Site Investigation Field Procedures Workplan

Steve's Corner Bar
200 N Main Street
Butternut, Wisconsin

October 23, 2017
by METCO
WDNR File Reference #: 03-02-199424
PECFA Claim #: 54514-9802-00

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This document was prepared by:

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October 23, 2017

WDNR BRRTS#: 03-02-199424
PECFA Claim #: 54514-9802-00

Steve Rusnak
P.O. Box 191
Butternut, WI 54514

Dear Mr. Rusnak,

Enclosed is our "Site Investigation Field Procedures Workplan" concerning the Steve's Corner Bar site in Butternut, Wisconsin. This document outlines the procedures and the methods used to conduct such an investigation.

A copy of this workplan will be sent to the Wisconsin Department of Natural Resources for review.

We appreciate the opportunity to be of service to you on this project. Should you have any questions or require additional information, do not hesitate to contact our La Crosse office.

Sincerely,

Jason T. Powell
Staff Scientist

C: Carrie Stoltz – WDNR

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OBJECTIVES

Requirements of the WDNR

A Site Investigation is required by the Wisconsin Department of Natural Resources (WDNR) by authority of Section 292.11 of the Wisconsin Statutes. According to the WDNR, any soil that tests over 10 ppm Gasoline Range Organics (GRO) or Diesel Range Organics (DRO) requires an investigation. Any soil that tests over the Chapter NR720 Groundwater RCLs, Direct Contact RCLs, or Soil Saturation Values an investigation and possible remediation. Any groundwater that tests over the Preventive Action Limits (PAL) or Enforcement Standards (ES) for compounds listed in Chapter NR140 of the Wisconsin Statutes requires an investigation and possible remediation. For a further explanation of WDNR rules and regulations, see Appendix D.

Requirements of the PECFA Program

According to rules adopted in May 2006, the maximum allowable cost for an initial Site Investigation shall be no more than $20,000 unless pre-approved by PECFA. All consultant and commodity service costs must not exceed the PECFA Usual and Customary Charges.

Purpose of Document

This document briefly outlines all methods and procedures used by METCO personnel concerning "Site Investigations". These guidelines are strictly followed unless changed by managing personnel, site conditions, or project situations. All changes will be clearly noted.

All work conducted by METCO is undertaken in accordance with approved methods and regulations of the WDNR Bureau for Remediation and Redevelopment.

This document is site specific and will always be on-site during the project.

INTRODUCTION

Site Name

Steve's Corner Bar

Site Address

200 N Main Street
Butternut, Wisconsin

Legal Description

NE ¼, SE ¼, Section 21, Township 41 North, Range 1 West, Ashland County

Contact or Client

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(715) 661-0341

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SITE BACKGROUND

Facility

A gas station operated on the property from approximately the 1930s until the 1970s. The property currently and for many years has operated as a bar.

On August 20, 1998, one 500-gallon gasoline UST and one 1,100-gallon diesel UST were removed from the subject property. During the UST removal, Agenda International, Inc. collected six soil samples from beneath the removed USTs and dispensers for laboratory analysis (DRO or GRO). The laboratory analysis showed petroleum contamination to be present beneath the removed dispensers (4.3 ppm GRO and 700 ppm DRO), the removed diesel UST (<4.1-36 ppm DRO), and the removed gasoline UST (180-490 ppm GRO). The petroleum contamination was subsequently reported to the WDNR, who then required that a site investigation be conducted.

The nearest known LUST site is the Butternut Feed Mill site (BRRTS# 03-02-100179), which is located approximately 75 feet to the west of the subject property. During the Butternut Feed Mill site investigation, one monitoring well (MW-10) was installed along Main Street, immediately to the west of the Steve's Corner Bar property. Based on the results from monitoring well MW-10, low levels of Benzene (0.99 ppb) and other PVOC compounds were detected in a groundwater sample that was collected in June 1998. Currently, it is not clear from which of the two sites the petroleum detects are coming from or if low levels of petroleum contamination are still present in this area.

Potential Risks and Impacts

The subject property and surrounding properties are all served by the Village of Butternut municipal water supply. The nearest municipal well is located approximately 1,500 feet to the south to slightly southeast of the subject property. There are several residences within the village limits that have private water supply wells. The only known private well within 1,200 feet of the subject property is located at 316 E Illinois Street, approximately 800 feet to the east to slightly southeast of the subject property.

METCO is not currently aware of any other impacts, receptors, risks, or local problems associated with the subject property.

SITE CONDITIONS

Topography

According to the USGS Hydrologic Atlas, Butternut is located in the northern

portion of the Chippewa River Basin. The topography of this area has low to moderate relief with many swamps and lakes. This area is characterized by thick glacial deposits, ground moraine, and outwash that were deposited on a relatively level bedrock surface. Northeast oriented hills (drumlins) form a prominent drainage pattern in the area with closely spaced streams running parallel to the drumlins.

The elevation of the site is approximately 1,505 feet above Mean Sea Level (MSL). See Appendix A for site location.

Geology

Native unconsolidated materials in this area generally consist of clay, silt, sand, gravel, and boulders. The unconsolidated materials are underlain by crystalline bedrock at approximately 100 feet below ground surface.

Hydrology

The nearest surface water is the Butternut Creek, which exists approximately 550 feet to the east of the subject property.

Hydrogeology

Based on other nearby LUST sites, groundwater is expected to exist at approximately 5 to 10 feet below ground surface. Local groundwater flow is expected to be toward the southeast.

SCOPE OF WORK

Site Investigation

An investigation consists of collecting samples of soil and groundwater for analysis by a laboratory for compounds related to petroleum products. The WDNR requires that the investigation determine the degree and extent of contaminants in these mediums, which is commonly referred to as "defining the contaminant plume". Further background information will also be collected to assist in the investigation.

Geoprobe Project

METCO has proposed a 1-2 day Geoprobe Project. We propose approximately 20 borings to 8-12 feet with soil and groundwater sampling. The Geoprobe will be used to collect soil samples at various depths in order to determine the general extent of contaminants in the subsurface environment.

The goal of the Geoprobe Project is to complete the following:

1. Determine general subsurface geotechnical characteristics.
2. Determine general extent of the contaminants in the unconsolidated deposits.
3. Determine the general extent of contaminants in groundwater, if applicable.
4. Determine if contaminants have migrated to competent rock, if applicable.

This data will either completely define the extent of contamination or be used to guide the Drilling Project if required.

Drilling Project (if required)

METCO has proposed 6 to 10 boreholes to be completed on/off site. METCO has also proposed 5 to 8 monitoring wells to be installed on/off site. Based on the results of the Geoprobe project, we will be able to determine how many monitoring wells will need to be installed.

The goal of the Drilling Project is to complete the following:

1. Collect a soil sample for field analysis every 2.5 feet of boring.
2. Collect at least two soil samples for laboratory analysis in every boring.
3. Verify, through sampling, the horizontal and vertical extent of soil contamination, including smear zones.
4. Install monitoring wells in an arrangement that fully defines the horizontal and vertical extent of groundwater contamination.
5. Develop the monitoring wells.
6. Collect at least two rounds of groundwater samples from the monitoring wells.
7. If conditions warrant, perform slug tests on at least one monitoring well.

Report Preparation

The final report, prepared by METCO, will include background information, observations, procedures, methods, field data, laboratory analysis, site maps, data analysis, risk assessment, conclusions, and recommendations concerning all activities conducted for this project. This report will be submitted to the client and the WDNR for review and discussion.

METCO PROCEDURES AND METHODS

Geoprobe

The Geoprobe consists of a truck mounted, hydraulically driven unit that advances 1-inch diameter, 3 or 4-foot long, stainless steel rods into the subsurface. At desired depths, either a soil or water sample can be collected.

A 4-foot or 5-foot long, ½ or 1-inch diameter soil sampler is advanced to the sampling location. At desired depths, a soil sample is collected and brought to the surface for analysis. Groundwater samples are collected by installing a 1-inch diameter temporary well screen and casing into the soil boring with a 5 or 10 foot long slotted screen intersecting the watertable. Groundwater samples are collected from the boring by either using a small diameter bailer or using flexible polyethylene tubing and a peristaltic pump. The temporary well screen and casing is removed from the boring after sampling.

All Geoprobe holes are properly abandoned to ground level using bentonite clay and a surface seal.

Drilling

Drilling is conducted with a truck mounted auger drill rig. To penetrate any unconsolidated materials, work is conducted in accordance with ASTM D-1452 "Soil Investigation and Sampling by Auger Boring". If bedrock is encountered and cannot be penetrated with auger boring, an accepted air-rotary drilling procedure will be used.

Sampling unconsolidated materials is done in accordance with ASTM D-1586 "Penetration Tests and Split-Barrel Sampling of Soils" using a 2-inch outside diameter (O.D.), 2.5 foot split spoon sampler. Using this procedure, a split spoon sampler is driven into the soil by a 140-pound weight falling 30-inches, and a soil sample collected.

All borings are properly abandoned to ground level using bentonite clay.

PID Screening

Each of the samples, for headspace analysis, are placed in a clean, clear, plastic Ziploc bag. These containers are to be filled ¼ full. All containers are the same size and filled to the same volume. The containers are then sealed.

Once collected and sealed, samples are shaken for 30 seconds to break apart soil clods. They are then allowed to establish headspace. The following table is used to determine headspace equilibration time.

Outside temperature	Time to establish headspace
• <40 deg. F	40 minutes
• 41-55 deg. F	20 minutes
• 56-69 deg. F	10 minutes
• >70 deg. F	5 minutes

To take readings, the PID probe is inserted into the plastic bag halfway between the sample and the highest meter response recorded. The samples are screened with a Rae Systems, Mini Rae Lite Meter equipped with a 10.6 eV lamp. Metered calibration is done at the beginning of each workday. Other notes taken are as follows:

1. Temperature and weather conditions.
2. Date of last factory calibration.
3. Field calibration gas used and concentration.
4. Date and time of last calibration.
5. Instrument gain setting.
6. Erratic instrument readings.
7. Cleaning or repairs performed in the field.
8. Sample moisture (saturated, wet, moist, damp, dry).
9. Petroleum odors or staining of samples.
10. Any instrument quenching.
11. Other relevant information.

Monitoring Wells

Groundwater monitoring well installations are completed under the direction of a METCO hydrogeologist and in accordance with Wisconsin Department of Natural Resources Chapter NR141, "Groundwater Monitoring Well Requirements." The monitoring wells are constructed of flush-threaded, two-inch inside diameter schedule 40 or 80 polyvinyl chloride (PVC) piping. Ten-foot well screens with 0.010-inch slots are installed approximately 5 to 6 feet into the watertable. A uniform washed sand is installed around the well screens to serve as a filter pack. Granular bentonite is used above the filter pack to provide a surface seal. Steel, locking protective well casings are cemented in at each well. Any variances from NR141 will be reported to the WDNR.

Each well is developed by alternately surging and purging with a clean polyethylene bailer for 20 to 30 minutes to remove fines from the well screen, after which ten well volumes are removed using a submersible pump.

Groundwater level measurements are obtained using an electronic water level indicator. All measurements are recorded to the nearest 0.01-foot. The probe is thoroughly washed between measurements.

At least two rounds of samples are collected using a bottom loading, disposable, polyethylene bailer and disposable polyethylene cord. Approximately four well volumes are purged from each well before collecting samples.

Depending on site conditions and groundwater sampling results, slug tests may be conducted on two or three of the monitoring wells to determine hydrogeologic parameters (hydraulic conductivity, transmissivity, and flow velocity). During the slug test, groundwater in a monitoring well is displaced using a solid plastic slug, while water levels are recorded using a transducer and data logger. Water levels are recorded until the water level in the well returns to equilibrium. Slug test data is evaluated using the Bouwer and Rice method.

Well Elevation Survey

All wells are surveyed to the nearest 0.01-foot MSL by a qualified surveying company.

Sample Analysis

Environmental samples are collected to minimize both soil disturbance and exposure of the sample to the air.

Field observations such as soil characteristics, petroleum odors, product sheens, and staining associated with the samples are continuously noted throughout sampling.

The amount of sample taken, the size of the container used, and the type of sample preservation used, will depend on the laboratory contracted and for which parameters the soil samples are analyzed. See Appendix C for LUST Sample Guidelines.

All collected samples are stored in a cooler that maintains a temperature of, at most, 4 degrees Celsius. The coolers are accompanied by a complete chain of custody and are delivered to the laboratory within two days of sampling.

The WDNR document, "LUST Analytical and Quality Assurance Guidance, July 1993" is referenced in determining what parameters in which the soil and water samples will be analyzed, and the amount of duplicates/blanks required.

Quality Assurance/Quality Control/Waste Management

All drilling and sampling equipment advanced into the subsurface is cleaned between sampling locations. This consists of washing with a biodegradable Alconox solution and rinsing with potable water. Wash and rinse water are disposed of atop an isolated area of asphalt for evaporation or discharged into a local storm sewer.

Drill cuttings, field screened as being contaminated, are contained in 55-gallon DOT barrels, characterized, and properly disposed of by METCO and/or client.

Development and purge waters are contained in 55-gallon DOT barrels, characterized, and properly disposed of by METCO and/or the client. Disposal options will depend on the amount of water, type of contaminants, and concentration of contaminants. All wastewater contaminants and disposal activities are recorded with complete documentation submitted to the WDNR.

Variances

We are not aware of any variances needed at this time.

SCHEDULE FOR INVESTIGATION PROJECT

The following is a checklist of activities that have been, or will be completed, concerning the Site Investigation, along with an estimated time frame. A typical Site Investigation takes approximately 2 to 6 months. The investigation may take up to 12 months if bedrock or groundwater is contaminated.

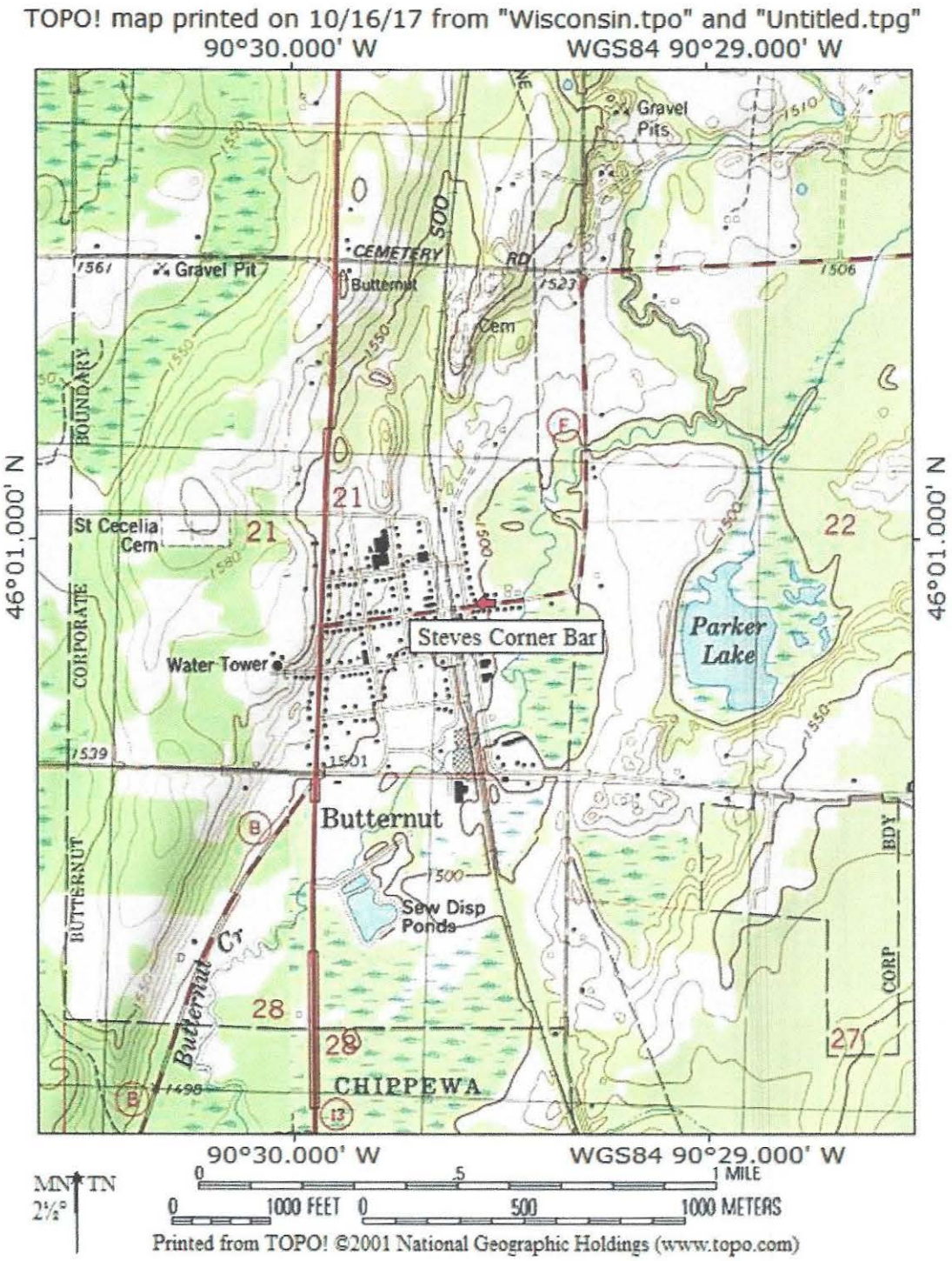
1) METCO submits a Site Investigation Project proposal to client (done).
2) Proposal acceptance by client. METCO notifies the WDNR that a consultant has been contracted (done).
3) Client obtains PECFA Packet and Site Eligibility Letter from PECFA (done).
4) METCO submits a Site Investigation Field Procedures Workplan to client and WDNR for review and approval (10/23/17).
5) METCO conducts Geoprobe Project (2-4 weeks). More than one field mobilization may be needed to complete project depending on complexity of the site and project (1 month to receive lab results).
6) Depending on the results of the investigation, METCO prepares a brief summary

report or final report and sends copies to client and WDNR (2 months after lab results are received).

NOTE: If groundwater is found to be impacted or suspected of being impacted by released contaminants, the WDNR will require a Drilling Project with monitoring wells.

7) METCO conducts Drilling Project (2 months). More than one field mobilization may be needed to complete project depending on complexity of the site and project (1 month to receive lab results).
8) METCO develops/surveys the installed monitoring wells and collects. Round 1 groundwater samples for laboratory analysis (1 month to receive lab results).
9) METCO collects Round 2 groundwater samples for laboratory analysis (1 month to receive lab results).
10) METCO completes any additional work that is needed, such as slug tests (1 month).
11) METCO prepares a Site Investigation report that contains all collected data and submits to the client and WDNR (3-6 months).
12) If no further investigation work is required, METCO will apply for "site closure" with the WDNR. Upon closure, METCO will complete the PECFA Application and submit for reimbursement (reimbursement takes 3 to 6 months).
13) If further investigation and/or remediation is required METCO will provide further assistance.

APPENDIX A/SITE MAPS



B.1.a LOCATION MAP
CONTOUR INTERVAL 10 FEET
STEVES CORNER BAR – BUTTERNUT, WI
SEAMLESS USGS TOPOGRAPHIC MAPS ON CD-ROM

B.I.b DETAILED SITE MAP

STEVE'S CORNER BAR

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Excellence through experience™

BUTTERNUT.
WISCONSIN

DRAWN BY: ED DATE: 10/03/2007

NOTE: INFORMATION BASED ON AVAILABLE DATA ACTUAL CONDITIONS MAY DIFFER

● - TANK CLOSURE SOIL SAMPLE LOCATION

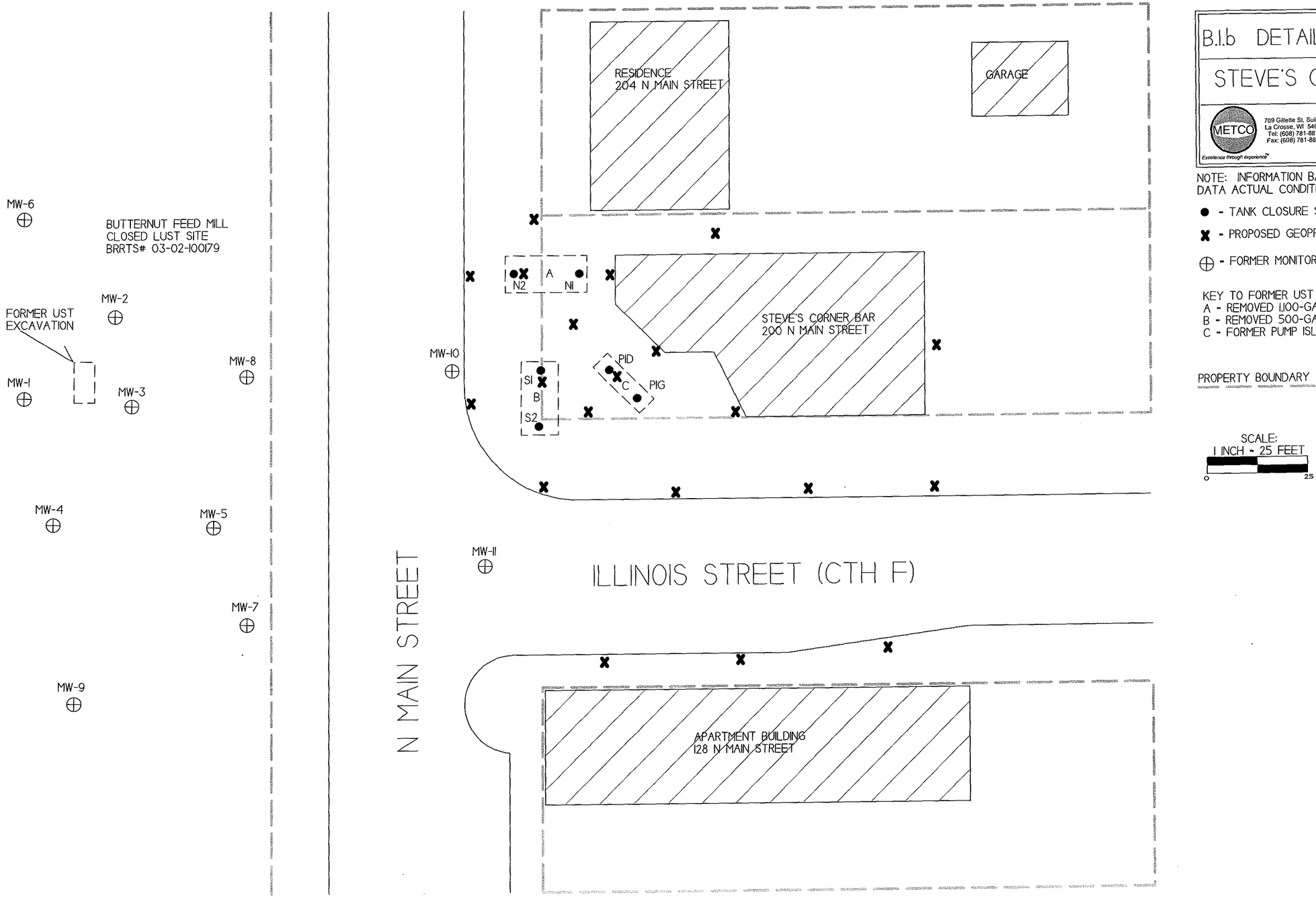
✖ - PROPOSED GEOPROBE BORING LOCATION

⊕ - FORMER MONITORING WELL LOCATION - BUTTERNUT FEED MILL

KEY TO FORMER UST SYSTEMS
A - REMOVED 1,100-GALLON DIESEL UST
B - REMOVED 500-GALLON GASOLINE UST
C - FORMER PUMP ISLAND

PROPERTY BOUNDARY

SCALE:
1 INCH = 25 FEET
0 25



APPENDIX B/INVESTIGATION CHECKLIST

SITE INVESTIGATION CHECKLIST
Revised February 1992 PUBL-SW-115

This checklist was prepared by the Department of Natural Resources. It lists the necessary information to include in a site investigation report, for investigations conducted in accordance with guidelines prepared by the Emergency and Remedial Response Section, of the Bureau of Solid and Hazardous Waste Management, Wisconsin DNR. Sites include those where actions are conducted under the LUST, Spills and Environmental Repair programs. If some of this information is not submitted the report should clearly state why it is omitted. More complete information regarding site investigations is available in the Department's "Guidance on Conducting Environmental Response Actions".

The purpose of the site investigation is to 1) define the extent and degree of contamination and 2) to provide a basis for choosing a remedial action alternative. The narrative portion of the investigation report should clearly address these goals.

The Department strongly recommends that the site investigation report follow the sequence of information listed here. This will allow for a quick completeness check and more timely review of submittals. Incomplete reports will not be reviewed until all the necessary information has been received. The following information should be included in the site investigation, (as appropriate to each case):

I. INTRODUCTION/COVER LETTER

___ 1. Project title
___ 2. Purpose of report and desired department action
___ 3. Client(s)
___ 4. Author(s), with signatures
___ 5. Scope of Services
___ 6. Dates the work was performed
___ 7. Date of report
___ 8. Subcontractors employed by the consultant

II. GENERAL and BACKGROUND INFORMATION

1. General Information

A. Identify the owner/operator and/or person(s) responsible: (include all applicable)
___ 1. name
___ 2. address
___ 3. day phone number
___ 4. contact person (name)
___ 5. address
___ 6. phone number
___ 7. verification of ownership: photocopy of deed or exact legal description of property

B. Specify the site of contamination:
___ 1. name
___ 2. phone number
___ 3. specific location (street corner, miles from an intersection, etc)
___ a. legal address (street address if applicable, do not supply just a P.O. Box #)
___ b. location of impacted properties by latitude and longitude, to an accuracy of seconds, at a minimum (preferred method) or State Plane coordinate system
___ c. location of impacted properties by quarter, quarter, section, township, range, civil township, county, or other locational criteria if site(s) are not within the Public Land Survey system
___ 4. type of operation: gas station, tank farm, private residence, manufacturer, etc.

C. Site Location Maps
1. General Location Map
___ locate on a USGS topographic base map (include quadrangle name, series and scale)
___ locate on a plat map, if applicable

2. Local Base Map: the map must be drawn to scale and include the following items. Other features may also be needed:
___ a. bar scale
___ b. North arrow
___ c. legend
___ d. location of benchmark used
___ e. origin of horizontal grid system

3. Including Site Specific Features: more than one map may be appropriate, use the local map for the base map (These maps may be used for several purposes.)

___ a. location of discharge on site or facility, for example, the location of (former) tank and pump islands and piping
___ b. location of all buildings on site
___ c. locations of public utilities, appropriately marked
___ d. property boundaries
___ e. location of all soil borings and wells (monitoring wells and potable wells)
___ f. location of soil vapor points
___ g. locations of where field screenings and lab confirmation samples were taken
___ h. nearby/neighboring structures and private wells (within 1200 feet)
___ i. any nearby surface waters (within map scale)
___ j. roads and paved areas, and other access areas
___ k. known and potential sources of contamination
___ l. known and potential receptors
___ m. limits of excavation

2. Site Background

A. General Site Information
1. site description, including features like:
___ - number of tanks/containers
___ - volume/size of tanks/containers
___ - tank/container contents, past and present
___ - tank/container age, installation dates
___ - tank/container construction materials
___ - presence and type of leak detection
___ - presence and type of secondary containment
___ 2. general site construction history
___ 3. any past reports of spills, or other incidents
___ 4. periods of nonoperation
___ 5. proximity of sensitive sites such as schools, homes, private or public wells, etc.

B. Description of Discharge Incident
___ 1. type of hazardous substances discharged, known or suspected (released, spilled, lost, etc.)
___ 2. approximate amounts discharged
___ 3. location of impact
___ 4. dates of discharge
___ 5. local problems associated with discharge, e.g. vapors in homes, well contamination, etc.
___ 6. known receptors

C. Impacts
___ 1. existing impacts to human health, safety, welfare and the environment
___ 2. any impacts to adjacent or nearby buildings, wells or other structures
___ 3. names and addresses of owners of adjacent properties, if those properties have been adversely impacted by the hazardous substance discharge

D. Past Activities, Monitoring and Testing
___ 1. dates of site activities, duration and type and potential amounts of discharges
___ 2. description of emergency actions taken and of interim actions taken, including dates
___ 3. record of activities conducted at the site which had potential to cause contamination
___ 4. inventory record system data
5. summary of monitoring results, including:
___ - product monitoring records according to ILHR 10
___ - groundwater monitoring
___ - surface water monitoring
___ - soil monitoring
___ - sediment monitoring
___ - atmospheric monitoring
___ 6. records of testing, repair, removal or replacement, including dates
7. tank/container/line integrity testing
___ method
___ testing firm
___ dates
___ results

E. Hazardous Waste Generation
___ 1. hazardous waste manifest
___ 2. was hazardous waste ever generated or stored on site?

F. Description of Tank/Container and Soil Removal Activities

___ 1. description of soil conditions in the area of the tank/container excavation or in area of discharge
___ 2. volume of (contaminated) soils removed from the excavation
___ 3. location of stockpiled contaminated soils
___ 4. type of impermeable base for stockpiled soils
___ 5. type of impermeable cover for stockpiled soils
___ 6. if excavation was backfilled, what was used as fill?
___ 7. final deposition of soil excavated, where and how were they used? (daily cover, backfill on/off site, roasted, buried, etc.)
___ 8. condition of tanks, lines, pumps (corrosion, visible leaks, etc?)
___ 9. product (other than petroleum) or waste delivery or storage systems

G. Land Use Information

___ 1. current and past land uses of site and neighboring properties
___ 2. description of zoning of property and adjacent properties

3. Environmental Analysis

A. Site Historical Significance

___ 1. impacts or potential impacts to significant historical or archeological features due to any response activities or the discharge itself
___ 2. presence of buildings greater than 50 years old on or next to discharge site

B. Presence of "Sensitive" Environmental Receptors

___ 1. wildlife habitat
___ 2. state or federal threatened or endangered species
___ 3. sensitive or unique ecosystems or species
___ 4. areas of special natural resource interest
___ 5. other surface waters and wetlands, as appropriate

C. Geology (use maps as appropriate)

___ 1. geologic origin, nature and distribution of bedrock
___ 2. geologic origin, nature and distribution of overlying soils
___ 3. thicknesses of various strata (consolidated and unconsolidated)
___ 4. depth to bedrock
___ 5. geophysical characteristics
___ 6. soil types and texture
___ 7. soil descriptions to include:
___ - structure
___ - mottling
___ - voids
___ - layering
___ - lenses
___ - geologic origin
___ - Unified Soil System Classification
___ - grain size distribution, if applicable
___ - evidence of secondary permeability
___ - odor, if evident
___ - staining, if evident
___ 8. bedrock descriptions, if impacted:
___ - rock type
___ - grain size
___ - bedding thickness
___ - presence of fractures
___ - orientation of fractures
___ - sedimentary structures
___ - secondary porosity/solutional features
___ - other
___ 9. topography
___ 10. site hydrology, including
___ - intermittent and ephemeral streams,
___ - drain tile systems,
___ - surface waters
___ - wetlands
___ - location of floodway and floodplain (this may be best located on a site map)

D. Hydrogeology

___ 1. depth to water table
___ 2. flow directions, seasonal variations

___ 3. horizontal and vertical gradients
___ 4. hydraulic characteristics: (define as field test results or non-field estimates)
___ hydraulic conductivity, variation
___ transmissivity
___ storativity
___ 5. aquifer definition:
___ size
___ use
___ presence of aquitards
___ 6. local and regional recharge or discharge area(s)
___ 7. potentiometric surface
___ 8. location, seasonal variation of groundwater divides
___ 9. location and extent of perched groundwater
___ 10. local and regional groundwater quality
___ 11. hydraulic connection between aquifers
___ 12. saturated thickness of aquifer
___ 13. estimates of flow volume passing below the discharge site/facility (include calculations in the appendices)
___ 14. drillers logs which indicated any abnormal drilling difficulties
___ 15. isoconcentration maps
___ 16. other

III. RESULTS

1. Contaminant Migration Pathway and Receptor Assessment

A. Potential Vapor and Product Migration Pathways (include depth of burial and construction material)
___ 1. sewer lines
___ 2. storm sewers
___ 3. buried power cables
___ 4. buried telephone lines
___ 5. tile lines
___ 6. more permeable soil lenses
___ 7. water lines
___ 8. road beds
___ 9. foundations
___ 10. other

B. Potential Receptors of Contamination (description of impacts or potential impacts, if applicable)
___ 1. buildings on site
___ 2. neighboring basements/buildings
___ 3. nearby wells (locations must be provided on a map)
___ 4. nearby surface waters, including wetlands
___ 5. critical habitats
___ 6. endangered species
___ 7. outstanding resource waters
___ 8. exceptional resource waters
___ 9. sensitive or unique ecosystems
___ 10. other

C. Potential Health Impacts
___ 1. danger of explosion
___ 2. contaminated private wells
___ 3. contaminated public water supply wells
___ 4. exposure to vapors
___ 5. dermal exposure
___ 6. other

2. Sampling and Analysis Results (figures and tables should be used, but general trends and the overall evaluation should be in narrative form) Provide units of measurement for all results. Describe or provide the following information for each media impacted:

A. soil chemistry results, per parameter, per location
___ 1. field screening results with locations identified
___ 2. laboratory (confirmation) sample results with locations identified
___ 3. any indication of contamination of soils encountered (staining, odor, etc.)

B. groundwater sample results, per parameter, per well, over time
___ 1. laboratory results
___ 2. trends analysis

___ 3. compliance evaluation with NR 140 groundwater standards, if applicable

C. soil vapor results (define type of survey used)
___ 1. by parameter
___ 2. per location

D. sampling results from other media impacted by the discharge
___ 1. parameters
___ 2. locations

3. Sampling Methods Used (for each media impacted, lists provided for soil and groundwater only)

A. Soils:
___ 1. description of sample collection method
2. field screening or analytical instrument type used
___ lamp strength
___ calibration
___ operating procedure
___ 3. sample container
___ 4. temperature at which the sample was collected
___ 5. time allowed for PID or FID samples to achieve at least 70° F, and location

B. Groundwater
___ 1. method and instruments used to obtain sample
___ 2. any indication of contamination noticed in field
___ 3. whether the well was purged or not, why and how, and amount removed
___ 4. drilling method used
___ 5. monitoring well construction features
6. abandonment methods
___ a. boreholes
___ b. monitoring wells
___ c. excavations
___ 7. survey methods
___ 8. sample container size
___ 9. sample description
___ - turbid
___ - clear
___ - sheen
___ - free product
___ 10. other

C. Vapors/Ambient Air
___ 1. description of sample collection method
___ 2. field screening, if conducted
___ 3. sample container

4. Quality Control and Quality Assurance

A. General QA/QC (for all media impacted)
___ 1. name and address of laboratory
___ 2. laboratory certification number
3. number of blanks, with results:
___ - field blanks
___ - trip blanks
___ - lab spikes
___ - split samples
___ - replicate spikes
___ 4. name and training of person collecting the samples (including certification, if applicable)

B. Field Instrument Quality Control (for all media impacted)
___ 1. instrument make, model and lamp energy
2. limitations of field screening instruments
___ - temperature changes
___ - humidity changes
___ - other
___ 3. any repairs to the instrument
___ 4. field instrument calibration measures conducted
___ 5. time and frequency or schedule of field instrument calibration
___ 6. composition of the calibration gas used (calibration product ?)
___ 7. calibration curves used
___ 8. correction factor if one was used

___ 9. results of any calibration checks
___ 10. time of day and ambient temperature when calibrations, calibration curves or calibration checks were completed
___ 11. time and temperature that samples were equilibrated if the outside temperature is below 60°F at the time of field analysis

C. Field Sampling and Transportation Quality Control and Assurance (for all media impacted)
___ 1. sample type
___ 2. sample location and associated field and laboratory identification
___ 3. sampling technique used
___ 4. sampling techniques used to minimize exposure of samples to the atmosphere
___ 5. date and time of sampling
___ 6. field preservation performed
___ 7. date and time of preservation or extraction
___ 8. decontamination procedures used during the site investigation
___ 9. deviations from standard operating procedures
___ 10. shipping time and technique

D. Laboratory Receipt and Analysis (for all media impacted)
___ 1. chain of custody forms (4400-151)
___ 2. time and date of receipt of samples by the laboratory
___ 3. sample condition on receipt by the laboratory including
- the temperature of the samples and
- whether the samples were properly sealed
___ 4. time and date of analysis
___ 5. method of analysis
___ 6. laboratory detection limit
___ 7. sample results with units of measurement
___ 8. accuracy and precision of replicate spikes
___ 9. results or percent recovery of matrix spikes with every batch of samples not to exceed eight hours

5. Investigative Wastes (for all media impacted, to include but which is not limited to contaminated water from excavations, borings, purge water, rinse waters from decontamination procedures, extra sample)

___ A. analytical results (hazardous determination, if listed?)
___ B. ultimate disposal
___ C. other

IV. SUMMARY AND EVALUATION OF RESULTS (Analysis of Degree and Extent of Contamination)

___ 1. degree and extent of soil contamination
___ 2. degree and extent of groundwater contamination
___ 3. degree and extent of contamination of other media impacted
___ 4. known or potential impacts to receptors, such as water supply wells
___ 4. vapor migration potential
___ 5. impacts from seepage into basements, utility lines, surface waters
___ 6. difficulties experienced during the investigation
___ 7. unanticipated or questionable results
___ 8. details needing emphasis

V. CONCLUSIONS

___ source and type of release defined
___ soil and groundwater contamination adequately defined?
___ further study needed
___ further remediation needed
___ known or potential impacts from the release defined?
___ clean site, ready for case closure
___ other

VI. RECOMMENDATIONS

1. Investigation Incomplete
___ continued monitoring
___ additional investigation

2. Remedial Action Alternatives (provide description of alternatives) e.g.:
___ remediation method (to be) used for contaminated soil

___ soil removal, treatment and disposal
___ soil venting
___ product recovery
___ groundwater extraction and treatment
___ insitu biological treatment
___ other actions (define)

3. Other
___ work plans for further action
___ construction proposals for further action
___ pilot study, other treatability studies
___ schedules for further actions
___ required permits
___ air quality
___ wastewater discharge

VII. FIGURES

1. Site Maps
___ - location maps (regional and local)
___ - water table and/or potentiometric surface maps
___ - isoconcentration maps
___ - surface water depth maps
___ - bedrock and soil type and distribution maps
___ 2. Flow Cross Sections
___ 3. Extent of Contamination in Soil
___ 4. Extent of Contamination in Groundwater (Isoconcentration)
___ 5. Locations of Potential Receptors
___ 6. Geologic Cross-Sections
___ a. geologic setting
___ b. boring location
___ c. soil classification
___ d. analytical sampling
___ e. monitoring well locations
___ f. water table
___ g. extent of contaminant plume
___ h. concentrations at referenced date and point
___ i. sampling intervals (for soil and groundwater)
___ j. of excavation walls showing location of field screening and/or analytical results, as appropriate
___ 7. Photographs (NO black and white photocopies)

VIII. TABLES

___ 1. Groundwater Chemistry Results
___ 2. Soil Chemistry Results
___ 3. Analytical Methods Used
___ 4. Standards for Comparison and Compliance Determinations (Tables with compliance standards should be combined with analytical results for comparison)
___ 5. Geologic and Hydrogeologic Results
___ 6. Groundwater Elevations
___ 7. Screening Results
___ 8. Other

IX. APPENDICES (up to the author)

___ 1. Table giving data for compounds found, such as:
Chemical formula, Molecular weight, Ionic potential, Solubility,
Vapor pressure, Henry's Law Constant, Kow
___ 2. References used to support methods or provide standards methods, including previous reports
___ 3. All raw data
4. All documentation on forms: (DNR form number)
___ a. soil boring logs (4400-122)
___ b. monitoring well construction logs (4400-113A)
___ c. soil boring/well abandonment forms (3300-5B)
___ d. chain of custody forms
___ e. lab/chemistry results
___ f. groundwater monitoring well information form (4400-89)
___ g. monitoring well development form (4400-113B)
___ 5. Variances (for well construction, hazardous waste storage requirements, etc.)

___ 6. Well logs of all impacted wells and potentially impacted wells within 1200' of the discharge site (locate wells on a map)
___ 7. All calculations and assumptions
___ 8. Landfill receipts for disposed soil
___ 9. Regional hydrogeological information references used

Other information that may be needed includes:
- access
- public information plan
- health and safety plan

APPENDIX C/LUST SAMPLING GUIDELINES

Petroleum Substance Discharged	Analysis of Samples Collected for UST Tank Closure Assessments	Solid Waste Program Requirements for Soils to be landfilled[5]	Site Investigation, Pretreatment and Posttreatment Sample Analysis[11]
Regular Gasoline	GRO[2]	Free Liquids[6] GRO Benzene[7] Pb[7] Haz. Waste Deter.[8]	GRO VOC/PVOC[15] Pb[12]
Unleaded Gasoline; Grades 80 100, and 100 LL (Low Lead) Aviation Fuel	GRO[2]	Free Liquids[6] GRO Benzene[7] Pb[7] Haz. Waste Deter.[8]	GRO PVOC
Diesel; Jet Fuels; and No's 1, 2, and 4 Fuel Oil	DRO[3]	Free Liquids[6] DRO Benzene[7] Haz. Waste Deter.[8]	DRO[3] PVOC PAH[13 14]
Crude Oil; Lubricating Oils; No. 6 Fuel Oil	DRO[3]	Free Liquids[6] DRO Haz. Waste Deter.[8]	DRO[3] PAH[13 14]
Unknown Petroleum	GRO[7] and DRO[3 4]	Free Liquids[6] GRO and DRO Pb, Cd[7] Haz. Waste Deter.[8] CN[19] S[2 10]	GRO and DRO[3 4] VOC/PVOC[15] PAH[13 14] Pb, Cd[12]
Waste Oil	DRO[3]	Free Liquids[6] DRO Pb, Cd[7] Haz. Waste Deter.[8] CN[19] S[2 10]	DRO[3] VOC/PVOC[15] PAH[13 14] PCBs[16] Pb, Cd[12]

Abbreviations:

GRO - Gasoline Range Organics, Determined by the Wisconsin Modified GRO Method

DRO - Diesel Range Organics, Determined by the Wisconsin Modified DRO Method

VOC - Volatile Organic Compounds (See Section 11.1 for a list of VOC compounds)

PVOC - Petroleum Organic Compounds (See Section 11.2 for a list of PVOC compounds)

PAH - Polynuclear Aromatic Hydrocarbons (See Section 11.3 for a list of the PAH compounds)

PCBs - Polychlorinated Biphenyls

Pb - Lead

SYNERGY ENVIRONMENTAL LAB – Sample Bottle Requirements

TABLE 1
SAMPLE & PRESERVATION REQUIREMENTS FOR WATER and DRINKING WATER SAMPLES

Test	Original Sample Container	Preserved	Holding Time to Analysis
WET CHEMISTRY			
Alkalinity SM2320B/EPA 310.2	250 mL HDPE	4°C	14 days
Ammonia EPA 350.1	250 mL HDPE	4°C, pH<2 with H_2SO_4	28 days
BOD, cBOD SM5210B	500 ml HDPE	4°C	48 hrs.
COD EPA 410.4	500 ml HDPE	4°C, pH<2 with H_2SO_4	28 days
Chloride EPA 300.0/EPA 325.2	250 mL HDPE	4°C	28 days
Cyanide SW846 9012A/SM4500-CN-C	1000 mL HDPE	4°C, pH>12 with NaOH	14 days
Flashpoint SW846 1010	250 mL HDPE	4°C	28 days
Fluoride EPA 300.0	250 mL HDPE	4°C	28 days
Hardness SW846 6010B	250 mL HDPE	4°C, pH<2 with HNO_3	180 days
TKN EPA 351.2	1 Liter HDPE	4°C, pH<2 with H_2SO_4	28 days
Nitrate EPA 300.0	250 mL HDPE	4°C	48 hours
Nitrate+Nitrite EPA 300.0	250 mL HDPE	4°C, pH<2 with H_2SO_4	28 days
Nitrite EPA 300.0	250 mL HDPE	4°C	48 hours
Oil & Grease EPA 1664	1 Liter Glass	4°C, pH<2 with H_2SO_4	28 days
Organic Carbon SW846 9060/ EPA 415.1	40 ml Glass	4°C, pH<2 with H_2SO_4 or HCL	28 days
Phenol, Total EPA 420.1	1 Liter Glass	4°C, pH<2 with H_2SO_4	28 days
Phosphorus, Total EPA 365.3	250 mL HDPE	4°C, pH<2 with H_2SO_4	28 days
Sulfate EPA 300.0	250 mL HDPE	4°C	28 days
Total Dissolved Solids EPA 160.1	250 ml HDPE	4°C	7 days
Total Solids EPA 160.3	250 ml HDPE	4°C	7 days
Total Suspended Solids EPA 160.2	250 mL HDPE	4°C	7 days
METALS			
Metals	250 mL HDPE	4°C, pH<2 with HNO_3	6 months
Mercury SW8467470/EPA 245.1	250 mL HDPE	4°C, pH<2 with HNO_3	28 days
ORGANICS			
Semivolatiles SW846 8270C	1 Liter amber glass, collect 2 for one of the samples submitted .	4°C	7 days extr. 40 days following extr
PAH SW846 8270C	1 Liter amber glass, collect 2 for one of the samples submitted	4°C	7 days extr. 40 days following extr
PCB SW846 8082	1 Liter amber glass, collect 2 for one of the samples submitted.	4°C	7 days extr. 40 days following extr
DRO, Modified DNR Sep 95	1 Liter amber glass with Teflon lined cap	4°C, 5 mL 50% HCl	7 days extr. 40 days following extr
VOC'S SW846 8260B/EPA524.2	(3) 40 mL glass vials with Teflon lined septum caps	4°C, 0.5 mL 50% HCl, No Headspace	14 days
GRO/VOC	(4) 40 mL glass vials with Teflon lined septum caps	4°C, 0.5 mL 50% HCl prior to adding sample to jar	14 days
GRO, Modified DNR Sep 95	(2) 40 mL glass vials with Teflon lined septum caps	4°C, 0.5 mL 50% HCl prior to adding sample to jar	14 days
GRO/PVOC	(2) 40 mL glass vials with Teflon lined septum caps	4°C, 0.5 mL 50% HCl prior to adding sample to jar	14 days
PVOC	(2) 40 mL glass vials with Teflon lined septum caps	4°C, 0.5 mL 50% HCl prior to adding sample to jar	14 days

All samples are to be cooled to 4°C until tested.
HDPE = High Density Polyethylene.

SYNERGY ENVIRONMENTAL LAB – Sample Bottle Requirements

TABLE 2
SAMPLE & PRESERVATION REQUIREMENTS FOR SOIL SAMPLES

Test	Original Sample Container	Preserved	Holding Times from Date and Time of Collection			
			Solvent Addition	Shipping	Extraction	Analysis
METALS						
Metals	2 oz glass or soil cup	4°C	NA	NA	NA	180 days
Mercury SW846 7471	2 oz glass or soil cup	4°C	NA	NA	NA	28 days
Chromium Hexavalent SM3500-Cr	2 oz glass or soil cup	4°C	NA	NA	NA	24 hours
ORGANICS						
Any combinations of GRO, VOC, PVOC	1- tared VOC vial with 10 mls methanol, 13 grams of soil collected with syringe	4°C, 1:1 with methanol	Immediately	4 days	21 days	21 days
DRO, Modified	1- tared VOC vial, 13 grams of soil collected with syringe jar	4°C, Hexane	10 days	4 days	47 days	47 days
PAH, SW846 8270C	2 oz glass untared	4°C	NA	NA	14 days	40 days
Semivolatile SW846 8270C	2 oz glass untared	4°C	NA	NA	14 days	40 days
PCB SW846 8082	2 oz glass untared	4°C	NA	NA	14 days	40 days

All samples are to be cooled to 4°C until tested.

APPENDIX D/WDNR DOCUMENTS

RCL Quick Reference Table

March 2017

Contaminant	Not-To-Exceed D-C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	RCL-gw (mg/kg) DF=2
	Non-Industrial	Industrial	
Benzene	1.6	7.07	0.0051
Ethylbenzene	, 8.02	, 35.4	, 1.57
Toluene	,818.	,818.	, 1.1072
Xylenes	,260.	,260.	, 3.96
Methyl tert-Butyl Ether (MTBE)	, 63.8	,282.	, 0.027
Dichloroethane, 1,2- (DCA)	, 0.652	, 2.87	, 0.0028
Dibromoethane, 1,2-	, 0.05	, 0.221	2.82E-05
Trichloroethylene (TCE)	1.3	8.41	0.0036
Tetrachloroethylene (PCE)	33	145	0.0045
Vinyl Chloride (VC)	0.067	2.08	0.0001
Dichloroethylene 1,1- (DCE)	320	1,190	0.005
Dichloroethylene, 1,2-trans-	1,560.	1,850.	, 0.0626
Dichloroethylene, 1,2-cis-	,156.	2,340.	, 0.0412
Trichloroethane, 1,1,1-	,640.	,640.	, 0.1402
Carbon Tetrachloride	, 0.916	, 4.03	, 0.0039
Pentachlorophenol (PCP)	, 1.02	, 3.97	, 0.0028
Trimethylbenzene, 1,2,4-	,219.	,219.	, 1.382
Trimethylbenzene, 1,3,5-	,182.	,182.	
Naphthalene	5.52	24.1	0.6582
Benzo(a)pyrene	0.115	2.11	0.47
Acenaphthene	3,590.	45,200.	
Anthracene	17,900.	100,000.	,196.9492
Benz[a]anthracene	, 1.14	, 20.8	

Contaminant	Not-To-Exceed D-C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	RCL-gw (mg/kg) DF=2	Background Threshold Value (BTV) (mg/kg)
	Non-Industrial	Industrial		
Benzo(j)fluoranthene	, 0.424	, 1.76		
Benzo[b]fluoranthene	, 1.15	, 21.1	, 0.4793	
Benzo[k]fluoranthene	, 11.5	,211.		
Chrysene	,115.	2,110.	, 0.1446	
Dibenz[a,h]anthracene	, 0.115	, 2.11		
Dibenzo(a,e)pyrene	, 0.042	, 0.176		
Dimethylbenz(a)anthracene, 7,12-	4.59E-04	, 0.008		
Fluoranthene	2,390.	30,100.	, 88.8778	
Fluorene	2,390.	30,100.	, 14.8299	
Indeno[1,2,3-cd]pyrene	, 1.15	, 21.1		
Methylnaphthalene, 1-	, 17.6	, 72.7		
Methylnaphthalene, 2-	,239.	3,010.		
Nitropyrene, 4-	, 0.424	, 1.76		
Pyrene	1,790.	22,600.	, 54.5455	
Arsenic, Inorganic	0.677	3	0.584	8
Barium	15,300.	100,000.	,164.8	364
Beryllium and compounds	,156.	2,300.	, 6.32	
Cadmium (Diet)	, 71.1	,985.	, 0.752	1
Chromium(VI)	, 0.301	, 6.36	, 3.84	
Chromium, Total			360,000 if no Cr-VI	44
Lead and Compounds	400	800	27	52
Mercury (elemental)	, 3.13	, 3.13	, 0.208	
Selenium	,391.	5,840.	, 0.52	

NOTES:

1) **This table of the most common compounds is intended to be a quick reference <u>ONLY</u>. It does not take into account cumulative effects as required in NR 700.**

2) **Values in this table are taken from the RCL spreadsheet which is periodically updated. PLEASE be sure to reference the RCL spreadsheet for the most current values.**

Site-specific

Resident Screening Levels (RSL) for Soil

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	GIABS	ABS	RBA	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)
Benzene	1	-	1	5.10E+03	1.82E+03	1.56E+09	1.26E+01	-	1.84E+00	1.60E+00
Dibromoethane, 1,2-	1	-	1	1.25E+04	1.34E+03	1.56E+09	3.48E-01	-	5.84E-02	5.00E-02
Dichloroethane, 1,2-	1	-	1	6.60E+03	2.98E+03	1.56E+09	7.64E+00	-	7.13E-01	6.52E-01
Ethylbenzene	1	-	1	8.18E+03	4.80E+02	1.56E+09	6.32E+01	-	9.19E+00	8.02E+00
Lead and Compounds	1	-	1	-	-	1.56E+09	-	-	-	-
Methyl tert-Butyl Ether (MTBE)	1	-	1	7.08E+03	8.87E+03	1.56E+09	3.86E+02	-	7.64E+01	6.38E+01
Acenaphthene	1	0.13	1	2.03E+05	-	1.56E+09	-	-	-	-
Anthracene	1	0.13	1	7.56E+05	-	1.56E+09	-	-	-	-
Benz[a]anthracene	1	0.13	1	6.37E+06	-	1.56E+09	2.10E-01	6.29E-01	5.85E+01	1.57E-01
Benzo(j)fluoranthene	1	0.13	1	-	-	1.56E+09	5.79E-01	1.58E+00	3.98E+04	4.24E-01
Benzo[a]pyrene	1	0.13	1	-	-	1.56E+09	2.10E-02	6.29E-02	1.44E+03	1.57E-02
Benzo[b]fluoranthene	1	0.13	1	-	-	1.56E+09	2.10E-01	6.29E-01	1.44E+04	1.57E-01
Benzo[k]fluoranthene	1	0.13	1	-	-	1.56E+09	2.10E+00	6.29E+00	1.44E+04	1.57E+00
Chrysene	1	0.13	1	-	-	1.56E+09	2.10E+01	6.29E+01	1.44E+05	1.57E+01
Dibenz[a,h]anthracene	1	0.13	1	-	-	1.56E+09	2.10E-02	6.29E-02	1.32E+03	1.57E-02
Dibenzo(a,e)pyrene	1	0.13	1	-	-	1.56E+09	5.79E-02	1.58E-01	3.98E+03	4.24E-02
Dimethylbenz(a)anthracene, 7,12-	1	0.13	1	-	-	1.56E+09	6.13E-04	1.84E-03	2.23E+01	4.59E-04
Fluoranthene	1	0.13	1	-	-	1.56E+09	-	-	-	-
Fluorene	1	0.13	1	4.06E+05	-	1.56E+09	-	-	-	-
Indeno[1,2,3-cd]pyrene	1	0.13	1	-	-	1.56E+09	2.10E-01	6.29E-01	1.44E+04	1.57E-01
Methylnaphthalene, 1-	1	0.13	1	8.46E+04	3.94E+02	1.56E+09	2.40E+01	6.55E+01	-	1.76E+01
Methylnaphthalene, 2-	1	0.13	1	8.37E+04	-	1.56E+09	-	-	-	-
Naphthalene	1	0.13	1	6.69E+04	-	1.56E+09	-	-	5.52E+00	5.52E+00
Nitropyrene, 4-	1	0.13	1	-	-	1.56E+09	5.79E-01	1.58E+00	3.98E+04	4.24E-01
Pyrene	1	0.13	1	3.43E+06	-	1.56E+09	-	-	-	-
Toluene	1	-	1	6.19E+03	8.18E+02	1.56E+09	-	-	-	-
Trimethylbenzene, 1,2,4-	1	-	1	1.14E+04	2.19E+02	1.56E+09	-	-	-	-
Trimethylbenzene, 1,3,5-	1	-	1	9.54E+03	1.82E+02	1.56E+09	-	-	-	-
Xylenes	1	-	1	8.28E+03	2.60E+02	1.56E+09	-	-	-	-

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(22) "Wastewater and sludge storage or treatment lagoon" means a natural or man−made containment structure, constructed primarily of earthen materials for the treatment or storage of wastewater or sludge, which is not a land disposal system.

History: Cr. Register, September, 1985, No. 357, eff. 10−1−85; cr. (1m), am. (7), (17) and (18), Register, October, 1988, No. 394, eff. 11−1−88; am. (6), cr. (20h) and (20m), Register, March, 1994, No. 459, eff. 4−1−94; cr. (1s), (10e), (10s), (20k), r. and recr. (12), (13), Register, August, 1995, No. 476, eff. 9−1−95; cr. (14m), Register, October, 1996, No. 490, eff. 11−1−96; am. (20), Register, December, 1998, No. 516, eff. 1−1−99; correction in (9) made under s. 13.93 (2m) (b) 7., Stats., Register, April, 2001, No. 544; CR 02−134: cr. (1u), (1w), (1y) and (20s) Register June 2003 No. 570, eff. 7−1−03; correction in (20) made under s. 13.92 (4) (b) 6., Stats., Register January 2012 No. 673.

Subchapter II — Groundwater Quality Standards

NR 140.10 Public health related groundwater standards. The groundwater quality standards for substances of public health concern are listed in Table 1.

Note: For all substances that have carcinogenic, mutagenic or teratogenic properties or interactive effects, the preventive action limit is 10% of the enforcement standard. The preventive action limit is 20% of the enforcement standard for all other substances that are of public health concern. Enforcement standards and preventive action limits for additional substances will be added to Table 1 as recommendations are developed pursuant to ss. 160.07, 160.13 and 160.15, Stats.

Table 1
Public Health Groundwater Quality Standards

Substance[1]	Enforcement Standard (micrograms per liter − except as noted)	Preventive Action Limit (micrograms per liter − except as noted)
Acetochlor	7	0.7
Acetochlor ethane sulfonic acid + oxanilic acid (Acetochlor − ESA + OXA)	230	46
Acetone	9 mg/l	1.8 mg/l
Alachlor	2	0.2
Alachlor ethane sulfonic acid (Alachlor − ESA)	20	4
Aldicarb	10	2
Aluminum	200	40
Ammonia (as N)	9.7 mg/l	0.97 mg/l
Antimony	6	1.2
Anthracene	3000	600
Arsenic	10	1
Asbestos	7 million fibers per liter (MFL)	0.7 MFL
Atrazine, total chlorinated residues	3[2]	0.3[2]
Bacteria, Total Coliform	0[3]	0[3]
Barium	2 milligrams/liter (mg/l)	0.4 mg/l
Bentazon	300	60
Benzene	5	0.5
Benzo(b)fluoranthene	0.2	0.02
Benzo(a)pyrene	0.2	0.02
Beryllium	4	0.4
Boron	1000	200
Bromodichloromethane	0.6	0.06
Bromoform	4.4	0.44
Bromomethane	10	1
Butylate	400	80
Cadmium	5	0.5
Carbaryl	40	4
Carbofuran	40	8
Carbon disulfide	1000	200
Carbon tetrachloride	5	0.5
Chloramben	150	30
Chlordane	2	0.2
Chlorodifluoromethane	7 mg/l	0.7 mg/l
Chloroethane	400	80
Chloroform	6	0.6
Chlorpyrifos	2	0.4
Chloromethane	30	3
Chromium (total)	100	10
Chrysene	0.2	0.02

Table 1 – Continued
Public Health Groundwater Quality Standards

Substance[1]	Enforcement Standard (micrograms per liter – except as noted)	Preventive Action Limit (micrograms per liter – except as noted)
Cobalt	40	8
Copper	1300	130
Cyanazine	1	0.1
Cyanide, free[4]	200	40
Dacthal	70	14
1,2–Dibromoethane (EDB)	0.05	0.005
Dibromochloromethane	60	6
1,2–Dibromo–3–chloropropane (DBCP)	0.2	0.02
Dibutyl phthalate	1000	100
Dicamba	300	60
1,2–Dichlorobenzene	600	60
1,3–Dichlorobenzene	600	120
1,4–Dichlorobenzene	75	15
Dichlorodifluoromethane	1000	200
1,1–Dichloroethane	850	85
1,2–Dichloroethane	5	0.5
1,1–Dichloroethylene	7	0.7
1,2–Dichloroethylene (cis)	70	7
1,2–Dichloroethylene (trans)	100	20
2,4–Dichlorophenoxyacetic Acid (2,4–D)	70	7
1,2–Dichloropropane	5	0.5
1,3–Dichloropropene (cis/trans)	0.4	0.04
Di (2–ethylhexyl) phthalate	6	0.6
Dimethenamid/Dimethenamid–P	50	5
Dimethoate	2	0.4
2,4–Dinitrotoluene	0.05	0.005
2,6–Dinitrotoluene	0.05	0.005
Dinitrotoluene, Total Residues[5]	0.05	0.005
Dinoseb	7	1.4
1,4–Dioxane	3	0.3
Dioxin (2, 3, 7, 8–TCDD)	0.00003	0.000003
Endrin	2	0.4
EPTC	250	50
Ethylbenzene	700	140
Ethyl ether	1000	100
Ethylene glycol	14 mg/l	2.8 mg/l
Fluoranthene	400	80
Fluorene	400	80
Fluoride	4 mg/l	0.8 mg/l
Fluorotrichloromethane	3490	698
Formaldehyde	1000	100
Heptachlor	0.4	0.04
Heptachlor epoxide	0.2	0.02
Hexachlorobenzene	1	0.1
N–Hexane	600	120
Hydrogen sulfide	30	6
Lead	15	1.5
Lindane	0.2	0.02
Manganese	300	60
Mercury	2	0.2

Table 1 – Continued
Public Health Groundwater Quality Standards

Substance[1]	Enforcement Standard (micrograms per liter – except as noted)	Preventive Action Limit (micrograms per liter – except as noted)
Methanol	5000	1000
Methoxychlor	40	4
Methylene chloride	5	0.5
Methyl ethyl ketone (MEK)	4 mg/l	0.8 mg/l
Methyl isobutyl ketone (MIBK)	500	50
Methyl tert–butyl ether (MTBE)	60	12
Metolachlor/s–Metolachlor	100	10
Metolachlor ethane sulfonic acid + oxanilic acid (Metolachlor – ESA + OXA)	1.3 mg/l	0.26 mg/l
Metribuzin	70	14
Molybdenum	40	8
Monochlorobenzene	100	20
Naphthalene	100	10
Nickel	100	20
Nitrate (as N)	10 mg/l	2 mg/l
Nitrate + Nitrite (as N)	10 mg/l	2 mg/l
Nitrite (as N)	1 mg/l	0.2 mg/l
N–Nitrosodiphenylamine	7	0.7
Pentachlorophenol (PCP)	1	0.1
Perchlorate	1	0.1
Phenol	2 mg/l	0.4 mg/l
Picloram	500	100
Polychlorinated biphenyls (PCBs)	0.03	0.003
Prometon	100	20
Propazine	10	2
Pyrene	250	50
Pyridine	10	2
Selenium	50	10
Silver	50	10
Simazine	4	0.4
Styrene	100	10
Tertiary Butyl Alcohol (TBA)	12	1.2
1,1,1,2–Tetrachloroethane	70	7
1,1,2,2–Tetrachloroethane	0.2	0.02
Tetrachloroethylene	5	0.5
Tetrahydrofuran	50	10
Thallium	2	0.4
Toluene	800	160
Toxaphene	3	0.3
1,2,4–Trichlorobenzene	70	14
1,1,1–Trichloroethane	200	40
1,1,2–Trichloroethane	5	0.5
Trichloroethylene (TCE)	5	0.5
2,4,5–Trichlorophenoxy–propionic acid (2,4,5–TP)	50	5
1,2,3–Trichloropropane	60	12
Trifluralin	7.5	0.75
Trimethylbenzenes (1,2,4– and 1,3,5– combined)	480	96
Vanadium	30	6

Table 1 – Continued
Public Health Groundwater Quality Standards

Substance[1]	Enforcement Standard (micrograms per liter – except as noted)	Preventive Action Limit (micrograms per liter – except as noted)
Vinyl chloride	0.2	0.02
Xylene[6]	2 mg/l	0.4 mg/l

[1] Appendix I contains Chemical Abstract Service (CAS) registry numbers, common synonyms and trade names for most substances listed in Table 1.

[2] Total chlorinated atrazine residues includes parent compound and the following metabolites of health concern: 2-chloro-4-amino-6-isopropylamino-s-triazine (formerly deethylatrazine), 2-chloro-4-amino-6-ethylamino-s-triazine (formerly deisopropylatrazine) and 2-chloro-4,6-diamino-s-triazine (formerly diaminoatrazine).

[3] Total coliform bacteria may not be present in any 100 ml sample using either the membrane filter (MF) technique, the presence-absence (P-A) coliform test, the minimal medium ONPG-MUG (MMO-MUG) test or not present in any 10 ml portion of the 10-tube multiple tube fermentation (MTF) technique.

[4] "Cyanide, free" refers to the simple cyanides (HCN, CN^-) and /or readily dissociable metal-cyanide complexes. Free cyanide is regulatorily equivalent to cyanide quantified by approved analytical methods for "amenable cyanide" or "available cyanide".

[5] Dinitrotoluene, Total Residues includes the dinitrotoluene (DNT) isomers: 2,3-DNT, 2,4-DNT, 2,5-DNT, 2,6-DNT, 3,4-DNT and 3,5-DNT.

[6] Xylene includes meta-, ortho-, and para-xylene combined.

History: Cr. Register, September, 1985, No. 357, eff. 10-1-85; am. table 1, Register, October, 1988, No. 394, eff. 11-1-88; am. table 1, Register, September, 1990, No. 417, eff. 10-1-90; am. Register, January, 1992, No. 433, eff. 2-1-92; am. Table 1, Register, March, 1994, No. 459, eff. 4-1-94; am. Table 1, Register, August, 1995, No. 476, eff. 9-1-95; am. Table 1, Register, December, 1998, No. 516, eff. 1-1-99; am. Table 1, boron, Register, December, 1998, No. 516, eff. 12-31-99; am. Table 1, Register, March, 2000, No. 531, eff. 4-1-00; CR 03-063: am Table 1, Register February 2004 No. 578, eff. 3-1-04; CR 02-095: am. Table 1, Register November 2006 No. 611, eff. 12-1-06; reprinted to correct errors in Table 1, Register January 2007 No. 613; CR 07-034: am. Table 1 Register January 2008 No. 625, eff. 2-1-08; CR 09-102: am. Table 1 Register December 2010 No. 660, eff. 1-1-11.

NR 140.12 Public welfare related groundwater standards. The groundwater quality standards for substances of public welfare concern are listed in Table 2.

Note: For each substance of public welfare concern, the preventive action limit is 50% of the established enforcement standard.

Table 2
Public Welfare Groundwater Quality Standards

Substance	Enforcement Standard (milligrams per liter – except as noted)	Preventive Action Limit (milligrams per liter – except as noted)
Chloride	250	125
Color	15 color units	7.5 color units
Foaming agents MBAS (Methylene-Blue Active Substances)	0.5	0.25
Iron	0.3	0.15
Manganese	0.05	0.025
Odor	3 (Threshold Odor No.)	1.5 (Threshold Odor No.)
Sulfate	250	125
Zinc	5	2.5

History: Cr. Register, September, 1985, No. 357, eff. 10-1-85; am. table 2, Register, October, 1990, No. 418, eff. 11-1-90; am. Table 2, Register, March, 1994, No. 459, eff. 4-1-94.

NR 140.14 Statistical procedures. (1) If a preventive action limit or an enforcement standard for a substance listed in Table 1 or 2, an alternative concentration limit issued in accordance with s. NR 140.28 or a preventive action limit for an indicator parameter established according to s. NR 140.20 (2) is attained or exceeded at a point of standards application:

(a) The owner or operator of the facility, practice or activity at which a standard is attained or exceeded shall notify the appropriate regulatory agency that a standard has been attained or exceeded; and

(b) The regulatory agency shall require a response in accordance with the rules promulgated under s. 160.21, Stats. No response shall be required if it is demonstrated to the satisfaction of the appropriate regulatory agency that a scientifically valid determination cannot be made that the preventive action limit or enforcement standard for a substance in Table 1 or 2 has been attained or exceeded based on consideration of sampling procedures or laboratory precision and accuracy, at a significance level of 0.05.

(2) The regulatory agency shall use one or more valid statistical procedures to determine if a change in the concentration of a substance has occurred. A significance level of 0.05 shall be used for all tests.

(3) In addition to sub. (2), the following applies when a preventive action limit or enforcement standard is equal to or less than the limit of quantitation:

(a) If a substance is not detected in a sample, the regulatory agency may not consider the preventive action limit or enforcement standard to have been attained or exceeded.

(b) If the preventive action limit or enforcement standard is less than the limit of detection, and the concentration of a substance is reported between the limit of detection and the limit of quantitation, the regulatory agency shall consider the preventive action limit or enforcement standard to be attained or exceeded only if:

1. The substance has been analytically confirmed to be present in the same sample using an equivalently sensitive analytical method or the same analytical method, and

2. The substance has been statistically confirmed to be present above the preventive action limit or enforcement standard, determined by an appropriate statistical test with sufficient samples at a significance level of 0.05.

(c) If the preventive action limit or enforcement standard is between the limit of detection and the limit of quantitation, the regulatory agency shall consider the preventive action limit or

APPENDIX E/PROJECT DOCUMENTS

agenda

international inc.

September 3, 1998

Janet Kazda
WDNR Northern Region
107 Sutliff Ave. P.O. Box 818
Rhinelander, WI 54501

Dears Ms. Kazda:

Underground Storage Tank Closure Site Assessment Report

Steve's Corner Bar
200 Main St. Butternut, Wisconsin.

500-gallon gasoline UST ID#020200005
1,100-gallon diesel UST ID#020200006

In accordance with DNR requirements , please find enclosed a copy of the above-mentioned report.

If you have any questions, please call me at your convenience.

Sincerely,

Travis Peterson

Travis Peterson
Environmental Scientist

enclosure

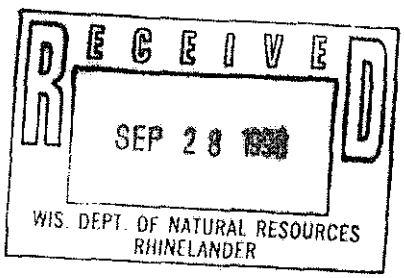
2130 South 17th Street
Sheboygan, WI 53081

TEL: (920) 451-9141
FAX: (920) 451-9088

Site Assessment
and
Tank Closure Report

for

Steve's Corner Bar
200 Main Street
Butternut, WI 54514



September 3, 1998

2130 South 17th Street
Sheboygan, WI 53081

TEL: (920) 451-9141
FAX: (920) 451-9088

INTRODUCTION

This Site Assessment and Tank Closure Report presents the results of an underground storage tank (UST) removal project which was conducted for Steve's Corner Bar at 200 Main Street, Butternut, WI 54514.

The assessment was conducted in accordance with the requirements of ILHR 10 and the Wisconsin Department of Natural Resources (WDNR) Publication PUBL-SW-175-93, "Site Assessment for Underground Storage Tanks, Technical Guidance."

Petroleum contamination was discovered during the assessment from visual observations, smell and sample results. In accordance with Site Assessment requirements, any collected soil samples were analyzed for Gasoline Range Organics (GRO) or Diesel Range Organics (DRO). The sampling locations, parameters and results are shown below. The release was reported by fax to the WDNR in accordance with 144.76, Wisconsin Statutes. Additional investigation will be required by the WDNR to determine the extent of soil and, if necessary, groundwater contamination.

A. SITE BACKGROUND INFORMATION

A.1 UST System Owner/Operator

The owner/operator of the UST system was Steve's Corner Bar. Gasoline and diesel was stored in the tank system. The tank system was used in conjunction with a tavern operation.

A.2 Landowner

The property is owned by the UST owner/operator.

A.3 Address of Tank Site

Steve's Corner Bar
200 Main Street
Butternut, WI 54514

B TANK CLOSURE ACTIVITIES

B.1 Certified Site Assessor

Travis Peterson
Agenda International Inc.
2130 South 17th Street
Sheboygan, WI 53081
Phone: (920) 451-9141

Assessor Certification Number 264264

B.2 *Method of Tank Closure*
The UST was abandoned by excavation.

B.3 *Date of Abandonment*
August 20th, 1998

B.4 *Certified Remover and Cleaner*
Travis Peterson
Agenda International Inc.
Sheboygan, WI 53081
Phone: (414) 451-9141

Remover Certification Number 264264

B.5 *Description of the Tank Removed*
The tank system age and manufacturer are unknown. The tank system was registered by Department of Commerce before the removal. A copy of the "Underground Petroleum Product Tank Inventory" form is attached as Appendix B.

C TANK CLEANING AND DISPOSAL

The tank system was cleaned on-site for accumulated sludges and removed from the site for destruction.

D SURPLUS PRODUCT MANAGEMENT

Surplus product was containerized on-site in 55-gallon drums pending proper off-site disposal.

E TANK SLUDGE MANAGEMENT

Sludge was containerized on-site in 55-gallon drums pending proper off-site disposal.

F SITE LAYOUT PLAN

The former location of the UST system is shown on the Site Plan, Figure 1.

G VISUAL INSPECTION

G.1 Weather

During the removal, the temperature was approximatcly 80°F, and, in general, the conditions could be described as sunny and calm.

G.2 Site Conditions

No visual evidence of contamination was present at the surface.

G.3 Excavation

The excavation was backfilled with the excavated soil after sampling.

Table 1

Excavation depth:	7 feet
Soils Strata:	0.0 - 1.5 feet bls: Topsoil 1.5 - 3.0 feet bls: SILTY SAND / SILT 3.0 - Bottom: CLAY
Depth to groundwater:	7-8 feet
Remarks:	None

G.4 Tank System Components

The system components consisted of one UST, a fill pipe, a vent pipe, and pump connections.

G.5 Observed Problems

There was pitting on the tank walls and evidence of surface spills or overfills.

I SOIL SAMPLING

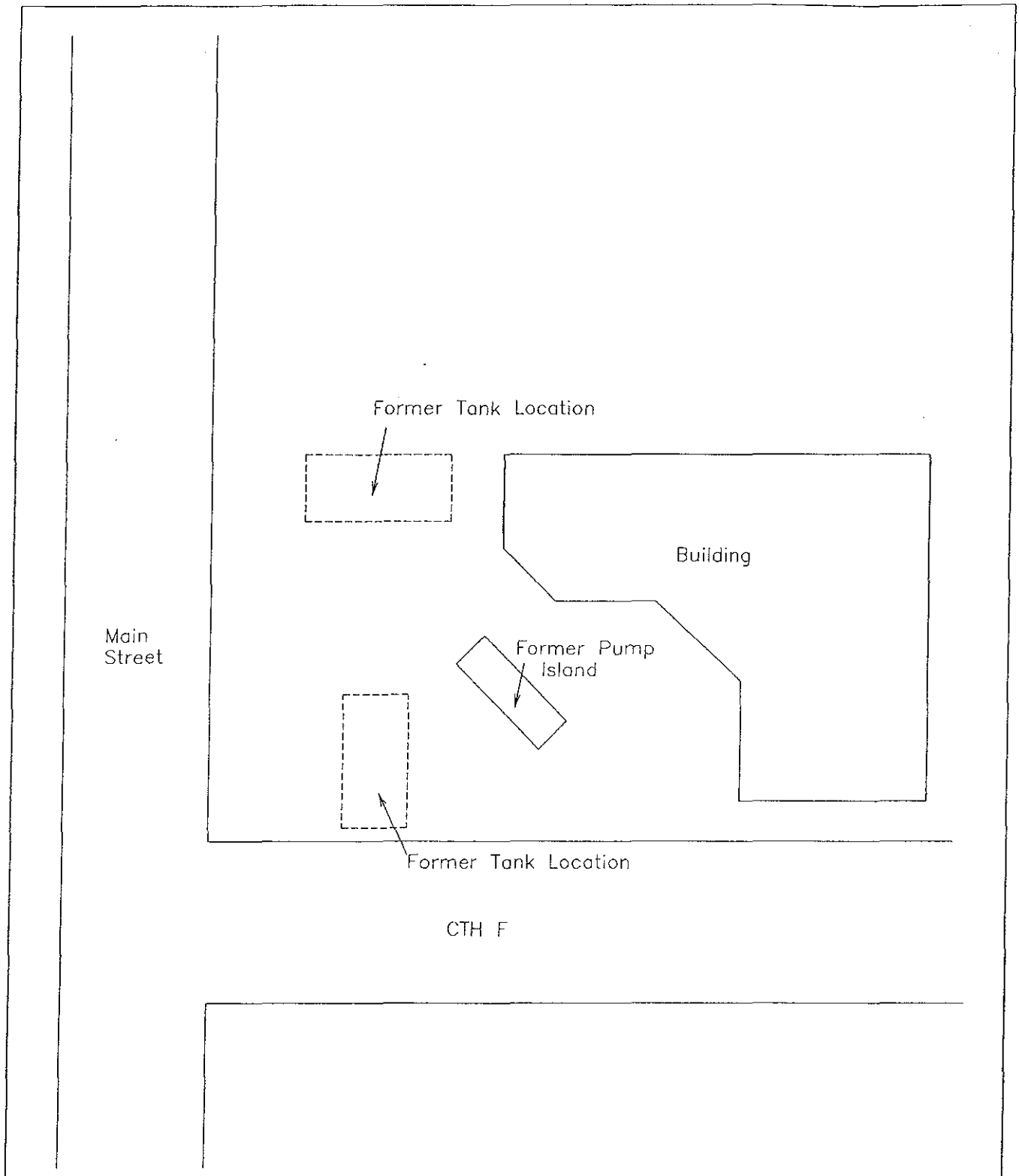
Six soil samples were collected for laboratory analysis and were handled and shipped in accordance with WDNR guidance and methods. Chain-of-custody forms were maintained throughout sample collection, handling, transportation and analysis to document sample integrity. The samples were analyzed by EN CHEM, Inc. of Green Bay, Wisconsin. The complete laboratory report and chain-of-custody form is included in Appendix A.

Table 2 - Soil Samples

Analysis	Units	Sample
GRO-S	mg/kg	(PI-G) 4.3
GRO-S	mg/kg	(PI-D) 700
GRO-S	mg/kg	(N1) <4.1
DRO-s	mg/kg	(N2) 36
DRO-S	mg/kg	(S1) 490
DRO-S	mg/kg	(S2) 180

NATURE SAVER™ FAX MEMO 01616

To Trevor Wilson	Date 02/03/03 # of pages ▶ 2
Co./Dept. Ayres	From Chris Saari
Phone #	Co. WDNR - Ashland
Fax # 715/831-7500	Phone # 715/685-2920
	Fax #



LEGEND

Steve's Corner Bar

agenda
International Inc.

Rev	Date	Description	By	Date: 2-Sep-98	File: sitemap
				By: a krier	Scale: not to scale

Appendix A: Laboratory Report

Company Name: Agenda Int. Inc
Branch or Location: Sheboygan
Project Contact: Travis
Telephone: (920) 451-9141
Project Number:
Project Name: Steve's Corner Bar
Project Location: Butternut
Sampled By (Print): Travis Peterson

Regulatory Program (circle): (UST) RCRA CLP SDWA NPDES/WPDES CAA NR____ Other

NR720 Confirmation Analysis Required? (circle): Y N
(En Chem will not confirm unless otherwise instructed.)

EN CHEM INC.

☐ 1241 Bellevue St., Suite 9, Green Bay, WI 54302, 920-469-2436 • 1-800-736-2436, FAX 920-469-8827
☐ 525 Science Drive, Madison, WI 53711, 608-232-3300 • 1-888-536-2436, FAX: 608-233-0502
☐ 1423 N. 8th Street, Suite 122, Superior, WI 54880, 715-392-5844 • 1-800-837-8238, FAX 715-392-5843

CHAIN OF CUSTODY

29946

Page ____ of ____
P.O. # ____ Quote # ____
Mail Report To: Travis
Company: Agenda Int. Inc
Address: Sheboygan
Invoice To:
Company:
Address:
Mail Invoice To:

FILTERED? (YES/NO): N | N
PRESERVATION (CODE)*: F | A
ANALYSES REQUESTED: GRO | DRO

FIELD ID	SAMPLE DESCRIPTION	DATE	TIME	GRO	DRO	FIELD SCREEN	MATRIX	GOOD COND.	TOTAL BOTTLES	COMMENTS	LABORATORY NUMBER
SCB PIG	Under Gas Pump	8/20	8:30	X			S	✓	1-2oz	2 1/M	001
" PID	Under Diesel Pump	8/20	8:45		X		S		1-4oz	2oz	002
" N1	North tank East Side	8/20	9:00		X		S				003
" N2	North tank West Side	8/20	9:15		X		S		↓		004
" S1	South tank North Side	8/20	9:30	X			S		1-4oz	2oz 1/M	005
" S2	South tank South Side	8/20	9:45	X			S		↓		006
Trip	Blank	8/20		X	X			✓	1-40ml	1/M	007

*Preservation Code
A=None B=HCL C=H2SO4
D=HN03 E=EnCore F=Methanol**
G=NaOH O=Other (Indicate)

**If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

Relinquished By:	Date/Time:	Received By:	Date/Time:
Travis Peterson	8/24 10:15	[signature]	8/24/98 10:15 ROT
[signature]	8/24/98 1530		
		Received By (En Chem):	

En Chem Project No.: 885019
Sample Receipt Temp.: ROT
Sample Receipt pH (Wet/Metals):

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Client: AGENDA INTERNATIONAL

WI DNR LAB ID : 405132750

Report Date : 8/28/98

Sample No.	Field ID	Collection Date	Sample No.	Field ID	Collection Date
885019-001	SCB PIG	8/20/98			
885019-002	SCB PID	8/20/98			
885019-003	SCB N1	8/20/98			
885019-004	SCB N2	8/20/98			
885019-005	SCB S1	8/20/98			
885019-006	SCB S2	8/20/98			
885019-007	TRIP BLANK	8/20/98			

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Duraucoau — Approval Signature

8/28/98 — Date

ENCHEM INC.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
FAX: 920-469-8827

Lab#:	TestGroupID:	Comment:
885019-001	GRO-S-ME	Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.
SCB PIG		
885019-004	DRO-S	Front peaks present along with diesel peaks.
SCB N2		
885019-005	GRO-S-ME	Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.
SCB S1		
885019-006	GRO-S-ME	Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.
SCB S2		

EN CHEM INC.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Field ID : SCB PIG

Lab Sample Number : 885019-001

WI DNR LAB ID : 405132750

Client : AGENDA INTERNATIONAL

Report Date : 8/27/98

Collection Date : 8/20/98

Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	94.4				%		8/25/98	SM2540G	SM2540G	DJB

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: WI MOD.GRO Prep Date: 8/26/98 Analyst: PMS

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	4.3			2.6	mg/kg		8/26/98	Wi MOD GRO
Blank Spike	99			1.0	%Recov		8/26/98	Wi MOD GRO
Blank Spike Duplicate	93			1.0	%Recov		8/26/98	Wi MOD GRO
Blank	< 2.5			2.5	mg/kg		8/26/98	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

EN CHEM INC.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
FAX: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Field ID : SCB PID

Lab Sample Number : 885019-002

WI DNR LAB ID : 405132750

Client : AGENDA INTERNATIONAL

Report Date : 8/26/98

Collection Date : 8/20/98

Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	92.1				%		8/25/98	SM2540G	SM2540G	DJB

Organic Results

Preservation Date : 8/25/98

DIESEL RANGE ORGANICS - SOIL Prep Method: Wi MOD DRO Prep Date: 8/25/98 Analyst: DJB

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	700			23	mg/kg		8/25/98	Wi MOD DRO
Blank spike	76			50	%Recov		8/25/98	Wi MOD DRO
Blank spike duplicate	72			50	%Recov		8/25/98	Wi MOD DRO
Blank	< 5.0			5.0	mg/kg		8/25/98	Wi MOD DRO

All soil results are reported on a dry weight basis unless otherwise noted.

ENCHEM INC.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Field ID : SCB N1

Lab Sample Number : 885019-003

WI DNR LAB ID : 405132750

Client : AGENDA INTERNATIONAL

Report Date : 8/26/98

Collection Date : 8/20/98

Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	95.2				%		8/25/98	SM2540G	SM2540G	DJB

Organic Results

Preservation Date : 8/25/98

DIESEL RANGE ORGANICS - SOIL Prep Method: Wi MOD DRO Prep Date: 8/25/98 Analyst: DJB

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.1			4.1	mg/kg		8/25/98	Wi MOD DRO
Blank spike	76			50	%Recov		8/25/98	Wi MOD DRO
Blank spike duplicate	72			50	%Recov		8/25/98	Wi MOD DRO
Blank	< 5.0			5.0	mg/kg		8/25/98	Wi MOD DRO

All soil results are reported on a dry weight basis unless otherwise noted.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Field ID : SCB N2

Lab Sample Number : 885019-004

WI DNR LAB ID : 405132750

Client : AGENDA INTERNATIONAL

Report Date : 8/26/98

Collection Date : 8/20/98

Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	93.5				%		8/25/98	SM2540G	SM2540G	DJB

Organic Results

Preservation Date : 8/25/98

DIESEL RANGE ORGANICS - SOIL Prep Method: Wi MOD DRO Prep Date: 8/25/98 Analyst: DJB

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	36			4.1	mg/kg		8/25/98	Wi MOD DRO
Blank spike	76			50	%Recov		8/25/98	Wi MOD DRO
Blank spike duplicate	72			50	%Recov		8/25/98	Wi MOD DRO
Blank	< 5.0			5.0	mg/kg		8/25/98	Wi MOD DRO

All soil results are reported on a dry weight basis unless otherwise noted.

EN CHEM INC.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Field ID : SCB S1

Lab Sample Number : 885019-005

WI DNR LAB ID : 405132750

Client : AGENDA INTERNATIONAL

Report Date : 8/27/98

Collection Date : 8/20/98

Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	93.4				%		8/25/98	SM2540G	SM2540G	DJB

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: WI MOD.GRO Prep Date: 8/26/98 Analyst: PMS

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	490			21	mg/kg		8/26/98	Wi MOD GRO
Blank Spike	99			1.0	%Recov		8/26/98	Wi MOD GRO
Blank Spike Duplicate	93			1.0	%Recov		8/26/98	Wi MOD GRO
Blank	< 2.5			2.5	mg/kg		8/26/98	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

ENCHEM INC.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Field ID : SCB S2

Lab Sample Number : 885019-006

WI DNR LAB ID : 405132750

Client : AGENDA INTERNATIONAL

Report Date : 8/27/98

Collection Date : 8/20/98

Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	87.2				%		8/25/98	SM2540G	SM2540G	DJB

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: WI MOD.GRO Prep Date: 8/26/98 Analyst: PMS

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	180			5.7	mg/kg		8/26/98	Wi MOD GRO
Blank Spike	99			1.0	%Recov		8/26/98	Wi MOD GRO
Blank Spike Duplicate	93			1.0	%Recov		8/26/98	Wi MOD GRO
Blank	< 2.5			2.5	mg/kg		8/26/98	Wi MOD GRO

All soil results are reported on a dry weight basis unless otherwise noted.

1795 Industrial Drive
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
FAX: 920-469-8827

- Analytical Report -

Project Name : STEVE'S CORNER BAR

Project Number :

Field ID : TRIP BLANK

Lab Sample Number : 885019-007

WI DNR LAB ID : 405132750

Client : AGENDA INTERNATIONAL

Report Date : 8/27/98

Collection Date : 8/20/98

Matrix Type : METHANOL

Organic Results

GASOLINE RANGE ORGANICS - METHANOL Prep Method: WI MOD.GRO Prep Date: 8/26/98 Analyst: PMS

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2500			2500	ug/L		8/26/98	Wi MOD GRO
Blank Spike	99			1.0	%Recov		8/26/98	Wi MOD GRO
Blank Spike Duplicate	93			1.0	%Recov		8/26/98	Wi MOD GRO
Blank	< 50			50	ug/L		8/26/98	Wi MOD GRO

Appendix B: Tank Closure Forms

Complete one form for each site closure.

The information you provide may be used by other government agency programs [Privacy Law, s.15.04 (1)(m)].

CHECKLIST FOR TANK CLOSURE

CHECK ONE:
☒ UNDERGROUND
☐ ABOVEGROUND
FOR PORTIONS OF THE FORM THAT DO NOT APPLY, CHECK THE N/A BOX

RETURN COMPLETED CHECKLIST TO:
Wisconsin Department of Commerce
ERS Division
Bureau of Storage Tank Regulation
P.O. Box 7969
Madison, WI 53707

A. IDENTIFICATION: (Please Print) Indicate whether closure is for: ☒ Tank System ☐ Tank Only ☐ Piping Only

1. Site Name	2. Owner Name
Steves Corner Bar	Steve Rusnik
Site Street Address (not P.O. Box)	Owner Street Address
200 Main St	200 Main St
☐ City ☒ Village ☐ Town of:	☐ City ☒ Village ☐ Town of:
Butternut	Butternut
State: Wi Zip Code: 54512 County: Ashland	State: WI Zip Code: 54512 County: Ashland
	Telephone No. (include area code): (715) 769-3907
3. Closure Company Name (print): Agenda International Inc	Closure Company Street Address: 2130 S. 17th St
Closure Company Telephone No. (include area code): (920) 451-9191	Closure Company City, State, Zip Code: Sheboygan, WI 53081
4. Name of Company Performing Closure Assessment: Agenda International Inc.	Assessment Company Street Address, City, State, Zip Code: 2130 S 17th St Sheboygan WI 53081
Telephone # (include area code): (920) 451-9191	Certified Assessor Name (print): Travis Peterson
Assessor Signature: Travis Peterson	Assessor Certification No.: 264264

Tank ID #	Closure	Temp. Closure	Closure in Place	Tank Capacity	Contents*	Closure Assessment
1. 0202000005	☒	☐	☐	500	02	☐ Y ☐ N
2. 0202000006	☒	☐	☐	~~600~~ 1,100	~~02~~ 01	☐ Y ☐ N
3	☐	☐	☐			☐ Y ☐ N
4.	☐	☐	☐			☐ Y ☐ N
5.	☐	☐	☐			☐ Y ☐ N
6.	☐	☐	☐			☐ Y ☐ N

* Indicate which product by numeric code: 01-Diesel; 02-Leaded; 03-Unleaded; 04-Fuel Oil; 05-Gasohol; 06-Other:_____; 10-Premix; 11-Waste Oil; 13-Chemical (indicate the chemical name(s) or number(s) _____ _____ _____; 14-Kerosene; 15-Aviation.

Written notification was provided to the local agent 15 days in advance of closure date. ☑ Y ☐ N ☐ NA
All local permits were obtained before beginning closure. ☐ Y ☐ N ☐ NA

Check applicable box at right in response to all statements in Sections B-E.	Remover Verified		Inspector Verified	NA
B. TEMPORARILY OUT OF SERVICE				
Written inspector approval of temporary closure obtained, which is effective until (provide date) _____	☐ Y	☐ N	☐	☐
1. Product Removed				
a. Product lines drained into tank (or other container) and resulting liquid removed; AND	☐ Y	☐ N	☐	☐
b. All product removed to bottom of suction line, OR	☐ Y	☐ N	☐	☐
c. All product removed to within 1" of bottom	☐ Y	☐ N	☐	☐
2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.	☐ Y	☐ N	☐	☐
3. All product lines at the islands or pumps located elsewhere are removed and capped, OR	☐ Y	☐ N	☐	☐
4. Dispensers/pumps left in place but locked and power disconnected.	☐ Y	☐ N	☐	☐
5. Vent lines left open.	☐ Y	☐ N	☐	☐
6. Inventory form filed indicating temporary closure.	☐ Y	☐ N	☐	☐
C. CLOSURE BY REMOVAL				
1. Product from piping drained into tank (or other container).	☐ Y	☐ N	☑	☐
2. Piping disconnected from tank and removed.	☑ Y	☐ N	☐	☐
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☑ Y	☐ N	☑	☐
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☑ Y	☐ N	☐	☐
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.	☑ Y	☐ N	☐	☐
NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR.				
6. Vent lines left connected until tanks purged.	☐ Y	☐ N	☐	☐
7. Tank openings temporarily plugged so vapors exit through vent.	☐ Y	☐ N	☐	☐
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	☑ Y	☐ N	☑	☐
9. Tank removed from excavation after PURGING/INERTING; placed on level ground and blocked to prevent movement.	☑ Y	☐ N	☐	☐
10. Tank cleaned before being removed from site.	☑ Y	☐ N	☐	☐

- CONTINUE ON NEXT PAGE -

C. CLOSURE BY REMOVAL (continued)

	Remover Verified		Inspector Verified	NA
11. Tank labeled in 2" high letters after removal but before being moved from site. NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE; FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE.	☑Y	☐N	☐	☐
12. Tank vent hole (1/8" in uppermost part of tank) installed prior to moving the tank from site.	☐Y	☐N	☐	☑
13. Inventory form ERS-7437 filed by owner with the Department of Commerce indicating closure by removal.	☑Y	☐N	☑	☐
14. Site security is provided while the excavation is open.	☒Y	☐N	☐	☐

D. CLOSURE IN PLACE

NOTE: CLOSURES IN PLACE ARE ONLY ALLOWED WITH THE PRIOR WRITTEN APPROVAL OF THE DEPARTMENT OF COMMERCE OR LOCAL AGENT.

1. Product from piping drained into tank (or other container).	☐Y	☐N	☐	☐
2. Piping disconnected from tank and removed.	☐Y	☐N	☐	☐
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☐Y	☐N	☐	☐
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☐y	☐N	☐	☐
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR - EDUCTOR OUTPUT 12 FT. ABOVE GRADE.	☐Y	☐N	☐	☐
6. Vent lines left connected until tanks purged.	☐Y	☐N	☐	☐
7. Tank openings temporarily plugged so vapors exit through vent.	☐Y	☐N	☐	☐
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) see Section F.	☐Y	☐N	☐	☐
9. Tank properly cleaned to remove all sludge and residue.	☐Y	☐N	☐	☐
10. Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled.	☐Y	☐N	☐	☐
11. Vent line disconnected or removed.	☐Y	☐N	☐	☐
12. Inventory form filed by owner with the Department of Commerce indicating closure in place.	☐Y	☐N	☐	☐

E. CLOSURE ASSESSMENTS

NOTE: DETERMINE IF A CLOSURE ASSESSMENT IS REQUIRED BY REFERRING TO ILHR 10.

1. Individual conducting the assessment has a closure assessment plan (written) which is used as the basis for their work on the site.	☑Y	☐N	☑	☐
2. Do points of obvious contamination exist?	☒Y	☒N	☐	☐
3. Are there strong odors in the soils?	☒Y	☐N	☐	☐
4. Was a field screening instrument used to pre-screen soil sample locations?	☐Y	☑N	☐	☐
5. Was a closure assessment omitted because of obvious contamination?	☐Y	☒N	☐	☐
6. Was the DNR notified of suspected or obvious contamination?	☒Y	☐N	☒	☐

Agency, office and person contacted: _____

7. Contamination suspected because of: ☑Odor ☒Soil Staining ☐Free Product ☐Sheen on Groundwater ☐Field Instrument Test

F. METHOD OF ACHIEVING 10% LEVEL DESCRIPTION

☐Eductor Or Diffused Air Blower
Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum of 12 feet above ground.
Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.

☐Dry Ice
Dry Ice introduced at 1.5 pounds per 100 gallons of tank capacity. Dry ice crushed and distributed over the greatest possible tank area.
Dry ice evaporated before proceeding.

☒Inert Gas (CO/2 or N/2) NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHERE. THE TANK MAY NOT BE ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT.
Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank opposite the vent.
Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing device grounded.

☐Tank atmosphere monitored for flammable or combustible vapor levels.
Calibrate combustible gas indicator. Drop tube removed prior to checking atmosphere. Tank space monitored at bottom, middle and upper portion of tank. Readings of 10% or less of the lower flammable range (LEL) obtained before removing tank from ground.

G. NOTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW

H. REMOVER/CLEANER INFORMATION

Travis Peterson	Travis Peterson	264264	08/20/98
Remover Name (print)	Remover Signature	Remover Certification No.	Date Signed

I. INSPECTOR INFORMATION

RANDY BARNES		IT-00218
Inspector Name (print)	Inspector Signature	Inspector Certification No.
0202	715-479-8328	8-31-98
FDID # For Location Where Inspection Performed	Inspector Telephone Number	Date Signed

TANK INVENTORY FORM ERS-7437 SIGNED BY THE OWNER MUST BE SUBMITTED WITH EACH CLOSURE CHECKLIST

OWNER

State of Wisconsin

WI Tank ID#: 02020000 6

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Information Required By Section 101.142, Wis. Stats.

Send Completed Form To:
Department of Commerce
ERS Division
Bureau of Storage Tank Regulation
P.O. Box 7969, Madison, WI 53707

Underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances must be registered. Please see the reverse side for additional information on this program. An underground storage tank is defined as any tank with at least 10 percent of its total volume (including piping) located below ground level. A separate form is needed for each tank. Send each completed form to the agency designated in the top right corner. Have you previously registered this tank by submitting a form? ☒ Yes ☐ No If yes, are you correcting/updating information only? ☐ Yes ☐ No

Personal information you provide may be used for secondary purposes. [Privacy Law, s. 15.04 (1)(m)]

This registration applies to a tank that is (check one):
1A. ☐ In Use or
1B. ☐ Newly Installed
2. ☐ Abandoned with Product
3. ☐ Abandoned No Product (empty) or with Water
4. ☒ Closed - Tank Removed
6. ☐ Closed - Filled with Inert Materials
7. ☐ Out of Service - Provide Date: _____
8. ☐ Ownership Change (Indicate new owner name in block 2)

Fire Department providing fire coverage where tank is located:
☐ City ☒ Village
☐ Town of Buttermut

A. IDENTIFICATION (Please Print)

1. Tank Site Name	Site Address	Site Telephone Number
Steves Corner Box	200 Main St	(715) 769-3907
☐ City ☒ Village Town of: Buttermut	State: Wi / Zip Code: 54514	County: Ashland
2. Tank Owner Name	Mailing Address	Telephone Number
Steve Rusynik	200 Main st	(715) 769-3907
☐ City ☒ Village Town of: Buttermut	State: Wi / Zip Code: 54514	County: Ashland
3. Previous Name	Previous site address if different than #1	

4. Tank Age (date installed, if known or years old)	5. Tank Capacity (gallons)	6. If more than one tank is located at facility, please provide tank #
	1,100	02020000 5

B. TYPE OF USER (check one)
1. ☒ Gas/Retail Sales 2. ☐ Bulk Storage 3. ☐ Utility 4. ☐ Mercantile/Commercial 5. ☐ Industrial
6. ☐ Government 7. ☐ School 8. ☐ Residential 9. ☐ Agricultural 10. ☐ Other (specify):
11. ☐ Tribal Nation 12. ☐ Federal Property 13. ☐ Backup Generator

C. TANK CONSTRUCTION (check one)
1. ☐ Bare Steel 2. ☐ Cathodically Protected & Coated Steel (Check one: A. ☐ Sacrificial Anodes or B. ☐ Impressed Current)
3. ☒ Coated Steel 4. ☐ Fiberglass 5. ☐ Other (specify): _____
6. ☐ Lined - Date: _____ 7. ☐ Steel - Fiberglass Reinforced Plastic Composite 9. ☐ Unknown

Approval: 1. ☐ Nat'l Std. 2. ☒ UL 3. ☐ Other: | Is tank double walled? ☐ Yes ☒ No

Overfill Protection Provided? ☐ Yes ☐ No If yes, identify type: | Spill Containment? ☐ Yes ☒ No

Tank leak detection method: 1. ☐ Automatic tank gauging 2. ☐ Vapor monitoring 3. ☐ Groundwater monitoring
4. ☐ Inventory control and tightness testing 5. ☐ Interstitial monitoring
7. ☐ Manual tank gauging (only for tanks of 1,000 gallons or less) 8. ☐ Statistical Inventory Reconciliation (SIR)

D. PIPING CONSTRUCTION
1. ☒ Bare Steel 2. ☐ Cathodically Protected & Coated Steel (Check one: A. ☐ Sacrificial Anodes or B. ☐ Impressed Current)
3. ☐ Coated Steel 4. ☐ Fiberglass 5. ☐ Other (Specify): 9. ☐ Unknown

Vapor Recovery/Stage II
4. ☐ Fiberglass 6. ☐ Flexible 5. ☐ Other (specify): ☐ CARB #: _____ ☐ Operational - Provide Date (mo/day/yr):

Piping System Type: 1. ☐ Pressurized piping with A. ☐ auto shutoff; B. ☐ alarm or C. ☐ flow restrictor
2. ☐ Suction piping with check valve at tank 3. ☐ Suction piping with check valve at pump and inspectable 4. ☐ Not needed if waste oil

Piping leak detection method: used if pressurized or check valve at tank: 1. ☐ Vapor monitoring 2. ☐ Interstitial monitoring
3. ☐ Groundwater monitoring 4. ☐ Tightness testing 5. ☐ Line leak detector 6. ☐ Not required 8. ☐ SIR

Approval: 1. ☐ Nat'l Std. 2. ☐ UL 3. ☐ Other: | Is pipe double walled? ☐ Yes ☐ No

E. TANK CONTENTS
1. ☒ Diesel 2. ~~☒ Leaded~~ 3. ☐ Unleaded 4. ☐ Fuel Oil 5. ☐ Gasohol
6. ☐ Other (Specify): _____ 7. ☐ Empty* 8. ☐ Sand/Gravel/Slurry* 9. ☐ Unknown* 10. ☐ Premix
11. ☐ Waste/Used Motor Oil 13. ☐ Chemical _____ 14. ☐ Kerosene 15. ☐ Aviation
(Indicate chemical name and number)
* If 7, 8, 9, or 13 is chosen, this tank is NOT PECFA eligible.

If Tank Closed, Abandoned or Out of Service, give date (mo/day/yr): 08/20/98 | Has a site assessment been completed (see reverse side for details) ☒ Yes ☐ No

Owner or Operator Name (please print): STEVE RUSNIAK | Indicate whether: ☒ Owner or ☐ Operator

Owner or Operator Signature: Steve Rusnak | Date Signed: 8-20-98

IMPORTANT: Failure to provide sufficient information may cause you to fall under additional regulations, and may delay PECFA eligibility determination. It is necessary to complete ALL shaded areas and as many other items as possible.

ERS-7437 (R. 01/97)

State of Wisconsin

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Information Required By Section 101.142, Wis. Stats.

WI Tank ID#: 020200005

Send Completed Form To:
Department of Commerce
ERS Division
Bureau of Storage Tank Regulation
P.O. Box 7969, Madison, WI 53707

Underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances must be registered. Please see the reverse side for additional information on this program. An underground storage tank is defined as any tank with at least 10 percent of its total volume (including piping) located below ground level. A separate form is needed for each tank. Send each completed form to the agency designated in the top right corner. Have you previously registered this tank by submitting a form? ☒ Yes ☐ No If yes, are you correcting/updating information only? ☐ Yes ☐ No

Personal information you provide may be used for secondary purposes. [Privacy Law, s. 15.04 (1)(m)]

This registration applies to a tank that is (check one):
1A. ☐ In Use or
1B. ☐ Newly Installed
2. ☐ Abandoned with Product
3. ☐ Abandoned No Product (empty) or with Water
4. ☒ Closed - Tank Removed
6. ☐ Closed - Filled with Inert Materials
7. ☐ Out of Service - Provide Date: _____
8. ☐ Ownership Change (Indicate new owner name in block 2)

Fire Department providing fire coverage where tank is located:
☐ City ☒ Village
☐ Town of Butternut

A. IDENTIFICATION (Please Print)

1. Tank Site Name	Site Address	Site Telephone Number
Steves Corner Bar	200 Main St	(715) 769-3907
☐ City ☒ Village Town of: Butternut	State: Wi / Zip Code: 54514	County: Ashland
2. Tank Owner Name	Mailing Address	Telephone Number
Steve Rusknik	200 Main st	(715) 769-3907
☐ City ☒ Village Town of: Butternut	State: Wi / Zip Code: 54514	County: Ashland
3. Previous Name	Previous site address if different than #1	
4. Tank Age (date installed, if known or years old)	5. Tank Capacity (gallons): 500 gal	6. If more than one tank is located at facility, please provide tank #: 020200005

B. TYPE OF USER (check one)
1. ☒ Gas/Retail Sales 2. ☐ Bulk Storage 3. ☐ Utility 4. ☐ Mercantile/Commercial 5. ☐ Industrial
6. ☐ Government 7. ☐ School 8. ☐ Residential 9. ☐ Agricultural 10. ☐ Other (specify):
11. ☐ Tribal Nation 12. ☐ Federal Property 13. ☐ Backup Generator

C. TANK CONSTRUCTION (check one)
1. ☐ Bare Steel 2. ☐ Cathodically Protected & Coated Steel (Check one: A. ☐ Sacrificial Anodes or B. ☐ Impressed Current)
3. ☒ Coated Steel 4. ☐ Fiberglass 5. ☐ Other (specify): _____
6. ☐ Lined - Date: _____ 7. ☐ Steel - Fiberglass Reinforced Plastic Composite 9. ☐ Unknown

Approval: 1. ☐ Nat'l Std. 2. ☒ UL 3. ☐ Other: | Is tank double walled? ☐ Yes ☒ No
Overfill Protection Provided? ☐ Yes ☐ No If yes, identify type: | Spill Containment? ☐ Yes ☒ No

Tank leak detection method: 1. ☐ Automatic tank gauging 2. ☐ Vapor monitoring 3. ☐ Groundwater monitoring
4. ☐ Inventory control and tightness testing 5. ☐ Interstitial monitoring
7. ☐ Manual tank gauging (only for tanks of 1,000 gallons or less) 8. ☐ Statistical Inventory Reconciliation (SIR)

D. PIPING CONSTRUCTION
1. ☒ Bare Steel 2. ☐ Cathodically Protected & Coated Steel (Check one: A. ☐ Sacrificial Anodes or B. ☐ Impressed Current)
3. ☐ Coated Steel 4. ☐ Fiberglass 5. ☐ Other (Specify): 9. ☐ Unknown

Vapor Recovery/Stage II ☐ CARB #: _____
4. ☐ Fiberglass 6. ☐ Flexible 5. ☐ Other (specify): ☐ Operational - Provide Date (mo/day/yr):

Piping System Type: 1. ☐ Pressurized piping with A. ☐ auto shutoff; B. ☐ alarm or C. ☐ flow restrictor
2. ☐ Suction piping with check valve at tank 3. ☐ Suction piping with check valve at pump and inspectable 4. ☐ Not needed if waste oil

Piping leak detection method: used if pressurized or check valve at tank: 1. ☐ Vapor monitoring 2. ☐ Interstitial monitoring
3. ☐ Groundwater monitoring 4. ☐ Tightness testing 5. ☐ Line leak detector 6. ☐ Not required 8. ☐ SIR

Approval: 1. ☐ Nat'l Std. 2. ☐ UL 3. ☐ Other: | Is pipe double walled? ☐ Yes ☐ No

E. TANK CONTENTS
1. ☐ Diesel 2. ☒ Leaded 3. ☐ Unleaded 4. ☐ Fuel Oil 5. ☐ Gasohol
6. ☐ Other (Specify): _____ 7. ☐ Empty* 8. ☐ Sand/Gravel/Slurry* 9. ☐ Unknown* 10. ☐ Premix
11. ☐ Waste/Used Motor Oil 13. ☐ Chemical _____ (Indicate chemical name and number) 14. ☐ Kerosene 15. ☐ Aviation

* If 7, 8, 9, or 13 is chosen, this tank is NOT PECFA eligible.

If Tank Closed, Abandoned or Out of Service, give date (mo/day/yr): 08/20/98 | Has a site assessment been completed (see reverse side for details)? ☒ Yes ☐ No

Owner or Operator Name (please print): Steve Rusknik | Indicate whether: ☐ Owner or ☐ Operator

Owner or Operator Signature: Steve Rusnik | Date Signed: 8-20-98

IMPORTANT: Failure to provide sufficient information may cause you to fall under additional regulations, and may delay PECFA eligibility determination. It is necessary to complete ALL shaded areas and as many other items as possible.

ERS-7437 (R. 01/97)

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Northern Region Headquarters
107 Sutliff Ave.
Rhinelander, Wisconsin 54501
Telephone 715-365-8900
FAX 715-365-8932
TDD 715-365-8957

October 12, 1998

NOR UID # 03-02-199424

Steve Rusnak
Steve's Corner Bar
200 Main St.
Butternut, WI 54514

SUBJECT: Steve's Corner Bar, 200 Main St., Butternut, WI

Dear Mr. Rusnak:

On September 23, 1998, the Department of Natural Resources - Remediation and Redevelopment Program was notified by Travis Peterson of Agenda International that diesel and leaded gasoline contamination was discovered during tank removal activities at the above referenced site.

Based on the information we have received, the Department believes that you are responsible for restoring the environment at this site under Section 292.11(3), Wisconsin Stats. known as the hazardous substances spills law. Your responsibilities include investigating the extent of the contamination, and then selecting and implementing the most appropriate remedial action. Enclosed is information to help you understand what you need to do to ensure your compliance with the spills law.

The purpose of this letter is threefold: 1) to describe your legal responsibilities, 2) to explain what you need to do to investigate and clean up the contamination, and 3) to provide you with information about cleanups, environmental consultants, and working cooperatively with the Department of Natural Resources.

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative rules. The hazardous substances spill law, Section 292.11(3) Wisconsin Statutes, states:

* RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Codes NR 700 through NR 728 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial

action systems, and case closure. Chapter NR 708 includes provisions for immediate actions in response to limited contamination. Wisconsin Administrative Code NR 140 establishes groundwater standards.

Steps to Take:

The longer contamination is left in the environment the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and to neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and rules, you should hire a professional environmental consultant who understands what needs to be done. The following are the first four steps to take:

1. Within thirty (30) days, please submit written verification (such as a letter from the consultant) that you have hired an environmental consultant. You will need to work quickly to meet this timeline.

2. Within sixty (60) days, your consultant must submit a workplan and a schedule for conducting the investigation. The consultant must follow the Department's administrative rules and our technical guidance documents. Please include with your workplan a copy of any previous information that has been completed for your site (such as an underground tank removal report, or a preliminary soil excavation report).

3. Please keep us informed of what is being done at your site. You or your consultant must provide us with a brief report at least every 90 days, starting after your workplan is submitted. These quarterly reports should summarize the work completed since the last report. Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. However, please note that should conditions at your site warrant, you may receive a letter requiring more frequent contacts with the Department. You will also receive one annual site status report form in February.

4. When the site investigation is complete, your consultant must submit a full report on the extent and degree of soil and groundwater contamination and a proposal for cleaning up the contamination.

Due to the number of contaminated sites and our staffing levels, we will be unable to respond to each report. To maintain your compliance with the spills law and chs. NR 700 through NR 728, do not delay the investigation and cleanup by waiting for DNR responses. We have provided detailed technical guidance to environmental consultants. Your consultant is expected to be familiar with our technical procedures and administrative codes and should be able to answer your questions on meeting Wisconsin's cleanup requirements.

Your correspondence and reports regarding this site should be sent to the Department at the following address: Janet Kazda, Wisconsin Department of Natural Resources, 107 Sutliff Ave., Rhinelander, WI 54501. Unless otherwise requested, please send only one copy of all plans and reports.

Information for Site Owners:

Enclosed is a list of environmental consultants and some important tips on selecting a consultant. If you are eligible for Wisconsin's PECFA program (see end of letter) you will need to compare at least three consultants' proposals before hiring a consultant. Consultants and laboratories working in the PECFA program are required to carry errors and omissions insurance to help protect you against unsuitable work. Also enclosed are materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method. This information has been prepared to help you understand your responsibilities and what your environmental consultant needs to do. Please read this information carefully.

If you are interested in obtaining the protection of limited liability under s. 292.15, Stats., please contact Mark Giesfeldt at (608) 267-7562 or Darsi Foss at (608) 267-6713, in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 292.15 Stats., is available to persons who meet the definition of "purchaser" in s. 292.15(1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

Financial Information:

Reimbursement from the Petroleum Environmental Cleanup Fund (PECFA) is available for the costs of cleaning up contamination from eligible petroleum storage tanks. The fund is administered by the Department of Industry, Labor, and Human Relations (DILHR). Please contact DILHR at (608) 267-3753 for more information on eligibility and regulations for this program.

If you have administrative questions (file and data management), please call Danielle Lancour at (715) 365-8986. If you have technical questions (science, code interpretation, remediation), please call Jim Hosch at (715) 392-0802 or Chris Saari at (715) 372-8539ext. 120.

Thank you for your cooperation.

Sincerely,

Danielle Lancour

Danielle Lancour
Remediation and Redevelopment Program

Enclosures

cc: File
Travis Peterson, Agenda International, 2130 S. 17th St., Sheboygen, WI 53012

APPENDIX F/HEALTH AND SAFETY PLAN

Site Investigation Field Procedures Workplan - METCO
Steve's Corner Bar

Safety Plan Information

Company Name: METCO

Contact Information: Jason Powell
709 Gillette Street, Suite 3
La Crosse, WI 54603
(608) 781-8879

Site Information

METCO Project #: C2665

Site Name: Steve's Corner Bar
Site address: 200 N Main Street
Butternut, WI 54514

County: Ashland

WDNR Contact: Carrie Stoltz
107 Sutliff Avenue
Rhinelander, WI 54501
(715) 365-8942

WDNR BRRTS Case #: 03-02-199424

Purpose of Activity (Check all that apply)

Petroleum Release Investigation	X
Ag Chemical Release Investigation	
Install Soil Borings/Monitoring Wells	X
Tank/Piping Removal	
Tank/Piping Closure Assessment	
Phase 1/Phase 2 Environmental Site Assessment	
Install Remedial System	
Other	

Site Investigation Field Procedures Workplan - METCO
Steve's Corner Bar

Tank Information

Tank Size (Gallons)	Contents	Age
1,100	Diesel	Unknown
500	Gasoline	Unknown

Potential Health and Safety Hazards (Check all that apply)

Handling/Transfer of Product (Fire, Explosions)	
General Construction (Electrical Hazards, Physical Injury)	X
Confined Space Entry (Explosions)	
Heavy Equipment	X
Noise	X
Underground and Overhead Utilities	X
Site Traffic	X
Oxygen Depletion	
Excavation (Cave Ins, Falls, Slips)	
Poisonous Plants	
Snakes, Insects, Rodents	
Heat, Cold	X
Other	

Evaluation of Chemical Hazards

Name	Physical State	Route of Entry	TWA/STEL (ppm)	Symptoms of Exposure
Gasoline	Vapor/Liquid	Inhalation/Skin	300/500	Irritation, Nausea, Vomiting, Dizziness, Unconsciousness
Diesel Fuel	Vapor/Liquid	Inhalation/Skin	100/None	Irritation, Nausea, Vomiting, Dizziness, Unconsciousness

On-Site Personnel Responsibilities

	Team Member	Responsibility
1.	Ron Anderson	Senior Project Manager
2.	Jason Powell	Site Project Manager
3.	Eric Dahl	Hydrogeologist
4.	Jon Jensen	Staff Scientist
5.	Bryce Kujawa	Hydrogeologist

Method to Control Potential Heath and Safety Hazards

Monitoring Instruments
Photoionization Detector (PID) [X]

Site Investigation Field Procedures Workplan - METCO
Steve's Corner Bar

Flame Ionization Detector (FID)	
Combustible Gas Indicator	
Four Gas Meter	
Detector Tubes	

Action Levels	Action
0-10% LEL (No Explosion Hazard)	None
Oxygen Deficient (Less Than 21%)	Notify Health & Safety Officer
Oxygen Deficient (Less Than 19%)	Evacuate

Personal Protective Equipment

Minimum Requirements:

1. Hardhat
2. Safety Glasses/Goggles
3. Steel Toe Shoes or Boots
4. Flame Retardant Coveralls
5. Hearing Protection (Muffs or Ear Plugs)
6. Nitrile Gloves

Is additional PPE required? No

Additional Requirements

Uncoated Tyvek Coveralls	
Saranex Tyvek Coveralls	
Rubber Boots	
Overboots	
Surgical Inner Gloves	
Butyl Neoprine/Nitrile Outer Gloves	
Full Face Respirators	
Type of Cartridge:	
SCBA/SAR	
Other	

Level of Protection Designated: D

Site Investigation Field Procedures Workplan - METCO
Steve's Corner Bar

Site Control

Work Zones

Support Zone: Beyond a 25 foot radius of drilling or excavation and upwind of operation.
Contamination Reduction Zone: Between 15 and 25 foot radius of drilling or excavation.
Exclusion Zone: Within 15 foot radius of of drilling or excavation.

Site Entry Procedure: Obtain all approval and instructions from project manager.

Decontamination Procedures:

Personnel: Remove protective equipment and wash hands prior to eating.
Equipment: Wash with brush and Alconox soap, rinse with fresh tap water.

Investigation Derived Material Disposal:

Stockpiling: The soils will be placed on and covered with plastic. The client will determine the stockpile location, but will have to be approved by the project manager. Soils will be disposed of by the most efficient and cost effective approved method.

DOT drums: Label drums as to content and date filled. Routinely inspect drums for leakage or spills. Place together in area where movement is at minimum.

Work Limitations: Daylight hours. No eating, drinking, or smoking in the exclusion zone or contamination reduction zone.

Employee Limitations:

Site Resources:

Shower	
Water Supply	X

Contingency Planning

Emergency Contacts	Phone Number
Ambulance: Butternut	911
Hospital Emergency Room: Flambeau Hospital	(715) 762-2484
Poison Control Center: Milwaukee	(800) 222-1222
Police: Butternut	911
Fire Department: Butternut	911
Hazardous Waste Response Center: Wisconsin	(800) 943-0003
EPA	(800) 424-8802

Location Address: 200 N Main Street, Butternut WI 54514

Site Investigation Field Procedures Workplan - METCO
Steve's Corner Bar

Hospital: Flambeau Hospital
98 Sherry Avenue
Park Falls, WI 54552
(715) 762-2484

Emergency Route:

- Travel west on Illinois Street 1,500 feet to STH 13 (N 5th Street).
- Turn right on STH 13 and travel 6 miles to 1st Street S (STH 182) in Park Falls.
- Turn left onto 1st Street S and travel ½ mile to Sherry Avenue.
- Turn right onto Sherry Avenue and travel 1,000 feet, hospital will be straight ahead.

Emergency Procedures:

If an emergency develops at the site, the discoverer will take the following course of action:

- Notify the proper emergency service (fire, police, etc.) for assistance.
- Notify other personnel on the site. Notify project manager.
- Contact METCO and the client representative to inform them of the incident as soon as possible.
- Prepare a summary report of the incident for METCO and the client representative.

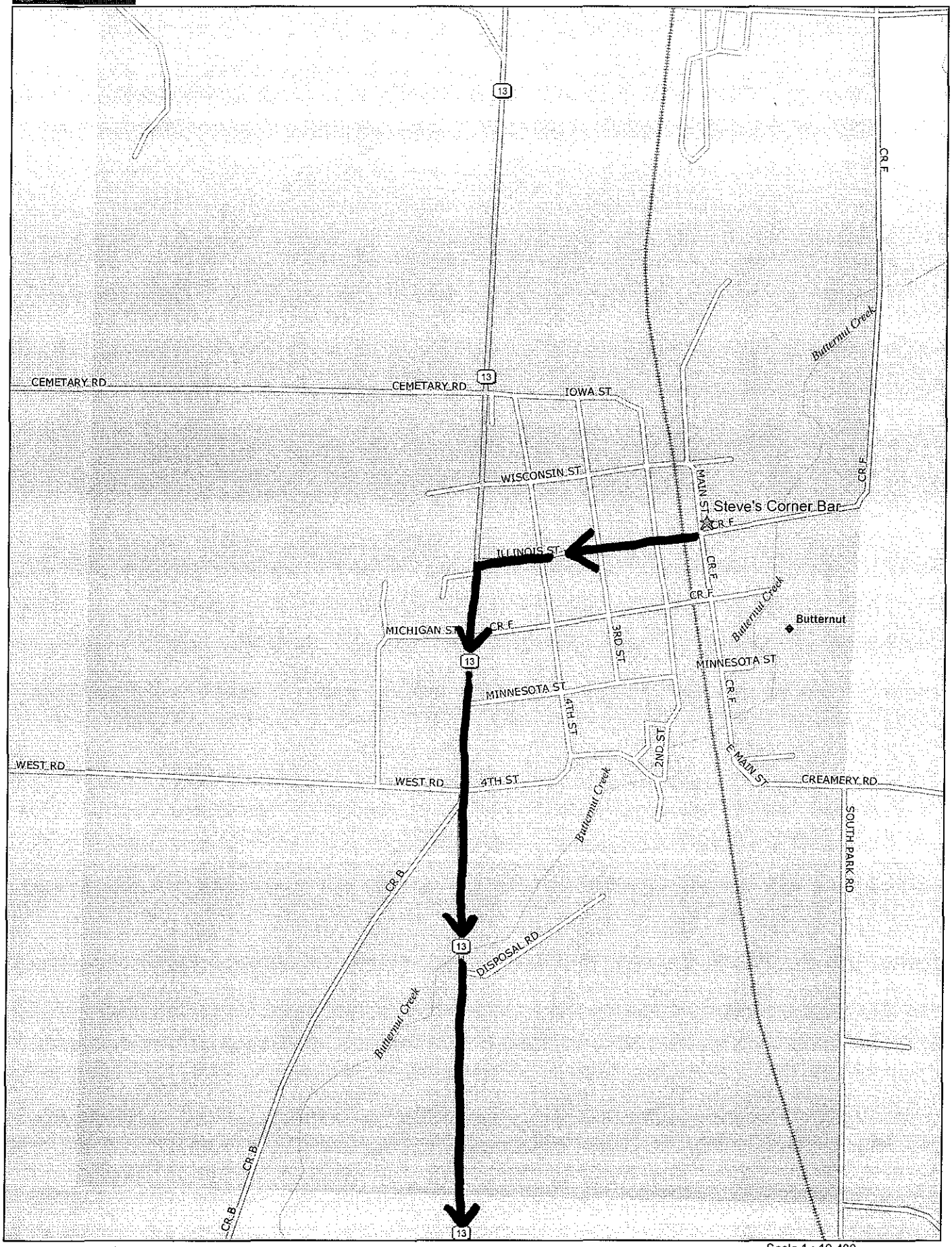
On-Site Organization	Phone Numbers	
METCO Project Manager: Jason Powell	work	(608) 781-8879
	cell	(608) 385-1467
METCO Safety Officer: Brian Hora	work	(800) 236-0448
	cell	(608) 604-2933
METCO Corporate Contact: Paul Knower	work	(800) 236-0448
	cell	(608) 604-2931
Client Contact: Steve Rusnak	(715) 661-0341	

Daily Safety Plan Check

1. Hard Hat
2. Visible Fire Extinguisher
3. Safety Glasses
4. Hearing Protection
5. No Smoking On Site
6. Safety Data Sheet
7. Route to Hospital
8. Barricades (Cones, Flags, Fences, Vehicle)
9. Emergency Phone Numbers
10. Know Where the Site Safety Plan Is

DeLorme

DeLorme Street Atlas USA® 2009



Data use subject to license.

www.delorme.com

TN

MN (2.6°W)

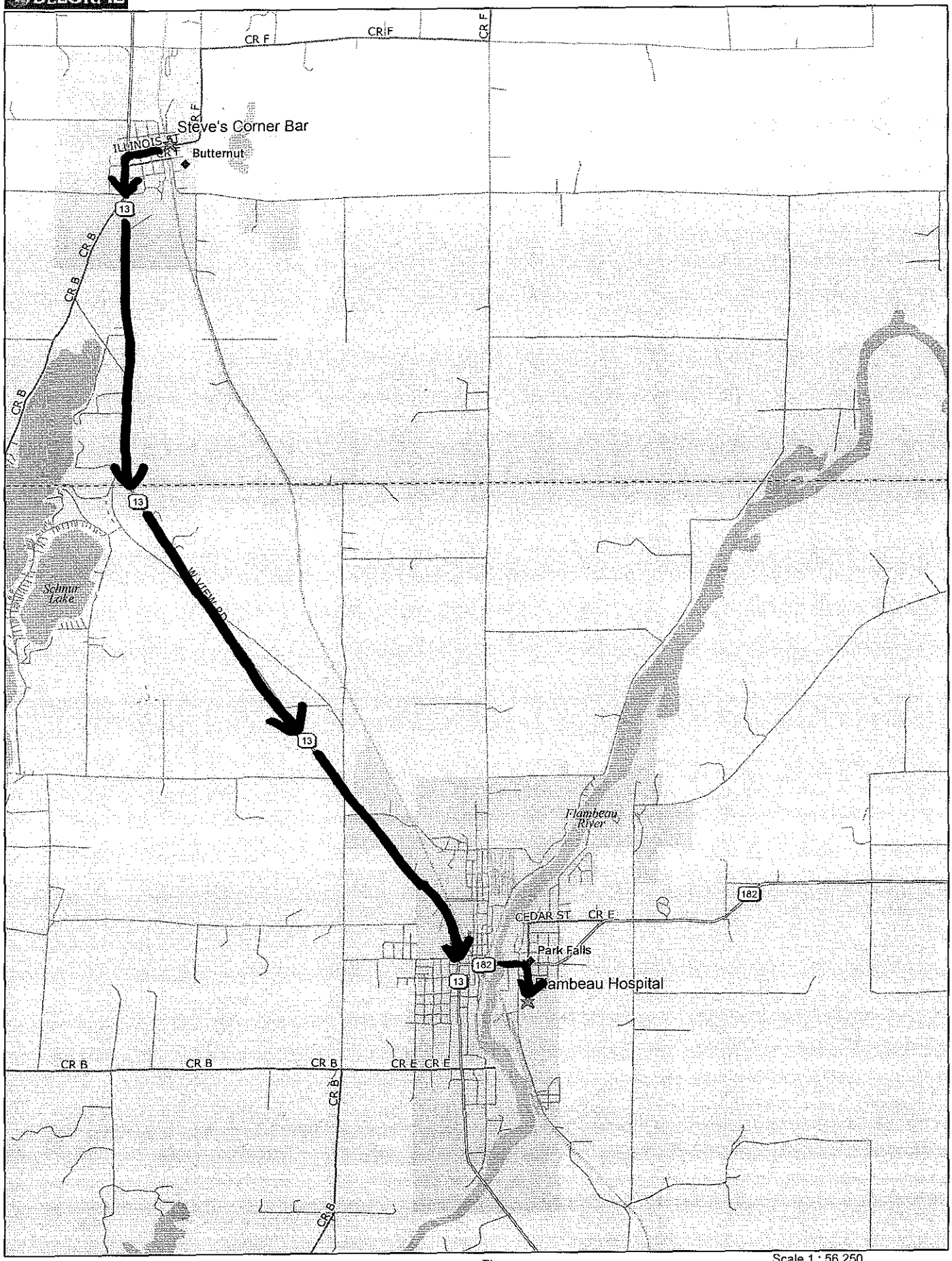
Scale 1 : 10,400

0 200 400 600 800 1000 ft

0 80 160 240 320 400 m

1" = 866.7 ft

Data Zoom 14-3

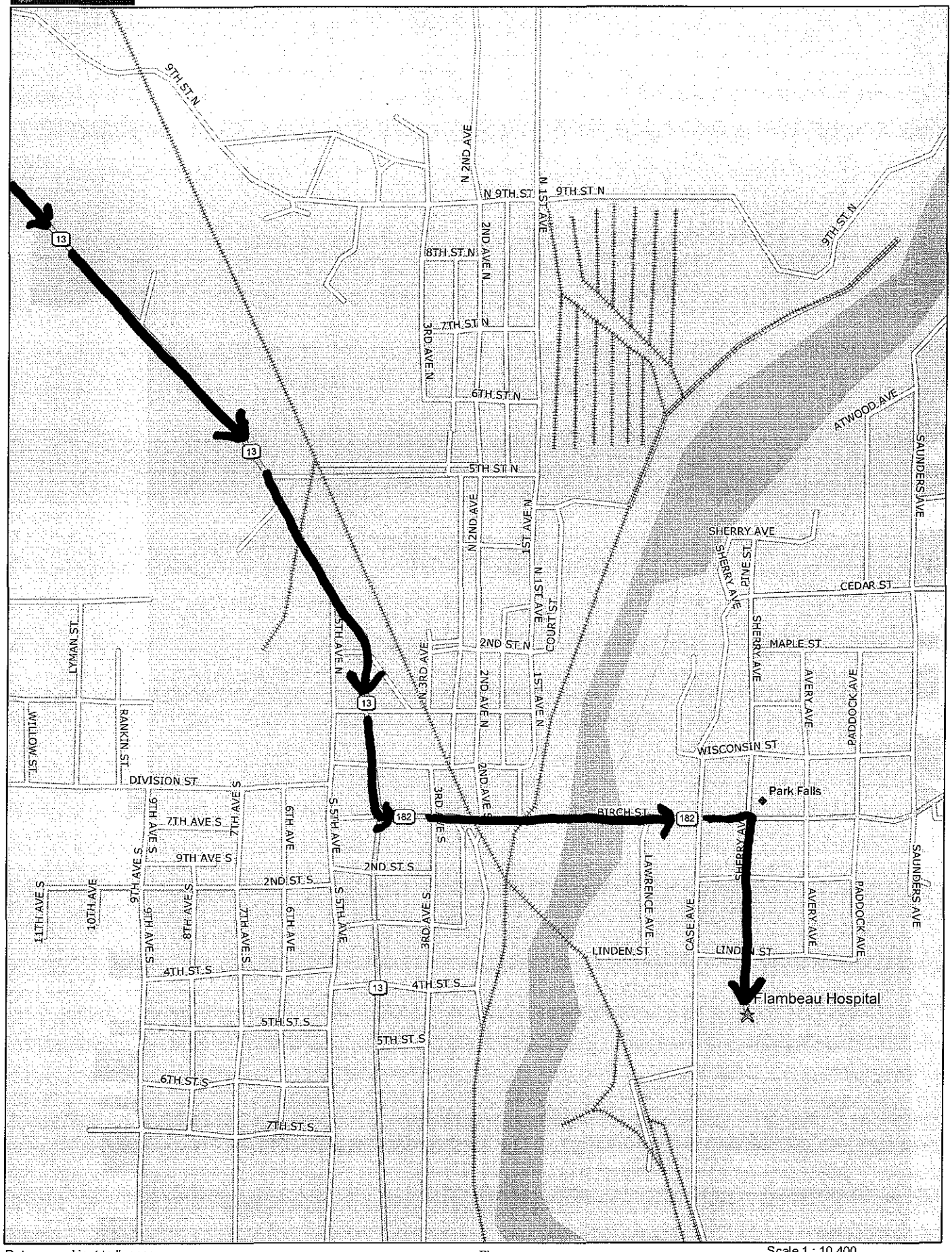


TN
MN (2.6°W)

Scale 1 : 56,250
1" = 4,687.5 ft
Data Zoom 11-7

DeLorme

DeLorme Street Atlas USA® 2009



TN

MN (2.6°W)

Scale 1 : 10,400

0 200 400 600 800 1000

0 80 160 240 320 400

1" = 866.7 ft

Data Zoom 14-3

APPENDIX G/QUALIFICATIONS

Ronald J. Anderson, P.G.

Professional Titles

- Senior Hydrogeologist
- Project Manager

Credentials

- Licensed Professional Geologist in Wisconsin
- Licensed Professional Geologist in Minnesota
- Recognized by the State of Wisconsin Department of Natural Resources (Chapter NR712) as a qualified Hydrogeologist
- Certified by State of Wisconsin to conduct PECFA-funded LUST projects
- Certified tank closure site assessor (#41861) in Wisconsin
- Member of the Wisconsin Groundwater Association
- Member of the Minnesota Groundwater Association
- Member of the Federation of Environmental Technologist, Inc.

Education

Includes a BA in Earth Science from the University of Minnesota-Duluth. Applicable courses successfully completed include Hydrogeology, Applied Hydrogeology, Environmental Geology, Geological Field Methods, Geology Field Camp, Geomorphology, Structural Geology, Stratigraphy/Tectonics, Mineralogy/Petrology, Glacial/Quaternary Geology, Geology of North America, Oceanography, General Chemistry, Organic Chemistry, and Environmental Conservation.

Post-Graduate Education

Includes Personnel Protection and Safety, Conducting Comprehensive Environmental Property Assessments, Groundwater Flow and Well Hydraulics, Effective Techniques for Contaminated Groundwater Treatment, and numerous other continuing education classes and conferences.

Work Experience

Includes nine months with the Wisconsin Department of Natural Resources Leaking Underground Storage Tank Program regulating LUST sites and since June 1990, with METCO as a Hydrogeologist and Project Manager. Duties have included: managing, conducting, and reporting tank closure assessments; property assessment, LUST investigations; spill investigations; agricultural chemical investigations, dry cleaning chemical investigations, general geotechnical/environmental investigations; Geoprobe projects (soil, groundwater, soil gas sampling); drilling projects (soil boring and monitoring wells); and remedial projects. Since 1989, METCO has sampled/consulted over 1,465 environmental sites.

Jason T. Powell

Professional Title

- Staff Scientist

Credentials

- Recognized by the State of Wisconsin Department of Natural Resources (Chapter NR712) as a qualified Scientist.

Education

Includes a BS in Groundwater Management from the University of Wisconsin- Stevens Point. Applicable courses successfully completed include Hydrogeology, Applied Hydrogeology, Environmental Geology, Hydrogeology-Groundwater Flow Modeling, Groundwater Management, Structural Geology, Mineralogy, Glacial Geology, Soils, Soil Physics, Hydrology, Geochemistry, Water Chemistry, Organic Chemistry, General Chemistry, Environmental Issues.

Post-Graduate Education

40-hour OSHA Hazardous Materials Safety Training course with 8-hour refresher course.

Work Experience

With METCO since May 1992 as a Geoprobe Assistant and Geoprobe Operator. In June 1995 to July 1996 as a Environmental Technician. In July 1996 as a Staff Scientist. Duties have included: LUST investigations; general geotechnical/environmental investigations; Geoprobe projects (soil, groundwater sampling); drilling projects (soil boring and monitoring wells); remedial projects (sampling, pilot tests, system operation/maintenance) and project management.

Eric J. Dahl

Professional Title

- Hydrogeologist

Credentials

- Recognized by the State of Wisconsin Department of Natural Resources (Chapter NR712) as a qualified Hydrogeologist.
- Registered through the Wisconsin Department of Safety and Professional Services as a PECFA consultant (#823519).

Education

Includes B.S. in Geology from the University of Wisconsin-Eau Claire. Applicable courses successfully completed include Environmental Geology, Physical Hydrogeology, Chemical Hydrogeology, Computer Modeling in Hydrogeology, Aqueous Geochemistry, Field Geology I and II, Mineralogy and Petrology I and II, Sedimentology and Stratigraphy, Petroleum and Economic Geology, Earth Resources, Earth History, and Structural Geology.

Post-Graduate Education

40-hour OSHA Hazardous Materials Safety Training course with 8-hour refresher course.

Work Experience

With METCO since November 1999 as a Hydrogeologist. Duties have included: Site Investigations, Phase I and Phase II Environmental Site Assessments, Case Closure Requests/GIS Registry, Geoprobe projects (oversight, direction, and sampling), drilling projects/monitoring well installation (oversight, direction, and sampling), soil excavation projects (oversight, direction, and sampling), Geoprobe operation, and operation and maintenance of remedial systems.

Thomas P. Pignet, P.E.

Professional Titles

- Chemical Engineer
- Industrial Engineer

Credentials

- Licensed Professional Engineer in Wisconsin

Education

Undergraduate: B.S. in Chemical Engineering from the University of Wisconsin. Applicable courses include the standard chemistry curriculum - basic, physical, organic, etc. - plus engineering transport phenomena, chemical unit operations (e.g. separations), fluid mechanics, etc.

Post-Graduate Education

Ph.D. in Chemical Engineering from the University of Minnesota - with applicable special training in absorption & catalysis; M.S. in Industrial Engineering from the University of Wisconsin - Milwaukee - with special emphasis on statistical techniques and data analysis. Applicable further training: continuing education, semester-length courses in [1] Understanding Environmental & Safety Regulation; [2] Hazardous & Toxic Waste Management; plus a number of 1-2 day workshops - Fire & Explosion Safety; Small Quantity Generations of Hazardous Waste.

Work Experience

Includes ten years as a research chemical engineer with a large chemical manufacturer; one year as process development engineer and demonstration-scale test analyst on a unique coal gasification project; ten years in association with UW-M, teaching and consulting to industry on energy efficiency, waste minimization and productivity improvement. One year working with a small engineering consulting firm on energy, environmental, and process improvement projects, including LUST Investigations and Remediations. With METCO since February 2000. Duties include Remedial Action Plan preparation, pilot test design and performance, remedial systems design and implementation, and general management of METCO's remedial projects.

Jon Jensen

Professional Title

- Staff Scientist

Credentials

- Registered through the Wisconsin Department of Safety and Professional Services as a PECFA consultant (#1294924).

Education

Includes B.S. in Geography with and Environmental Science minor from University of Wisconsin – La Crosse: Applicable courses successfully completed include Interpretation of Aerial Photographs, Intro to GIS, Advanced Remote Sensing, Fundamentals of Cartography, Biogeography, and Conservation of Global Environments.

Work Experience

With METCO since July, 2014 as Staff Scientist. Duties include: soil and groundwater sampling, operation and maintenance of remedial systems, Geoprobe projects (oversight, direction, and sampling), site mapping, data reduction and analysis, and reporting.

Bryce L. Kujawa

Professional Title

- Staff Scientist

Credentials

- Registered through the Wisconsin Department of Safety and Professional Services as a PECFA consultant (#17138).
- Member of the Geological Society of America

Education

Includes B.S. in Geology from the University of Wisconsin-Eau Claire. Applicable courses successfully completed include Hydrogeology, Contaminant Hydrogeology, Field Geology I and II, Mineralogy and Petrology I and II, Sedimentology and Stratigraphy, Petroleum and Economic Geology, Earth History, Physical Geology, Structural Geology, Computers in Geology, Geographic Informational Systems, Global Environmental Change, and General Chemistry.

Work Experience

With METCO since June, 2016 as Staff Scientist. Duties include: soil and groundwater sampling, operation and maintenance of remedial systems, Geoprobe projects (oversight, direction, and sampling), site mapping, data reduction and analysis, and reporting.

LIST OF ACRONYMS

AST - Aboveground Storage Tank
ASTM - American Society for Testing and Materials
Cd - Cadmium
DOT - Department of Transportation
DRO - Diesel Range Organics
ES - Enforcement Standards
gpm - gallons per minute
GRO - Gasoline Range Organics
ID - inside-diameter
LAST - Leaking Aboveground Storage Tank
LUST - Leaking Underground Storage Tank
MSL - Mean Sea Level
MTBE - Methyl-tert-butyl ether
MW - Monitoring Well
NIOSH - National Institute for Occupational Safety & Health
NR - Natural Resources
OD - outside-diameter
PAH - Polynuclear Aromatic Hydrocarbons
PAL - Preventive Action Limits
Pb - Lead
PECFA - Petroleum Environmental Cleanup Fund
PID - Photoionization Detector
POTW - Publicly Owned Treatment Works
ppb ug/kg - parts per billion
ppm mg/kg - parts per million
psi - pounds per square inch
PVC - Polyvinyl Chloride
PVOC - Petroleum Volatile Organic Compounds
RAP - Remedial Action Plan
scfm - standard cubic feet per minute
SVE - Soil Vapor Extraction
USCS - Unified Soil Classification System
USGS - United States Geological Survey
UST - Underground Storage Tank
VOC - Volatile Organic Compounds
WDNR - Wisconsin Department of Natural Resources
WPDES - Wisconsin Pollutant Discharge Elimination System