Phase I Environmental Site Assessment

University of Wisconsin – Milwaukee
Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin

Prepared For:

Waukesha County Department of Parks and Land Use
Waukesha, Wisconsin

February 4, 2025
Project No. 1E-2501002

GILES
ENGINEERING ASSOCIATES, INC.

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GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

• Dallas, TX
• Los Angeles, CA
• Manassas, VA
• Milwaukee, WI

February 4, 2025

Waukesha County Department of Parks and Land Use
Waukesha County Administration Center, Room AC260
515 W. Moreland Boulevard
Waukesha, WI 53188

Attention: Mr. Steven Todd
Hazardous Materials Coordinator

Subject: Phase I Environmental Site Assessment
University of Wisconsin – Milwaukee
Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

Dear Mr. Todd:

In accordance with your request and subsequent authorization, we have completed a Phase I Environmental Site Assessment on the above referenced property. Findings and conclusions are discussed in detail within the accompanying report.

We appreciate the opportunity to be of service on this project. If there are any questions regarding the information contained herein, or if we can be of any additional service, please contact the undersigned at your convenience.

Very truly yours,

GILES ENGINEERING ASSOCIATES, INC.

Timothy J. Taugher, P.G.
Senior Hydrogeologist

Steven C. Thuemling
Environmental Department Manager |
Corporate Manager – Phase I Services

Distribution: Waukesha County Department of Parks and Land Use
Attn: Mr. Steven Todd (PDF to: stodd@waukeshacounty.gov)

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PROJECT NO. 1E-2501002

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PHASE I ENVIRONMENTAL SITE ASSESSMENT

UNIVERSITY OF WISCONSIN – MILWAUKEE
WAUKESHA CAMPUS
1500 N. UNIVERSITY DRIVE
WAUKESHA, WISCONSIN
PROJECT NO. 1E-2501002

1. SUMMARY

The summary is provided solely for the purpose of overview. Any party who relies on this report must read the full report. The summary omits a number of details, any one of which could be crucial to the proper application of this report.

Giles Engineering Associates, Inc. (Giles) has completed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of American Society of Testing and Materials (ASTM) *Standard Practice E1527-21* for the property located at 1500 N. University Drive, in the City of Waukesha, Waukesha County, Wisconsin (the "subject property"). Any exceptions to, or deletions from, this practice are described in *Section 3.2*. Pertinent information relative to this assessment is enclosed within Appendix A.

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

The purpose of the Phase I ESA is to provide information to prospective purchasers of the subject property.

This assessment has revealed evidence of the following recognized environmental conditions:

- A closed leaking underground storage tank (LUST) site is present on the subject property. While regulatorily closed, soil vapor testing was not performed, and residual impacted soil and groundwater are present.

- A fuel oil underground storage tank (UST) was abandoned in place on the subject property in 1979 without any soil confirmation sampling.

In addition, this assessment has revealed evidence of the following historic recognized environmental condition:

- The gasoline release in the area of the former farmstead has received regulatory closure with a deed notification that impacted soil and groundwater were left in place.

This assessment has revealed no indications of controlled recognized environmental conditions or significant data gaps in connection with the subject property.

Based on information gathered for this assessment, further environmental investigation of the subject property, including sampling and analysis of soil from the vicinity of the abandoned fuel oil UST, is considered warranted at this time. The soil vapor concern associated with the residual impacted soil and groundwater may warrant soil vapor testing at a later date, depending on the eventual planned use of the subject property. No testing of soil vapor is considered warranted at this time.

2. INTRODUCTION

A Phase I Environmental Site Assessment (Phase I ESA) has been completed for the property located at 1500 N. University Drive, in the City of Waukesha, Waukesha County, Wisconsin (the "subject property"). The assessment was performed at the request of Mr. Steven Todd of Waukesha County Department of Parks and Land Use, in accordance with Giles Proposal No. 1EP-2412024, dated December 10, 2024. The purpose of this assessment is to facilitate the sale of the subject property.

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The purpose of a Phase I ESA is to identify *recognized environmental conditions* (as defined by ASTM) in connection with the subject property. This Phase I ESA is intended to permit the user to satisfy one of the requirements to qualify for *innocent landowner defense, contiguous property owner or bona fide prospective purchaser* (collectively *Landowner Liability Protections* (LLPs)) for limitations on CERCLA liability as stated in the *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA, 42 USC § 9601(35), 9601 (40), 9607(b), 9607 (q) and 9607 (r)).

Mr. Timothy Taugher conducted the reconnaissance activities on January 24, 2025. Resumes of environmental professionals directly responsible for this assessment are enclosed within Appendix B.

3. SCOPE OF SERVICES AND LIMITATIONS

3.1. Scope of Services

The Phase I ESA has been performed in general accordance with the scope and limitations of ASTM *Standard Practice E1527-21*. The scope of services included:

- A visual reconnaissance of the subject property and a cursory evaluation of adjoining properties,
- Interviews of existing and/or former owners and/or operators of the subject property, and individuals who have knowledge of the subject property and surrounding areas,
- A review of available federal, state, tribal, county, and local registries of known environmental concerns,
- A review of available and applicable building inspection, permitting, and other environmental records maintained by county and/or local agencies, and interviews with agency representatives,
- A review of available aerial photographs, city directories, fire insurance maps, geological maps, hydro-geological maps, and United States Geological Survey (USGS) topographic maps,

- Complete a Tier 1 and Tier 2 Vapor Encroachment Screening of the subject property; and

- An evaluation of the information collected and the preparation of this report summarizing the scope of services and the resulting conclusions and recommendations.

3.2. Limitations and Exceptions

The limitations of this Phase I ESA included:

- Preparation and review of a chain-of-title and environmental lien search was not requested.

- "Non-Scope Considerations" such as asbestos-containing materials, radon, lead-based paint, lead in drinking water, mold, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high-voltage power lines were not included as part of this assessment.

- The subject property was covered in snow at the time of the on-site visit.

4. OWNER/USER PROVIDED INFORMATION

4.1. User Questionnaire

We were not provided with a completed user questionnaire for this project.

4.2. Recorded Land Title Records

No recorded land title records for the subject property were provided for review.

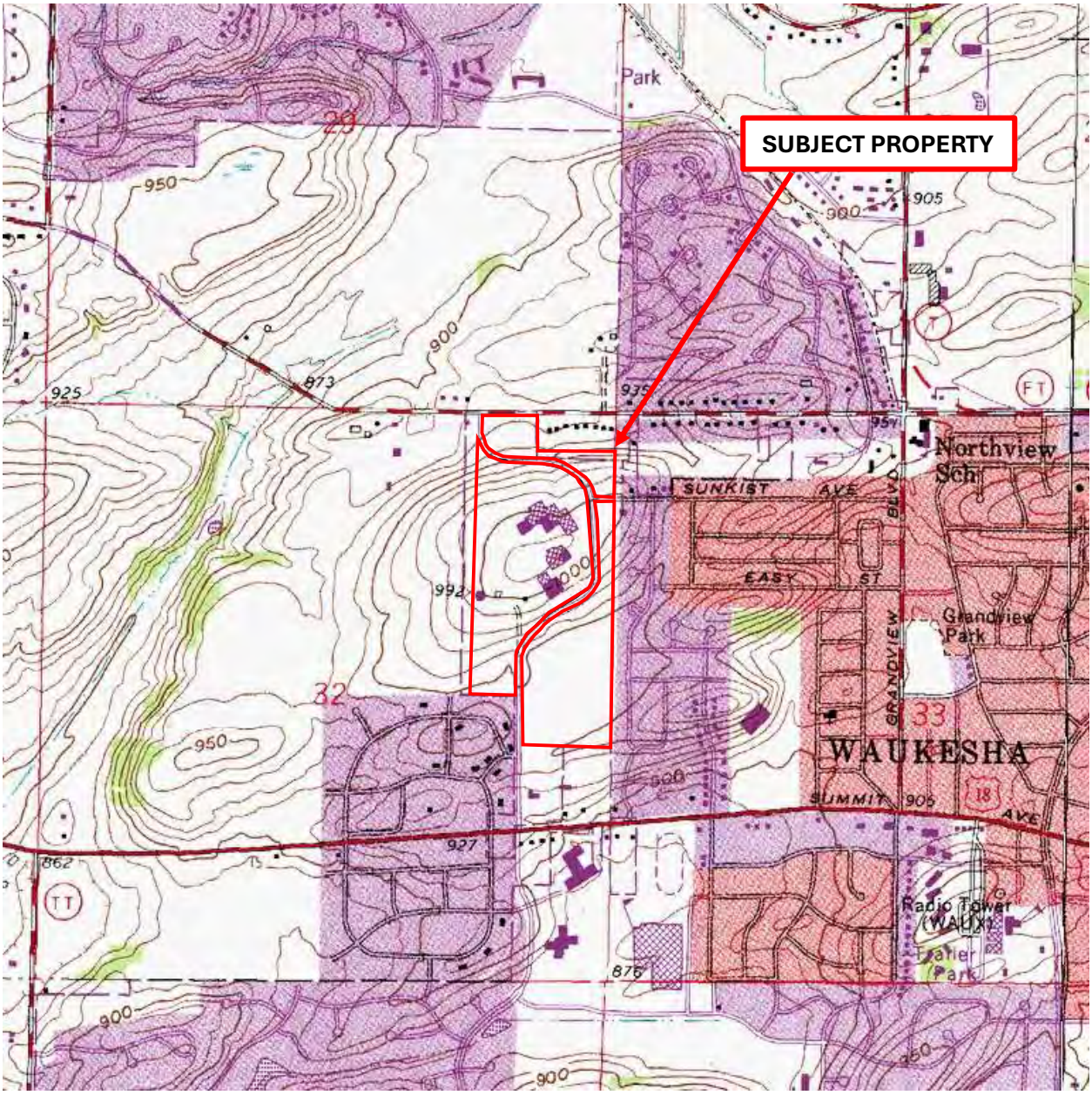
4.3. Previous Environmental Reports

Mr. Steven Todd of the Waukesha County Department of Parks and Land Use provided Giles with several reports and other environmental documents. The documents are discussed in Sections 10.1.4, 10.2.4, and 10.2.12.

5. SUBJECT PROPERTY DESCRIPTION

5.1. Setting and Location

The subject property is located at 1500 N. University Drive, in the City of Waukesha, Waukesha County, Wisconsin. The subject property is situated at latitude 43.028º north, longitude -88.268º west. The following Figure 1 illustrates the generalized location of the subject property.



Source: USGS *Hartland, Wisconsin* 7.5-minute series quadrangle map (1959; revised in 1994)
Scale: 1:24,000
Contour Interval: 10 feet

N
W E
S

FIGURE 1
SUBJECT PROPERTY LOCATION

University of Wisconsin – Milwaukee
Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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5.2. Surrounding Area

North:	Single-family dwellings and Northview Road, with Homestead Condominiums and multi-family dwellings beyond
Northeast:	Single-family dwellings, with Northview Road and residential properties beyond
East, Southeast:	Residential neighborhood
South:	Single-family dwellings and Waukesha Montessori School, with Summit Avenue beyond
Southwest, West:	Residential neighborhoods
Northwest:	Residences and Northview Road, with Homestead Condominiums beyond

The subject property and surrounding area land uses are illustrated on the following Figure 2. Photographs of the subject property and surrounding area are enclosed within Appendix C.

6. SUBJECT PROPERTY OBSERVATIONS

Mr. Timothy Taugher conducted the reconnaissance activities on January 24, 2025. The site visit included a visual evaluation of the subject property, as well as a cursory evaluation of adjoining properties. A walk-through of the on-site structures was also completed. Weather conditions at the time of the assessment were mostly sunny and a temperature around 12ºF.

6.1. Current Property Use and Activity

The subject property consists of the Waukesha Campus of the University of Wisconsin – Milwaukee. The N. University Drive and Sunkist Avenue rights-of-way extend through the subject property and divide the property into three distinct sections.

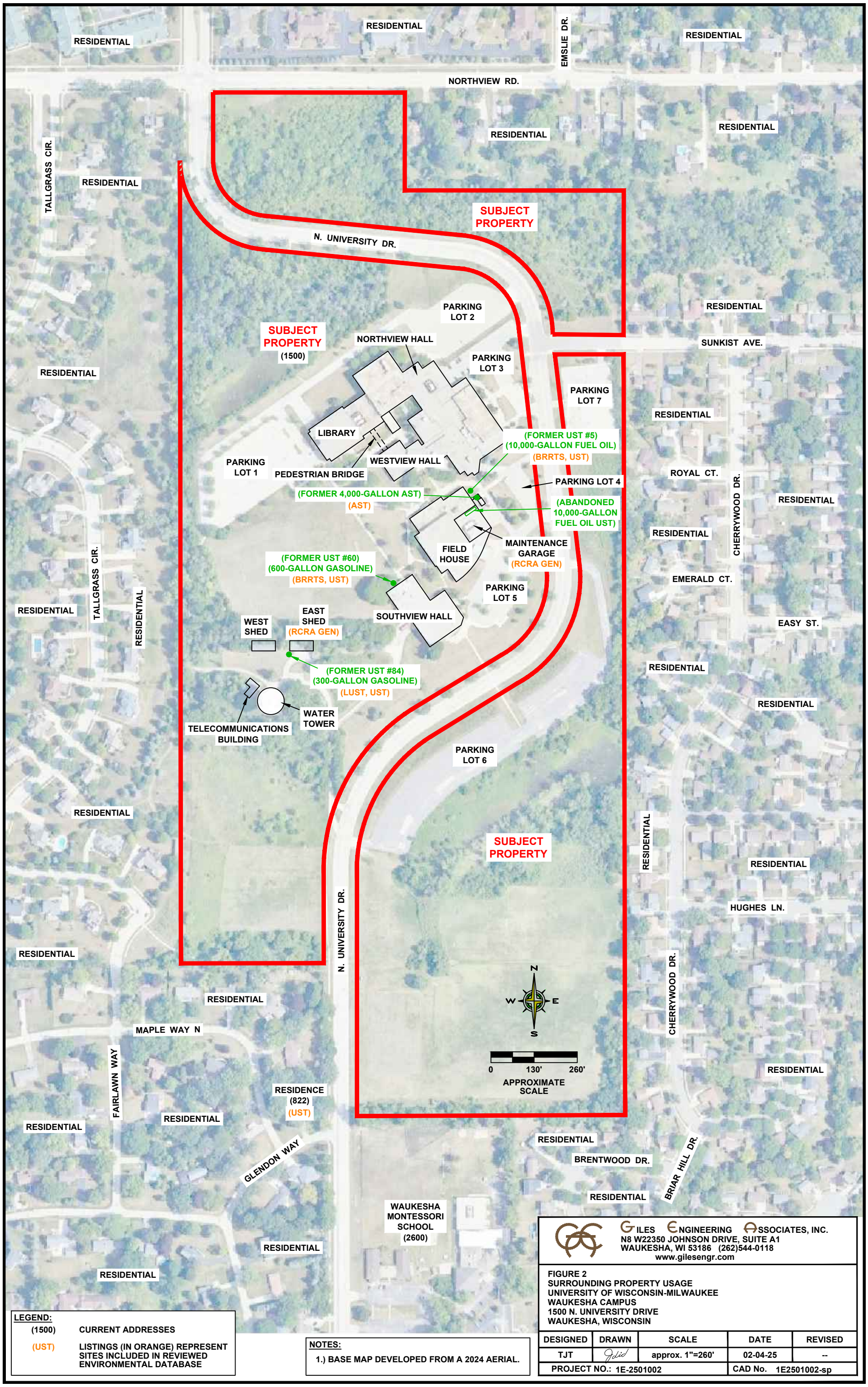
Portion of campus west of N. University Drive

The largest portion of the campus includes areas on the west side of N. University Drive. There are three primary structures on the western portion of the campus. The largest of the structures is divided into three separate sections.

The northernmost section is known as Northview Hall. It includes classrooms, science laboratories, lecture halls, and the school's library. A small greenhouse is also attached to Northview Hall.

The area directly south of Northview Hall is known as Administration Hall. This portion of the building houses the university's administrative offices and student offices.

Westview Hall, which is an addition to the south end of Administration Hall, houses an area known as "The Union." This portion of the building has student affairs and continuing education offices and the university bookstore. An area known as "The Hub"



LEGEND:

(1500)	CURRENT ADDRESSES
(UST)	LISTINGS (IN ORANGE) REPRESENT SITES INCLUDED IN REVIEWED ENVIRONMENTAL DATABASE

NOTES:

1.) BASE MAP DEVELOPED FROM A 2024 AERIAL.

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FIGURE 2
SURROUNDING PROPERTY USAGE
UNIVERSITY OF WISCONSIN-MILWAUKEE
WAUKESHA CAMPUS
1500 N. UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
TJT	JdH	approx. 1"=260'	02-04-25	--
PROJECT NO.: 1E-2501002			CAD No. 1E2501002-sp	

includes a kitchen, a commons/dining area, the academic success center, English offices, and the computer center. Two loading docks are also located in this portion of the building.

The structure forms a U-shape; an exterior pedestrian bridge connects the southwest (Westview Hall) and northwest (Northview Hall) portions of the structure.

A building known as the "Field House" is located south of Westview Hall. The building contains a gymnasium, locker rooms, and several classrooms. The boiler room is situated in the northeast corner of the building. It houses three boilers, water softening equipment, and a chiller, and provides steam for heating in the four primary buildings (Northview, Southview, and Westview Halls and the Field House).

In addition, the campus maintenance facility is found in this building. The facility includes a maintenance garage, maintenance office, and storage areas. The garage has four overhead doors, all at-grade. A single loading dock is located immediately west of the maintenance garage.

A brick enclosure is also attached to the northeast side of the Field House building, directly north of the overhead garage doors. A small structure is situated within the brick enclosure. This structure houses fire suppression equipment for the complex.

A small brick addition was also attached to the northwest side of the Field House building. The addition is understood to house telecommunications equipment associated with a small cellular tower, situated between Westview Hall and the Field House.

The southernmost academic building is known as Southview Hall. The structure houses the campus' fine arts center, including art classrooms, an orchestra room, practice rooms, a theatre, and auxiliary theatre rooms such as a costume storage room, a prop room, and dressing rooms.

The area north of the campus complex is largely wooded, with a significant downward slope towards the north. A small area which, despite being located near the crest of a hill appears to have wetland vegetation, is also located on the northern portion of the subject property.

There are several parking lots in the vicinity of the primary campus buildings. Lot 1 is located west and northwest of Northview Hall. It is accessed via an asphalt driveway that extends eastward, along the north side of Northview Hall, to Lot 2. Lot 2 is located northeast of Administration Hall, and has one means of ingress and egress to and from N. University Drive. A small parking lot, known as Lot 3, is located directly south of Lot 2 but is situated at least ten feet higher than Lot 2. It, too, has one entrance from N. University Drive. Lot 3 is also connected to Lot 4, more commonly referred to as the Visitor Parking Lot. This small parking lot is situated east of Westview Hall and has one entrance from N. University Drive. Lot 5 has two sections; a small lot located east of the Field House, and a larger parking lot east of the Field House and north of Southview Hall. It has two entrances from N. University Drive.

A large field which appears to be used as a soccer field is located west of Westview Hall and the Field House. Several concrete sidewalks extend through areas east of the soccer field and between the academic buildings. These areas are landscaped with grass and trees, as are areas around the parking lots.

A narrow strip of wooded land is located along the south side of the soccer field and extends west from the area south of Southview Hall to the western property boundary. The western property boundary is also wooded and provides a buffer between the campus and the residential area to the west of the subject property.

The area south of the soccer field and wooded strip of land was formerly part of a farmstead. Two long, narrow sheds are the only buildings that remain from the farmstead. Both sheds are used for storage; the eastern half of the eastern shed is also used as a household hazardous waste drop-off station for the City of Waukesha during the summer months.

The sheds are connected via an asphalt driveway that extends from north to south, connecting the area with University Drive. Another driveway extends from the asphalt driveway westward, then turns to extend northward along the western property boundary, terminating at the southwest corner of Lot 1. If this driveway is improved or unimproved is not clear due to snow cover at the time of our site visit.

A small masonry building which is understood to house telecommunications equipment is located south of the western shed. A water tower is also located south of the western shed. Telecommunications antennae are attached to the water tower. A small, wooded area is located south and southeast of the water tower; this area appears to contain remnants of stone foundations. University employees also appear to use this area for disposal of brush. A pile of gravel was also noted in this area. Additional athletic fields are located south of the former farmstead.

Portion of campus east of N. University Drive and south of Sunkist Avenue

A second section of the subject property is located east of N. University Drive and south of Sunkist Avenue. Parking Lot 7 is located on the northern portion of this part of the subject property. The parking lot has one means of egress and ingress from Sunkist Avenue and two from N. University Drive. A vacant area is located south of Lot 7. Another narrow, serpentine parking lot, Lot 6, is located south of the apparent wetland. Lot 6 only has one entrance from N. University Drive, located at the south end of the lot. Additional vacant land, understood to include wetlands, is located east of Lot 6. The southernmost portion of this section of the subject property is occupied by additional athletic fields. A sign proclaims that the athletic fields are used by SC Waukesha soccer club.

Portion of campus east of N. University Drive and north of Sunkist Avenue

The northeast part of the campus is also the smallest and is largely wooded. It also includes a significant downward slope to the north. There is no development on this part of the subject property.

6.2. Observations

- Hazardous Substances..... Observed
  There are two areas where hazardous materials are stored in Northview Hall, one of which is used by the Biology Department and is located on the lower level, and one on the upper level used by the Chemistry Department. In each case, the hazardous substances are stored in designated and well-labeled cabinets. Acids, bases, oxidizers, and flammable liquids are stored separately. Hazardous materials were also noted in storage cabinets in the maintenance garage. Liquids stored in the maintenance garage appear to be limited to flammable liquids.

- Petroleum Products ..... Observed
  Small containers of gasoline and oil were observed in the eastern shed in the old farmstead portion of the property, and in the maintenance shop in the Field House. Materials appeared to be properly stored above concrete floors with no indications of spills.

- Pipelines.....None Observed

- Storage Tanks
  Aboveground Storage Tanks (ASTs)..... Observed
  A 119-gallon diesel AST was observed in the fire suppression equipment room adjacent to the Field House. The AST was situated over a spill containment dike which, in turn, was situated on a concrete floor. The AST appeared to be in good condition, with no signs of leakage.
  Underground Storage Tanks (USTs).....None Observed

- Odors.....None Detected

- Pools of Liquid .....None Observed

- Drums or Other Containers..... Observed
  Drums, mostly 55-gallons in size, of boiler and chiller chemicals were observed stored on spill containment pallets or on the concrete floor in the boiler room in the Field House. Several 55-gallon drums of waste antifreeze were observed on the concrete floor or on spill containment pallets in the loading dock area in the Field House building. An empty 55-gallon drum was also observed in the enclosed area adjacent to the maintenance garage.

  At least 40 empty 55-gallon drums were observed in the eastern half of the eastern shed, the portion which is used by the municipal household hazardous waste program during the summer months. Most of the drums were stacked in one area of the shed; a few drums were also used to support a piece of plywood to make a makeshift workbench. The drums in the shed were all situated on or above the concrete floor.

  Observed drums on the subject property appeared to be in good condition, with no indications of spills or leakage.

- Potential Polychlorinated Biphenyls (PCB) sources
  Electrical Equipment ..... Observed
  Pad-mounted transformers were observed in the following locations:

  One transformer was observed in a landscaping area along the south side of Westview Hall.

  One transformer was observed in a grassy area east of the maintenance shop in the Field House. Another smaller transformer was noted in a grassy area adjacent to the northwest portion of the Field House.

  One transformer was observed in a grassy area on the north side of Southview Hall.

The pad-mounted transformers appeared to be in good condition with no signs of leakage.

In addition, two pole mounted transformers were observed mounted on separate poles in the vicinity of the former farmstead. The pole-mounted transformers appeared to be in good condition with no signs of leakage.

Hydraulic Equipment ..... Observed
An air compressor was observed in the mechanical room in Southview Hall. The air compressor appeared to be in good condition with no signs of leakage.

- Waste Water
  - Surface Water Discharge ..... None Observed
  - Process/Sanitary Discharge ..... Observed
  - Septic Systems ..... None Observed
  - Industrial Wastewater Treatment ..... None Observed
  - Holding Tanks ..... None Observed

- Potable Water Supply
  - Municipal ..... Observed
  - Private ..... None Observed

- Wells ..... None Observed

- Pits, Ponds or Lagoons ..... None Observed

- Stained Soil or Pavement ..... Observed
  De minimis staining from parked vehicles was noted in the parking lots.

- Stressed Vegetation ..... None Observed

- Solid Waste
  - Storage ..... Observed
    Dumpsters for rubbish and for recyclables were observed in the loading dock adjacent to Westview Hall. A small dumpster that appears to be used to accumulate scrap metal was observed in the brick enclosure adjacent to the maintenance garage in the Field House. A large, roll-off dumpster was observed adjacent to the eastern shed in the former farmstead area. The large dumpster is understood to be used for the household hazardous waste drop-off station during the summer months. The dumpster was lined and covered with tarpaulins. A small amount of apparent non-hazardous trash was observed in the dumpster.
  - On-Site Disposal ..... None Observed

- Heating/Cooling ..... Observed
  The buildings are heated with natural gas. The two sheds in the old farmstead area do not appear to be heated.

- Interior Staining or Corrosion ..... Observed
  De minimis staining was observed on the concrete floors in the maintenance garage and the loading dock areas.

- Drains or Sumps ..... Observed
  One floor drain was observed inside the maintenance shop. Small floor drains were also observed in the boiler room. At least one sump was observed in each of the primary campus buildings. Storm sewer catch basins were observed in a few of the asphalt parking lots.

7. INTERVIEWS

An interview was conducted with Mr. Giulio Leonardelli at the time of our site visit. Mr. Leonardelli is the interim maintenance supervisor for the University of Wisconsin – Milwaukee Waukesha Campus and has been in that role since mid-2024. Mr. Leonardelli accompanied Mr. Taugher during the walk-through of the on-site structures.

Mr. Leonardelli mentioned that there is one floor drain located in the maintenance garage. He also noted that the garage has one aboveground hydraulic lift, which he mentioned had never been used. There are no in-ground hydraulic lifts in the garage. He pointed out the flammable liquids storage cabinets in the garage.

Mr. Leonardelli noted that a boiler room is present in the Field House building. The boiler room currently houses three boilers; the boilers generate steam which is used to heat the academic buildings on campus. Chiller equipment was also observed in the boiler room. He noted that each building does have its own air handling equipment and other mechanical equipment related to the steam heating system. Mr. Leonardelli also stated that the boilers are fired with natural gas.

Chemicals associated with the boilers and chiller are stored in the boiler room, generally on spill containment pallets. Other containers are stored directly on the concrete floor. The only significant waste generated in the facility is waste antifreeze, which is stored on spill containment pallets or directly on the concrete floor in the Field House's loading dock area. Waste antifreeze is occasionally removed from the property by Veolia Waste Management for off-site disposal.

Mr. Leonardelli stated that there are two hazardous materials storage rooms in Northview Hall, which houses the school's science classrooms. Hazardous materials belonging to the Biology Department are stored in a small, dedicated room on the lower level, while the Chemistry Department's hazardous materials are stored in a room which is also used to store non-hazardous materials and glassware. In both cases, hazardous materials are stored in labeled cabinets. When either department has hazardous waste materials, they are retrieved by University of Wisconsin – Milwaukee staff for proper disposal.

Mr. Leonardelli noted that a farmstead was formerly located on the southwest portion of the subject property. While most of the buildings that were present in this area are gone, two sheds from the old farmstead remain. One of the sheds is used entirely for storage; a portion of the second shed is also used for storage. The remainder of the shed is used seasonally by the City of Waukesha for a resident drop-off of hazardous household waste. The drop-off site is managed by Veolia Waste Management. Veolia is responsible for appropriate disposal of the collected hazardous waste.

Mr. Leonardelli was unaware of any significant spills of petroleum or hazardous materials on the subject property. He also provided no new information regarding storage tanks formerly located on the subject property.

8. HISTORICAL USE INFORMATION

8.1. Aerial Photographs

Aerial photographs of the subject property and vicinity dated 1941, 1950, 1963, 1970, 1980, 1990, 1995, 2000, 2005, 2007, 2008, 2010, 2013, 2015, 2017, 2020, 2022, and 2024 (original scales 1" = 400') were obtained from the Waukesha County Land Information System. In addition, aerial photographs of the subject property and vicinity, dated 1967, 1975, and 1985 (scales 1" = 400'), were obtained from the Southeastern Wisconsin Regional Planning Commission. No additional aerial photographs were reasonably ascertainable. The following is a summary of information obtained from the aerial photographs:

1941

An apparent farmstead was present on the southwest portion of the subject property. A driveway extended south from the farmstead toward Summit Avenue in the current location of University Drive. The remainder of the subject property appeared to be used as cropland. Northview Road was present along part of the northern property boundary. Three small structures, likely residences were located north of the northeast corner of the subject property, on the south side of Northview Road. Other surrounding properties appeared to be utilized as farmland.

1950

The subject property appeared unchanged. Three additional apparent dwellings were noted on the south side of Northview Road north of the northeast corner of the subject property. Other surrounding properties generally appeared in 1950 as they had in 1941.

1963

The subject property generally appeared unchanged from the earlier aerial photographs. Residential development was noted east of the subject property, with Sunkist Avenue extending westward to the eastern boundary of the subject property. An outbuilding appeared to encroach on the subject property's eastern boundary just south of Sunkist Avenue. Additional residential development was first noted adjacent to the southwest portion of the subject property. Other surrounding properties generally appeared unchanged from the 1950 aerial photograph.

1967

Structures were first noted in the current location of Northview Hall and the Field House building. The only parking lots noted were the parking lots currently known as Lot 2 and Lot 5, located on the west side of N. University Drive, which also was first noted in 1967. Sunkist Avenue appeared to extend westward to its intersection with University Drive. University Drive was configured slightly differently than it currently exists. The farmstead buildings remained present on the southwest portion of the subject property. Some additional residential development was noted east and southwest of the subject property. A somewhat larger structure with a parking lot was first noted south of the subject property, on the northeast corner of University Drive and Summit Avenue. Other surrounding properties generally appeared unchanged.

1970

Additions to the campus buildings were noted in 1970. A structure was also first noted in the current location of Southview Hall. University Drive appeared to have been reconfigured into its current right-of-way. The farmstead buildings remained in 1970. The serpentine parking lot located south of the campus buildings on the east side of University Drive (Lot 6) was also first observed. Surrounding properties generally appeared in 1970 as they had in 1967.

1975

An apparent parking lot was noted on the southeast corner of Sunkist Avenue and University Drive east of the campus buildings; however, the apparent parking lot was not connected to either Sunkist Avenue or University Drive. The remainder of the subject property appeared relatively unchanged from the 1970 aerial photograph. Another building with a parking lot was noted on the north side of Summit Avenue south of the subject property. Other surrounding properties generally appeared unchanged from the 1970 aerial photograph.

1980

Additions to the north and south buildings on the subject property were noted in 1980. The parking lot located west of the structures (currently known as Lot 1) was also first noted. Development of streets in the residential area southeast and east of the subject property appeared to be underway. Other surrounding properties generally appeared in 1980 as they had in 1975.

1985

The subject property appeared relatively unchanged from the 1980 aerial photograph. Residential development east of the subject property appeared to have been completed by 1985. Other surrounding properties generally appeared in 1985 as they had in 1980.

1990

A large addition to Southview Hall was noted in 1990. The parking lot on the southeast corner of Sunkist Avenue and University Drive (Lot 7) appeared to have been connected to the adjacent streets and was in use for vehicle parking. One of the former farmstead structures on the southwest portion of the subject property appeared to have been razed by 1990. Surrounding properties generally appeared unchanged from the 1985 aerial photograph.

1995

By 1995, all but two of the structures associated with the farmstead on the southwest portion of the subject property appeared to have been razed. The water tank present just west of the former farmstead also was first noted in 1995. Apparent tennis courts were first observed on the southern portion of the subject property, east of University Drive. Surrounding properties appeared relatively unchanged from the 1990 aerial photograph.

2000

A significant addition to Northview Hall was first observed in 2000, as well as the parking lot south of the Field House building (Lot 5). The remainder of the subject property appeared largely as it had in 1995. The residential development west and northwest of

the subject property appeared to have been completed between 1995 and 2000; grading of the area north of the subject property in preparation for development was first noted in 2000. Other surrounding properties appeared largely unchanged from 1995.

2005, 2007, 2008, 2010, 2013, 2015, 2017, 2020, 2022, and 2024
The subject property and adjacent properties generally appeared during this period as they did at the time of our site reconnaissance.

Copies of the 1941, 1950, 1963, 1970, 1980, 1990, 1995, 2000, 2005, 2007, 2008, 2010, 2013, 2015, 2017, 2020, 2022, and 2024 aerial photographs are enclosed within Appendix D.

8.2. City Directories

The 1964, 1968, 1973, 1977, 1982, and 1987 editions of *Wright's Waukesha, Wisconsin City Directory* and 1992, 1998, 2002, 2007, 2012, 2017, and 2022 editions of the *Waukesha, Wisconsin Polk City Directory* were reviewed at the Waukesha Public Library. Earlier directories with coverage in the vicinity of the subject property were not reasonably ascertainable. The area of the subject property was not included in the 1964 directory. Only residential listings were noted for most surrounding properties. The following non-residential listings were noted for the subject property and non-residential properties in the vicinity of the subject property:

Address	Occupant	Year(s) Listed
1500 N. University Drive (subject property)	University of Wisconsin (UW)	1967
	UW – Waukesha County Campus	1973 – 1982
	UW/Barnes & Noble Bookstore	1987
	UW-Waukesha Bookstore/Lunt – Fontanne Theatre/Fine Art Center Gallery	1992
	Barnes & Noble Bookstore/UW – Waukesha Childcare/Waukesha County Campus	1998
	Barnes & Noble Booksellers/Food Services at UW-Waukesha/ UW-Waukesha Bookstore/UW-Waukesha Library/UW/WYRE/ YWCA Childcare	2002
	Food Services at UW-Waukesha/La Casa de Esperanza Childcare/UW-Waukesha Library/UW-Waukesha Bookstore/ WUWW Radio/UW	2007
	UW-Waukesha Bookstore/UW-Waukesha Library/Food Services at UW-Waukesha/Only Kids University	2012
	UW-Waukesha Bookstore/Consolidated Management Co./ Child's First Campus/UW-Waukesha Friends	2017
	UW-Milwaukee/UW-Waukesha Friends and Alumni/UW-Waukesha Library	2022

Address	Occupant	Year(s) Listed
2600 Summit Avenue (south adjacent)	Address not listed Montessori School of Waukesha	1967 – 1992 1998 – 2022

8.3. Fire Insurance Maps

Fire Insurance Maps with coverage in the vicinity of the subject property were not included in the digital collections maintained by the Library of Congress and the Wisconsin State Historical Society.

8.4. Topographic Maps

The 1892 and 1909 editions of the *Oconomowoc, Wisconsin* 15-minute quadrangle map and the 1959, 1959 photorevised in 1971, 1959 photorevised in 1976, 2010, 2013, 2016, 2018, and 2022 editions of the *Hartland, Wisconsin* 7.5-minute quadrangle map were reviewed. The following observations were made from the topographic maps:

1892
No buildings were illustrated in the vicinity of the subject property. A roadway was present in the current location of Northview Road.

1909
A building or farmstead was illustrated on the southwest portion of the subject property. A driveway from the farmstead extended south to connect the farmstead with Summit Avenue. Adjacent properties were generally shown as undeveloped.

1959
Two small buildings and two outbuildings were depicted in the location of the former farmstead on the subject property, with a driveway extending south from the farmstead to Summit Avenue. Small structures were evident along the south side of Northview Road north and northeast of the subject property. Residential development was noted southwest of the subject property. Other surrounding properties were portrayed as undeveloped.

1971 and 1976
Three buildings were present on the UWM at Waukesha campus, along with University Drive. Sunkist Avenue extended westward to intersect with University Drive. Two structures were first illustrated immediately south of the subject property, east of University Drive. The area southwest of the subject property was illustrated as having urban uses. Some additional development was noted east of the subject property.

1994
Additions to the three on-site structures were illustrated. Only one small building and one outbuilding remained southwest of Southview Hall, though a circular structure was first noted in this area as well. The area east of the subject property was depicted as having urban uses. Other surrounding properties appeared unchanged from the 1976 topographic map.

2010, 2013, 2015, 2018, and 2022

Structures were not shown on topographic maps during this period. The subject property was labeled as "UW Center – Waukesha County" in 2010 but was unlabeled on the subsequent topographic maps. Roadways in the vicinity of the subject property were depicted during this period as they were at the time of our site reconnaissance.

8.5. Chain-of-Title and Environmental Lien Search

We were not authorized to prepare or review a chain-of-title and an environmental lien search for this project.

9. PHYSICAL SETTING INFORMATION

9.1. USGS Topographic Map

The USGS *Hartland, Wisconsin,* 7.5-minute series (topographic) map, dated 1959 and revised in 1994, was reviewed. The subject property and the campus buildings appear to be situated near the crest of a hill, with significant downward slopes to both the north and south. Elevation across the subject property appears to vary from approximately 925 feet to approximately 1015 feet above sea level.

A portion of the USGS *Hartland, Wisconsin,* 7.5-minute series map is provided as the previously referenced Figure 1.

9.2. Geologic Conditions

9.2.1. Soil Type and Permeability

According to the United States Department of Agriculture – Natural Resources Conservation Service *Web Soil Survey*, the following types of soil are found on the subject property:

Hochheim loam

The Hochheim loam formed in loamy till with a thin loess mantle on drumlins and ground moraines. The soil is well drained. Permeability decreases from moderate near the surface to moderately slow in the substratum.

Kendall silt loam

The Kendall silt loam is a somewhat poorly drained soil that formed in loess or other silty materials and the underlying loamy, stratified outwash on outwash plains, till plains, and stream terraces. The soil has a moderate permeability.

Knowles silt loam

The Knowles silt loam formed from a loess mantle and the underlying loamy till on ground moraine which is in contact with dolomite bedrock. The soil is well drained and has a moderate permeability.

Pella silt loam
The Pella silt loam formed in loamy or silty sediments and the underlying stratified loamy glacial sediments on lake plains, outwash plains, and till plains. The soil is poorly drained and has a moderate permeability.

Theresa silt loam
The Theresa silt loam is a poorly drained soil that formed in loamy or silty sediments and the underlying loamy glacial sediments on lake plains, outwash plains, and till plains. The soil's permeability decreases from moderate to slow with depth.

9.2.2. Regional Geology

According to the Wisconsin Geological and Natural History Survey (WGNHS) *Pleistocene Geologic Map of Waukesha County, Wisconsin* (2001), the subject property is underlain by the Horicon and New Berlin members of the Holy Hill formation which consist of sandy till. The underlying bedrock, according to the WGNHS *Bedrock Geology of Waukesha County, Wisconsin* (2004) consists of the Kankakee equivalent (dolomite).

9.2.3. Groundwater Flow Direction

Based on site observations and review of the *Hartland, Wisconsin* quadrangle map, groundwater flow across the northern portion of the subject property is inferred to be to the north or northwest. Groundwater flow across the southern half of the property is likely in a general southerly direction. Groundwater flow across the southwestern portion of the subject property is towards the south (see Section 10.2.4).

10. ENVIRONMENTAL RECORDS REVIEW

10.1. Local Sources

10.1.1. Building Permit/Inspection Department

We reviewed the building permits on file for the subject property on the City of Waukesha website on January 20, 2025. Additional records were requested on January 16, 2025, and were provided for our review by Ms. Sue Sawall of the Waukesha Department of Community Development on January 21, 2025. The following records were noted:

9/7/1965	Building Permit to construct 3 education buildings (Building A – 30,427 ft^2; 85 rooms and 8 toilet rooms; Building B – 24,396 ft^2; 33 rooms and 6 toilet rooms; and Building C – 26,200 ft^2; 16 rooms and 8 toilet rooms). The address was noted as "Sunkist Avenue"
9/15/1965	Building Permit to construct a heating plant
10/12/1966	Occupancy Permit for a school
3/13/1967	Occupancy Permit – Building B

3/24/1967	Occupancy Permit – Building C
6/21/1968	Building Permit – construct 10 rooms and 4 toilet rooms in a classroom and faculty building
1/27/1969	Heating Permit for a heating plant
1/31/1969	Occupancy Permit – first floor addition only
5/4/1970	Building Permit – remodel for art department
6/25/1970	Certificate of Inspection – barn (chicken coop)
7/20/1970	Electrical Permit – chicken house at the “Hughes Farm,” address “1000 University Drive”
8/19/1970	Building Permit – construct bookstore with 4 rooms
9/15/1970	Heating Permit – bookstore (Modine heater and distribution system)
12/7/1970	Occupancy Permit – bookstore
2/4/1971	Department of Industry, Labor, and Human Relations (DILHR) inspection of the flammable liquids storage rooms in Northview and Southview Halls. Both rooms needed a 6” tall, liquid tight sill at the entrance to the rooms
5/7/1971	Certificate of Electrical Inspection – one ball court
12/21/1978	Application for Building Permit – Building A addition
12/21/1978	Application for Building Permit – Building B addition
12/21/1978	Application for Building Permit – Building C addition
12/21/1978	Application for Building Permit – new greenhouse
1/31/1979	Application for Heating and Air Conditioning Permit – remove and relocate a 10,000-gallon oil storage tank and fill the excavation with gravel; install a 10,000-gallon tank, buried 3 feet below grade adjacent to the boiler room on the east side of the gym building
3/15/1979	Note stating that a 10,000-gallon tank had been tested at 4 psi for 31 minutes. The “old tank” was filled with pea gravel. The 1/31/1979 diagram seems to suggest the abandoned UST is currently located beneath the maintenance garage.

3/29/1979	Building Permit – two story addition to Building A (library) – 42 rooms and 6 toilet rooms (12,524 ft^2). The permit also noted the installation of a new 10,000-gallon fuel tank
3/29/1979	Building Permit – one story addition to Building B (administrative) – 39 rooms and 4 toilet rooms (16,000 ft^2)
3/29/1979	Building Permit – one story addition to Building C (maintenance garage) – 4 rooms (7140 ft^2)
3/29/1979	Building Permit – construct a one story, 10' x 14' greenhouse
4/22/1980	Occupancy Permit – Building A, lower level
4/22/1980	Occupancy Permit – Building A, 1st floor of library only
4/24/1980	Occupancy Permit – Building B, administration and faculty offices
7/17/1984	Building Permit – interior elevator addition (new pit and stairs)
1/30/1985	Application for Moving Permit – 42' x 45' accessory building
2/1/1985	Occupancy Permit – relocatable classroom
5/21/1985	Building Permit – alterations to Northview Hall and field house (insulate exterior walls)
7/30/1985	Application for Building Permit – remodel and expansion of Southview Hall
6/9/1999	Application for Building Permit – repair a pedestrian bridge
6/15/1999	Building Permit – replace a pedestrian bridge
10/7/1999	Occupancy Permit - pedestrian bridge
3/20/2000	Application for Building Permit – remodel and addition to the field house
4/4/2000	Application for Wrecking Permit
4/14/2000	Building Permit – addition and alterations to UW-W fieldhouse building
10/16/2000	Waukesha Fire Department letter regarding occupancy – emergency fuel oil tank needs to be permitted
10/16/2000	Occupancy Permit – field house

12/14/2000	Occupancy Permit – field house
12/19/2000	Application for Building Permit – concrete slab outside mechanical room
12/22/2000	Certificate of Occupancy – addition and alterations
9/6/2002	Application for Building Permit – install a 56' telecommunications tower
11/5/2002	Building Permit – 372 ft^2 communications tower
1/23/2003	Application for Building Permit – remodel classroom and office
2/11/2003	Building Permit – interior renovation and finish remodel – Southview Hall
7/11/2003	Certificate of Occupancy – education, clinic, bank
12/12/2003	Certificate of Occupancy – addition/alterations, greenhouse, sheds
1/3/2006	Application for Building Permit – Northview Hall remodeling
1/25/2006	Building Permit - Northview Hall remodeling
8/2/2006	Certificate of Occupancy
12/14/2006	Application for Building Permit – storage garage for SC Waukesha soccer
1/3/2007	Certificate of Occupancy – garden shed
8/28/2008	Certificate of Electrical Inspection – new service at soccer field
10/7/2011	Electrical Permit – remove and replace generator
12/17/2013	Application for Heating, Ventilation, and Air Conditioning Permit – replace one rooftop unit
12/23/2013	Heating, Ventilation, and Air Conditioning Permit – replace one rooftop unit
4/4/2014	Application for Building Permit – bridge and boiler room roof replacement
5/1/2014	Building Permit – Northview mechanical, roof, and pedestrian bridge remodel

10/1/2014	Certificate of Occupancy – bridge and boiler room roof replacement
4/21/2015	Application for Re-Roofing and Flashing Permit
4/21/2015	Building Permit – commercial re-roofing
5/29/2015	Electrical Permit – disconnect and reconnect 2 rooftop units in association with re-roofing
3/21/2016	Electrical Permit – decommissioning of a cellular tower
1/9/2017	Heating, Ventilation, and Air Conditioning Permit – replace two rooftop units
8/7/2018	Permit – cellular tower modification
10/11/2018	Mechanical Permit – rooftop unit and ductwork installation in the field house
4/23/2019	Sign Permit – UW Milwaukee – Waukesha
7/23/2020	Mechanical Permit – replace a rooftop unit on the south fieldhouse
8/4/2020	Application for Electrical Permit - replace a rooftop unit

Building records related to storage tanks are included in Appendix E.

10.1.2. Fire Department

A request for information regarding the subject property was submitted to the Waukesha Fire Department on January 16, 2025. Kerry Harris of the Waukesha Fire Department – Fire Prevention Bureau responded to our request on January 20, 2025. They noted that there are storage tanks at the subject property but had no further information regarding the tanks. They also noted that the department has no records of hazardous materials or petroleum spills or storage.

10.1.3. Planning/Zoning Department

According to information provided by the City of Waukesha, the subject property is zoned I-1 (Institutional).

10.1.4. Department of Health /Pollution Control /Water Quality

Records were provided by Mr. Steve Todd, Hazardous Materials Coordinator for the Waukesha County Department of Parks and Land Use's Environmental Health Division, responded via e-mail on January 2, 2025. Reviewed records included the following:

- Superfund Amendments and Reauthorization Act (SARA) Title III, also known as Emergency Planning and Community Right-to-Know Act

(EPCRA) reporting forms for the period of 2000 through 2015. SARA reporting was required due to "furnace oil," which presented a fire hazard.

- Letter to Wisconsin Emergency Management, dated January 28, 2016, noting that SARA reporting was being discontinued as the facility had discontinued use of "furnace oil."

- Undated scope of work which included the following: (1) remove Tank 5, a 10,000-gallon fuel oil tank from the northwest corner of the maintenance building/field house; (2) remove Tank 84, a gasoline tank of unknown size located adjacent to the south side of the garage located southwest of the university buildings; and (3) install a 4000-gallon AST for fuel oil along the south side of the field house.

- Undated scope of work which included the removal of one 60-gallon UST from the northwest corner of the Southview Building. The contents of the tank were not clear, with the tank containing 95% water or gasoline and 5% fuel oil. The tank was registered as containing fuel oil.

- Change order to scope of work, dated August 31, 2015, regarding a "boiler replacement project." The change order included (1) the removal of a 4000-gallon boiler backup tank; (2) the installation of a 150 gallon to 300 gallon fuel oil tank for fire suppression; and (3) remove a 65-gallon tank from the pump room.

- November 15, 2015, AST registration form for a 4000-gallon fuel oil tank used for the emergency backup generator. The AST had been installed on November 16, 1994.

- Record of gasoline UST removal dated August 17, 1994. The note stated that the UST had likely been installed in the 1940s and had leaked.

- Report by Foth & Van Dyke, dated October 1994, regarding the removal of "Tank 60," the 60-gallon tank, from the property. The tank is further discussed in Section 10.2.3.

- Reports by Foth & Van Dyke, dated May 1995, regarding the removal of Tank 5 and Tank 84. Further information regarding the tanks can be found in Section 10.2.4.

- *Site Investigation/Remedial Options Analysis Report* for Tank 84 by Delta Environmental Consultants, Inc. (Delta), dated November 21, 1997. This report is further discussed in Section 10.2.4.

- Multiple *Ground Water Sampling Reports* by Delta regarding Tank 84, the last one dated July 24, 1998. These reports are further discussed in Section 10.2.4.

- *Case Summary and Close-Out Form* report by Delta for Tank 84, dated January 21, 1999. This report is further discussed in Section 10.2.4.

- April 16, 1999 letter from the Wisconsin Department of Natural Resources (WDNR) regarding case closure with regards to Tank 84.

10.1.5. Tax Assessor's/Appraisal/Auditor Department

According to information obtained from the Waukesha County Land Information Division and the City of Waukesha Assessor, the subject property is referenced as Parcel No. WAKC 0989999. The property is 75.9 acres in size and is owned by Waukesha County, c/o Parks and Land Use. As the property is county owned, no further information was available.

10.2. State Sources

We used Environmental Risk Information Service (ERIS) to identify state sites of known environmental concern. The *ERIS Database Report*, completed on January 27, 2025, is enclosed within Appendix F. Some terms utilized in the ERIS report may differ from actual state identification listings. The following is a summary of the information provided.

10.2.1. State/Tribal State Sites

The WDNR *Hazard Ranking Sites* (SHWS) database was reviewed. The subject property is not included on this listing. In addition, no SHWS sites are located within 1.0 mile of the subject property.

10.2.2. State/Tribal Solid Waste Landfill

The WDNR listing of *Active and Historic Licensed Solid Waste Landfills* (SWL) was reviewed. The subject property is not included within this listing. In addition, no SWL sites are located within 0.50 mile of the subject property.

10.2.3. State/Tribal Storage Tanks

The Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) database of underground and aboveground storage tanks (UST/AST) was reviewed. The subject property and the following adjacent property are included on the UST/AST database:

Facility Name/Address	Type of Tank	Number/Size of Tanks (in Gallons)	Contents	Status
UW-Waukesha Fieldhouse 1500 University Drive (subject property)	AST	1 – 4000	Fuel oil	Installed, 1994; removed, 2015
UW Fieldhouse 1500 University Drive (subject property)	UST UST UST	1 – 10,000 1 – 60 1 – 300	Fuel oil Fuel oil Gasoline	Removed, 1994 Removed, 1993 Removed, 1994
Verizon – UW-Waukesha 1220 University Avenue (subject property)	AST	1 – 210	Diesel	Installed, 2011; in use
Edward E Epps 822 N. Mapleway (110 feet west)[1]	UST	1 – 2500	Fuel oil	In use

[1]Approximate distance from the dwelling to the closest portion of the subject property, measured using Google Earth™

Tank registration forms for the on-site ASTs and USTs are included in Appendix G.

10.2.4. State/Tribal Leaking Underground Storage Tanks

The WDNR database of leaking underground and aboveground storage tanks (LUST) was reviewed. The subject property is included on the list of LUST sites, as are the following LUST sites located within 0.50 mile of the subject property:

Facility Name/Address	Distance/Direction from the Subject Property	Status
UW-Waukesha Campus 1500 N. University Drive	Subject property	No further action required, 2003
Jones Farm N1 W26026 Northview Road	0.15 mile north-northeast	No further action required, 2000
Shirley Hellman 2125 Oaklawn Avenue	0.23 mile east	Active site

We reviewed information regarding the on-site LUST cases both provided by Mr. Steven Todd and obtained from the WDNR website. The following records were noted:

A 300-gallon gasoline UST, known as UST No. 84, was located adjacent to the farm buildings on the southwest portion of the subject property. The tank was believed to have been installed in the 1940s and was abandoned in place during the 1970s. Under the direction of Foth & Van Dyke, the UST was removed in August 1994. Evidence of a release was noted at the time the UST was removed.

A copy of the *Site Assessment for Underground Storage Tank Closure* for UST No. 84 is included in Appendix H.

Delta Environmental Consultants, Inc. (Delta) oversaw a site investigation for the area around UST No. 84 in August 1996. The investigation included the advancement of nine soil borings, three of which were converted to groundwater monitoring wells. Impacted soil appeared to be isolated to the area around the former UST. Impacted groundwater was also present. Groundwater, which was encountered at a depth of around 6 feet below the ground surface (bgs), was determined to flow to the south or southeast.

Delta indicated that passive aerobic biodegradation was occurring in groundwater, noting that the concentrations of petroleum volatile organic compounds (PVOCs) in the two impacted wells were stable or decreasing. Delta proposed conducting quarterly groundwater sampling for two years to verify continued decrease in contaminants in groundwater.

A copy of pertinent portions of Delta's *Site Investigation/Remedial Options Analysis Report* is included in Appendix I.

Seven rounds of quarterly groundwater monitoring occurred from February 1997 until December 1998. PVOC concentrations in the most severely impacted well continued to show a gradual decrease in concentration. Concentrations of PVOCs in the other historically impacted groundwater monitoring well did not exceed the WDNR enforcement standard (ES). Groundwater flow continued to be in a south to southeasterly direction.

A copy of Delta's *Case Summary and Close Out Form* report is included in Appendix J.

The WDNR issued a no further action letter for the site on April 16, 1999. The letter noted that natural attenuation was being used to remediate the impacted groundwater remaining on site. As impacted groundwater remained on site, however, the site was required to have a groundwater use restriction attached to the deed for the subject property to alert future property owners of the restriction.

A copy of the closure letter is included in Appendix K.

10.2.5. Other Sites

The WDNR *Environmental Repair Program* (ERP) database was reviewed. The subject property is not included on the ERP database. In addition, no sites located within 0.50 mile of the subject property are included on the ERP database.

10.2.6. Dry Cleaner Environmental Response Fund

The WDNR *Dry Cleaner Environmental Response Fund* (DERF) database, which includes dry cleaners have applied to the WDNR for reimbursement for investigation or cleanup costs associated with contamination from dry cleaning chemicals, was reviewed. The subject property is not included on the DERF database. In addition, no sites located within 0.50 mile of the subject property are included on the DERF database.

10.2.7. State/Tribal Engineering Controls Site

The WDNR *Engineering Controls* (EC) database, a subset of the VCP database, was reviewed. The subject property is not included on this database.

10.2.8. State/Tribal Institutional Controls Sites

The WDNR *Institutional Controls* (IC) database, a subset of the VCP database, was reviewed. The subject property is not included on this database.

10.2.9. State/Tribal Voluntary Cleanup Program Sites

The WDNR Voluntary Cleanup Program (VCP) sites database was reviewed. The subject property is not included on the VCP database. In addition, no sites located within 0.50 mile of the subject property is included on the VCP database.

10.2.10. State/Tribal Brownfields

The Brownfields Subset of the *Bureau of Remediation and Redevelopment Tracking System* and the *Brownfields Environmental Assessment Program*

(collectively referred to as Brownfields) were reviewed. The subject property is not included on the Brownfields inventory. In addition, no sites located within 0.50 mile of the subject property are included on the Brownfields database.

10.2.11. State/Tribal Spills

The WDNR *Database of Spill Cases* was reviewed. The subject property is not included on this database.

10.2.12. State/Tribal BRRTS

The WDNR BRRTS database was reviewed. No adjacent sites were identified on the BRRTS database. However, the subject property is included on the BRRTS database:

Facility Name/Address	Distance/Direction from the Subject Property	Status
Southview Hall, UW-Waukesha 1500 N. University Drive	Subject property	No action required determination, 1993

The tank closure report prepared by Foth & Van Dyke for the Southview Hall UST was reviewed. The UST, known as UST No. 60, was a 60-gallon UST which reportedly contained either fuel oil or gasoline. Prior to removal, UST No. 60 had been filled with water and abandoned in place. Confirmation soil samples were collected following the removal of the UST in December 1993 and were analyzed for gasoline range organics (GRO). GRO was not detected in the confirmation soil samples. As such, Foth & Van Dyke concluded that no further action was necessary. The WDNR concurred and issued a no action required determination letter in December 1993.

A copy of the Foth & Van Dyke tank closure report is included in Appendix L.

Although not included on the BRRTS database, a 10,000-gallon fuel oil UST, known as UST No. 5, was removed from a location adjacent to the northeast side of Field House building in November 1994. The UST had been present on the subject property since 1981.

Upon removal of the tank system, confirmation soil samples were collected and were analyzed for diesel range organics (DRO). Low levels of DRO were detected in two of the soil samples. The concentrations were well below the DRO action level. Therefore, Foth & Van Dyke requested that the WDNR require no further action with regards to the fuel oil tank.

A copy of the tank system site assessment report is included in Appendix M.

10.3. Federal Sources

We used ERIS to identify federal sites of known environmental concern. The *ERIS Database Report*, completed on January 27, 2025, is enclosed within Appendix F. The following is a summary of the information provided.

10.3.1. Federal NPL

The USEPA *National Priorities List* (NPL) was reviewed. The subject property is not included within this listing. In addition, no NPL sites are located within 1.0 mile of the subject property.

10.3.2. Federal Delisted NPL

The USEPA *Delisted* NPL was reviewed. The subject property is not included within this listing. In addition, no Delisted NPL sites are located within 0.50 mile of the subject property.

10.3.3. Federal SEMS

The *Superfund Enterprise Management System* (SEMS), which includes active sites that are proposed to be on or are on the NPL, was reviewed. The subject property is not included on the SEMS. In addition, no SEMS sites are located within 0.50 mile of the subject property.

10.3.4. Federal SEMS Archive

The SEMS Archive database, which includes sites that have been removed from the NPL, was reviewed. The subject property is not included on the SEMS Archive. In addition, no SEMS Archive sites are located within 0.50 mile of the subject property.

10.3.5. Federal Superfund ROD

The Superfund Record of Decision (ROD) database, which includes sites where changes have been made to Superfund cleanup plans, was reviewed. The subject property is not included on this database. In addition, no Superfund ROD sites are located within 1.0 mile of the subject property.

10.3.6. Federal CERCLIS

The USEPA *Comprehensive Environmental Response, Compensation and Liability Information System* (CERCLIS) was reviewed. The subject property is not included within this listing. In addition, no CERCLIS sites are located within 0.50 mile of the subject property.

10.3.7. Federal CERCLIS NFRAP

The USEPA *CERCLIS No Further Remedial Action Planned* (NFRAP) was reviewed. The subject property is not included within this listing. In addition, CERCLIS NFRAP sites are located within 0.50 mile of the subject property.

10.3.8. Federal RCRA TSD

The USEPA *Resource Conservation and Recovery Information System* (RCRA*) Treatment, Storage and/or Disposal Facilities* (RCRA TSD) was reviewed. The subject property is not included within this listing. In addition, no RCRA TSD sites are located within 0.50 mile of the subject property.

10.3.9. Federal RCRA COR

The USEPA *RCRA Corrective Action Sites* (RCRA COR) was reviewed. The subject property is not included within this listing. In addition, no RCRA COR sites are located within 1.0 mile of the subject property.

10.3.10. Federal RCRA GEN

The USEPA *RCRA – Large, Small and Very Small Quantity Generators* (RCRA GEN*)* was reviewed. No adjacent properties are included on the RCRA GEN database. However, the subject property is included on the RCRA GEN database:

Facility Name/Address	Distance/Direction from the Subject Property	Status
University of Wisconsin Center – Waukesha Art Chemistry and Biology and Maintenance Building 1500 N. University Drive	Subject property	Very small quantity generator of hazardous waste; last reported hazardous waste generation in 2000; no RCRA violations or enforcement actions
Waukesha County Household Hazardous Waste County Owned Shed at UW – Waukesha 1500 N. University Drive	Subject property	Not a generator of hazardous waste; status verified, 2022; no RCRA violations or enforcement actions on file

10.3.11. Federal ERNS

The USEPA *Emergency Response Notification System* (ERNS) was reviewed. The subject property is not included on this listing.

10.3.12. Federal IC and EC Brownfield Management System

The USEPA *Brownfield Management System* (BMS) of sites with IC and EC was reviewed. The subject property is not included within this listing. In addition, no Federal BMS sites are located within 0.50 mile of the subject property.

11. VAPOR ENCROACHMENT SCREENING

Giles conducted a limited Tier 1 and Tier 2 Vapor Encroachment Screen (VES) at the subject property to determine if a vapor encroachment condition (VEC) exists. While Giles used the *ASTM Standard E 2600-22, Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions* as a general guideline, this limited VES is not intended to constitute a full Tier 1 or Tier 2 VES as described in the ASTM E 2600-22 standard. A VEC is defined as the presence or likely presence of vapors from chemical(s) of concern (COC) in the subsurface of the subject property, caused by the release of vapors from contaminated soil or groundwater either on or in the vicinity of the subject property.

Subject Property

The southwest portion of the subject property was occupied by a farmstead, with the remainder of the subject property utilized as farmland until 1967, when the subject property was developed with the existing university complex. Though agricultural uses

ceased around 1967, the farmstead remained until the 1980s, when most of the buildings were razed; two sheds which were part of the farmstead remain to this day.

One 300-gallon gasoline UST had been utilized on the farmstead from approximately the 1940s until the 1970s. The UST was left abandoned until it was removed in 1994. Impacted soil and groundwater were encountered at the time the UST was removed. The extent of the impacted soil and groundwater was defined. The WDNR granted the site regulatory closure when natural attenuation of impacted soil and groundwater was determined to be occurring. A deed notification was placed on the property's legal deed to notify future owners of the subject property of residual impacted soil and groundwater. Current concentrations of PVOCs in soil and groundwater in the vicinity of the former UST are not known. Therefore, a vapor encroachment condition currently exists.

One 10,000-gallon fuel oil UST was abandoned in place in 1979 prior to construction of an addition to the Field House. The addition was constructed over the abandoned UST. No confirmation soil sampling was completed to verify that a release from the UST had not occurred. Volatility of fuel oil is generally low; however, because no information exists regarding soil and groundwater quality around the abandoned UST, a vapor encroachment condition currently exists with respect to the abandoned UST.

The abandoned 10,000-gallon fuel oil UST was replaced in 1979 with another 10,000-gallon fuel oil UST located adjacent to the Field House building. The UST was removed in 1994. Confirmation soil sampling confirmed that a significant release to soil from the 10,000-gallon UST had not occurred. As such, a vapor encroachment condition from the 10,000-gallon fuel oil UST that was removed in 1994 does not exist.

The 10,000-gallon fuel oil UST that was removed in 1994 was replaced with a 4000-gallon fuel oil AST. The AST was placed over concrete inside an enclosure adjacent to the Field House building. The AST was removed in 2015. There were no indications of a release at the time the AST was removed. A vapor encroachment condition from the former fuel oil AST does not exist.

A 60-gallon fuel oil or gasoline UST was removed from adjacent to Southview Hall in 1993. Confirmation soil sampling did not identify impacted soil around the UST location. As such, a vapor encroachment condition from the 60-gallon UST does not exist.

A portion of a shed on the portion of the subject property formerly occupied by the farmstead is used as a drop-off station for community members to dispose of household hazardous waste. The household hazardous waste drop-off site is included on the RCRA GEN database. The site is listed as a non-generator of hazardous waste, a status which was verified in 2022. There are no RCRA violations or enforcement actions on file. As such, a vapor encroachment condition from the household hazardous waste drop-off site does not exist.

The University of Wisconsin – Milwaukee Waukesha Campus is also listed as a very small quantity generator of hazardous waste. Hazardous waste appeared to come from four sources on the subject property – the art, chemistry, and biology departments as well as the maintenance garage. Hazardous materials appeared to be stored properly at

the time of our site reconnaissance. In addition, the generation of hazardous waste has not been reported since 2000. There are no RCRA violations or enforcement actions on file for the subject property. As such, a vapor encroachment condition from the very small quantity generation of hazardous waste on the subject property does not exist.

A 119-gallon diesel AST was observed in the fire suppression room located adjacent to the Field House building. The AST appeared to be in good condition and is situated above a spill containment dike, which in turn is situated on concrete. As such, a vapor encroachment condition from the AST does not exist.

Verizon Wireless maintains a telecommunications building in the area of the former farmstead. A small diesel AST is associated with this building. The AST does not appear to be located outside the building. The site is not included on the other reviewed state or federal environmental databases. As such, a vapor encroachment condition from the Verizon Wireless facility does not exist.

Edward E. Epps Residence, 822 N. Mapleway (west-adjacent)

The Edward E. Epps residence is located approximately 110 feet west of the southeast portion of the subject property. This residence has a 2500-gallon fuel oil UST which is understood to be in use. The Epps property is not located hydraulically upgradient of the subject property. Despite the proximity of the Epps residence to the subject property, the closest structure on the subject property, the telecommunications building, is located more than 1200 feet from the Epps dwelling. Fuel oil has a relatively low volatility. As such, a vapor encroachment condition from the fuel oil UST on the Epps property does not exist with respect to the subject property.

No sites which present a potential vapor encroachment condition were identified within approximately 300 feet of the subject property.

12. FINDINGS AND OPINIONS

- A farmstead was previously located on the southwest portion of the subject property. The remainder of the subject property was utilized as farmland until approximately 1967, when the existing university complex was developed. The farm buildings remained on the subject property until the 1980s when most were razed. Only two sheds that were associated with the farmstead remain on the subject property.

  A 300-gallon gasoline UST was formerly utilized at the farmstead. It was believed to have been installed in the 1940s and was used until the 1970s. The UST remained abandoned on the property until it was removed in 1994. Soil and groundwater had been impacted by a release from the UST. The extent of impacted soil and groundwater was later defined. The site received regulatory closure after natural attenuation of petroleum compounds in soil and groundwater were occurring. No soil vapor testing was conducted prior to regulatory closure in 2003. A deed notification was placed on the subject property's deed as a condition of case closure. Current concentrations of PVOCs in soil and groundwater is not known. As such, the closed LUST case constitutes a historical recognized environmental condition with regards

to soil and groundwater, and a recognized environmental condition with respect to soil vapor. A vapor encroachment condition exists.

A 10,000-gallon fuel oil UST was located adjacent to the boiler room portion of the Field House building. The UST was abandoned in place in 1979, prior to construction of the maintenance garage addition. No soil sampling was conducted to determine if the UST had impacted the subject property. As such, the abandoned UST constitutes a recognized environmental condition, and a vapor encroachment condition exists.

The fuel oil UST that was abandoned in place in 1979 was replaced by a 10,000-gallon fuel oil UST which was located directly east of the boiler room in the Field House building. The UST was removed in 1994. Soil confirmation sampling demonstrated that a significant release from the UST had not occurred. As such, the fuel oil UST that was removed in 1994 does not constitute a recognized environmental condition, and a vapor encroachment condition does not exist.

The fuel oil UST that was removed in 1994 was replaced with a 4000-gallon fuel oil AST that was placed over concrete in an enclosure adjacent to the boiler room. The AST was removed in 2015. There were no indications of a release from the AST. As such, the former fuel oil AST does not constitute a recognized environmental condition, and a vapor encroachment condition does not exist.

One 60-gallon UST, reportedly containing gasoline or fuel oil, was formerly located adjacent to Southview Hall. The UST was removed in 1993. Confirmation soil sampling demonstrated that a release from the UST had not occurred. As such, the former 60-gallon UST does not present a recognized environmental condition with respect to the subject property, and a vapor encroachment condition does not exist.

One 119-gallon diesel AST is currently in use on the subject property. The AST is situated over a spill containment dike in the fire suppression room. There are no indications of a release from the AST. As such, the 119-gallon diesel AST does not present a recognized environmental condition with respect to the subject property, and a vapor encroachment condition does not exist.

One 210-gallon diesel AST is reportedly in use at the Verizon telecommunications building, which is located in the vicinity of the former farmstead. The AST is believed to be located inside the structure. The facility is not included on the other reviewed state and federal environmental databases. As such, the Verizon AST does not present a recognized environmental condition with respect to the subject property, and a vapor encroachment condition does not exist.

A household hazardous waste drop-off site is located in one of the sheds associated with the former farmstead and operates during warmer months. The site is included on the RCRA GEN database. The site does not generate hazardous waste, a status that was verified in 2022. The household hazardous waste drop-off site was not included on the other reviewed state and federal environmental databases, and no environmental concerns were noted in the shed during the site reconnaissance. As

such, the household hazardous waste drop-off site does not present a recognized environmental condition with respect to the subject property, and a vapor encroachment condition does not exist.

The University of Wisconsin – Milwaukee Waukesha Campus is also included on the RCRA GEN database as a very small quantity generator of hazardous waste. Waste reportedly was generated by the Art, Biology, and Chemistry Departments and the maintenance shop. The last time hazardous waste generation was reported was in 2000. There are no RCRA violations or enforcement actions on file for the subject property. Hazardous materials appeared to be appropriately stored during our site reconnaissance. As such, the RCRA GEN listing does not constitute a recognized environmental condition, and a vapor encroachment condition does not exist.

- The Edward E. Epps residence, located approximately 110 feet west of the southeast portion of the subject property, is included on the UST database. A 2500-gallon fuel oil UST is understood to be in use on the property. The site is not located hydraulically upgradient of the subject property. The residence is also more than 1200 feet from the closest on-site building, the Verizon Wireless Telecommunications building near the former farmstead. Considering this and the relatively low volatility of fuel oil, the Epps residence does not present a recognized environmental condition with respect to the subject property.

- The remaining adjacent properties have residential or institutional uses. Historically, the adjacent properties were residential in nature or used as farmland prior to the existing development. These properties are not included in the reviewed state and federal environmental databases. As such, the remaining adjacent properties do not present a recognized environmental condition with respect to the subject property, and a vapor encroachment condition does not exist.

- No additional facilities that presented a potential vapor encroachment condition were identified within approximately 300 feet of the subject property.

- Two additional LUST sites are located 0.15 mile north-northeast and 0.23 mile east of the subject property. The closer of the LUST sites has received regulatory closure. The LUST sites are not inferred to be located hydraulically upgradient of the subject property. As such, the LUST sites do not present a recognized environmental condition with respect to the subject property.

No significant data gaps were identified during the preparation of this report.

13. CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM *Standard Practice E1527-21* of the property located at 1500 N. University Drive, in the City of Waukesha, Waukesha County, Wisconsin, the property. Any exceptions to, or deletions from, this practice are described within *Section 3.2*.

This assessment has revealed evidence of the following recognized environmental conditions:

- A closed LUST site is present on the subject property. While regulatorily closed, soil vapor testing was not performed, and residual impacted soil and groundwater are present.

- A fuel oil UST was abandoned in place on the subject property in 1979 without any soil confirmation sampling.

In addition, this assessment has revealed evidence of the following historic recognized environmental condition:

- The gasoline release in the area of the farmstead has received regulatory closure with a deed notification that impacted soil and groundwater were left in place.

This assessment has revealed no indications of controlled recognized environmental conditions or significant data gaps in connection with the subject property.

14. RECOMMENDATIONS

Based on information gathered for this assessment, further environmental investigation of the subject property, including sampling and analysis of soil from the vicinity of the abandoned fuel oil UST, is considered warranted at this time. The soil vapor concern associated with the residual impacted soil and groundwater may warrant soil vapor testing at a later date, depending on the eventual planned use of the subject property. No testing of soil vapor is considered warranted at this time.

15. REFERENCES

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Wisconsin Department of Natural Resources, April 16, 1999, *Subject: Case Closure, 300 gallon gasoline underground storage tank release, UW-Waukesha UST #84, 1500 North University Drive, Waukesha*

16. GENERAL COMMENTS

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the property. ASTM International's *Standard Practice E1527-21* is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the property and recognizes reasonable limits of time and cost.

The term *recognized environmental condition* means *(1)* the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* to the *environment*; *(2)* the likely presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* or likely *release* to the *environment*; or *(3)* the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* under conditions that pose a *material threat* of a future *release* to the *environment*. A *de minimis condition* is not a *recognized environmental condition*.

The term *de minimis condition* means a condition that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The term *historical recognized environmental condition* means a previous *release of hazardous substances* or *petroleum products* affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the *subject property* to any controls (for example, *activity and use limitations* or other *property use limitations*).

The term *controlled recognized environmental condition* means *a recognized environmental condition* affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities with *hazardous substances* or *petroleum products* allowed to remain in place subject to implementation of required controls (for example, *activity and use limitations* or *other property use limitations*).

The term *business environmental risk means* a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, and is not necessarily an issue required to be investigated under this practice (Phase I ESA ASTM E1527-21). Consideration of business environmental risk issues may involve addressing one or more non-scope considerations.

The term *significant data gap* means a data gap that affects the ability of the *environmental professional* to identify a *recognized environmental condition.*

The term *hazardous substance* is a substance defined as hazardous pursuant to CERCLA 42 USC § 9601(14), and as interpreted by USEPA regulations and the courts.

The term *petroleum products* is defined as those substances included within the meaning of the petroleum exclusion to CERCLA 42 USC § 9601(14), as interpreted by

the courts and USEPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of CERCLA 42 USC § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

The services described in this report were performed consistent with generally accepted professional consulting principles and practices and in accordance with the practices and service scope elements recommended by ASTM International for a Phase I ESA. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client or as otherwise noted. Any unauthorized use of this report is strictly prohibited, and we assume no liability for any such use.

We prepared this report to aid in the evaluation of recognized environmental conditions of the subject property located at 1500 N. University Drive, in the City of Waukesha, Waukesha County, Wisconsin. The conclusions presented in the report are based on available information that pertained to the subject property at various points in time. The information may have been provided to us by others or acquired through discussions with various governmental or agency personnel. We must rely on the credibility of others and do not independently verify or warrant the accuracy of information or test results they supply. Any alteration in the documentation, facts, or verbal information we obtained may result in a modification or redirection of the conclusions presented in this report.

Conclusions in this report are based on visual field observations performed within the property boundaries and our record review at a specific point in time. Environmental conditions may exist at the subject property that could not be identified by visual observation, including potential hazardous substances present within undocumented fills on the subject or adjoining properties. Where subsurface work and/or laboratory testing was performed, our professional opinions are based in part on the interpretation of data obtained from discreet sampling locations. The sampling may not have depicted actual environmental conditions at non-sampled locations elsewhere on the subject or adjoining properties. We are not responsible for any errors in the professional opinions presented within this report that result from subsequent events or inaccuracies due to sampling or services provided by subcontracted testing laboratories.

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APPENDIX A

Important Information About This Geoenvironmental Report

Important Information about This

Geoenvironmental Report

Geoenvironmental studies are commissioned to gain information about environmental conditions on and beneath the surface of a site. The more comprehensive the study, the more reliable the assessment is likely to be. But remember: Any such assessment is to a greater or lesser extent based on professional opinions about conditions that cannot be seen or tested. Accordingly, no matter how many data are developed, risks created by unanticipated conditions will always remain. *Have realistic expectations.* Work with your geoenvironmental consultant to manage known and unknown risks. Part of that process should already have been accomplished, through the risk allocation provisions you and your geoenvironmental professional discussed and included in your contract's general terms and conditions. This document is intended to explain some of the concepts that may be included in your agreement, and to pass along information and suggestions to help you manage your risk.

Beware of Change; Keep Your Geoenvironmental Professional Advised

The design of a geoenvironmental study considers a variety of factors that are subject to change. Changes can undermine the applicability of a report's findings, conclusions, and recommendations. *Advise your geoenvironmental professional about any changes you become aware of.* Geoenvironmental professionals cannot accept responsibility or liability for problems that occur because a report fails to consider conditions that did not exist when the study was designed. Ask your geoenvironmental professional about the types of changes you should be particularly alert to. Some of the most common include:

- modification of the proposed development or ownership group,
- sale or other property transfer,
- replacement of or additions to the financing entity,
- amendment of existing regulations or introduction of new ones, or
- changes in the use or condition of adjacent property.

Should you become aware of any change, *do not rely on a geoenvironmental report.* Advise your geoenvironmental professional immediately; follow the professional's advice.

Recognize the Impact of Time

A geoenvironmental professional's findings, recommendations, and conclusions cannot remain valid indefinitely. The more time that passes, the more likely it is that important latent changes will occur. *Do not rely on a geoenvironmental report if too much time has elapsed since it was completed.* Ask your environmental professional to define "too much time." In the case of Phase I Environmental Site Assessments (ESAs), for example, more than 180 days after submission is generally considered "too much."

Prepare To Deal with Unanticipated Conditions

The findings, recommendations, and conclusions of a Phase I ESA report typically are based on a review of historical information, interviews, a site "walkover," and other forms of noninvasive research. When site subsurface conditions are not sampled in any way, the risk of unanticipated conditions is higher than it would otherwise be.

While borings, installation of monitoring wells, and similar invasive test methods can help reduce the risk of unanticipated conditions, *do not overvalue the effectiveness of testing.* Testing provides information about actual conditions only at the precise locations where samples are taken, and only when they are taken. Your geoenvironmental

professional has applied that specific information to develop a general opinion about environmental conditions. *Actual conditions in areas not sampled may differ (sometimes sharply) from those predicted in a report.* For example, a site may contain an unregistered underground storage tank that shows no surface trace of its existence. *Even conditions in areas that were tested can change*, sometimes suddenly, due to any number of events, not the least of which include occurrences at adjacent sites. Recognize, too, that *even some conditions in tested areas may go undiscovered,* because the tests or analytical methods used were designed to detect only those conditions assumed to exist.

Manage your risks by retaining your geoenvironmental professional to work with you as the project proceeds. Establish a contingency fund or other means to enable your geoenvironmental professional to respond rapidly, in order to limit the impact of unforeseen conditions. And to help prevent any misunderstanding, identify those empowered to authorize changes and the administrative procedures that should be followed.

Do Not Permit Any Other Party To Rely on the Report

Geoenvironmental professionals design their studies and prepare their reports to meet the specific needs of the clients who retain them, in light of the risk management methods that the client and geoenvironmental professional agree to, and the statutory, regulatory, or other requirements that apply. The study designed for a developer may differ sharply from one designed for a lender, insurer, public agency...or even another developer. *Unless the report specifically states otherwise, it was developed for you and only you.* Do not unilaterally permit any other party to rely on it. The report and the study underlying it may not be adequate for another party's needs, and you could be held liable for shortcomings your geoenvironmental professional was powerless to prevent or anticipate. Inform your geoenvironmental professional when you know or expect that someone else—a third-party—will want to use or rely on the report. *Do not permit third-party use or reliance until you first confer with the geoenvironmental professional who prepared the report.* Additional testing, analysis, or study may be required and, in any event, appropriate terms and conditions should be agreed to so both you and your geoenvironmental professional are protected from third-party risks. *Any party who relies on a geoenvironmental report without the express written permission of the professional who prepared it and the client for whom it was prepared may be solely liable for any problems that arise.*

Avoid Misinterpretation of the Report

Design professionals and other parties may want to rely on the report in developing plans and specifications. They need to be advised, in writing, that their needs may not have been considered when the study's scope was developed, and, even if their needs were considered, they might misinterpret geoenvironmental findings, conclusions, and recommendations. *Commission your geoenvironmental professional to explain pertinent elements of the report to others who are permitted to rely on it, and to review any plans, specifications or other instruments of professional service that incorporate any of the report's findings, conclusions, or recommendations.* Your geoenvironmental professional has the best understanding of the issues involved, including the fundamental assumptions that underpinned the study's scope.

Give Contractors Access to the Report

Reduce the risk of delays, claims, and disputes by giving contractors access to the full report, *providing that it is accompanied by a letter of transmittal that can protect you* by making it unquestionably clear that: 1) the study was not conducted and the report was not prepared for purposes of bid development, and 2) the findings, conclusions, and recommendations included in the report are based on a variety of opinions, inferences, and assumptions and are subject to interpretation. Use the letter to also advise contractors to consult with your geoenvironmental professional to obtain clarifications, interpretations, and guidance (a fee may be required for this service), and that—in any event—they should conduct additional studies to obtain the specific type and extent of information each prefers for preparing a bid or cost estimate. Providing access to the full report, with the appropriate caveats, helps prevent formation of adversarial attitudes and claims of concealed or differing conditions. If a contractor elects to ignore the warnings and advice in the letter of transmittal, it would do so at its own risk. Your geoenvironmental professional should be able to help you prepare an effective letter.

Do Not Separate Documentation from the Report

Geoenvironmental reports often include supplemental documentation, such as maps and copies of regulatory files, permits, registrations, citations, and correspondence with regulatory agencies. If subsurface explorations were performed, the report may contain final boring logs and copies of laboratory data. If remediation activities occurred on site, the report may include: copies of daily field reports; waste manifests; and information about the disturbance of subsurface materials, the type and thickness of any fill placed on site, and fill placement practices, among other types of documentation. *Do not separate supplemental documentation from the report. Do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.*

Understand the Role of Standards

Unless they are incorporated into statutes or regulations, standard practices and standard guides developed by the American Society for Testing and Materials (ASTM) and other recognized standards-developing organizations (SDOs) are little more than aspirational methods agreed to by a consensus of a committee. The committees that develop standards may not comprise those best-qualified to establish methods and, no matter what, no standard method can possibly consider the infinite client- and project-specific variables that fly in the face of the theoretical "standard conditions" to which standard practices and standard guides apply. In fact, these variables can be so pronounced that geoenvironmental professionals who comply with every directive of an ASTM or other standard procedure could run afoul of local custom and practice, thus violating the standard of care. Accordingly, when geoenvironmental professionals indicate in their reports that they have performed a service "in general compliance" with one standard or another, it means they have applied professional judgement in creating and implementing a scope of service designed for the specific client and project involved, and which follows some of the general precepts laid out in the referenced standard. To the extent that a report indicates "general compliance" with a standard, you may wish to speak with your geoenvironmental professional to learn more about what was and was not done. *Do not assume a given standard was followed to the letter.* Research indicates that that seldom is the case.

Realize That Recommendations May Not Be Final

The technical recommendations included in a geoenvironmental report are based on assumptions about actual conditions, and so are preliminary or tentative. Final recommendations can be prepared only by observing actual conditions as they are exposed. For that reason, you should retain the geoenvironmental professional of record to observe construction and/or remediation activities on site, to permit rapid response to unanticipated conditions. *The geoenvironmental professional who prepared the report cannot assume responsibility or liability for the report's recommendations if that professional is not retained to observe relevant site operations.*

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in the scope of professional service, a report is not likely to relate any findings, conclusions, or recommendations about the suitability of subsurface materials for construction purposes, especially when site remediation has been accomplished through the removal, replacement, encapsulation, or chemical treatment of on-site soils. The equipment, techniques, and testing used by geotechnical engineers differ markedly from those used by geoenvironmental professionals; their education, training, and experience are also significantly different. If you plan to build on the subject site, but have not yet had a geotechnical engineering study conducted, your geoenvironmental professional should be able to provide guidance about the next steps you should take. The same firm may provide the services you need.

Read Responsibility Provisions Closely

Geoenvironmental studies cannot be exact; they are based on professional judgement and opinion. Nonetheless, some clients, contractors, and others assume geoenvironmental reports are or certainly should be unerringly precise. Such assumptions have created unrealistic expectations that have led to wholly unwarranted claims and disputes. To help prevent such problems, geoenvironmental professionals have developed a number of report provisions and contract terms that explain who is responsible for what, and how risks are to be allocated. Some people mistake these for "exculpatory clauses," that is, provisions whose purpose is to transfer one party's rightful responsibilities and liabilities to someone else. Read the responsibility provisions included in a report and in the contract you and your geoenvironmental professional agreed to. *Responsibility provisions are not "boilerplate."* They are important.

Rely on Your Geoenvironmental Professional for Additional Assistance

Membership in the Geoprofessional Business Association exposes geoenvironmental professionals to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a geoenvironmental project. Confer with your GBA-member geoenvironmental professional for more information.

GEOPROFESSIONAL BUSINESS ASSOCIATION

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APPENDIX B

Resumes

Timothy J. Taugher, P.G.

Senior Hydrogeologist

GILES ENGINEERING ASSOCIATES, INC.

Education

- M.S., Geology, University of Wisconsin – Milwaukee, 1991
- B.S., Geography, Carroll College – Waukesha, Wisconsin, 1989

Professional Registration and Certification

- Registered Professional Geologist – Wisconsin
- Illinois Dept. of Public Health – Licensed Asbestos Inspector
- Indiana Dept. of Environmental Management – Licensed Asbestos Inspector
- Iowa Dept. of Labor – Licensed Asbestos Inspector
- Kentucky Department for Environmental Protection – Licensed Asbestos Inspector
- Maryland Department of the Environment – Licensed Asbestos Inspector
- Michigan Dept. of Public Health – Licensed Asbestos Inspector
- Minnesota Dept. of Health – Licensed Asbestos Inspector
- Missouri Dept. of Natural Resources – Licensed Asbestos Inspector
- North Carolina Health Hazard Management Program – Licensed Asbestos Inspector
- Ohio Dept. of Health – Licensed Asbestos Hazard Evaluation Specialist
- Pennsylvania Dept. of Labor & Industry – Licensed Asbestos Inspector
- South Carolina Dept. of Health and Environmental Control – Licensed Asbestos Consultant
- South Dakota Dept. of Agriculture & Natural Resources – Licensed Asbestos Inspector
- Texas Dept. of State Health Services – Licensed Asbestos Individual Management Planner
- Virginia Dept. of Professional & Occupational Regulation – Licensed Asbestos Inspector
- West Virginia Dept. of Health & Human Relations – Licensed Asbestos Inspector
- Wisconsin Dept. of Health Services – Licensed Asbestos Inspector and Management Planner
- 40-Hour OSHA Hazardous Waste Operations Emergency Response Certificate
- ASTM Property Condition Assessments Training

Experience

Mr. Taugher has more than 32 years of experience conducting research on the history of properties, Phase I & II Environmental Site Assessments (ESAs), Property Condition Assessments (PCAs), asbestos inspections, feasibility studies, and investigation and remediation projects. His project experience includes:

Environmental Assessments

- Conducted more than 2,400 industrial, commercial, and residential Phase I ESAS in 44 states.
- Conducted more than 900 asbestos inspections for building renovation and demolition.
- Prepared asbestos management plans for apartment complexes and office buildings.

Property Condition Assessments

- Completed more than 70 PCAs on commercial, industrial, and residential facilities.

Investigation and Remediation Services

- Project manager for subsurface investigations and site characterization of two former solid waste disposal landfills impacted with RCRA metals and petroleum hydrocarbons.
- Project hydrogeologist responsible for evaluation of data and design of remedial technologies at numerous sites. Remedial methods included active and passive soil vapor extraction (SVE), soil excavation and disposal, soil aeration by means of thin spreading, and in-situ bioremediation.

Compliance Services

- Conducted compliance audits at numerous oil change facilities in several states. Recommended upgrade design for USTs and ASTs. Completed or corrected state registration of USTs and ASTs.
- Conducted an environmental compliance audit of a large camp/retreat facility, including recommendations for an abandoned landfill; USTs and ASTs; and spill prevention, control, and countermeasures (SPCC) program.

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Steven C. Thuemling

Corporate Manager – Phase I Services

Education

- AAS, Computer Engineering, Milwaukee School of Engineering, 1985

Professional Registration and Certification

- OSHA 40-Hour Health and Safety Waste Site Worker Training and Annual Refresher (29CFR1910.120(e)8)

Experience & Background

Mr. Thuemling has 39 years of experience with Giles Engineering in the environmental consulting industry conducting Environmental Site Assessments (ESAs), managing site investigations, developing site-specific work plans, and overseeing site remediation on commercial, industrial and residential properties. He understands client objectives; develops project scope, schedules and budgets; and acts as client/regulator liaison. Also, he mentors staff and provides technical review of project documentation. He combines his expertise to evaluate cost-effective investigation, remedial and closure solutions to a variety of environmental scenarios for industrial and commercial clients. His responsibilities include client management and the review of data and preparation of technical reports for environmental studies, including Phase I ESAs, asbestos sampling and analysis, lead-based paint studies and radon gas surveys. His project experience includes:

Environmental Site Assessments

- Prepared and/or managed more than 5,900 residential, commercial and industrial Phase I ESAs for due diligence for refinancing and property transfers throughout the United States.
- Conducted and/or managed over 650 asbestos inspections of institutional, commercial and residential buildings.
- Project manager for multi-unit development clients including management of more than 500 Phase II ESAs throughout the United States.

Stormwater Management

- Implemented sampling strategies to comply with stormwater and sanitary sewer discharge permits for industrial properties in Wisconsin, as well as properties in Illinois and Texas.
- Implemented stormwater management plans for development of the Lake Express Ferry Terminal site, and expansion of the Howard Avenue Water Treatment facility.

Underground Storage Tank Management and Tank Removal Services

- Project manager for the removal of USTs, including on-site supervision, and oversight management for over 100 projects, throughout the United States.

Investigations Services

- Served as project manager and negotiated with regulatory agencies the closure of over 200 contaminated properties. Responsibilities include conducting long-term groundwater monitoring, evaluating the natural attenuation of contaminants, conducting active remedial actions, applying the use of institutional controls such as filing of deed/use restrictions, conducting health risk-based evaluations, or any combination of the aforementioned closure methods.

Remediation Services

- Designed and implemented over 100 subfloor passive/active vapor mitigation systems for a variety of commercial building concepts constructed on historic fill sites with high methane gas conditions and/or petroleum hydrocarbon vapor conditions.

APPENDIX C

Photographs

View of Northview Hall, facing southwest.

View of classroom/computer laboratory room in Northview Hall.

PHOTOGRAPHS
January 24, 2025

University of Wisconsin – Milwaukee
Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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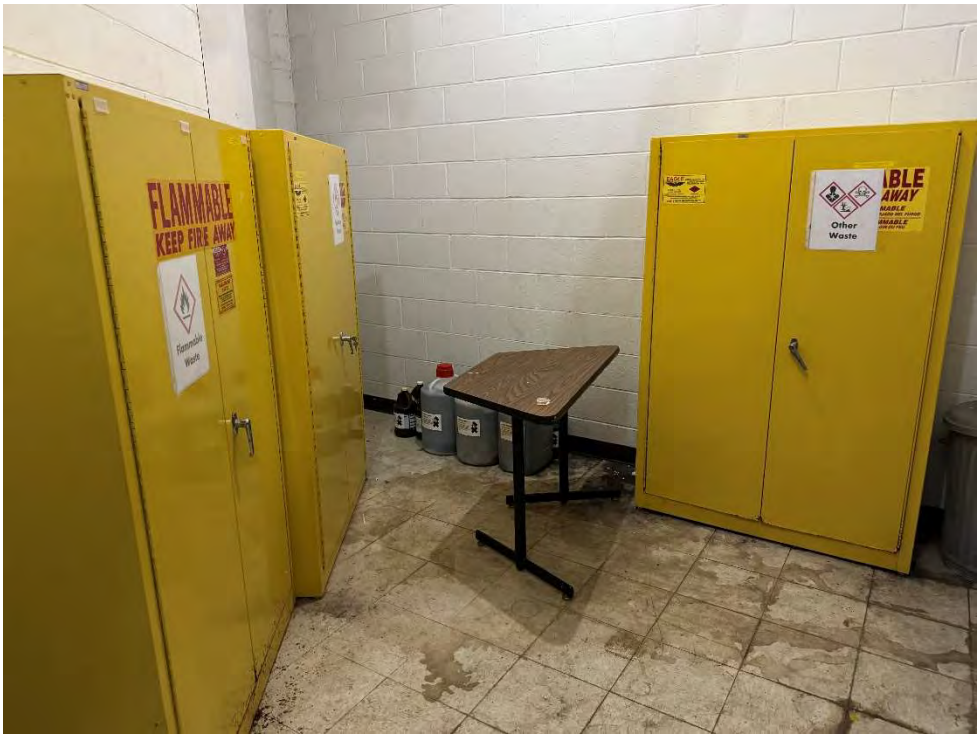
View of a biology room in Northview Hall.



View of the Biology Department's hazardous materials storage room in Northview Hall.

PHOTOGRAPHS
January 24, 2025

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View of a sump in a mechanical room in Northview Hall.

View of the Library in Northview Hall.

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January 24, 2025

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View of a chemistry laboratory in Northview Hall.

View of the Chemistry Department's hazardous materials store room in Northview Hall.

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January 24, 2025

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View of a greenhouse attached to Northview Hall.

View of a lecture hall in Northview Hall.

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January 24, 2025

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1500 N. University Drive
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Project No. 1E-2501002

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View of Westview Hall, facing north.

View of administrative offices in Westview Hall.

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View of the kitchen in Westview Hall. The facility's grease trap is in the foreground.

View of the commons and dining area in Westview Hall.

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January 24, 2025

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Project No. 1E-2501002

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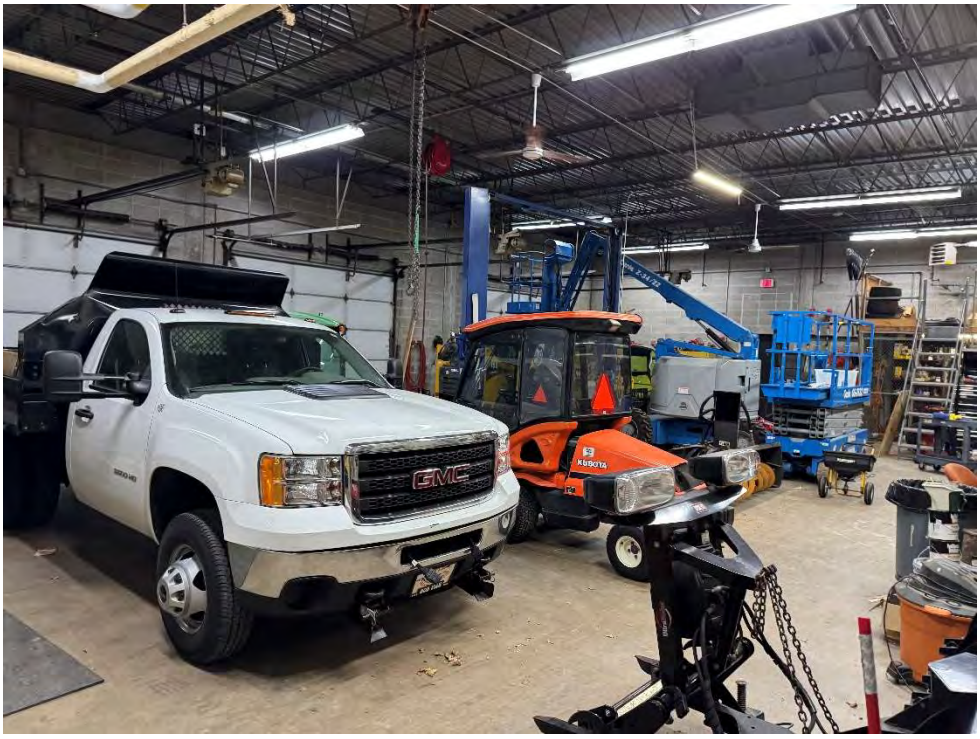
View of the Field House, facing west.



View of the maintenance garage located in the Field House.

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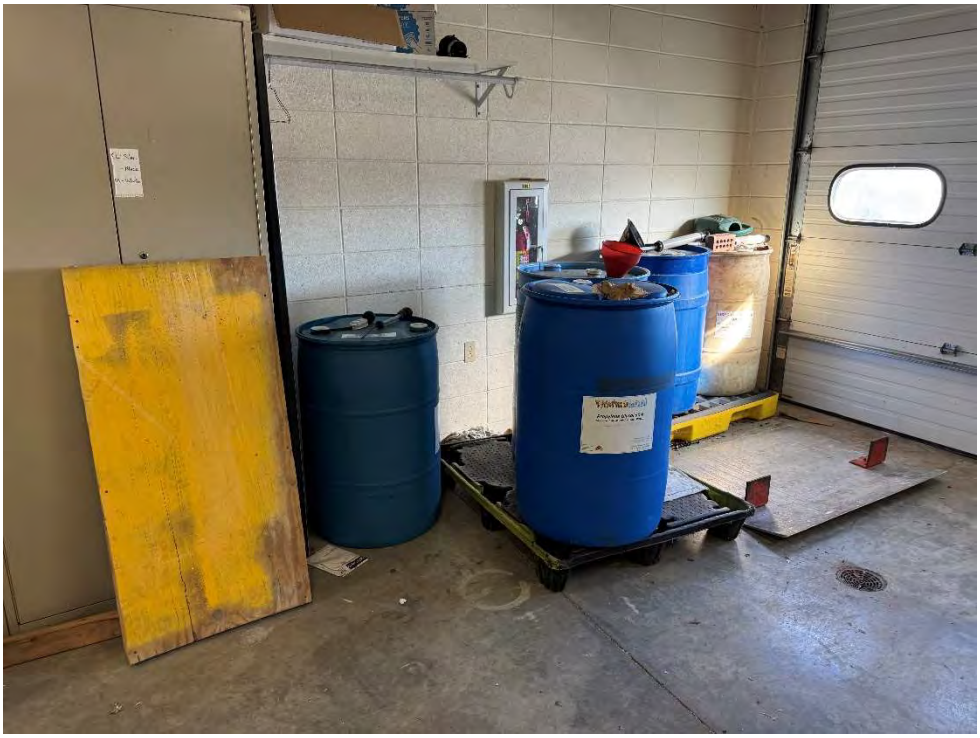

View of used antifreeze storage in the Field House's loading dock area.

View of the boiler room in the Field House. The boilers provide steam heat to all four academic buildings.

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January 24, 2025

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View of boiler chemicals stored in the boiler room.

View of a hallway in the Field House.

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1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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View of the gymnasium located in the Field House.

View of the fire suppression equipment room and location of former aboveground storage tank.

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View of a diesel tank and containment dike associated with the fire suppression system.

View of Southview Hall, facing southwest.

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View of the rear of Southview Hall, facing southeast.

View of the entrance to the Lunt Fontanne Theatre, located in Southview Hall.

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January 24, 2025

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Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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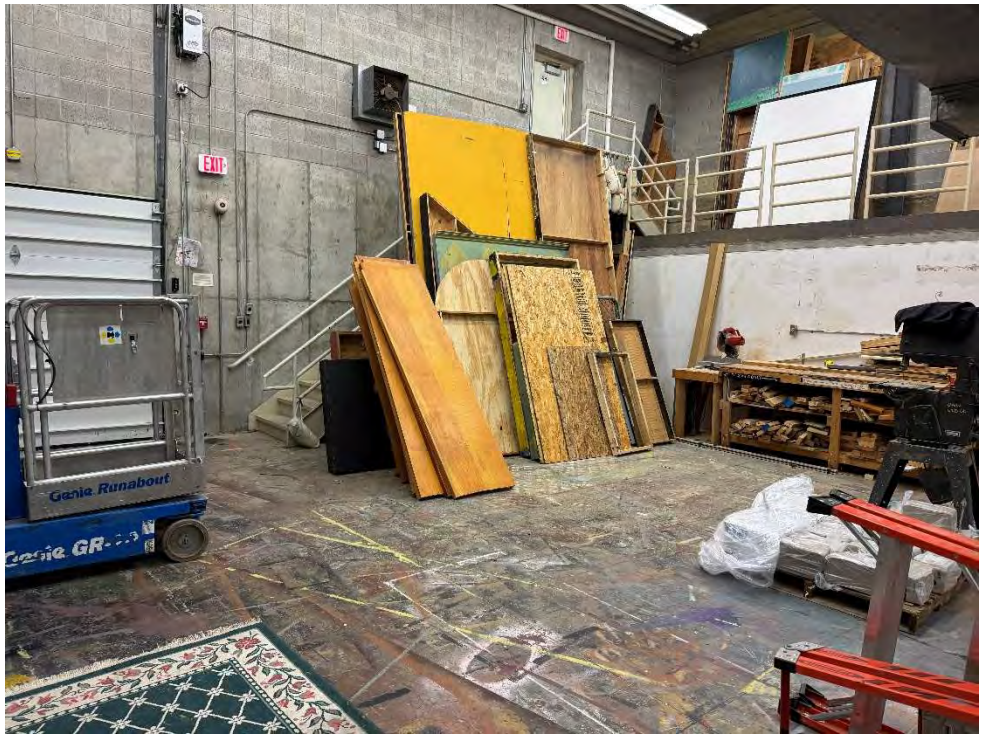
View of the Lunt Fontanne Theatre.



View of the prop room located behind the theatre stage.

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January 24, 2025

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Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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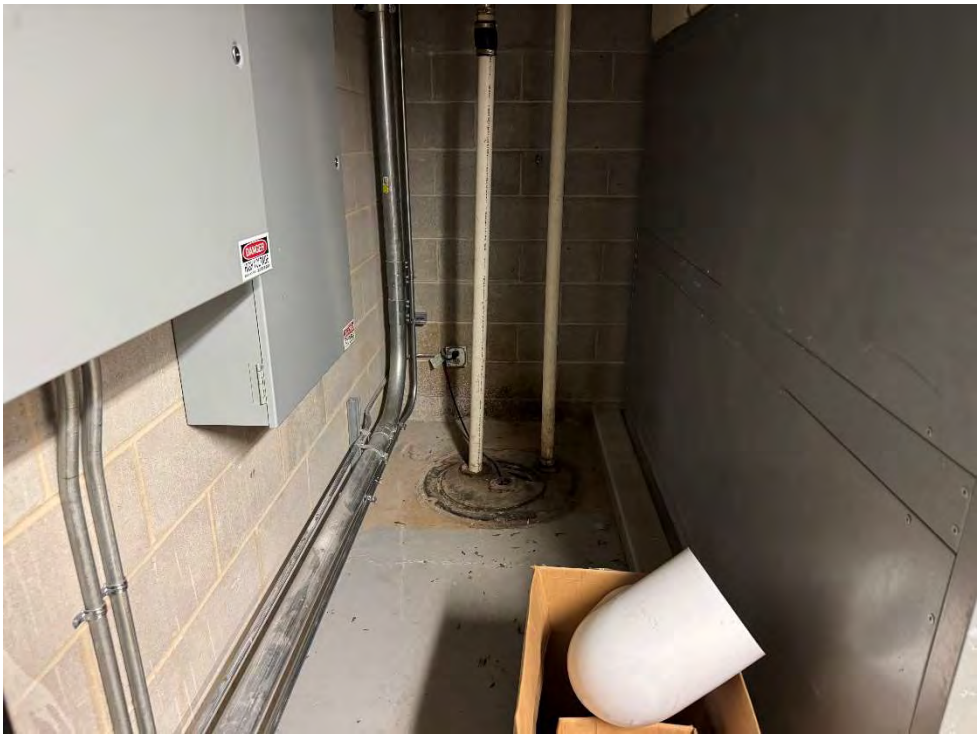
View of an elevator equipment room in Southview Hall.



View of a sump located in Southview Hall.

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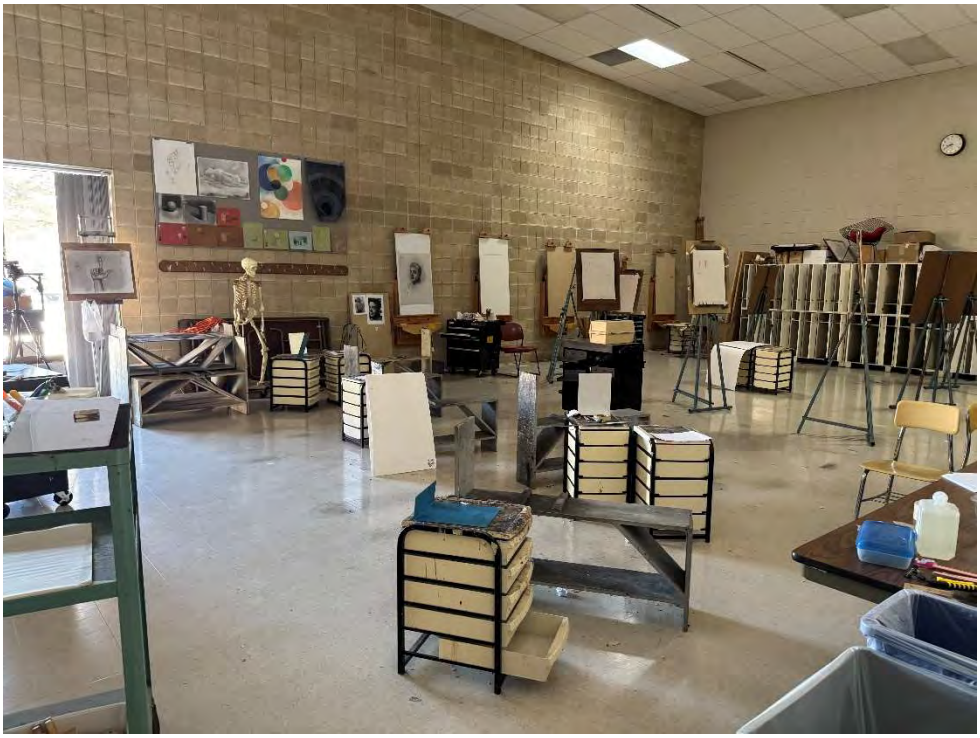

View of an art room in Southview Hall.

View of Parking Lot 6, located on the east side of University Drive, facing east.

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January 24, 2025

University of Wisconsin – Milwaukee
Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
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View of Parking Lot 7 on the southeast corner of University Drive and Sunkist Avenue.

View of the northern portion of the subject property on the east side of University Drive.

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January 24, 2025

University of Wisconsin – Milwaukee
Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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View of the northern portion of the subject property, facing northeast.

View of the subject property, facing southeast.

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January 24, 2025

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Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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View of athletic fields west of the academic buildings, facing north.

View of soccer fields on the southeast portion of the subject property.

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Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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View of the driveway to the farmstead formerly located on the subject property.

View of the area of the former barn.

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January 24, 2025

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Waukesha Campus
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Waukesha, Wisconsin
Project No. 1E-2501002

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View of the western shed in the location of the former farmstead.

View of the eastern shed in the location of the former farmstead.

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View of empty drums in the eastern shed.

View of a cellular tower equipment building in the area of the old farmstead.

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January 24, 2025

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Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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View of residences west of the subject property.

View of the area north of the subject property facing north.

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Waukesha, Wisconsin
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View of residences along Sunkist Avenue east of the subject property.

View of a residential area east of the subject property.

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Waukesha Campus
1500 N. University Drive
Waukesha, Wisconsin
Project No. 1E-2501002

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View of Waukesha Montessori School south of the subject property.

View of a residential area south of the subject property.

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January 24, 2025

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Waukesha Campus
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Project No. 1E-2501002

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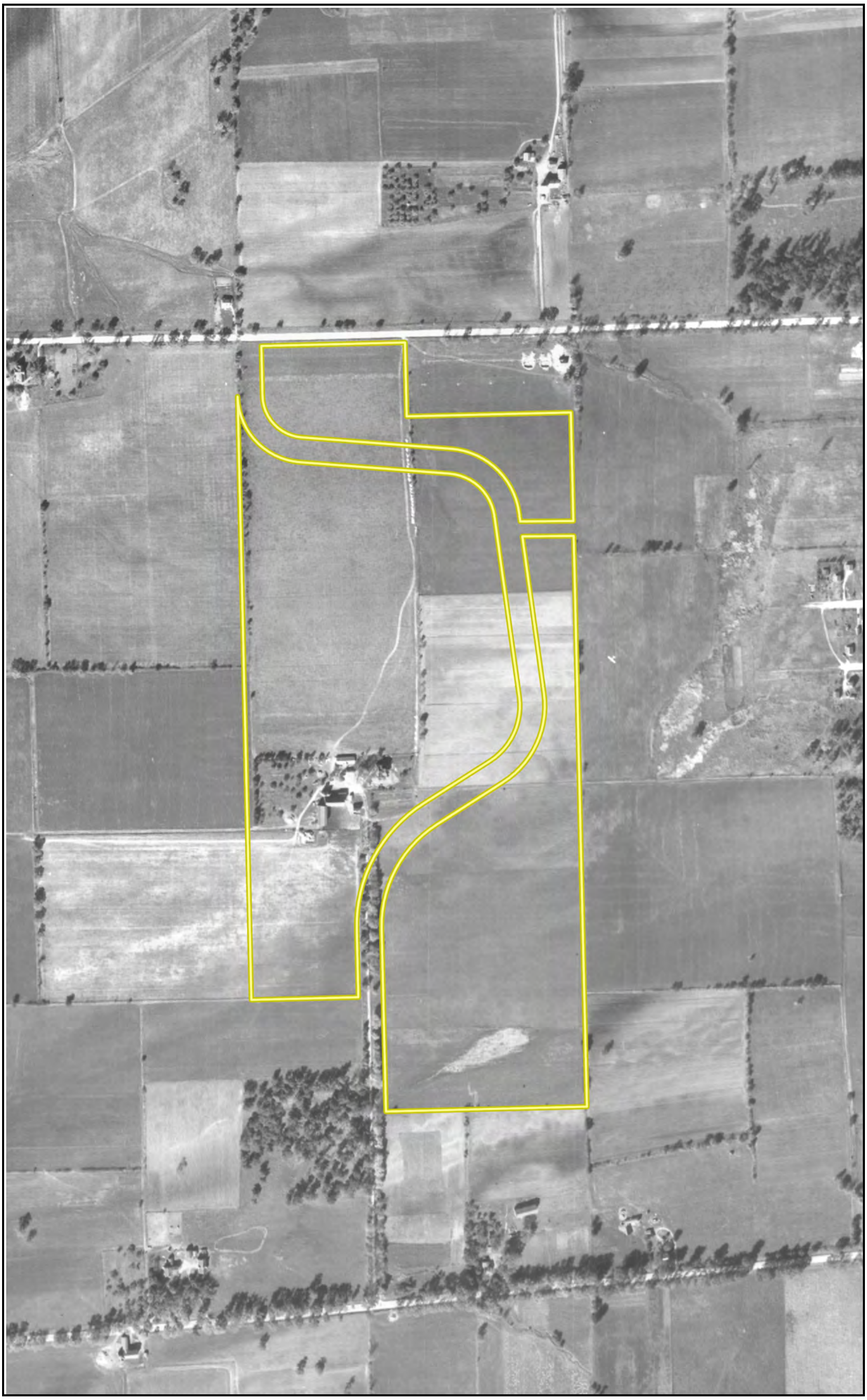
APPENDIX D

Aerial Photographs

MAP WAUKESHA county

1941 aerial



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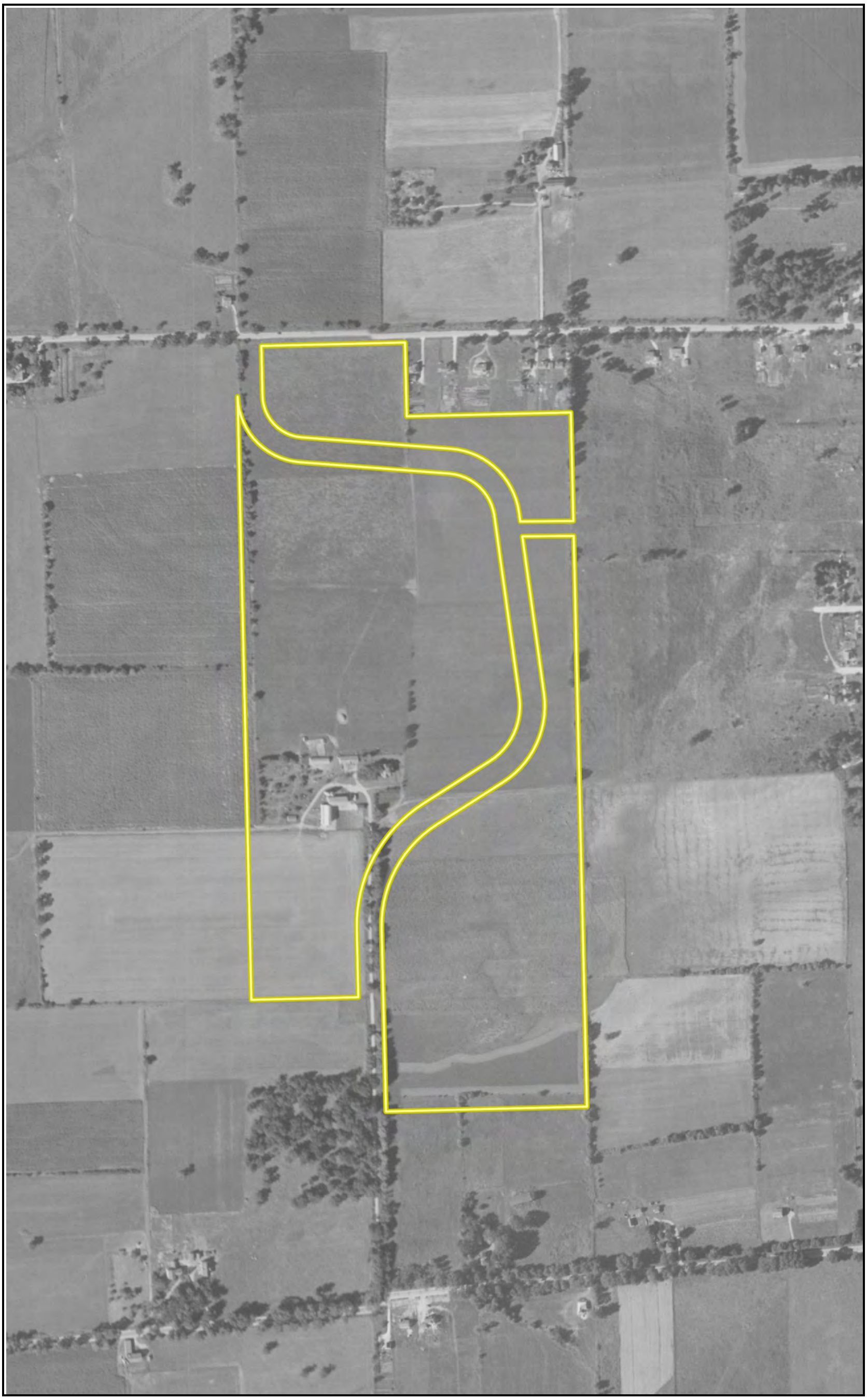
MAP WAUKESHA county

1950 aerial



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MAP WAUKESHA county

1963 aerial

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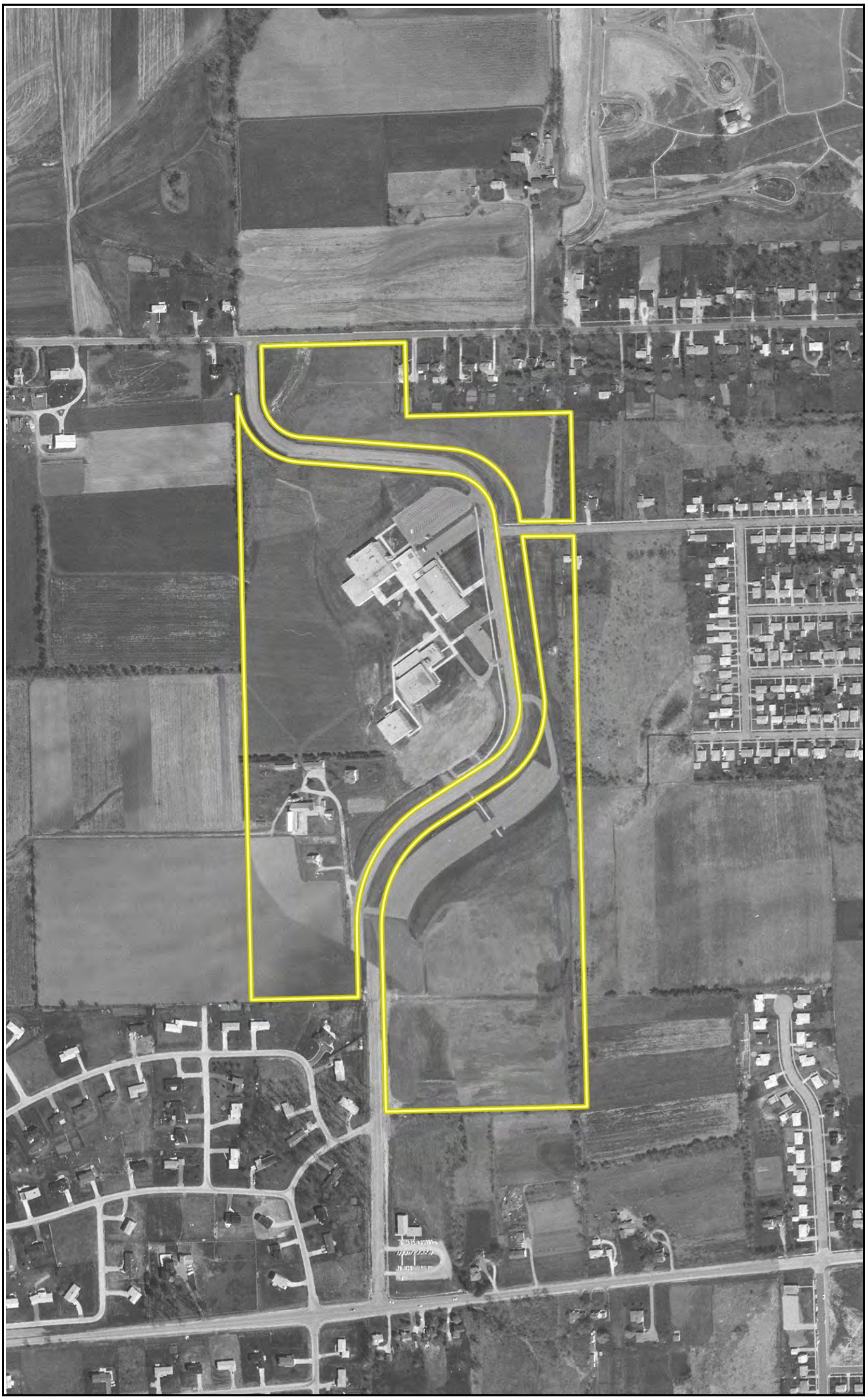
MAP WAUKESHA county

1970 aerial



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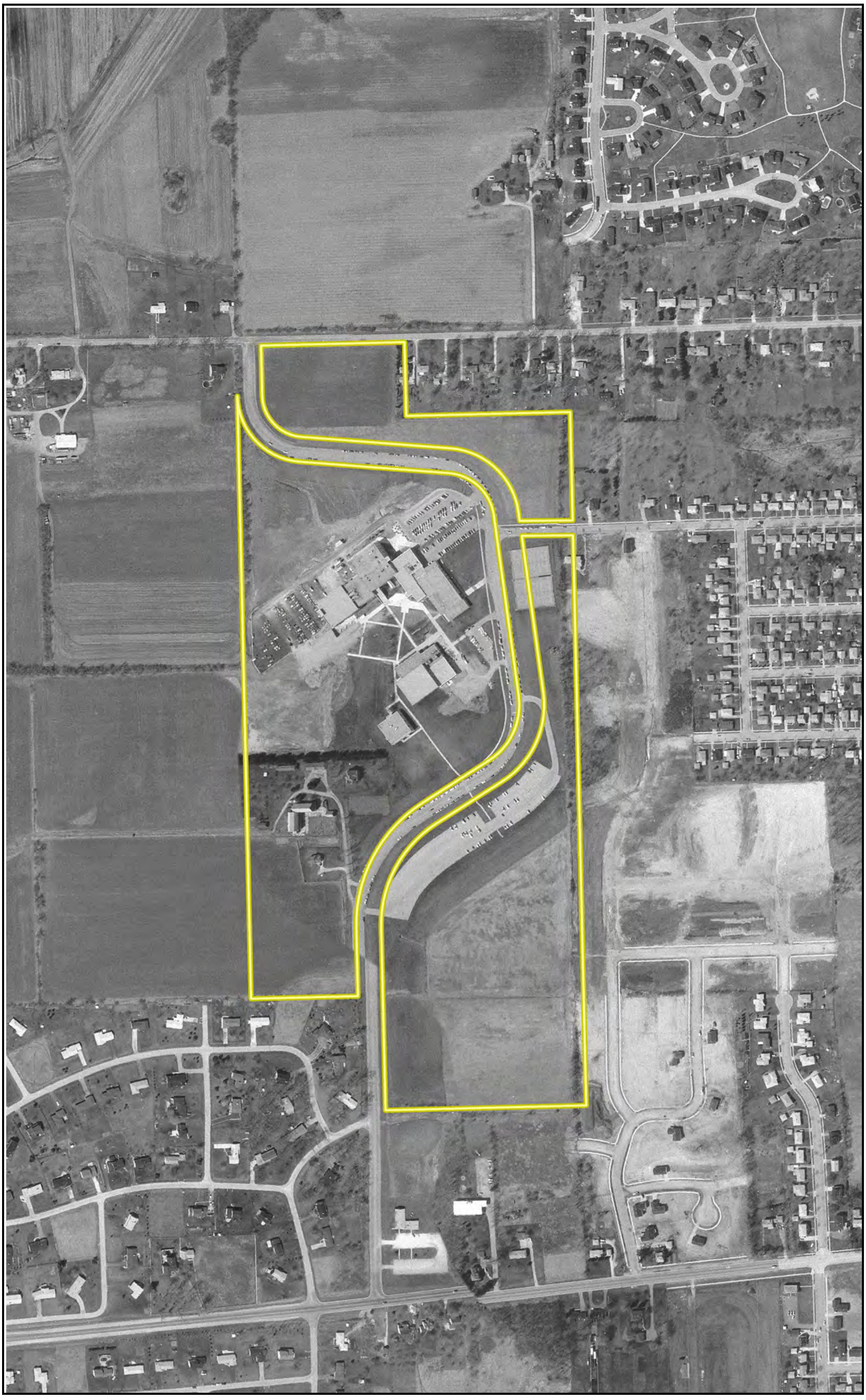
MAP WAUKESHA county

1980 aerial



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MAP WAUKESHA county

1990 aerial

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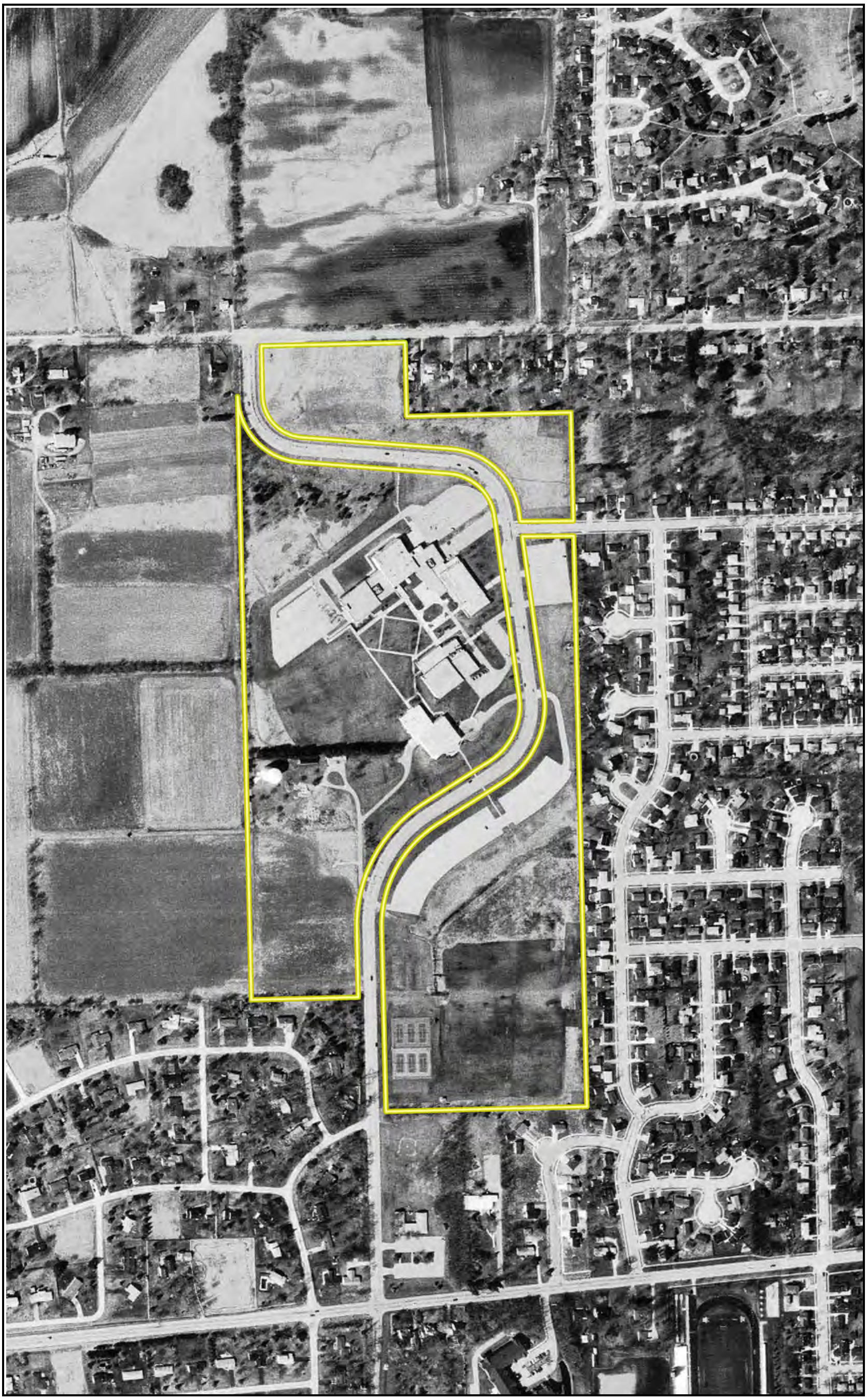
MAP WAUKESHA county

1995 aerial



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MAP WAUKESHA county

2000 aerial

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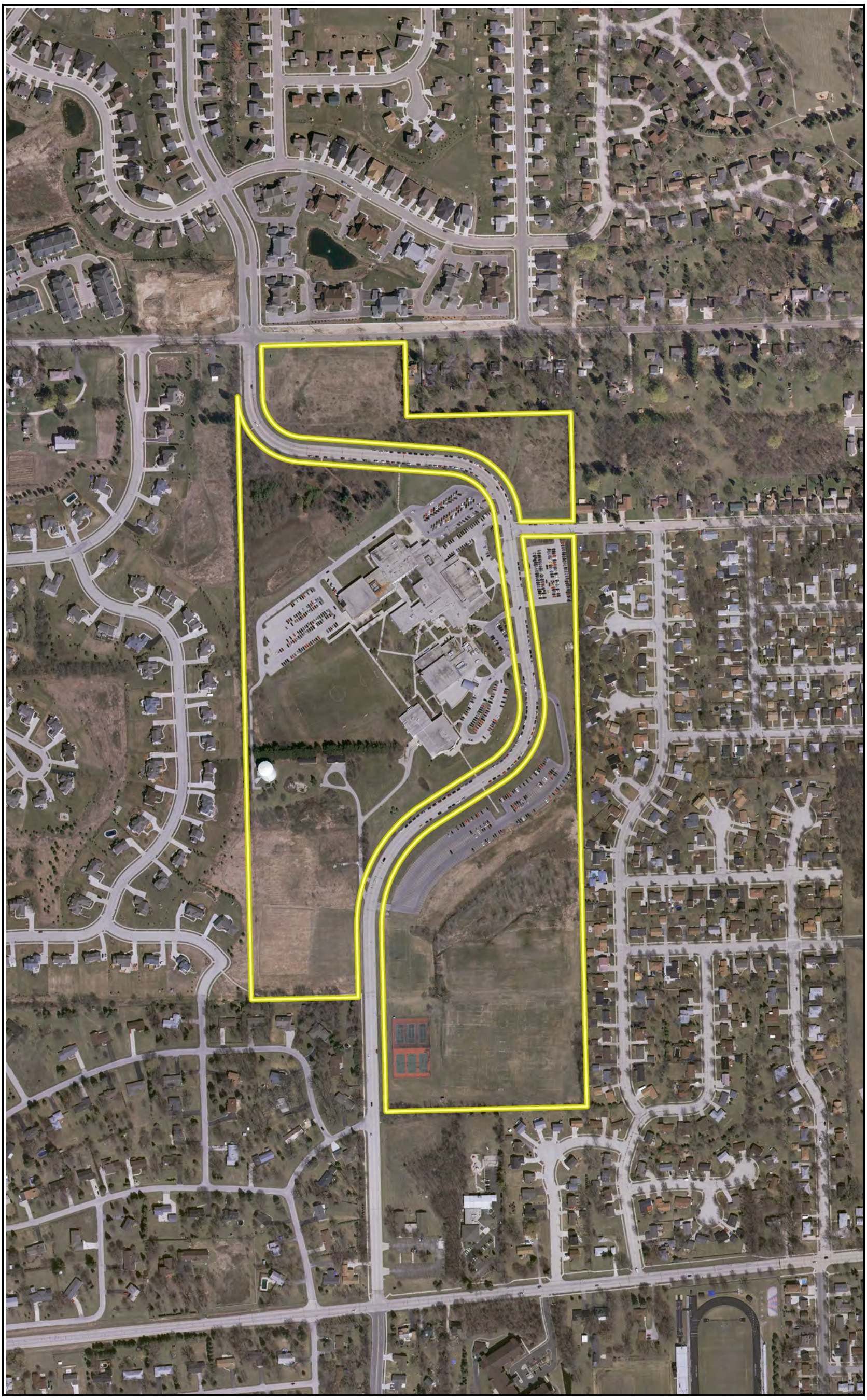
MAP WAUKESHA county

2005 aerial



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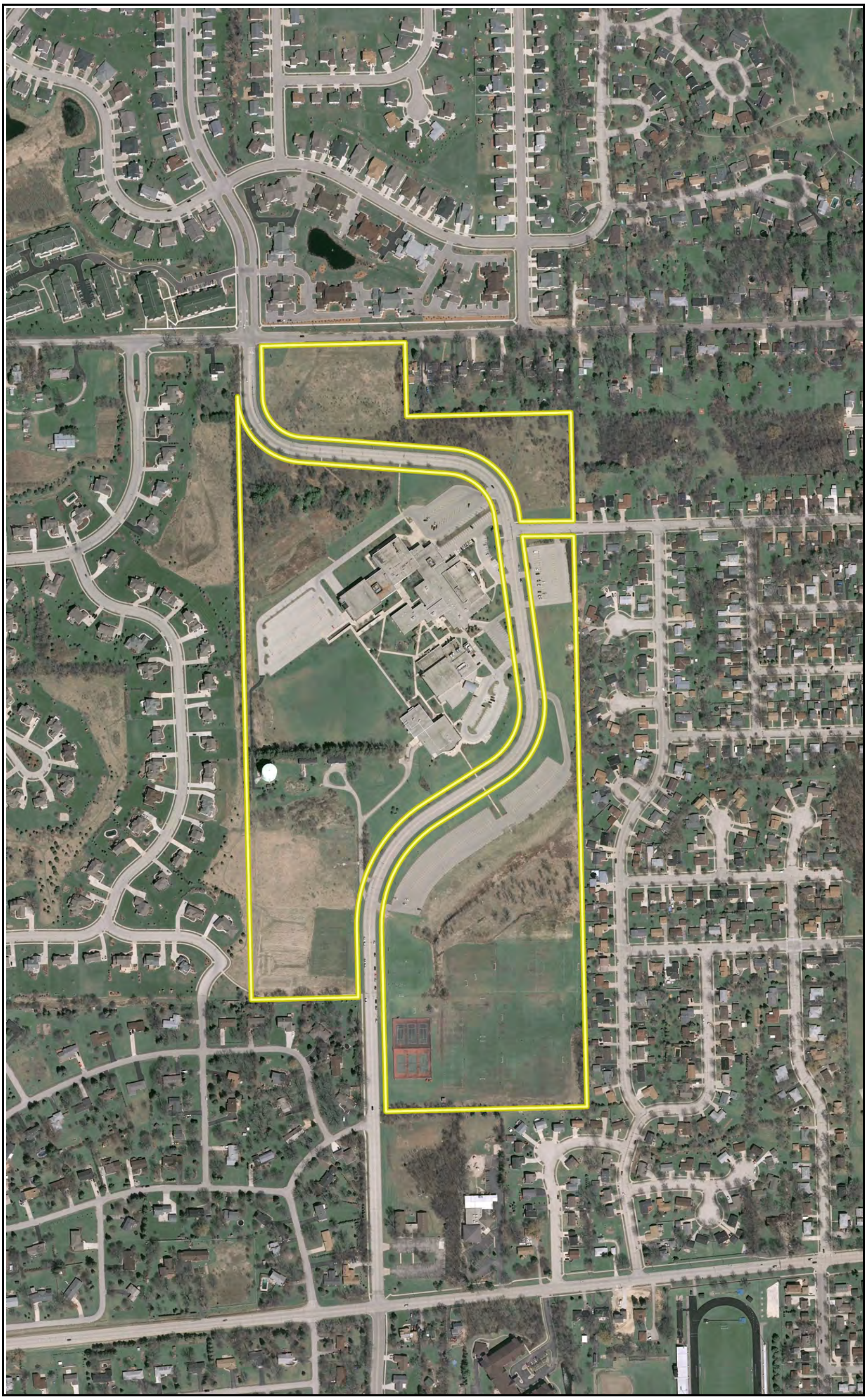
MAP WAUKESHA county

2007 aerial



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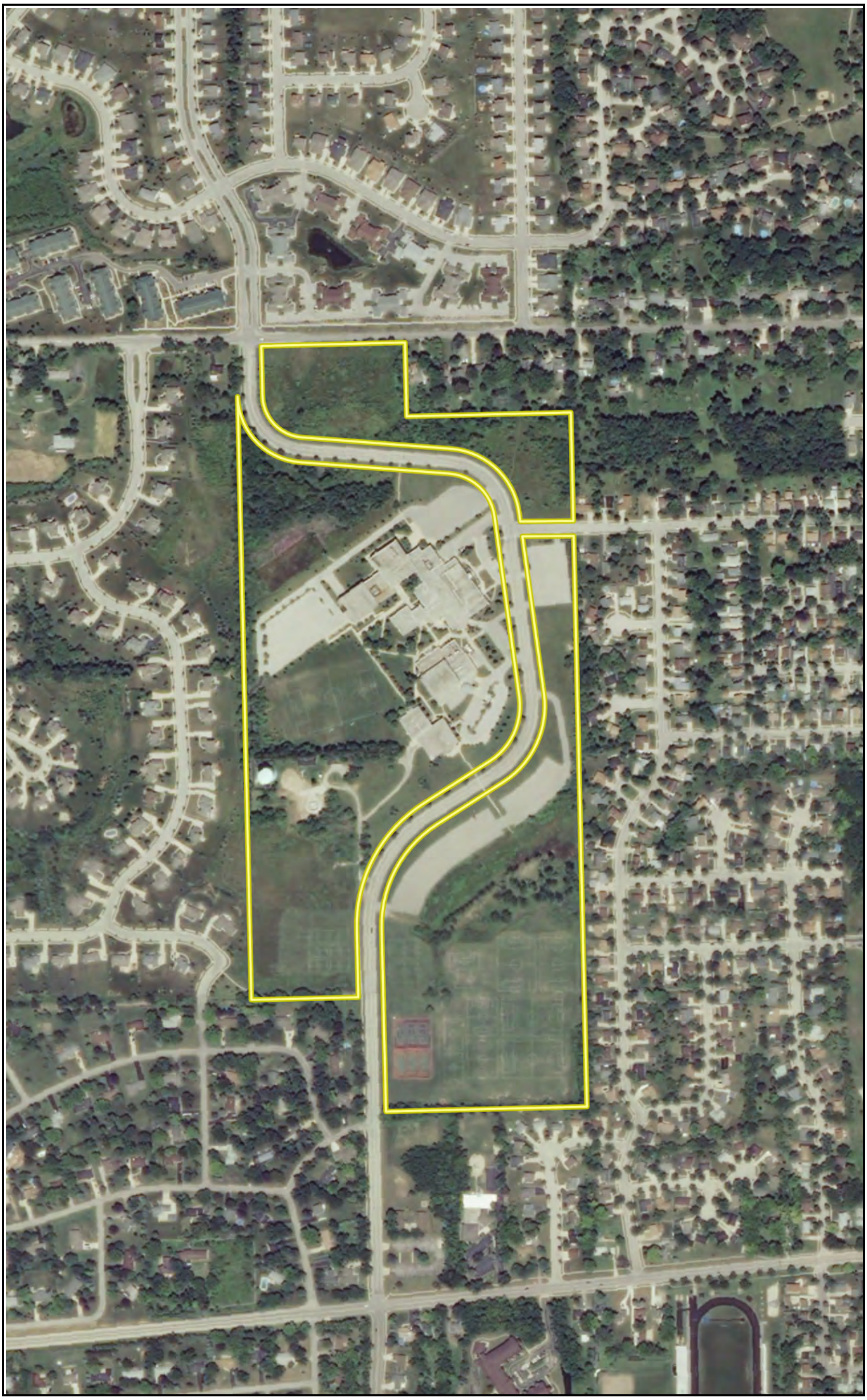
MAP WAUKESHA county

2008 aerial



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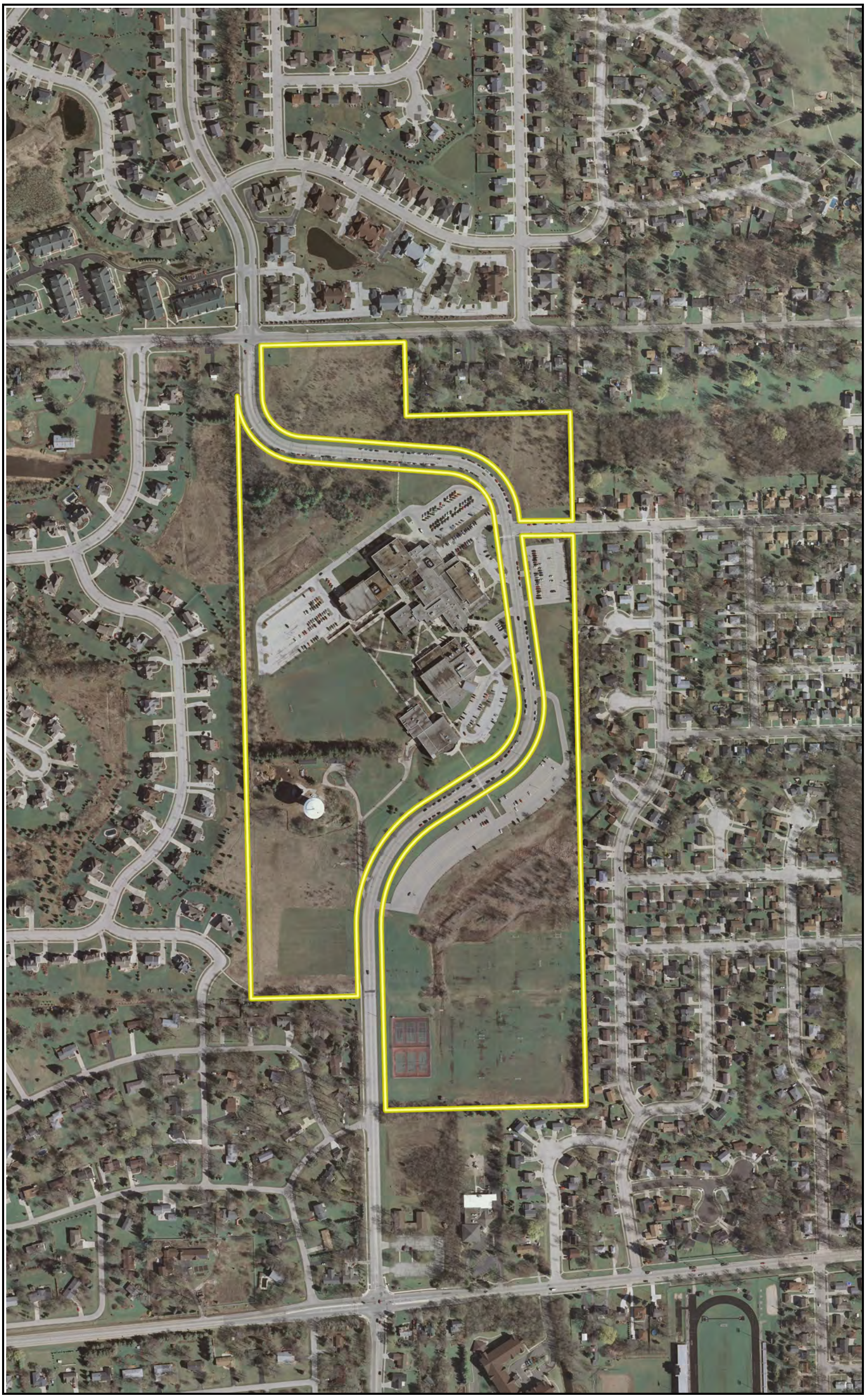
MAP WAUKESHA county

2010 aerial



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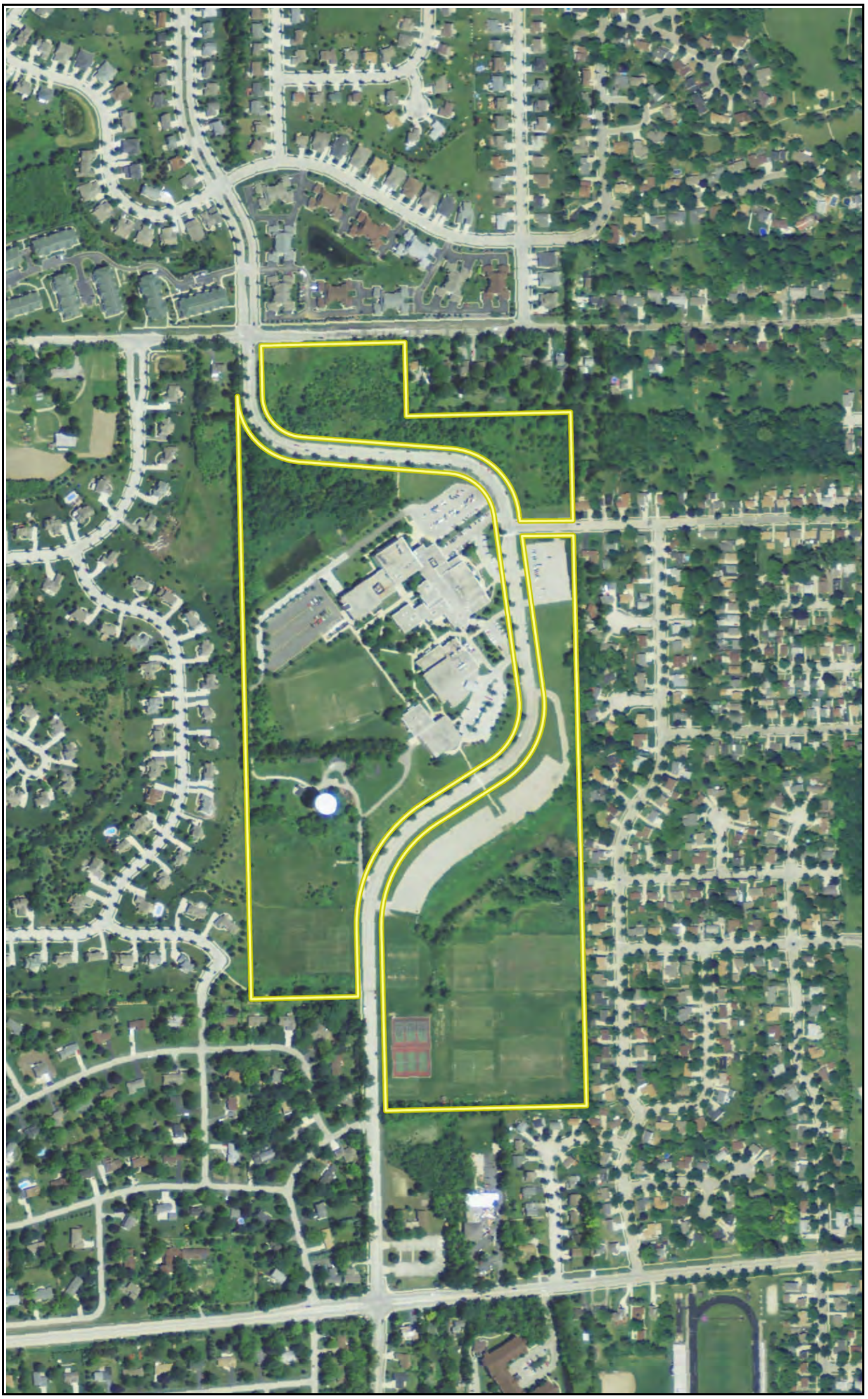
MAP WAUKESHA county

2013 aerial



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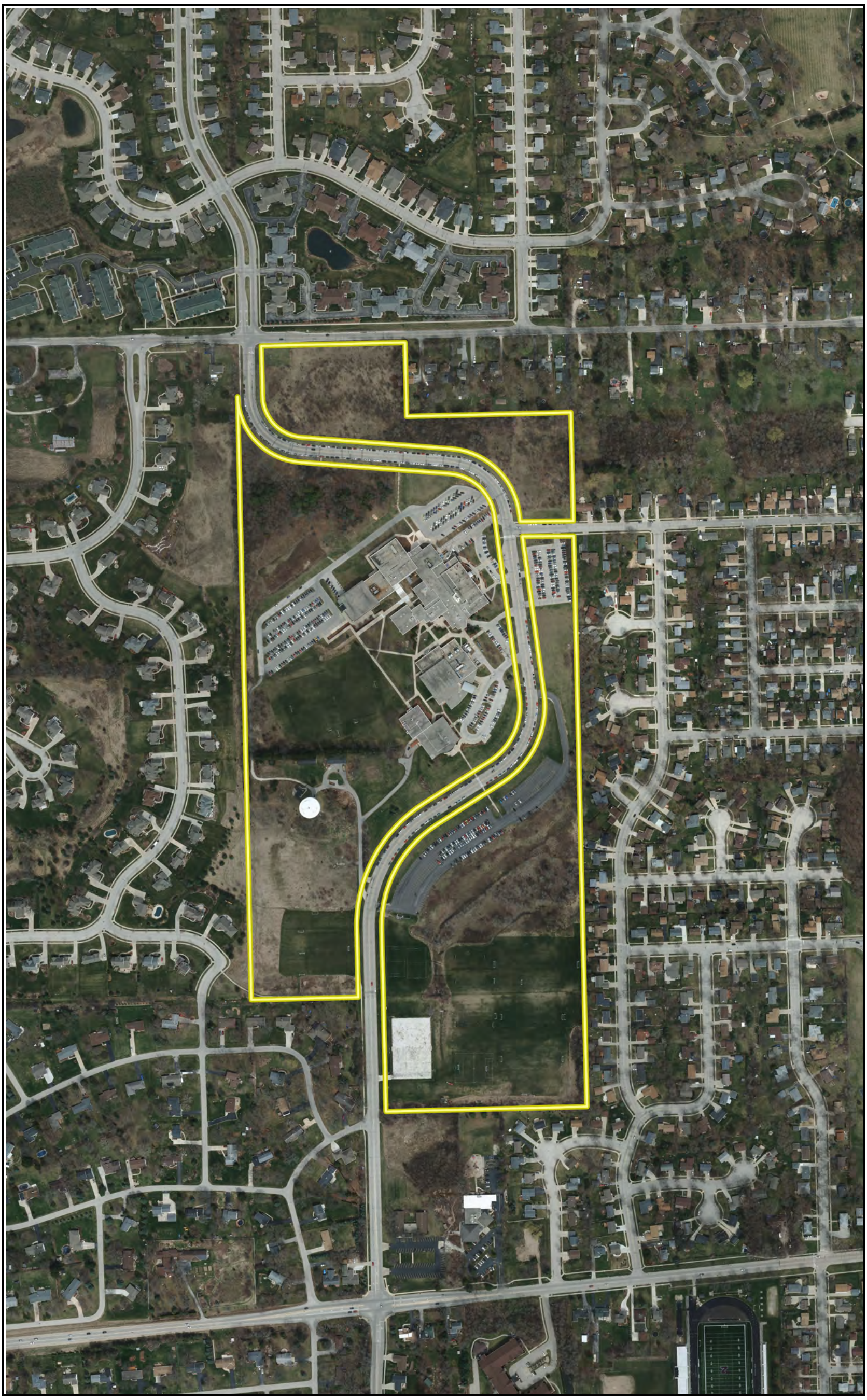
MAP WAUKESHA county

2015 aerial



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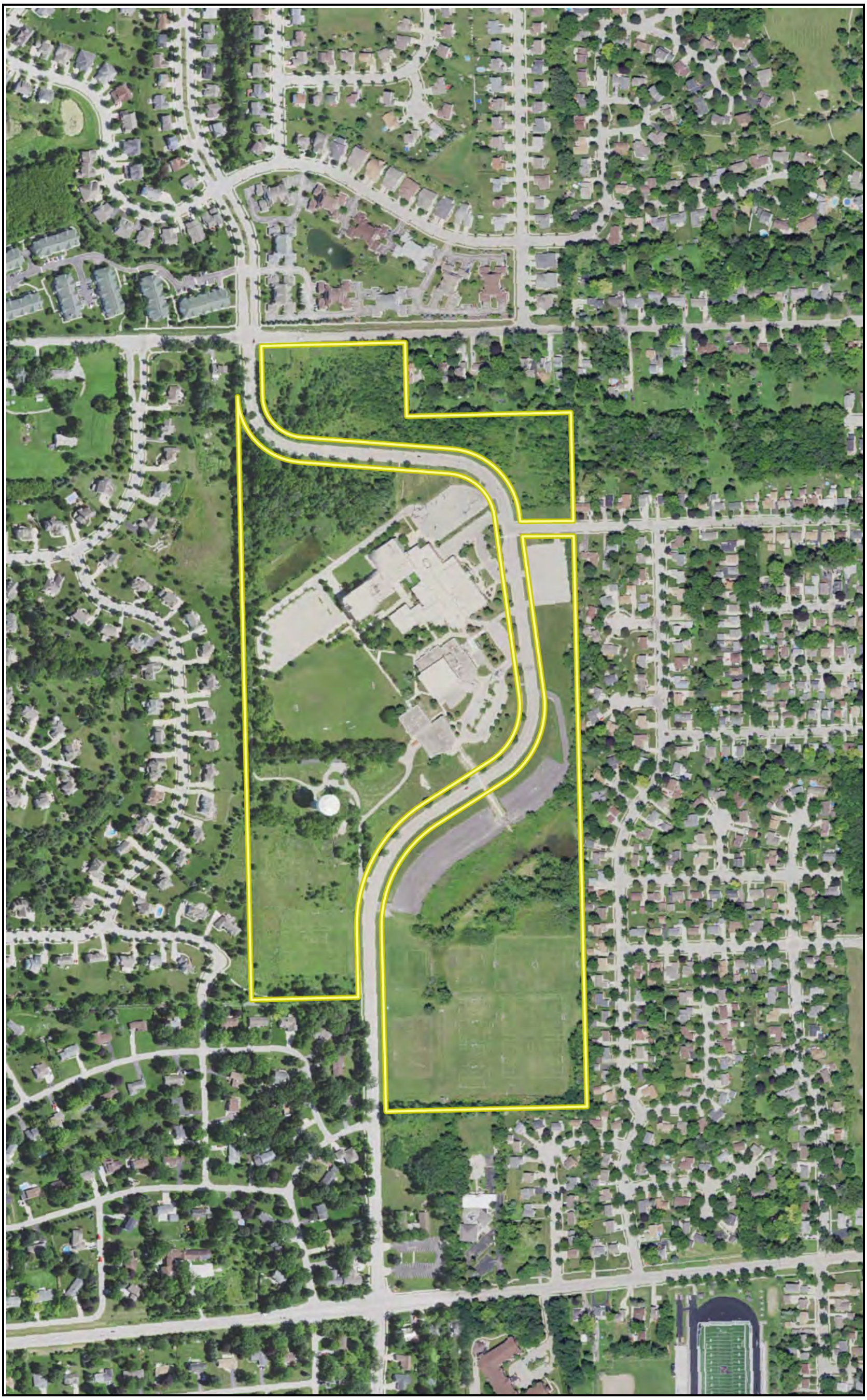
MAP WAUKESHA county

2017 aerial



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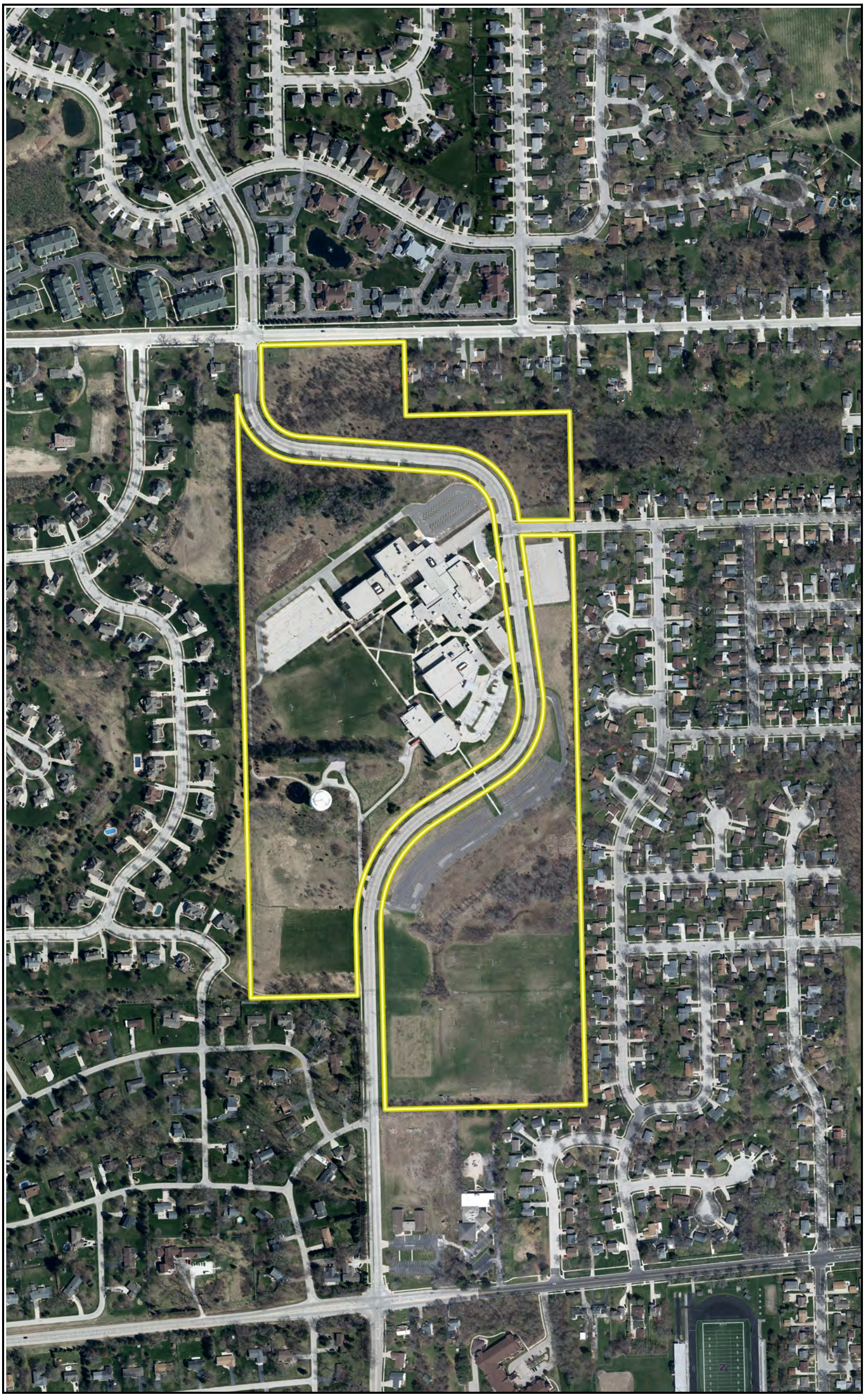
MAP WAUKESHA county

2020 aerial



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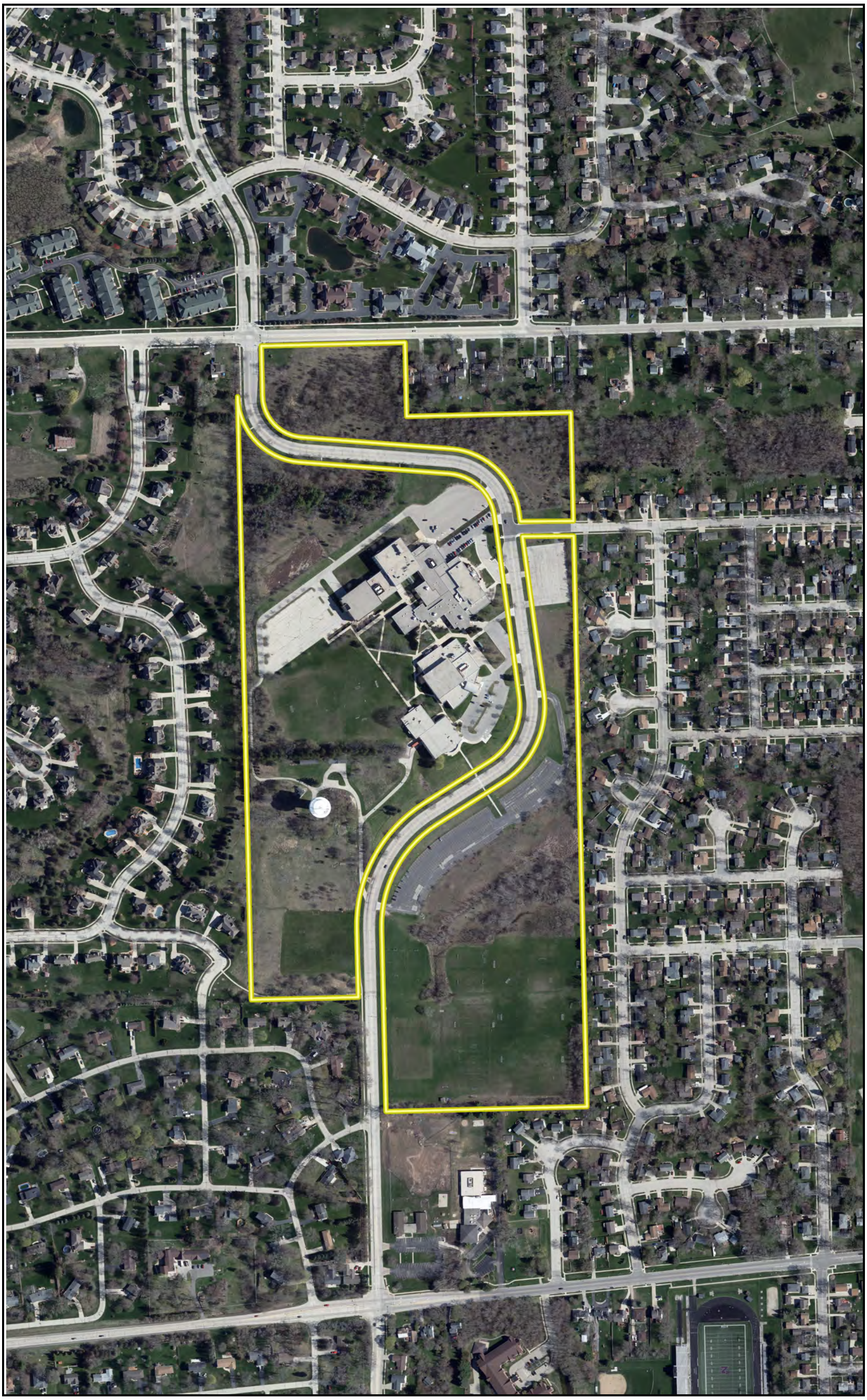
MAP WAUKESHA county

2022 aerial



Legend

0 400.00 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 1/16/2025

MAP WAUKESHA county

2024 aerial

Legend

0 400.00 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 1/16/2025

APPENDIX E

Building Records

Kept pink copy

CITY OF WAUKESHA 201 DELAFIELD STREET WAUKESHA, WI 53186 (547-2201)

APPLICATION FOR HEATING AND AIR CONDITIONING PERMIT

PREMISES NO. 1500 N. University Dr. DATE 1-3-79 PERMIT NO. ____

OWNER U.W. Waukesha ADDRESS N. University Dr.

CONTRACTOR Petroleum Equipment LICENSE NO. ____

ADDRESS 3950 W. Douglas (Street) Milw (City) 53209 (Zip) 466-300 (Phone No.)

Double fees shall be charged if work is started before permit is issued.

PERMIT FEES	QUANTITY	FEE	
NEW BUILDINGS, ADDITIONS AND REMODELING Heating and Air Conditioning, Commercial, Industrial, and Buildings housing over two families $0.40 per 1,000 cu. ft. or fraction thereof			
Residential Heating and Air Conditioning Systems $0.50 per 1,000 cu. ft. or fraction thereof			
REPLACEMENT AND MODIFICATIONS OF HEATING AND AIR CONDITIONING EQUIPMENT Gas, Oil, Coal and Electric-Fired Boilers, Furnaces and Unit Heaters:			
Commercial, Industrial, and Buildings housing over two families $15.00 ea.			
Residential $ 5.00 ea.			
ALL TYPES OF CONVERSION BURNERS AND REPLACEMENTS			
Commercial and Industrial $15.00			
Residential $ 5.00			
FUEL OIL TANKS 275 gal. to 1,000 gal. $4.00. Over 1,000 gal. add $2.00 per 1,000 gal. or fraction thereof	(1) 10,000 Gallon	22.00	
MINIMUM INSPECTION FEES: Commercial $10.00			
Residential $ 4.00			
Estimated Cost $ 8900.00	TOTAL FEES	$ 22	00

N/C

REQUIREMENTS BEFORE PERMIT IS ISSUED. Commercial, Industrial, and Buildings housing over two families shall have STATE APPROVED Heating Plans with the application.

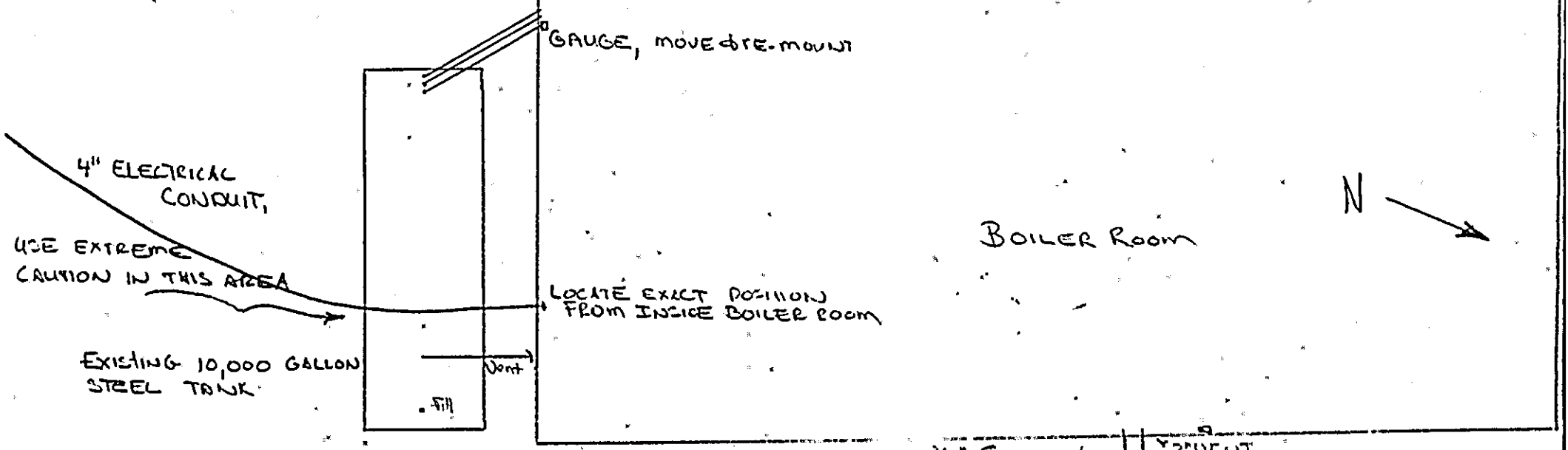
Residential. Heating Plans, Heat Loss Calculations, and Specifications of the equipment to be installed.

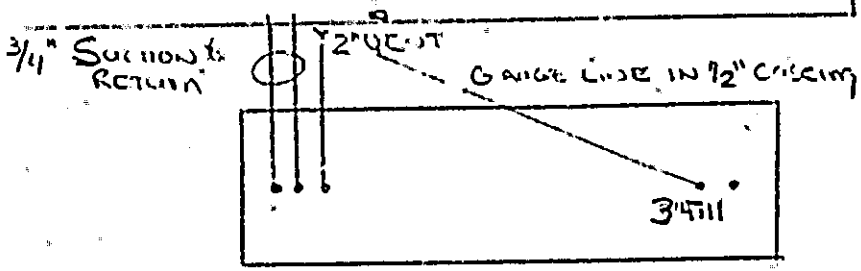
Note: The cubic footage shall be calculated from the basement floor to the highest point of the roof.

Signature of Applicant W.J. Hart

Approval ____ Date 1-8-79

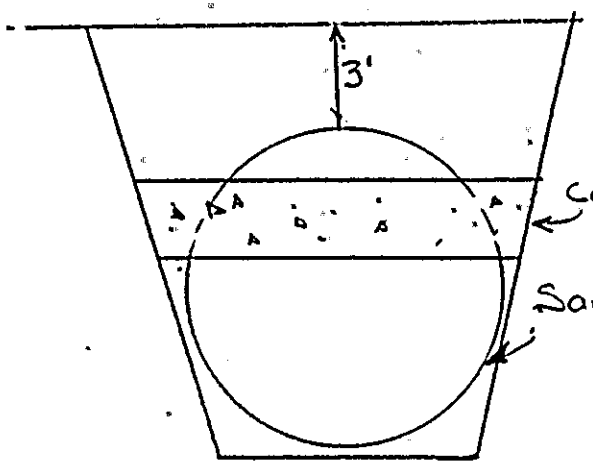
1500 University Dr
1-8-79

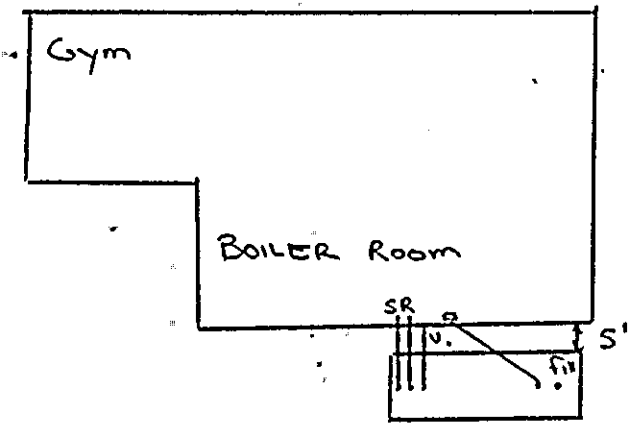




8' DIA, 10,000 GALLON TANK WITH 10yd Concrete Anchor.

UNIVERSITY of WISCONSIN
WAUKESHA CENTER





N

1- 10,000 GALLON TANK,
Per detail BURIED 3' BELOW GRADE

~ GRASS AREA ~

ADMINISTRATION BLDG.

UNIVERSITY of WISCONSIN - WAUKESHA CENTER
1500 N. UNIVERSITY DRIVE
WAUKESHA, WISC
53186

16. EXISTING OIL STORAGE TANK

A. Remove and relocate existing 10,000 gal. oil storage tank as indicated on plans and fill existing hole with gravel.

B. Excavating and backfilling required for the installation of the existing oil storage tank shall be done by the Mechanical Contractor.

C. Note:

1. Furnish and install a new concrete oil tank anchor as indicated per plan detail.
2. Tank shall be buried at least 3 ft. below surrounding grade.
3. Backfill with at least one foot of sand all around tank.
4. Tank shall be not less than 5 ft. away from any building or property line.

17. EXISTING OIL STORAGE TANK LEVEL INDICATOR

A. Remove existing oil storage tank level indicator and reinstall where indicated on plans.

B. Complete and ready for operation.

C. Run the 1/4" copper tube transmission line encased in a 1/2" wrought iron pipe where the transmission line runs buried from the tank to within the building.

D. Excavating and backfilling required for the installation of the transmission line shall be done by the Mechanical Contractor.

18. EXISTING OIL PUMPS

~~A. Remove existing oil pumps and reinstall where indicated~~ on plans.

~~B. Furnish and install new 4" high concrete bases with anti~~ strut channels.

19. OIL PIPING 15' Piping

~~A. Remove and~~ remodel existing oil piping as indicated or required.

B. New suction and return piping shall be constructed of Schedule 40 ASTM Specification A-53 "Yoloy" nickel-copper alloy pipe with 2000-pound forged steel socket welding fittings.

C. Fill and vent piping shall be constructed of Schedule 40 ASTM Specification A-120 galvanized steel pipe with cast iron Class 125 galvanized screwed fittings.

D. Reuse existing weatherproof fill cap.

E. Vent piping shall have galvanized cast iron weatherproof vent cap with 30 x 30 mesh brass screen.

~~F. Remove and relocate existing duplex oil strainers, shut-~~ off valves, gauges and thermometers as indicated and/or required for a complete system.

G. All excavating and backfilling required for the installation of the oil piping shall be done by the Mechanical Contractor.

20. HEAT EXCHANGERS

~~A. Bell & Gossett, Patterson Kelley or Yuba.~~

B. Each complete with:
1. Cast iron head.
2. Steel shell with required connections.
3. Steel tube sheets and support cradles.
4. 3/4" O.D. No. 18 gauge seamless drawn copper tubing heat transfer surface.
5. Cast iron support saddles.
6. Heat exchanger shall be constructed for 125 PSIG design pressure and shall bear an ASME stamp for that pressure.
7. The square foot of heating surface shall include an additional 25% of heat transfer area over that required to meet the design capacity to provide for a fouling allowance.
8. Vacuum breaker tapping.

C. Note:
1. Support heat exchangers on steel supports off floor.

21. WATER CHILLER

A. Trane or Carrier hermetic, centrifugal, refrigeration machine.

B. Complete with:
1. Centrifugal compressor with variable inlet guide vanes.
2. Shell and tube condenser.

1500 UNIVERSITY DRIVE (BUILDING "A") (LIBRARY & MEDIA CENTER)
(No. & Street)

Lot _____ Block _____ Subdivision _____

DESCRIPTION: (Bldg., Elec., Bldg. Sewer, Plbg., Heating, Misc.)

Building "A", 2-story 42 rms., 6-baths 101' x 124' - 12,524 S.F. 425,000 C.F. 751,000(Total C.F.on all Bldgs.)	Htg. Instal. *1-10,000 Gal. fuel tank 1-Temp.Serv.& Other Elec. Instal.	87-Plbg.Fix., San. Bldg. Drain,Storm Bldg.Drain **2-Backflow preventers for Htg.System (2-Bldgs.)

CLASSIFICATION	PERMIT NO.	DATE	CONTRACTOR	OWNER	EST. COST
BUILDING	96	3-29-79	A.Guenther & sons Co.	Waukesha County	$ 527,000.00
ELECTRIC	151	3-30-79	STAFF ELEC. CO.	"	274,000.00
BUILDING SEWER	No sewer permit necessary - per R. Hoffman				
PLUMBING	75	3-28-79	JOS.WITTIG CO.	"	----------
HEATING	68	1-8-79 4-2-79	PETROLEUM EQUIPMENT WENNINGER CO.INC.	" "	$ 8,900.00 $ 549,000.00
Total Htg.Fee-MISC. $300.40	**38	2-5-80	"	"	

1500 UNIVERSITY DRIVE (BUILDING "C") (Maintenance & Storage)
(No. & Street)

Lot _____ Block _____ Subdivision _____

DESCRIPTION: (Bldg., Elec., Bldg. Sewer, Plbg., Heating, Misc.)
Building "C", 1-story
4-rms.,
84'6 x 84'6 - 7,140 S.F.
107,000 C.F. (

CLASSIFICATION	PERMIT NO.	DATE	CONTRACTOR	OWNER	EST. COST
BUILDING	99	3-29-79	A.Guenther & Sons Co.	Waukesha County	$ 101,000.00
ELECTRIC					
BUILDING SEWER					
PLUMBING					
HEATING					
MISC.					

See Bldg "A" Card for Permit Information

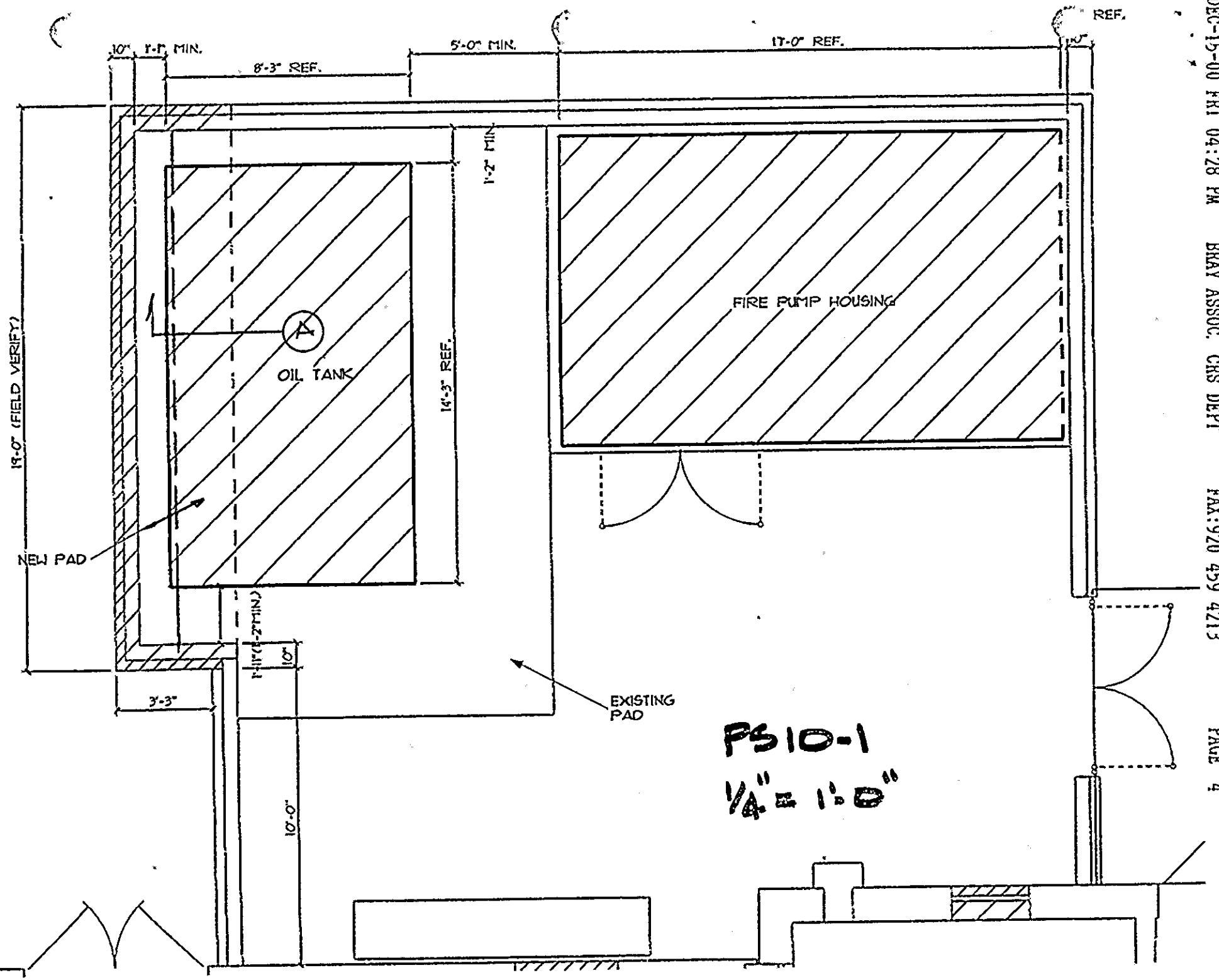
1500 UNIVERSITY DRIVE (BLDG. "C") (Maintenance & Storage)
(No. & Street)

I N S P E C T I O N S

BUILDING	ELECTRIC	PLBG./BLDG.SEW.	HEATING
Footing: 4-19-79	Rgh.	Rgh.	Rgh
		west addition 7-10-79	
		Bldg. Drain 7-11-79	
Foundation	Service		
		Bldg. Sewer:	
Rgh. Carpentry:			
	Final		
OCCUPANCY			

3/10/79 10,000 GALLON TANK
tested 4. P.S.I. 30 minutes
old tank filled with
Pea Gravel

R. Schmitz W.F.D.


10"
1'-1" MIN.
8'-3" REF.
5'-0" MIN.
17'-0" REF.
REF.
1'-2" MIN.
19'-0" (FIELD VERIFY)
A
OIL TANK
FIRE PUMP HOUSING
14'-3" REF.
NEW PAD
(MIN 2'-2" FROM FACE OF WALL)
10"
3'-3"
EXISTING PAD
10'-0"
PS10-1
1/4" = 1'-0"

APPENDIX F

ERIS Database Report

DATABASE REPORT

Project Property:	*University of Wisconsin - Waukesha Campus* *1500 N. University Drive* *Waukesha WI 53188*
Project No:	*1E-2501002*
Report Type:	*Database Report*
Order No:	*25010600648*
Requested by:	*Giles Engineering Associates, Inc.*
Date Completed:	*January 27, 2025*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Executive Summary

Property Information:

Project Property:		*University of Wisconsin - Waukesha Campus* *1500 N. University Drive Waukesha WI 53188*
Project No:		*1E-2501002*
Coordinates:		
	Latitude:	*43.02773681*
	Longitude:	*-88.26831706*
	UTM Northing:	*4,764,675.40*
	UTM Easting:	*396,667.48*
	UTM Zone:	*16T*
Elevation:		*1,008 FT*

Order Information:

Order No:	*25010600648*
Date Requested:	*January 6, 2025*
Requested by:	*Giles Engineering Associates, Inc.*
Report Type:	*Database Report*
Note:	***Modified Report***

Historicals/Products:

ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	***1***	0	0	-	-	***1***
RCRA NON GEN	Y	0.25	***1***	0	0	-	-	***1***
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0
State								
SHWS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
WDS	Y	0.5	0	0	0	0	-	0
HIST LF	Y	0.5	0	0	0	0	-	0
SHWIMS	Y	0.25	0	0	0	-	-	0
LUST	Y	0.5	**1**	0	**2**	0	-	**3**
LAST	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	**1**	**1**	0	-	-	**2**
AST	Y	0.25	**2**	0	0	-	-	**2**
DEL STORAGE TANK	Y	0.25	0	0	0	-	-	0
CRS	Y	0.5	0	0	0	0	-	0
AUL	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
BEAP	Y	0.5	0	0	0	0	-	0
BROWNFIELDS	Y	0.5	0	0	0	0	-	0
BSA PROJECTS	Y	0.5	0	0	0	0	-	0
BGP	Y	0.5	0	0	0	0	-	0
ERP	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County	***No County databases were selected to be included in the search.***							

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Additional Environmental Records								
Federal								
PFAS GHG	Y	0.5	0	0	0	0	-	0
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
PFAS ERNS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
MRDS	Y	1	0	0	0	0	0	0
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
POWER PLANTS	Y	0.125	0	0	-	-	-	0
State								
SPILLS	Y	0.125	0	0	-	-	-	0
AGSPILLS	Y	0.125	0	0	-	-	-	0
AG SPILL REMED	Y	0.25	0	0	0	-	-	0
BRRTS	Y	PO	**1**	-	-	-	-	**1**
DELISTED BRRT	Y	0.5	0	0	0	0	-	0
PFAS CONTAM	Y	0.5	0	0	0	0	-	0
PFAS SAMPLING	Y	0.5	0	0	0	0	-	0
DRYC REM	Y	0.25	0	0	0	-	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYC REM	Y	0.25	0	0	0	-	-	0
LIENS	Y	PO	0	-	-	-	-	0
TIER 2	Y	0.125	0	0	-	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental record sources available for this State.***							
Total:			**7**	**1**	**2**	0	0	**10**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	BRRTS	SOUTHVIEW HALL, UW-WAUKESHA	1500 N UNIVERSITY DR WAUKESHA WI 53188	NNW	0.00 / 0.00	3.4	17
2	RCRA VSQG	UNIVERSITY OF WISCONSIN CENTER WAUKESHA	ART CHEM AND BIO AND MAINT BLG WAUKESHA WI 53188 ***EPA Handler ID | Recycler Activity?:*** *WID981095599 | NO*	E	0.00 / 0.00	-5.9	18
3	RCRA NON GEN	WAUKESHA COUNTY HHW-COUNTY OWNED SHED AT UW-WAUKESHA	1500 N UNIVERSITY DR STE B WAUKESHA WI 53188-2720 ***EPA Handler ID | Recycler Activity?:*** *WIR000181099 | NO*	WSW	0.00 / 0.00	-3.2	20
4	LUST	UW WAUKESHA CAMPUS	1500 N UNIVERSITY DR WAUKESHA WI 53188 ***Site ID:*** *1120900* ***Status:*** *CLOSED, CLOSED*	WSW	0.00 / 0.00	-3.5	23
5	AST	UW WAUKESHA FIELDHOUSE	1500 University Dr Waukesha WI 53188 ***License No:*** *649580* ***Tank ID | Tank Status | Install Date:*** *213782 | Closed/Removed | 11/16/1994 12:00:00 AM*	NE	0.00 / 0.00	2.9	29
5	UST	UW WAUKESHA FIELDHOUSE	1500 University Dr Waukesha WI 53188 ***License No:*** *649580* ***Tank ID | Tank Status | Install Date:*** *366141 | Closed/Removed | , 366142 | Closed/Removed | , 366140 | Closed/Removed | 1/1/1940 12:00:00 AM*	NE	0.00 / 0.00	2.9	30
6	AST	Verizon - Uw Waukesha	1220 University Avenue Waukesha WI 53188 ***License No:*** *451603* ***Tank ID | Tank Status | Install Date:*** *7622 | In Use | 6/7/2011 12:00:00 AM*	WSW	0.00 / 0.00	-9.6	32

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
7	UST	Edward E Epps	822 N Mapleway Waukesha WI 53188 ***License No:*** 453898 ***Tank ID*** | ***Tank Status*** | ***Install Date:*** 103417 | In Use |	SSW	0.03 / 179.62	-58.5	33
8	LUST	HELLMAN, SHIRLEY M	2125 OAKLAWN AVE WAUKESHA WI 53188 ***Site ID:*** 7975600 ***Status:*** OPEN	E	0.23 / 1,208.84	-49	34
9	LUST	JONES FARM	N1 W26026 NORTHVIEW RD WAUKESHA WI ***Site ID:*** 7086100 ***Status:*** CLOSED	NNE	0.15 / 807.86	-77	37

Executive Summary: Summary by Data Source

Standard

Federal

RCRA VSQG - RCRA Very Small Quantity Generators List

A search of the RCRA VSQG database, dated Oct 21, 2024 has found that there are 1 RCRA VSQG site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
UNIVERSITY OF WISCONSIN CENTER WAUKESHA	ART CHEM AND BIO AND MAINT BLG WAUKESHA WI 53188	E	0.00 / 0.00	2
	***EPA Handler ID	Recycler Activity?**: WID981095599	NO*		

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Oct 21, 2024 has found that there are 1 RCRA NON GEN site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
WAUKESHA COUNTY HHW-COUNTY OWNED SHED AT UW-WAUKESHA	1500 N UNIVERSITY DR STE B WAUKESHA WI 53188-2720	WSW	0.00 / 0.00	3
	***EPA Handler ID	Recycler Activity?**: WIR000181099	NO*		

State

LUST - Leaking Underground Storage Tanks

A search of the LUST database, dated Nov 6, 2024 has found that there are 3 LUST site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
UW WAUKESHA CAMPUS	1500 N UNIVERSITY DR WAUKESHA WI 53188	WSW	0.00 / 0.00	4
	***Site ID**: 1120900* ***Status**: CLOSED, CLOSED*			
HELLMAN, SHIRLEY M	2125 OAKLAWN AVE WAUKESHA WI 53188	E	0.23 / 1,208.84	8
	***Site ID**: 7975600* ***Status**: OPEN*			
JONES FARM	N1 W26026 NORTHVIEW RD WAUKESHA WI	NNE	0.15 / 807.86	9
	***Site ID**: 7086100* ***Status**: CLOSED*			

UST - Underground Storage Tanks

A search of the UST database, dated Sep 3, 2024 has found that there are 2 UST site(s) within approximately 0.25 miles of the project

property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
UW WAUKESHA FIELDHOUSE	1500 University Dr Waukesha WI 53188	NE	0.00 / 0.00	5

***License No**: 649580*
***Tank ID | Tank Status | Install Date**: 366141 | Closed/Removed | , 366142 | Closed/Removed | , 366140 | Closed/Removed | 1/1/1940 12:00:00 AM*

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Edward E Epps	822 N Mapleway Waukesha WI 53188	SSW	0.03 / 179.62	7

***License No**: 453898*
***Tank ID | Tank Status | Install Date**: 103417 | In Use |*

AST - Aboveground Storage Tanks

A search of the AST database, dated Sep 3, 2024 has found that there are 2 AST site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
UW WAUKESHA FIELDHOUSE	1500 University Dr Waukesha WI 53188	NE	0.00 / 0.00	5

***License No**: 649580*
***Tank ID | Tank Status | Install Date**: 213782 | Closed/Removed | 11/16/1994 12:00:00 AM*

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Verizon - Uw Waukesha	1220 University Avenue Waukesha WI 53188	WSW	0.00 / 0.00	6

***License No**: 451603*
***Tank ID | Tank Status | Install Date**: 7622 | In Use | 6/7/2011 12:00:00 AM*

Non Standard

State

BRRTS - Wisconsin Bureau for Remediation and Redevelopment Tracking System

A search of the BRRTS database, dated Nov 6, 2024 has found that there are 1 BRRTS site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
SOUTHVIEW HALL, UW-WAUKESHA	1500 N UNIVERSITY DR WAUKESHA WI 53188	NNW	0.00 / 0.00	1

Map: 1.0 Mile Radius

Order Number: 25010600648

Address: 1500 N. University Drive, Waukesha, WI

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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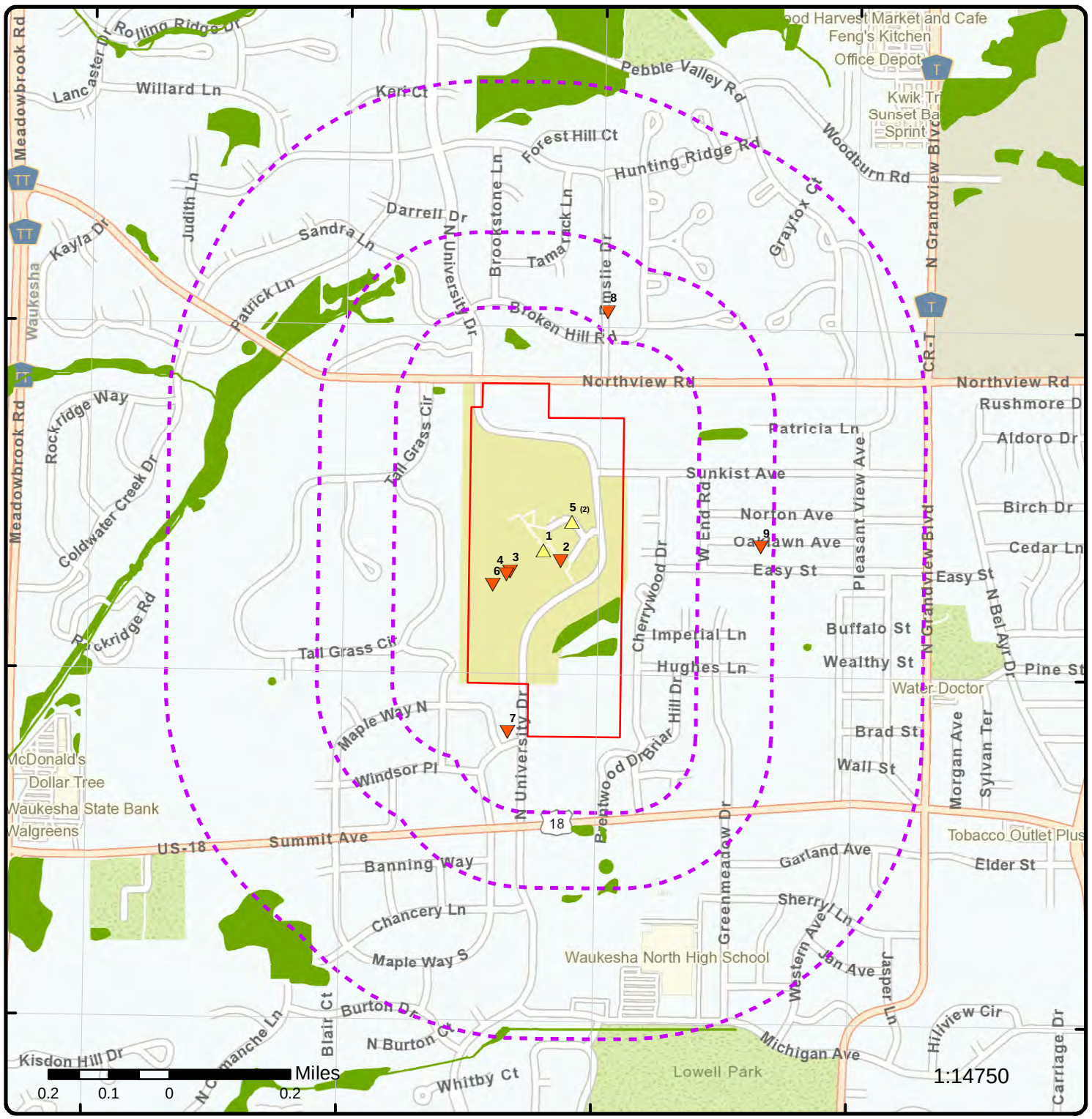

Map: 0.5 Mile Radius

Order Number: 25010600648

Address: 1500 N. University Drive, Waukesha, WI

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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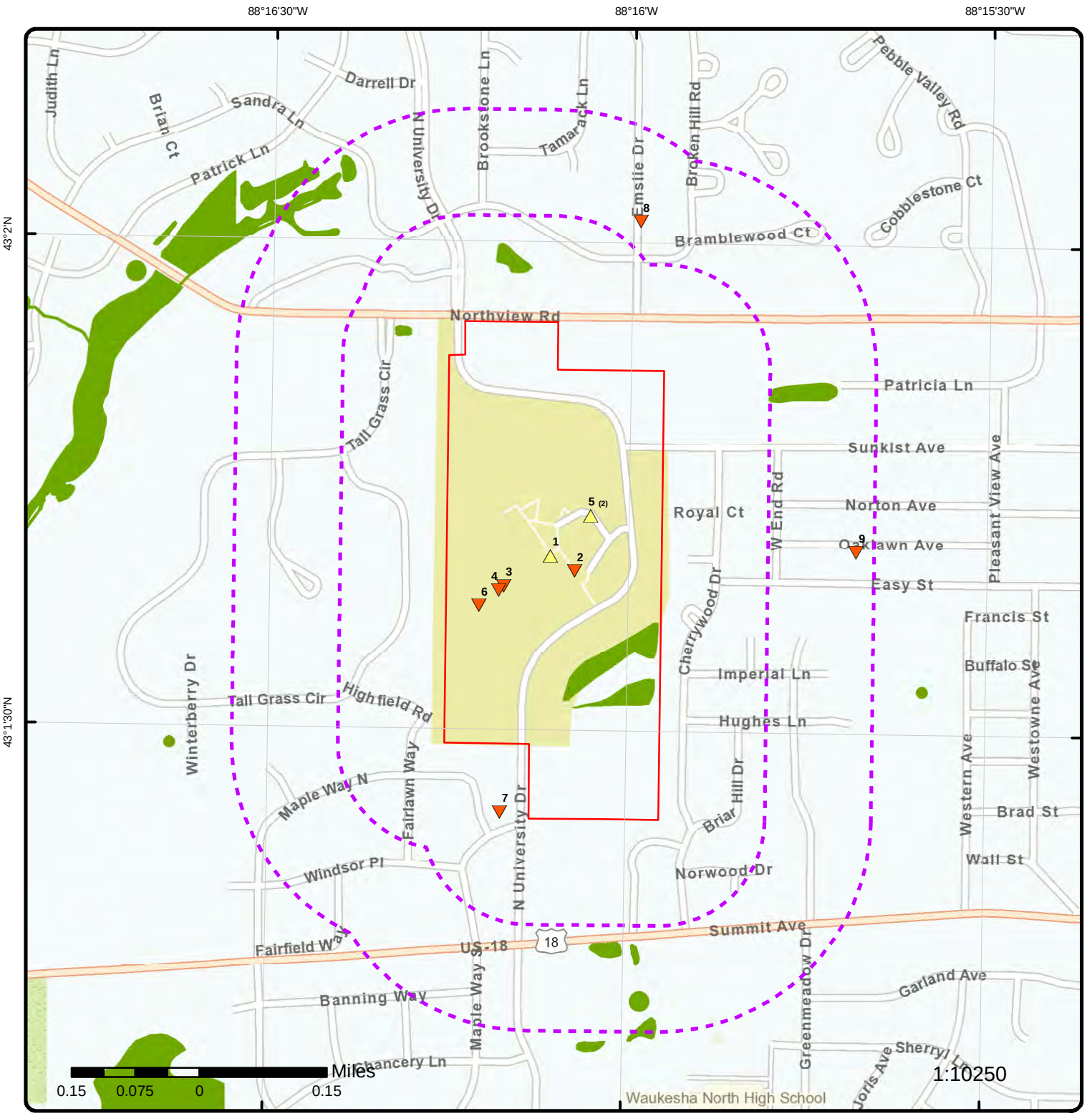


Map: 0.25 Mile Radius

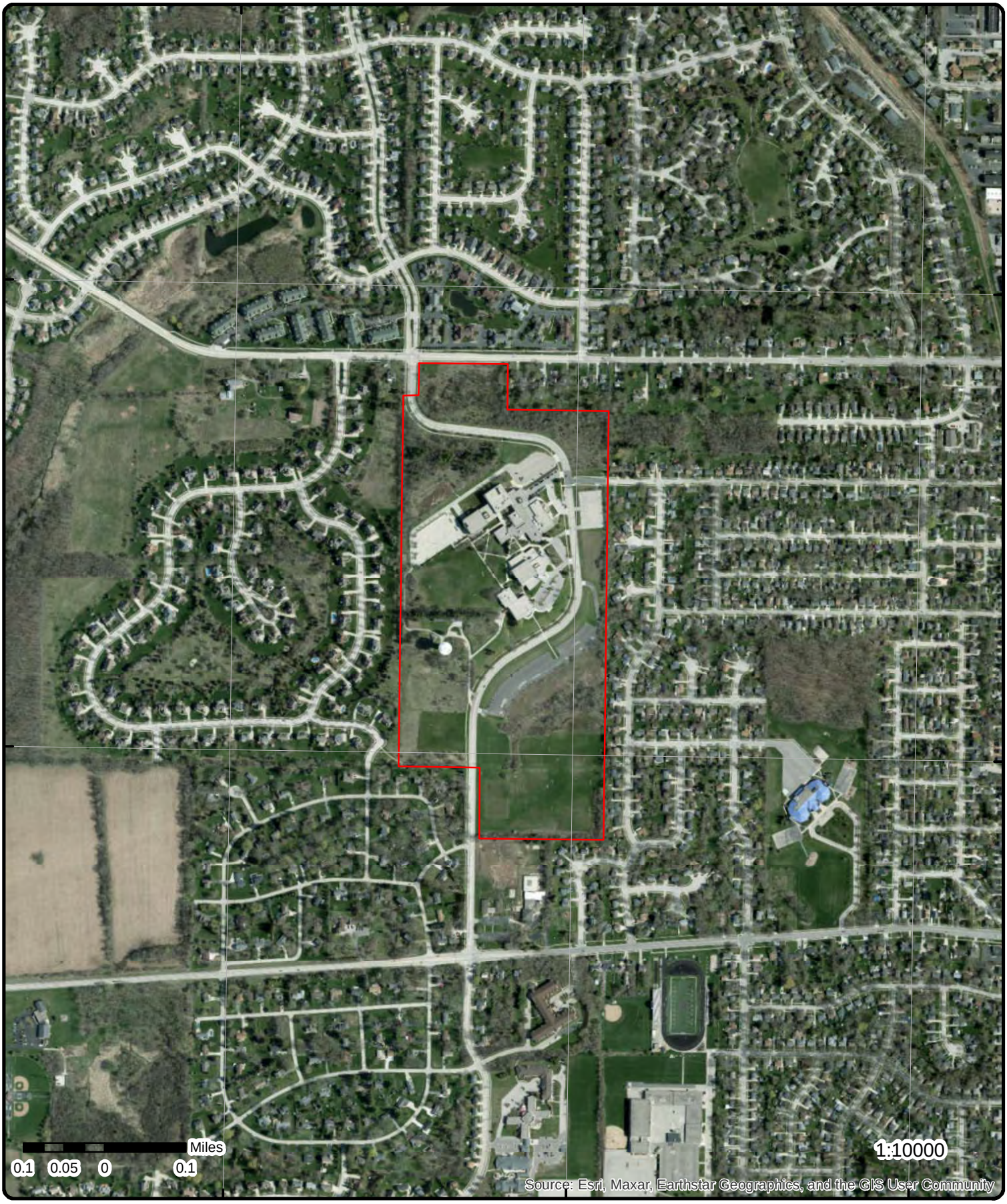
Order Number: 25010600648

Address: 1500 N. University Drive, Waukesha, WI

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



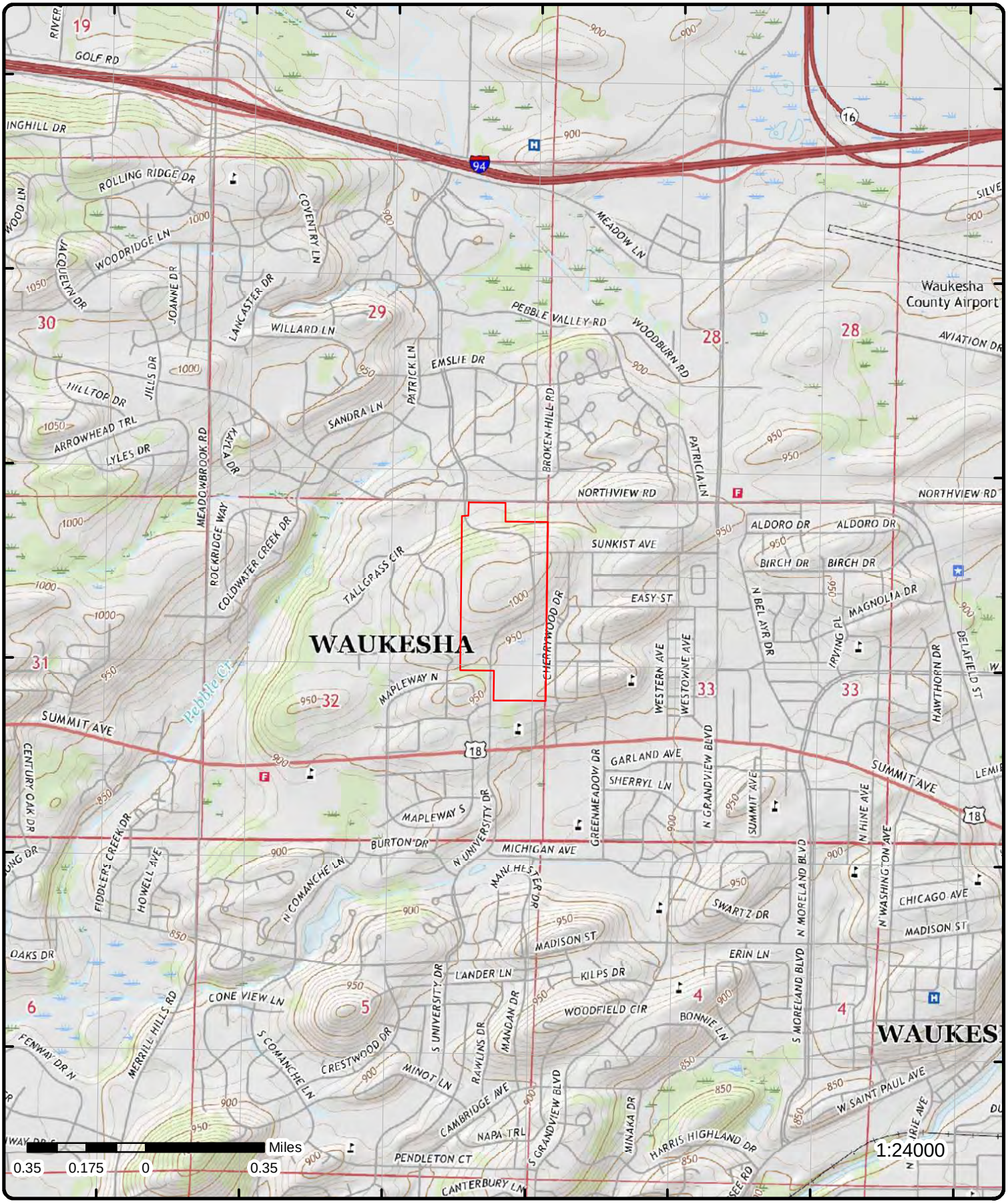
Aerial **Year: 2022**

Order Number: 25010600648

Address: 1500 N. University Drive, Waukesha, WI

Source: ESRI World Imagery

© ERIS Information Inc.



Topographic Map

Year: 2018

Order Number: 25010600648

Address: 1500 N. University Drive, WI

Quadrangle(s): Genesee WI, Waukesha WI, Hartland WI, Muskego WI

Source: USGS Topographic Map

© ERIS Information Inc.

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	NNW	0.00 / 0.00	1,011.32 / 3	SOUTHVIEW HALL, UW-WAUKESHA 1500 N UNIVERSITY DR WAUKESHA WI 53188	BRRTS

Site ID: 8352200
Region: SE
County Code: 68
County Name: Waukesha

Facility Activity Information

Detail Seq No: 295229
Act Code: 390
Activity Type: NO ACTION REQUIRED
Activity No: 0968295229
Activit Display No: 09-68-295229
Status Code:
Status:
DCOM No:
Comm Occurrence ID:
EPA CERCLIS ID:
FID:
Start Date: 1993-12-09
End Date: 1993-12-09
Last Action: 1993-12-09
Risk Code:
Acres:
Acres 100:
Juris: DNR RR
NPL Flag: No
DCOM DB Track Flag:
PECFA Eligible Flg: No
AST Flag: No
Drycleaner Flag: No
CO Contam Flag: No
Geo Located Flag: Yes
GIS Registry Flag:
GIS Area Point Flg: No
PLSS: NENE3207N19E
PECFA No:
PECFA Occurrenc ID:
DERF Flag: No
GLC Flag: No
Offsite Impact Flg: No
Petrol Ust Flag: No
PFAS Flag: No
RFR Flag: No
Row Impact Flag: No
Sediments Flag: No
SUDZ Flag: No
VPLE COC Flag: No
WAM Flag: No
CO Flag: No
SFR Flag: No
Latitude: 43.029236007
Longitude: -88.267813031
WDOT Flag: No
WDOT Desc:
Activity Name: SOUTHVIEW HALL, UW-WAUKESHA
Activity Detail Addr:
Activity Comment: UST Closure - No site investigation required. 60 gal leaded High field detects: 44 to 102

Action Information

Action Date: 1993-12-09
Action Code: 801
Action Name: No Action Required (NAR) determination
Action Desc: Date of DNR determination that no action is required (NAR) or limited actions were necessary when laboratory results indicated no detect to low level contamination.
Action Comment:

Action Date: 1993-12-09
Action Code: 1
Action Name: Notification of Hazardous Substance Discharge
Action Desc: Date DNR received notice of a discharge of a hazardous substance under s. 292.11 Wis. Stats. Discharge was discovered during an environmental assessment or laboratory analysis of soil, sediment, groundwater or vapor samples. Includes historic contamination.
Action Comment:

Action Date: 1993-12-09

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Action Code: 33
Action Name: Tank System Site Assessment (TSSA) Report Received
Action Desc: Date DNR received a tank system site assessment (TSSA) regarding tank closure or change in services for an above-ground or underground tank system.
Action Comment:

WHO Information

Org Flag: No
Role Desc: DNR File Contact
Full Name: JENNIFER MEYER
Address 1: 1027 W ST PAUL AVE
Address 2:
City: MILWAUKEE
State Abbr: WI
Postal Code: 53233
Composite Address: MILWAUKEE, WI 53233
Country Name: UNITED STATES
Email: jennifer.meyer1@wisconsin.gov

2	1 of 1	E	0.00 / 0.00	1,002.02 / -6	UNIVERSITY OF WISCONSIN CENTER WAUKESHA ART CHEM AND BIO AND MAINT BLG WAUKESHA WI 53188	RCRA VSQG

EPA Handler ID: WID981095599
Gen Status Universe: VSG
Contact Name:
Contact Address:
Contact Phone No and Ext:
Contact Email:
Contact Country:
County Name: WAUKESHA
EPA Region: 05
Land Type:
Receive Date: 20000821
Location Latitude:
Location Longitude:
Recycler Activity?: NO
Recycler Activity Note: This facility has no indication of Recycling Activity.

Violation/Evaluation Summary

Note: NO RECORDS: As of Oct 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No
Recycler Activity: No

Recycler Act W.O. Storage: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19850909
Handler Name: UNIVERSITY OF WISCONSIN CENTER WAUKESHA
Federal Waste Generator Code: 1
Generator Code Description: Large Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D000
Waste Code Description: DESCRIPTION

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D003
Waste Code Description: REACTIVE WASTE

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19900301
Handler Name: UNIV OF WIS-WAUKESHA
Federal Waste Generator Code: 1
Generator Code Description: Large Quantity Generator
Source Type: Annual/Biennial Report

Hazardous Waste Handler Details

Sequence No: 2
Receive Date: 19920301
Handler Name: UW WAUKESHA
Federal Waste Generator Code: 1
Generator Code Description: Large Quantity Generator
Source Type: Annual/Biennial Report

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20000821
Handler Name: UNIVERSITY OF WISCONSIN CENTER WAUKESHA
Federal Waste Generator Code: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: State
Name: NAME NOT REPORTED
Date Became Current:
Date Ended Current:
Phone: 312-555-1212
Source Type: Implementer
Street No:
Street 1: ADDRESS NOT REPORTED
Street 2:
City: CITY NOT REPORTED
State: AK
Country:
Zip Code: 99998

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	State	**Street 1:**	ADDRESS NOT REPORTED
Name:	NAME NOT REPORTED	**Street 2:**	
Date Became Current:		**City:**	CITY NOT REPORTED
Date Ended Current:		**State:**	AK
Phone:	312-555-1212	**Country:**	
Source Type:	Notification	**Zip Code:**	99998

Historical Handler Details

Receive Dt:	19920301
Generator Code Description:	Large Quantity Generator
Handler Name:	UW WAUKESHA
Receive Dt:	19900301
Generator Code Description:	Large Quantity Generator
Handler Name:	UNIV OF WIS-WAUKESHA
Receive Dt:	19850909
Generator Code Description:	Large Quantity Generator
Handler Name:	UNIVERSITY OF WISCONSIN CENTER WAUKESHA

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 1	WSW	0.00 / 0.00	1,004.77 / -3	**WAUKESHA COUNTY HHW-COUNTY OWNED SHED AT UW-WAUKESHA** **1500 N UNIVERSITY DR STE B** **WAUKESHA WI 53188-2720**	RCRA NON GEN

EPA Handler ID:	WIR000181099
Gen Status Universe:	No Report
Contact Name:	PATRICK BASKFIELD
Contact Address:	515 W MORELAND BLVD # AC260 , , WAUKESHA , WI, 53188-2428 , US
Contact Phone No and Ext:	920-226-8796
Contact Email:	PATRICK.BASKFIELD@VEOLIA.COM
Contact Country:	US
County Name:	WAUKESHA
EPA Region:	05
Land Type:	Other
Receive Date:	20240229
Location Latitude:	
Location Longitude:	
Recycler Activity?:	NO
Recycler Activity Note:	This facility has no indication of Recycling Activity.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Oct 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No

Used Oil Spec Marketer: No
Recycler Activity: No
Recycler Activity Without Storage: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20220916
Handler Name: WAUKESHA COUNTY HHW-COUNTY OWNED SHED AT UW-WAUKESHA
Source Type: Notification
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Hazardous Waste Handler Details

Sequence No: 1481
Receive Date: 20240229
Handler Name: WAUKESHA COUNTY HHW-COUNTY OWNED SHED AT UW-WAUKESHA
Source Type: Notification
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D003
Waste Code Description: REACTIVE WASTE

Hazardous Waste Code: D004
Waste Code Description: ARSENIC

Hazardous Waste Code: D005
Waste Code Description: BARIUM

Hazardous Waste Code: D006
Waste Code Description: CADMIUM

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D010
Waste Code Description: SELENIUM

Hazardous Waste Code: D011
Waste Code Description: SILVER

Hazardous Waste Code: D012
Waste Code Description: ENDRIN (1,2,3,4,10,10-HEXACHLORO-1,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO-1,4-ENDO, ENDO-5,8-DIMETH-ANO-NAPHTHALENE)

Hazardous Waste Code: D013
Waste Code Description: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Hazardous Waste Code: F002

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Waste Code Description:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Hazardous Waste Code:	F003
Waste Code Description:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Hazardous Waste Code:	F004
Waste Code Description:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Hazardous Waste Code:	F005
Waste Code Description:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Hazardous Waste Code:	P030
Waste Code Description:	CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED
Hazardous Waste Code:	P037
Waste Code Description:	2,7:3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXACHLORO-1A,2,2A,3,6,6A,7,7A-OCTAHYDRO-, (1AALPHA, 2BETA, 2AALPHA, 3BETA, 6BETA, 6AALPHA, 7BETA, 7AALPHA)- (OR) DIELDRIN
Hazardous Waste Code:	P075
Waste Code Description:	NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS
Hazardous Waste Code:	U002
Waste Code Description:	2-PROPANONE (I) (OR) ACETONE (I)
Hazardous Waste Code:	U003
Waste Code Description:	ACETONITRILE (I,T)
Hazardous Waste Code:	U036
Waste Code Description:	4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2,3,3A,4,7,7A-HEXAHYDRO- (OR) CHLORDANE, ALPHA & GAMMA ISOMERS
Hazardous Waste Code:	U061
Waste Code Description:	BENZENE, 1,1'-(2,2,2-TRICHLOROETHYLIDENE)BIS[4-CHLORO- (OR) DDT
Hazardous Waste Code:	U129
Waste Code Description:	CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE
Hazardous Waste Code:	U151
Waste Code Description:	MERCURY
Hazardous Waste Code:	U165
Waste Code Description:	NAPHTHALENE
Hazardous Waste Code:	U211
Waste Code Description:	CARBON TETRACHLORIDE (OR) METHANE, TETRACHLORO-

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street 1:***	W124N9355 BOUNDARY RD
Name:	VEOLIA ENVIRONMENTAL SERVICES	***Street 2:***	
Date Became Current:	20230401	***City:***	MENOMONEE FALLS
Date Ended Current:		***State:***	WI
Phone:		***Country:***	
Source Type:	Notification	***Zip Code:***	53051

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street 1:***	W124 N9351 BOUNDARY RD
Name:	VEOLIA ENVIRONMENTAL SERVICES	***Street 2:***	
Date Became Current:	20100101	***City:***	MENOMONEE FALLS
Date Ended Current:		***State:***	WI
Phone:	262-253-3346	***Country:***	US
Source Type:	Notification	***Zip Code:***	53051

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	1500 N UNIVERSITY DR STE B
Name:	UW WAUKESHA	***Street 2:***	
Date Became Current:	20230401	***City:***	WAUKESHA
Date Ended Current:		***State:***	WI
Phone:		***Country:***	
Source Type:	Notification	***Zip Code:***	53188

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	County	***Street 1:***	515 W MORELAND BLVD
Name:	WAUKESHA COUNTY	***Street 2:***	
Date Became Current:		***City:***	WAUKESHA
Date Ended Current:		***State:***	WI
Phone:	262-896-8014	***Country:***	US
Source Type:	Notification	***Zip Code:***	53188

Historical Handler Details

Receive Dt:	20220916
Generator Code Description:	Not a Generator, Verified
Handler Name:	WAUKESHA COUNTY HHW-COUNTY OWNED SHED AT UW-WAUKESHA

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of 1	WSW	0.00 / 0.00	1,004.47 / -4	UW WAUKESHA CAMPUS 1500 N UNIVERSITY DR WAUKESHA WI 53188	LUST

Site ID:	1120900	***Zip:***	53188
Location Name:	UW WAUKESHA CAMPUS	***County:***	68
Address:	1500 N UNIVERSITY DR	***County Name:***	Waukesha
Muni:	WAUKESHA	***Region:***	SE
Address (Web):	1500 N UNIVERSITY DR	***County (Web):***	WAUKESHA
Municipality (Web):	WAUKESHA	***Region (Web):***	SE
Zip (Web):	53188		
Data Source:	Environmental Cleanup & Brownfields Redevelopment BRRTS on the Web-Bulk Data Download; Bureau for Remediation and Redevelopment Tracking System on the Web (BOTW) (Web)		

Facility Activity Information

Detail Seq No:	31845	***CO Contam Flag:***	No
Act Code:	340	***Geo Located Flag:***	Yes
Activity Type:	LUST	***GIS Registry Flag:***	
Activity No:	0368004432	***GIS Area Point Flg:***	No
Activit Display No:	03-68-004432	***PLSS:***	SENE3207N19E
Status Code:	C	***PECFA No:***	
Status:	CLOSED	***PECFA Occurrenc ID:***	
DCOM No:		***DERF Flag:***	No
Comm Occurrence ID:		***GLC Flag:***	No

EPA CERCLIS ID:		**Offsite Impact Flg:**	No
FID:	268181650	**Petrol Ust Flag:**	Yes
Start Date:	1994-08-18	**PFAS Flag:**	No
End Date:	2003-08-27	**RFR Flag:**	No
Last Action:	2022-12-06	**Row Impact Flag:**	No
Risk Code:		**Sediments Flag:**	No
Acres:		**SUDZ Flag:**	No
Acres 100:		**VPLE COC Flag:**	No
Juris:	DNR RR	**WAM Flag:**	No
NPL Flag:	No	**CO Flag:**	Yes
DCOM DB Track Flag:		**SFR Flag:**	No
PECFA Eligible Flg:	No	**Latitude:**	43.027269219
AST Flag:	No	**Longitude:**	-88.269528517
Drycleaner Flag:	No		

WDOT Flag: No
WDOT Desc:
Activity Name: UNIVERSITY OF WI-WAUKESHA
Activity Detail Addr:
Activity Comments:

Action Information

Action Date: 1999-06-01
Action Code: 99
Action Name: Miscellaneous
Action Desc: Miscellaneous action - See Action Comments
Action Comment: JF. RCV'D WELL ABAN. FORMS

Action Date: 1994-08-18
Action Code: 1
Action Name: Notification of Hazardous Substance Discharge
Action Desc: Date DNR received notice of a discharge of a hazardous substance under s. 292.11 Wis. Stats. Discharge was discovered during an environmental assessment or laboratory analysis of soil, sediment, groundwater or vapor samples. Includes historic contamination.
Action Comment:

Action Date: 2003-08-27
Action Code: 11
Action Name: Activity Closed
Action Desc: Date DNR sends a letter approving the final closure of an activity based on data provided and compliance with NR 726 and 727. No further investigation or remediation is required at this time.
Action Comment: DV.

Action Date: 2003-08-06
Action Code: 14
Action Name: Notice of Violation (NOV) Issued
Action Desc: Date Responsible Party (RP) is sent a Notice of Violation (NOV) stating that a violation exists & the violator is responsible. Advises of possible prosecution & forfeitures. Requires response within a specified time. More specific than a Notice of Noncompliance (NON).
Action Comment:

Action Date: 1997-12-04
Action Code: 99
Action Name: Miscellaneous
Action Desc: Miscellaneous action - See Action Comments
Action Comment: BOREHOLE ABAND FORMS REC'D

Action Date: 1997-11-24
Action Code: 37
Action Name: Site Investigation Report (SIR) Received (non-fee)
Action Desc: Date DNR received a site investigation report (SIR) to determine degree & extent of contamination and form a basis for choosing the appropriate remedial action.
Action Comment:

Action Date: 1994-08-19
Action Code: 2
Action Name: Responsible Party (RP) letter sent
Action Desc: Date of DNR letter to responsible party (RP) notifying them of state law responsibilities associated with the

investigation and cleanup of a hazardous substance discharge to the environment.

Action Comment: RP LETTER

Action Date: 2003-08-27
Action Code: 56
Action Name: Continuing Obligation(s) Applied
Action Desc: Closure or ongoing cleanup was approved with one or more continuing obligations to give notice of residual contamination; require or restrict certain actions to protect the public or environment; minimize human or environmental exposures.
Action Comment: *** AUTO-POPULATED ***

Action Date: 1995-06-05
Action Code: 33
Action Name: Tank System Site Assessment (TSSA) Report Received
Action Desc: Date DNR received a tank system site assessment (TSSA) regarding tank closure or change in services for an above-ground or underground tank system.
Action Comment: TNK CLS/SA REPT RECV'D

Action Date: 2003-08-27
Action Code: 236
Action Name: Continuing Obligation - Residual GW Contamination
Action Desc: Closure or ongoing cleanup was approved with the Continuing Obligation for residual groundwater contamination in excess of ch. NR 140 groundwater enforcement standard, to obtain DNR approval before well construction or reconstruction.
Action Comment: *** AUTO-POPULATED ***

Action Date: 1999-02-01
Action Code: 79
Action Name: Case Closure Review Request Received
Action Desc: Date DNR Project Manager received a request to review Case Closure - (Form 4400-202). A fee was paid for DNR review.
Action Comment: JF.3-22-99 BRING TO CLOSURE COMM

Action Date: 2003-08-27
Action Code: 730
Action Name: CO Packet created for Recorded Groundwater Use Restriction
Action Desc: Date DNR created a Continuing Obligations (CO) Packet for a site closure where a Groundwater Use Restriction (GWUR) was required and recorded at the Register of Deeds. DNR Staff created the packet from available file material. A copy of the deed filing can be found in the CO Packet
Action Comment: *** AUTO-POPULATED ***

Action Date: 2003-08-12
Action Code: 99
Action Name: Miscellaneous
Action Desc: Miscellaneous action - See Action Comments
Action Comment: REC'D DECLARATION OF RESTRICTION

Action Date: 1999-04-16
Action Code: 84
Action Name: Remaining Actions Needed
Action Desc: Date DNR sends a letter outlining the remaining actions needed to achieve final closure. The site will not be formally closed until receipt of documentation. This action was formerly known as conditional closure.
Action Comment: JF.11WHEN GW USE REST& WELL ABAND FORMS COME IN

Action Date: 2003-08-12
Action Code: 59
Action Name: Environmental Enforcement Action Completed
Action Desc: Date DNR indicates no further enforcement action on this subject will be taken at this time.
Action Comment:

Impacts Information

Impact Seq No:
Impact Code: 05
Impact Desc: Soil Contamination
Impact Comment: SOIL CONTAMINATION
Potential Flag: No

Impact Seq No:
Impact Code: 04
Impact Desc: Groundwater Contamination
Impact Comment: above pal
Potential Flag: No

Substances Information

Substance Desc: Gasoline - Unleaded and Leaded
Spill Released Amt:
Spill Released Unit Code:

WHO Information

Org Flag: No
Role Desc: DNR File Contact
Full Name: JENNIFER MEYER
Address 1: 1027 W ST PAUL AVE
Address 2:
City: MILWAUKEE
State Abbr: WI
Postal Code: 53233
Composite Address: MILWAUKEE, WI 53233
Country Name: UNITED STATES
Email: jennifer.meyer1@wisconsin.gov

Org Flag: Yes
Role Desc: Owner
Full Name: CITY OF WAUKESHA
Address 1: 1320 PEWAUKEE RD RM 148
Address 2: C/O COUNTY TREASURER
City: WAUKESHA
State Abbr: WI
Postal Code: 53188
Composite Address: WAUKESHA, WI 53188
Country Name: UNITED STATES
Email: NA

Continuing Obligation Information

Facility ID: 268181650
Sediments Flag: No
Point Rep: Approximate/other location
Loc Meth: Interpreted based on site records
WTM91 X Amt: 660987
WTM91 Y Amt: 285296
Start Dt: 1994-08-18 05:00:00 UTC
End Dt: 2003-08-27 05:00:00 UTC
Point Y: 43.02726120840576
Point X: -88.26952245854324

Facility Activity Information

Detail Seq No: 32083
Act Code: 340
Activity Type: LUST
Activity No: 0368004675
Activit Display No: 03-68-004675
Status Code: C
Status: CLOSED
DCOM No:
Comm Occurrence ID:
EPA CERCLIS ID:
FID: 268181650
Start Date: 1994-11-28
End Date: 1995-08-22
Last Action: 1995-08-22
Risk Code:
Acres:
CO Contam Flag: No
Geo Located Flag: Yes
GIS Registry Flag:
GIS Area Point Flg: No
PLSS: NENE3207N19E
PECFA No:
PECFA Occurrenc ID:
DERF Flag: No
GLC Flag: No
Offsite Impact Flg: No
Petrol Ust Flag: Yes
PFAS Flag: No
RFR Flag: No
Row Impact Flag: No
Sediments Flag: No
SUDZ Flag: No

Acres 100:		**VPLE COC Flag:**	No
Juris:	DNR RR	**WAM Flag:**	No
NPL Flag:	No	**CO Flag:**	No
DCOM DB Track Flag:		**SFR Flag:**	No
PECFA Eligible Flg:	No	**Latitude:**	43.028638246
AST Flag:	No	**Longitude:**	-88.267213481
Drycleaner Flag:	No		

WDOT Flag: No
WDOT Desc:
Activity Name: UNIVERSITY OF WI - WAUKESHA TANK 5
Activity Detail Addr:
Activity Comments:

Action Information

Action Date: 1994-11-29
Action Code: 2
Action Name: Responsible Party (RP) letter sent
Action Desc: Date of DNR letter to responsible party (RP) notifying them of state law responsibilities associated with the investigation and cleanup of a hazardous substance discharge to the environment.
Action Comment: RP LETTER

Action Date: 1995-08-22
Action Code: 11
Action Name: Activity Closed
Action Desc: Date DNR sends a letter approving the final closure of an activity based on data provided and compliance with NR 726 and 727. No further investigation or remediation is required at this time.
Action Comment:

Action Date: 1995-05-26
Action Code: 33
Action Name: Tank System Site Assessment (TSSA) Report Received
Action Desc: Date DNR received a tank system site assessment (TSSA) regarding tank closure or change in services for an above-ground or underground tank system.
Action Comment: TNK CLS/SA REPT RECV'D

Action Date: 1994-11-28
Action Code: 1
Action Name: Notification of Hazardous Substance Discharge
Action Desc: Date DNR received notice of a discharge of a hazardous substance under s. 292.11 Wis. Stats. Discharge was discovered during an environmental assessment or laboratory analysis of soil, sediment, groundwater or vapor samples. Includes historic contamination.
Action Comment:

Action Date: 1995-06-15
Action Code: 30
Action Name: Site Investigation Workplan (SIWP) Notice to Proceed (NTP)
Action Desc: Date DNR provided a notice to proceed (NTP) with site investigation activities. This is not an official approval of the workplan and no fee was collected for review. An NTP may be via email or phone call.
Action Comment: NOTICE TO PROCEED

Action Date: 1995-06-15
Action Code: 33
Action Name: Tank System Site Assessment (TSSA) Report Received
Action Desc: Date DNR received a tank system site assessment (TSSA) regarding tank closure or change in services for an above-ground or underground tank system.
Action Comment: TNK CLS/SA REPT RECV'D

Action Date: 1995-06-05
Action Code: 41
Action Name: Remedial Action Report Received
Action Desc: [OBSOLETE] Date the DNR receives the Remedial Action Report detailing remedial action efforts for an activity.
Action Comment: RA REPORT RECV'D

Impacts Information

Impact Seq No:

Impact Code: 05
Impact Desc: Soil Contamination
Impact Comment: SOIL CONTAMINATION
Potential Flag: No

Substances Information

Substance Desc: Petroleum - Unknown Type
Spill Released Amt:
Spill Released Unit Code:

WHO Information

Org Flag: Yes
Role Desc: Responsible Party
Full Name: WAUKESHA COUNTY DEPT PARKS & LAND USE
Address 1: 1320 PEWAUKEE RD RM 260
Address 2:
City: WAUKESHA
State Abbr: WI
Postal Code: 53188
Composite Address: WAUKESHA, WI 53188
Country Name: UNITED STATES
Email: NA

Org Flag: No
Role Desc: DNR File Contact
Full Name: JENNIFER MEYER
Address 1: 1027 W ST PAUL AVE
Address 2:
City: MILWAUKEE
State Abbr: WI
Postal Code: 53233
Composite Address: MILWAUKEE, WI 53233
Country Name: UNITED STATES
Email: jennifer.meyer1@wisconsin.gov

Facility Owner Information

Name: BOARD OF REGENTS UW
Street: 1500 UNIVERSITY DR
City: WAUKESHA
State: WI
Zip: 53188
Start Date:
End Date:

BRRTS Web List

BRRTS No: 03-68-004432
FID: 268181650
Status: CLOSED
Activity Type: LUST
Activity Name: UNIVERSITY OF WI-WAUKESHA
Comments:
Jurisdiction: RR
Address: 1500 N UNIVERSITY DR
Start Date: 1994-08-18
End Date: 2003-08-27

BRRTS Web List

BRRTS No: 03-68-004675
FID: 268181650
Status: CLOSED
Activity Type: LUST
Activity Name: UNIVERSITY OF WI - WAUKESHA TANK 5
Jurisdiction: RR
Address: 1500 N UNIVERSITY DR
Start Date: 1994-11-28
End Date: 1995-08-22

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Comments:						
5	1 of 2	NE	0.00 / 0.00	1,010.83 / 3	UW WAUKESHA FIELDHOUSE 1500 University Dr Waukesha WI 53188	AST

License No: 649580
Facility Ref No: 649580|674451
Fire Department ID: 6706
License Type: Registration
License: Storage Tank Registration
Licensee: Waukesha County

Expiration Date:
Fire Department Nm: Waukesha
Municipality Name:
Property County: Waukesha County

Tank Details

Tank ID: 213782
Tank Reference No: 213782|670600156
Equipment Wang ID: 670600156
CAS No:
Tank Status: Closed/Removed
Tank Type: Aboveground Storage Tank
Tank Contents: Fuel Oil
Tank Occupancy: School
Install Date: 11/16/1994 12:00:00 AM
Capacity: 4000.00
Construction Material: Bare Steel
Wall Size:

Federally Regulated: No
Leak Detection: Visual Monitoring
Leak Test Method:
Contain Sump Install:
Dispen Sump Install: No
Marketer: No
Spill Protection: Not Installed
Overfill Protection: Installed
Overfill Protect Type: Fill Shut Off
Corrosion Protect Ty:
Date of Lining:
Lining Inspect Date:

Piping Details

Related Tank ID:
Status:
Type:
System Type:
Wall Type:
Construction Material:
Catastrop Leak Detn:
Aboveground Piping: No
Underground Piping: No

UST Manifolded:
Flex Connector:
Leak Test Method:
Leak Detection:
Corrosion Protection:
Latest Test Name:
Latest Test Date:
Latest Test Expire Dt:

MyDATCP Storage Tank Search - Tank Details

Tank ID: 213782
Wang ID: 670600156
CAS No:
Tank Status: Closed/Removed as of 2015-11-14
Install Date: 11/16/1994
Tank Type: Aboveground Storage Tank
Tank Occupancy: School
Wall Type:
Federally Regulated: No
Leak Detection: Visual Monitoring
Leak Test Method:
Contain Sump Install:

Corrosion Protect Ty:
Overfill Protect Type: Fill Shut Off
Construction Material: Bare Steel
Capacity in Gallons: 4,000
Marketer: No
Spill Protection: Not Installed
Date of Lining:
Contents: Fuel Oil
Overfill Protection: Installed
Lining Inspect Date:
Underground Piping: No

MyDATCP Storage Tank Search - Owner Details

Site Anniversary Date:
Owner Name: Waukesha County
Owner Address1: 515 W Moreland Blvd RM AC220
Owner Address2:
Owner City: Waukesha
Owner State: WI

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Owner Zip:		53188-2428				
5	2 of 2	NE	0.00 / 0.00	1,010.83 / 3	UW WAUKESHA FIELDHOUSE 1500 University Dr Waukesha WI 53188	UST

License No: 649580
Facility Ref No: 649580|674451
Fire Department ID: 6706
License Type: Registration
License: Storage Tank Registration
Licensee: WAUKESHA COUNTY

Expiration Date:
Fire Department Nm: Waukesha
Municipality Name:
Property County: Waukesha County

Tank Details

Tank ID: 366141
Tank Reference No: 366141|670600515
Equipment Wang ID: 670600515
CAS No:
Tank Status: Closed/Removed
Tank Type: Underground Storage Tank
Tank Contents: Fuel Oil
Tank Occupancy: Government
Install Date:
Capacity: 10000.00
Construction Material: Bare Steel
Wall Size:

Federally Regulated: No
Leak Detection: Not Required
Leak Test Method:
Contain Sump Install:
Dispen Sump Install: No
Marketer: No
Spill Protection: Not Installed
Overfill Protection: Not Installed
Overfill Protect Type: Not Installed
Corrosion Protect Ty:
Date of Lining:
Lining Inspect Date:

Pipe Details

Related Tank ID:
Status:
Type:
System Type:
Wall Type:
Construction Material:
Catastrop Leak Detn:
Aboveground Piping: No
Underground Piping: No

UST Manifolded:
Flex Connector:
Leak Test Method:
Leak Detection:
Corrosion Protection:
Latest Test Name:
Latest Test Date:
Latest Test Expire Dt:

Tank Details

Tank ID: 366142
Tank Reference No: 366142|670600516
Equipment Wang ID: 670600516
CAS No:
Tank Status: Closed/Removed
Tank Type: Underground Storage Tank
Tank Contents: Fuel Oil
Tank Occupancy: School
Install Date:
Capacity: 60.00
Construction Material: Bare Steel
Wall Size:

Federally Regulated: No
Leak Detection: Not Required
Leak Test Method:
Contain Sump Install:
Dispen Sump Install: No
Marketer: No
Spill Protection: Not Installed
Overfill Protection: Not Installed
Overfill Protect Type: Not Installed
Corrosion Protect Ty:
Date of Lining:
Lining Inspect Date:

Pipe Details

Related Tank ID:
Status:
Type:
System Type:
Wall Type:
Construction Material:

UST Manifolded:
Flex Connector:
Leak Test Method:
Leak Detection:
Corrosion Protection:
Latest Test Name:

Catastrop Leak Detn:		***Latest Test Date:***	
Aboveground Piping:	No	***Latest Test Expire Dt:***	
Underground Piping:	No		

Tank Details

Tank ID:	366140	***Federally Regulated:***	Yes
Tank Reference No:	366140|670600514	***Leak Detection:***	
Equipment Wang ID:	670600514	***Leak Test Method:***	
CAS No:		***Contain Sump Install:***	
Tank Status:	Closed/Removed	***Dispen Sump Install:***	No
Tank Type:	Underground Storage Tank	***Marketer:***	No
Tank Contents:	Leaded Gasoline	***Spill Protection:***	Not Installed
Tank Occupancy:	Government	***Overfill Protection:***	Not Installed
Install Date:	1/1/1940 12:00:00 AM	***Overfill Protect Type:***	Not Installed
Capacity:	300.00	***Corrosion Protect Ty:***	
Construction Material:	Bare Steel	***Date of Lining:***	
Wall Size:		***Lining Inspect Date:***	

Pipe Details

Related Tank ID:		***UST Manifolded:***	
Status:		***Flex Connector:***	
Type:		***Leak Test Method:***	
System Type:		***Leak Detection:***	
Wall Type:		***Corrosion Protection:***	
Construction Material:		***Latest Test Name:***	
Catastrop Leak Detn:		***Latest Test Date:***	
Aboveground Piping:	No	***Latest Test Expire Dt:***	
Underground Piping:	No		

MyDATCP Storage Tank Search - Tank Details

Tank ID:	366140	***Corrosion Protect Ty:***	
Wang ID:	670600514	***Overfill Protect Type:***	Not Installed
CAS No:		***Construction Material:***	Bare Steel
Tank Status:	Closed/Removed as of 1994-08-17	***Capacity in Gallons:***	300
Install Date:	01/01/1940	***Marketer:***	No
Tank Type:	Underground Storage Tank	***Spill Protection:***	Not Installed
Tank Occupancy:	Government	***Date of Lining:***	
Wall Type:		***Contents:***	Leaded Gasoline
Federally Regulated:	Yes	***Overfill Protection:***	Not Installed
Leak Detection:		***Lining Inspect Date:***	
Leak Test Method:		***Underground Piping:***	No
Contain Sump Install:			

Tank ID:	366141	***Corrosion Protect Ty:***	
Wang ID:	670600515	***Overfill Protect Type:***	Not Installed
CAS No:		***Construction Material:***	Bare Steel
Tank Status:	Closed/Removed as of 1994-11-27	***Capacity in Gallons:***	10,000
Install Date:		***Marketer:***	No
Tank Type:	Underground Storage Tank	***Spill Protection:***	Not Installed
Tank Occupancy:	Government	***Date of Lining:***	
Wall Type:		***Contents:***	Fuel Oil
Federally Regulated:	No	***Overfill Protection:***	Not Installed
Leak Detection:	Not Required	***Lining Inspect Date:***	
Leak Test Method:		***Underground Piping:***	No
Contain Sump Install:			

Tank ID:	366142	***Corrosion Protect Ty:***	
Wang ID:	670600516	***Overfill Protect Type:***	Not Installed
CAS No:		***Construction Material:***	Bare Steel
Tank Status:	Closed/Removed as of 1993-12-08	***Capacity in Gallons:***	60
Install Date:		***Marketer:***	No
Tank Type:	Underground Storage Tank	***Spill Protection:***	Not Installed

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank Occupancy:	School	**Date of Lining:**	
Wall Type:		**Contents:**	Fuel Oil
Federally Regulated:	No	**Overfill Protection:**	Not Installed
Leak Detection:	Not Required	**Lining Inspect Date:**	
Leak Test Method:		**Underground Piping:**	No
Contain Sump Install:			

MyDATCP Storage Tank Search - Owner Details

Site Anniversary Date:	
Owner Name:	Waukesha County
Owner Address1:	515 W Moreland Blvd RM AC220
Owner Address2:	
Owner City:	Waukesha
Owner State:	WI
Owner Zip:	53188-2428

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6 | **1 of 1** | **WSW** | **0.00 / 0.00** | **998.29 / -10** | **Verizon - Uw Waukesha**
1220 University Avenue
Waukesha WI 53188 | **AST**

License No:	451603	**Expiration Date:**	
Facility Ref No:	714301|768565	**Fire Department Nm:**	Waukesha
Fire Department ID:	6706	**Municipality Name:**	City of Waukesha
License Type:	Registration	**Property County:**	Waukesha County
License:	Storage Tank Registration		
Licensee:	Verizon Wireless		

Tank Details

Tank ID:	7622	**Federally Regulated:**	No
Tank Reference No:	1321053|	**Leak Detection:**	Interstitial Monitor
Equipment Wang ID:		**Leak Test Method:**	
CAS No:		**Contain Sump Install:**	No
Tank Status:	In Use	**Dispen Sump Install:**	No
Tank Type:	Aboveground Storage Tank	**Marketer:**	No
Tank Contents:	Diesel	**Spill Protection:**	Installed
Tank Occupancy:	Optional Standby Gen	**Overfill Protection:**	Not Installed
Install Date:	6/7/2011 12:00:00 AM	**Overfill Protect Type:**	Not Installed
Capacity:	210.00	**Corrosion Protect Ty:**	
Construction Material:	Bare Steel	**Date of Lining:**	
Wall Size:	Double	**Lining Inspect Date:**	

Piping Details

Related Tank ID:		**UST Manifolded:**	
Status:		**Flex Connector:**	
Type:		**Leak Test Method:**	
System Type:		**Leak Detection:**	
Wall Type:		**Corrosion Protection:**	
Construction Material:		**Latest Test Name:**	
Catastrop Leak Detn:		**Latest Test Date:**	
Aboveground Piping:	No	**Latest Test Expire Dt:**	
Underground Piping:	No		

MyDATCP Storage Tank Search - Tank Details

Tank ID:	7622	**Corrosion Protect Ty:**	
Wang ID:		**Overfill Protect Type:**	Not Installed
CAS No:		**Construction Material:**	Bare Steel
Tank Status:	In Use	**Capacity in Gallons:**	210
Install Date:	06/07/2011	**Marketer:**	No
Tank Type:	Aboveground Storage Tank	**Spill Protection:**	Installed

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank Occupancy:	Optional Standby Gen	**Date of Lining:**	
Wall Type:	Double	**Contents:**	Diesel
Federally Regulated:	No	**Overfill Protection:**	Not Installed
Leak Detection:	Interstitial Monitor	**Lining Inspect Date:**	
Leak Test Method:		**Underground Piping:**	No
Contain Sump Install:	No		

MyDATCP Storage Tank Search - Owner Details

Site Anniversary Date:	
Owner Name:	Verizon Wireless
Owner Address1:	4600 W Collge Ave
Owner Address2:	
Owner City:	Appleton
Owner State:	WI
Owner Zip:	54913

7	**1 of 1**	**SSW**	**0.03 / 179.62**	**949.45 / -58**	**Edward E Epps 822 N Mapleway Waukesha WI 53188**	**UST**

License No:	453898	**Expiration Date:**	
Facility Ref No:	74031|74031	**Fire Department Nm:**	Waukesha
Fire Department ID:	6706	**Municipality Name:**	City of Waukesha
License Type:	Registration	**Property County:**	Waukesha County
License:	Storage Tank Registration		
Licensee:	EDWARD E EPPS		

Tank Details

Tank ID:	103417	**Federally Regulated:**	No
Tank Reference No:	366323|670600749	**Leak Detection:**	Unknown
Equipment Wang ID:	670600749	**Leak Test Method:**	
CAS No:		**Contain Sump Install:**	No
Tank Status:	In Use	**Dispen Sump Install:**	No
Tank Type:	Underground Storage Tank	**Marketer:**	No
Tank Contents:	Fuel Oil	**Spill Protection:**	Not Installed
Tank Occupancy:	Residential	**Overfill Protection:**	Not Installed
Install Date:		**Overfill Protect Type:**	Not Installed
Capacity:	2500.00	**Corrosion Protect Ty:**	
Construction Material:	Unknown	**Date of Lining:**	
Wall Size:	Single	**Lining Inspect Date:**	

Pipe Details

Related Tank ID:	202864	**UST Manifolded:**	No
Status:	In Use	**Flex Connector:**	No
Type:	Piping (Storage Tank)	**Leak Test Method:**	
System Type:		**Leak Detection:**	Unknown
Wall Type:	Single	**Corrosion Protection:**	
Construction Material:	Unknown	**Latest Test Name:**	
Catastrop Leak Detn:		**Latest Test Date:**	
Aboveground Piping:	No	**Latest Test Expire Dt:**	
Underground Piping:	Yes		

MyDATCP Storage Tank Search - Tank Details

Tank ID:	103417	**Corrosion Protect Ty:**	
Wang ID:	670600749	**Overfill Protect Type:**	Not Installed
CAS No:		**Construction Material:**	Unknown
Tank Status:	In Use	**Capacity in Gallons:**	2,500
Install Date:		**Marketer:**	No
Tank Type:	Underground Storage Tank	**Spill Protection:**	Not Installed
Tank Occupancy:	Residential	**Date of Lining:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Wall Type:	Single	**Contents:**	Fuel Oil
Federally Regulated:	No	**Overfill Protection:**	Not Installed
Leak Detection:	Unknown	**Lining Inspect Date:**	
Leak Test Method:		**Underground Piping:**	Yes
Contain Sump Install:	No		

MyDATCP Storage Tank Search - Owner Details

Site Anniversary Date:	
Owner Name:	Edward E Epps
Owner Address1:	822 Maple Way N
Owner Address2:	
Owner City:	Waukesha
Owner State:	WI
Owner Zip:	53188-2602

8	1 of 1	E	0.23 / 1,208.84	959.38 / -49	**HELLMAN, SHIRLEY M** **2125 OAKLAWN AVE** **WAUKESHA WI 53188**	LUST

Site ID:	7975600	**Zip:**	53188
Location Name:	HELLMAN, SHIRLEY M	**County:**	68
Address:	2125 OAKLAWN AVE	**County Name:**	Waukesha
Muni:	WAUKESHA	**Region:**	SE
Address (Web):	2125 OAKLAWN AVE	**County (Web):**	WAUKESHA
Municipality (Web):	WAUKESHA	**Region (Web):**	SE
Zip (Web):	53188		
Data Source:	Environmental Cleanup & Brownfields Redevelopment BRRTS on the Web-Bulk Data Download; Bureau for Remediation and Redevelopment Tracking System on the Web (BOTW) (Web)		

Facility Activity Information

Detail Seq No:	281783	**CO Contam Flag:**	No
Act Code:	340	**Geo Located Flag:**	Yes
Activity Type:	LUST	**GIS Registry Flag:**	
Activity No:	0368281783	**GIS Area Point Flg:**	No
Activit Display No:	03-68-281783	**PLSS:**	SWNW3307N19E
Status Code:	O	**PECFA No:**	
Status:	OPEN	**PECFA Occurrenc ID:**	
DCOM No:		**DERF Flag:**	No
Comm Occurrence ID:		**GLC Flag:**	No
EPA CERCLIS ID:		**Offsite Impact Flg:**	No
FID:	268190780	**Petrol Ust Flag:**	Yes
Start Date:	2001-04-10	**PFAS Flag:**	No
End Date:		**RFR Flag:**	No
Last Action:	2021-04-06	**Row Impact Flag:**	No
Risk Code:		**Sediments Flag:**	No
Acres:		**SUDZ Flag:**	No
Acres 100:		**VPLE COC Flag:**	No
Juris:	DNR RR	**WAM Flag:**	No
NPL Flag:	No	**CO Flag:**	No
DCOM DB Track Flag:		**SFR Flag:**	No
PECFA Eligible Flg:	No	**Latitude:**	43.028024368
AST Flag:	No	**Longitude:**	-88.261364104
Drycleaner Flag:	No		
WDOT Flag:	No		
WDOT Desc:			
Activity Name:	HELLMAN, SHIRLEY M		
Activity Detail Addr:			
Activity Comments:			

Action Information

Action Date:	2021-04-06
Action Code:	130

Action Name: DNR Regulatory Reminder Sent
Action Desc: Date DNR sent written notification to Responsible Parties and/or other interested parties reminding them of a regulatory obligation.
Action Comment: VAPOR INTRUSION AND TCE REMINDER LETTER

Action Date: 2011-12-07
Action Code: 200
Action Name: Push Action Taken
Action Desc: Date DNR took an action, either written or verbal to get an inactive site moving again, including request for status update.
Action Comment:

Action Date: 2020-08-17
Action Code: 130
Action Name: DNR Regulatory Reminder Sent
Action Desc: Date DNR sent written notification to Responsible Parties and/or other interested parties reminding them of a regulatory obligation.
Action Comment: EMERGING CONTAMINANTS REMINDER LETTER

Action Date: 2011-09-07
Action Code: 130
Action Name: DNR Regulatory Reminder Sent
Action Desc: Date DNR sent written notification to Responsible Parties and/or other interested parties reminding them of a regulatory obligation.
Action Comment: Vapor Intrusion (VI) Assessment Notification Ltr Sent

Action Date: 2001-04-10
Action Code: 1
Action Name: Notification of Hazardous Substance Discharge
Action Desc: Date DNR received notice of a discharge of a hazardous substance under s. 292.11 Wis. Stats. Discharge was discovered during an environmental assessment or laboratory analysis of soil, sediment, groundwater or vapor samples. Includes historic contamination.
Action Comment: PER SPILL 04-68-550114

Action Date: 2001-04-10
Action Code: 998
Action Name: Activity Transferred from Spill Activity
Action Desc: Activity started as a spill but additional site investigation and remediation was needed. Activity is now categorized as an Environmental Repair Program (ERP) or Leaking Underground Tank (LUST) activity.
Action Comment: 04-68-550114

Action Date: 2001-10-17
Action Code: 2
Action Name: Responsible Party (RP) letter sent
Action Desc: Date of DNR letter to responsible party (RP) notifying them of state law responsibilities associated with the investigation and cleanup of a hazardous substance discharge to the environment.
Action Comment:

Impacts Information

Impact Seq No:
Impact Code: 05
Impact Desc: Soil Contamination
Impact Comment:
Potential Flag: No

Impact Seq No:
Impact Code: 06
Impact Desc: Other
Impact Comment: ADJACENT LAND USES
Potential Flag: Yes

Substances Information

Substance Desc: Petroleum - Unknown Type
Spill Released Amt:
Spill Released Unit Code:

WHO Information

Org Flag: Yes
Role Desc: Consultant
Full Name: NO CONSULTANT
Address 1: NO ADDRESS
Address 2:
City: NO CITY
State Abbr: WI
Postal Code:
Composite Address: NO CITY, WI
Country Name: UNITED STATES
Email: NA

Org Flag: No
Role Desc: Owner
Full Name: CHRISTOPHER BO
Address 1: 2125 OAKLAWN AVE
Address 2:
City: WAUKESHA
State Abbr: WI
Postal Code: 53188
Composite Address: WAUKESHA, WI 53188
Country Name: UNITED STATES
Email: NA

Org Flag: No
Role Desc: Owner
Full Name: ASHLEY FRANTZ
Address 1: 2125 OAKLAWN AVE
Address 2:
City: WAUKESHA
State Abbr: WI
Postal Code: 53188
Composite Address: WAUKESHA, WI 53188
Country Name: UNITED STATES
Email: NA

Org Flag: No
Role Desc: Responsible Party
Full Name: PERSONAL INFORMATION WITHHELD
Address 1: 381 W ANN ST
Address 2:
City: WHITEWATER
State Abbr: WI
Postal Code: 53190-1918
Composite Address: WHITEWATER, WI 53190
Country Name: UNITED STATES
Email: NA

Org Flag: No
Role Desc: DNR Project Manager
Full Name: MARGARET BRUNETTE
Address 1: 1027 W ST PAUL AVE
Address 2:
City: MILWAUKEE
State Abbr: WI
Postal Code: 53233
Composite Address: MILWAUKEE, WI 53233
Country Name: UNITED STATES
Email: margaret.brunette@wisconsin.gov

BRRTS Web List

BRRTS No: 03-68-281783 ***Jurisdiction:*** RR
FID: 268190780 ***Address:*** 2125 OAKLAWN AVE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status:	OPEN	**Start Date:**	2001-04-10
Activity Type:	LUST	**End Date:**	0000-00-00
Activity Name:	HELLMAN SHIRLEY M		
Comments:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
9	1 of 1	NNE	0.15 / 807.86	930.95 / -77	JONES FARM N1 W26026 NORTHVIEW RD WAUKESHA WI	LUST

Site ID:	7086100	**Zip:**	
Location Name:	JONES FARM	**County:**	68
Address:	N1 W26026 NORTHVIEW RD	**County Name:**	Waukesha
Muni:	WAUKESHA	**Region:**	SE
Address (Web):	N1 W26026 NORTHVIEW RD	**County (Web):**	WAUKESHA
Municipality (Web):	WAUKESHA	**Region (Web):**	SE
Zip (Web):			
Data Source:	Environmental Cleanup & Brownfields Redevelopment BRRTS on the Web-Bulk Data Download; Bureau for Remediation and Redevelopment Tracking System on the Web (BOTW) (Web)		

Facility Activity Information

Detail Seq No:	212401	**CO Contam Flag:**	No
Act Code:	340	**Geo Located Flag:**	Yes
Activity Type:	LUST	**GIS Registry Flag:**	
Activity No:	0368212401	**GIS Area Point Flg:**	No
Activit Display No:	03-68-212401	**PLSS:**	SESE2907N19E
Status Code:	C	**PECFA No:**	
Status:	CLOSED	**PECFA Occurrenc ID:**	
DCOM No:		**DERF Flag:**	No
Comm Occurrence ID:		**GLC Flag:**	No
EPA CERCLIS ID:		**Offsite Impact Flg:**	No
FID:	268556420	**Petrol Ust Flag:**	Yes
Start Date:	1999-01-25	**PFAS Flag:**	No
End Date:	2000-03-30	**RFR Flag:**	No
Last Action:	2022-12-20	**Row Impact Flag:**	No
Risk Code:		**Sediments Flag:**	No
Acres:		**SUDZ Flag:**	No
Acres 100:		**VPLE COC Flag:**	No
Juris:	DNR RR	**WAM Flag:**	No
NPL Flag:	No	**CO Flag:**	No
DCOM DB Track Flag:		**SFR Flag:**	No
PECFA Eligible Flg:	No	**Latitude:**	43.033688425
AST Flag:	No	**Longitude:**	-88.266455747
Drycleaner Flag:	No		
WDOT Flag:	No		
WDOT Desc:			
Activity Name:	JONES FARM		
Activity Detail Addr:			
Activity Comments:			

Action Information

Action Date:	2000-03-30
Action Code:	11
Action Name:	Activity Closed
Action Desc:	Date DNR sends a letter approving the final closure of an activity based on data provided and compliance with NR 726 and 727. No further investigation or remediation is required at this time.
Action Comment:	
Action Date:	2000-03-15
Action Code:	179
Action Name:	Case Closure Review Request Received (non-fee)
Action Desc:	Date DNR received a case Closure Review Request for a site where the fee has previously been paid or no fee is required (i.e. Voluntary Party Liability Exemption).
Action Comment:	CLOSURE REVIEW REQUEST FEE PAID PREVIOUSLY

Action Date: 1999-02-03
Action Code: 35
Action Name: Site Investigation Workplan (SIWP) Received (non-fee)
Action Desc: Date DNR received a site investigation workplan (SIWP) which states the objectives of the site investigation to determine the degree and extent of contamination.
Action Comment:

Action Date: 1999-10-25
Action Code: 80
Action Name: Closure Not Recommended
Action Desc: Date DNR sends a letter in response to a request for closure review. Letter outlines the reasons DNR cannot recommend site closure at this time.
Action Comment: NR.

Action Date: 1999-02-05
Action Code: 2
Action Name: Responsible Party (RP) letter sent
Action Desc: Date of DNR letter to responsible party (RP) notifying them of state law responsibilities associated with the investigation and cleanup of a hazardous substance discharge to the environment.
Action Comment:

Action Date: 1999-07-14
Action Code: 37
Action Name: Site Investigation Report (SIR) Received (non-fee)
Action Desc: Date DNR received a site investigation report (SIR) to determine degree & extent of contamination and form a basis for choosing the appropriate remedial action.
Action Comment: GW IMPACTS

Action Date: 2000-03-30
Action Code: 99
Action Name: Miscellaneous
Action Desc: Miscellaneous action - See Action Comments
Action Comment: WELL ABANDONMENT FORM RECEIVED

Action Date: 2000-03-22
Action Code: 84
Action Name: Remaining Actions Needed
Action Desc: Date DNR sends a letter outlining the remaining actions needed to achieve final closure. The site will not be formally closed until receipt of documentation. This action was formerly known as conditional closure.
Action Comment: NR

Action Date: 1999-01-25
Action Code: 1
Action Name: Notification of Hazardous Substance Discharge
Action Desc: Date DNR received notice of a discharge of a hazardous substance under s. 292.11 Wis. Stats. Discharge was discovered during an environmental assessment or laboratory analysis of soil, sediment, groundwater or vapor samples. Includes historic contamination.
Action Comment:

Action Date: 1999-08-20
Action Code: 79
Action Name: Case Closure Review Request Received
Action Desc: Date DNR Project Manager received a request to review Case Closure - (Form 4400-202). A fee was paid for DNR review.
Action Comment: NR.10-21-99

Impacts Information

Impact Seq No:
Impact Code: 05
Impact Desc: Soil Contamination
Impact Comment:
Potential Flag: No

Substances Information

Substance Desc: Gasoline - Unleaded and Leaded

Spill Released Amt:
Spill Released Unit Code:

Substance Desc: Diesel Fuel
Spill Released Amt:
Spill Released Unit Code:

WHO Information

Org Flag: No
Role Desc: DNR File Contact
Full Name: JENNIFER MEYER
Address 1: 1027 W ST PAUL AVE
Address 2:
City: MILWAUKEE
State Abbr: WI
Postal Code: 53233
Composite Address: MILWAUKEE, WI 53233
Country Name: UNITED STATES
Email: jennifer.meyer1@wisconsin.gov

Org Flag: Yes
Role Desc: Consultant
Full Name: DRAKE ENVIRONMENTAL
Address 1: 6980 N TEUTONIA AVE
Address 2:
City: MILWAUKEE
State Abbr: WI
Postal Code: 53209-2536
Composite Address: MILWAUKEE, WI 53209
Country Name: UNITED STATES
Email: NA

Org Flag: No
Role Desc: Responsible Party
Full Name: PERSONAL INFORMATION WITHHELD
Address 1: 100 E SUNSET DR
Address 2: C/0 ATTY JANE L WALKER
City: WAUKESHA
State Abbr: WI
Postal Code: 53189
Composite Address: WAUKESHA, WI 53189
Country Name: UNITED STATES
Email: NA

BRRTS Web List

BRRTS No: 03-68-212401
FID: 268556420
Status: CLOSED
Activity Type: LUST
Activity Name: JONES FARM
Comments:
Jurisdiction: RR
Address: N1 W26026 NORTHVIEW RD
Start Date: 1999-01-25
End Date: 2000-03-30

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

The U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL) includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program, based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. This data includes NPL sites represented as polygons, where available, that can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. As site investigation and remediation progress, OUs may be added, modified or refined. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 25, 2024

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the U.S. Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 25, 2024

Deleted NPL: DELETED NPL

Sites deleted from the U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL). The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 25, 2024

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool.

Government Publication Date: Oct 24, 2024

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Oct 24, 2024

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Oct 21, 2024

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Oct 21, 2024

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Oct 21, 2024

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Oct 21, 2024

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Oct 21, 2024

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Oct 21, 2024

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Oct 21, 2024

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made availabe by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Nov 20, 2024

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Nov 20, 2024

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: NPL IC

These boundaries of Institutional Control areas at sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), or as Proposed or Deleted, are sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). The EPA's NPL includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes.

Government Publication Date: Sep 25, 2024

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Oct 15, 2024

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Feb 7, 2024

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: Jan 9, 2024

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jan 9, 2024

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Oct 31, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from Oak Ridge National Laboratory hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Oct 31, 2024

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Oct 24, 2024

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Oct 24, 2024

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

Hazard Ranking List: SHWS

Last published in 1994, this is a list of sites which were investigated by the Department of Natural Resources (DNR) under the Wisconsin Environmental Repair Law. Hazard ranking of a site or facility was performed to determine if the site or facility presents a substantial danger to the public health, or welfare, or the environment. The DNR Bureau for Remediation and Redevelopment now maintains other programs for the investigation and cleanup of potential and confirmed contamination to soil and groundwater in Wisconsin. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: July 1994

Licensed Solid Waste Landfills: SWF/LF

List of licensed municipal solid waste and industrial landfills as recorded by the Wisconsin Department of Natural Resources (DNR). Data is made available by the DNR Waste & Materials Management Public Reports.

Government Publication Date: Dec 17, 2024

The Historic Registry of Waste Disposal Sites: WDS

Prior to development of on-line databases, the Wisconsin Department of Natural Resources (DNR) provided public information about old waste disposal facilities in a printed publication called the Historic Registry of Waste Disposal Sites (the "Registry").

Government Publication Date: Jul 22, 2013

Solid Waste - Landfills and Historic Waste Sites: HIST LF

A list of active and inactive solid waste landfills and known historic waste sites available through the Wisconsin Department of Natural Resources' Open Data Portal. This list is based on the known or inferred limits of waste found in the 'Solid Waste - Landfills and Historic Waste Site Extents' dataset.

Government Publication Date: Nov 15, 2024

Solid & Hazardous Waste Information Management System: SHWIMS

A list of facilities in the Solid and Hazardous Waste Information System (SHWIMS) and Master Data Layer (MDL) as provided by the Wisconsin Department of Natural Resources (DNR) Waste and Materials Management (WMM) Program. The SHWIMS database is no longer being updated and is considered historical. The MDL is the WMM Program's internal database for managing source data for the facilities regulated by DNR and contains actively updated data. Activities that occur at these facilities include those related to various solid waste, hazardous waste, infectious waste, and used oil type activities, as well as sharps collection and more.

Government Publication Date: Jun 10, 2024

Leaking Underground Storage Tanks: LUST

A list of Leaking Underground Storage Tank (LUST) sites as recorded by the Wisconsin Department of Natural Resources (DNR). When petroleum products are released from underground tanks into the soil or groundwater, the DNR will work with the responsible party and environmental professionals to clean up the spill to state standards. This LUST site listing is sourced from the Bureau for Remediation and Redevelopment Tracking System (BRRTS) database and Open Data Portal applicable file/s provided by the DNR.

Government Publication Date: Nov 6, 2024

Leaking Aboveground Storage Tanks: LAST

List of Leaking Aboveground Storage Tank (LAST) sites as recorded by the Wisconsin Department of Natural Resources (DNR). When petroleum products are released from tanks into the soil or groundwater, the DNR will work with the responsible party and environmental professionals to clean up the spill to state standards.

Government Publication Date: Nov 6, 2024

Delisted Leaking Tanks: DELISTED LST

This database contains a list of closed leaking tank sites that were removed from the leaking tank database regulated by the Storage Tank Regulation Section of the Wisconsin Department of Natural Resources.

Government Publication Date: Nov 6, 2024

Underground Storage Tanks: UST

List of Underground Storage Tank (UST) locations. The Bureau of Weights and Measures, operating under the Department of Agriculture, Trade and Consumer Protection is responsible for the administration and regulation of the Wisconsin Administrative Code ATCP 93 - Flammable and Combustible Liquids.

Government Publication Date: Sep 3, 2024

Aboveground Storage Tanks: AST

List of Aboveground Storage Tank (AST) locations. The Bureau of Weights and Measures, operating under the Department of Agriculture, Trade and Consumer Protection is responsible for the administration and regulation of the Wisconsin Administrative Code ATCP 93 - Flammable and Combustible Liquids.

Government Publication Date: Sep 3, 2024

Delisted Storage Tanks: DEL STORAGE TANK

This database contains a list of closed storage tank sites that were removed from the storage tank database regulated by the Storage Tank Regulation Section of the Wisconsin Department of Agriculture, Trade, and Consumer Protection.

Government Publication Date: Sep 3, 2024

Closed Remediation Sites: CRS

This list of closed environmental remediation sites is provided by the Wisconsin Department of Natural Resources (WI DNR). The listing includes Environmental Repair Program (ERP) and Leaking Underground Storage Tank (LUST) sites where contamination affected soil, groundwater or other media, but the DNR has determined, based on information available at the time, that no further remedial action is required. A "site" is a contamination incident, not a property. A site may be smaller than a property or may include more than one property.

Government Publication Date: Oct 22, 2024

Deed Restriction at Closeout Sites: AUL

List of sites for which a deed restriction is recorded at the Wisconsin Register of Deeds Office. Deed restrictions limit property use or outline requirements for actions prior to future use. Deed restrictions are applied in cases where there is known soil contamination that is impracticable to remove, or an engineering requirement or NR270 industrial standards are in place. Data is obtained from the Wisconsin Department of Natural Resource (DNR) Bureau for Remediation and Redevelopment Tracking System (BRRTS).

Government Publication Date: Nov 6, 2024

Voluntary Party Liability Exemption Sites: VCP

List of sites which have participated in the Voluntary Party Liability Exemption (VPLE) program, an elective environmental cleanup program administered by the Wisconsin Department of Natural Resources (DNR), and received an exemption from future environmental liability. Any individual, business or unit of government that conducts an environmental investigation and cleanup of a contaminated property - following state requirements with the oversight of DNR staff - can receive an exemption from future environmental liability. With some restrictions, most properties that have had a discharge of a hazardous substance are eligible for VPLE.

Government Publication Date: Nov 6, 2024

Brownfields Environmental Assessment Program: BEAP

List of sites which participated in the Brownfields Environmental Assessment Program (BEAP) - a federal program that assisted municipalities with Environmental Site Assessments (ESAs) for tax delinquent or bankrupt properties, or properties a local government acquired for redevelopment. Site assessments to determine property contamination were conducted by the Wisconsin Department of Natural Resources staff.

Government Publication Date: Nov 6, 2024

Brownfields Listing: BROWNFIELDS

The Wisconsin Department of Natural Resource (DNR) Remediation and Redevelopment program has a wide range of financial and liability tools available to assist local governments, businesses, lenders and others to clean up and redevelop brownfields in Wisconsin. DNR describes brownfields as abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfield properties present public health, economic, environmental and social challenges to the rural and urban communities in which they are located.

Government Publication Date: Nov 6, 2024

Brownfield Site Assessment Grant Projects: BSA PROJECTS

In 2012, the Brownfield Site Assessment Grant (SAG) program was transferred to the Wisconsin Economic Development Corporation (WEDC), this was previously a financial tool of the Wisconsin Department of Natural Resources (DNR). This grant program helps local governments conduct initial activities and investigations at properties with known or suspected environmental contamination. The awarded grant funds cannot be used for environmental cleanup activities. Applicants must meet the eligibility definition outlined in s.292.75(1)(a), Wisconsin Statutes: "'Eligible site or facility' means one or more contiguous industrial or commercial facilities or sites with common or multiple ownership that are abandoned, idle, or underused, the expansion or redevelopment of which is adversely affected by actual or perceived environmental contamination." This listing includes the current WDEC SAG projects, the final DNR Round 11 and 12 SAG DNR projects. The Round 12 SAG projects were tracked by the DNR, but not funded by the DNR since the SAG program was vetoed out of the budget.

Government Publication Date: Sep 30, 2015

Brownfields Grant Program Sites: BGP

This list of Brownfield Grant Program sites is provided by the Wisconsin Economic Development Corporation. The Wisconsin Brownfield Program provides grant funds to assist local governments, businesses and individuals with assessing and remediating the environmental contamination of an abandoned, idle or underused industrial or commercial facility or site. This program will help convert contaminated sites into productive properties that are attractive and ready for redevelopment.

Government Publication Date: Mar 26, 2024

Environmental Repair: ERP

Environmental Repair Program sites are those other than Leaking Underground Storage Tanks (LUSTs) that have contaminated soil and/or groundwater. Examples include industrial spills (or dumping) that need long term investigation, buried containers of hazardous substances, and closed landfills that have caused contamination. This ERP site listing is sourced from the Bureau for Remediation and Redevelopment Tracking System (BRRTS) database and Open Data Portal applicable file/s provided by the Wisconsin Department of Natural Resources (DNR).

Government Publication Date: Nov 6, 2024

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 5, which includes Wisconsin, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 11, 2024

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 5, which includes Wisconsin, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 11, 2024

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO_2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.

Government Publication Date: Aug 5, 2024

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Apr 4, 2024

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Aug 1, 2024

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Dec 17, 2024

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

This list of federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS) is made available by the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools data. The EPA outlines that these data are gathered from several federal entities, such as the federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration (NASA), Department of Transportation (DOT), and Department of Energy (DOE). The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2024. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Oct 24, 2024

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Jun 27, 2024

National Response Center PFAS Spills: PFAS ERNS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Dec 9, 2024

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Dec 16, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Jul 22, 2024

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest : PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Dec 15, 2024

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Dec 16, 2024

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: May 29, 2024

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Nov 20, 2024

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Apr 13, 2024

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 5, 2024

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 5, 2024

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: May 6, 2024

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Feb 5, 2024

Surface Mining Control and Reclamation Act Sites: SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: May 20, 2024

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 12, 2023

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Aug 29, 2024

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Jun 26, 2024

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 29, 2024

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: May 23, 2024

Power Plants: POWER PLANTS

This list of power plants is provided by the U.S. Energy Information Administration (EIA). The listing includes operable electric generating plants in the United States by energy source, originating from the EIA-860, Annual Electric Generator Report; EIA-860M, Monthly Update to the Annual Electric Generator Report; and EIA-923, Power Plant Operations Report. It includes all operable plants by energy source with a combined nameplate capacity of 1 megawatt or more that are operating, are on standby, or out of service for short- or long-term.

Government Publication Date: Apr 15, 2024

State

Spills: SPILLS

A list of spill events reported to the Wisconsin Department of Natural Resources (DNR). The DNR describes a spill as a discharge of a hazardous substance that may adversely impact, or threaten to impact public health, welfare or the environment. This spills listing is sourced from the Bureau for Remediation and Redevelopment Tracking System (BRRTS) database and Open Data Portal applicable file/s provided by the DNR.

Government Publication Date: Nov 6, 2024

Wisconsin Agricultural Spills Boundaries: AGSPILLS

Boundaries of agricultural spill sites reported to the Wisconsin Department of Agriculture, Trade and Consumer Protection. The Agricultural Chemical Cleanup Program (ACCP) is in place to identify and manage pesticide and fertilizer spills to prevent these products from reaching the groundwater. Once a site has been identified as requiring remediation, the ACCP provides reimbursement for eligible costs incurred by the responsible person.

Government Publication Date: Aug 31, 2024

Wisconsin Agricultural Spills - Remediation Locations: AG SPILL REMED

List of agricultural spill site remediation locations made available by the Wisconsin Department of Agriculture, Trade and Consumer Protection. The Agricultural Chemical Cleanup Program (ACCP) is in place to identify and manage pesticide and fertilizer spills to prevent these products from reaching the groundwater. Once a site has been identified as requiring remediation, the ACCP provides reimbursement for eligible costs incurred by the responsible person.

Government Publication Date: Aug 31, 2024

Wisconsin Bureau for Remediation and Redevelopment Tracking System: BRRTS

The Wisconsin Bureau for Remediation and Redevelopment Tracking System (BRRTS) contains information on the investigation and cleanup of potential and confirmed contamination to soil and groundwater in Wisconsin. This database includes: sites where an abandoned container with potentially hazardous contents has been inspected and recovered, and no known discharge to the environment has occurred; sites where there was, or may have been, a discharge to the environment and, based on the known information, the Wisconsin Department of Natural Resources (DNR) has determined that the responsible party does not need to undertake an investigation or cleanup in response to that discharge; materials management sites that receive contaminated soil from other properties; and sites which have been removed from the tracking system and archived.

Government Publication Date: Nov 6, 2024

Delisted BRRT: DELISTED BRRT

The Wisconsin Bureau for Remediation and Redevelopment Tracking System (BRRTS) maintained by the Wisconsin Department of Natural Resources contains information on the investigation and cleanup of potential and confirmed contamination to soil and groundwater in Wisconsin. Sites and site details are removed from the data made available to the public when the source of contamination is unclear and an investigation to determine the source of contamination is in progress.

Government Publication Date: Nov 6, 2024

Per- and Polyfluoroalkyl Substances (PFAS): PFAS CONTAM

List of sites at which the Wisconsin Department of Natural Resources (DNR) has determined further action is required due to confirmed per- and polyfluoroalkyl (PFAS) contamination. DNR advises that the information as presented may be incomplete and is subject to change as new information becomes available.

Government Publication Date: Nov 6, 2024

Municipal System PFAS Sampling: PFAS SAMPLING

List of sample points where municipal water supply is impacted by per- and polyfluoroalkyl substances (PFAS). Listing made available by the Wisconsin Department of Natural Resources (DNR).

Government Publication Date: Mar 28, 2024

Dry Cleaner Environmental Response Fund: DRYC REM

A list of facilities enrolled in the Dry Cleaner Environmental Response Fund (DERF) or have a reported historical use as a dry cleaning facility, provided by the Wisconsin Department of Natural Resources (WIDNR). This is only a listing of known remediation sites with a cleanup of contamination that may be related to dry cleaning substances. The WIDNR Remediation & Redevelopment Program does not regulate or license Dry Cleaning Facilities The "status" provided in this list is only in regards to the cleanup and not the operations of the facility.

Government Publication Date: Sep 20, 2024

Five Star Recognition Program Sites: DRYCLEANERS

The purpose of Wisconsin's Five Star Environmental Recognition Program for Drycleaners was to encourage drycleaners to become more environmentally-friendly. The program was divided into five different star categories, with the ultimate goal being to achieve the Five Star status. The program was sponsored by the Wisconsin Fabricare Institute (WFI), in cooperation with the Department of Natural Resources, the Department of Commerce, the University of Wisconsin Extension-Solid and Hazardous Waste Education Center and the Center for Neighborhood Technology. WFI discontinued the program on Jan 1, 2013

Government Publication Date: Jan 1, 2013

Delisted Dry Cleaner Environmental Response Fund: DELISTED DRYC REM

Sites which once appeared on - but have since been removed from - the list of sites in the Dry Cleaner Environmental Response Fund Program made available by the Wisconsin Department of Natural Resources (DNR). The Dry Cleaner Environmental Response Fund Program reimburses dry cleaners for the investigation and clean up of the release of chemicals used in dry cleaning.

Government Publication Date: Sep 20, 2024

Liens and Notices of Contamination: LIENS

A list of sites with liens and notices of contamination. This list is made available by the Wisconsin Department of Natural Resources (DNR).

Government Publication Date: Sep 4, 2024

Tier 2 Report: TIER 2

A list of Tier 2 facilities in Wisconsin. This list is provided by the Wisconsin Emergency Management/ State Emergency Response Commission.

Government Publication Date: Mar 12, 2024

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX G

Tank Registration Forms

To go back to your search results please click the back arrow in the above Toolbar

Tank Details

Site and Owner

Site Info	County & Municipality	Owner
Facility ID: 649580	Waukesha County	Waukesha County
UW WAUKESHA FIELDHOUSE		515 W Moreland Blvd RM AC220
1500 University Dr	Fire Dept ID: 6706	Waukesha
Waukesha		WI 53188-2428
Site Anniversary Date:	Dispenser Has Sumps: N	

Aboveground Storage Tank - ID: 213782, WANG ID: 670600156, Closed/Removed as of 2015-11-14

Install Date:	11/16/1994	**Capacity In Gallons:**	4,000	**Contents:**	Fuel Oil
Tank Occupancy:	School	**Marketer:**	N	**CAS Number**	
Federally Regulated:	No	**Spill Protection:**	Not Installed	**Overfill Protection:**	Installed
Overfill Prot Type:	Fill Shut Off	**Containment Sump Installed:**		**Lining Inspected Date:**	
Corrosion Protect Type:		**Date Of Lining:**		**Underground Piping:**	N
Leak Detection:	Visual Monitoring	**Wall Type:**			
Leak Test Method:					
Construction Material:	Bare Steel				

PIPING -

Flex Connectors:	**UST Mainfolded:**	**Related Tank ID:**
Type:	**Aboveground Piping:** N	**Aboveground Pipe Cons:**
Construction Material:	**Corrosion Protect Type:**	**Leak Detection:**
Catastrophic Leak Detection:		**Leak Test Method:**
		Pipe Wall Type:
		Piping System Type:

Inspection Test Dates

Test Type	Test Date	Test Expire Date

To go back to your search results please click the back arrow in the above Toolbar

Tank Details

Site and Owner

Site Info	County & Municipality	Owner
Facility ID: 649580	Waukesha County	Waukesha County
UW WAUKESHA FIELDHOUSE		515 W Moreland Blvd RM AC220
1500 University Dr	Fire Dept ID: 6706	Waukesha
Waukesha		WI 53188-2428
Site Anniversary Date:	Dispenser Has Sumps: N	

Underground Storage Tank - ID: 366140, WANG ID: 670600514, Closed/Removed as of 1994-08-17

Install Date:	01/01/1940	**Capacity In Gallons:**	300	**Contents:**	Leaded Gasoline
Tank Occupancy:	Government	**Marketer:**	N	**CAS Number**	
Federally Regulated:	Yes	**Spill Protection:**	Not Installed	**Overfill Protection:**	Not Installed
Overfill Prot Type:	Not Installed	**Containment Sump Installed:**		**Lining Inspected Date:**	
Corrosion Protect Type:		**Date Of Lining:**		**Underground Piping:**	N
Leak Detection:		**Wall Type:**			
Leak Test Method:					
Construction Material:	Bare Steel				

PIPING -

Flex Connectors:	**UST Mainfolded:**	**Related Tank ID:**
Type:	**Aboveground Piping:** N	**Aboveground Pipe Cons:**
Construction Material:	**Corrosion Protect Type:**	**Leak Detection:**
Catastrophic Leak Detection:		**Leak Test Method:**
		Pipe Wall Type:
		Piping System Type:

Inspection Test Dates

Test Type	Test Date	Test Expire Date

To go back to your search results please click the back arrow in the above Toolbar

Tank Details

Site and Owner

Site Info	County & Municipality	Owner
Facility ID: 649580	Waukesha County	Waukesha County
UW WAUKESHA FIELDHOUSE		515 W Moreland Blvd RM AC220
1500 University Dr	Fire Dept ID: 6706	Waukesha
Waukesha		WI 53188-2428
Site Anniversary Date:	Dispenser Has Sumps: N	

Underground Storage Tank - ID: 366141, WANG ID: 670600515, Closed/Removed as of 1994-11-27

Install Date:		**Capacity In Gallons:**	10,000	**Contents:**	Fuel Oil
Tank Occupancy:	Government	**Marketer:**	N	**CAS Number**	
Federally Regulated:	No	**Spill Protection:**	Not Installed	**Overfill Protection:**	Not Installed
Overfill Prot Type:	Not Installed	**Containment Sump Installed:**		**Lining Inspected Date:**	
Corrosion Protect Type:		**Date Of Lining:**		**Underground Piping:**	N
Leak Detection:	Not Required	**Wall Type:**			
Leak Test Method:					
Construction Material:	Bare Steel				

PIPING -

Flex Connectors:		**UST Mainfolded:**		**Related Tank ID:**	
Type:		**Aboveground Piping:**	N	**Aboveground Pipe Cons:**	
Construction Material:		**Corrosion Protect Type:**		**Leak Detection:**	
Catastrophic Leak Detection:				**Leak Test Method:**	
				Pipe Wall Type:	
				Piping System Type:	

Inspection Test Dates

Test Type	Test Date	Test Expire Date

To go back to your search results please click the back arrow in the above Toolbar

Tank Details

Site and Owner

Site Info	County & Municipality	Owner
Facility ID: 649580	Waukesha County	Waukesha County
UW WAUKESHA FIELDHOUSE		515 W Moreland Blvd RM AC220
1500 University Dr	Fire Dept ID: 6706	Waukesha
Waukesha		WI 53188-2428
Site Anniversary Date:	Dispenser Has Sumps: N	

Underground Storage Tank - ID: 366142, WANG ID: 670600516, Closed/Removed as of 1993-12-08

Install Date:		**Capacity In Gallons:**	60	**Contents:**	Fuel Oil
Tank Occupancy:	School	**Marketer:**	N	**CAS Number**	
Federally Regulated:	No	**Spill Protection:**	Not Installed	**Overfill Protection:**	Not Installed
Overfill Prot Type:	Not Installed	**Containment Sump Installed:**		**Lining Inspected Date:**	
Corrosion Protect Type:		**Date Of Lining:**		**Underground Piping:**	N
Leak Detection:	Not Required	**Wall Type:**			
Leak Test Method:					
Construction Material:	Bare Steel				

PIPING -

Flex Connectors:	**UST Mainfolded:**	**Related Tank ID:**
Type:	**Aboveground Piping:** N	**Aboveground Pipe Cons:**
Construction Material:	**Corrosion Protect Type:**	**Leak Detection:**
Catastrophic Leak Detection:		**Leak Test Method:**
		Pipe Wall Type:
		Piping System Type:

Inspection Test Dates

Test Type	Test Date	Test Expire Date

To go back to your search results please click the back arrow in the above Toolbar

Tank Details

Site and Owner

Site Info	County & Municipality	Owner
Facility ID: 451603	Waukesha County	Verizon Wireless
Verizon - Uw Waukesha	City of Waukesha	4600 W Collge Ave
1220 University Avenue	Fire Dept ID: 6706	Appleton
Waukesha		WI 54913
Site Anniversary Date:	Dispenser Has Sumps: N	

Aboveground Storage Tank - ID: 7622, WANG ID: , In Use

Install Date:	06/07/2011	**Capacity In Gallons:**	210	**Contents:**	Diesel
Tank Occupancy:	Optional Standby Gen	**Marketer:**	N	**CAS Number**	
Federally Regulated:	No	**Spill Protection:**	Installed	**Overfill Protection:**	Not Installed
Overfill Prot Type:	Not Installed	**Containment Sump Installed:**	N	**Lining Inspected Date:**	
Corrosion Protect Type:		**Date Of Lining:**		**Underground Piping:**	N
Leak Detection:	Interstitial Monitor	**Wall Type:**	Double		
Leak Test Method:					
Construction Material:	Bare Steel				

PIPING -

Flex Connectors:		**UST Mainfolded:**		**Related Tank ID:**	
Type:		**Aboveground Piping:**	N	**Aboveground Pipe Cons:**	
Construction Material:		**Corrosion Protect Type:**		**Leak Detection:**	
Catastrophic Leak Detection:				**Leak Test Method:**	
				Pipe Wall Type:	
				Piping System Type:	

Inspection Test Dates

Test Type	Test Date	Test Expire Date

APPENDIX H

UST No. 84 Tank Closure Report

Foth & Van Dyke

Site Assessment for Underground Storage Tank Closure

University of Wisconsin - Waukesha
UST No. 84
1500 North University Drive
Waukesha, Wisconsin
Scope ID: 94W058

Waukesha County Department of Environmental Resources

May 1995

REPORT

Foth & Van Dyke

Two Park Plaza, Suite 950
10850 West Park Place
Milwaukee, WI 53224-3619
(414) 359-2500
Fax: (414) 359-2519

May 25, 1995

Ms. Giselle Red
Wisconsin Department of Natural Resources
Southeast District Office
Richards Street Annex
4041 North Richards Street
P.O. Box 12436
Milwaukee, Wisconsin 53212

Dear Ms. Red:

RE: Site Assessment for Underground Storage Tank Closure
University of Wisconsin - Waukesha UST No. 84
1500 North University Drive
Waukesha, Wisconsin
WDNR File Ref. No. 268181650 ER-LUST

On behalf of the Waukesha County Department of Environmental Resources, Foth & Van Dyke is submitting documentation for the closure of a 300-gallon leaded gasoline underground storage tank (UST). The former UST system was located at the University of Wisconsin - Waukesha, 1500 North University Drive, Waukesha, Wisconsin. The UST system was closed on August 18, 1994 in accordance with Wisconsin Administrative Code Chapter ILHR 10.

This report contains a description of site activities, analytical results of soil samples collected during the closure of the system, and documentation of disposal of the tank cleaning waste and the decommissioned tank.

ILHR 10.732(1) requires that a site assessment be performed before completion of the permanent closure of the UST system. This site assessment report has been prepared and is being submitted pursuant to the general requirements of ILHR 10.732 and ILHR 10.734 of the Wisconsin Administrative Code.

If you have any questions or comments concerning the tank closure or the site, please contact the undersigned at (414) 359-2500.

Sincerely,

Foth & Van Dyke

John S. Fry
Certified Site Assessor

Edwin W. Morse, P.G.
Senior Hydrogeologist

JSF:EWM:kmw1

Enclosure

KMW1\94W058

Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 84 1500 North University Drive Waukesha, Wisconsin - Waukesha County Department of Environmental Resources

Distribution

No. of Copies	Sent To
1	Ms. Giselle Red Wisconsin Department of Natural Resources Southeast District Office Richards Street Annex 4041 North Richards Street P.O. Box 12436 Milwaukee, Wisconsin 53212 Phone: (414) 961-2741
1	Ms. Leslie Williams Hazardous Materials Coordinator Waukesha County Department of Environmental Resources 1320 Pewaukee Road, Room 260 Waukesha, Wisconsin 53188 Phone: (414) 896-8300
1	Ms. Laura Stauffer Risk Manager Waukesha County Department of Administration 1320 Pewaukee Road, Room 310 Waukesha, Wisconsin 53188 Phone: (414) 548-7020

Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 84 1500 North University Drive Waukesha, Wisconsin

Scope I.D. 94W058

Prepared for
Waukesha County
Department of Environmental Resources
1320 Pewaukee Road, Room 260
Waukesha, Wisconsin 53188

Prepared by
Foth & Van Dyke and Associates Inc.
Two Park Plaza, Suite 950
10850 West Park Place
Milwaukee, Wisconsin 53224-3619

May 1995

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Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 84 1500 North University Drive Waukesha, Wisconsin - Waukesha County Department of Environmental Resources

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Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 84 1500 North University Drive Waukesha, Wisconsin - Waukesha County Department of Environmental Resources

Executive Summary

Underground storage tank (UST) No. 84 was a 300-gallon steel tank which contained leaded gasoline that served the original farm buildings on the property now used for the University of Wisconsin - Waukesha Campus. The UST had been abandoned in-place since the mid-1970s, and was permanently closed by removal on August 18, 1994.

During the excavation and removal of the tank, soil samples were collected for field screening and laboratory analysis to check for contamination in the soil.

During the tank closure, a petroleum product odor was present in the soil and the field screening results were high. Two soil samples were collected, one below each end of the tank, for laboratory analysis to confirm the contamination that was observed. The samples were analyzed for gasoline range organics (GRO) following the Wisconsin Department of Natural Resources (WDNR) Modified GRO Method, and the laboratory analysis results of the GRO samples were 2,400 milligrams per kilogram (mg/kg) beneath the west end of the tank and 2,300 mg/kg beneath the east end of the tank.

The tank was cleaned on-site, and the tank sludge and cleaning waste were removed from the site and disposed of by a licensed waste hauler. The tank was removed from the site and destroyed by being cut up into scrap. The UST excavation was then backfilled with the excavated material, until a remedial investigation can be performed.

Clean closure of UST No. 84 was not obtained and a remedial investigation is recommended.

1 Site Background Information

The site is located at the University of Wisconsin - Waukesha at 1500 North University Drive, Waukesha, Wisconsin. The site is located in Waukesha County within the southeast quarter of the northeast quarter of Section 32, Township 7 North, Range 19 East. The site location is shown on the "Site Location Map", Figure 1-1, which is a portion of the United States Geological Survey (USGS), Hartland Quadrangle, 7.5-minute series topographic map published in 1976. The elevation of the site is approximately 1,000 feet above mean sea level (msl). The area consists of gently rolling hills with residential subdivisions to the south, east, and northeast; and farmlands to the north and west. The depth to groundwater at the site is greater than 6 feet.

UST No. 84 was located in a grassy area on the south side of a wood garage building, just west of an asphalt service drive, on the far west side of the University of Wisconsin - Waukesha Campus, as shown on the "UWW Campus Layout Map", Figure 1-2. The wood garage building was originally constructed in 1945 as one of the outbuildings for the original farm that was located on this property before being sold to Waukesha County. The underground fuel tank was used for leaded gasoline for the farm machinery.

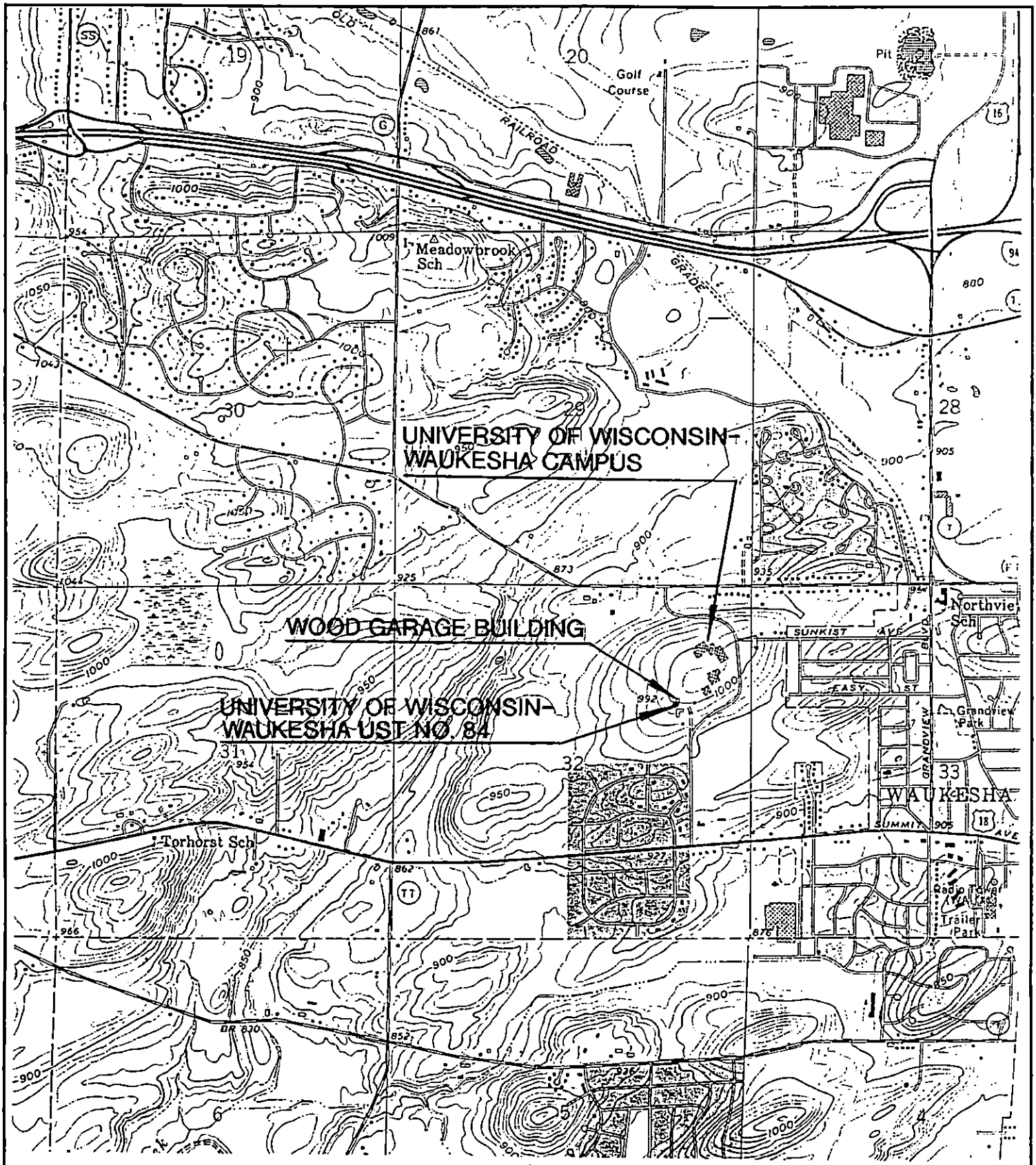
UST No. 84 was a 300-gallon single wall steel tank with riveted ends and a riveted longitudinal seam, and appeared to have been an old hot water boiler system storage tank before being converted for use as an underground gasoline storage tank. There were two plugged pipe fittings and a sealed drain valve fitting in the side of the tank. The fill, vent, and dispenser suction pipes were all located in the top of the tank and an 8-inch thick, 21-inch wide by 35-inch long concrete dispenser pad was located above the tank. The dispenser had been previously removed. Although product still remained in the tank, the tank had not been used since the mid-1970s when the farm was sold. A drawing of the UST system is shown on the "Site Layout Plan", Figure 1-3. The tank was registered with the Department of Industry, Labor and Human Relations (DILHR) on April 23, 1986 and the tank's DILHR Registration Number was 67060-0514. A copy of the "*Underground Petroleum Product Tank Inventory*" form (DILHR SBD-7437, N 04/85), submitted to DILHR when the tank was registered, is included in Appendix A. The "*Underground Petroleum Product Tank Inventory*" form was updated at the time of the tank closure to indicate that the tank was permanently closed by removal, and a copy of the updated form (DILHR SBD-7437, R 04/92) is also included in Appendix A.

The UST Owner/Operator is:

University of Wisconsin - Waukesha
1500 North University Drive
Waukesha, Wisconsin 53188

Contact Person:

Ms. Leslie Williams, Hazardous Materials Coordinator
Waukesha County Department of Environmental Resources
(414) 896-8300

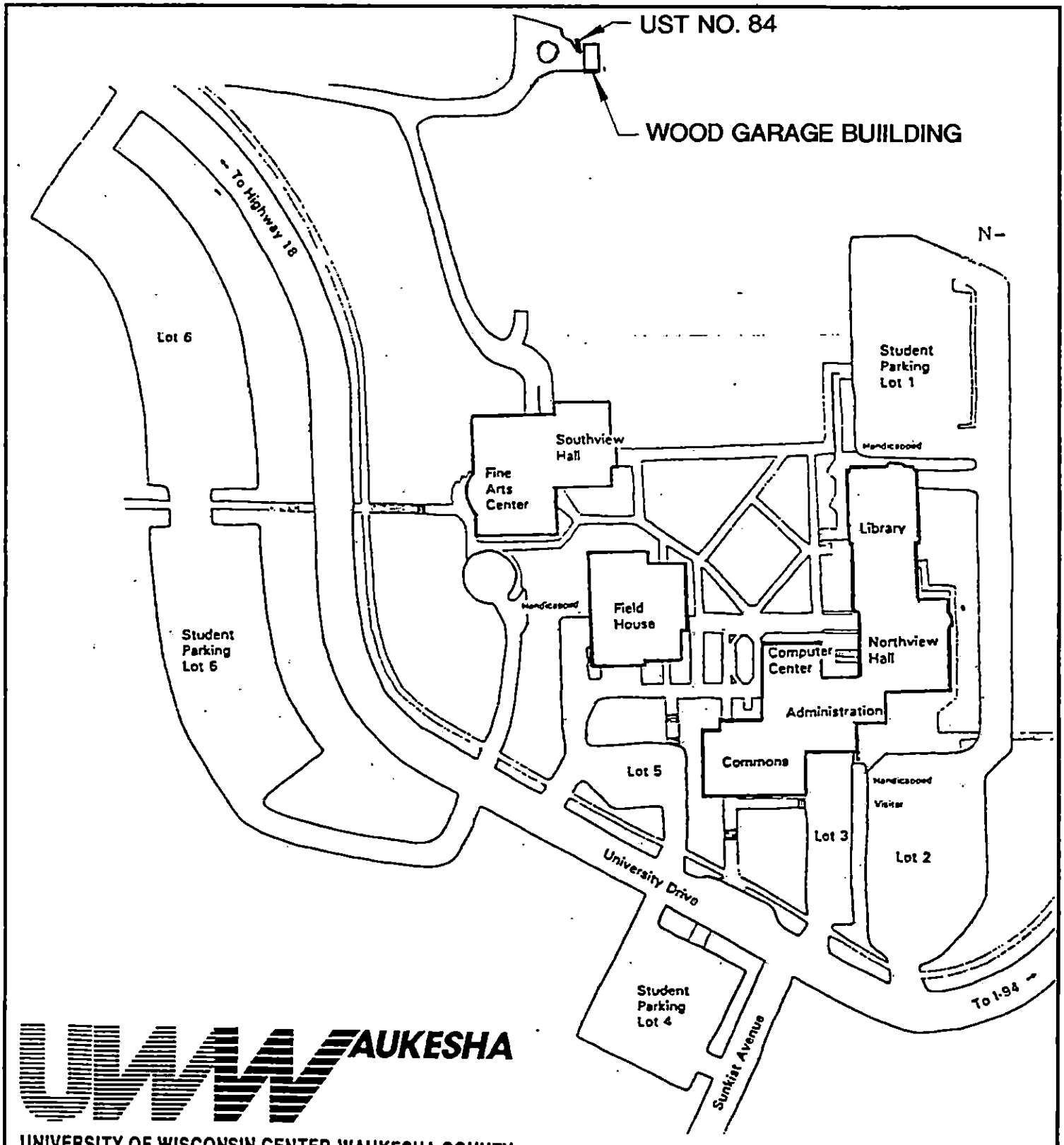


SOURCE: USGS 7.5 MIN. QUADRANGLE
HARTLAND, WISCONSIN

QUADRANGLE LOCATION

WAUKESHA COUNTY	94W058
FIGURE 1-1	
SITE LOCATION MAP UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	2
SCALE: APPROX. 1"=2000'	DATE: AUGUST, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1

94W058-1.DWG



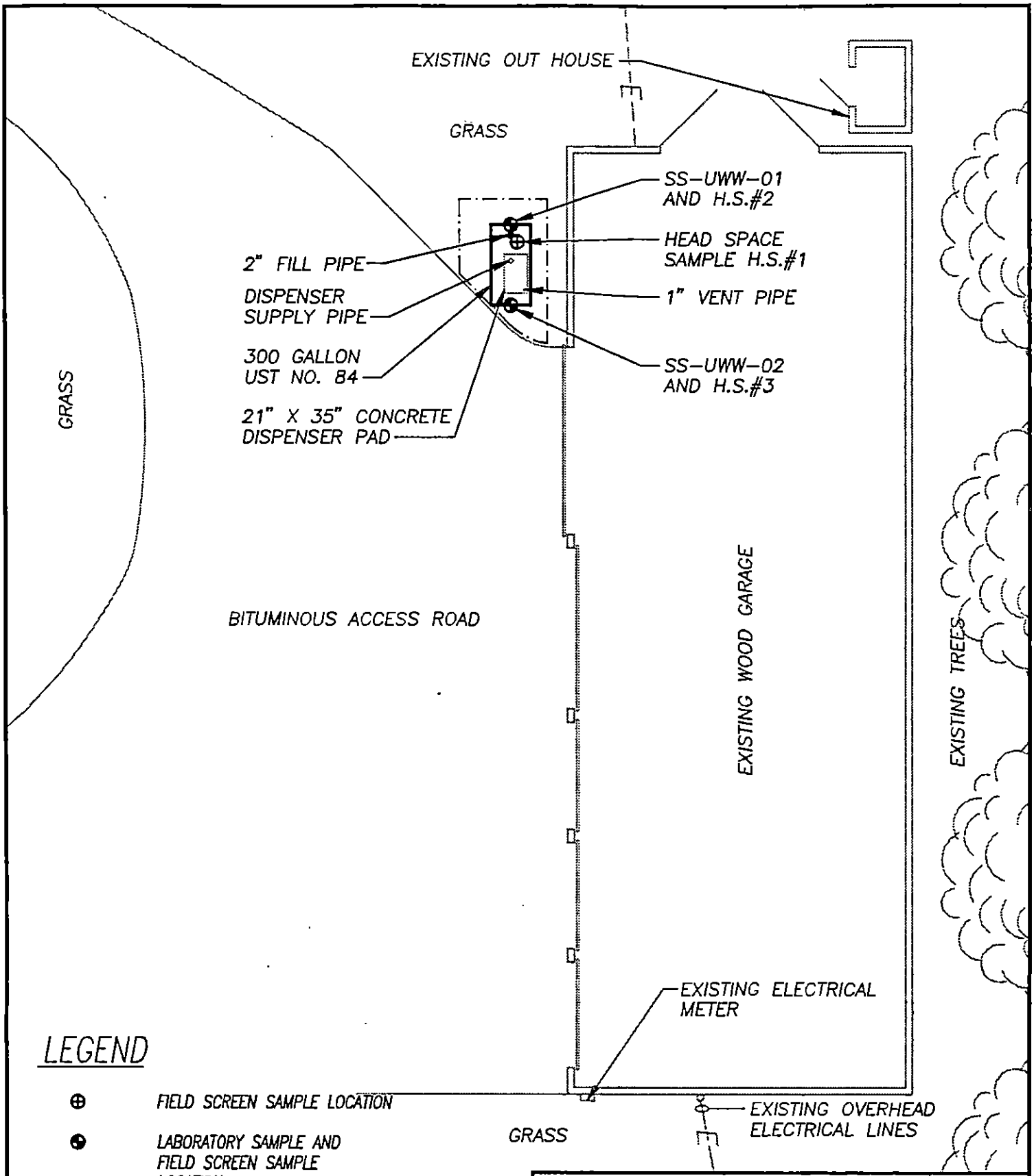
UWW WAUKESHA

UNIVERSITY OF WISCONSIN CENTER-WAUKESHA COUNTY

N

WAUKESHA COUNTY	94W058
FIGURE 1-2	
UWW CAMPUS LAYOUT MAP UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	
3	
SCALE: NOT TO SCALE	DATE: AUGUST, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1

94W058-1.DWG



LEGEND

- ⊕ FIELD SCREEN SAMPLE LOCATION
- ◒ LABORATORY SAMPLE AND FIELD SCREEN SAMPLE LOCATION
- —— · —— EXCAVATION LIMITS
- ——E—— OVERHEAD ELECTRIC
- ——E——— UNDERGROUND ELECTRIC

GRAPHIC SCALE

0 5' 10' 20'

WAUKESHA COUNTY	94W058
FIGURE 1-3	
SITE LAYOUT PLAN UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	
4	
SCALE: 1" = 10'	DATE: AUGUST, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1

94W058-1.DWG

The soil type at the site is the Hochheim loam (HmC2) according to the "*Soil Survey of Milwaukee and Waukesha Counties, Wisconsin*" (United States Department of Agriculture [USDA] Soil Conservation Service [SCS] in cooperation with University of Wisconsin, Wisconsin Geological and Natural History Survey Soils Department, and Wisconsin Agricultural Experiment Station, issued July 1971). Hochheim loam is part of the Hochheim series, which consists of soils that are well drained and loamy and are underlain by highly calcareous loam glacial till. In profile, the surface layer of the Hochheim series is very dark brown loam (about 3 inches thick); the subsurface layer is dark grayish-brown loam (about 3 inches thick); the subsoil (about 11 inches thick) is dark yellowish-brown and dark brown, slightly acid clay loam in the upper part and dark yellowish-brown or yellowish-brown, slightly calcareous heavy loam in the lower part; and the substratum is yellowish-brown, strongly calcareous gravelly loam glacial till. Hochheim soils are moderately permeable.

2 Work Functions

Petroleum Equipment, Inc. performed the excavating and tank removal procedures and had the tank cut up into scrap for disposal. National Tank Service of Wisconsin, Inc. performed the tank cleaning procedures. Foth & Van Dyke performed the site assessment procedures. Milsolv Corporation transported the tank sludge and cleaning waste to their facility in Menomonee Falls, Wisconsin for processing and final disposal. Miller Compressing Company disposed of the decommissioned tank. Tom Golson, Fire Inspector for the City of Waukesha Fire Department, witnessed the tank removal.

DILHR Certified Tank Remover

Petroleum Equipment, Inc.
3950 West Douglas Avenue
Milwaukee, Wisconsin 53209
(414) 466-3000
Remover: Erich Larsen
DILHR Cert. No. 00083
Expiration Date: 08/31/97

DILHR Certified Tank Cleaner

National Tank Service of Wisconsin, Inc.
1813 South 73rd Street
West Allis, Wisconsin 53214
(414) 257-0030
Cleaner: Scott Kalman
DILHR Cert. No. 00091
Expiration Date: 04/30/98
EPA W.I.D. No. 73838880

DILHR Certified Site Assessor

Foth & Van Dyke
10850 West Park Place, Suite 950
Milwaukee, Wisconsin 53224-3619
(414) 359-2500
Site Assessor: John Fry
DILHR Cert. No. 05318
Expiration Date: 05/26/97

Sludge/Waste Transporter and Disposer

Milsolv Corporation
N59 W14765 Bobolink Avenue
Menomonee Falls, Wisconsin 53051
(414) 252-3550
EPA W.I.D. No. 023350192

Tank Destruction

Miller Compressing Company
1640 West Bruce Street
Milwaukee, Wisconsin 53204
(414) 671-5980

3 Tank Closure

UST No. 84 was permanently closed by removal on August 18, 1994. Prior to the tank closure, the tank had been abandoned in-place. Some gasoline still remained in the tank.

The weather on the day of the tank closure was cloudy with a temperature of 68 degrees Fahrenheit (°F). During excavation, a brief thunderstorm occurred, which lasted for 10 minutes; otherwise, there was no other rain on the day of the closure or on the previous day.

UST No. 84 was a steel, single-wall tank, 36 inches in diameter by 70 inches long. The tank was of riveted construction and appeared to be a water storage tank prior to being used as a gasoline tank. The tank was constructed without a liner or an outside coating. The tank did not have any corrosion protection. The "*Checklist for Underground Tank Closure*" form (DILHR SBD-8951, R 12/91) was completed by Petroleum Equipment Inc. and a copy of the form is included in Appendix B.

The top of the tank was encountered approximately 15 inches below grade. The backfill material removed from above and along the side of the tank consisted of 3 inches of topsoil with grass, then about 24 inches of medium brown damp sandy loam and light clay. The vegetation around the UST site did not appear stressed or dead. There were no visible stains or petroleum product odor observed during the excavation and in the backfill material, but a petroleum product odor was noticed when collecting the soil samples from the native soil 2 feet below the tank. The bottom of the tank was located at approximately 4.25 feet below grade. Groundwater was not encountered in the excavation.

The condition of the tank was fair. The tank was heavily rusted but there were no visible holes rusted through.

Before the tank was cleaned, the atmosphere within the tank was monitored for combustible vapor levels, then vented using a blower. The tank was cleaned while it was still in the excavation. A 2-foot by 5-foot section was cut out of the side wall of the tank to gain access to the inside of the tank for cleaning. Approximately 18 to 20 gallons of gasoline was bailed out of the tank and placed into a 55-gallon drum. An absorbent material ("oil dry") was then placed inside the tank to soak up the remaining gasoline and sludge, which was subsequently removed and placed into the 55-gallon drum for disposal. The tank sludge and cleaning waste was transported off-site by Milsolv Corporation to their facility in Menomonee Falls, Wisconsin for processing and final disposal, under their EPA I.D. number identifying Milsolv Corporation as the generator. A copy of the "*Generator's Certification*", and Milsolv Corporation's "*Bill of Lading*" and letter documenting final disposal of the sludge and waste are included in Appendix C. The tank was removed from the site by Petroleum Equipment, Inc. and taken back to their facility where it was cut up into scrap and then salvaged (destroyed) by Miller Compressing Company. A copy of the letter documenting destruction of the tank is included in Appendix C.

The excavated soil was then placed back into the excavation, covered with plastic, and then additional clean backfill material added to fill the excavation even with the surrounding grade.

Photographs of the UST site including excavation, tank removal, and decommissioned tank are included in Appendix D.

4 Soil Sample Methodology

Soil samples from the tank excavation were collected from the backfill material surrounding the fill pipe at the top of the tank and from the bottom of the excavation in native soil approximately 2 feet below each end of the tank. Samples from below the ends of the tank were taken from the backhoe bucket. The soil sample at the fill pipe was a headspace sample for field screening, and the two samples from below the tank consisted of samples for laboratory analysis and headspace samples for field screening. Soil sampling locations are identified on the "Site Layout Plan", Figure 1-3.

Headspace samples collected from the excavation were field screened using a photoionization detector (PID) for the presence of volatile organic compounds (VOCs) following the headspace sample container analysis procedure, as described in Wisconsin Administrative Code ILHR 10, Attachment No. 2. The PID used was a Photovac MicroTIP HL-200 (Serial No. PA910111) with a 10.6 electron-volt (eV) lamp. The PID was field calibrated to a span gas with a concentration of 100 parts-per-million (ppm) isobutylene on August 18, 1994 at 9:00 a.m., prior to measuring the headspace samples.

The two soil samples collected from below the tank were analyzed for GRO following the WDNR Modified GRO method. Soil samples were analyzed by En Chem Inc., 1795 Industrial Drive, Green Bay, Wisconsin 54302. A copy of the laboratory analysis report and the chain-of-custody record are included in Appendix E. Samples collected for laboratory analysis were obtained using En Chem Inc.'s "Encore Sampler", stainless steel cartridges with gasketed caps, and sampling handle to provide headspace free GRO samples that weighed approximately 25 grams. A separate cartridge was used for each sample. Samples were preserved with methanol at the laboratory. A copy of the Encore Sampler instructions are included in Appendix E. Dry weight samples were also collected.

The headspace sample collected at the fill pipe (Sample No. H.S. #1) had a PID reading of 12.5 ppm relative to isobutylene. The soil sample collected from under the west end of the tank (Sample No. SS-UWW-01) had a GRO concentration of 2,400 mg/kg and the corresponding headspace sample (Sample No. H.S. #2) had a PID reading of 1,213 ppm relative to isobutylene. The soil sample collected from under the east end of the tank (Sample No. SS-UWW-02) had a GRO concentration of 2,300 mg/kg and the corresponding headspace sample (Sample No. H.S. #3) had a PID reading of 689 ppm relative to isobutylene just before the display on the PID went to "over 9999 ppm". Headspace Sample Nos. H.S. #2 and H.S. #3 had noticeable petroleum product odor. Sampling results are summarized in Table 4-1.

Table 4-1

Laboratory and Field Screening Results for University of Wisconsin - Waukesha UST No. 84

Soil Sample I.D. No.	Sample Location	Sample Depth (ft.)	Soil Type	Moisture Content	Date Collected	Time Collected	Sample Odor	Field Reading (i.u.)	Gasoline Range Organics (mg/kg)
H.S. #1	Top of tank, at fill pipe	1.25	Sandy loam	Damp	08/18/94	8:40	None	12.5	N/A
H.S. #2	2 feet below west end of tank	6.25	Clay	Moist	08/18/94	10:23	Yes	1,213.0	N/A
H.S. #3	2 feet below east end of tank	6.25	Clay	Moist	08/18/94	10:35	Yes	689.0[1]	N/A
SS-UWW-01	2 feet below west end of tank	6.25	Clay	Moist	08/18/94	10:23	Yes	N/A	2,400
SS-UWW-02	2 feet below east end of tank	6.25	Clay	Moist	08/18/94	10:35	Yes	N/A	2,300

[1] = highest reading before display on PID changed to "over 9999 ppm"
ft. = feet
i.u. = instrument units as isobutylene
mg/kg = milligrams per kilogram
N/A = Not Analyzed

5 Conclusion and Recommendations

Although there were no visible stains on the tank, or in the backfill material around the tank and pipe fittings, there was a petroleum product odor in the excavation below the bottom of the tank which indicated the presence of a release. The high PID field screening results supported the observations of contamination. Two soil samples for laboratory analysis were collected to confirm a release.

On August 18, 1994, Stephanie Shaw of the WDNR-Southeast District Office was notified of the release of petroleum-related contamination at the UW-Waukesha UST No. 84 site. The WDNR File Reference Number established for this tank is File Ref. No. 268181650 ER-LUST. A copy of the confirmation letter from the WDNR is included in Appendix F.

Petroleum Equipment, Inc. backfilled the excavation (to eliminate a safety hazard due to an open excavation) until a remedial investigation can be performed. The excavation was backfilled with the originally excavated soil, plastic was placed over the backfill material, and then clean backfill was placed on top of the plastic to fill the excavation to grade.

Clean closure of UST No. 84 was not obtained and a remedial investigation is recommended.

APPENDIX I

UST No. 84 site Investigation / Remedial Options Analysis Report

SITE INVESTIGATION/
REMEDIAL OPTIONS ANALYSIS REPORT
University of Wisconsin-Waukesha UST No. 84
Waukesha, Wisconsin
WDNR FID No. 268181650 ER-LUST
Delta No. I096-115

Prepared For:

Waukesha County Department of Environmental Resources
Division of Environmental Health
1320 Pewaukee Road
Waukesha, WI 53188

Prepared By:

Delta Environmental Consultants, Inc.
2775 South Moorland Road, Suite 300
New Berlin, Wisconsin
(414) 789-0254

November 21, 1997

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Appendix B	Potable Well Construction Form
Appendix C	Hydraulic Conductivity Analytical Data
Appendix D	Soil Analytical Laboratory Report
Appendix E	Monitoring Well Construction, Development and Abandonment Forms
Appendix F	Ground Water Analytical Laboratory Report
Appendix G	Biodegradation Phase I Ground Water Parameters
Appendix H	Methods and Procedures

Executive Summary

This report was prepared for Waukesha County Department of Parks and Land Use by Delta Environmental Consultants, Inc. (Delta) of New Berlin, Wisconsin in accordance with Wisconsin Administrative Code (WAC) Chapter (ch.) NR 716.15, 722 and Department of Commerce (COMM) 47. Delta conducted a remedial investigation (RI) at the University of Wisconsin - Waukesha, 1500 University Drive, Waukesha, Wisconsin from July 1996 through February 1997.

Soil sampling occurred at the site during underground storage tank (UST) removal activities in May 1995. Additionally, nine soil borings (GB-1 through GB-6 and MW-1 through MW-3) were advanced on the site. Based on analytical results and field measurements, residual petroleum soil impacts exist on site generally in the vicinity of the former UST basin from 6 to 10 feet below ground surface (bgs). Selected soil samples collected from the site contained benzene, ethylbenzene, toluene, xylene (BETX) and gasoline range organics (GRO) impacts in excess of the WAC ch. NR 720 residual contaminant levels (RCLs).

Groundwater has been encountered at depths ranging from 5.2 to 8.4 ft. bgs across the site in unconsolidated glacial deposits since monitoring began in February 1997. Shallow groundwater flow direction on site has been to the southeast.

Groundwater analytical results from the August 1997 sampling event indicate benzene, toluene, ethylbenzene, xylenes and naphthalene concentrations in excess of WAC NR 140 Enforcement Standards (ES) in monitoring well MW-2.

A remedial action options analysis has been prepared in accordance with WAC COMM 47.33, 47.335, and WAC Ch. NR 722. Three remedial alternatives were evaluated with respect to technical and economic feasibility to remediate impacted soil and ground water at the site including remediation by natural attenuation (RNA), limited soil removal with ground water monitoring, and air sparging (AS) with ground water monitoring.

Ground water biodegradation data collected during each sampling event indicates that natural attenuation processes are active and may be limiting dissolved-phase hydrocarbon ground water impacts.

Based on the remedial action options evaluation, the most technically and economically feasible alternative for remediating petroleum hydrocarbon impacted soil and ground water at this site is natural attenuation. The total cost associated with this option is approximately $22,394 over a two-year or less time period to achieve site closure.

Site Investigation/Remedial Options Analysis Report
University of Wisconsin-Waukesha UST No. 84
Waukesha, Wisconsin
WDNR FID No. 268181650 ER-LUST
Delta No. I096-115

1.0 INTRODUCTION

1.1 Purpose

This report presents results of the site investigation performed at the University of Wisconsin-Waukesha (site) located at 1500 North University Drive, Waukesha, Wisconsin (NE 1/4, NE 1/4, Section 32, T7N, R19E) (Figure 1). The purpose of the investigation was to define the extent and degree of subsurface petroleum hydrocarbon soil and ground water impacts. This investigation was conducted in response to impacted soils discovered during the removal of a 300 gallon gasoline underground storage tank (UST) on August 18, 1994. The Waukesha County Department of Parks and Land Use authorized Delta Environmental Consultants, Inc. (Delta) to proceed with the investigation on July 10, 1996.

The remedial action options that are reasonable for site conditions are presented in Section 5.0 of this report. They are evaluated with respect to feasibility, clean-up effectiveness and cost effectiveness. Based on evaluation of data compiled in this report, remediation by natural attenuation with two years of ground water monitoring (Section 5.1) is the recommended option for addressing on-site soil and ground water impacts and achieving site closure. The total cost associated with this option through site closure is approximately $22,394 based on two years of quarterly ground water monitoring, including ground water biodegradation parameter monitoring and laboratory analysis of petroleum volatile organic compounds (PVOCs) and gasoline range organics (GRO).

1.2 Scope of Services

The following tasks were performed by Delta during the investigation:

◊ Advanced six Geoprobe soil borings (GP-1 through GP-6) to a maximum depth of 16 feet below ground surface (ft bgs) in the area of the former UST for soil sample collection, on August 14, 1996;

- Submitted 12 soil samples (two from each boring) to National Environmental Testing, Inc. (NET) of Watertown, Wisconsin, for laboratory analysis of volatile organic compounds (VOCs), GRO and total lead;

◊ Installed three monitoring wells to a maximum depth of 18 ft bgs (MW-1 through MW-3), on February 11, 1997;

- Collected two soil samples from MW-2 (installed within the former UST excavation), and submitted them to NET for laboratory analysis of VOCs, GRO and total lead;

- ◊ Collected samples from monitoring wells MW-1 through MW-3 for laboratory analysis of VOCs and dissolved lead on February 27, and PVOCs, GRO and naphthalene on May 8 and August 25, 1997;
- ◊ Collected ground water elevation measurements and monitored biodegradation parameters at all wells during each sampling event;
- ◊ Performed hydraulic conductivity tests on MW-1 and MW-3 on February 20, 1997;
- ◊ Performed a potable water well survey to identify wells with one-quarter mile radius of the site;
- ◊ Prepared this report in accordance with Wisconsin Administrative Code (WAC) Chapter (ch.) NR 716, 722 and Department of Commerce (COMM) 47.

2.0 BACKGROUND INFORMATION

2.1 Site Description

The site is located in the NE 1/4 of the NE 1/4 of Section 32, Township 7 North, Range 19 East in Waukesha, Waukesha County, Wisconsin (Figure 1). The site was a farm until approximately 1970, when the University of Wisconsin-Waukesha (UW-W) acquired the property. One 300 gallon UST was located on the south side of a garage, formerly a farm building, for fueling farm equipment. Reportedly, the UST was not used by UW-W since purchase, and still contained product at the time of its removal on August 18, 1994 (Figure 2).

2.2 Previous Work

The 300 gallon gasoline UST was removed on August 18, 1994. Petroleum impacted soil was discovered at the site during the tank removal. Foth & Van Dyke performed closure assessment activities which consisted of collecting soil samples from the base of the excavation after UST removal (*Site Assessment for Underground Storage Tank Closure*, dated May 1995, prepared by Foth & Van Dyke). No holes in the tank or soil staining were observed at the time of removal, although petroleum odors were noted within the excavation during soil sample collection after tank removal. Two soil samples were collected from the base of the excavation, at a depth of 6.25 ft bgs, and submitted for laboratory analysis of GRO. GRO concentrations of 2,300 and 2,400 milligrams per kilogram (mg/kg) were detected in the samples collected under the east and west ends of the tank respectively. All soil was returned to the excavation after tank removal.

3.0 SITE INVESTIGATION ACTIVITIES AND RESULTS

3.1 Regional Geology

The site lies in an area of glacial drift deposits overlying the undifferentiated, cherty and shaly dolomite in the Rock-Fox River Basin. The surficial drift sediments are primarily composed of unstratified and unsorted till, sand and gravel deposits and glacial end moraines formed at the maximum advance of the ice front prior to retreat (Cotter, Hutchinson, Skinner and Wentz, 1969). The thickness of the unconsolidated deposits beneath the study area is greater than 18 ft bgs, the maximum explored depth.

3.2 Site Soils and Geology

Delta supervised advancement of six Geoprobe borings (GB-1 through GB-6) to depths of 10 to 16 ft bgs on August 14, 1996 and three soil borings (completed as monitoring wells MW-1, MW-2 and MW-3) to depths of 15.5 to 18 ft bgs using hollow stem augers on February 11, 1997 (Figure 3). The near surface sediments beneath the asphalt and grass surfaces at the site consisted of sandy to clayey silt with few pebbles and cobbles to 18 ft bgs, the maximum explored depth. A gravely layer could not be penetrated during installation of MW-3(R), at 9.5 ft bgs. The well was installed approximately five feet to the west. Geologic cross-sections are included as Figures 4 and 5. Soil boring logs and borehole abandonment forms are included in Appendix A.

3.3 Regional Hydrogeology

The three primary ground water aquifers include the unconfined glacial aquifer, the dolomite Niagara aquifer (Silurian) and the deep sandstone aquifer. The glacial aquifer is comprised of shallow, unconsolidated, fine and mixed grain sediments; few water supply wells are found in this aquifer. Underlying the glacial aquifer are Silurian and Ordovician dolomites and shales. Beneath these are the Ordovician and Cambrian sandstones and shales (*Gonthier, 1975*).

After monitoring well development, depth to ground water was approximately six ft bgs on February 27, 1997. During the most recent ground water sampling event (August 25, 1997), the water table had risen approximately one foot across the site. Ground water elevation data are summarized on Table 1. Ground water flow is to the southeast, generally conforming to the surface topography, with a hydraulic gradient of 0.04 feet per foot (ft/ft) (Figure 6).

Hydrogeological literature and the private potable well construction report for the nearest well, located approximately 1700 feet north, indicate that ground water encountered at the site is likely in a perched zone. The static water level within the private well was measured at 91 ft bgs, within "limestone," at the time of construction (1989). Regional ground water is estimated at approximately 900 feet above mean sea level (msl) within the Niagara aquifer (*Gonthier, 1975*). (Due to their similarity in appearance, the dolomite aquifer is usually referred to as limestone by well drillers.) The site is located on a topographic high, approximately 1000 ft msl. The well construction report is included in Appendix B.

3.3.1 Hydraulic Conductivity

In situ hydraulic conductivity tests (slug tests) were performed in monitoring wells MW-1 and MW-3 to estimate the local hydraulic conductivity of the saturated subsurface materials. After each test was performed, the data were evaluated using the Bouwer and Rice Method (1976).

Evaluation of the data indicates the hydraulic conductivity for the subsurface soils beneath this site ranges from 0.751 to 1.59 feet per day (2.65×10^{-4} to 5.61×10^{-4} centimeters per second [cm/sec]).

The average linear flow velocity (V) can be calculated using the following equation:

$$V = \frac{Ki}{n}$$

V = Average Linear Flow Velocity

K = Estimated Hydraulic Conductivity (1.17 ft/day, average)

i = Average Hydraulic Gradient (0.04)

n = Effective Porosity (10%)

The estimated average ground water linear flow velocity across the site is 171 feet per year. This value is typical of the silty to sandy soils encountered across the site. Data and results from the in situ hydraulic conductivity tests are included in Appendix C.

3.4 Soil Sampling Analytical Results

During the Geoprobe investigation on August 14, 1996, soil samples were described and classified at continuous two foot intervals. Field screening (headspace analysis) for the presence of organic vapors was performed on each soil sample using an organic vapor meter equipped with a photoionization detector (PID) and recorded in the boring logs (Figure 3). Elevated headspace readings were measured in borings GP-3 and GP-4. Soil samples from the interval with the highest PID reading, or at the ground-water interface, and from the bottom of the borehole were submitted to NET for laboratory analysis of VOC, GRO and lead. Results are summarized on Table 2.

GRO and/or VOC concentrations in excess of WAC (ch.) NR 720 residual contaminant levels (RCLs) were detected in sample GP-2 (8 to 10 ft bgs), GP-3 (6 to 8 ft bgs and 8 to 10 ft bgs) and GP-4 (6 to 8 ft bgs) (Table 2). GRO concentrations ranged from 14 mg/kg to 890 mg/kg, with RCL exceedances (100 mg/kg) at GP-3 and GP-4. Benzene concentrations ranged from 86 ug/kg to 1000 ug/kg at GP-2, GP-3 and GP-4, which exceeds the RCL of 5.5 ug/kg. Ethylbenzene, toluene and total xylene concentrations at GP-3 and GP-4, at 6 to 8 ft bgs, were above their respective RCLs. The laboratory analytical reports are included in Appendix D. Headspace, benzene and GRO results are shown on Figure 3.

On February 11, 1997, additional soil samples were collected during installation of three ground water monitoring wells (MW-1 through MW-3). Saturated soil from MW-2, located within the former UST excavation, exhibited elevated headspace readings ranging from 36 to 345 instrument units. Soil samples collected from the interval with the highest PID reading (6 to 8 ft bgs) and from 12 to 14 ft bgs, were submitted for laboratory analysis of GRO, VOCs and lead. GRO, benzene, toluene, ethylbenzene and xylene (BTEX) concentrations in the sample collected from the 6 to 8 ft bgs interval exceeded their respective RCLs (Table 2). No soil samples were collected from MW-1 or MW-3. Based on ground water elevation and soil analytical data, residual soil impacts are present beneath the water table and are not a true representation of soil chemistry but rather hydrocarbon impacts to ground water. Well construction and development forms and the MW-3R abandonment form are included in Appendix E.

3.5 Ground Water Sampling Analytical Results

Ground water has been sampled quarterly at all three wells since February 1997. Samples have been submitted to NET for laboratory analysis. Dissolved lead and VOC analyses (using EPA method 8260) were performed on the first round of ground water samples collected on February 27, 1997. Only the sample from MW-2 exhibited VOC concentrations other than PVOC or naphthalene. Samples from the two subsequent sample rounds were analyzed for PVOCs, GRO and naphthalene. Copies of the complete ground water analytical reports are included in Appendix F and summarized on Table 3 and Figure 6.

Ground water collected from MW-2 (in the former UST area) has exhibited benzene, toluene, xylene and naphthalene concentrations that exceed WAC ch. NR 140 enforcement standards (ESs) for all three sample rounds. An ethylbenzene concentration of 2,200 ug/L on August 8, 1997 also exceeded the ES of 700 ug/L. In addition, PVOC concentrations at MW-2 have increased over time.

The increases in PVOC concentrations in MW-2 coincides with a continued rise in water table elevations over the last two sampling events. This indicates that as the ground water table rises, petroleum constituents in the soil near the water table surface are flushed into the ground water, resulting in greater dissolved-phase hydrocarbon concentrations.

No hydrocarbon constituents have been detected in samples from MW-3 at concentrations that exceed ESs. At MW-1, benzene was detected at 120 ug/L on May 8, 1997, but decreased to 1.7 ug/L in the next sample round. PVOC concentrations at MW-1 have decreased from May to the August 8, 1997.

3.6 Ground Water Biodegradation Data

Field measurements of Biodegradation Phase 1 Parameters, including dissolved oxygen (DO), temperature, conductivity, pH, reduction-oxidation potential (redox) and total/dissolved iron, were measured in all monitoring wells in conjunction with each sampling event. A list of parameters and their significance is included in Appendix G. A summary of all historic data is on Table 3.

Field measurements measured during the August 25, 1997, monitoring event identified relatively high DO (4.7 to 5.3 parts per million (ppm) in slightly impacted down-gradient wells, MW-1 and MW-3. DO concentrations of 1 to 2 ppm are generally considered necessary for aerobic respiration and petroleum hydrocarbon biodegradation to readily occur. Redox ranged from +24 to +54 millivolts for all the wells, providing evidence of an oxidizing environment for biodegradation. Low to moderate total/soluble iron levels provide further evidence of the predominantly oxidizing conditions in the site ground water, despite fairly high dissolved-phase hydrocarbon concentrations in MW-2.

DO levels noted in down-gradient well locations provide sufficient passive aerobic biodegradation capacity for source contamination from MW-2 to attenuate to low or non-detect concentrations by the time ground water migrates to the down-gradient well locations. Oxidizing redox values and low soluble/total iron ratios also indicated an oxidizing (aerobic)

ground water environment. Dissolved-phase plume stability since February 1997 has been due to aerobic range DO levels across the site and redox measurements that confirm an aerobic groundwater environment. The data indicated that site conditions remain conducive to biodegradation and that biodegradation processes, together with non-degradation natural attenuation processes, are maintaining dissolved-phase plume dimensions to typically less than 45 feet from MW-2.

3.7 Receptor Surveys

3.7.1 Ground Water Receptor Survey

The City of Waukesha gets its drinking water from 12 municipal wells drilled into dolomite and sandstone bedrock to depths of 314 to 2266 ft bgs (Syftestad, 1985). Private potable wells are used outside the city limits. Delta requested well location and construction information from the Wisconsin Geological and Natural History Survey (WGNHS) for potable wells within a one-quarter mile radius of the site. No wells were identified within one-quarter mile, however, one well was identified approximately 1700 feet north of the subject site on Northview Road. The well, drilled to a depth of 198 ft bgs, is hydrogeologically up-gradient and therefore, not considered a receptor of site impact. A copy of the well construction report is included in Appendix B.

3.7.2 Current and Future Land Use

The site is zoned P-3 for public lands and institutions and the surrounding land use is residential. According to Mr. Mike Hoeft, city of Waukesha Planning Director, continued development of residential subdivisions utilizing municipal water is planned in the area.

4.0 REMEDIAL INVESTIGATION SUMMARY AND CONCLUSIONS

Saturated zone soil impacted by the former gasoline UST release is localized to the former UST area. Petroleum hydrocarbon concentrations above RCLs were detected in the Geoprobe borings advanced nearest to and immediately down-gradient from the former excavation (GP-2, GP-3 and GP-4) at 6 to 10 ft bgs. GRO and BTEX concentrations within the former excavation, at 6 to 8 ft bgs in MW-2, also exceeded RCLs.

Dissolved-phase hydrocarbons in ground water are also generally confined to the former UST area. PVOC concentrations in all three sample rounds from MW-2 exceeded ch. NR 140 ESs. Additionally, the trend of increasing concentrations noted at MW-2 coincides with the rise in the water table. This indicates that as the ground water table rises, petroleum constituents in the soil near the water table surface are flushed into the ground water, resulting in greater dissolved-phase hydrocarbon concentrations. However, only benzene, the most soluble and therefore the most mobile BTEX compound, has been historically detected in down-gradient well MW-1 at a concentration that exceeded its ES (May 1997). There were no BTEX ES exceedances at MW-1 in the latest (August) sampling round. Ground water conditions within and down-gradient from the source area remain conducive to aerobic biodegradation and together with subsurface conditions (permeability, infiltration, ground water flow, etc.) are preventing appreciable plume migration.

5.0 REMEDIAL OPTIONS ANALYSIS

This Remedial Action Options Analysis has been prepared in accordance with the following chapters of the WAC: COMM 47.33, 47.335, and WAC ch. NR 722. Three remedial alternatives were evaluated with respect to technical and economic feasibility to remediate impacted soil and ground water at the site including:

- Remediation by natural attenuation (RNA) with two years of ground water monitoring.
- Limited soil excavation (75 cubic yards) with one additional year of ground water monitoring.
- Air sparging with ground water monitoring

A generalized cost comparison is made between the three alternatives (Table 4) and a detailed cost estimate of the selected alternative is also included (Table 5).

5.1 RNA With Two Years of Ground Water Monitoring

5.1.1 Description

RNA includes biodegradation (both aerobic and anaerobic) of petroleum impacts by indigenous microbes and retardation of impacts by other natural processes (dilution, absorption, chemical adsorption, dispersion, etc.) resulting in a reduction of impacts over time.

5.1.2 Site Applicability

Several factors were evaluated with respect to natural attenuation as an alternative for remediating subsurface impacts at this site. These factors are described below:

- Current and Future Land Use: The site is zoned P-3 for public lands and institutions and the surrounding land use is residential. According to Mr. Mike Hoeft (city of Waukesha Planning Director), residential development utilizing municipal water is planned in the area.
- Receptor Surveys: A ground water receptor survey was performed for this site indicates that there were no wells within a one-quarter mile radius of the site. The nearest identified well is approximately 1700 feet north and up-gradient from the release source. The well was installed in 1989. The well was completed in the "limestone" aquifer at a depth of 198 feet bgs. The operational status of this well was not identified, however, this entire area is supplied drinking water by the city of Waukesha. Based on the location and direction of the private well, it does not appear to act as a receptor of site ground water.
- Site Geology and Hydrogeology: Soil on site is moderately permeable sandy to clayey silt with few pebbles and cobbles. The estimated average hydraulic conductivity at the site is 4×10^{-4} cm/sec based on in situ slug test data. Based on the August 1997 data, the calculated hydraulic gradient at the site is approximately 0.04 ft/ft across the site. Flow velocity using the

estimated hydraulic conductivity was calculated at 171 ft per year and the direction of ground water flow is to the southeast. Based on the flow direction and velocity and the location of downgradient monitoring wells (which were below ES in August), any remaining dissolved-phase hydrocarbon impacts are expected to be limited to the immediate source area (former UST basin).

- Soil Analytical Results: Soil analytical results from samples collected during remedial investigation activities indicate the presence of hydrocarbon impacts in saturated and unsaturated zone soils in the vicinity of the former gasoline UST basin at depths of 6 to 10 feet bgs. Reductions in concentrations of dissolved-phase impacts would take place in time due to flushing from ground water table fluctuations.

- Ground Water Analytical Results: Results of ground water analysis from August 1997 indicate WAC ch. NR 140 ES exceedances exist in MW-2. PVOC concentrations in both downgradient monitoring wells (MW-1 and MW-3) do not exceed WAC ch. NR 140 ES. Although impacts in MW-2 have increased over the three sampling events, this is likely due to increasing water table elevations. Also, impacts are not noted in down gradient monitoring wells, therefore, ground water impacts have been defined. Additional sampling is required to confirm RNA as a viable remedial option.

- Ground Water Biodegradation Data: Ground water biodegradation parameters collected and evaluated for this site indicate passive aerobic biodegradation is occurring in ground water beneath this site (refer to Section 3.6), and has contributed to the stability and reduction of PVOC compounds in MW-1 and MW-3 since sampling began in February 1997.

The primary goal for RNA is to reduce soil and ground water impacts to below the WAC ch. NR 720 RCLs and NR 140 ESs on the property, respectively. Based on evaluation of the above site specific results, RNA is a feasible alternative for remediating residual subsurface petroleum hydrocarbon impacts at this site.

5.1.3 Estimated Costs

- The following assumptions were made for estimating purposes:

- Quarterly ground water sampling for biodegradation parameters and PVOC/GRO;

- Projected duration of two years.

Total estimated costs are $22,394. A detailed cost estimate is located on Table 5.

5.2 Limited Soil Removal With Ground Water Monitoring

5.2.1 Description

This remedial alternative is considered an effective method for addressing soil and ground water impacts because of the relatively small amount of soil removal required. Field data show that biodegradation processes will promote attenuation of residual hydrocarbon impacts in ground

water. The advantage of this option is source removal and reduced site monitoring with expedited case closure.

The primary goals for this remedial alternative are:

- To remove impacted soil that could continually act as a source of dissolved-phase hydrocarbons to ground water;
- To allow natural attenuation to address residual hydrocarbons from ground water following source removal.

5.2.2 Site Applicability

This alternative involves the excavation of limited source area soil impacts in the area of MW-2, GP-3 and GP-4. Primary soil impacts were encountered from 6 ft bgs to 10 feet (approximate ground water depth . Impacted soil removal would consist of excavating an approximate 10 foot by 20 foot area including the three impacted points, to the approximate water table depth (approximately 75 cubic yards total). After soil excavation is complete, four quarters of ground water monitoring would follow, to demonstrate that natural attenuation had reduced ground water impact to acceptable levels.

This remedial alternative is considered an effective method for addressing soil and ground water impacts because of the relatively small amount of soil removal required. Field data show that biodegradation processes will promote attenuation of residual hydrocarbon impacts in ground water following soil removal. The advantage is reduced site monitoring and expedited case closure.

5.2.3 Estimated Costs

The following assumptions are made for estimating purposes:

- Removal of 75 cubic yards of petroleum impacted soil in the vicinity of the former 300 gallon gasoline UST.
- Replacement of MW-2 within the excavation for ground water monitoring.
- Quarterly ground water sampling for one year.

A cost estimate is included on Table 4. The total estimated cost for this alternative is approximately $34,075.

5.3 Air Sparge/ Soil Vapor Extraction (AS/ SVE)

5.3.1 Description

Air sparging (AS) is an effective remediation technique for removing dissolved phase ground water impacts by delivering air into the saturated zone to promote in-situ bioremediation of dissolved phase petroleum hydrocarbons in the ground water.

Soil Vapor Extraction (SVE) is used for removing absorbed phase soil impacts by extracting air and vapors from unsaturated zone soils. SVE is typically utilized as a complementary remediation technology to AS. SVE systems can function to remove petroleum hydrocarbon impacts absorbed in unsaturated zone soils and/or remove soil vapors resulting from operation of AS systems. SVE systems can also function to remove free product in vapor form, however, treatment of the SVE system exhaust could likely be necessary to comply with WDNR air emission regulations.

5.3.2 Site Applicability

AS systems are most effective in aquifers with a hydraulic conductivity of at least 10^{-3} cm/sec to ensure that the injected air can be delivered throughout the saturated zone. Results of hydraulic conductivity testing at this site indicate hydraulic conductivity is approximately 4×10^{-4} cm/sec which is below the aforementioned criteria. To adequately evaluate the effectiveness of AS/SVE technology with respect to site specific conditions, a field pilot test would need to be performed, and air flow rates would have to be carefully monitored and controlled. However, based on past experience with sites having similar geology, air sparging would not likely be optimally effective at remediating soil and ground water impacts at this location.

In order for SVE systems to be effective, a minimum depth to ground water of six feet is desired to avoid flooding of vent lines. The depth to ground water at the site ranges from 5.2 to 8.4 ft bgs.

Based on the fairly shallow ground water table, proper construction may be compromised because of the shallow water table and water could be drawn into the vent lines. Therefore, SVE is not expected to yield effective remedial results A soil porosity of at least 30% is also desired to minimize preferential air pathways. Biodegradation data collected from the site indicates aerobic biodegradation is occurring in ground water beneath this site (Section 3.6).

5.3.3 Estimated Costs

The following assumptions were made for estimating purposes:

- Installation of three AS points and three SVE points to aggressively remediate on-site impacts;
- Operation & maintenance on a monthly basis for the duration of the project;
- One year of AS/SVE system operation.
- Quarterly ground water sampling for two years;
- Two-year project duration to remove adsorbed soil impact and maintain ground water concentration levels below NR 140 ES for site closure.

A cost estimate is included on Table 4. The total estimated cost for this option is approximately $111,343.80.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on an evaluation of three remedial action options, RNA with two years of quarterly ground water monitoring is the most cost effective method for residual hydrocarbon attenuation and achieving site closure. A detailed cost estimate for implementation of this remedial action is presented on Table 5. The total estimated cost for implementing this remedial action option is $22,394 with an estimated project duration of two years.

Natural attenuation is currently actively reducing dissolved phase ground water impacts at this site. The following site characteristics support RNA as the remediation action:

- Site geology and hydrogeology will limit migration of ground water impacts based on concentrations and distance to downgradient wells.

- Soil impact at the site appears to be localized to the former UST basin.

- No private wells were identified within one-quarter mile radius of the site. The closest well is approximately 1700 feet north and upgradient of the site. The City of Waukesha is supplied drinking water by 12 municipal wells drilled into dolomite and sandstone bedrock to depths of 314 to 2266 ft. bgs.

- Ground water biodegradation parameters collected and evaluated for this site indicate passive aerobic biodegradation is occurring in ground water beneath the site, and has contributed to the stability or reduction of PVOC compounds in MW-1 and MW-3 since sampling began in February 1997.

- No liquid phase hydrocarbons exist in soil or ground water at the site.

- A ground water monitoring program consisting of quarterly sampling for two years will be implemented to monitor the performance and progress of this remedial option. Ground water samples will be analyzed for PVOC, GRO, and naphthalene, as well as in-field biodegradation parameters. Should results from the next four events demonstrate that RNA continues to be effective at limiting ground water concentrations to levels acceptable for closure, site closure will be requested under the closure flexibility rule (CFR). Petroleum hydrocarbon impacts reported in soil and ground water at this site currently pose no immediate threat to human health or the environment.

8.0 REMARKS

The results and conclusions of this report represent our professional opinions. These opinions are based on currently available information and at arrived at in accordance with currently accepted hydrogeologic and engineering practices at this location. Other than this, no warranty is implied or intended.

This report was prepared by **DELTA ENVIRONMENTAL CONSULTANTS, INC.**

George G. Garneau, Jr., P.G.
Geologist

11/21/97
Date

Reviewed by:

Rick Carney
Project Manager

11/21/97
Date

9.0 REFERENCES

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7.0 CERTIFICATION STATEMENTS

I, Linda M. Michalets, 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 document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Linda M. Michalets
Hydrogeologist

November 21, 1997
Date

I, Joyce Linck, 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 document 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 document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Joyce A. Linck
Petroleum Division Unit Manager
P.E. No. 28807

11/21/97
Date

Table 1

Ground Water Elevation Data

UW-Waukesha

Waukesha, Wisconsin

Delta No. I096-115-1

MW-1 T.O.C. Elev.:	1003.36	(ft. from M.S.L.)			Well Depth:	18.35	(ft. T.O.C.)
Date MM/DD/YR	GW Depth T.O.C. (ft.)	GW Table Elev. (ft.)	Elev. Diff. (ft.)	Water in Well (ft.)	Physical Observations		
02/27/97	8.36	995.00		9.99	CLOUDY BROWN		
05/08/97	7.30	996.06	1.06	11.05	CLOUDY BROWN		
08/25/97	7.12	996.24	0.18	11.23	CLOUDY, SILTY		

MW-2 T.O.C. Elev.:	1004.65	(ft. from M.S.L.)			Well Depth:	17.65	(ft. T.O.C.)
Date MM/DD/YR	GW Depth T.O.C. (ft.)	GW Table Elev. (ft.)	Elev. Diff. (ft.)	Water in Well (ft.)	Physical Observations		
02/27/97	8.41	996.24		9.94	CLOUDY BROWN		
05/08/97	7.48	997.17	0.93	10.87	CLOUDY BROWN		
08/25/97	6.72	997.93	0.76	11.63	CLOUDY, LT SILT		

MW-3 T.O.C. Elev.:	1002.18	(ft. from M.S.L.)			Well Depth:	15.00	(ft. T.O.C.)
Date MM/DD/YR	GW Depth T.O.C. (ft.)	GW Table Elev. (ft.)	Elev. Diff. (ft.)	Water in Well (ft.)	Physical Observations		
02/27/97	6.23	995.95		12.12	CLEAR		
05/08/97	5.12	997.06	1.11	13.23	SLIGHTLY CLOUDY		
08/25/97	5.21	996.97	-0.09	13.14	CLOUDY, LT SILT		

Table 1
Ground Water Elevation Data
UW-Waukesha
Waukesha, Wisconsin
Delta No. I096-115-1

EXPLANATION:

MW = ... Monitoring Well
Elev. =..... Elevation
ft. =..... Feet
NM =..... No Measurement Obtained
T.O.C. =..... Top of Casing
GW =..... Ground Water
M.S.L. =..... Mean Sea Level
NC =..... No change
NM =..... Not Measured

Table 2
Soil Sample Analytical Results Summary
UW-Waukesha
Waukesha, Wisconsin
Delta No. 1096-115-1

Boring No.	Date Sampled	Sample Depth (ft)	PID IU	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	1,2,4-TMB (ug/kg)	1,3,5-TMB (ug/kg)	MTBE (ug/kg)	Isopropylbenzene (ug/kg)	p-Isopropyltoluene (ug/kg)	Methylene Chlorid (ug/kg)	Naphthalene (ug/kg)	n-Propylbenzene (ug/kg)	1,2 DCA (ug/kg)	Total Lead (mg/kg)	GRO (mg/kg)
NR 720 RCL				5.5	2900	1500	4100	NA	NA	NA						4.9	50*	100
GP-1	08/14/96	8-10	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	300	<25	<25	<13	<4.0	<5.0
GP-1	08/14/96	12-13	0	<25	<25	<25	<35	46	<25	<25	<25	<25	220	<25	<25	<13	<4.0	<5.0
GP-2	08/14/96	8-10	0	95	240	<25	400	400	110	<25	<25	<25	240	53	40	<13	<4.0	<5.0
GP-2	08/14/96	14-16	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	220	<25	<25	<13	<4.0	<5.0
GP-3	08/14/96	6-8	188	940	6500	17000	97000	17000	4400.00	<120	610	180	2900	3000	2000	<65	<4.0	2801
GP-3	08/14/96	8-10	42	86	240	270	2200	1300	330	<25	47	31	310	370	170	<13	<4.0	20
GP-4	08/14/96	6-8	267	1000	8300	29000	140000	61000	17000	<120	1300	580	3000	8500	3400	<65	6.6	890
GP-4	08/14/96	8-10	58	<25	320	37	2100	1200	360	<25	40	<25	310	460	130	<13	4.6	14
GP-5	08/14/96	6-8	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	300	<25	<25	<13	3.9	<5.0
GP-5	08/14/96	8-10	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	330	<25	<25	<13	<4.0	<5.0
GP-6	08/14/96	6-8	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	440	<25	<25	<13	<4.0	<5.0
GP-6	08/14/96	8-10	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	340	<25	<25	<13	<4.0	<5.0
MW-2	02/11/97	6-8	345	482	27400	38300	197000	87600	25200	<153	3070	3500	<307	13100	12000	<77	15	1310
MW-2	02/11/97	12-14	113	<30	62	118	353	150	54	<30	<30	<30	<59	82	<30	<15	<4.3	<5.3

NOTES:
PID..... photoionization detector
IU..... instrument units
ug/kg..... micrograms per kilogram
mg/kg..... milligrams per kilogram
TMB..... trimethylbenzene
MTBE..... methyl tert-butyl ether
1,2 DCA..... 1,2 dichloroethane
GRO..... gasoline range organics
RCL..... residual contaminant level for protection of ground water
NA..... generic residual contaminant level not established
NR 720..... Wisconsin Administrative Code Chapter NR 720
*..... NR 720 Non-Industrial residual contaminant level for direct contac pathway
Shaded results indicate NR 720 RCL exceedances.

Table 3
Ground Water Analytical Data Summary
UW-Waukesha
Waukesha, Wisconsin
Delta No. I096-115-1

MW-1

	Volatile Organic Compounds										In-field Biodegradation Measurements						
Parameter/ Date	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Xylenes ug/L	1,3,5-TMB ug/L	1,2,4 TMB ug/L	Dissolved Lead mg/L	GRO ug/L	Naphthalene ug/L	MTBE ug/L	DO ppm	Temp °C	Conductivity µmhos/cm	pH	REDOX milliVolts	Iron (T) ppm	Iron (S) ppm
NR 140 ES	*5.0*	*343*	*700*	*620*			*0.015*		*40*	*60*							
02/27/97	<0.31	<0.39	<0.38	1.5	2.3	<0.32	<0.00089	NA	<0.35	9.0	3.6	7	400	7.4	-60	0.2	0.1
05/08/97	120	5.8	12	100	29	66	NA	580	0.71	32.0	4.1	11	400	7.4	90	1.0	0.1
08/25/97	1.7	0.24	0.29	1.8	0.44	1.3	NA	<50	<0.46	<0.16	5.3	19	300	7.2	54	4.0	2

MW-2

	Volatile Organic Compounds										In-field Biodegradation Measurements						
Parameter/ Date	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Xylenes ug/L	1,3,5-TMB ug/L	1,2,4 TMB ug/L	Dissolved Lead mg/L	GRO ug/L	Naphthalene ug/L	MTBE ug/L	DO ppm	Temp °C	Conductivity µmhos/cm	pH	REDOX milliVolts	Iron (T) ppm	Iron (S) ppm
NR 140 ES	*5.0*	*343*	*700*	*620*			*0.015*		*40*	*60*							
02/27/97	180	740	92	1000	73	180	0.0033	NA	43	2.8	2.3	7	400	7.5	37	0.8	0.1
05/08/97	370	3100	510	3600	170	570	NA	12000	120	<3.2	2.0	10	300	7.3	-70	0.2	0.1
08/25/97	1100	13000	2200	12000	470	1800	NA	33000	640	<16	1.7	18	300	7.1	24	2.0	0.8

MW-3

	Volatile Organic Compounds										In-field Biodegradation Measurements						
Parameter/ Date	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Xylenes ug/L	1,3,5-TMB ug/L	1,2,4 TMB ug/L	Dissolved Lead mg/L	GRO ug/L	Naphthalene ug/L	MTBE ug/L	DO ppm	Temp °C	Conductivity µmhos/cm	pH	REDOX milliVolts	Iron (T) ppm	Iron (S) ppm
NR 140 ES	*5.0*	*343*	*700*	*620*			*0.015*		*40*	*60*							
02/27/97	0.32	0.69	<0.38	<1.1	<0.33	<0.32	<0.00089	NA	0.65	<0.14	4.7	7	400	7.6	-5	0.6	0.3
05/08/97	0.18	0.35	<0.22	<0.23	<0.29	<0.22	NA	<50	<0.46	2.8	5.6	11	300	7.5	75	0.3	0.1
08/25/97	<0.13	<0.20	<0.22	0.38	<0.29	0.24	NA	<50	<0.46	<0.16	4.7	18	300	7.3	29	2.0	0.3

Table 3
Ground Water Analytical Data Summary
UW-Waukesha
Waukesha, Wisconsin
Delta No. 1096-115-1

Explanation:

MW =..... Monitoring Well
TMB =..... Tri-methyl Benzene
MTBE =..... Methyl Tertiary-butyl Ether
GRO =..... Gasoline Range Organic Compounds
DO =..... Dissolved Oxygen
Redox =..... Reduction/Oxidation
Iron (T) =..... Iron; Total
Iron (S) =..... Iron; Soluble
µg/L =..... micrograms per liter
mg/L=..... milligrams per liter
msl =..... mean sea level
ppm =..... parts per million
°C =..... Degrees Celsius
µmhos/cm =.... micromhos per centimeter
NR 140 ES =... Wisconsin Adm. Code Ch. NR 140 Enforcement Standard (Rev. 10/96)
NA =..... Not analyzed
NM =..... No measurement
Additional VOC compounds were detected at MW-2 at very low concentrations

TABLE 4
REMDIAL ACTION OPTION COST ESTIMATE SUMMARY
UW - Waukesha
Waukesha, Wisconsin
Delta No. I096-115-1

	RNA	Soil Excavation & Thermal Treatment	Air Sparge
ONE TIME COSTS			
Consulting Costs:			
Pilot Test	---	---	$3,000.00
System design & install	---	---	$13,376.00
System start-up	---	---	$2,682.40
Project management	---	$880.00	$1,320.00
Data evaluation & Closure	$3,470.00	$4,250.00	$4,250.00
Limited soil removal	---	$2,577.00	---
Subtotal	**$3,470.00**	**$7,707.00**	**$24,628.40**
Commodity Costs:			
Closure	$500.00	$500.00	$500.00
Soil Removal	---	---	---
Soil Remediation & Trtmt	---	$10,660.00	---
Subsurface installation	---	$1,500.00	$5,100.00
System Equipment	---	---	$14,200.00
Equipment Installation	---	---	$6,000.00
Equipment Enclosure	---	---	$10,000.00
Subtotal	**$500.00**	**$12,660.00**	**$35,800.00**
ANNUAL COSTS:			
Consulting Costs:			
Ground Water Monitoring	$6,572.00	$6,572.00	$6,572.00
System O & M	---	---	$24,614.40
Commodity Costs:			
Ground Water Monitoring	$2,640.00	$2,640.00	$2,640.00
Subtotal	**$9,212.00**	**$9,212.00**	**$33,826.40**
TOTAL COSTS	$22,394.00	$29,579.00	$103,466.80
TOTAL YEARS	2	1	2

TABLE 5

Cost Estimate: RNA With Two Years Of Ground Water Monitoring
UW - Waukesha
Delta No. I096-115-1

Subtask	Personnel/Equipment	Hrs/Unit x	Rate =	Cost	Comments
Project Mgmt	Project Manager	2.0	$ 88.00	$ 176.00	
Pre-/Post-Site Preparation	Field Technician	2.0	$ 58.00	$ 116.00	
Site Time	Field Technician	4.0	$ 58.00	$ 232.00	Addit'l Site Time
Data Evaluation & Reporting	Project Manager	1.0	$ 88.00	$ 88.00	Status Reports and
	Project Hydrogeologist	20.0	$ 78.00	$ 1,560.00	Annual Reports
	Field Technician	2.0	$ 58.00	$ 116.00	
	Drafting	2.0	$ 40.00	$ 80.00	
- Equipment	Phase I Bio Kit (wl)	3.0	$ 35.00	$ 105.00	3 MWs
	Water Level Indicator	1.0	$ 10.00	$ 10.00	
- Expenses	Mileage (mi)	40.0	$ 0.35	$ 14.00	
	Miscellaneous			$ 20.00	Ice, etc
- Subcontractors	Laboratory (sample)	3.0	$ 35.00	$ 105.00	PVOC/GRO
	Lab-QA/QC samples	3.0	$ 35.00	$ 105.00	Dup, trip, field
	Lab-Bio Ph. 2	2.0	$ 150.00	$ 300.00	
	GW disposal			$ 150.00	Avg per event
	Consultant Cost per Event			$ 761.00	
	Commodity Cost per Event			$ 660.00	
	Consultant Reporting per six months			$ 1,764.00	

Consultant Cost Over Two Years (semiannual reports)	$ 13,144.00
Commodity Cost Over Two Years	$ 5,280.00
Cost For Quarterly Ground Water Sampling Over Two Years	**$ 18,424.00**

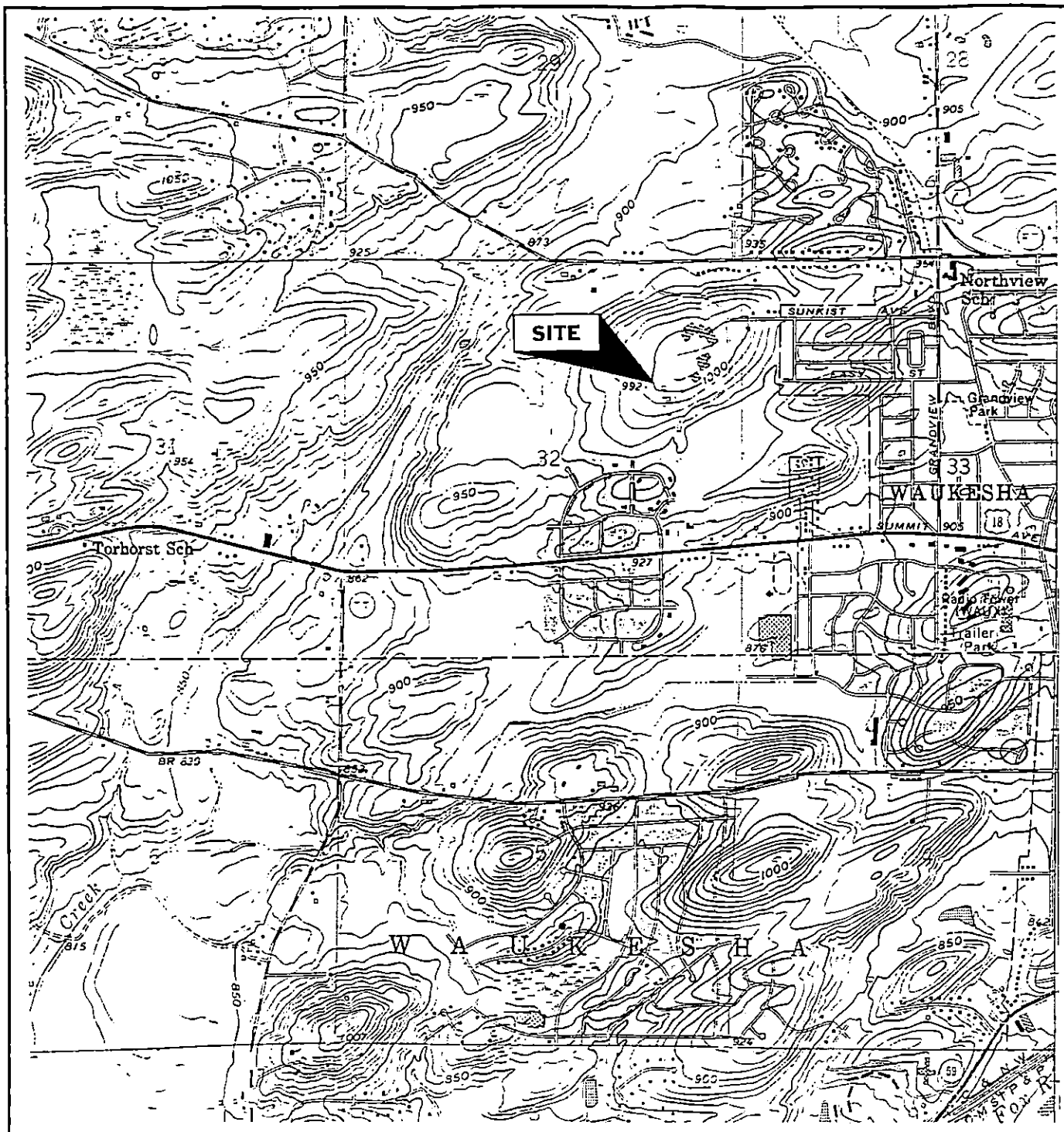
TABLE 5

Cost Estimate: RNA With Two Years Of Ground Water Monitoring
UW - Waukesha
Delta No. I096-115-1

Task 2: Closure Tasks

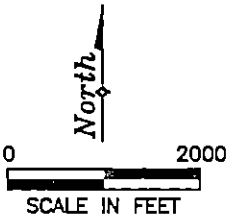
Description	Personnel/Unit	Units	Hrs/Unit x	Rate =	Cost
Well Abandonments	Technician	Hrs	4.00	$ 65.00	$ 260.00
Contractor	Driller	lump			$ 500.00
Closure Report	Hydrogeologist	Hrs	35.00	$ 78.00	$ 2,730.00
	Drafting	Hrs	4.00	$ 40.00	$ 160.00
	Clerical	Hrs	2.00	$ 30.00	$ 60.00
	Senior Review	Hrs	2.00	$ 130.00	$ 260.00
			Consulting Costs		$ 3,470.00
			Commodity Costs		$ 500.00
			Total Cost		**$ 3,970.00**

Total Cost Estimate for RNA and GW Sampling Remedial Option **$ 22,394.00**



HARTLAND QUADRANGLE
WISCONSIN
7.5 MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION

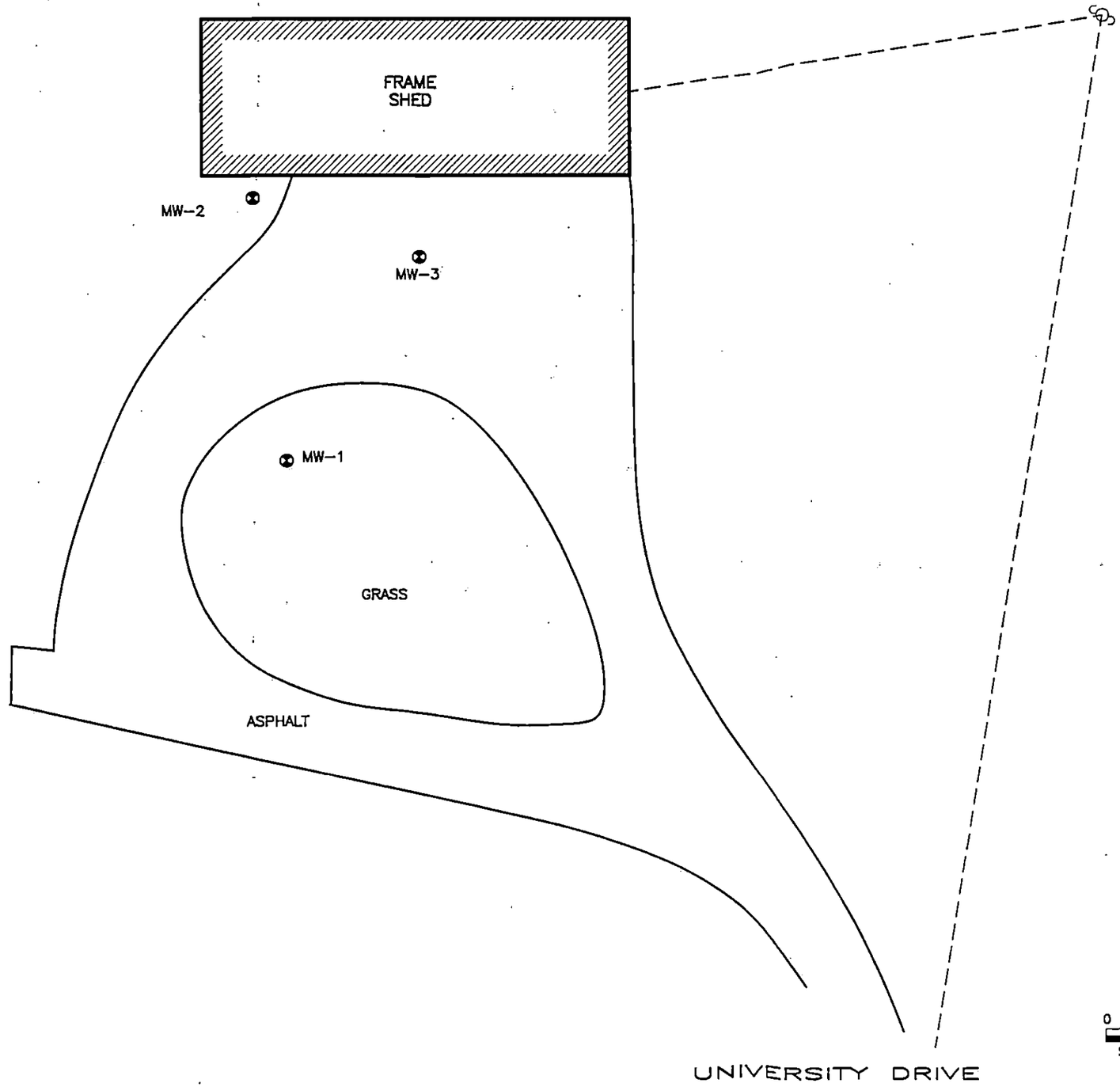


SCALE IN FEET

FIGURE 1
SITE LOCATION MAP
UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.	PREPARED BY
1096–115	GGG
DATE	REVIEWED BY
11/05/97	

Delta Environmental Consultants, Inc.



LEGEND

MW–3 ⊗ MONITORING WELL LOCATION

– – – – OVERHEAD UTILITY

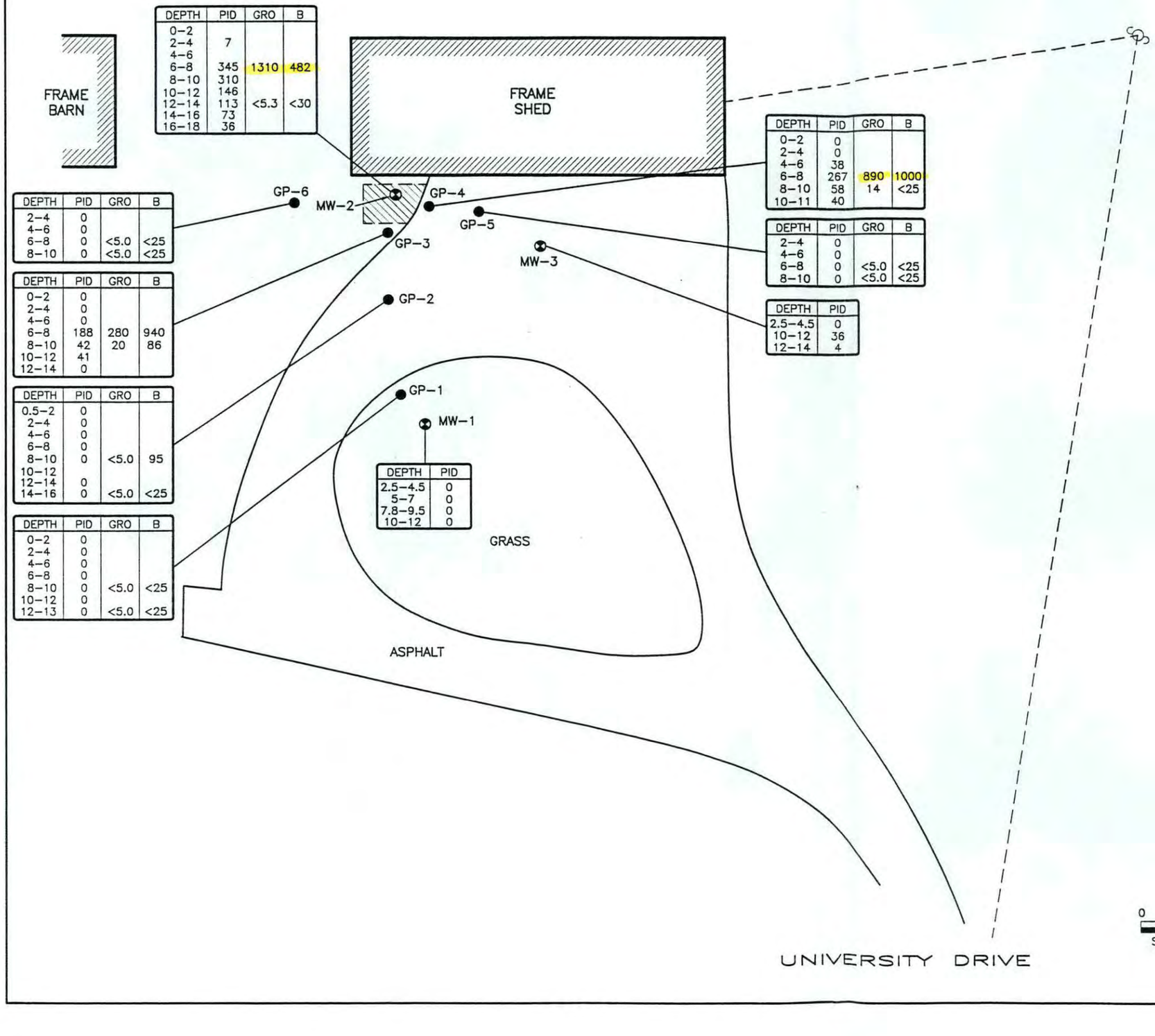
FIGURE 2

SITE MAP

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.: 1096–115	DRAWN BY: DD
PREPARED BY: GGG	DATE: 11/20/97
FILE NAME: 96115–S	

Delta Environmental Consultants inc.



DEPTH	PID	GRO	B
0–2			
2–4	7		
4–6			
6–8	345	1310	482
8–10	310		
10–12	146		
12–14	113	<5.3	<30
14–16	73		
16–18	36		

DEPTH	PID	GRO	B
0–2	0		
2–4	0		
4–6	38		
6–8	267	890	1000
8–10	58	14	<25
10–11	40		

DEPTH	PID	GRO	B
2–4	0		
4–6	0		
6–8	0	<5.0	<25
8–10	0	<5.0	<25

DEPTH	PID	GRO	B
2–4	0		
4–6	0		
6–8	0	<5.0	<25
8–10	0	<5.0	<25

DEPTH	PID	GRO	B
0–2	0		
2–4	0		
4–6	0		
6–8	188	280	940
8–10	42	20	86
10–12	41		
12–14	0		

DEPTH	PID
2.5–4.5	0
10–12	36
12–14	4

DEPTH	PID	GRO	B
0.5–2	0		
2–4	0		
4–6	0		
6–8	0		
8–10	0	<5.0	95
10–12			
12–14	0		
14–16	0	<5.0	<25

DEPTH	PID
2.5–4.5	0
5–7	0
7.8–9.5	0
10–12	0

DEPTH	PID	GRO	B
0–2	0		
2–4	0		
4–6	0		
6–8	0		
8–10	0	<5.0	<25
10–12	0		
12–13	0	<5.0	<25

LEGEND

- MW–3 ⊗ MONITORING WELL LOCATION
- – – – – OVERHEAD UTILITY
- GP–1 ● GEOPROBE LOCATION
- UST EXCAVATION
- PID– INSTRUMENT UNITS
- DEPTH– FEET
- GRO– GASOLINE RANGE ORGANICS (μg/Kg)
- B– BENZENE (μg/Kg)

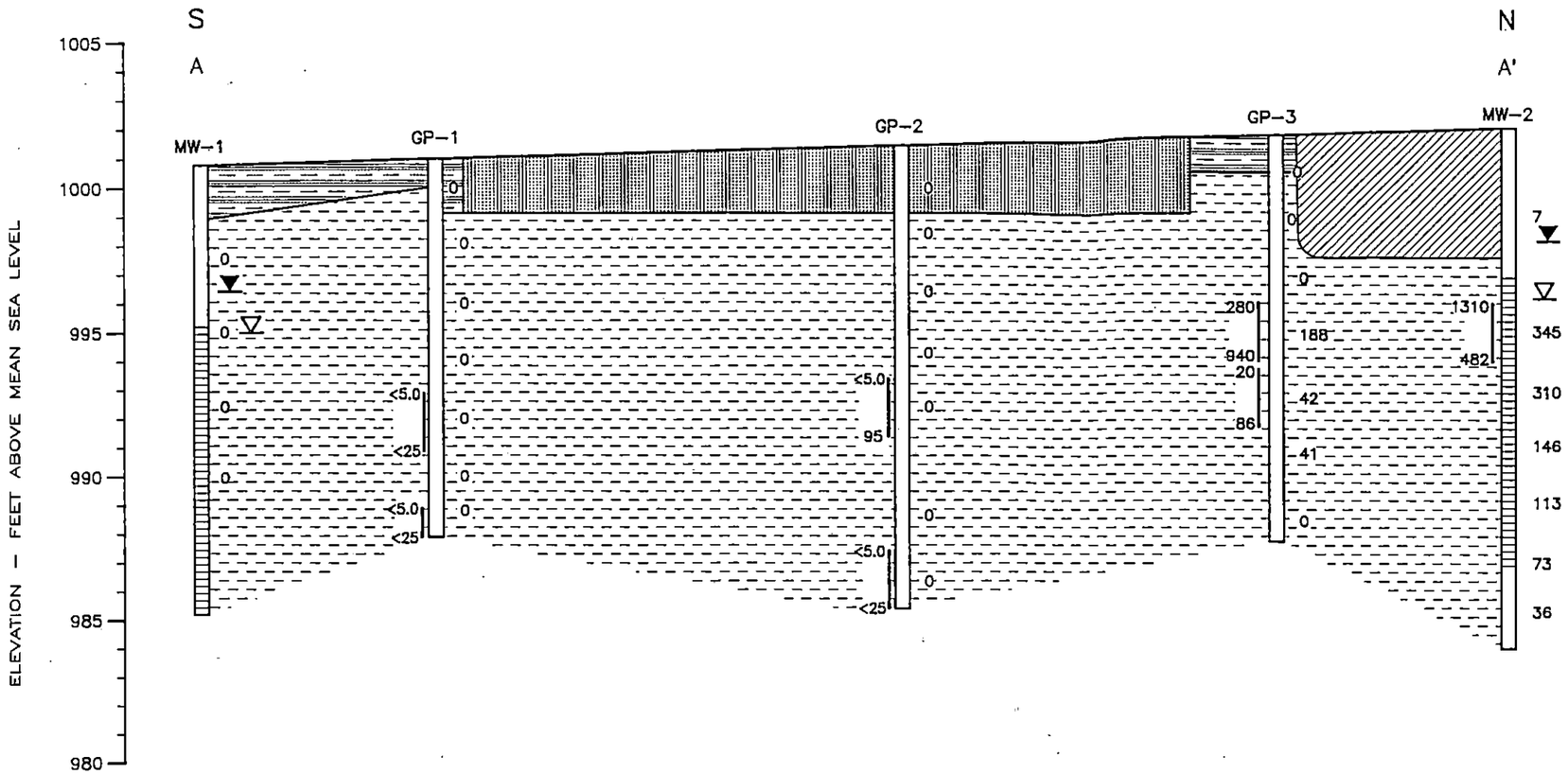
FIGURE 3

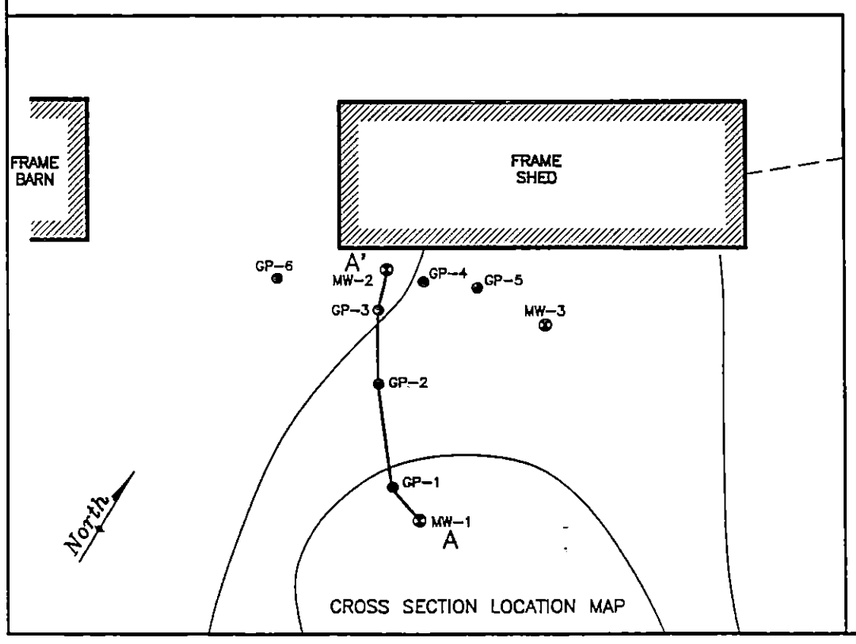
SOIL CHEMICAL CONCENTRATION MAP

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.:	DRAWN BY:
1096–115	DD
PREPARED BY:	DATE:
GGG	11/20/97
FILE NAME:	
96115–S	

Delta Environmental Consultants Inc.





LEGEND:

SAMPLING INTERVAL, SOIL ANALYTICAL RESULTS

1310 GASOLINE RANGE ORGANICS (mg/Kg)

482 BENZENE (ug/Kg)

MONITORING WELL

0 HEADSPACE READING (PID-INSTRUMENT UNITS)

SCREEN INTERVAL

GROUND WATER ELEVATION 2/27/97

GROUND WATER ELEVATION 8/25/97

ASPHALT AND BASE COURSE

FILL

SANDY SILT/CLAYEY SILT

TOPSOIL

(FEET) VERTICAL SCALE 5

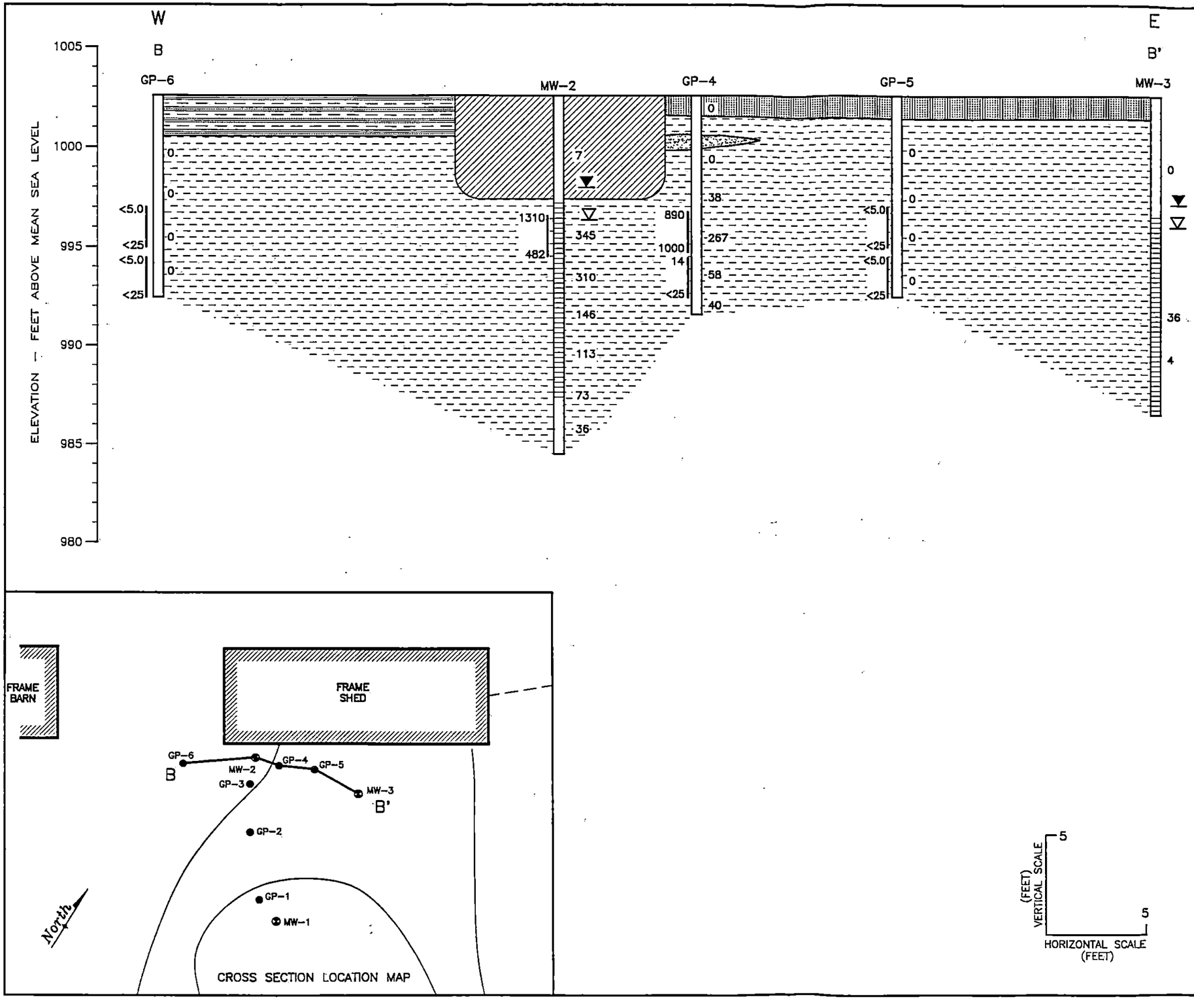
HORIZONTAL SCALE (FEET) 5

FIGURE 4
CROSS-SECTION A-A'

UW - WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.:	DRAWN BY:
1096-115	DD
PREPARED BY:	DATE:
GGG	11/20/97
FILE NAME: 96115-AA	

Delta Environmental Consultants inc.



LEGEND:

SAMPLING INTERVAL, SOIL ANALYTICAL RESULTS

1310 GASOLINE RANGE ORGANICS (mg/Kg)

482 BENZENE (ug/Kg)

MONITORING WELL

0 HEADSPACE READING (PID–INSTRUMENT UNITS)

SCREEN INTERVAL

GROUND WATER ELEVATION 2/27/97

GROUND WATER ELEVATION 8/25/97

ASPHALT AND BASE COURSE

FILL

SANDY SILT/CLAYEY SILT

TOPSOIL

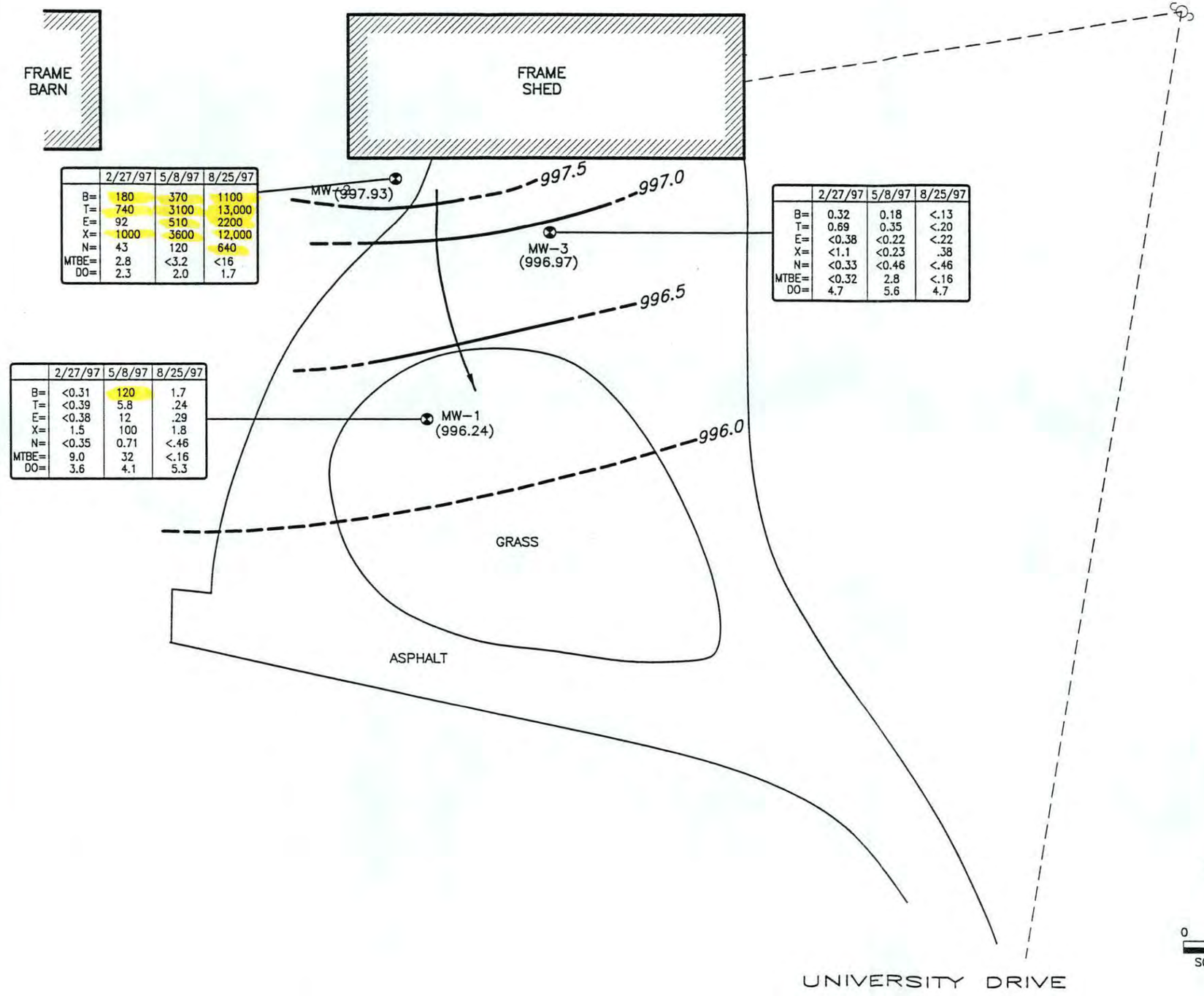
SAND

FIGURE 5
CROSS–SECTION B–B'

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.: 1096–115	DRAWN BY: DD
PREPARED BY: GGG	DATE: 11/20/97
FILE NAME: 96115–BB	

Delta Environmental Consultants Inc.



	2/27/97	5/8/97	8/25/97
B=	180	370	1100
T=	740	3100	13,000
E=	92	510	2200
X=	1000	3600	12,000
N=	43	120	640
MTBE=	2.8	<3.2	<16
DO=	2.3	2.0	1.7

	2/27/97	5/8/97	8/25/97
B=	0.32	0.18	<.13
T=	0.69	0.35	<.20
E=	<0.38	<0.22	<.22
X=	<1.1	<0.23	.38
N=	<0.33	<0.46	<.46
MTBE=	<0.32	2.8	<.16
DO=	4.7	5.6	4.7

	2/27/97	5/8/97	8/25/97
B=	<0.31	120	1.7
T=	<0.39	5.8	.24
E=	<0.38	12	.29
X=	1.5	100	1.8
N=	<0.35	0.71	<.46
MTBE=	9.0	32	<.16
DO=	3.6	4.1	5.3

LEGEND

- MW-3 ⊗ MONITORING WELL LOCATION
- OVERHEAD UTILITY
- (996.24) GROUND WATER ELEVATION (IN FEET)
- 996.0 GROUND WATER CONTOUR LINE CONTOUR INTERVAL = 0.50 FEET
- INFERRED GROUND WATER CONTOUR
- GROUND WATER FLOW DIRECTION

DATE	SAMPLE DATE
B=	BENZENE (µg/L)
T=	TOLUENE (µg/L)
E=	ETHYLBENZENE (µg/L)
X=	XYLENES (µg/L)
N=	NAPHTHALENE (µg/L)
MTBE=	METHYL TERTIARY BUTYL ETHER (µg/L)
DO=	DISSOLVED OXYGEN (ppm)

(µg/L) MICROGRAMS PER LITER
(ppm) PARTS PER MILLION

FIGURE 6

GROUND WATER CONTOUR AND CHEMICAL CONCENTRATION MAP – AUGUST 25, 1997

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.: 1096-115	DRAWN BY: DD
PREPARED BY: GGG	DATE: 11/20/97
FILE NAME: 96115-S	

Delta Environmental Consultants Inc.

APPENDIX J

UST No. 84 Closeout Summary

Delta
Environmental
Consultants, Inc.

2775 South Moorland Road
Suite 300
New Berlin,WI 53151
414/789-0254
FAX: 414/789-5483

January 21, 1999

Mr. Mike Farley
Wisconsin Department of Natural Resources
Southeast District Annex
4041 N. Richards Street
Milwaukee, Wisconsin 53212-0436

Subject: **Case Summary and Close Out Form**
University of Wisconsin-Waukesha UST # 84
1500 North University Drive
Waukesha, Wisconsin
WDNR File Ref. No. 03-68-004432
Delta Project No. I096-115

Dear Mr. Farley:

On behalf of the Waukesha County Department of Parks and Land Use, Delta Environmental Consultants, Inc. (Delta) is submitting this request for closure to the Wisconsin Department of Natural Resources (WDNR) for the above referenced site. The *Case Summary and Close Out Form (4400-202)* is attached as Appendix A. A closure review fee in the amount of $750 is also attached.

Remediation by natural attenuation (RNA) was recommended in the *Site Investigation/Remedial Options Analysis Report* dated November 21, 1997 and has been the chosen remedial strategy since then. Figure 1 is a Site Location Map and Figure 2 is a Site Map depicting site area features.

Delta is requesting that the WDNR grant case closure based on the delineation of limited adsorbed-phase soil impact outside the former underground storage tank (UST) excavation, significantly declining benzene, toluene, ethylbenzene, and total xylene (BTEX) concentrations in monitoring wells MW-1 and MW-2, the presence of sandy-clayey silt soils underlying the site, favorable conditions for continued natural attenuation outside the excavation, and the absence of area sensitive receptors.

This report contains the following attachments:

Table 1	Ground Water Elevation Summary
Table 2	Soil Sample Analytical Summary
Table 3	Ground Water Chemistry and In-Field Biodegradation Data Summary
Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	Ground Water Elevation Contour Map - December 3, 1998
Figure 4	Soil Sample Location and Chemical Concentration Map
Figure 5	Ground Water Chemical Concentration Map - December 3, 1998
Figure 6	Benzene Concentration and Ground Water Elevation vs. Time: MW-1
Figure 7	Total BTEX Concentration and Ground Water Elevation vs. Time: MW-1
Figure 8	Benzene Concentration and Ground Water Elevation vs. Time: MW-2

Figure 9 Total BTEX Concentration and Ground Water Elevation vs. Time: MW-2

Appendix A Case Summary and Close Out Form (4400-202)
Appendix B Ground Water Laboratory Analytical Reports: March 17, 1998, June 9, 1998, September 10, 1998, December 3, 1998
Appendix C Ground Water Biodegradation Parameter Field Measurements

CASE SUMMARY

Release Information and Background

The subject investigation area is located on the property of the University of Wisconsin-Waukesha. The site area was utilized for farming prior to acquisition by the Waukesha County Department of Parks and Land Use in 1970. One 300-gallon leaded gasoline UST was located on the property adjacent to a farm equipment storage building. The UST was removed on August 18, 1994 at which time hydrocarbon impacted soil was detected. No soil was excavated for removal from the site. Foth and Van Dyke submitted a *Site Assessment for Underground Storage Tank Closure* in May 1995.

Delta initiated an environmental site investigation in July 1996. Six geoprobe borings (GP-1 through GP-6) were completed on August 14, 1996 to delineate the vertical and horizontal extent of hydrocarbon impacted soil. Three ground water monitoring wells (MW-1, MW-2, and MW-3) were installed on February 11, 1997. A *Site Investigation/Remedial Options Analysis Report* was submitted by Delta on November 21, 1997 recommending RNA as the most cost effective remedial option for the site. Four rounds of quarterly ground water sampling have taken place since November 1997 to monitor the attenuation of ground water hydrocarbon impact.

Additional reports prepared by Delta documenting the investigation and remediation progress at the site include:

- *Ground Water Sampling Report-September 1998* (October 28, 1998)
- *Ground Water Sampling Report-March 1998* (April 14, 1998)

Site Geology

The site is underlain by soils comprised predominantly of silt to a depth of 18 feet below grade. Varying percentages of sand and/or clay were detected throughout. Bedrock was not encountered during either the geoprobe investigation or the monitoring well installation. A cross-section depicting the unconsolidated glacial deposits underlying the site was included in the November 21, 1997 *Site Investigation/Remedial Options Analysis Report* prepared by Delta.

Site Hydrogeology

Depth to ground water measured during the most recent sampling event on December 3, 1998 was found to occur 11.22 to 13.28 feet below grade. Figure 3 is a ground water contour map constructed with data collected on December 3, 1998. The inferred contours depicted on Figure 3 indicate ground water flow is southeast across the site with a hydraulic gradient of 0.02 ft/ft between monitoring wells MW-2 and MW-1. This is consistent with previous data collected at the site.

Seasonal water-table fluctuations of up to 6.56 feet (MW-2) have been measured during ground water monitoring conducted between February 27, 1997 and December 3, 1998. Table 1 is a summary of current and historical ground water elevation data. Figures 7 and 8 are hydrographs illustrating the seasonally influenced water-table elevations in monitoring wells MW-1 and MW-2, respectively. Data collected during aquifer characteristic slug tests completed at the site in February 1997 indicate an average ground water velocity of 171 ft/yr across the site (originally presented in the November 21, 1997 *Site Investigation/Remedial Options Analysis Report*).

Adsorbed-Phase Petroleum Hydrocarbons in Soil

To delineate the areal extent of adsorbed-phase hydrocarbon soil impact outside the former UST excavation, six geoprobe borings (GP-1 through GP-6) were completed on August 14, 1996. Boring depths ranged from 10 to 16 feet below grade. Soil samples collected at 6-8 and 8-10 feet below grade from geoprobe borings GP-5 and GP-6, approximately 13 feet east and west (sidegradient) of the former UST excavation, respectively, were non-detect for all BTEX, GRO, and naphthalene parameters. Soil samples from 8-10 and 12-13 feet below grade from GP-1, approximately 39 feet southeast (downgradient) of the former UST, were also non-detect for all BTEX, GRO, and naphthalene parameters.

Geoprobe boring GP-2, approximately 14 feet downgradient of the former UST, exhibited nominal BTEX and naphthalene impact at 8-10 feet below grade. The soil sample collected from this boring at 14-16 feet below grade was non-detect for BTEX, GRO, and naphthalene. Geoprobe borings GP-3 and GP-4, adjacent (south and east, respectively) to the former UST excavation, detected BTEX, GRO, and naphthalene impact at 6-8 and 8-10 feet below grade.

Table 2 summarizes soil sample analytical results. Figure 4 illustrates the geoprobe sample locations and results of the soil laboratory analyses. A complete presentation of the geoprobe investigation was included in Delta's November 21, 1997 *Site Investigation/Remedial Options Analysis Report.*

Dissolved-Phase Petroleum Hydrocarbons in Ground Water

Three ground water monitoring wells have been installed at the site: MW-1, approximately 44 feet downgradient of the former UST source area; MW-2, installed within the former UST excavation; and MW-3, approximately 29 feet sidegradient of the former UST source area. Seven rounds of ground water sampling have been completed, four of them since the recommendation for remediation by natural attenuation: March 17, 1998; June 9, 1998; September 10, 1998; and December 3, 1998.

No exceedences of the NR 140 ES have been detected historically for any analyte at MW-3. Benzene concentrations in this well have ranged from non-detect to 0.32 ug/L (0.23 ug/L during the December 1998 sampling event). Monitoring well MW-1, which has intermittently contained exceedences of benzene NR 140 ES ranging from 32 ug/L to 120 ug/L, did not contain any NR 140 ES exceedence of benzene or any other analyte in December 1998. Benzene and total BTEX attenuation over time for MW-1 are depicted with ground water elevations in Figures 6 and 7, respectively.

Monitoring well MW-2 contained NR 140 ES exceedences of benzene (68 ug/L), total xylenes (660 ug/L), and naphthalene (88 ug/L). All three parameters have significantly declined during the quarterly natural attenuation monitoring conducted in 1998. Benzene and total BTEX attenuation over time for MW-2 are depicted with ground water elevations in Figures 8 and 9, respectively. Appendix B contains the complete

laboratory analytical reports for the March 1998 through December 1998 sampling events. Table 3 summarizes current and historical ground water chemistry.

Natural Attenuation Potential

Phase I biodegradation parameters including dissolved oxygen (DO) and reduction-oxidation potential (redox) were measured during ground water sampling events to assess site biodegradation conditions. DO concentrations in ground water are indicators of natural inputs of oxygen into the saturated zone and the activity of natural bacteria in response to organic chemicals in the ground water. Aerobic conditions are generally present in ground water with DO concentrations of 2.0 parts per million (ppm) or higher, although aerobic biodegradation may occur with DO levels as low as 1.0 ppm. DO concentrations of 1.5 ppm, 0.8 ppm, and 1.7 ppm were measured in monitoring wells MW-1, MW-2, and MW-3, respectively, during the December 1998 sampling event.

The measurement of redox compliments direct field readings of DO. A redox greater +50 millivolts (mV) indicates oxidizing aerobic conditions; redox less than +50 mV indicates reducing anaerobic conditions. December 1998 redox levels of +79 mV, +15 mV, and +83 mV were measured in wells MW-1, MW-2, and MW-3, respectively.

DO and redox measurements in monitoring wells MW-1 and MW-3 indicate conditions outside the former UST excavation are favorable for aerobic biodegradation of soluble-phase hydrocarbons. Monitoring well MW-2, set within the former UST excavation, contained DO and redox levels which were nominally anaerobic. Complete phase I biodegradation data is contained in Appendix C and summarized in Table 3.

Land Use and Receptors

A potable well survey was previously completed by Delta for the subject site. The City of Waukesha gets its drinking water from 12 municipal wells drilled into dolomite and sandstone bedrock. Municipal well depths range from 314 feet to 2,266 feet below grade (Syftestad, 1985). Residential potable wells are utilized for drinking water outside the Waukesha city limits. No residential potable wells were identified within one-quarter mile of the site. The closest well identified is approximately 1,700 feet north (sidegradient) of the site. This well is not considered a receptor given the ground water flow direction. Complete results of the sensitive receptor survey previously completed by Delta including available area well logs are included in the November 21, 1997 *Site Investigation/Remedial Options Analysis Report.*

Closure Recommendation

Case closure is requested based on the following:

- Monitoring well MW-3, 29 feet sidegradient of MW-2, has not contained any ground water exceedences of the NR 140 ES for any BTEX or naphthalene constituents during the seven ground water sampling events conducted at the site.

- Monitoring well MW-1, 44 feet downgradient of the UST excavation, did not contain any exceedences of the benzene NR 140 ES during the December 1998 sampling event. This well has previously contained benzene levels nominally in excess of the 5.0 ug/L standard. No other BTEX constituents or naphthalene levels above the NR 140 ES have been historically detected in this well.

- Monitoring well MW-2, set within the former UST excavation, has exhibited significantly declining trends in benzene and total BTEX concentrations. The naphthalene concentration in this well has also significantly declined.

- DO and redox measurements suggest that aerobic ground water conditions exist in monitoring wells MW-1 and MW-3, downgradient/sidegradient of the former UST pit. Nominally anaerobic conditions exist in monitoring well MW-2, set within the former UST excavation.

- The site is underlain by sandy-clayey silt. Slug tests conducted at the site indicate an average ground water velocity across the site of 171 ft/yr. A sensitive receptor survey of the site area did not locate any downgradient receptors.

- There is no existing or anticipated threat to public health, safety or welfare, or the environment.

Based on these factors and the results of the December 1998 ground water sampling event which did not detect any BTEX constituents in excess of the NR 140 ES in downgradient well MW-1, suitable site conditions exist for closure at this time and case closure is recommended.

Certification:

"I, Kurt D. McClung, 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 document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

_____ _____

Signature and Title Date

Thank you for your consideration of our request. If you have any questions or require additional information regarding this request for closure, please do not hesitate to contact me at (414) 827-4803.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Rick Carney
Project Manager

Attachments

c: Ms. Leslie Williams - Waukesha County Department of Parks and Land Use

Table 1

Ground Water Elevation Summary

UW-Waukesha

Waukesha, Wisconsin

Delta No. 1096-115-1

MW-1 T.O.C. Elev.:	1003.36	(ft. from M.S.L.)			Well Depth:	18.35	(ft. T.O.C.)
Date MM/DD/YR	GW Depth T.O.C. (ft.)	GW Table Elev. (ft.)	Elev. Diff. (ft.)	Water in Well (ft.)	Physical Observations		
02/27/97	8.36	995.00		9.99	CLOUDY BROWN		
05/08/97	7.30	996.06	1.06	11.05	CLOUDY BROWN		
08/25/97	7.12	996.24	0.18	11.23	CLOUDY, SILTY		
03/17/98	7.53	995.83	-0.41	10.82	CLOUDY, SILTY		
06/09/98	8.33	995.03	-0.80	10.02	CLOUDY,HEAVY SILT		
09/10/98	12.04	991.32	-3.71	6.31	CLOUDY,HEAVY SILT		
12/03/98	12.89	990.47	-0.85	5.46	CLOUDY/VERY HEAVY SILT		

MW-2 T.O.C. Elev.:	1004.65	(ft. from M.S.L.)			Well Depth:	17.65	(ft. T.O.C.)
Date MM/DD/YR	GW Depth T.O.C. (ft.)	GW Table Elev. (ft.)	Elev. Diff. (ft.)	Water in Well (ft.)	Physical Observations		
02/27/97	8.41	996.24		9.94	CLOUDY BROWN		
05/08/97	7.48	997.17	0.93	10.87	CLOUDY BROWN		
08/25/97	6.72	997.93	0.76	11.63	CLOUDY, LT SILT		
03/17/98	7.41	997.24	-0.69	10.94	CLOUDY, LT SILT / SLIGHT ODOR		
06/09/98	8.13	996.52	-0.72	10.22	CLOUDY, LT SILT / SLIGHT ODOR		
09/10/98	12.11	992.54	-3.98	6.24	CLOUDY, LT SILT / SLIGHT ODOR		
12/03/98	13.28	991.37	-1.17	5.07	CLOUDY, LT SILT / SLIGHT ODOR		

Table 1
Ground Water Elevation Summary
UW-Waukesha
Waukesha, Wisconsin
Delta No. I096-115-1

MW-3 T.O.C. Elev.:	1002.18	(ft. from M.S.L.)			Well Depth: 15.00 (ft. T.O.C.)
Date MM/DD/YR	GW Depth T.O.C. (ft.)	GW Table Elev. (ft.)	Elev. Diff. (ft.)	Water in Well (ft.)	Physical Observations
02/27/97	6.23	995.95		12.12	CLEAR
05/08/97	5.12	997.06	1.11	13.23	SLIGHTLY CLOUDY
08/25/97	5.21	996.97	-0.09	13.14	CLOUDY, LT SILT
03/17/98	5.12	997.06	0.09	13.23	CLOUDY, LT SILT
06/09/98	5.76	996.42	-0.64	12.59	CLOUDY,HEAVY SILT
09/10/98	10.04	992.14	-4.28	8.31	CLOUDY, SILTY
12/03/98	11.22	990.96	-1.18	7.13	CLOUDY, SILTY

EXPLANATION:
MW = ... Monitoring Well
Elev. =..... Elevation
ft. =..... Feet
NM =..... No Measurement Obtained
T.O.C. =..... Top of Casing
GW =..... Ground Water
M.S.L. =..... Mean Sea Level
NC =..... No change
NM =..... Not Measured

Table 2
Soil Sample Analytical Summary
UW-Waukesha
Waukesha, Wisconsin
Delta No. I096-115-1

Boring No.	Date Sampled	Sample Depth (ft)	PID IU	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	1,2,4-TMB (ug/kg)	1,3,5-TMB (ug/kg)	MTBE (ug/kg)	Isopropylbenzene (ug/kg)	p-Isopropyltoluene (ug/kg)	Methylene Chlorid (ug/kg)	Naphthalene (ug/kg)	n-Propylbenzene (ug/kg)	1,2 DCA (ug/kg)	Total Lead (mg/kg)	GRO (mg/kg)
NR 720 RCL				5.5	2,900	1,500	4,100	NA	NA	NA						4.9	50*	100
GP-1	08/14/96	8-10	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	300	<25	<25	<13	<4.0	<5.0
GP-1	08/14/96	12-13	0	<25	<25	<25	<35	46	<25	<25	<25	<25	220	<25	<25	<13	<4.0	<5.0
GP-2	08/14/96	8-10	0	95	240	<25	400	400	110	<25	<25	<25	240	53	40	<13	<4.0	<5.0
GP-2	08/14/96	14-16	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	220	<25	<25	<13	<4.0	<5.0
GP-3	08/14/96	6-8	188	940	6500	17,000	37,000	17,000	4,400	<120	610	180	2,900	3,000	2,000	<65	<4.0	280
GP-3	08/14/96	8-10	42	86	240	270	2,200	1,300	330	<25	47	31	310	370	170	<13	<4.0	20
GP-4	08/14/96	6-8	267	1000	8300	29,000	140,000	61,000	17,000	<120	1,300	580	3,000	8,500	3,400	<65	6.6	890
GP-4	08/14/96	8-10	58	<25	320	37	2,100	1,200	360	<25	40	<25	310	460	130	<13	4.6	14
GP-5	08/14/96	6-8	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	300	<25	<25	<13	3.9	<5.0
GP-5	08/14/96	8-10	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	330	<25	<25	<13	<4.0	<5.0
GP-6	08/14/96	6-8	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	440	<25	<25	<13	<4.0	<5.0
GP-6	08/14/96	8-10	0	<25	<25	<25	<35	<25	<25	<25	<25	<25	340	<25	<25	<13	<4.0	<5.0
MW-2	02/11/97	6-8	345	1482	27400	38,300	197,000	87,600	25,200	<153	3,070	3,500	<307	13,100	12,000	<77	15	1310
MW-2	02/11/97	12-14	113	<30	62	118	353	150	54	<30	<30	<30	<59	82	<30	<15	<4.3	<5.3

NOTES:

PID..... photoionization detector
IU..... instrument units
ug/kg..... micrograms per kilogram
mg/kg..... milligrams per kilogram
TMB..... trimethylbenzene
MTBE..... methyl tert-butyl ether
1,2 DCA..... 1,2 dichloroethane
GRO..... gasoline range organics
RCL..... residual contaminant level for protection of ground water
NA..... generic residual contaminant level not established
NR 720..... Wisconsin Administrative Code Chapter NR 720
*..... NR 720 Non-Industrial residual contaminant level for direct contac pathway
Shaded results indicate NR 720 RCL exceedances.

Table 3
Ground Water Chemistry and In-Field Biodegradation Data Summary
UW-Waukesha
Waukesha, Wisconsin
Delta No. 1096-115-1

MW-1

	Volatile Organic Compounds										In-field Biodegradation Measurements						
Parameter/ Date	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Xylenes ug/L	1,3,5-TMB ug/L	1,2,4 TMB ug/L	Dissolved Lead mg/L	GRO ug/L	Naphthalene ug/L	MTBE ug/L	DO ppm	Temp °C	Conductivity µmhos/cm	pH	REDOX milliVolts	Iron (T) ppm	Iron (S) ppm
NR 140 ES	*5.0*	*343*	*700*	*620*			*0.015*		*40*	*60*							
02/27/97	<0.31	<0.39	<0.38	1.5	2.3	<0.32	<0.00089	NA	<0.35	9.0	3.6	7	400	7.4	-60	0.2	0.1
05/08/97	120	5.8	12	100	29	66	NA	580	0.71	32.0	4.1	11	400	7.4	90	1.0	0.1
08/25/97	1.7	0.24	0.29	1.8	0.44	1.3	NA	<50	<0.46	<0.16	5.3	19	300	7.2	54	4.0	2.0
03/17/98	<0.13	<0.20	<0.29	0.51	<0.29	0.39	NA	<50	0.51	<0.16	6.8	10	800	7.7	100	0.2	0.2
06/09/98	38	2	5.7	50	9.6	27	NA	330	<0.46	<1.5	2.0	14	200	7.6	179	7.0	4.0
09/10/98	32	1.4	1.1	29	9.7	17	NA	310	<0.46	<5.7	0.9	19	300	7.9	134	5.0	2.0
12/03/98	0.4	<0.20	1.6	2	1.7	0.89	NA	<50	<1.1	<0.16	1.5	18	200	7.9	79	4.0	1.0

MW-2

	Volatile Organic Compounds										In-field Biodegradation Measurements						
Parameter/ Date	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Xylenes ug/L	1,3,5-TMB ug/L	1,2,4 TMB ug/L	Dissolved Lead mg/L	GRO ug/L	Naphthalene ug/L	MTBE ug/L	DO ppm	Temp °C	Conductivity µmhos/cm	pH	REDOX milliVolts	Iron (T) ppm	Iron (S) ppm
NR 140 ES	*5.0*	*343*	*700*	*620*			*0.015*		*40*	*60*							
02/27/97	180	740	92	1000	73	180	0.0033	NA	43	2.8	2.3	7	400	7.5	37	0.8	0.1
05/08/97	370	3100	510	3600	170	570	NA	12000	120	<3.2	2.0	10	300	7.3	-70	0.2	0.1
08/25/97	1100	13000	2200	12000	470	1800	NA	33000	640	<16	1.7	18	300	7.1	24	2.0	0.8
03/17/98	430	13000	2300	13000	440	1700	NA	54000	550	<32	5.0	11	970	8.1	100	2.3	1.5
06/09/98	320	5700	1500	8000	340	1300	NA	28000	380	<12	0.8	13	100	7.5	-127	6.0	5.0
09/10/98	59	330	240	830	76	260	NA	4500	86	<0.80	0.4	19	300	7.6	-123	8.0	5.0
12/03/98	68	230	240	660	88	280	NA	4100	88	<1.6	0.8	16	100	7.6	15	10.0	6.0

Table 3
Ground Water Chemistry and In-Field Biodegradation Data Summary

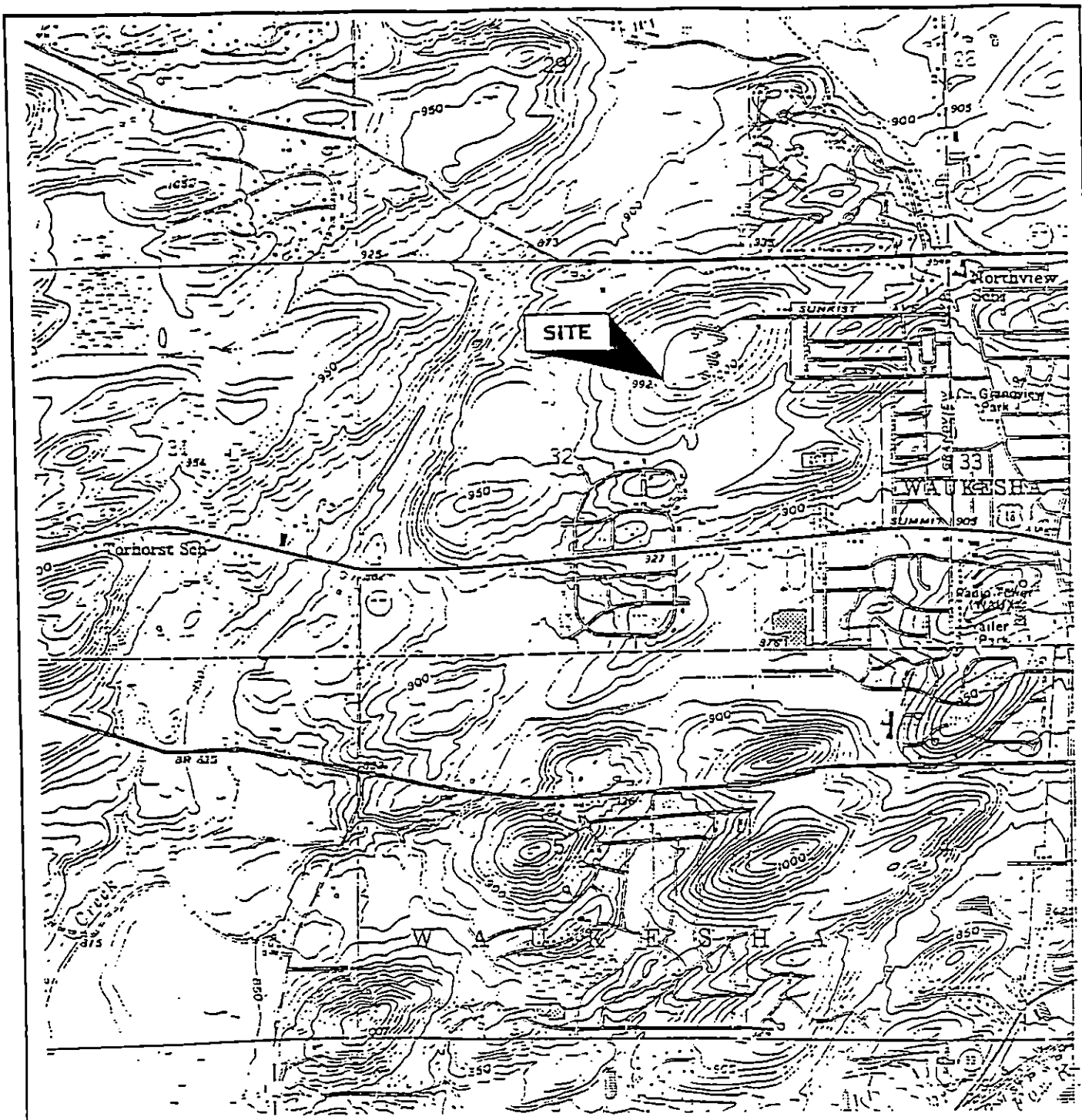
UW-Waukesha
Waukesha, Wisconsin
Delta No. 1096-115-1

MW-3

	Volatile Organic Compounds										In-field Biodegradation Measurements						
Parameter/ Date	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Xylenes ug/L	1,3,5-TMB ug/L	1,2,4 TMB ug/L	Dissolved Lead mg/L	GRO ug/L	Naphthalene ug/L	MTBE ug/L	DO ppm	Temp °C	Conductivity µmhos/cm	pH	REDOX milliVolts	Iron (T) ppm	Iron (S) ppm
NR 140 ES	*5.0*	*343*	*700*	*620*			*0.015*		*40*	*60*							
02/27/97	0.32	0.69	<0.38	<1.1	<0.33	<0.32	<0.00089	NA	0.65	<0.14	4.7	7	400	7.6	-5	0.6	0.3
05/08/97	0.18	0.35	<0.22	<0.23	<0.29	<0.22	NA	<50	<0.46	2.8	5.6	11	300	7.5	75	0.3	0.1
08/25/97	<0.13	<0.20	<0.22	0.38	<0.29	0.24	NA	<50	<0.46	<0.16	4.7	18	300	7.3	29	2.0	0.3
03/17/98	<0.13	<0.20	<0.22	<0.23	<0.29	<0.22	NA	<50	<0.46	0.34	7.5	10	800	7.5	100	0.2	0.1
06/09/98	<0.13	<0.20	<0.22	<0.23	<0.29	<0.22	NA	<50	<0.46	<0.16	2.3	14	200	7.6	191	4.0	1.0
09/10/98	<0.13	<0.20	<0.22	<0.23	<0.29	<0.22	NA	<50	<0.46	<0.16	0.8	20	300	7.6	131	1.0	0.5
12/03/98	0.23	2.3	2.8	12	0.56	2.2	NA	<50	<1.1	<0.16	1.7	17	100	7.8	83	3.0	1.0

Explanation:

MW = ... Monitoring Well
TMB = ... Tri-methyl Benzene
MTBE = ... Methyl Tertiary-butyl Ether
GRO = ... Gasoline Range Organic Compounds
DO = ... Dissolved Oxygen
Redox = ... Reduction/Oxidation
Iron (T) = ... Iron; Total
Iron (S) = ... Iron; Soluble
µg/L = ... micrograms per liter
mg/L = ... milligrams per liter
msl = ... mean sea level
ppm = ... parts per million
°C = ... Degrees Celsius
µmhos/cm = ... micromhos per centimeter
NR 140 ES = ... Wisconsin Adm. Code Ch. NR 140 Enforcement Standard (Rev. 10/96)
NA = ... Not analyzed
NM = ... No measurement
Additional VOC compounds were detected at MW-2 at very low concentrations



HARTLAND QUADRANGLE
WISCONSIN
7.5 MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION

North

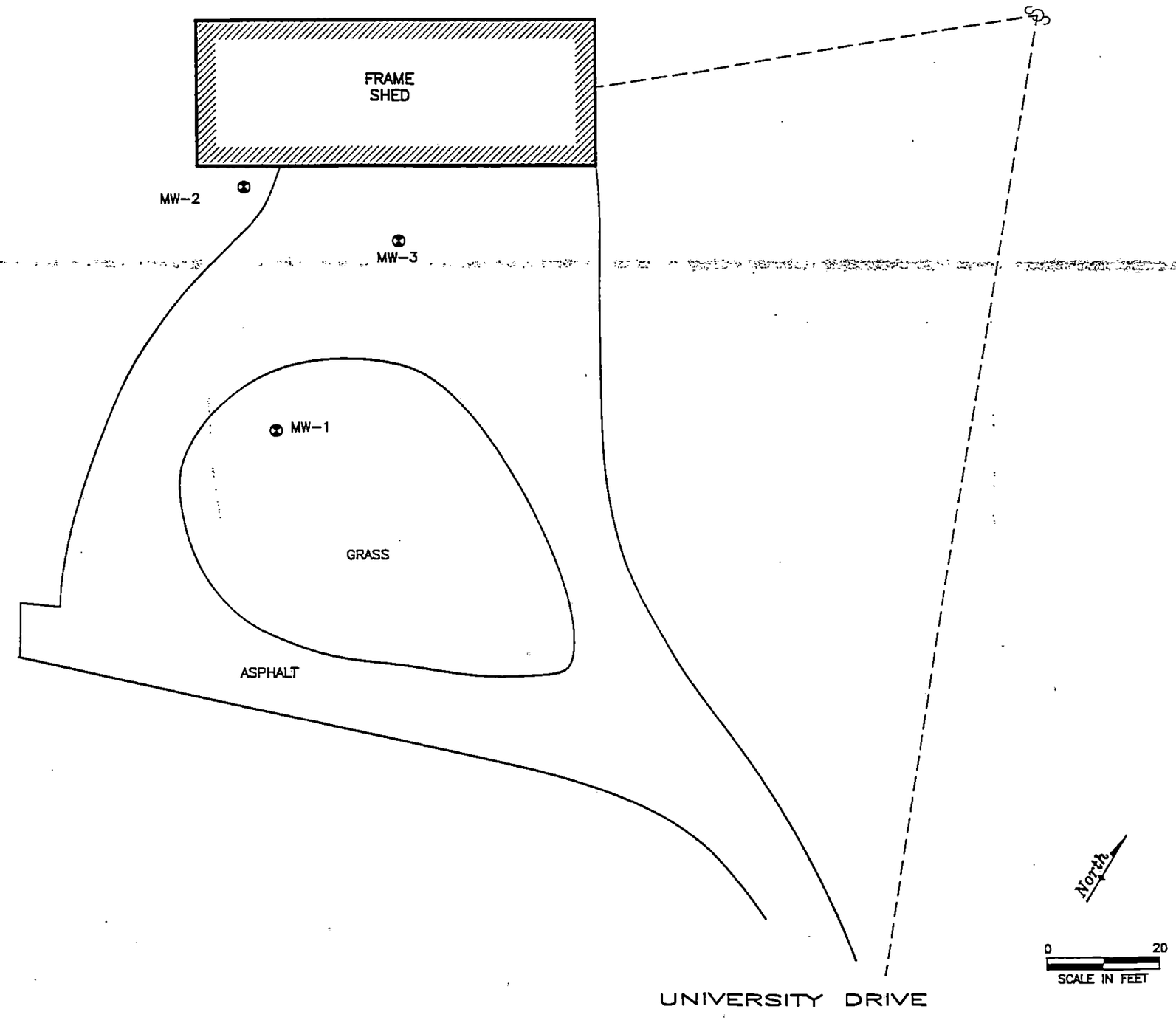
0 2000

SCALE IN FEET

FIGURE 1
SITE LOCATION MAP
UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.	PREPARED BY
1096-115	GGG
DATE	REVIEWED BY
11/05/97	

Delta Environmental Consultants, Inc.



LEGEND

MW-3 ⊗ MONITORING WELL LOCATION

– – – – OVERHEAD UTILITY

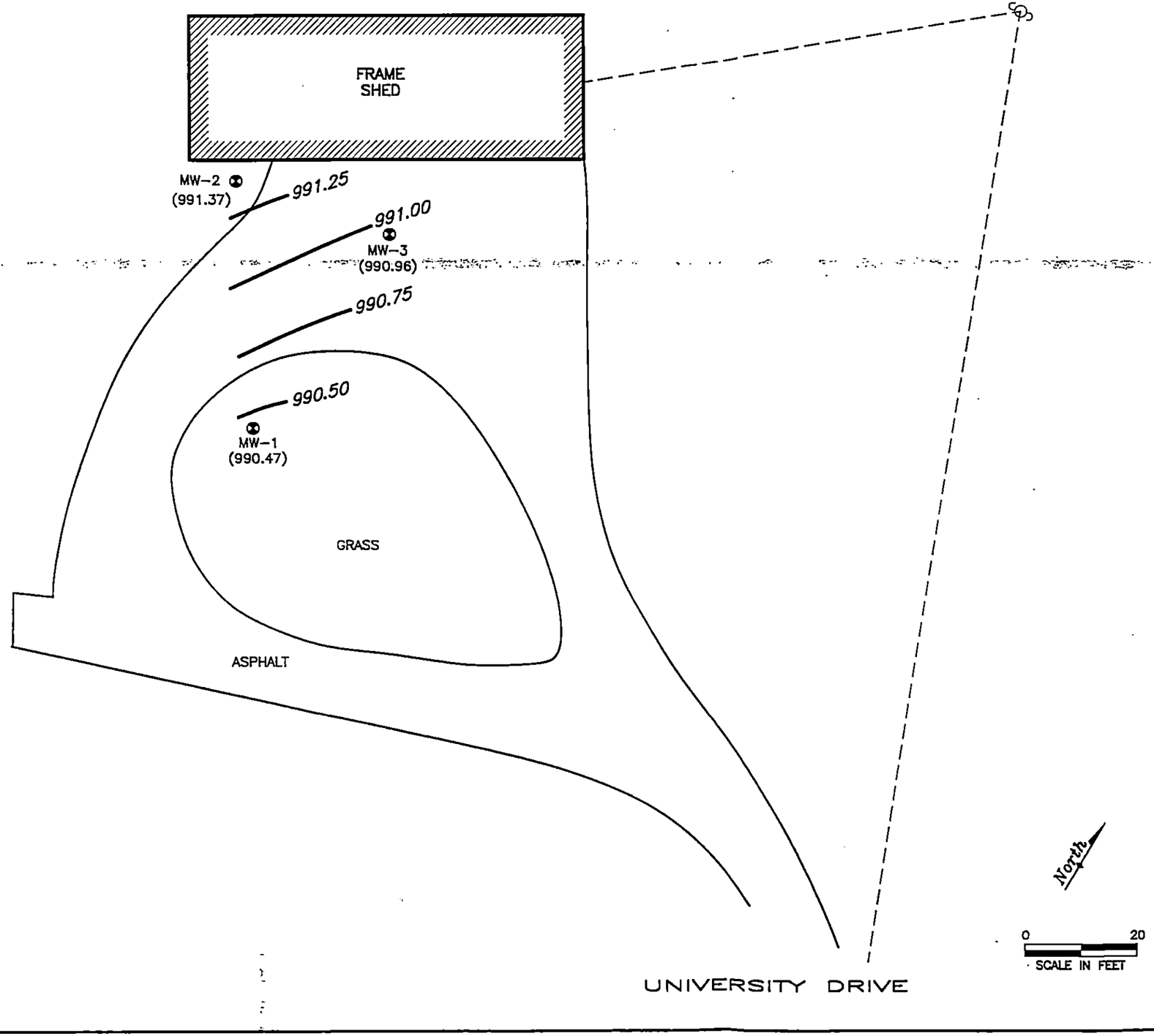
FIGURE 2

SITE MAP

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.: 1096-115	DRAWN BY: DD
PREPARED BY: GGG	DATE: 11/20/97
FILE NAME: 96115-S	

Delta Environmental Consultants Inc.



LEGEND

MW-3 ⊗	MONITORING WELL LOCATION
– – – –	OVERHEAD UTILITY
(990.96)	GROUND WATER ELEVATION (IN FEET)
991.00	GROUND WATER CONTOUR LINE CONTOUR INTERVAL = 0.25 FEET

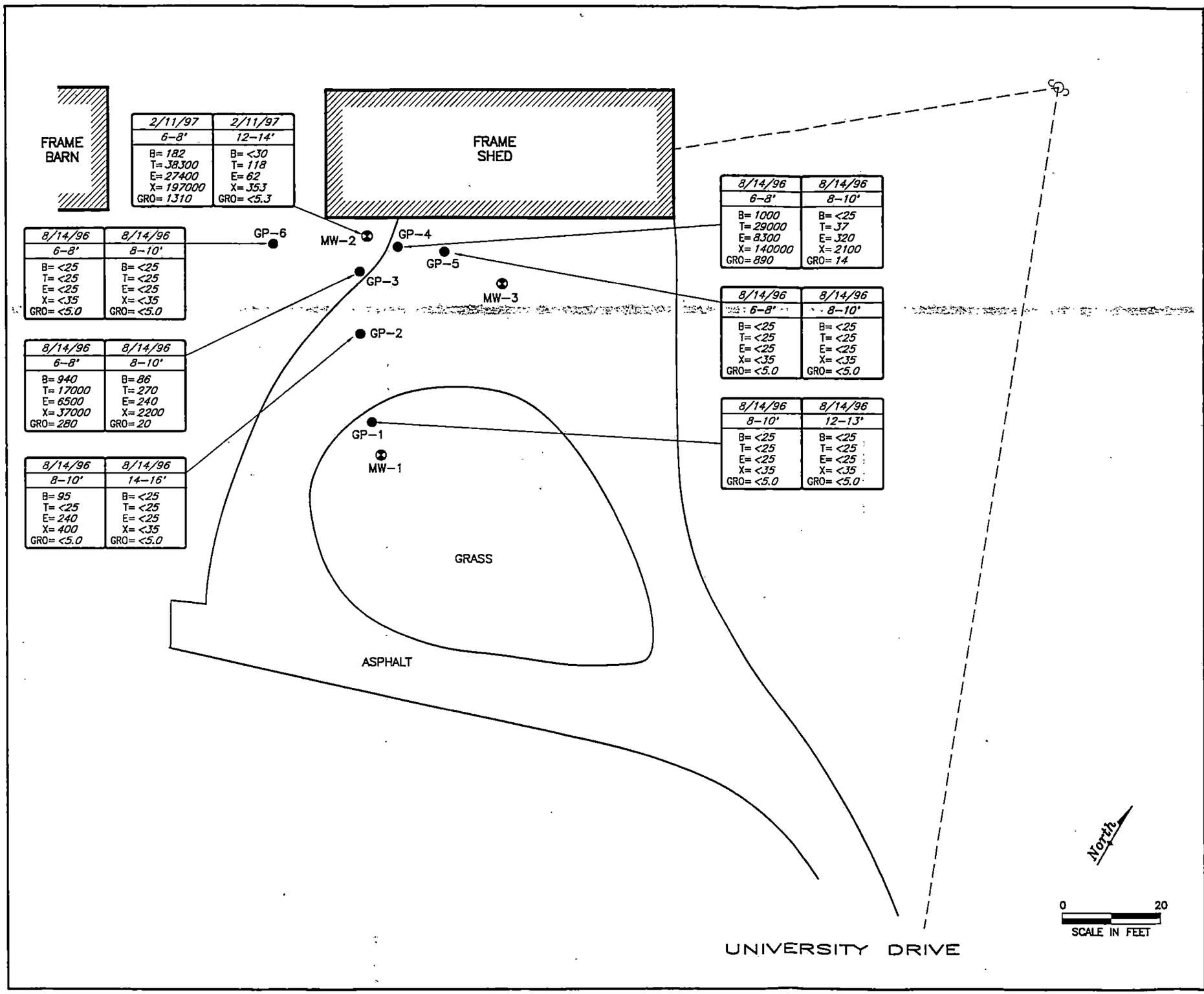
FIGURE 3

GROUND WATER ELEVATION
CONTOUR MAP –DECEMBER 3, 1998

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.: 1096-115	DRAWN BY: DD
PREPARED BY: JZ	DATE: 1/14/99
FILE NAME: 96115-S	

Delta Environmental Consultants Inc.



LEGEND

- MW-3 ⊗ MONITORING WELL LOCATION
- OVERHEAD UTILITY
- GP-1 ● GEOPROBE LOCATION

DATE	SAMPLE DATE
DEPTH	SAMPLE DEPTH (FEET)
B=	BENZENE (µg/Kg)
T=	TOLUENE (µg/Kg)
E=	ETHYLBENZENE (µg/Kg)
X=	XYLENES (µg/Kg)
GRO=	GASOLINE RANGE ORGANICS (µg/Kg)

(µg/Kg) MICROGRAMS PER KILOGRAM

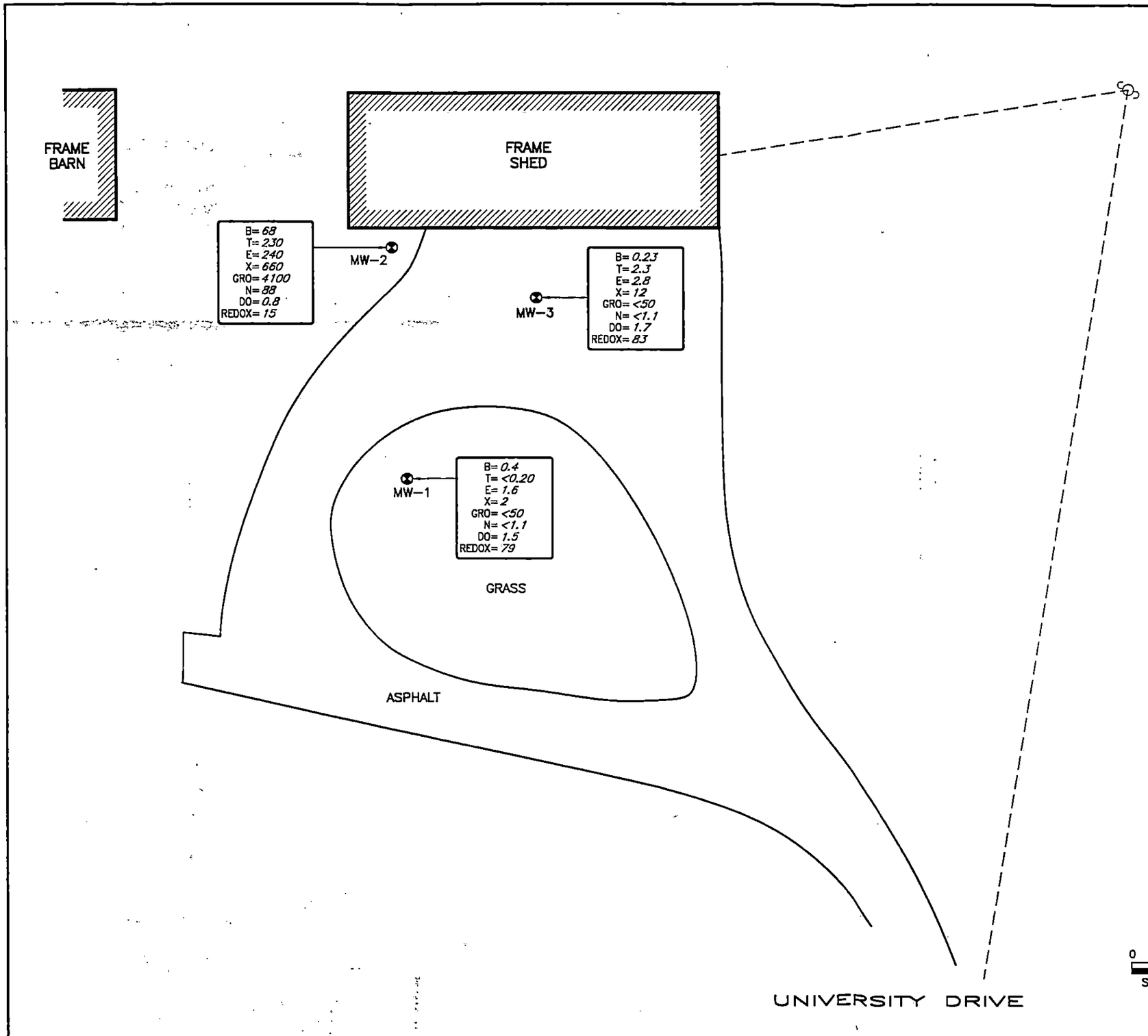
FIGURE 4

SOIL CHEMICAL CONCENTRATION MAP

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.: 1096-115	DRAWN BY: DD
PREPARED BY: JZ	DATE: 1/15/99
FILE NAME: 96115-S	

Delta Environmental Consultants Inc.



LEGEND

MW–3 ⊗ MONITORING WELL LOCATION

– – – – OVERHEAD UTILITY

B= BENZENE (µg/L)
T= TOLUENE (µg/L)
E= ETHYLBENZENE (µg/L)
X= XYLENES (µg/L)
GRO= GASOLINE RANGE ORGANICS (µg/L)
N= NAPHTHALENE (µg/L)
DO= DISSOLVED OXYGEN (ppm)
REDOX= REDUCTION/OXIDATION (mV)

(µg/L) MICROGRAMS PER LITER
(ppm) PARTS PER MILLION
(mV) MILLIVOLTS

FIGURE 5

GROUND WATER CHEMICAL CONCENTRATION MAP – DECEMBER 3, 1998

UW – WAUKESHA
UNIVERSITY DRIVE
WAUKESHA, WISCONSIN

PROJECT NO.: 1096–115	DRAWN BY: DD
PREPARED BY: JZ	DATE: 1/15/99
FILE NAME: 96115–S	

Delta Environmental Consultants Inc.

APPENDIX K

UST No. 84 Closure Letter

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Region Annex
4041 North Richards Street
PO Box 12436
Milwaukee, Wisconsin 53212-0436
Telephone 414-229-0800
FAX 414-229-0810

April 16, 1999

Leslie Williams
Waukesha County Department of Parks and Land Use
1320 Pewaukee Road
Waukesha, WI 53188

Subject: Case closure, 300 gallon gasoline underground storage tank release, UW-Waukesha UST #84, 1500 North University Drive, Waukesha, file reference FID #268181650 ERR-LUST

I have reviewed your case file based on documents submitted by Northern Environmental. Based on this information I agree with Northern Environmental in that no further work is needed. The department reserves the right to reopen this case pursuant to s. NR726.09, Wisconsin Administrative Code (WAC), should additional information regarding site conditions indicate contamination on or from the site poses a threat to public health, safety or welfare or the environment.

To complete the closure of this site, you must place a groundwater use restriction on the property deed at the county register of deeds office which specifies the legal description of the property, the location, type, and concentration of the contaminants and includes the following language:

> Natural attenuation has been approved by the Department of Natural Resources to remediate groundwater exceeding ch. NR 140 groundwater standards within the boundaries of this property. Construction of wells where water quality exceeds the drinking water standards in ch. NR809 is restricted by chs. NR811 and NR812. Special well construction standards or water treatment requirements, or both, or well construction prohibitions may apply. Anyone who proposes to construct or reconstruct a well on this property is required to contact the Department of Natural Resources' Bureau of Drinking Water and Groundwater to determine what specific requirements are applicable prior to constructing or reconstructing a well on this property.

Within 60 days all of the groundwater monitoring wells at the site must be abandoned in accordance with WAC NR 141 and the completed abandonment forms must be submitted to the department. Once the department receives the abandonment forms and a notarized copy of the groundwater use restriction, this case will be tracked as closed on our computer tracking system.

If you have any questions about this letter, call me at 414-229-0850.

Sincerely,

John Feeney
Hydrogeologist

Cc: Delta Environmental Consultants, Inc.
SER File

APPENDIX L

UST No. 5 Tank Closure Report

Foth & Van Dyke

Site Assessment for Underground Storage Tank Closure

University of Wisconsin - Waukesha
UST No. 60

Scope ID: 93W066

Waukesha County Department of Environmental Resources

October 1994

REPORT

Foth & Van Dyke

Two Park Plaza, Suite 950
10850 West Park Place
Milwaukee, WI 53224-3619
414/359-2500
Fax: 414/359-2519

Engineers
Architects
Planners
Scientists

Foth & Van Dyke

Two Park Plaza, Suite 950
10850 West Park Place
Milwaukee, WI 53224-3619
414/359-2500
FAX: 414/359-2519

October 31, 1994

Tank Response Unit - SW/3
Wisconsin Department of Natural Resources
101 South Webster Street
P.O. Box 7921
Madison, Wisconsin 53707

Dear Tank Response Unit:

RE: Site Assessment for Underground Storage Tank Closure
University of Wisconsin - Waukesha UST No. 60
Waukesha County, Wisconsin

On behalf of the Waukesha County Department of Environmental Resources, Foth & Van Dyke is submitting documentation for the closure of a 60-gallon leaded gasoline underground storage tank (UST). The former UST system was located at the University of Wisconsin - Waukesha, 1500 North University Drive, Waukesha, Wisconsin. The UST system was closed on December 9, 1993 in accordance with Wisconsin Administrative Code Chapter ILHR 10.

This report contains a description of site activities, analytical results of soil samples collected during the closure of the system, and documentation of disposal of the tank cleaning waste and the decommissioned tank.

This site assessment report has been prepared and is being submitted pursuant to the general requirements of ILHR 10.732 and ILHR 10.734 of the Wisconsin Administrative Code. ILHR 10.732(1) requires the preparation of a site assessment for the permanent closure of a UST system.

If you have any questions or comments concerning the tank closure or the site, please contact the undersigned at (414) 359-2500.

Sincerely,

Foth & Van Dyke

John S. Fry

John S. Fry
Certified Site Assessor

Lanette L. Altenbach/kmw1

Lanette L. Altenbach, C.P.G.
Senior Project Manager

JSF:LLA:jaw:kmw1

Enclosure

A4-14/93W066

Site Assessment for
Underground Storage Tank Closure
University of Wisconsin - Waukesha
UST No. 60 -
Waukesha County
Department of Environmental Resources

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1	Ms. Laura Stauffer Risk Manager Waukesha County Finance Department 707 West Moreland Boulevard Waukesha, Wisconsin 53188 Phone: (414) 548-7020

SITE ASSESSMENT FOR
UNDERGROUND STORAGE TANK CLOSURE
UNIVERSITY OF WISCONSIN - WAUKESHA
UST NO. 60

Scope I.D. 93W066

Prepared for
Waukesha County
Department of Environmental Resources
325 East Broadway
Waukesha, Wisconsin 53186-5079

Prepared by
Foth & Van Dyke and Associates Inc.
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October 1994

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Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 60 - Waukesha County Department of Environmental Resources

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Appendix B	"*Checklist for Underground Tank Closure*" DILHR Form SBD-8951 (R. 12/91)
Appendix C	Sludge and Tank Disposal Documentation
Appendix D	Photograph Documentation
Appendix E	Laboratory Analysis Report and Chain-of-Custody Record

Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 60 - Waukesha County Department of Environmental Resources

Executive Summary

Underground storage tank (UST) No. 60 was a 60-gallon steel tank containing leaded gasoline that originally served an emergency generator at "Southview Hall" on the University of Wisconsin - Waukesha Campus. The UST had been abandoned in-place since the mid-1970s (the UST was filled with water) and was permanently closed by removal on December 9, 1993.

During the excavation and removal of the tank, soil samples were collected for field screening and laboratory analysis to check for contamination in the soil.

During the tank closure, no petroleum product odor was present, no noticeable stains were observed, and the field screening results were relatively low. The laboratory analysis results of the soil samples were below laboratory detection limits.

The tank was cleaned on-site and the tank sludge and cleaning waste were removed from the site and disposed of by a licensed waste hauler. The tank was removed from the site and destroyed by being cut up into scrap. The UST excavation was then backfilled.

Clean closure of UST No. 60 was achieved.

1 Site Background Information

The site is located at the University of Wisconsin - Waukesha at 1500 North University Drive, Waukesha, Wisconsin. The site is located in Waukesha County within the southeast quarter of the northeast quarter of Section 32, Township 7 North, Range 19 East. The site location is shown on the "Site Location Map", Figure 1-1, which is a portion of the United States Geological Survey (USGS), Hartland Quadrangle, 7.5-minute series topographic map published in 1976. The elevation of the site is approximately 1,010 feet above mean sea level (msl). The area consists of gently rolling hills with residential subdivisions to the south, east, and northeast, and farmlands to the north and west. The depth to groundwater at the site is greater than 6 feet.

UST No. 60 was located in an area of shrubs and bushes on the north side of "Southview Hall", on the University of Wisconsin - Waukesha Campus. The UST was a 60-gallon single-wall steel tank and the tank's Department of Industry, Labor, and Human Relations (DILHR) Registration No. was 67060-0516. The UST was used for leaded gasoline to serve a 10 horsepower standby emergency generator that was located in the basement. The UST system was originally installed in 1968, at the time the building was constructed, but has not been used since approximately 1976. The UST was previously abandoned in-place by filling the tank with water. The fill pipe was located in the top of the tank and the vent pipe was routed over to the north wall of the building. The vent riser on the exterior wall of the building was removed in 1987. The suction piping consisted of ⅜-inch diameter copper tubing routed into the basement of the building, where it was cut off at the foundation wall. A drawing of the UST system is shown on the "Site Layout Plan", Figure 1-2. A copy of the "*Underground Petroleum Product Tank Inventory*" form (DILHR SBD-7437) is included in Appendix A.

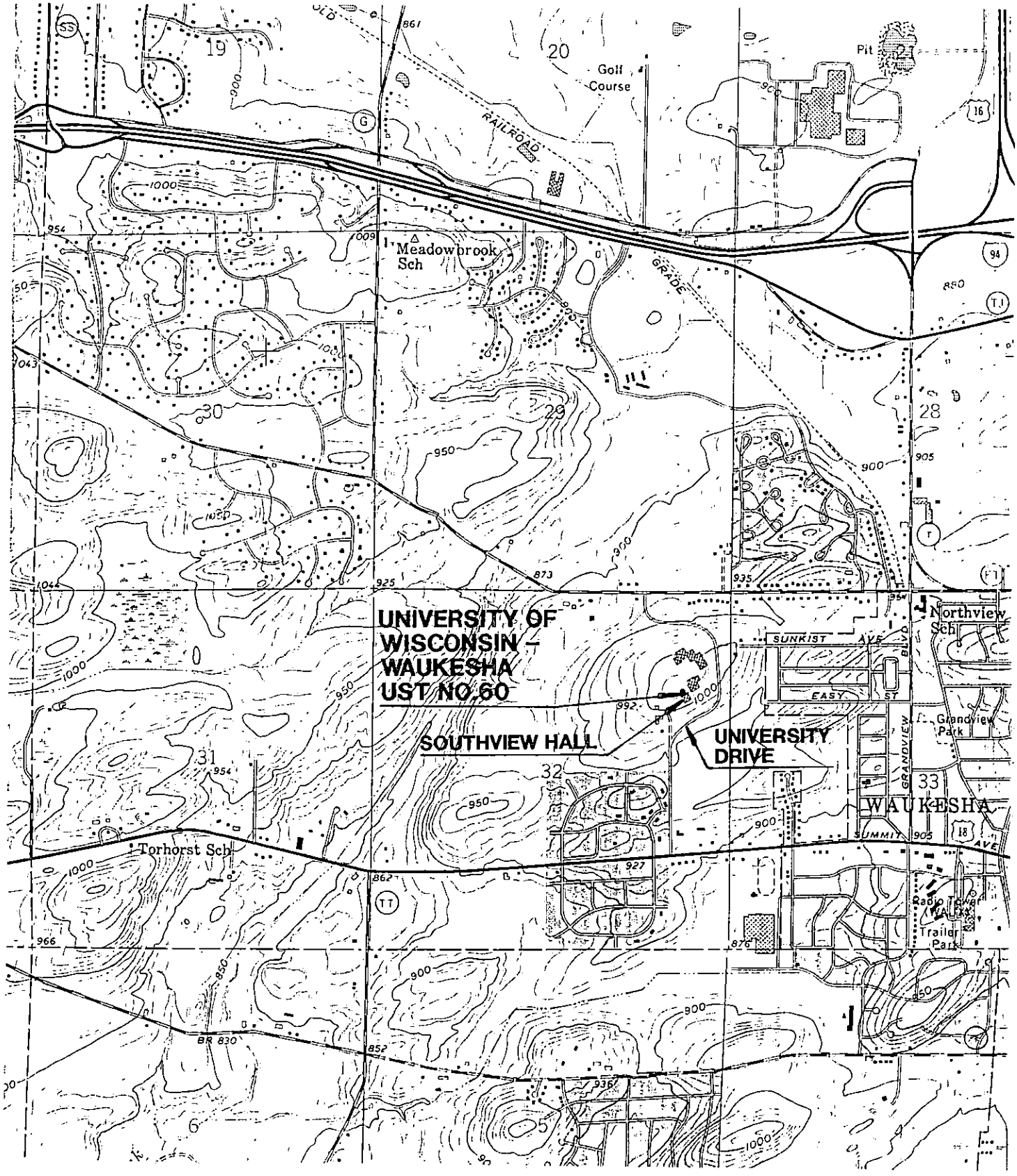
The UST Owner/Operator is:

University of Wisconsin - Waukesha
1500 North University Drive
Waukesha, Wisconsin 53188

Contact Person:

Ms. Leslie Williams, Hazardous Materials Coordinator
Waukesha County Department of Environmental Resources
(414) 549-3012

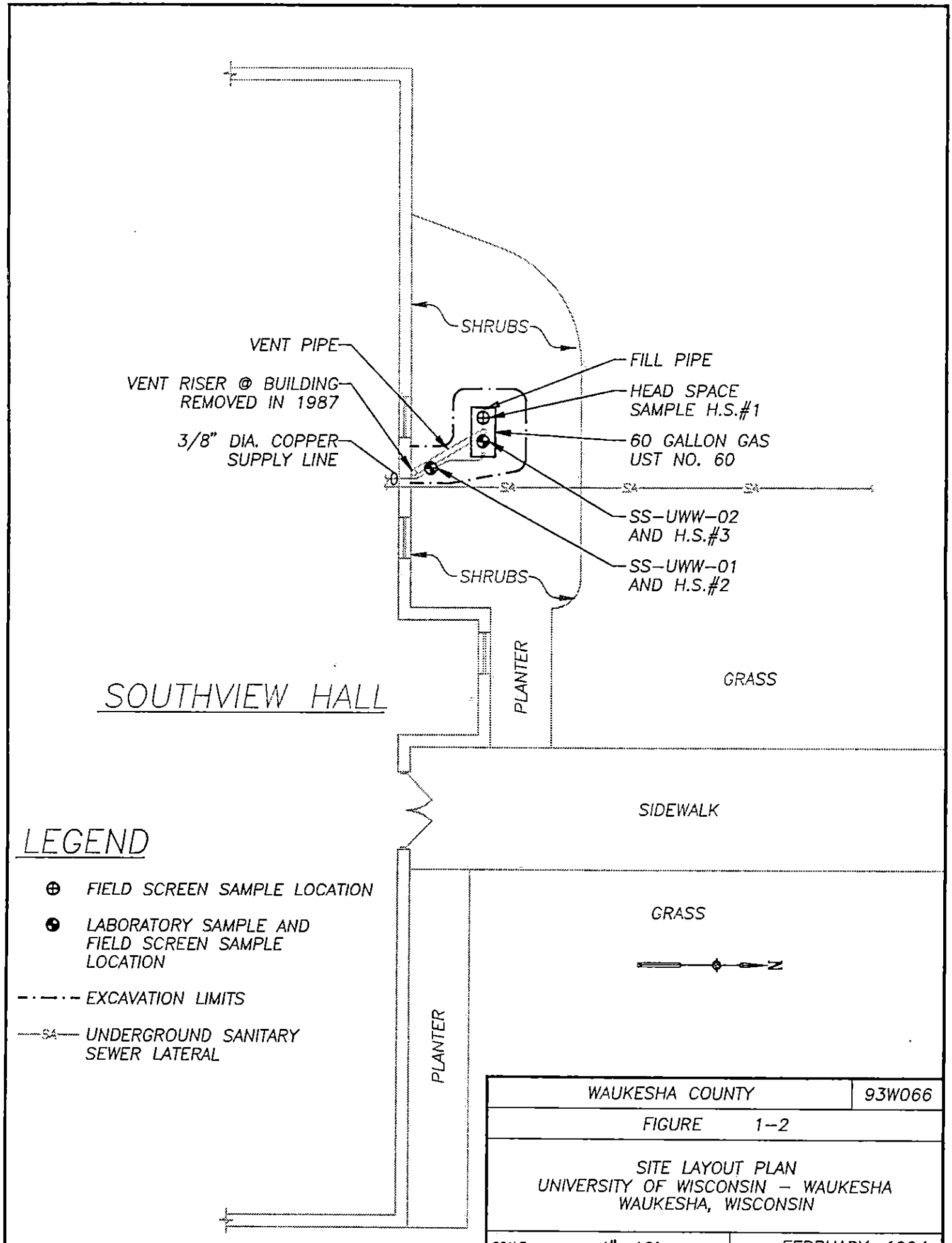
The soil type at the site is the Hochheim loam (HmC2) according to the "*Soil Survey of Milwaukee and Waukesha Counties, Wisconsin*" (United States Department of Agriculture [USDA] Soil Conservation Service [SCS] in cooperation with University of Wisconsin, Wisconsin Geological and Natural History Survey Soils Department, and Wisconsin Agricultural Experiment Station, issued July 1971). Hochheim loam is part of the Hochheim series, which consists of soils that are well drained and loamy and are underlain by highly calcareous loam glacial till. The surface layer of the Hochheim series is very dark brown loam (about 3 inches thick); the subsurface layer is dark grayish-brown loam (about 3 inches thick); the subsoil (about 11 inches thick) is dark yellowish-brown and dark brown, slightly acid clay loam in the upper part



SOURCE: USGS 7.5 MIN. QUADRANGLE
HARTLAND, WISCONSIN

QUADRANGLE LOCATION

WAUKESHA COUNTY	93W066
FIGURE 1–1	
SITE LOCATION MAP UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	
SCALE: APPROX. 1"=2000'	DATE: FEBRUARY, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1



WAUKESHA COUNTY	93W066
FIGURE 1-2	
SITE LAYOUT PLAN UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	
SCALE: 1"=10'	DATE: FEBRUARY, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1

and dark yellowish-brown or yellowish-brown, slightly calcareous heavy loam in the lower part; and the substratum is yellowish-brown, strongly calcareous gravelly loam glacial till. Hochheim soils are moderately permeable.

2 Work Functions

Midwest Petroleum Service, Inc. performed the excavating, tank removal, and tank cleaning procedures. Foth & Van Dyke performed the site assessment procedures. EOG Environmental, Inc. and Dahlen Transport, Inc. transported the tank sludge and cleaning waste to Pollution Control Industries of Indiana for waste disposal. Ellertson Salvage and Recycling, Inc. disposed of the decommissioned tank. Lt. Karl Beaster, Fire Inspector for the City of Waukesha Fire Department, witnessed the tank removal.

DILHR Certified Tank Remover/Cleaner

Midwest Petroleum Service, Inc.
2148 South 116th Street
West Allis, Wisconsin 53227
(414) 545-0550
Remover/Cleaner: Larry Warichak
DILHR Cert. No. 02602
Expiration Date: 05/01/94

DILHR Certified Site Assessor

Foth & Van Dyke
10850 West Park Place, Suite 950
Milwaukee, Wisconsin 53224-3619
(414) 359-2500
Site Assessor: John Fry
DILHR Cert. No. 05318
Expiration Date: 05/26/97

Waste Transporters

EOG Environmental, Inc.
5611 West Hemlock Street
Milwaukee, Wisconsin 53223
(414) 353-1156
W.I.D. No. 988580056

Dahlen Transport, Inc.
1680 4th Avenue
New Port, MN 55055
(800) 328-1330
M.N.D. No. 022969026

Tank Destruction

Ellertson Salvage and Recycling, Inc.
8330 Raynor Avenue
Franksville, Wisconsin 53126
(414) 425-1312
W.I.D. No. 988579298

Sludge Disposer

Pollution Control Industries
of Indiana
4343 Kennedy Avenue
East Chicago, IN 46312
(219) 397-3951
I.N.D. No. 000646943

3 Tank Closure

UST No. 60 was permanently closed by removal on December 9, 1993. Prior to the tank closure, the tank had been abandoned in-place. The tank was filled with water to serve as ballast.

The ambient air temperature on the day of closure was 42°F at the start of the excavating, falling to 35°F by late afternoon. The sky was mostly cloudy. There was a 15 to 20 miles per hour (mph) wind from the southwest. No precipitation occurred during the tank closure or the previous day. Stressed or dead vegetation was not observed in the immediate area.

UST No. 60 was a steel, single-wall tank, 20 inches in diameter by 4 feet long. The tank was constructed without a liner or an outside coating. No additional corrosion protection was present. The "*Checklist for Underground Tank Closure*" form (DILHR SBD-8951, R. 12/91) was completed by Midwest Petroleum Service, Inc. and a copy of the form is included in Appendix B.

The top of the tank was encountered approximately 4 feet below grade. The backfill material removed from above the tank consisted of 6 inches of topsoil with loose sandy clay mixed with small stones (½- to 3-inch size). There were no visible stains or petroleum product odor observed in the excavation and backfill material. The soil along the sides of the tank and at the bottom of the excavation was a medium brown damp hard clay with stones. The bottom of the tank was located at approximately 5.6 feet below grade. Groundwater was not encountered in the excavation.

The condition of the tank was poor. The tank was heavily rusted and there was a ⅝-inch diameter hole rusted through the bottom of the tank. The fill pipe broke off during the excavation.

Before the tank was removed from the ground, the atmosphere within the tank was monitored for combustible vapor levels. Then, about 30 gallons of water was baled out of the tank and placed into a 55-gallon drum. The tank was cleaned on-site after removal from the excavation. A 1-foot by 3-foot section was cut out of the side wall of the tank to gain access inside the tank for cleaning. An absorbent material was then placed inside the tank to soak up the remaining water, which was subsequently removed and placed into the 55-gallon drum for disposal. The tank waste was transported off-site by EOG Environmental, Inc. and Dahlen Transport, Inc. to Pollution Control Industries of Indiana for disposal. A copy of EOG Environmental, Inc.'s "*Waste Profile Sheet*" and the Indiana Department of Environmental Management's "*Uniform Hazardous Waste Manifest*" form are included in Appendix C. The tank was removed from the site by Midwest Petroleum Service, Inc. and salvaged (destroyed) by Ellertson Salvage and Recycling, Inc. A copy of the letter documenting receipt of the tank and destruction of the tank is included in Appendix C.

Photographs of the UST site including excavation, tank removal, and decommissioned tank are included in Appendix D.

4 Soil Sample Methodology

Soil samples from the tank excavation were collected from the backfill material surrounding the fill pipe at the top of the tank, from the bottom of the excavation in native soil approximately 1 foot below the middle of the tank, and 1 foot below the supply line and vent pipe. The soil sample at the fill pipe was a headspace sample for field screening, and the two samples from below the tank and piping consisted of samples for laboratory analysis and headspace samples for field screening. Soil sampling locations are identified on the "Site Layout Plan", Figure 1-2.

Headspace samples collected from the excavation were field screened using a photoionization detector (PID) for the presence of volatile organic compounds (VOCs) following the headspace sample container analysis procedure, as described in Wisconsin Administrative Code ILHR 10, Attachment No. 2. The PID used was a Photovac MicroTIP HL-200 (Serial No. PA910111) with a 10.6 electron-volt (eV) lamp. The PID was field calibrated to a span gas with a concentration of 100 parts-per-million (ppm) isobutylene on December 9, 1993 at 12:30 p.m., prior to measuring the headspace samples.

The soil samples collected from below the tank and piping were analyzed for gasoline range organics (GRO) following the Wisconsin Department of Natural Resources (WDNR) Modified GRO method. Soil samples were analyzed by Suburban Laboratories of Wisconsin, Inc., N8 W22520-B Johnson Drive, Waukesha, Wisconsin 53186. A copy of the laboratory analysis report and the chain-of-custody record are included in Appendix E. Samples collected for laboratory analysis were obtained using a 35-milliliter (ml) disposable plastic syringe with the end cut off, filling the syringe to the 12-ml to 13-ml mark to provide a GRO sample that weighed approximately 25 grams. Methanol was then added to the samples. In addition to the GRO samples, dry weight samples were collected. A methanol trip blank accompanied the soil samples to the laboratory.

The headspace sample collected at the fill pipe (No. H.S. #1) had a PID reading of 67.5 ppm relative to isobutylene. The soil sample collected from under the supply line and vent pipe (No. SS-UWW-01) had a GRO concentration of less than 10.0 milligrams per kilogram (mg/kg) and the corresponding headspace sample (No. H.S. #2) had a PID reading of 102.3 ppm relative to isobutylene (highest reading of four readings taken). The soil sample collected from under the middle of the tank (No. SS-UWW-02) had a GRO concentration of less than 10.0 mg/kg and the corresponding headspace sample (No. H.S. #3) had a PID reading of 43.5 ppm relative to isobutylene. The headspace samples had no noticeable petroleum product odor. Sampling results are summarized in Table 4-1.

Table 4-1

Laboratory and Field Screening Results for University of Wisconsin - Waukesha UST No. 60

Soil Sample I.D. No.	Sample Location	Sample Depth (ft.)	Soil Type	Moisture Content	Date Collected	Time Collected	Sample Odor	Field Reading (i.u.)	Gasoline Range Organics (mg/kg)
H.S. #1	Top of tank, at fill pipe	3.75	Sandy loam	Damp	12/09/93	14:10	None	67.5	N/A
H.S. #2	12 inches below vent pipe and suction line (at center of pipe run)	3.0	Sandy loam	Damp	12/09/93	15:32	None	102.3	N/A
H.S. #3	Below center of tank	6.5	Stiff clay	Damp	12/09/93	15:52	None	43.5	N/A
SS-UWW-01	12 inches below vent pipe and suction line (at center of pipe run)	3.0	Sandy loam	Damp	12/09/93	15:34	None	N/A	< 10.0
SS-UWW-02	Below center of tank	6.5	Stiff clay	Damp	12/09/93	15:54	None	N/A	< 10.0
SS-UWW-TB	Trip blank (MeOH)	--	--	--	12/09/93	16:07	--	N/A	< 10.0

Prepared by: John Fry | Checked by: Katie Roberts

ft. = feet
i.u. = instrument units as isobutylene
mg/kg = milligrams per kilogram
N/A = Not Analyzed
MeOH = methanol

5 Conclusion

There was no visual evidence of any product spills or leakage, no petroleum product odor, and relatively low PID field screening results. The laboratory analysis of the soil samples confirmed a clean closure of UST No. 60.

Midwest Petroleum Service, Inc. proceeded to backfill the excavation with the previously excavated soil.

APPENDIX M

UST No. 60 Tank Closure Report

Foth & Van Dyke

Site Assessment for Underground Storage Tank Closure

University of Wisconsin - Waukesha
UST No. 5
1500 North University Drive
Waukesha, Wisconsin

Scope ID: 94W058

Waukesha County Department of Environmental Resources

May 1995

REPORT

Foth & Van Dyke

Two Park Plaza, Suite 950
10850 West Park Place
Milwaukee, WI 53224-3619
(414) 359-2500
Fax: (414) 359-2519

May 25, 1995

Ms. Giselle Red
Wisconsin Department of Natural Resources
Southeast District Office
Richards Street Annex
4041 North Richards Street
P.O. Box 12436
Milwaukee, Wisconsin 53212

Dear Ms. Red:

RE: Site Assessment for Underground Storage Tank Closure
University of Wisconsin - Waukesha UST No. 5
1500 North University Drive
Waukesha, Wisconsin
WDNR File Ref. No. 268181650 ER-LUST

On behalf of the Waukesha County Department of Environmental Resources, Foth & Van Dyke is submitting documentation for the closure of a 10,000-gallon heating oil underground storage tank (UST). The former UST system was located at the University of Wisconsin - Waukesha, 1500 North University Drive, Waukesha, Wisconsin. The UST system was closed on November 28, 1994 in accordance with Wisconsin Administrative Code Chapter ILHR 10.

This report contains a description of site activities, analytical results of soil samples collected during the closure of the system, and documentation of disposal of the tank cleaning waste and the decommissioned tank. Low levels of diesel range organics (DRO) were detected below the supply piping and the south end of the tank, but because of the low levels of DRO no further action is recommended.

ILHR 10.732(1) requires that a site assessment be performed before completion of the permanent closure of the UST system. This site assessment report has been prepared and is being submitted pursuant to the general requirements of ILHR 10.732 and ILHR 10.734 of the Wisconsin Administrative Code.

We request your concurrence with the no further action recommendation. If you have any questions or comments concerning the tank closure or the site, please contact the undersigned at (414) 359-2500.

Sincerely,

Foth & Van Dyke

John S. Fry
Certified Site Assessor

Edwin W. Morse, P.G.
Senior Hydrogeologist

JSF:EWM:kmw1

Enclosure

Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 5 1500 North University Drive Waukesha, Wisconsin - Waukesha County Department of Environmental Resources

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1	Ms. Laura Stauffer Risk Manager Waukesha County Department of Administration 1320 Pewaukee Road, Room 310 Waukesha, Wisconsin 53188 Phone: (414) 548-7020

Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 5 1500 North University Drive Waukesha, Wisconsin

Scope I.D. 94W058

Prepared for
Waukesha County
Department of Environmental Resources
1320 Pewaukee Road, Room 260
Waukesha, Wisconsin 53188

Prepared by
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May 1995

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Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 5 1500 North University Drive Waukesha, Wisconsin - Waukesha County Department of Environmental Resources

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6 Limitations of Assessment 13

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Figure 1-2 UWW Campus Layout Map 3
Figure 1-3 Site Layout Plan 4

Drawings

None

Appendices

Appendix A	"*Underground Petroleum Product Tank Inventory*" Form DILHR Form SBD-7437
Appendix B	"*Checklist for Underground Tank Closure*" DILHR Form SBD-8951 (R 06/94)
Appendix C	Sludge and Tank Disposal Documentation
Appendix D	Photograph Documentation
Appendix E	Laboratory Analysis Report and Chain-of-Custody Record
Appendix F	Wisconsin Department of Natural Resources (WDNR) Letter - Leaking Tank Confirmation

Site Assessment for Underground Storage Tank Closure University of Wisconsin - Waukesha UST No. 5 1500 North University Drive Waukesha, Wisconsin - Waukesha County Department of Environmental Resources

Executive Summary

Underground storage tank (UST) No. 5 was a 10,000-gallon steel tank which contained heating oil that served two boilers located in the Maintenance Building at the University of Wisconsin - Waukesha Campus. The UST was permanently closed by removal on November 28, 1994.

During the excavation and removal of the tank, soil samples were collected for field screening and laboratory analysis to check for contamination in the soil.

During the tank closure, black staining and lack of vegetation was observed on the ground around the tank's fill pipes; some staining was visible in the pea gravel backfill material located near the bottom of the excavation; there was a dark-brown oily residue floating on top of the water that was at the bottom of the excavation; and the field screening results from some of the headspace samples were high. Four soil samples were collected for laboratory analysis (one under the middle of the tank, one under each end of the tank, and one beneath the fuel piping adjacent to where they enter the building), to confirm the contamination that was observed. The samples were analyzed for diesel range organics (DRO), following the Wisconsin Department of Natural Resources (WDNR) Modified DRO Method, and the laboratory analysis results of the DRO samples were 15 milligrams per kilogram (mg/kg) beneath the south end of the tank, 3.2 mg/kg under the fuel piping near the building, and no detectable DRO concentration (at or above the laboratory's listed detection limit) for the DRO samples beneath the middle and north end of the tank.

The tank was cleaned on-site, and the tank sludge and cleaning waste were removed from the site and disposed of by a licensed waste hauler. The tank was cut up on-site and the scrap was removed from the site and taken to a scrap recycler. The UST excavation was then backfilled with the excavated material.

Visual observations and field screening results indicated that a residual petroleum product from UST No. 5 was present in the tank pit. However, since the laboratory analysis results of the soil samples indicated only minor detects of DRO concentrations below the south end of the tank and below the fuel piping, and no detectable DRO concentrations below the middle and north end of the tank, it is recommended that no further action is required at this UST site.

1 Site Background Information

The site is located at the University of Wisconsin - Waukesha at 1500 North University Drive, Waukesha, Wisconsin. The site is located in Waukesha County within the northeast quarter of the northeast quarter of Section 32, Township 7 North, Range 19 East. The site location is shown on the "Site Location Map", Figure 1-1, which is a portion of the United States Geological Survey (USGS), Hartland Quadrangle, 7.5-minute series topographic map published in 1976. The elevation of the site is approximately 1,010 feet above mean sea level (msl). The area consists of gently rolling hills with residential subdivisions to the south, east, and northeast; and farmlands to the north and west.

UST No. 5 was located in a grassy area on the northeast side of the Maintenance Building, on the University of Wisconsin - Waukesha Campus, as shown on the "UWW Campus Layout Map", Figure 1-2. UST No. 5 was a 10,000-gallon single wall steel tank used for heating oil to serve the two gas/oil-fired boilers in the Maintenance Building, as a back-up (standby) fuel supply to the interruptible gas service. UST No. 5 was originally installed in 1981, during a building addition project to the Maintenance Building. The tank was registered with the Department of Industry, Labor and Human Relations (DILHR) on April 23, 1986 and the tank's DILHR registration number was 67060-0515. A copy of the "*Underground Petroleum Product Tank Inventory*" form (DILHR SBD-7437, N 04/85) submitted to DILHR when the tank was registered, is included in Appendix A. The "*Underground Petroleum Product Tank Inventory*" form was updated at the time of the tank closure to indicate that the tank was permanently closed by removal, and a copy of the updated form (DILHR SBD-7437, R 05/94) is also included in Appendix A.

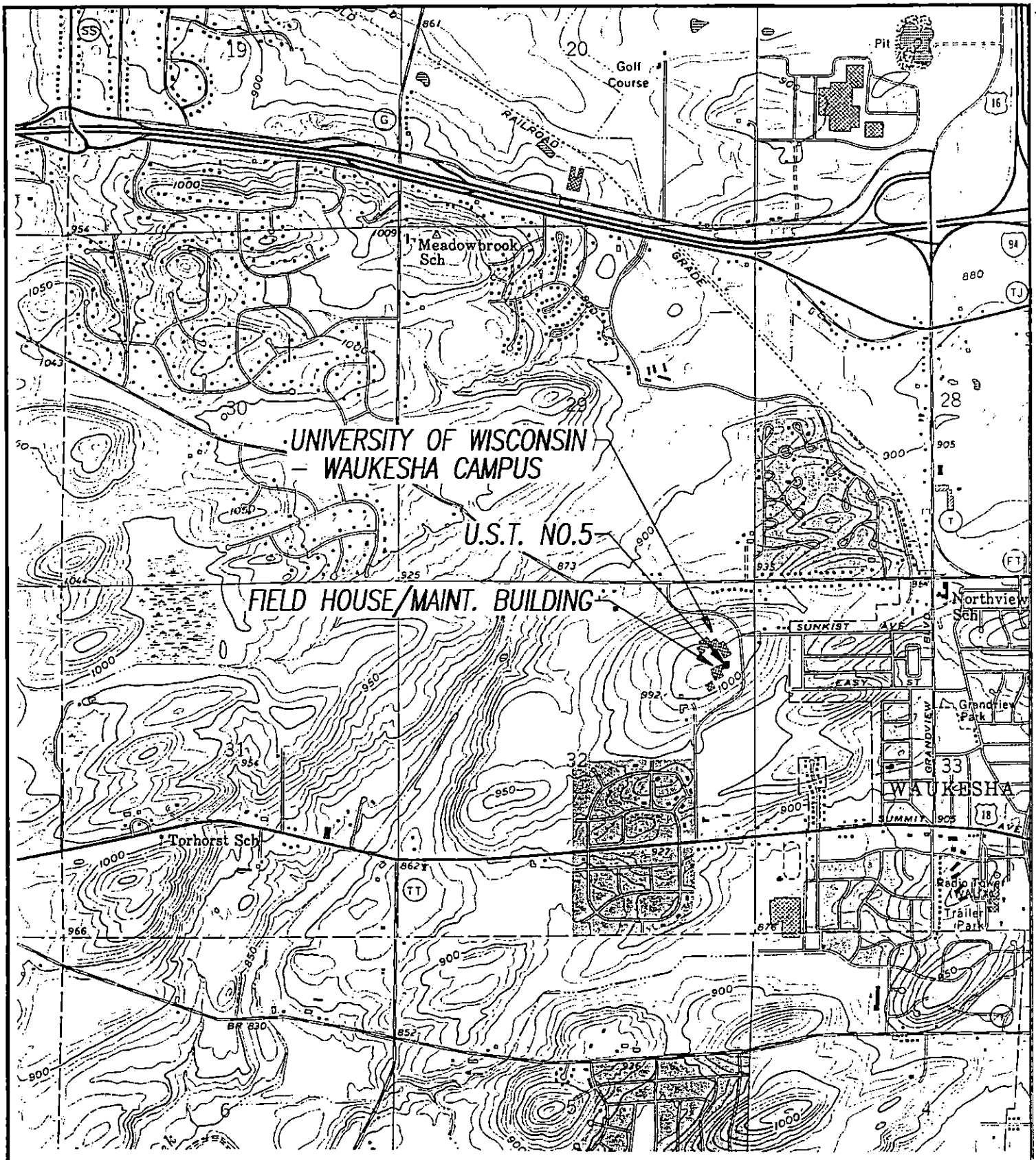
UST No. 5 had two 3-inch diameter fill pipes (without spill containment) located at the north end of the tank; a 3-inch diameter vent pipe was located at the south end of the tank, with the vent line extending over to the exterior wall of the building; and two 1-inch diameter suction and two 3/4-inch diameter return fuel lines also located at the south end of the tank, routed from the top of the tank over to the building where they passed through the foundation wall into the boiler room of the Maintenance Building. The suction and return fuel piping was steel with welded fittings. A drawing of the UST system is shown on the "Site Layout Plan", Figure 1-3.

The UST Owner/Operator is:

University of Wisconsin - Waukesha
1500 North University Drive
Waukesha, Wisconsin 53188

Contact Person:

Ms. Leslie Williams, Hazardous Materials Coordinator
Waukesha County Department of Environmental Resources
(414) 896-8300



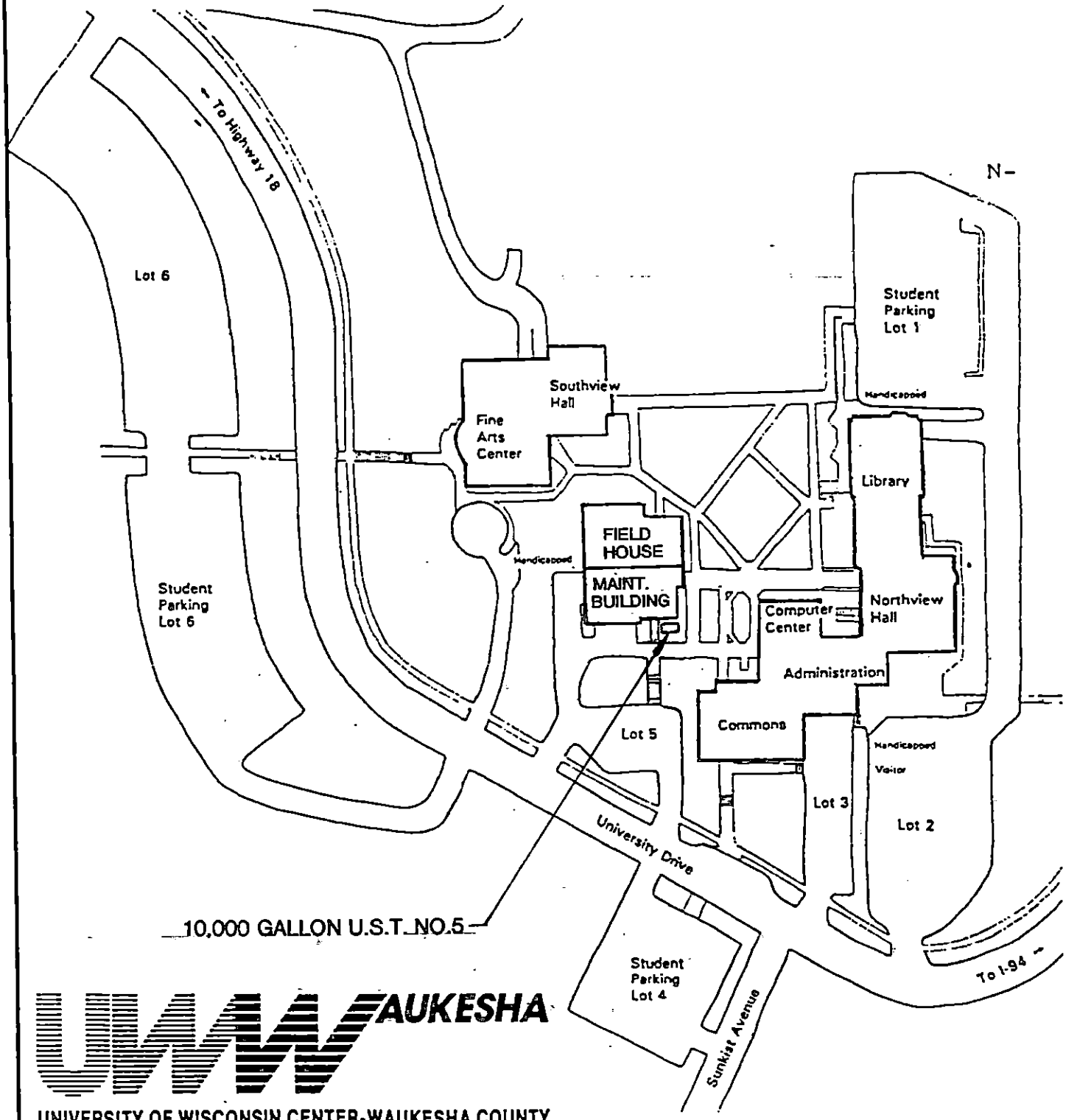
SOURCE: USGS 7.5 MIN. QUADRANGLE
HARTLAND, WISCONSIN

QUADRANGLE LOCATION

N

WAUKESHA COUNTY	94W058
FIGURE 1-1	
SITE LOCATION MAP UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	2
SCALE: APPROX. 1"=2000'	DATE: DECEMBER, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1

94W058-5.DWG

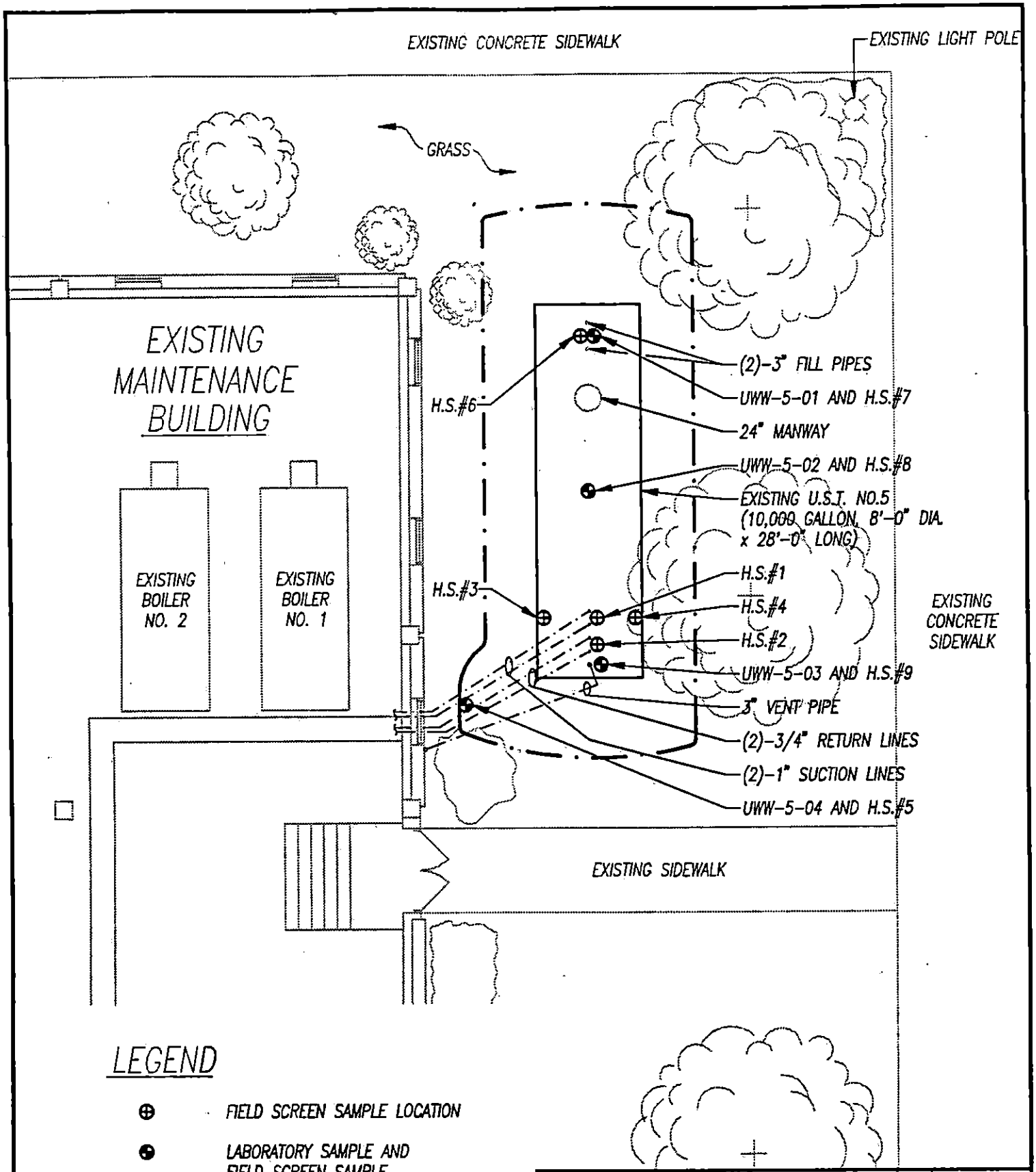


UWW WAUKESHA

UNIVERSITY OF WISCONSIN CENTER-WAUKESHA COUNTY

N

WAUKESHA COUNTY	94W058
FIGURE 1-2	
UWW CAMPUS LAYOUT MAP UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	3
SCALE: NONE	DATE: DECEMBER, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1



WAUKESHA COUNTY	94W058
FIGURE 1-3	
SITE LAYOUT PLAN UNIVERSITY OF WISCONSIN – WAUKESHA WAUKESHA, WISCONSIN	4
SCALE: 1" = 10'	DATE: DECEMBER, 1994
PREPARED BY: Foth & Van Dyke	BY: PDP1

The soil type at the site is the Hochheim loam (HmB) according to the "*Soil Survey of Milwaukee and Waukesha Counties, Wisconsin*" (United States Department of Agriculture [USDA] Soil Conservation Service [SCS] in cooperation with University of Wisconsin, Wisconsin Geological and Natural History Survey Soils Department, and Wisconsin Agricultural Experiment Station, issued July 1971). Hochheim loam is part of the Hochheim series, which consists of soils that are well drained and loamy and are underlain by highly calcareous loam glacial till. In profile, the surface layer of the Hochheim series is very dark brown loam (about 3 inches thick); the subsurface layer is dark grayish-brown loam (about 3 inches thick); the subsoil (about 11 inches thick) is dark yellowish-brown and dark brown, slightly acid clay loam in the upper part and dark yellowish-brown or yellowish-brown, slightly calcareous heavy loam in the lower part; and the substratum is yellowish-brown, strongly calcareous gravelly loam glacial till. Hochheim soils are moderately permeable.

2 Work Functions

Petroleum Equipment, Inc. performed the excavating and tank removal procedures, and had the tank cut up into scrap for disposal. National Tank Service of Wisconsin, Inc. performed the tank cleaning procedures. Foth & Van Dyke performed the site assessment procedures. Milsolv Corporation transported the tank sludge and cleaning waste to their facility in Menomonee Falls, Wisconsin for processing and final disposal. The decommissioned tank was disposed of at Miller Compressing Company. Lt. Steve Howard, Fire Inspector for the City of Waukesha Fire Department, witnessed the tank removal.

DILHR Certified Tank Remover

Petroleum Equipment, Inc.
3950 West Douglas Avenue
Milwaukee, Wisconsin 53209
(414) 466-3000
Remover: Erich Larsen
DILHR Cert. No. 00083
Expiration Date: 08/31/97

DILHR Certified Site Assessor

Foth & Van Dyke
10850 West Park Place, Suite 950
Milwaukee, Wisconsin 53224-3619
(414) 359-2500
Site Assessor: John Fry
DILHR Cert. No. 05318
Expiration Date: 05/26/97

DILHR Certified Tank Cleaner

National Tank Service of Wisconsin, Inc.
1813 South 73rd Street
West Allis, Wisconsin 53214
(414) 257-0030
Cleaner: Scott Kalman
DILHR Cert. No. 00091
Expiration Date: 04/30/98
EPA W.I.D. No. 73838880

Sludge/Waste Transporter and Disposer

Milsolv Corporation
N59 W14765 Bobolink Avenue
Menomonee Falls, Wisconsin 53051
(414) 252-3550
EPA W.I.D. No. 023350192

Tank Destruction

Miller Compressing Company
1640 West Bruce Street
Milwaukee, Wisconsin 53204
(414) 671-5980

3 Tank Closure

UST No. 5 was permanently closed by removal on November 28, 1994. Prior to the tank closure, approximately 3,125 gallons of product was pumped out of the tank and transferred to a new aboveground fuel storage tank located on the south side of the Field House.

The weather on the day of the tank closure was cloudy with light snow flurries. The temperature was 35°F, falling to 32°F by late afternoon. The day before the closure, it had rained all day with an accumulation of approximately ¾-inch. The ground around the UST site was still damp and muddy from the rain.

The ground cover over the UST site was grass which did not appear stressed or dead, except for an area of ground to the north of the tank's two fill pipes that did not have any grass at all. A black stain about 1-inch thick was also observed on top of the soil immediately surrounding the fill pipes. The top of the tank was encountered 38 inches below grade. The excavated soil consisted of a top layer 2 to 3 inches thick of dark-brown top soil with grass, with light-brown sandy clay loam mixed with small- to medium-size stones below the top soil, becoming a stiffer clay towards the bottom of the excavation. Pea gravel was encountered above and around the sides of the tank and around the fuel piping that ran over to the building. All of the soil and pea gravel removed from the excavation was trucked from the UST site to the far southwest corner of the UWW Campus, where it was temporarily stockpiled on plastic. A 2-foot thick steel reinforced concrete hold-down collar had been poured around the upper sides and ends of the tank, and had to be broken up using a steel wrecking ball attached to the backhoe bucket. The bottom of the tank was located at approximately 11.25 feet below grade. Groundwater was first encountered in the excavation at 6.75 feet below grade, but the water level dropped to 10.5 feet below grade after the tank was removed from the excavation.

UST No. 5 was a steel, single wall tank, 8 feet in diameter by approximately 27 feet long. The tank was constructed without a liner, but had an outside coating of asphalt paint. The tank did not have any corrosion protection. The "*Checklist for Underground Tank Closure*" form (DILHR SBD-8951, R 06/94) was completed by the tank remover, site assessor and the fire inspector and a copy of the form is included in Appendix B.

In an effort to save the two trees adjacent to the excavation, UST No. 5 was cleaned and cut up while it was still in the excavation. The atmosphere within the tank was monitored for combustible vapor levels, then a 3½-foot square opening was cut into the top of the tank at the south end to gain access inside the tank for cleaning. Approximately 3 inches of product and sludge still remained at the bottom of the tank, which was bailed out and placed into two 55-gallon drums, filling one drum completely and the second drum about two-thirds full. An absorbent material was then placed in the tank to soak up the remaining sludge residue at the bottom, which was then scooped up and placed into the second drum for disposal. Petroleum Equipment, Inc. took a sample of the tank sludge, to be analyzed as part of the tank sludge manifesting and disposal procedures. The two drums of tank sludge were temporarily left on-site until Milsolv Corporation was able to pick them up for disposal. The tank was then cut up on-site.

The condition of the tank was good. Some rust and minor pitting was noticeable, primarily on the two end walls and on the east side towards the south end of the tank. The bottom of the tank was coated with a black oily film. The tank cleaner did not observe any holes in the tank while he was cleaning the inside of the tank and there was no water leaking into the tank, despite the fact that there was water at the bottom of the excavation.

After the tank had been cut up and the sections removed from the excavation, a dark-brown oily film was observed floating on top of the water at the bottom of the excavation. Dark-gray stains were also observed in the pea gravel towards the north end of the excavation. Although there were visible signs of a suspected petroleum release, there was no noticeable petroleum odor in the excavated soil.

The cut up sections of the tank were hauled off-site and taken to Miller Compressing Company where they were salvaged (destroyed by recycling). A copy of the letter documenting destruction of the tank is included in Appendix C.

The excavation was temporarily barricaded overnight, and then was backfilled on November 29, 1994. The large sections of concrete from the hold-down collar were pushed into the bottom of the excavation first, and then the originally excavated soil was brought back from the stockpile area and placed into the excavation. Additional clean fill and top soil was then placed on top to completely fill in the excavation and then the site was graded level to match the surrounding area.

The two drums of tank sludge and cleaning waste were picked up by Milsolv Corporation and transported off-site to their facility in Menomonee Falls, Wisconsin for processing and final disposal, under their EPA I.D. number identifying Milsolv Corporation as the generator. A copy of Milsolv Corporation's "*Bill of Lading*" and letter documenting final disposal of the sludge and waste are included in Appendix C.

Photographs of the tank closure procedures, including excavating, tank cleaning and cutting up and removing the tank, were taken and are included in Appendix D.

Geotechnical, Environmental & Construction Materials Consultants

GILES

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