

**Wisconsin Department of Natural Resources
Superfund Site Assessment
Site Inspection
SAMPLING PLAN
Areas in Wisconsin Associated with the
Ironwood MGP Site
(EPA ID # MIN00051055)**

[The following section is prepared by the Wisconsin Department of Natural Resources (WDNR) to be included in the Site Inspection Sampling Plan for the MGP Site in Ironwood Michigan (EPA ID # MIN00051055) being prepared by MDNRE. The section numbering, numbering of appendices and numbering of the figures should be considered place holders, and if needed changed to conform with the numbering of the final report.]

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Wisconsin Department of Natural Resources**

X.0 Wisconsin

X.1 Introduction

The Wisconsin Department of Natural Resources (WDNR), through a Cooperative Agreement with the United States Environmental Protection Agency (U.S. EPA) Region 5, is tasked to conduct Site Inspections (SIs) to determine if potentially contaminated sites throughout Wisconsin are eligible for placement on the National Priorities List (NPL) of Superfund sites. A Hazard Ranking System (HRS) score of 28.5 or greater determines NPL eligibility.

Purpose of this Section

The purpose of this section is to provide written protocols used by WDNR to ensure that data of known quality are used to determine if the contamination detected from the Manufactured Gas Plant property (property) located in Ironwood, Michigan is significantly impacting the soil, groundwater and surface water in Wisconsin. This section will make the Field Support Group aware of potential contaminants, sampling procedures, and their roles and responsibilities during the sampling event. This section will be included with MDNRE's sampling plan and will be sent to U.S. EPA Region 5 in advance of the sampling event so that laboratory services through the U.S. EPA's Contract Laboratory Program (CLP) may be obtained.

Objective of Investigation

The objective of this inspection in Wisconsin is to collect samples of soils and groundwater to establish if hazardous material, attributable to the MGP property in Ironwood Michigan, has been released into the environment in Wisconsin. Sampling strategy will support that the direct contact of soils, surface water, and groundwater exposure pathways pose, or potentially pose, a threat to human health or the environment.

Site Geology/Hydrogeology

The MGP property is located directly across the Montreal River from the City of Hurley Wisconsin. Bedrock in the area is from 0-15 feet below the ground surface and groundwater flow in Wisconsin is assumed to be east and north toward the Montreal River.

The WDNR in their 1999 Water Quality Management Plan classified the Montreal River as a Cold Water Category II Trout Water. The river flows north into Lake Superior approximately 13 miles from the MGP site. River flow rates vary seasonally, from an estimated depth of 6-8 feet during spring run-off to a low of 1-3 feet deep during the late summer. These seasonal variations will move or transport and deposit contaminated material from the source area downstream during high flow periods, and make areas where contaminants were deposited more accessible during low flow periods. Recreational activities along the river bank in the area include play areas for children, cookout/picnic areas and typical "back yard" lawn and storage uses.

X.2 Description of Work to be Performed.

Pathways to be Investigated

The intent of this section of the SI is to investigate the soil and groundwater on the Wisconsin side of the Montreal River. (The surface water pathway will be investigated by the MDNRE.) Sampling will assist WDNR in determining if there is a source or sources of the contamination, detected from

the MGP property in Ironwood Michigan that is potentially posing a threat to human health or the environment in Wisconsin.

Groundwater

The closest down gradient potable well is located approximately 7,200 feet from the source area at Ero Nasi Construction Company, 5421 West Center Dr., Hurley. This potable well will be sampled for VOCs, SVOCs, pesticides and metals for an observed release and contaminant migration to receptors.

Three temporary groundwater water table observation wells will be installed along the west bank of the Montreal River where evidence of contamination may exist. The wells will be installed using a hydraulic push (Geoprobe) drill rig. The temporary monitoring wells will be installed according to the requirements of ch. NR 141 Wisconsin Administrative Code and be construed by MDNRE using MDNRE equipment.

Groundwater samples from monitoring well WMW-1 will serve as a background sample and support attribution, while monitoring well samples WMW-2 and WMW-3 and private well sample WS-8 will serve to document an observed release. Table 1 lists the sample number, the corresponding monitoring well name, the well location and the order in which the wells will be sampled. Wells will be sampled from cleanest to most contaminated. In addition, a field duplicate sample and rinsate blank sample will also be collected. The locations of the groundwater wells that are to be sampled are shown on Figure-X.

**TABLE 1
GROUNDWATER MONITORING WELL AND SAMPLING LOCATIONS**

SAMPLE ID #	WELL #	WELL LOCATION	SAMPLING ORDER
WS-1	WMW-1	Located on the southwest side of the Montreal River Bridge at Silver Street.	1
WS-2	WMW-2 MS/MSD	Located along the Montreal River in the Maple Street ROW	2
WS-3	WMW-3	Located along the Montreal River in the Oak Street ROW	3
WS-4		Duplicate of WMW-3	3
WS-6		Rinsate Blank	
WS-7		Field Blank	
WS-8		Trip Blank	
WS-9	Private well	5421 West Center Dr., Hurley	1

Soil Sampling

Seven locations have been selected to evaluate soil attributes, observed releases and contaminant migration to receptors. Soil sampling will be collected along the Wisconsin side (west side) of the Montreal River bank. The locations are shown on Figure-X and Figure-Y.

Three soil samples will be collected during the installation of the temporary monitoring wells. Soil samples will be collected from Geoprobe pushed cores. Soil samples will be field screened using a Thermo Environmental 580B photoionization detector (PID). Soil samples will be collected for laboratory analysis from cored soil material if it is shown to be contaminated using the PID or directly above bedrock.

Five soil samples will be collected from hand auger borings collected along the riverbank. Hand auger boring shall be advanced from approximately 2 feet below the surface and a sample of the soils collected from that depth. Table 2 lists the 8 samples to be collected, their respective locations, and sample description.

**TABLE 2
SOIL SAMPLING LOCATIONS**

SAMPLE ID #	SAMPLE LOCATION	SAMPLE DESCRIPTION
SS-1	Core from the installation of WMW-1	Background site, soil below 4 feet
SS-2	Core from the installation of WMW-2	Suspected deposition area properties, soil below 4 feet
SS-3	Core from the installation of WMW-3	Suspected deposition area properties, soil below 4 feet
SS-4	Hand auger at riverbank at the southwest side of Silver Street bridge.	Background soil less than 2 feet
SS-5	Hand auger at riverbank at the end of 1 st Street.	Suspected deposition area properties, soil less than 2 feet
SS-6	Hand auger at riverbank at the end of Oak Street	Suspected deposition area properties, soil less than 2 feet
SS-7	Hand auger at riverbank at the north end of Riverside Drive	Suspected deposition area properties, soil less than 2 feet
SS-8	Duplicate of SS-7 sample	

Groundwater Sampling

Proposed sampling at the properties includes collecting groundwater samples from a private potable well and three temporary monitoring wells.

Private well groundwater sampling will comply with Chapter 3 of the WDNR's Groundwater Sampling Field Manual PUBL DG-038-96. Permission from the owner of the well to be sampled will be obtained, and the sampling date and time will be confirmed with the owner prior to sampling. On the day of sampling, the owner will be met to provide access and the location of the well and appropriate tap from which to sample will be determined. The sample will be taken as close to the pump as possible and before any water softener, water heater, or pressure tank, if possible. The sample will be collected from an inside faucet only if absolutely necessary. Any aerators, filters, hoses, or other devices will be removed from the tap before sampling. If the sample is obtained on the well side of the tank, it will be run a minimum of two minutes prior to collection; if it is obtained

on the plumbing side of the tank, the water will be allowed to run a minimum of ten to fifteen minutes to flush the pressure tank. When collecting the VOC sample, water flow will be reduced to a thin stream to prevent the loss of volatile organic compounds. Pre-preserved sample containers for VOCs will be used. Samples for metals analyses will not be filtered. See **Attachment X** for appropriate sample containers, volumes, preservation, and holding times. All private well samples for organic and inorganic analyses will be kept at 4°C until they arrive at the laboratory. Deionized or distilled water will be used for QA/QC samples.

Water samples collected from the water table observation wells will be sampled for TCL Low Level Organics and TAL Inorganics. Groundwater samples will include one up-gradient background sample (WS-1) from monitoring well WMW-1. Groundwater samples collected from the monitoring wells will provide data on background and potential source area groundwater quality, support attribution of contaminants to the site, and document an observed release through chemical analysis. The sampling locations are shown on Figure-X. Groundwater flow in the area of the manufactured gas plant is suspected to be to the north and west toward the Montreal River. Groundwater flow on the Wisconsin side is suspected to be to the north and east toward the Montreal River.

Sampling Rationale

A summary of the sampling rationale is shown on Table 3 below. Soil and groundwater sampling for VOCs, SVOCs, pesticides and metals will be conducted for all soil and groundwater samples collected.

TABLE 3
Sampling Rationale

Sample Matrix	Sample Location Description	Sample Location	Analyses	Rationale for Sampling
Soil	Background site, soil below 4 feet	At WMW-1	TCL Organic TAL Inorganic	Background for attribution
Soil	Down gradient soil below 4 feet	At WMW-2 and WMW-3	TCL Organic TAL Inorganic	Observed release, contaminant migration to receptors
Soil	Background site along riverbank in the upper 2-feet	SS-5	TCL Organic TAL Inorganic	Background for attribution
Soil	Down gradient soil in the upper 2- feet	SS-6 SS-7 SS-8	TCL Organic TAL Inorganic	Observed release, contaminant migration to receptors
Groundwater	Up gradient monitoring well	WMW-1	Low Level TCL Organic TAL Inorganic	Background for attribution

Groundwater	Down gradient monitoring wells	WMW-2 WMW-3	TCL Trace VOA TCL Low SVOC TCL Pesticides TAL Inorganic	Observed release, contaminant migration to receptors
Groundwater	Downgradient private well	WS-8	Low Level TCL Organic TAL Inorganic	Observed release, contaminant migration to receptors

X.3 Sampling Procedures

The procedures given below will be used to collect samples at the Wisconsin part of the Ironwood MGP site inspection.

Soil Sampling

The procedures given below will be used to collect soil samples at the Wisconsin part of the Ironwood MGP site inspection for TCL Low Level Organics and TAL Inorganics contamination properties. A Geoprobe drill rig will be used to obtain cores from the soil borings.

Prior to soil sample collection soils will be classified by Department staff. Soil samples for field analysis will be collected from two foot intervals placed in a quart size Ziploc bag. Soil in the Ziploc bag will be agitated and the bag allowed to rest for a period of 4 to 5 minutes. The headspace inside the bag will then be analyzed with a PID. Soil samples for laboratory analysis will be selected based on the highest stable PID and visual observation.

TCL VOA samples will be containerized as soon as possible and with as little handling or disturbance as possible to prevent loss of compounds. Three 5-gram Encore Samplers will be tightly packed to the rim, without headspace, from appropriate sample locations within the Geoprobe core sample tube. Samples will be preserved by cooling to 4° C with ice until they arrive at the laboratory. No chemical preservatives are required.

Regardless of the depth or method of collection, soil samples obtained for non-volatile chemical analyses will be thoroughly mixed to homogenize the sample material before being placed in the appropriate sample containers. Samples will be initially mixed by rolling soils from the sides, corners and bottom into the center of a pan with the help of a stainless steel trowel or spoon. The sample will then be quartered and moved to the four corners of the container. Each quarter of the sample will be mixed individually. Each quarter will then be rolled to the center of the container and the entire sample mixed again.

One 8-ounce jar will be filled for SVOCs and PCB/pesticides and one 4-ounce jar will be filled for metals and cyanide analyses. Soil will be removed from the jar threads so that the cap will fit securely. Samples will be preserved by cooling to 4° C with ice until they arrive at the laboratory. No chemical preservatives are required.

See **Attachment X** for appropriate sample containers, volumes, preservation, and holding times.

Monitoring Well Sampling

A reading with a PID from the head space in the well and water elevations will be taken according to procedures outlined in the department's *Groundwater Sampling Field Manual*. Wells will be purged using the following equation:

EQUATION 1 Volume to be Purged from a Monitoring Well

$$V = \pi \times (D/2)^2 \times H \times 4 \times 7.48 \text{ gallons/ft}^3$$

Where V = Total purge volume (i.e., four well volumes in gallons)
 π = 3.1416
 D = Inside diameter of well casing (feet)
 H = Feet of water in well (depth to well bottom minus depth to water)

Purged water will be collected in graduated 5-gallon plastic pails. Physical features such as color, odor, and turbidity will be recorded in the field logbook.

Monitoring wells will be sampled using disposable bailers. One-time-use nylon rope will be used to lower the bailers. Some of the bailers are provided with specially designed bottom-emptying devices which will be inserted into the bottom to transfer the groundwater to containers, thus minimizing loss of volatile contaminants.

See **Attachment X** for appropriate sample containers, volumes, preservation, and holding times.

Sample containers will be filled in the following order: VOCs, SVOCs, PCB/Pesticides, Cyanide, and a transfer bottle. The transfer bottle will be used for field measurements of pH, conductivity, and temperature and then for field filtering (using disposable filters) for metals. Procedures for field measurements are found in the WDNr BEAP QAP, Attachment A. The sample containers will be kept at 4° C until they arrive at the laboratory.

VOC Groundwater Samples for CLP

The 40-ml. vials for VOC analysis have hydrochloric acid added in advance. Three vials will be filled slowly and with caution to avoid loss of volatile contaminants. Containers will be filled completely, without headspace. Once capped, the vials will be inverted to check for trapped air bubbles.

SVOC and PCB/Pesticide Groundwater Samples for CLP

Two 1-liter amber bottles will be filled for these fractions. No chemical preservation is required, only 4° C until samples arrive at the laboratory.

Inorganic Groundwater Analyses for CLP

Preservation of the remaining fractions will take place in a well ventilated area to avoid inhalation of potentially hazardous vapors that may be produced as a result. Groundwater for metals analyses will be field filtered into plastic containers and preserved with nitric acid. Groundwater for cyanide

analysis will not be filtered but collected directly from the bailer into a plastic container and preserved with sodium hydroxide. Samples will be kept at 4° C until they arrive at the laboratory.

Quality Control Sampling

A summary of field and laboratory quality control sample requirements may be found in **Attachment X**. All sample containers will be purchased from commercial suppliers. All sample containers will be cleaned according to EPA's highest standards. A certificate of analysis that substantiates the absence of contamination will accompany shipments of containers. These certificates will be retained as part of the final project files.

Field blanks, rinsate blanks, trip blanks, and field duplicates will get *unique* sample numbers. All organic portions and all inorganic portions of the matrix spike/matrix spike duplicate will receive the *same* organic and inorganic sample numbers, respectively.

Monitoring Well Samples

One field duplicate per ten field samples, or fewer, will be collected. The field duplicate will be collected, containerized, and preserved at the same time and in the same manner as the parent sample. All field duplicates will be analyzed for the entire suite of parameters as the parent sample.

A matrix spike/matrix spike duplicate (MS/MSD) will be designated on the CLP Organic and Inorganic Traffic Report/Chain of Custody Record in the area labeled "Sample(s) to be Used for Laboratory QC" at a frequency of one per twenty field samples, or fewer. Extra volume is required for all aqueous organic samples (2x volume for organic analyses) and no extra volume is required for all aqueous inorganic samples.

A trip blank of reagent-free, preserved water will be prepared and shipped at a frequency of 1/cooler with all groundwater for VOC analysis.

A field rinsate blank prepared from reagent free water using all pertinent field equipment and preservation for groundwater sampling will be prepared.

X.4 Documentation and Custody Procedures

Chain of custody procedures and documentation protocol as outlined in Section 5 of the WDNR BEAP QAP will be strictly adhered to. All appropriate information such as field measurements, sample numbers, persons obtaining and handling samples, etc., will be recorded on preprinted field recording sheets and/or preprinted and bound sampling field log books. The date and time of sampling will be recorded on each sample container. If errors occur on any field documentation, a single line will be drawn through the error, signed and dated. No erasures, write-overs, or correction liquids are permitted.

X.5 Sample Packaging and Shipping

The sample custodian is responsible for packaging samples and preparing coolers for shipping. The sample custodian will follow protocol specified in Section 5 of the WDNR BEAP QAP and this sampling plan. Samples to CLP/CRL laboratories will be shipped overnight via Federal Express for next-morning delivery. For samples arriving at the CLP laboratories on Monday through Friday

mornings, shipping information must be given to Dyncorp by 8:00 a.m. Central Time the day of arrival. Similarly, CRL needs to be notified in advance of samples arriving at the laboratory. For CLP samples being shipped Friday for a Saturday morning delivery, shipping information must be provided to Dyncorp by 11:00 a.m. Friday, Central Time. CRL does not accept samples on Saturdays.

X.6 Decontamination and Investigative Waste

Disposable sampling equipment such as bailers will not be cleaned by WDNR before use in the field. Dedicated, non-disposable sampling equipment will be cleaned before the sampling event in the following manner:

1. Equipment will be washed with a non-phosphate detergent (Alconox or equivalent) and warm tap water. If possible, a brush will be used to loosen any residual contamination.
2. Sampling equipment will be rinsed with tap water first, followed by a copious de-ionized, reagent-free water rinse.
3. Sampling equipment will be allowed to air dry in a clean environment and then stored in sealed plastic containers until used for sampling.

If sampling equipment is reused in the field, the procedure given above will be followed between sampling locations as closely as practical.

Discarded items such as Tyvek suits, gloves, paper towels, and disposable sampling equipment, etc., will be placed in plastic trash bags, removed from the site, and disposed of at the WDNR regional office. Other investigative waste such as decontamination waters, purge waters from wells and drill cuttings, and excess sediment sample material will be containerized in 55-gallon drums and properly disposed of in accordance with Wisconsin Statute and Administrative Code when sample results are known.

X.7 Field Support Group Assignments

Seven people will be associated with the field sampling. Two sampling crews of two people each will be assigned to collect the soil and groundwater samples. Sampling crews will work as pairs and be jointly responsible for properly collecting and documenting the samples in the field. A person will be responsible for field measurements, filtering, and preserving collected samples. One person will function as sample custodian, and will be responsible for preparing the collected samples for shipment including chain of custody requirements. One person will be designated the health and safety officer for the site. He will oversee on-site health and safety monitoring, photo documentation and assist where needed with sample preservation and field measurements.

TABLE 5
Work Assignments

Name	Media	Duties
Loren Brumberg	All	Sample custodian-documentation
Greer Lundquist	All	GIS location, groundwater and soil sample collection, documentation and sample packaging
Chris Saari	All	Groundwater and soil sample collection,

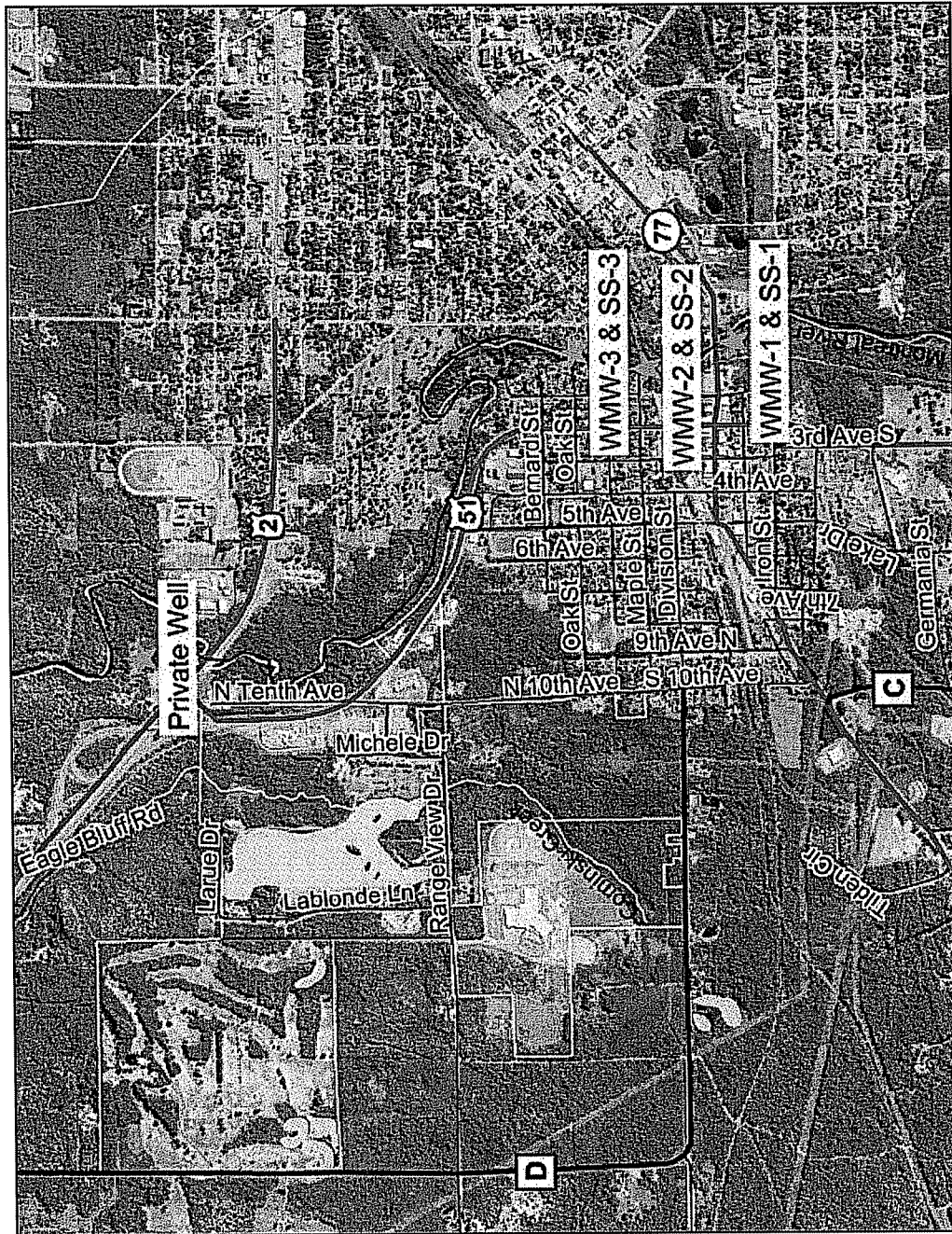
		documentation and sample packaging
Phil Richard	All	Groundwater and soil sample collection, documentation and sample packaging
John Sager	All	Soil classification/boring log documentation, Groundwater Sample Filtration, Preservation, Sample Packaging
William Schultz	All	On-site support, sample collection, sample logistics, On-site Health & Safety coordinator.
Jill Zalesny	All	Groundwater and soil sample collection, documentation and sample packaging

X.8 Sampling Report

A sampling report will be submitted to the WDNR Quality Assurance Manager after each round of sampling is complete. This report will include a means of matching the traffic report numbers with the field identification numbers and their corresponding locations so that data received may be accurately assessed. In addition, the report will include any deviations from the sampling plan, particularly noting how these deviations might affect data quality and usability.

Figure-X and Figure-Y Sampling Location Maps

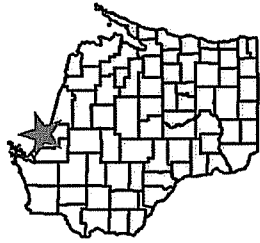
Figure X Groundwater & Soil Sampling Locations



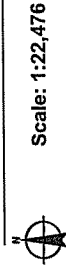
Map created on Jul 14, 2010
 Note: Not all RR Sites have been geo-located yet.



This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



- Legend**
- County Boundary
 - ✂ Railroads
 - County Roads (WDOT)
 - County Trunk Highway
 - State and U.S. Highways (WDOT)
 - State Trunk Highway
 - US Highway
 - Interstate Highways (WDOT)
 - Interstate Highway
 - Local Roads (WDOT)
 - Civil Towns
 - Civil Town
 - 24K Open Water
 - 24K Rivers and Shorelines
 - Municipalities



Attachment X
Sampling, Analyses, Containers, Preservation,
Holding Times, and Field/Lab QC

Attachment X SAMPLING, ANALYSES, CONTAINERS, PRESERVATION, HOLDING TIME, FIELD/LAB QC SUMMARY
SOILS

MATRIX	NUMBER OF FIELD SAMPLES	LABORATORY ANALYSIS	CONTAINERS	VOLUME	FIELD FILTER	PRESERVATION	HOLDING TIME	FIELD/LAB QC	FREQUENCY	VOLUME	LAB ANALYSIS
Soil	8	VOCs	3-5 gram EnCore samplers	no headspace	N/A	frozen or iced to 4° C	14 days or 48 hours w/MS/MSD	trip blank	1/cooler of VOC samples (unique sample #)	3-40 ml vials glass prior to field	VOAs only
		SVOCs + PCBs + Pesticides	1-8 oz. short, wide mouth, straight-sided glass jar w/ PTFE lined lid	full	N/A	iced to 4° C	14 days	rinsate & field blanks	N/A		
		Metals and Cyanide	1-4 oz. tall, wide mouth, straight-sided glass jar w/ PTFE lined lid	full	N/A	iced to 4° C	14 days CN 28 days Hg 6 mo. others	field duplicate	1/10 samples or fewer/soil matrix (unique sample #)	same as field samples	all
								MS/MSD	1/20 samples or fewer/soil matrix (same sample #)	total 3X total 2X no extra volume	VOCs SVOCs/ PCBs/ Pest. metals + cyanide

Attachment X SAMPLING, ANALYSES, CONTAINERS, PRESERVATION, HOLDING TIME, FIELD/LAB QC SUMMARY
 "Low Detection Limit" GROUNDWATER

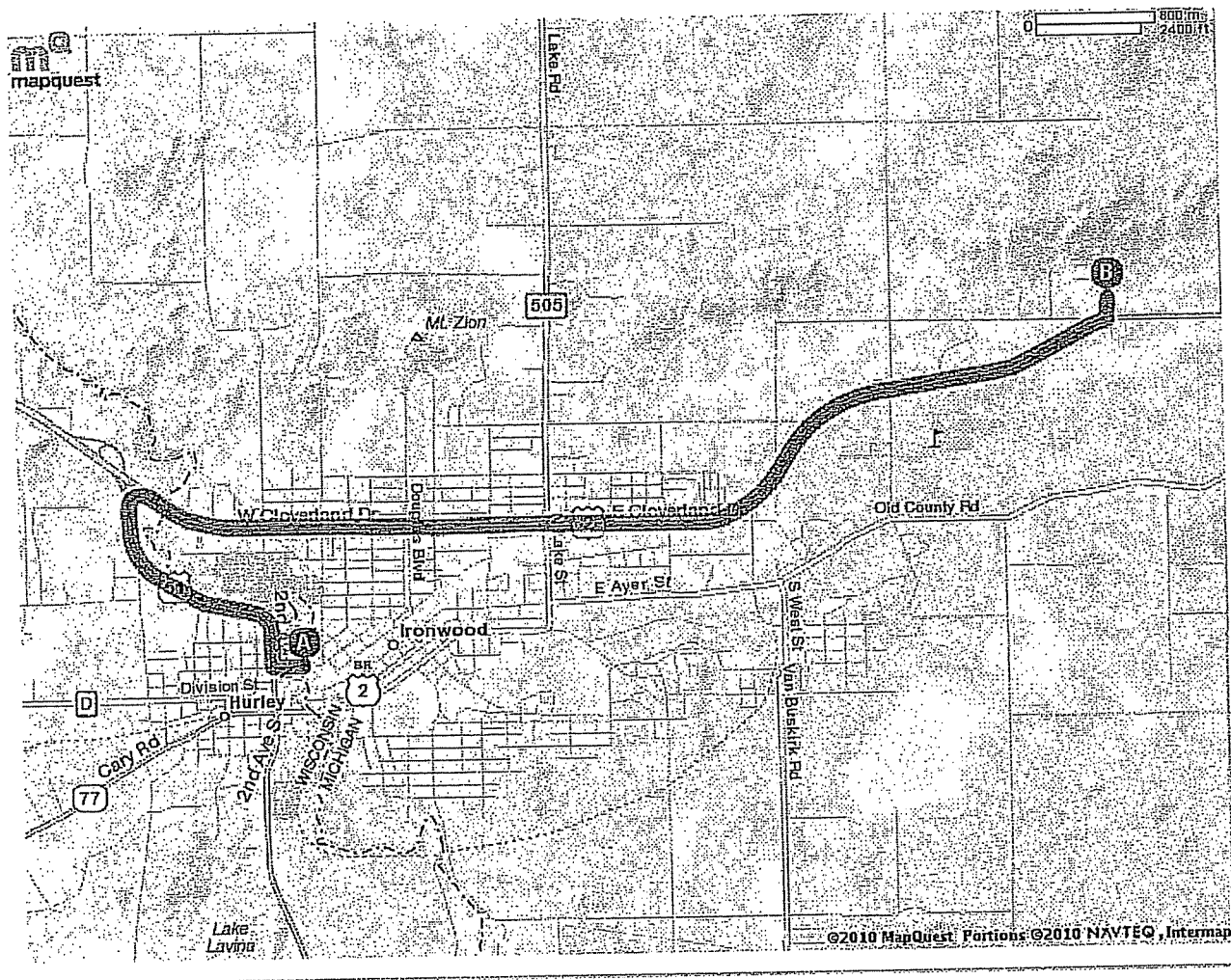
MATRIX	NUMBER OF FIELD SAMPLES	LABORATORY ANALYSIS	CONTAINERS	VOLUME	FIELD FILTER	PRESERVATION	HOLDING TIME	FIELD/LAB QC	FREQUENCY	VOLUME	LAB ANALYSIS
"Low" Groundwater	4	VOCs	3-40 ml vials glass w/PTFE septa	no headspace	no	1:1 HCl, pH<2 iced to 4° C	14 days	trip blank	1/cooler of VOC samples (unique sample #)	same as field samples prior to field	VOAs only
		SVOCs	1-liter amber round glass w/ PTFE lined lid	full	no	iced to 4° C	7 days until extraction	rinsate blank	not necessary if cont. filled directly.	(see "Ground- water" info)	(all)
		PCB	1-liter amber round glass w/ PTFE lined lid	full	no	iced to 4° C	7 days until extraction	field blank	1/10 samples or fewer (unique sample #)	same as field samples	all
		Pesticides	1-liter amber round glass w/ PTFE lined lid	full	no	iced to 4° C	7 days until extraction	field duplicate	1/10 samples or fewer (unique sample #)	same as field samples	all
		Metals	1-liter HDPE w/polyethylene lined lid	full	yes*	5 ml 1:1 HNO ₃ pH<2 iced to 4° C	Hg 28 days 6 mo. Others	MS/MSD	1/20 samples or fewer (same sample #)	total 2X no additional volume	organics inorganics
		Cyanide	1-liter HDPE w/polyethylene lined lid	full	no	NaOH pH>12 iced to 4° C	14 days				

* Groundwater should be field filtered for metals within 20 minutes of sample collection, unless a low flow pump is used for collection.

**Attachment X SA
PRIVATE WELLS**

MATRIX	NUMBER OF FIELD SAMPLES	LABORATORY ANALYSIS	CONTAINERS	VOLUME	FIELD FILTER	PRESERVATION	HOLDING TIME	FIELD/LAB QC	FREQUENCY	VOLUME	LAB ANALYSIS
Private Wells	1	VOCs	3-40 ml vials glass w/PTFE septa	no headspace	no	1:1 HCl, pH<2 iced to 4°C	14 days	trip blank	1/cooler of VOC samples (unique sample #)	same as field samples prior to field	VOAs only
		SVOCs	1-liter amber round glass w/ PTFE lined lid	full	no	iced to 4° C	7 days until extraction	rinsate blank	not necessary if cont. filled directly.	(see "Ground- water" info)	(all)
		PCB	1-liter amber round glass w/ PTFE lined lid	full	no	iced to 4° C	7 days until extraction	field blank	1/10 samples or fewer (unique sample #)	same as field samples	all
		Pesticides	1-liter amber round glass w/ PTFE lined lid	full	no	iced to 4° C	7 days until extraction	field duplicate	1/10 samples or fewer (unique sample #)	same as field samples	all
		Metals	1-liter HDPE w/polyethylene lined lid	full	no	5 mls 1:1 HNO ₃ pH<2 iced to 4° C	Hg 28 days 6 mo. Others	MS/MSD	1/20 samples or fewer (same sample #)	total 2X	organics
		Cyanide	1-liter HDPE w/polyethylene lined lid	full	no	NaOH pH>12 iced to 4° C	14 days			no additional volume	inorganics

Driving Directions from 1 Poplar St Hurley, Wisconsin to GRAND View Hospital in N10561 Grandvi



1 Poplar St Hurley, WI 54534-1160



1. Start out going **WEST** on **POPLAR ST** toward **1ST AVE N**. 0.1 mi



2. Turn **RIGHT** onto **2ND AVE N/US-51**. Continue to follow **US-51**. 1.1 mi



3. Merge onto **US-2 E** toward **IRONWOOD** (Crossing into **MICHIGAN**). 4.8 mi



4. Turn **LEFT** onto **GRANDVIEW LN**. 0.1 mi



5. **N10561 GRANDVIEW LN**.



GRAND View Hospital N10561 Grandview Ln, Ironwood, MI 49938 - (906) 932-2525

Total Travel Estimate: 10 minutes / 6.13 miles F