



**Superior Water Light & Power Company
Superior, Wisconsin**

**Phase II Investigation, Part IV
Work Plan for the Former
Manufactured Gas Plant
Superior, Wisconsin**

WDNR BRRTs # 02-16-275446

**ENSR *International*
August 2005
ENSR Project No.: 09413-098**

Phase II Part IV Investigation Work Plan
Superior Manufactured Gas Plant
Superior, Wisconsin

August 2005

CERTIFICATION - PROFESSIONAL ENGINEER

I, Scott Tarmann, 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.



Scott Tarmann

8/29/05

Seal

Phase II Part IV Investigation Work Plan
Superior Manufactured Gas Plant
Superior, Wisconsin

August 2005

CERTIFICATION - HYDROGEOLOGIST

I, William Gregg, 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 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.

William M. Gregg Senior Program Manager
Signature and Title

8/29/05
Date

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1.0 INTRODUCTION

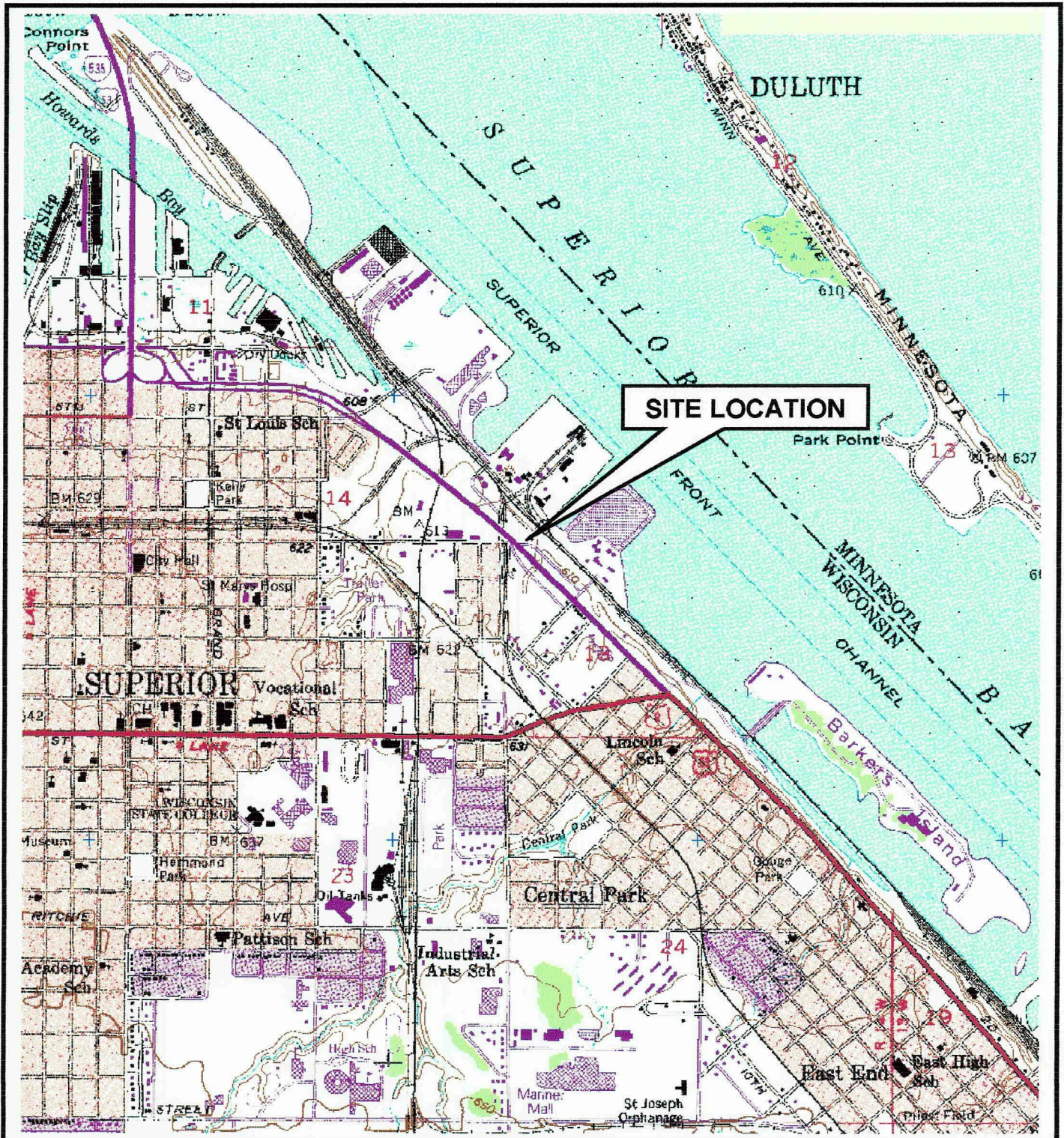
ENSR International (ENSR) has been contracted by Superior Water Light and Power Company to conduct additional subsurface investigations at the former Manufactured Gas Plant (MGP), located at the intersection of Winter Street and East 1st Street in Superior, Wisconsin (Site). The Site location is shown in Figure 1-1. ENSR completed previous investigations at the Site which indicated the presence of typical MGP chemicals in limited portions of the on-site soils and groundwater and the presence of volatile organic compounds (VOC). This work plan presents the anticipated scope of work to further define the extent of tarry material, VOC, and PAH in the study area.

1.1 Background

ENSR conducted a Phase I environmental assessment at the Site for SWL&P in September/October of 2001. The Phase I report indicated that gas was manufactured at the Site for fifteen years, ending in 1904. Areas of the Site that had the potential to contain MGP-related chemicals and/or byproducts were identified as part of the Phase I assessment. ENSR performed a Phase II Site investigation from November 2001 through February 2002. Results of the Phase II indicated areas of the Site contained volatile organic compounds and polyaromatic hydrocarbons (PAH) compounds in the soil above Wisconsin Department of Natural Resources (WDNR) Residual Contaminant Levels (RCL). Groundwater samples contained benzene, toluene, ethylbenzene, and xylene (BTEX) and PAH compounds above the WDNR groundwater enforcement standards. South of the Site building, an area contained exclusively volatile organic compounds of unknown origin. Other Site areas contained both PAH and BTEX. The former gas holder tank bases were investigated with a backhoe. MGP wastes were not found in association with the tank bases, but tarry materials that contained PAH were found in the soil north and west of the former Site building.

A Phase II, Part II Investigation was completed in September 2002 to further delineate the PAH and BTEX in the soil and groundwater. Fingerprinting analytical results indicated the volatile organic compounds found south of the Site building appeared to be a blended solvent or degreaser consisting of primarily benzene and toluene with lesser amounts of ethylbenzene and xylene. In addition, a test trench excavation north of the Site building encountered a clay tile pipe oriented toward the former Superior Bay shoreline that contained tarry material. The tarry material was analyzed using "fingerprinting" techniques and appeared to be carbureted water gas coal tar. The results of the Phase II, Part II investigation indicated additional BTEX and PAH impacts downgradient of the Site.

A sediment investigation was completed in the Superior Bay boat slip and nearby storm sewers in March and April 2003. The sediment results indicated concentrations of PAH similar to typical urban run-off in the storm sewer and boat slip. Thus, the investigation shifted back to soil and groundwater in upland areas of the Site.



SOURCE: USGS 7½ Minute Topographic Quadrangle from DeLorme Superior, Wisconsin, 1993

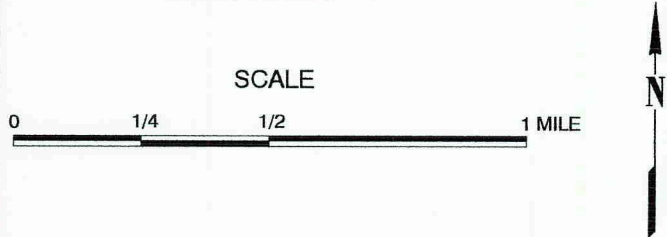


Figure 1-1
SITE LOCATION MAP
 Superior Water Light & Power Former MGP
 Superior, Wisconsin

PREPARED BY: CMB	DATE: Dec 2001	PROJECT NO: 09413-098	REV: 0
FILE NO.: FIG1-1.doc	CHECKED: WMG		

The Phase II Part III subsurface investigation was completed in October and November 2004. The investigation consisted of eight soil borings, B-24 through B-31, and five monitoring wells, MW-8 through MW-12, installed off-site to the north and east of the Site. The results indicated the plume of dissolved BTEX and PAH in the groundwater follow the groundwater flow direction and are found off-site northeast and east of the Site.

Tarry materials were observed during drilling well MW-8. The tarry materials appeared to extend from the terminus of the clay pipe on-Site to the southeast towards MW-8, in the area between the former shoreline and the railroad embankment. Tarry material was not found in the area between the railroad tracks and Superior Bay. However, the extent of tarry material was not fully delineated.

1.2 Site Location and Ownership

The former Superior MGP Site is located in the vicinity of the intersection of Winter Street and East 1st Street in Superior, Wisconsin. The Site occupies a portion of the northeast quarter of the northwest quarter of Section 13, Township 49 North and Range 14 West (SW $\frac{1}{4}$, NW $\frac{1}{4}$ of Sec. 13, T49N, R14W). The Site location is depicted on Figure 1-1.

Portions of the former MGP property are now owned by Superior Water Light & Power (SWL&P), the City of Superior, the U.S. Department of Transportation, and CLM, Inc. Figure 1-2 is a color-coded map indicating property ownership in the vicinity of the MGP Site.

The owner contact is:

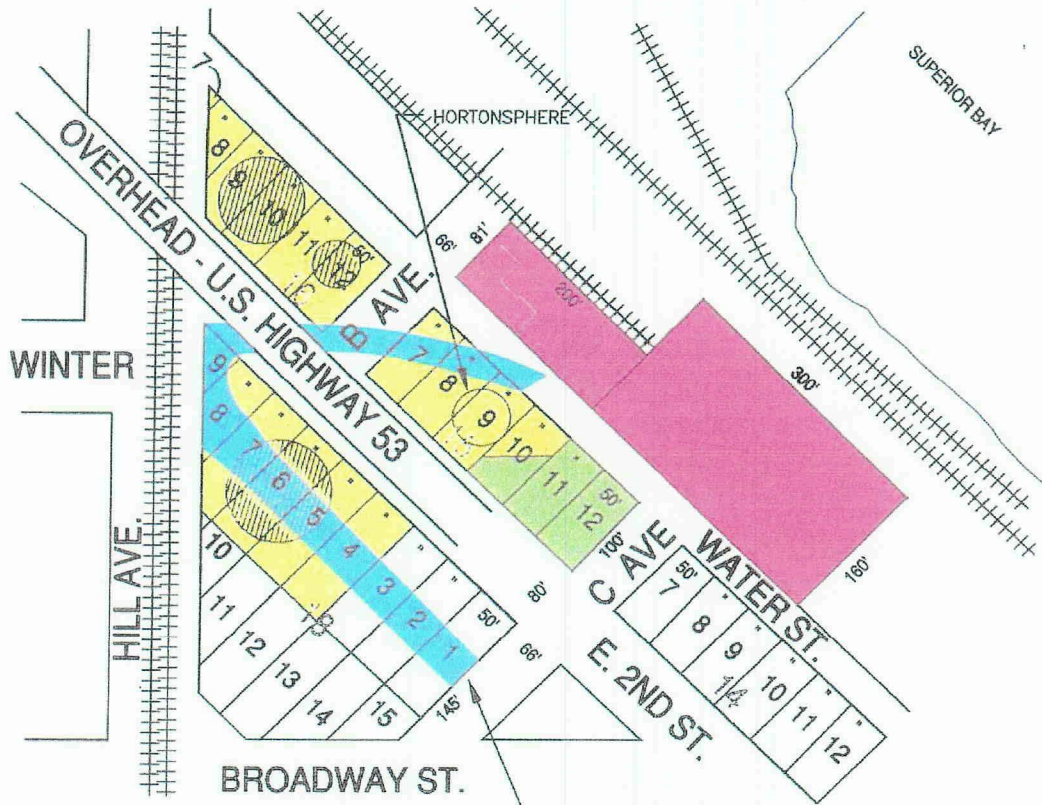
Bill Bombich
Superior Water Light and Power Company
2915 Hill Avenue
Superior, Wisconsin 54880
(715) 395-6288

1.3 Consultant and Contractor Identification

The Site investigation activities will be conducted by:

ENSR International
Attn: William M. Gregg
4500 Park Glen Road, Suite 210
St. Louis Park, MN 55416
(952) 924-0117 - phone
(952) 924-0317 – fax

Subcontractors anticipated to provide services for this project are identified below. The subcontractors selected to conduct the work may change due to availability or changes in the scope of work.



NOTE: City street on SWL&P Co. land -
No recorded easement as of 1/2/81

ROY'S ADDITION TO THE
CITY OF SUPERIOR



- DEEDED TO STATE
- OWNED BY SWL&P CO.
- OWNED BY CLM



PROPERTY OWNED BY
SUPERIOR WATER, LIGHT & POWER
SUPERIOR, WI

APPROXIMATE SCALE

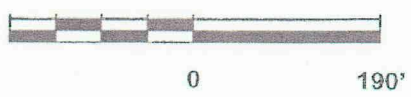


Figure 1-2
PROPERTY OWNERSHIP MAP
SUPERIOR MGP
Source: SWL&P Co. Records

PREPARED BY: AJT	DATE: SEP 2001	PROJECT NO: 9413-098	REV: 0
FILE NO.: Property.DOC	CHECKED: WMG		

Lab Services

Pace Analytical, Inc.
Attn: Laurie Woelfel
1795 Industrial Dr.
Green Bay, WI 54302
(800) 736-2436 – phone
(414) 469-8827 – fax
(WDNR Certification 405132750)

Coal Tar Delineation

Dakota Technologies, Inc.
Attn: Randy Saint Germain
2201- A 12th Street North
Fargo, ND 58102
(701) 237-4908 - phone
(701) 237-4926 - fax

TarGOST, MIP, On-Site Lab, Borings and Wells

Matrix Environmental
Attn: Jim Dzubay
8631 Jefferson Highway
Osseo, MN 55369
(763) 424-4803 – phone
(763) 424-9452 – fax

Surveying

Salo Engineering
Attn: Dale Berntsen
15 East First Street
Duluth, MN 55802
(218) 727-8796 – phone
(218) 727-0216 – fax

2.0 OBJECTIVES AND PROJECT SCOPE

The objectives of this investigation include the following:

1. Delineate the extent of tarry materials on-Site and off-site,
2. Delineate the off-site extent of PAH coal tar chemicals in the soil and groundwater;
3. Delineate the off-site extent of BTEX solvent chemicals in the soil and groundwater; and
4. Collect soil samples from the top two feet of soil on-site for risk assessment analysis.

In order to accomplish the goals listed above, ENSR proposes to use two real-time data collection techniques and an on-site laboratory to complete the delineation tasks listed above. Based on the delineation data, ENSR will select the best locations for the permanent monitoring wells. The methodologies are described in greater detail in Section 3.

2.1 Project Scoping

To the extent practical, the scope of the project was defined in consideration of the criteria listed in NR 716.07, as follows:

- Site Use: The only operations currently conducted on the Site are associated with the brick building owned by CLM, Inc. According to Mr. Dana Stone, Vice President of Operations, for CLM, Inc., the building is only used for storage. One of the three rooms in the building at the subject property is being leased by Lakehead Concrete Co, and is used for storage of sand, lime, cement, and miscellaneous materials related to Lakehead's adjacent ready-mix plant.
- Type and Amount of Impact: Impacts to the soil and groundwater have not been fully identified. However, the soil and groundwater contain varying amounts of BTEX and/or PAH both on-site and off-site to the northeast and east. Tarry material were found on-site at the terminus of the clay pipe and off-site to the east.
- Environmental Media Potentially Affected: Soil and groundwater are potentially affected.
- Other Environmental Investigations/Findings: ENSR performed a Phase I; Phase II, Phase II Part II; Phase II, Part III; and sediment investigation previously at the Site. The results of the previous investigations are summarized in Section 1.1.
- Potential Receptors: Groundwater discharges to Superior Bay. There are no known groundwater users in the area. The municipal drinking water supply is obtained from Lake

Superior via horizontal wells installed over a mile from the Site in the bed of the lake as illustrated in Figure 2-1. The nearest surface water body is Superior Bay.

- Significant Resources: Any impacts identified at the Site will be evaluated with respect to threatened or endangered species, sensitive habitats, wetlands and/or resource waters.
- Potential Remedial Actions: At this time, an evaluation of potential remedial actions to address potentially impacted media on the Property is premature. This Phase II, Part IV investigation is designed to determine the extent of groundwater and soil impacts, and the location of any source materials at the Site. Remedial Actions will be determined based on the results of this investigation.

2.2 Sampling Strategy

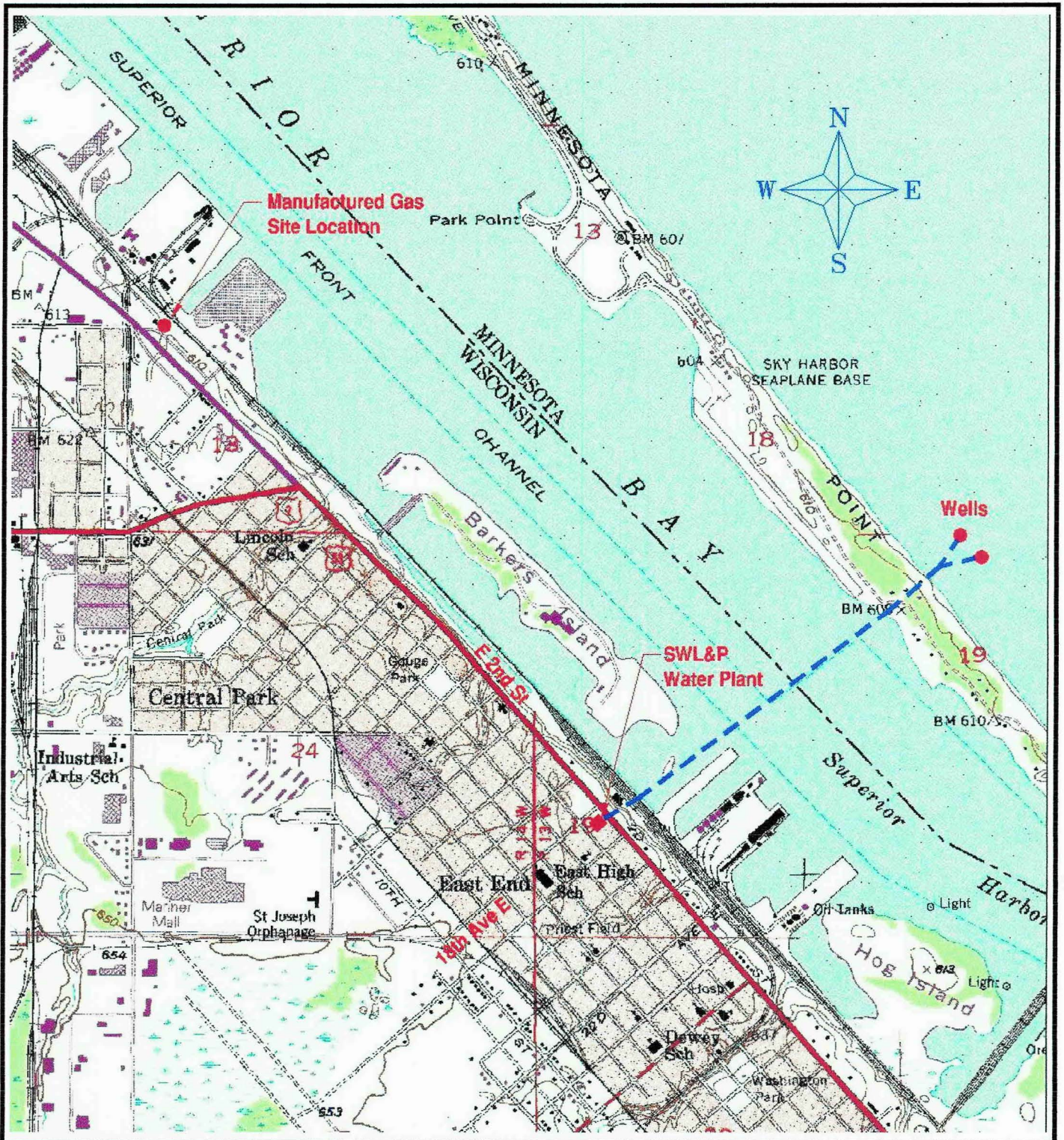
The sampling strategy was developed to further delineate the nature and extent of tarry material, PAH, and BTEX impacts to the soil and groundwater. The sampling locations were selected based on data gaps identified from previous investigations. The following Site characteristics are provided for reference.

2.2.1 Site Topography

Based on the USGS Superior, Wisconsin 7.5-minute topographic map (1993), the Site is located at approximately 613 feet above mean sea level in an area of gently sloping topography. The topography in the area of the Site is relatively flat. The area northeast of the Site slopes down towards Lake Superior.

2.2.2 Surface Water Drainage

Storm water runoff is generally sheet-flow across the Site toward Superior Bay. No known storm sewer system exists at the Site. A storm sewer grate was observed near boring B-3 during the previous Phase II, however, it did not appear to be maintained. The nearest storm sewer runs southeast of the Site through the Lakehead Concrete Company property. Two sanitary sewer lines run through the property. The locations of the sanitary and storm sewers are illustrated on Figure 2-2.



SOURCE: USGS 7½ Minute Topographic Quadrangle from DeLorme Superior, Wisconsin, 1993, and SLW&P Well Location Maps

SCALE

0 1/4 1/2 1 MILE

ENSR
INTERNATIONAL

Figure 2-1
MUNICIPAL DRINKING WATER SUPPLY WELL
LOCATION MAP
Superior, Wisconsin

PREPARED BY: CMB

DATE: July 2002

PROJECT NO:

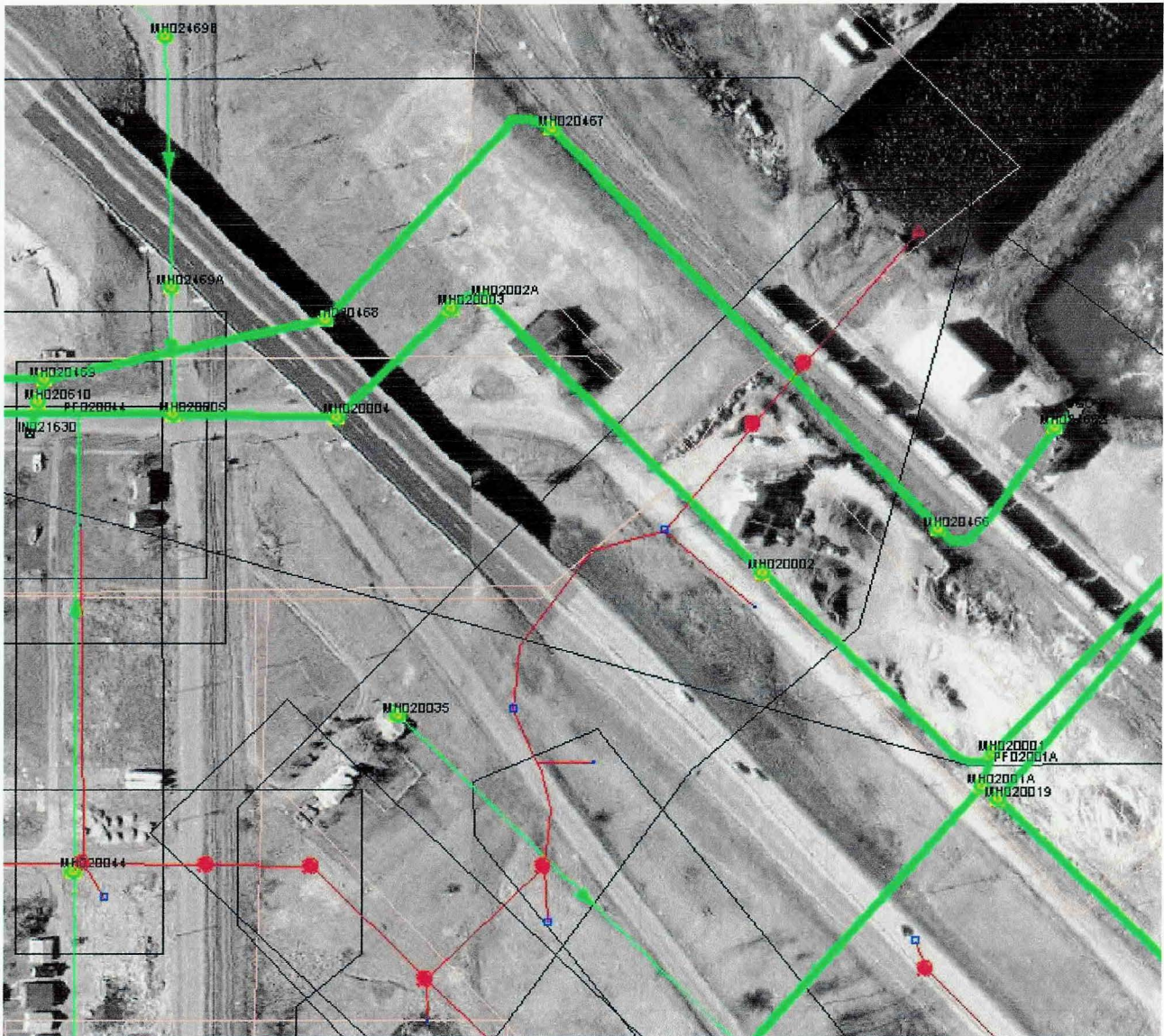
REV:

FILE NO.: FIG 2-1.doc

CHECKED: WMG

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Explanation:

- Green Lines are Sanitary Sewer Lines
- Red Lines are Storm Water Lines

SOURCE: Aerial Photograph with sewer locations supplied by the City of Superior.

APPROXIMATE SCALE
1 INCH = 250 FEET



Figure 2-2
STORM AND SANITARY SEWER LINE
LOCATION MAP
Superior, Wisconsin

PREPARED BY: CMB	DATE: July 2002	PROJECT NO: 09413-098	REV: 0
FILE NO.: FIG 2-2.doc	CHECKED: WMG		

2.2.3 Site Geology

Site investigations indicate there are three predominant soil types encountered in the Site vicinity: a red high-plasticity clay, silty sand and sand, and a fill material consisting primarily of white to dark gray lime-like material. There were also small amounts of miscellaneous fill, such as bricks, wood and slag, encountered in several locations. Lime-like fill material was encountered in the majority of the borings as the uppermost soil type. The thickness of the lime-like material ranged from approximately five-feet thick south of the railroad tracks to one-foot thick or less north of the rail road tracks. Underlying the lime-like material was silty sand or sand along with miscellaneous fill (slag, wood, brick, etc.) in some borings. Underlying the sand unit was reddish-brown high plasticity clay. The clay unit appears to slope northeast and east-northeasterly, towards Superior Bay. Sandstone bedrock (Keweenawan Formation) is encountered beneath the unconsolidated soils. Depth to bedrock is estimated to be from 100 to 200 feet below ground surface.

Groundwater was encountered in the borings in the sand, silty sand, or fill material above the red clay. Groundwater was encountered approximately three to five-feet below the ground surface in the borings north of the railroad tracks and approximately eight to eleven-feet below ground surface in the borings south of the railroad tracks. Results of the slug tests indicate hydraulic conductivity of wells screened in silty sand ranged from 1.17×10^{-2} centimeters per second (cm/s) to 8.48×10^{-3} cm/s. The wells screened in silty sand are located downgradient and off-site, to the northeast of the Site. Results of slug tests indicated the hydraulic conductivity of the lime-like material / clay range from 3.07×10^{-3} to 7.63×10^{-5} cm/s. South of the former shoreline (on-Site area) the hydraulic gradient is approximately 0.04 feet per feet and north of the former shoreline (north of the site, downgradient) the hydraulic gradient ranges from approximately 0.001 to 0.006 feet per feet.

2.2.4 Potential Migration Pathways

Potential migration pathways include vertical migration through the unsaturated zone with lateral migration with local topography and anticipated groundwater flow. Storm sewer and sanitary sewer lines are present in the Site area and may serve as preferential flow pathways.

3.0 INVESTIGATION SCOPE OF WORK

The Phase II, Part IV Investigation will be conducted to fully delineate MGP and solvent impacts in soil and groundwater. The scope of work includes the use of Geoprobe® rigs equipped with instruments to detect MGP coal tar and VOCs while drilling proceeds. The Geoprobe rigs will install borings in a grid pattern until the vertical and horizontal extent of tarry materials and VOCs is delineated. Up to ten monitoring wells will be installed to confirm PAH and VOC concentrations within and outside the groundwater contamination plume. The placement of the wells will be determined based on the VOC concentrations of the borings. Twenty-two hand auger borings will be installed on-site to a depth of two feet. A soil sample will be collected from each hand auger boring to assess direct contact risk. All activities will be conducted in accordance with the WDNR WAC Chapters NR 716.

3.1 Summary of Sampling Activities

3.1.1 Delineate Extent of Tarry Materials

ENSR proposes using TarGOST™, a Geoprobe direct push rig equipped with laser induced fluorescence technology, to delineate the extent of tarry materials north and east of the former MGP building. Laser induced fluorescence uses an instrument attached to the end of the drilling equipment to detect coal tar materials as drilling proceeds. A boring grid will be setup in the area with known tarry materials and borings will be completed in a given direction until tar is no longer detected. This pattern will be repeated until the extent of tarry materials has been delineated. Figure 3-1, attached, shows the estimated area where the TarGOST will be used to delineate tarry materials. Color logs will be produced for each boring showing the depth and relative concentration of tar constituents. A map will be produced showing the thickness, relative concentration, and extent of tarry materials.

3.1.2 Delineate Extent of BTEX and PAH

ENSR proposes using a membrane interface probe with on-site volatile gas analysis to delineate the VOC impacts in soil and groundwater. Figure 3-2, attached, shows the estimated areas where the membrane interface probe and on-site laboratory will be used to investigate the extent of soil and groundwater impacts. The membrane interface probe gives real time data of total VOC concentration in soil and water and is sensitive to approximately 500 parts per billion. ENSR anticipates using the Geoprobe mounted membrane interface probe to collect data on a grid pattern to delineate moderate to high concentration solvent impacted areas.

EXPLANATION:

- B-12 Geoprobe Soil Boring
- ◆ MW-7 Monitoring Well Location
- Estimated Extent of Tarry Materials in Soil
- ▨ Anticipated area where TarGOST will be used to delineate extent of tarry materials

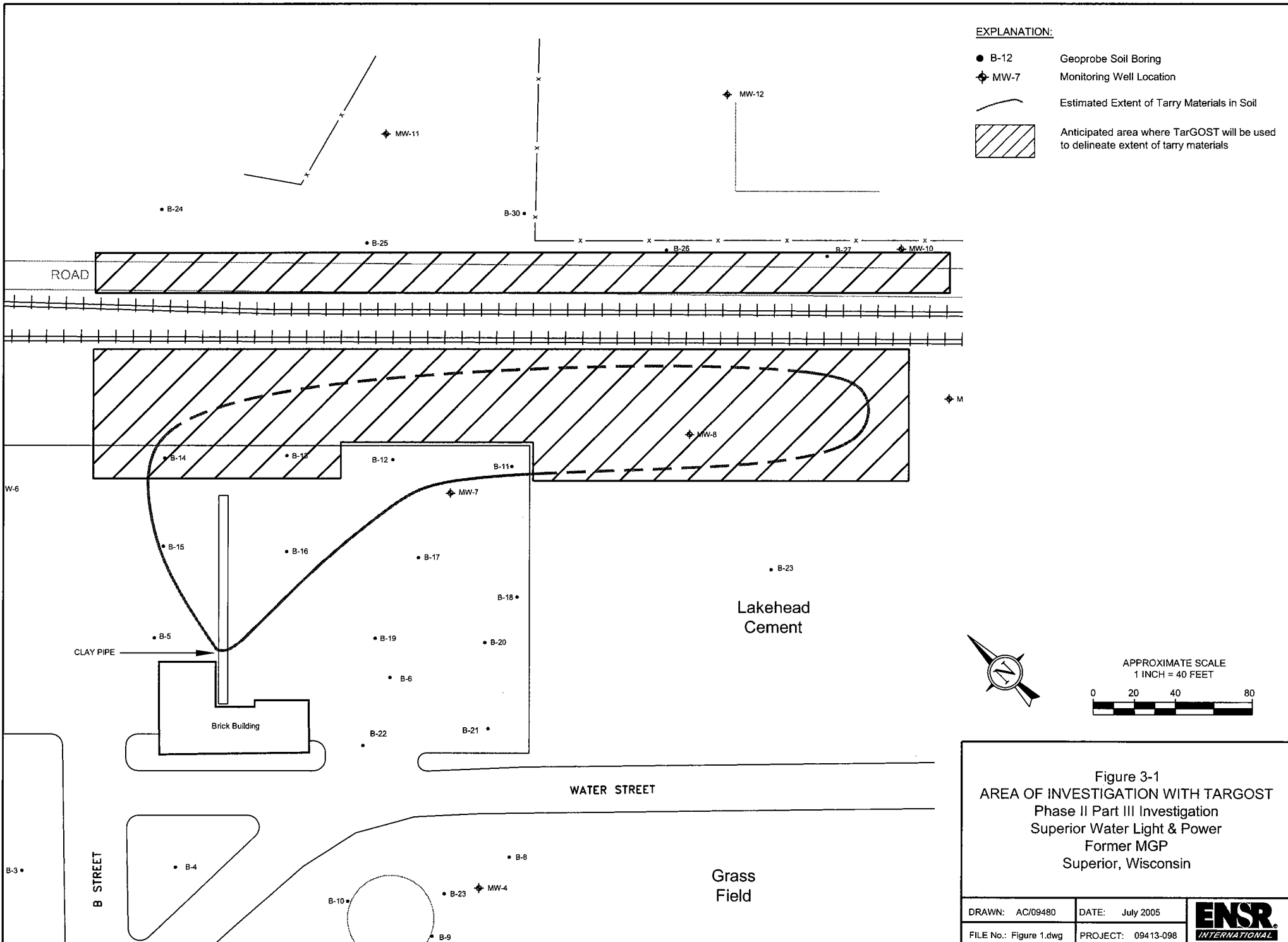
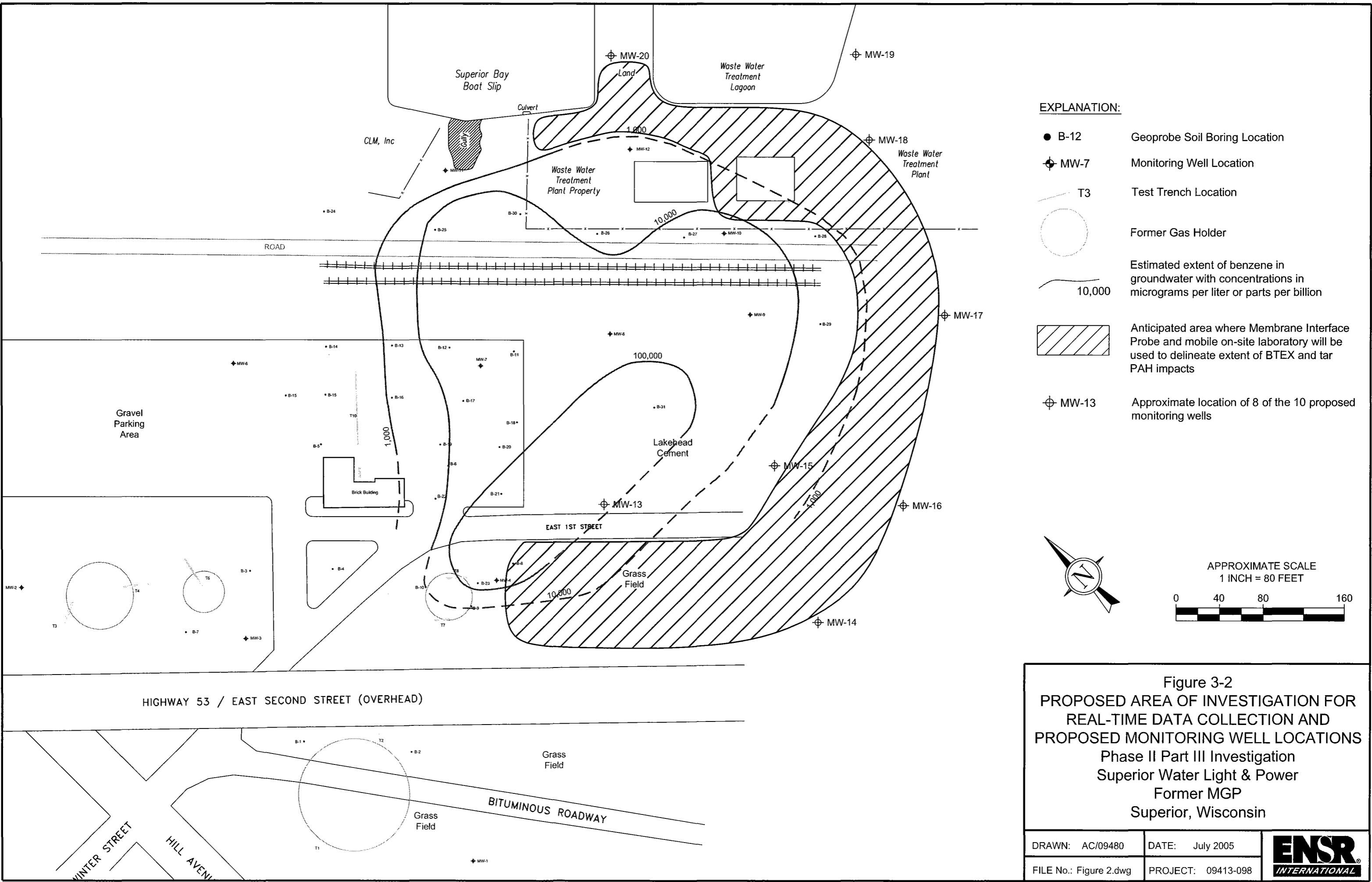


Figure 3-1
 AREA OF INVESTIGATION WITH TARGOST
 Phase II Part III Investigation
 Superior Water Light & Power
 Former MGP
 Superior, Wisconsin

DRAWN: AC/09480	DATE: July 2005	ENSR INTERNATIONAL
FILE No.: Figure 1.dwg	PROJECT: 09413-098	



- EXPLANATION:**
- B-12 Geoprobe Soil Boring Location
 - ⊕ MW-7 Monitoring Well Location
 - T3 Test Trench Location
 - Former Gas Holder
 - Estimated extent of benzene in groundwater with concentrations in micrograms per liter or parts per billion
 - 10,000
 - Anticipated area where Membrane Interface Probe and mobile on-site laboratory will be used to delineate extent of BTEX and tar PAH impacts
 - ⊕ MW-13 Approximate location of 8 of the 10 proposed monitoring wells

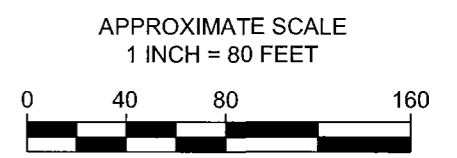
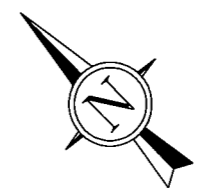


Figure 3-2
PROPOSED AREA OF INVESTIGATION FOR
REAL-TIME DATA COLLECTION AND
PROPOSED MONITORING WELL LOCATIONS
 Phase II Part III Investigation
 Superior Water Light & Power
 Former MGP
 Superior, Wisconsin

DRAWN: AC/09480	DATE: July 2005	ENSR INTERNATIONAL
FILE No.: Figure 2.dwg	PROJECT: 09413-098	

After delineating the high concentration areas, ENSR proposes using a Geoprobe to collect soil and groundwater samples and analyzing them for VOC using a mobile on-site laboratory. The on-site gas chromatogram analyzes soil and groundwater samples in approximately half an hour and is sensitive to one part per billion in water and 100 parts per billion in soil. ENSR will install borings on a grid pattern to delineate the downgradient extent of VOC concentrations using the on-site laboratory down to regulatory levels (five parts per billion benzene in groundwater). ENSR will also confirm the VOC concentrations detected with the MIP in several locations with medium to high solvent concentrations. The most common coal tar constituent detected in groundwater on-site is naphthalene. The gas chromatogram will also report naphthalene concentrations, thus indicating the approximate extent of PAH in groundwater. The Geoprobe borings will be surveyed for ground surface elevation and northing and easting location.

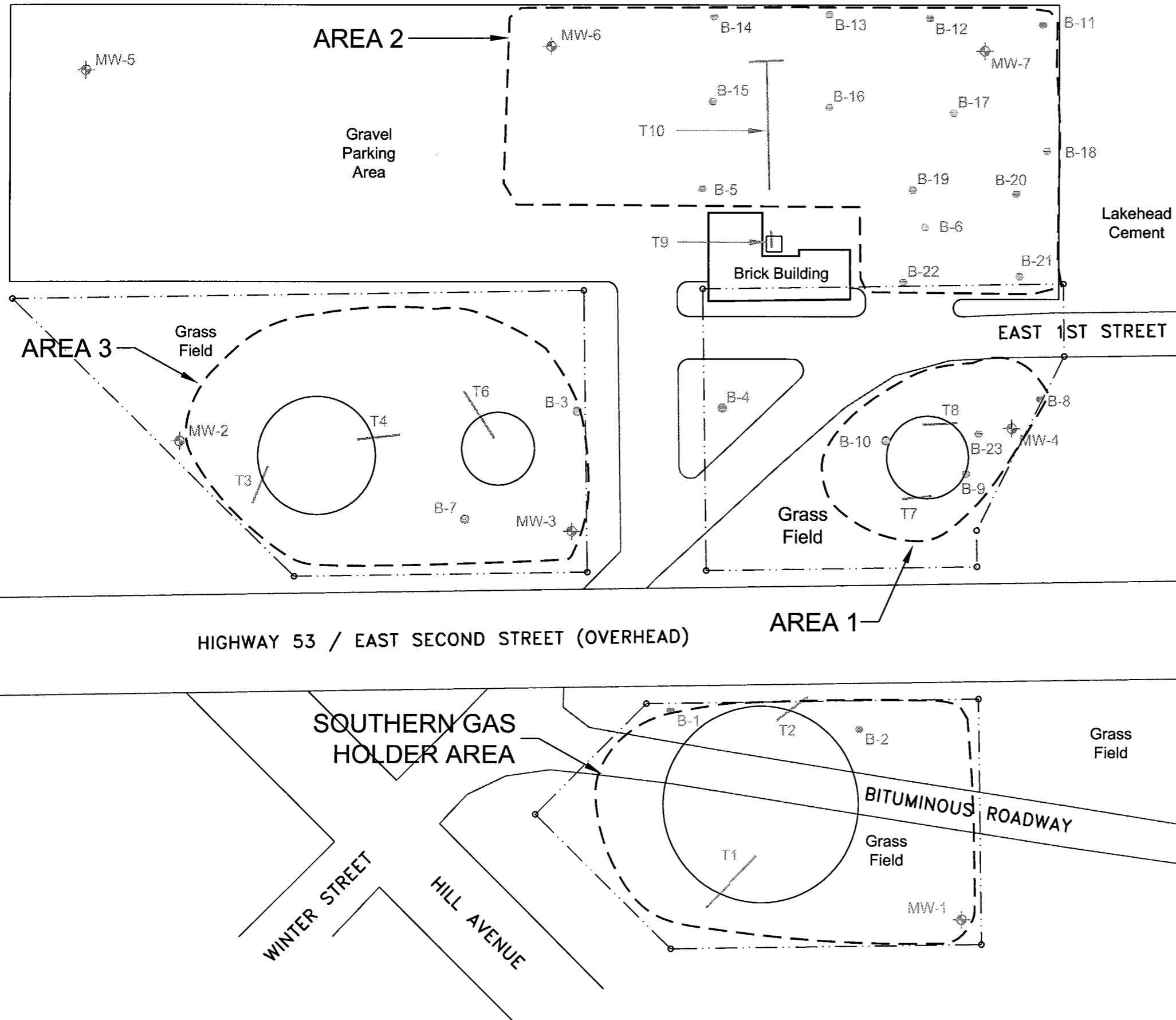
3.1.3 Monitoring Well Installation and Soil Sampling

Up to ten monitoring wells will be installed with a Geoprobe track rig equipped with hollow-stem augers to confirm concentrations of PAH and BTEX within the groundwater plume and outside the plume. The approximate locations for eight of the ten monitoring wells are illustrated on Figure 3-2. The placement of the wells will be determined based on the data obtained from the membrane interface probe, laser induced fluorescence, and the on-site laboratory analytical data. The sampling methodologies outlined in the November 2001 and July 2002 Work Plans will be used for the proposed Phase II, Part IV well installation. Based on data obtained to date, ENSR anticipates installing monitoring wells on the City Wastewater Treatment Plant property, the Lakehead Concrete property, the area southeast of the Horton sphere (property owner is not known), and railroad right of way.

Soil samples will be collected from the monitoring well borings on a continuous basis and logged for soil characteristics and organic vapors using a standard headspace screening technique. One soil sample from each boring exhibiting the highest organic vapor reading, or the most visually impacted sample, will be submitted for PAH and benzene, toluene, ethylbenzene and xylene (BTEX) analyses to Pace Analytical, Inc. In addition, up to five soil samples will also be analyzed for total organic carbon and bulk density. Up to six soil samples will be selected for fingerprinting analysis by GTI laboratory. The wells will be surveyed by a licensed surveyor for top of casing elevation, ground surface elevation, and northing and easting location.

3.2 Risk Assessment Soil Data Collection

Twenty hand-auger borings will be installed to a depth of two-feet below ground surface to collect soil samples for a direct-contact risk assessment. One soil sample from each hand auger will be analyzed for PAH, VOC, and cyanide. The soil sample locations include approximately four samples in Area 1, nine samples in Area 2, four samples in Area 3, and three samples from the area surrounding the southern most gas holder near MW-1. Figure 3-3 shows the locations of the areas selected for the surface soil risk assessment.



EXPLANATION:

- +++++ Railroad Tracks
- SWL&P Property Boundary
- B-2 Previous Geoprobe Soil Boring Location (Nov 2001 and Sept 2002)
- ⊕ MW-1 Monitoring Well Location
- T10 Test Trench Location (Nov 2001 and Sept 2002)
- Former Gas Holder

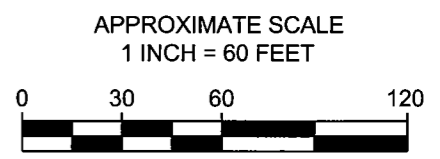


Figure 3-3
SURFACE SOIL SAMPLING AREAS FOR RISK ASSESSMENT
 Superior Water Light & Power
 Former MGP
 Superior, Wisconsin

DRAWN: AC/09480	DATE: July 2005	ENSR INTERNATIONAL
FILE No.: Fig 2-1.dwg	PROJECT: 09413-098	

The soil data will be used to complete a risk assessment for impacted soil for direct contact and inhalation exposure pathways. This information will be critical to completing a comparative analysis of remedial alternatives to address site risks. The hand auger borings will be surveyed for ground surface elevation and northing and easting location.

3.3 Groundwater Sampling

Groundwater samples will be collected from the new monitoring wells, after they are properly developed, and from the existing monitoring wells MW-1 through MW-12. The groundwater samples will be analyzed for PAH and VOC. In addition, the groundwater samples will be analyzed for natural attenuation parameters including nitrate, sulfate, iron, and manganese.

3.4 Laboratory Analyses

Soil and groundwater samples submitted to a fixed laboratory will be analyzed for PAH using SW-846 Method 8270, VOC using SW-846 Method 8260, and cyanide by SW846 Method 6020 by Pace Analytical, Inc, a certified Wisconsin laboratory.

3.5 Quality Assurance/Quality Control Methods

The following quality assurance/quality control measures will be implemented during the Site investigation activities:

- Decontamination procedures and measures to minimize the potential for cross-contamination of samples will be followed as specified in Section 3.2 above.
- All Site activities will be recorded in a bound field notebook (Section 3.5.1).
- Stringent chain-of-custody procedures will be followed (Section 3.5.2).
- Sample duplicates and blanks will be collected and analyzed (Section 3.5.3).

3.5.1 Field Documentation

All Site activities will be documented in a bound field notebook. Included in the daily documentation are:

- Procedures for sampling and other routine activities associated with the Site investigation;
- Personnel working on the Site; and
- Chronological log of Site activities.

3.5.2 Chain of Custody Procedures

Chain-of-custody forms will be completed to the extent possible prior to sample shipment. Included on the form will be the sample identification (sample location identification, depth of sample and date of sample collection), sample type, sample container (type and number of containers), analytical method to be performed, preservatives, and name of sampler. The forms will be filled out in a legible manner, using blue or black waterproof ink.

A chain-of-custody document will accompany each sample shipment. The sampler will relinquish custody of the samples to the courier, retaining one copy of the record for the project file. Samples will be transported to the laboratory in containers that meet applicable state and federal standards for safe shipment.

3.5.3 Duplicate and Field/Trip Blank Samples

The following QA/QC samples will be collected with the soil samples that are submitted to a fixed laboratory. If multiple days and/or containers are used, appropriate increases in the number of blanks will be made.

- Methanol blanks A methanol sample will be collected in the same manner as the soil samples with methanol preservation without placing soil into the container. One blank will be collected per 20 soil samples (or fraction thereof).
- Field Duplicates One duplicate sample will be collected per twenty samples (or fraction thereof) and submitted for analysis of all parameters analyzed in the original sample.
- Matrix Spike/Matrix Spike Duplicates One Matrix Spike/Matrix Spike Duplicate sample will be prepared and analyzed by the laboratory per every batch of 20 samples to evaluate data precision and accuracy.

The following QA/QC samples will be collected with the groundwater samples that are submitted to a fixed laboratory. If multiple days and/or containers are used, appropriate increases in the number of QA/QC samples will be made.

- Trip blanks The trip blank(s) will be prepared by the laboratory and transported with the sample jars. One trip blank per day per shipping container containing VOC samples.
- Field Duplicates One duplicate sample will be collected per sampling event per twenty samples (or fraction thereof) and submitted for analysis of all parameters analyzed in the original sample.

- Matrix Spike/Matrix Spike Duplicates One Matrix Spike/Matrix Spike Duplicate sample will be prepared and analyzed by the laboratory per every batch of 20 samples to evaluate data precision and accuracy.

3.6 Site Health and Safety

The protection of Site personnel and the general public is a primary concern. All reasonable measures will be taken to protect the health and safety of the project personnel and general public. A Site Health and Safety Plan that meets or exceeds the standards found in 29 CFR 1910.120 has been prepared and is available for review. A copy will be on-Site during all fieldwork activities. A tailgate health and safety meeting will be conducted prior to beginning field work each day.

3.7 Reporting

Upon receipt of the laboratory data, ENSR will prepare a report for submittal to Wisconsin Department of Natural Resources. The report will summarize the data and provide conclusions regarding the extent and concentrations of PAH and VOC in soil and groundwater and the extent of tarry materials. The report will be submitted to the SWL&P not later than 90 days following receipt of the laboratory reports, unless otherwise directed by SWL&P or pending further investigative activities if the objectives of the Site investigation are not met.

4.0 SCHEDULE

ENSR will have two people on-site for approximately ten days to complete the fieldwork. The fieldwork will be scheduled after appropriate access agreements are obtained from off-site property owners.

All investigation activities, except the risk assessment soil data collection, at the Superior MGP are anticipated to occur from October through November 2005. The risk assessment soil data collection will be completed in the spring of 2006. Laboratory results are generally provided within three weeks after sample receipt. The Phase II, Part IV investigation report and risk assessment is anticipated to be completed within 90 days following receipt of the laboratory reports, in summer of 2006.