thence Northeasterly along an arc of a curve and the Southeasterly right-of-way line of said street, whose center lies to the East, whose radius is 55.00 feet, whose chord bears North $43^{\circ} 50' 56''$ East 76.76 feet, a distance of 84.96 feet to a point of tangency thence North $88^{\circ} 06' 07''$ East, along the South right-of-way line of West Orchard Street 123.00 feet; thence South $00^{\circ} 24' 15''$ East 100.00 feet; thence South $88^{\circ} 06' 07''$ West 178.00 feet to the point of beginning.

PARCEL 2:

That part of the Northeast $\frac{1}{4}$ of Section 4, in Town 6 North, Range 21 East, which was formerly a part of a Chicago and North Western Railway Company Spur Track right of way, Lots 1, 2, 3 and 4, in Block 5, and Lots 14, 15 16, 17, 18 and 19, in Block 1, and vacated Honey Creek in Henderson Park, in the Northeast $\frac{1}{4}$ of Section 4, in Township 6 North, Range 21 East, and Lots 3 and 4, in Block 3, in Assessor's Plat No. 257, being a part of the Northwest $\frac{1}{4}$ of Section 4 and a part of the Northeast $\frac{1}{4}$ of Section 4, in Town 6 North, Range 21 East, all in the City of West Allis, County of Milwaukee, and State of Wisconsin, bounded and described as follows:

Commencing at a point in the North line of West Orchard Street, said point being the Southeast corner of Lot 14, Block 1, Henderson Park; thence Westerly along the North line of West Orchard Street 336.00 feet to its intersection with the West line of South 83rd Street, thence southerly along the West line of South 83rd Street, 195.00 feet to a point; said point being the Southeast corner of Lot 4, Block 5, Henderson Park; thence Westerly along the South line of Lot 4, 152.83 feet to the Southwest corner of Lot 4, said point also being the Northwest corner of Lot 5; thence Southerly along the West line of Lot 5, Block 5, Henderson Park 35.00 feet to the Southwest corner of Lot 5; thence Westerly on the extension of the Southerly line of Lot 5, 20.00 feet to a point; thence Northerly and parallel to the West line of Henderson Park 352.29 feet to a point; thence Northeasterly 46.75 feet to a point in the West line of said Lot 4, Block 3, Assessor's Plat No. 257; thence Northerly along the West line of said Lot 4, 97.40 feet to a point, said point being 310.60 feet South of the North line of the Northeast $\frac{1}{4}$ of Section 4, in Township 6 North, Range 21 East; thence Easterly and parallel to the North line of said $\frac{1}{4}$ Section 395.73 feet to a point in the vacated Honey Creek in Block 1 of Henderson Park; thence Southerly on a line 168 feet from and parallel to the West line of South 82nd Street, 142.40 feet to a point in the Westerly extension of the North line of Lots 14 and 15, Block 1, Henderson Park; thence Easterly along said line 98.00 feet to the Northeast corner of Lot 14, Block 1, thence Southerly along the East line of said Lot 14, 120.00 feet to the point of commencement.

PARCEL 3:

Easement for the benefit of Parcel 2 created by Easement dated December 18, 1984 and recorded on January 8, 1995, on Reel 1715 Image 1422, as Document No. 5778899 for the purpose of storm sewer main and appurtenances.

PARCEL 4:

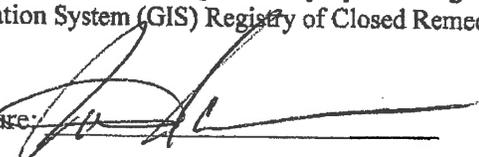
That part of the West ½ of the Northeast ¼ of Section 4, Township 6 North, Range 21 East of the Fourth Principal Meridian, bounded and described as follows:

Commencing at a point on the South line of Greenfield Avenue, distance 25 feet Easterly, measured at right angles, from the centerline of a spur track (now relocated) of the Chicago and North Western Railway Company (now the Chicago and North Western Transportation Company), running from North-Greenfield station to "proposed fair grounds", as described by Warranty, Deed dated December 2, 1891, between Mary A. Abbott and the Chicago and North Western Railway Company, recorded February 23, 1892, in the Milwaukee County Register of Deeds office in Volume 284 of Deeds at Pages 492, 493 and 494; thence Southerly parallel with said spur track centerline a distance of 325 feet to the point of beginning of the tract of land herein described; thence continuing Southerly parallel with said spur track centerline, said parallel line being also the Westerly line of Assessor's Plat No. 257, a distance of 105 feet, more or less, to a point distance 359.25 feet Northerly from the Southwest corner of Lot 4, Block 5, of Henderson Park; thence Southwestly along a straight line a distance of 46.75 feet to a point distance 20 feet Westerly measured at right angles, from the West line of said Assessor's Plat No. 257; thence Southerly parallel with said West line of Assessor's Plat No. 257, and the West line of said Block 5 of Henderson Park, a distance of 352.29 feet to a point on the Westerly extension of the South line of Lot 5 in said Block 5; thence Easterly along said South line, extended, of Lot 5, a distance of 20 feet, more or less, to the Southwest corner of said lot 5; thence Southerly along the West line of said Block 5 a distance of 500 feet, more or less, to a point on the North line of West Lapham Avenue; thence Westerly along said North line of West Lapham Avenue to a point distant 50 feet Westerly, measured at right angles, from the West line of said Block 5; thence Northerly parallel with the West line of said Block 5, and the West line of said Assessor's Plat No. 257, a distance of 1,000 feet, more or less, to a point on a line drawn parallel with the North line of said Section 4 through the point of beginning; thence Easterly along said last described parallel line a distance of 50 feet, more or less, to the point of beginning.

PARCEL 5:

Lot 35, in Block 4 in Henderson Park, in the Northeast ¼ of Section 4, Township 6 North, Range 21 East, in the City of West Allis, County of Milwaukee and State of Wisconsin, together with the West ½ of vacant Honey Creek adjoining on the East (now a vacated alley pursuant to a Resolution recorded in Reel 4672, Image 1503, as Document No. 7217).

I, Patrick Schloss, certify that the legal description provided above is complete and accurate to the best of my knowledge for the purpose of registering this site onto the Wisconsin Geographical Information System (GIS) Registry of Closed Remediation Sites.

Signature: 

Title: Community Development mgr.

Date: 3-1-13