

Site Investigation Field Procedures Workplan

**Sandy's Service (Former)
16571 State Highway 35
Dairyland, Wisconsin**

**July 13, 2017
by METCO**

**WDNR File Reference #: 03-16-286908
PECFA Claim #: 54830-9999-71**



Excellence through experience™

This document was prepared by:

A handwritten signature in black ink, appearing to read "Jason T. Powell", is written over a horizontal line.

Jason T. Powell
Staff Scientist

A handwritten signature in black ink, appearing to read "Ronald J. Anderson", is written over a horizontal line.

Ronald J. Anderson, P.G.
Senior Hydrogeologist/Project Manager



Excellence through experience™

709 Gillette St., Ste 3 ♦ La Crosse, WI 54603 ♦ 1-800-552-2932 ♦ Fax (608) 781-8893 Email: rona@metcohq.com ♦ www.metcohq.com

July 13, 2017

WDNR BRRTS#: 03-16-286908

PECFA Claim #: 54830-9999-71

Ray Sandstrom
31125 Gable Avenue
Stacy, MN 55079

Dear Mr. Sandstrom,

Enclosed is our "Site Investigation Field Procedures Workplan" concerning the Sandy's Service (Former) site in Dairyland, 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: Ralph Smith – WDNR

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

Table of Contents

OBJECTIVES.....1

INTRODUCTION.....2

SITE BACKGROUND.....3

SITE CONDITIONS.....3

SCOPE OF WORK.....4

METCO PROCEDURES AND METHODS.....5

SCHEDULE FOR INVESTIGATION PROJECT.....9

APPENDIX A/SITE MAPS.....11

APPENDIX B/INVESTIGATION CHECKLIST.....12

APPENDIX C/LUST SAMPLING GUIDELINES.....13

APPENDIX D/WDNR DOCUMENTS.....14

APPENDIX E/PROJECT DOCUMENTS.....15

APPENDIX F/HEALTH AND SAFETY PLAN.....16

APPENDIX G/QUALIFICATIONS.....17

LIST OF ACRONYMS.....18

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

INTRODUCTION

Site Name

Sandy's Service (Former)

Site Address

16571 State Highway 35
Dairyland, Wisconsin

Legal Description

SW ¼, NW ¼, Section 34, Township 43 North, Range 15 West, Douglas County

Contact or Client

Ray Sandstrom
31125 Gable Avenue
Stacy, MN 55079
(612) 801-9747

WDNR Project Manager

Ralph Smith
101 S Webster Street
Madison, WI 53707
(608) 261-6543

Consultant

METCO
Ronald J. Anderson, P.G.
Jason T. Powell
709 Gillette Street, Suite 3
La Crosse, WI 54603
(608) 781-8879

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

SITE BACKGROUND

Facility

A service station operated on the property from approximately 1974 until 1991. Prior to this the property was vacant. Currently the former service station is vacant and a seasonal residence has since been built on the property.

On November 21, 2001, Environmental Troubleshooters, Inc. oversaw the removal of four underground storage tanks (USTs). The tank systems consisted of one 1,000-gallon unleaded gasoline UST, one 560-gallon unleaded gasoline UST, and two 560-gallon diesel USTs. During the UST removal, two soil samples were collected from beneath the removed USTs for laboratory analysis (DRO, GRO, PVOC, and Naphthalene). Both soil samples showed elevated levels of petroleum contamination. 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 Kinblom IGA site (BRRTS# 03-16-000611), which is located approximately 950 feet to the south of the subject property. Due to the significant distance, it is unlikely that this site is impacting or being impacted by the subject property.

Potential Risks and Impacts

The subject property and surrounding properties are all served by private water supply wells. The water supply well for the subject property is located on the west side of the former service station building, approximately 60 feet to the northwest of the former pump island.

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, Dairyland is located in the northern portion of the St. Croix River Basin. This area is characterized by a relatively flat glacial outwash plain and numerous swamps and kettle lakes.

The elevation of the site is approximately 1,065 feet above Mean Sea Level (MSL). See Appendix A for site location.

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

Geology

Native unconsolidated materials in this area generally consist of unstratified clay, silt, sand, gravel, and boulders. The unconsolidated materials are underlain by Pre-Cambrian basalt at approximately 50 feet below ground surface.

Hydrology

The nearest surface water is unnamed creek, which exists approximately 425 feet to the south/southwest of the subject property.

Hydrogeology

Based on the local topography, groundwater is expected to exist at approximately 5 to 10 feet below ground surface. Local groundwater flow is expected to be toward the west to southwest.

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 20 to 25 borings to 10-15 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.

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

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 5 to 8 boreholes to be completed on/off site. METCO has also proposed 4 to 7 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.

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

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.

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

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

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

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

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.

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

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 (7/13/17).
- 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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

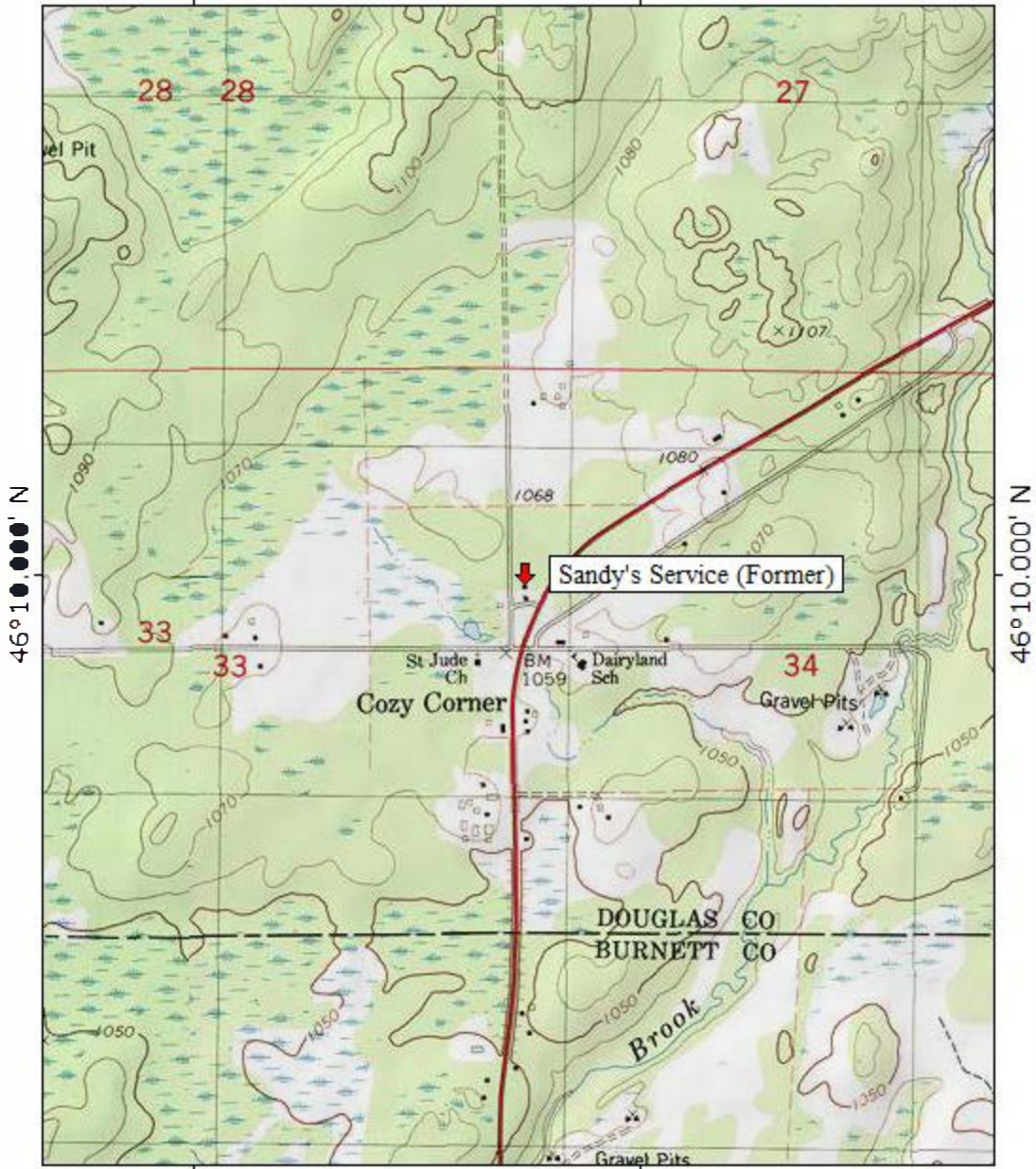
Round 1 groundwater samples for laboratory analysis (1 month to receive lab results).

- 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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

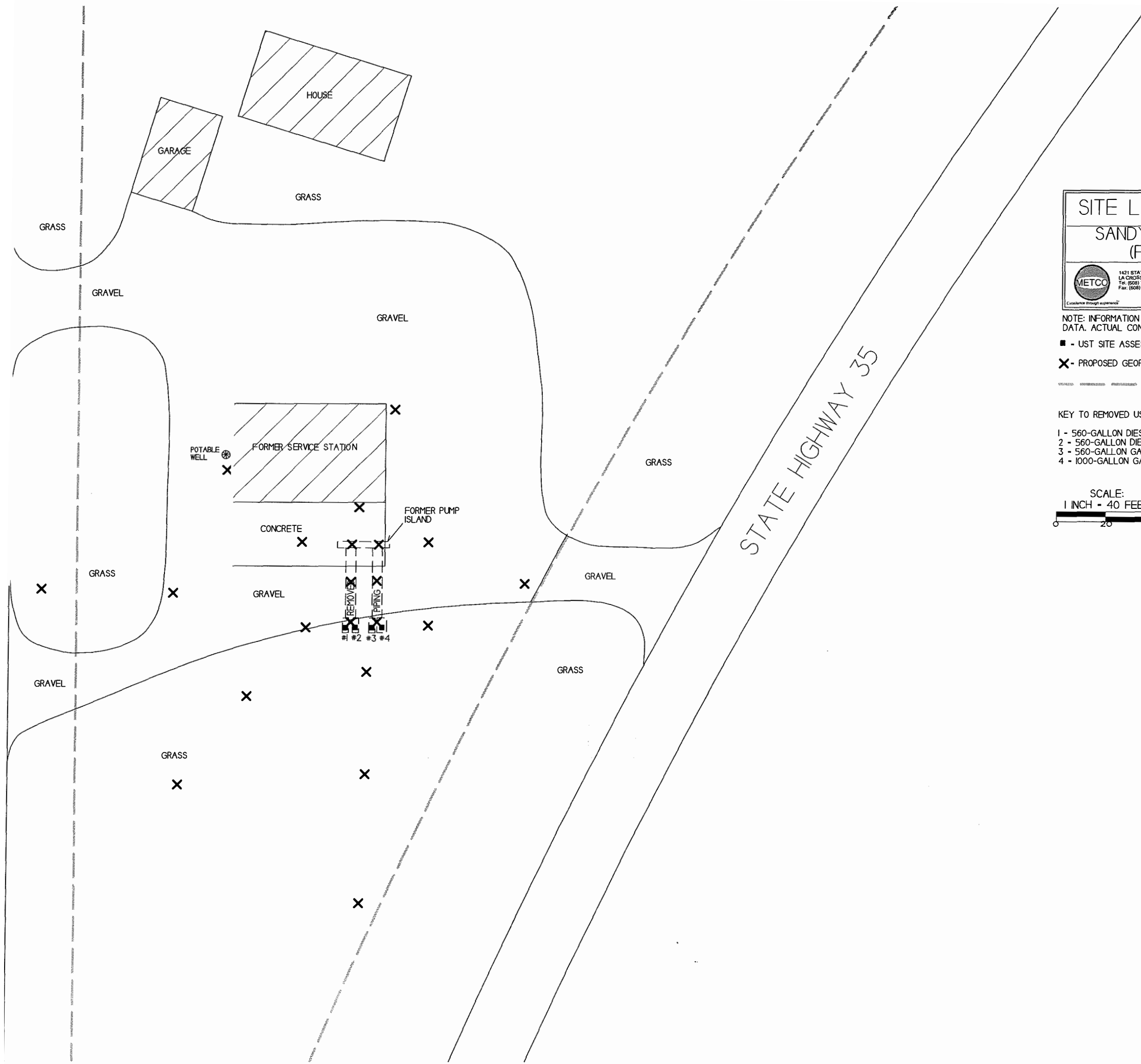
APPENDIX A/SITE MAPS

TOPO! map printed on 07/12/17 from "Wisconsin.tpo" and "Untitled.tpg"
92°15.000' W WGS84 92°14.000' W



B.1.a LOCATION MAP
CONTOUR INTERVAL 10 FEET
SANDY'S SERVICE (FORMER) – DAIRYLAND, WI
SEAMLESS USGS TOPOGRAPHIC MAPS ON CD-ROM

NORTH ROAD



SITE LAYOUT MAP		
SANDY'S SERVICE (FORMER)		
	1421 STATE ROAD 16 LA CROSSE, WI 54601 Tel: (608) 781-8879 Fax: (608) 781-8853	DARYLAND, WISCONSIN
	DRAWN BY: ED DATE: 07/04/07	

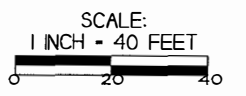
NOTE: INFORMATION BASED ON AVAILABLE DATA. ACTUAL CONDITIONS MAY DIFFER

■ - UST SITE ASSESSMENT SAMPLING LOCATION

✕ - PROPOSED GEOPROBE BORING LOCATION

----- - PROPERTY LINE

- KEY TO REMOVED USTS
- 1 - 560-GALLON DIESEL
 - 2 - 560-GALLON DIESEL
 - 3 - 560-GALLON GASOLINE
 - 4 - 1000-GALLON GASOLINE



**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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/neighbor 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 MR 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 (3300-58)
 - ___ d. chain of custody forms
 - ___ e. lab/chemistry results
 - ___ f. groundwater monitoring well information form (4400-89)
 - ___ g. monitoring well development form (4400-1138)
- ___ 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

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

APPENDIX C/LUST SAMPLING GUIDELINES

LUST and Petroleum Analytical and QA Guidance
July 1993 Revision

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 ₂ SO 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 ₂ SO 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 ₂ SO 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 ₂ SO 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 ₂ SO ₄	28 days
Organic Carbon SW846 9060/ EPA 415.1	40 ml Glass	4°C, pH<2 with H ₂ SO ₄ or HCL	28 days
Phenol, Total EPA 420.1	1 Liter Glass	4°C, pH<2 with H ₂ SO ₄	28 days
Phosphorus, Total EPA 365.3	250 mL HDPE	4°C, pH<2 with H ₂ SO 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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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)	1.0	3.21	0.0039
Tetrachloroethylene (PCE)	1.0	1.4	0.0045
Vinyl Chloride (VC)	0.067	2.16	0.001
Dichloroethylene, trans (DCE)	2.0	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	3.52	24.1	0.6382
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	0.537	
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.	300.	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 ONLY. 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	Soil	Particulate	Ingestion	Dermal	Inhalation	Carcinogenic
				Factor (m ³ /kg)	Saturation Concentration (mg/kg)	Emission Factor (m ³ /kg)	SL TR=1.0E-6 (mg/kg)	SL TR=1.0E-6 (mg/kg)	SL TR=1.0E-6 (mg/kg)	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	-	-	-	-
Benzo[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	-	-	-	-

(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. (lu), (lw), (ly) 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

Published under s. 35.93, Stats. Updated on the first day of each month. Entire code is always current. The Register date on each page

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

Published under s. 35.93, Stats. Updated on the first day of each month. Entire code is always current. The Register date on each page

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 1 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 diamino-atrazine).

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 (MIMO-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 02-093; 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

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

APPENDIX E/PROJECT DOCUMENTS

**UNDERGROUND STORAGE TANK
SITE ASSESSMENT REPORT**

**Former Sandy's Service Site
16569 South State Road 35
Dairyland, Wisconsin 54830**

**Prepared by
Environmental Troubleshooters, Inc.
102 South 29th Avenue West
Duluth, Minnesota 55806**

ET Project Number: 01-1116

TABLE OF CONTENTS

UNDERGROUND STORAGE TANK SITE ASSESSMENT REPORT

- I. SITE BACKGROUND INFORMATION
- II. ACTIVITIES (Including Visual Inspection) AND EXCAVATION
- III. CLEANING, DISPOSAL AND SURPLUS PRODUCT MANAGEMENT
- IV. SITE LOCATION MAP
- V. SITE LAYOUT PLAN
- VI. SAMPLING
- VII. DISCUSSION

TABLES

- TABLE 1: Soil Field Screening Results
- TABLE 2: Soil Analytical Results

FIGURES

- FIGURE 1: Site Location Map
- FIGURE 2: Site Plan View Map – Former Sandy's Service Station

APPENDICES

- APPENDIX A: Underground Flammable/Combustible Liquid Storage Tank Inventory Forms
- APPENDIX B: Checklists for Tank Closure
- APPENDIX C: Bill of Lading and Tank Cleaning Summaries
- APPENDIX D: Laboratory Analytical Results and Chain of Custody

UNDERGROUND STORAGE TANK SITE ASSESSMENT REPORT

Former Sandy's Service Site
16569 South State Road 35
Dairyland, Wisconsin 54830

I. SITE BACKGROUND INFORMATION

A. Introduction

Environmental Troubleshooters, Inc. (ET) performed underground storage tank site (UST) assessment activities on behalf of Mr. Ray Sandstrom, the current property owner.

B. Personnel

The certified site assessor present at the time of UST closure was:

Amber A. Wallgren
Environmental Troubleshooters, Inc.
102 South 29th Avenue West, Suite 100
Duluth, Minnesota 55806
(218) 722-6013
Certification # 253102

The excavating subcontractor on the project was:

Dwayne Proffit
Dairyland, Wisconsin, 54830
(715) 244-3509

The certified remover/cleaner on the project was Robert Strassburg, Certification # 01065, of B&D Pump (4950 Lightning Drive, Duluth, Minnesota; Telephone (218) 729-9696). Also on site at various times during tank and piping removal activities were J&D Services of Aurora, Minnesota for tank pumping, cutting and cleaning.

C. Location

The site is located in the NW $\frac{1}{4}$, Sec.34, T42N, R14W, in Douglas County, Wisconsin. The site location is illustrated in Figure 1.

The Former Sandy's Service Station site is located near the intersection of State Road 35 and County Road T West in Cozy Corner, Wisconsin (near Dairyland). North Road borders the property to the west. The former tank basin, associated piping and dispensers

were located in the central portion of the property. The garage portion of the property is currently unoccupied. An occupied residence is located on the northern portion of the property. Pertinent site features include a service garage, a residence, miscellaneous scrap piles and numerous parked, used vehicles.

The Former Sandy's Service Station site previously operated four (4) underground storage tanks (USTs) to the south of the service garage (Figures 2). The USTs include: two (2) 560-gallon diesel tanks; one (1) 560-gallon gasoline tank; and one (1) 1,000-gallon gasoline tank. Mr. Ray (Dusty) Sandstrom previously conducted vehicle repair services at the subject site, in conjunction with gasoline and diesel distribution.

The on-site residence occupies the northern portion of the property followed by woodlands. Highway 35, County Road T West and North Road intersect to the south. Highway 35 exists directly to the east. Dairyland School exists nearly 1,000 feet to the southeast. North Road, followed by the volunteer fire department building and forest border the site to the west. The site plan view for the site is depicted in Figure 2.

D. Site and Vicinity Characteristics

An unused service station garage and an occupied residence currently exist at the site. Mr. Sandstrom is unable to enter either the garage or the residence because of respiratory problems.

Local site geology, from information collected during UST removal assessment activities, consists of brown, coarse grained, poorly sorted sand within the former tank system basin.

Geology in the area consists of surficial Quaternary glacial deposits overlying bedrock. Quaternary deposits consist of generally well-sorted, fine to coarse sand associated with glaciofluvial deposits (Mickelson et al. 1984, Pleistocene Stratigraphic Units of Wisconsin, WGNHS Misc. Paper 84-1). Bedrock stratigraphy consists primarily of middle Precambrian volcanic rocks: basalt flows and interbedded sedimentary rocks including Chengwatana Volcanic Group and Portage Lake Volcanics (Mudrey, Brown, and Greenburg. 1982. Bedrock Map of Wisconsin 1:1,000,000). Hydrogeology consists of an unconfined aquifer in the surficial sand deposits. Locally, depth to water is anticipated to be approximately between depths of thirty (30) and forty (40) feet bgs. Groundwater flow is anticipated to be locally to the south/southwest, towards Chases Brook.

E. Tank Information

The UST system present at the site consisted of: two (2), 560-gallon diesel tanks, one (1) 560-gallon gasoline tank, one (1) 1,000-gallon gasoline tank, associated piping and four (4) dispensers. The four (4) USTs were of coated steel construction and had neither cathodic nor overfill protection. Spill containment/spill buckets were not present on the

tanks. The primary tank leak detection method employed was manual tank gauging. The piping system was composed of non-cathodically protected, coated steel.

Site assessment activities were initiated in compliance with ILHR/ COMM 10 rules and regulations for UST systems. None of the tanks had any visible holes or cracks. Rust was limited and spotty. Pipe-fittings were secure and intact.

The Underground Flammable/Combustible Liquid Storage Tank Inventory Forms and Checklist for Tank Closure are attached in Appendix A and B, respectively. Department of Commerce database review indicated that one (1) of the four (4) tanks was not registered. A signed copy of the Tank Inventory Form for this tank, a 1,000-gallon gasoline tank is attached as Appendix B.

II. ACTIVITIES (Including Visual Inspection) AND EXCAVATION

UST and piping closure was conducted by removal and occurred concurrently for all four (4) tanks (November 21, 2001). Weather at the time of removal was in the mid 40s to low 50s and skies were sunny. No precipitation was reported throughout the excavation period.

Tank #1 - 560-gallon diesel UST

Excavation commenced directly west of the first 560-gallon tank, the tank situated the farthest west within the tank basin. Excavation activities revealed gray native silty clay. Overlying backfill was a brown well-graded sand with silt. Noticeable odor was observed near the fill pipe and at the top of the tank. A soil sample collected beneath this tank was field screened with a photoionization detector (PID) and resulted in a reading of 479 parts per million (ppm). Limited perched groundwater was encountered at approximately seven (7) feet below ground surface.

Tank #2 - 560-gallon diesel UST

Excavation continued to the east with a second 560-gallon diesel tank, situated directly east of the first 560-gallon diesel tank. Excavation activities revealed similar soils that were encountered near the first UST. Noticeable odor was once again observed near the fill pipe and at the top of the tank. However, the odor was not as pronounced as was noted near the first removed tank. A soil sample collected beneath this tank was field screened with a PID and resulted in a reading of 462 parts ppm. A soil sample from beneath this tank was collected for laboratory analysis. Exposed piping was found in good condition.

Tank #3 - 560-gallon gasoline UST

Excavation continued to the east with the removal of a 560-gallon gasoline tank, situated directly east of the second 560-gallon diesel tank. Tank orientations are visually depicted

on the attached Figure 2. Excavation activities revealed similar soils that were encountered near the first UST. Noticeable odor was once again observed near the fill pipe and at the top of the tank. However, the odor was not as pronounced as was noted near the first removed tank and was distinctly gas. A soil sample collected beneath this tank was field screened with a PID and resulted in a reading of 763 ppm, as isobutylene. A soil sample from beneath this tank was collected for laboratory analysis. Exposed piping was found in good condition and the piping was dry.

Tank #4 – 1,000-gallon gasoline UST

Excavation continued to the east with the removal of the final tank, a 1,000-gallon gasoline tank, situated directly east of the 560-gallon gasoline tank. Tank orientations are visually depicted on the attached Figure 2. Excavation activities revealed similar soils that were encountered near the first UST. Noticeable odor was once again observed near the fill pipe and at the top of the tank. A soil sample collected beneath this tank was field screened with a PID and resulted in a reading of 569 ppm, as isobutylene. Exposed piping was found in good condition and the piping was dry.

Two (2) soil samples were submitted to a Wisconsin certified independent laboratory for analysis. Soil samples were collected beneath: (1) tank #2 (560-gallon diesel); and (2) tank #3 (560-gallon gasoline). The samples were collected at a depth of approximately seven (7) feet BGS. For personnel safety, the samples were collected from the backhoe bucket; care was taken to collect a representative sample at the stated depth after a minimum of six (6) inches of soil was removed. Sampled material is believed to be native with respect to historic filling at the site.

The piping runs were disconnected from the dispensers and removed. Following piping removal, the pumps were removed from the island and staged along the backside of the former service garage. The concrete island was removed and placed next to the parked vehicles on the western portion of the site.

III. CLEANING, DISPOSAL AND SURPLUS PRODUCT MANAGEMENT

J&D Services pumped the four (4) tanks free of remaining product, diesel or gas. Dwayne Profitt transported the two (2) diesel tanks to his nearby facility for possible future use.

ET personnel witnessed the cleaning and removal of tank bottom materials (sludge) from the gasoline tanks. Tank sludge was removed by five (5)-gallon bucket, floor dry, and absorbent padding and retained in 55-gallon drums while on-site. Sludge was transported to Como Lube and Supplies, 1108 Port Terminal Drive, Duluth, Minnesota 55802, (218) 722-2920 where it was stored pending final depository. Material was then transported to WRR Environmental Services Company, Inc., 5200 State Road 93, Eau Claire, Wisconsin, 54701, for recycling. Representatives of ET did not conduct laboratory analysis on the tank sludge.

The cut and cleaned gasoline tanks were transported to Bay Side Recycling for scrapping purposes. The tank cleaning and disposal documentation is included in Appendix C.

IV. SITE LOCATION MAP

Refer to Figure 1 for Site Location Map.

V. SITE LAYOUT PLAN

Refer to Figure 2 for Site Plan View.

VI. SAMPLING

Field screening for volatile organic compounds (VOCs) was performed during excavation. Sample locations are shown in Figure 2. Field screening was conducted using a MiniRae 10.6 eV PID calibrated to 100.00 ppm isobutylene span gas and air in accordance with WDNR guidance (PUBL-SW-176-93) and according to the guidelines established by Wisconsin Administrative Code ILHR/COMM 10.

Soil sampling was conducted in accordance with WDNR LUST and Petroleum Analytical and Quality Assurance Guidance (PUBL-SW-130-93) and according to Wisconsin Administrative Code ILHR/COMM 10, Appendix B, Attachment 3. Table 1 presents a summary of the laboratory analytical results for the samples submitted to a Wisconsin certified lab for analysis. The laboratory analytical report in its entirety is attached as Appendix D.

VIII. DISCUSSION


The site assessment conducted for the UST system confirmed the presence of petroleum contamination. Initial visual inspection, field screening results and olfactory evidence from the former tank basin suggested the site's soil had been impacted. Contaminated soil near the fill pipes is consistent with spills and/or overfills.

Analytical results from samples collected at beneath a 560 gallon diesel and 560-gallon gasoline tank indicate gasoline range organic (GRO) and diesel range (DRO) soil contamination was present above WDNR site investigation trigger levels.

Potential for groundwater contamination exists; localized perched water (associated with nearby wetlands areas) at depths between five (5) and fifteen (15) feet BGS are believed to be at risk and necessitate an investigation.

If you have any questions regarding the site assessment results, please contact me at (218) 722-6013.

I, Amber A. Wallgren, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in ch. ILHR 10 Wis. Adm. Code.



Amber A. Wallgren
Wisconsin Site Assessor #253102

FIGURES

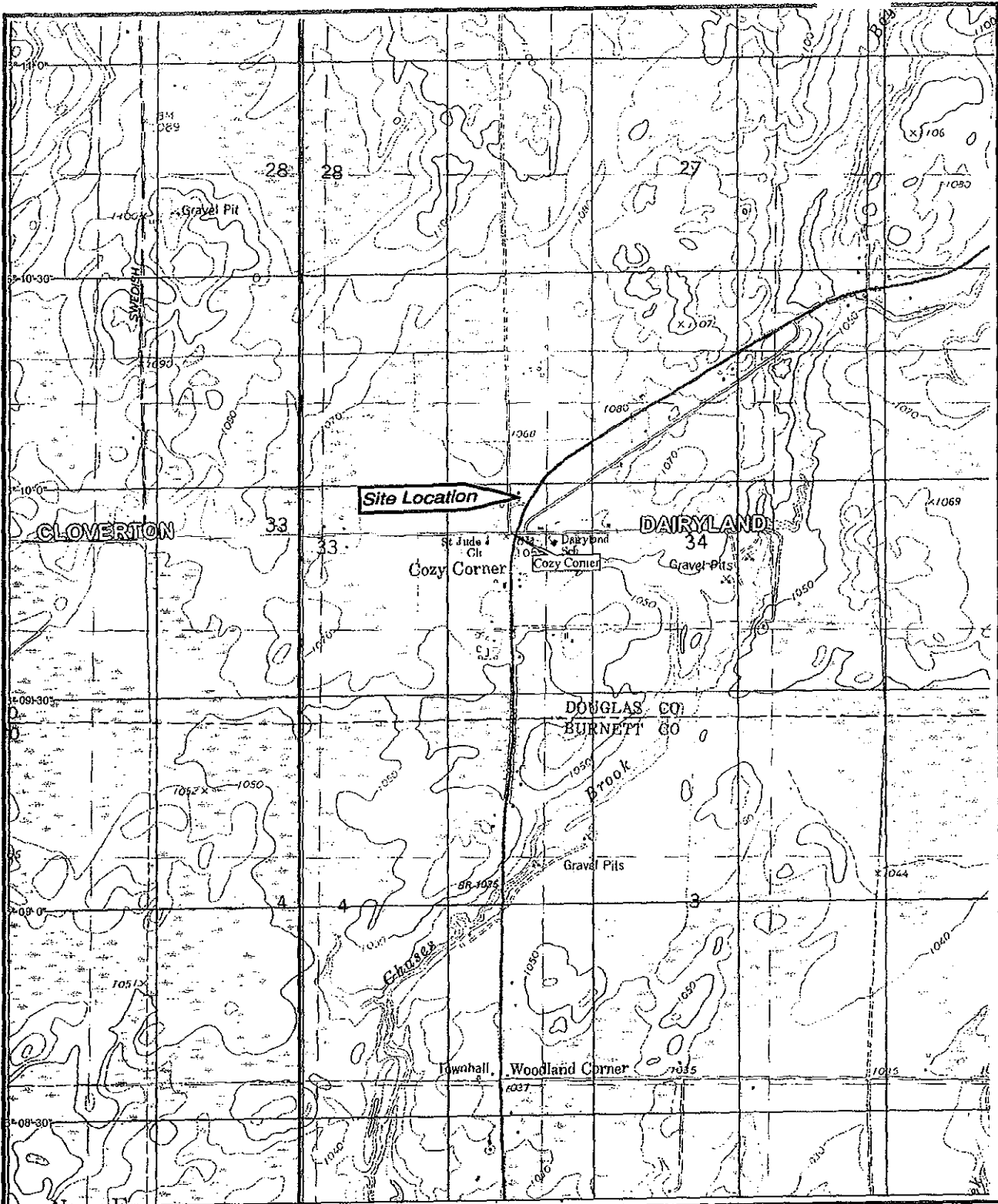
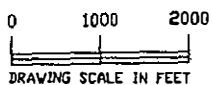


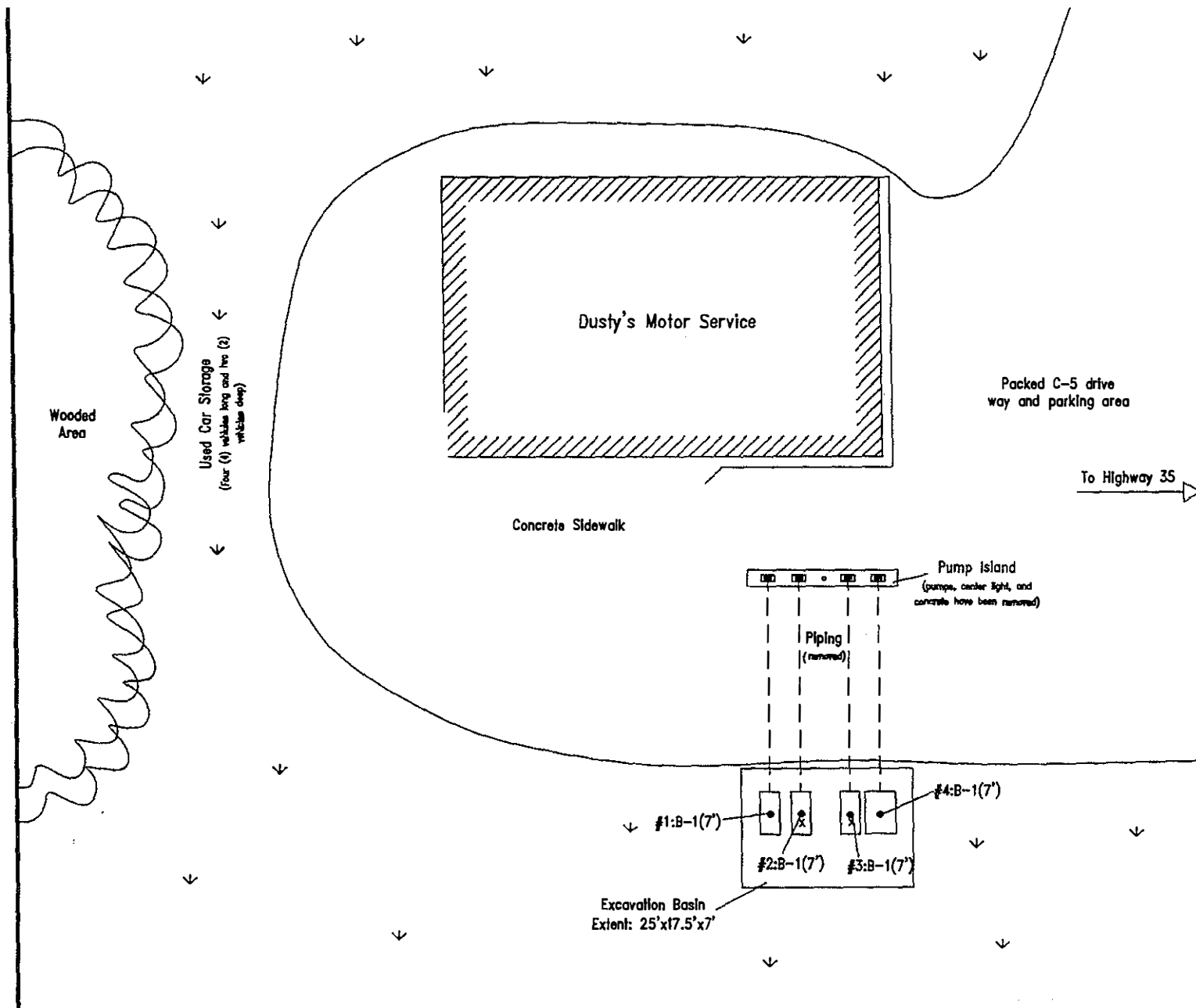
FIGURE 1

Site Location Map

Former Sandy's Service
Dairyland, WI

MPCA LEAK#: _____
 JOB NUMBER: 01-1116
 CHECKED BY: _____ CREATED BY: JMG
 DATE: 02-05-02
 FILE NAME: E:\sandy'sservice01-1118(fig1)





ENVIRONMENTAL TROUBLESHOOTERS, INC.

LEGEND



- Soil-Vapor Headspace Screening Point
- x Soil-Laboratory Sampling Point
- ∨ Grass

Tank Legend

- #1 - 560 gallons (diesel)
- #2 - 560 gallons (diesel)
- #3 - 560 gallons (gasoline)
- #4 - 1,000 gallons (gasoline)

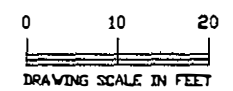


FIGURE 2

Site Plan View

Former Sandy's Service
Dairyland, WI

MPCA Leak #
 JOB NUMBER: 01-1116
 CHECKED BY: CREATED BY: JMG
 DATE: 01-1116
 FILE NAME: E:\sandy'sservice01-1116(fig2)

TABLES

Table 1
Tank Removal Site Assessment Analytical Results (November 21, 2001)
Former Sandy's Service Site
Dairyland, Wisconsin

Sample Identification	PID Reading (ppm)	GRO (mg/kg)	DRO (mg/kg)	Benzene (ug/kg)	Ethylbenzene (ug/kg)	Toluene (ug/kg)	Xylenes (ug/kg)	MTBE (ug/kg)	1,2,4-TMB (ug/kg)	1,3,5-TMB (ug/kg)
Tank #2 B-1 (7 ft)	462	NA	1,900	<1,000	6,900	<1,000	31,000	<1,000	58,000	20,000
Tank #3 B-1 (7 ft)	703	1,800	NA	<1,000	9,300	1,300	41,000	<1,000	68,000	25,000
WDNR Site Investigation Trigger Level		10	10	NS	NS	NS	NS	NS	NS	NS
WDNR Residual Contaminant Level		100	100	5.5	2,900	1,500	4,100	NS	NS	NS

really want to table?

< - Analyte concentration was below the method detection limit
 Shading indicates an exceedence of the Wisconsin Department of Natural Resources (WDNR) Site Investigation Trigger Level of 10 ppm GRO/DRO
 mg/kg - milligrams per kilogram (equivalent to parts per million)
 ug/kg - micrograms per kilogram (equivalent to parts per billion)
 GRO - gasoline range organics
 DRO - diesel range organics
 TMB - trimethyl benzene
 MTBE - methyl-tert-butyl ether
 PID - photo ionization detector
 NA - Not analyzed
 NS - no published standard

APPENDIX A

**Underground Flammable/Combustible Liquid
Storage Tank Inventory Forms**

State of Wisconsin

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

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

WI Tank ID#: 284693

Information Required By Section 101.142, Wis. Stats.

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):			Fire Department providing fire coverage where tank is located:
1A. <input type="checkbox"/> In Use or	4. <input checked="" type="checkbox"/> Closed - Tank Removed	8. <input type="checkbox"/> Ownership Change (Indicate new owner name in block 2)	<input type="checkbox"/> City <input type="checkbox"/> Village
1B. <input type="checkbox"/> Newly Installed	6. <input type="checkbox"/> Closed - Filled with Inert Materials		<input checked="" type="checkbox"/> Town of <u>Dairyland</u>
2. <input type="checkbox"/> Abandoned with Product	7. <input type="checkbox"/> Out of Service - Provide Date: _____		
3. <input type="checkbox"/> Abandoned No Product (empty) or with Water			

A. IDENTIFICATION (Please Print)

1. Tank Site Name <u>Sandy's Service</u>	Site Address <u>116569 South State Rd 35</u>	Site Telephone Number <u>(715) 244-3447</u>
<input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town of: <u>Dairyland</u>	State <u>Wisconsin</u>	Zip Code <u>54830</u>
2. Tank Owner Name <u>Ray Sandstrom</u>	Mailing Address <u>116569 South State Rd 35</u>	Telephone Number <u>(715) 244-3447</u>
<input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town of: <u>Dairyland</u>	State <u>Wisconsin</u>	Zip Code <u>54830</u>
3. Previous Name _____	Previous site address if different than #1 <u>Star Rte 3 Box 157</u>	
4. Tank Age (date installed, if known or years old) _____	5. Tank Capacity (gallons) <u>1,000 - gallons</u>	6. If more than one tank is located at facility, please provide tank # <u># 284693</u>

B. TYPE OF USER (check one)

1. <input checked="" type="checkbox"/> Gas/Retail Sales	2. <input type="checkbox"/> Bulk Storage	3. <input type="checkbox"/> Utility	4. <input type="checkbox"/> Mercantile/Commercial	5. <input type="checkbox"/> Industrial
6. <input type="checkbox"/> Government	7. <input type="checkbox"/> School	8. <input type="checkbox"/> Residential	9. <input type="checkbox"/> Agricultural	10. <input type="checkbox"/> Other (specify): _____
11. <input type="checkbox"/> Tribal Nation	12. <input type="checkbox"/> Federal Property	13. <input type="checkbox"/> Backup Generator		

C. TANK CONSTRUCTION (check one)

1. <input checked="" type="checkbox"/> Bare Steel	2. <input type="checkbox"/> Cathodically Protected & Coated Steel (Check one: A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> impressed Current)	3. <input type="checkbox"/> Coated Steel	4. <input type="checkbox"/> Fiberglass	5. <input type="checkbox"/> Other (specify): _____	6. <input type="checkbox"/> Steel - Fiberglass Reinforced Plastic Composite	7. <input type="checkbox"/> Unknown
Approval: 1. <input type="checkbox"/> Nat'l Std.	2. <input type="checkbox"/> UL	3. <input type="checkbox"/> Other: _____	Is tank double walled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Overfill Protection Provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, identify type: _____		Spill Containment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Tank leak detection method:	1. <input type="checkbox"/> Automatic tank gauging	2. <input type="checkbox"/> Vapor monitoring	3. <input type="checkbox"/> Groundwater monitoring	4. <input type="checkbox"/> Inventory control and tightness testing	5. <input type="checkbox"/> Interstitial monitoring	6. <input type="checkbox"/> Manual tank gauging (only for tanks of 1,000 gallons or less)
	7. <input type="checkbox"/> Statistical Inventory Reconciliation (SIR)	8. <input type="checkbox"/> _____	9. <input type="checkbox"/> _____	10. <input type="checkbox"/> _____	11. <input type="checkbox"/> _____	12. <input type="checkbox"/> _____

D. PIPING CONSTRUCTION

1. <input checked="" type="checkbox"/> Bare Steel	2. <input type="checkbox"/> Cathodically Protected & Coated Steel (Check one: A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> Impressed Current)	3. <input type="checkbox"/> Coated Steel	4. <input type="checkbox"/> Fiberglass	5. <input type="checkbox"/> Other (Specify): _____	6. <input type="checkbox"/> Unknown	
Vapor Recovery/Stage II	1. <input type="checkbox"/> CARB # _____	2. <input type="checkbox"/> Operational - Provide Date (mo/day/yr): _____				
4. <input type="checkbox"/> Fiberglass	5. <input type="checkbox"/> Flexible	6. <input type="checkbox"/> Other (specify): _____				
Piping System Type:	1. <input type="checkbox"/> Pressurized piping with A. <input type="checkbox"/> auto shutoff; B. <input type="checkbox"/> alarm or C. <input type="checkbox"/> flow restrictor	2. <input checked="" type="checkbox"/> Suction piping with check valve at tank	3. <input type="checkbox"/> Suction piping with check valve at pump and inspectable	4. <input type="checkbox"/> Not needed if waste oil		
Piping leak detection method: used if pressurized or check valve at tank:	1. <input type="checkbox"/> Vapor monitoring	2. <input type="checkbox"/> interstitial monitoring	3. <input type="checkbox"/> Groundwater monitoring	4. <input type="checkbox"/> Tightness testing	5. <input type="checkbox"/> Line leak detector	
Approval: 1. <input type="checkbox"/> Nat'l Std.	2. <input type="checkbox"/> UL	3. <input type="checkbox"/> Other: _____	Is pipe double walled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

E. TANK CONTENTS

1. <input type="checkbox"/> Diesel	2. <input type="checkbox"/> Leaded	3. <input checked="" type="checkbox"/> Unleaded	4. <input type="checkbox"/> Fuel Oil	5. <input type="checkbox"/> Gasohol
6. <input type="checkbox"/> Other (Specify): _____	7. <input type="checkbox"/> Empty*	8. <input type="checkbox"/> Sand/Gravel/Slurry*	9. <input type="checkbox"/> Unknown*	10. <input type="checkbox"/> Premix
11. <input type="checkbox"/> Waste/Used Motor Oil	12. <input type="checkbox"/> Chemical _____	13. <input type="checkbox"/> Kerosene	14. <input type="checkbox"/> Aviation	15. <input type="checkbox"/> _____

(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): November 21, 2001

Has a site assessment been completed (see reverse side for details): Yes No

Owner or Operator Name (please print): Ray Sandstrom

Indicate whether: Owner or Operator

Owner or Operator Signature: [Signature]

Date Signed: 11-21-01

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.

State of Wisconsin

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

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

WI Tank ID#: 284694

Information Required By Section 101.142, Wis. Stats.

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):			Fire Department providing fire coverage where tank is located:	
1A. <input type="checkbox"/> In Use or	4. <input checked="" type="checkbox"/> Closed - Tank Removed	8. <input type="checkbox"/> Ownership Change (Indicate new owner name in block 2)	<input type="checkbox"/> City	<input type="checkbox"/> Village
1B. <input type="checkbox"/> Newly Installed	6. <input type="checkbox"/> Closed - Filled with Inert Materials		<input checked="" type="checkbox"/> Town of <u>Dairyland</u>	
2. <input type="checkbox"/> Abandoned with Product	7. <input type="checkbox"/> Out of Service - Provide Date:			
3. <input type="checkbox"/> Abandoned No Product (empty) or with Water				

A. IDENTIFICATION (Please Print)		Site Address	Site Telephone Number
1. Tank Site Name <u>Sandy's Service</u>		<u>16569 South State Rd 35</u>	<u>(715) 244-3447</u>
<input type="checkbox"/> City	<input type="checkbox"/> Village	State	County
<input checked="" type="checkbox"/> Town of:	<u>Dairyland</u>	<u>Wisconsin</u>	<u>Douglas</u>
2. Tank Owner Name <u>Ray Sandstrom</u>		Zip Code	Telephone Number
<input type="checkbox"/> City	<input type="checkbox"/> Village	<u>54830</u>	<u>(715) 244-3447</u>
<input checked="" type="checkbox"/> Town of:	<u>Dairyland</u>	Mailing Address	County
3. Previous Name		<u>16569 South State Rd 35</u>	<u>Douglas</u>
4. Tank Age (date installed, if known or years old)		State	Zip Code
		<u>Wisconsin</u>	<u>54830</u>
		Previous site address if different than #1	
		<u>Star Rte 3 Box 157</u>	
		5. Tank Capacity (gallons)	6. If more than one tank is located at facility, please provide tank #
		<u>500 gallons</u>	<u># 284694</u>

B. TYPE OF USER (check one)

1. <input checked="" type="checkbox"/> Gas/Retail Sales	2. <input type="checkbox"/> Bulk Storage	3. <input type="checkbox"/> Utility	4. <input type="checkbox"/> Mercantile Commercial	5. <input type="checkbox"/> Industrial
6. <input type="checkbox"/> Government	7. <input type="checkbox"/> School	8. <input type="checkbox"/> Residential	9. <input type="checkbox"/> Agricultural	10. <input type="checkbox"/> Other (spec if):
11. <input type="checkbox"/> Tribal Nation	12. <input type="checkbox"/> Federal Property	13. <input type="checkbox"/> Backup Generator		

C. TANK CONSTRUCTION (check one)

1. <input checked="" type="checkbox"/> Bare Steel	2. <input type="checkbox"/> Cathodically Protected & Coated Steel (Check one: A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> impressed Current)
3. <input type="checkbox"/> Coated Steel	4. <input type="checkbox"/> Fiberglass
5. <input type="checkbox"/> Other (specify):	6. <input type="checkbox"/> Steel - Fiberglass Reinforced Plastic Composite
7. <input type="checkbox"/> Lined - Date:	8. <input type="checkbox"/> Unknown

Approval: 1. <input type="checkbox"/> Nat'l Std.	2. <input type="checkbox"/> UL	3. <input type="checkbox"/> Other:	Is tank double walled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Overfill Protection Provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, identify type:		Spill Containment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Tank leak detection method:	1. <input type="checkbox"/> Automatic tank gauging	2. <input type="checkbox"/> Vapor monitoring	3. <input type="checkbox"/> Groundwater monitoring
	4. <input type="checkbox"/> Inventory control and tightness testing	5. <input type="checkbox"/> Interstitial monitoring	
	7. <input type="checkbox"/> Manual tank gauging (only for tanks of 1,000 gallons or less)	8. <input type="checkbox"/> Statistical Inventory Reconciliation (SIR)	

D. PIPING CONSTRUCTION

1. <input checked="" type="checkbox"/> Bare Steel	2. <input type="checkbox"/> Cathodically Protected & Coated Steel (Check one: A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> Impressed Current)
3. <input type="checkbox"/> Coated Steel	4. <input type="checkbox"/> Fiberglass
5. <input type="checkbox"/> Other (Specify):	6. <input type="checkbox"/> Unknown

Vapor Recovery/Stage II	<input type="checkbox"/> CARB #:
4. <input type="checkbox"/> Fiberglass	<input type="checkbox"/> Operational - Provide Date (mo/day/yr):
Piping System Type:	1. <input type="checkbox"/> Pressurized piping with A. <input type="checkbox"/> auto shutoff; B. <input type="checkbox"/> alarm or C. <input type="checkbox"/> flow restrictor
2. <input checked="" type="checkbox"/> Suction piping with check valve at tank	3. <input type="checkbox"/> Suction piping with check valve at pump and inspectable
4. <input type="checkbox"/> Not needed if waste oil	
Piping leak detection method: used if pressurized or check valve at tank:	1. <input type="checkbox"/> Vapor monitoring
2. <input type="checkbox"/> Interstitial monitoring	
3. <input type="checkbox"/> Groundwater monitoring	4. <input type="checkbox"/> Tightness testing
5. <input type="checkbox"/> Line leak detector	6. <input type="checkbox"/> Not required
7. <input type="checkbox"/> SIR	

Approval: 1. <input type="checkbox"/> Nat'l Std.	2. <input type="checkbox"/> UL	3. <input type="checkbox"/> Other:	Is pipe double walled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	------------------------------------	--

E. TANK CONTENTS

1. <input checked="" type="checkbox"/> Diesel	2. <input type="checkbox"/> Leaded	3. <input type="checkbox"/> Unleaded	4. <input type="checkbox"/> Fuel Oil	5. <input type="checkbox"/> Gasohol
6. <input type="checkbox"/> Other (Specify):	7. <input type="checkbox"/> Empty*	8. <input type="checkbox"/> Sand/Gravel/Slurry*	9. <input type="checkbox"/> Unknown*	10. <input type="checkbox"/> Premix
11. <input type="checkbox"/> Waste/Used Motor Oil	13. <input type="checkbox"/> Chemical	14. <input type="checkbox"/> Kerosene	15. <input type="checkbox"/> 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): November 21, 2001

Has a site assessment been completed (see reverse side for details) Yes No

Owner or Operator Name (please print): Ray Sandstrom

Owner or Operator Signature: [Signature]

Indicate whether: Owner or Operator

Date Signed: 11-21-01

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.

State of Wisconsin

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

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

WI Tank ID#: 284695

Information Required By Section 101.142, Wis. Stats.

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. <input type="checkbox"/> In Use or	4. <input checked="" type="checkbox"/> Closed - Tank Removed	8. <input type="checkbox"/> Ownership Change (Indicate new owner name in block 2)	Fire Department providing fire coverage where tank is located:
1B. <input type="checkbox"/> Newly Installed	6. <input type="checkbox"/> Closed - Filled with Inert Materials		<input type="checkbox"/> City <input type="checkbox"/> Village
2. <input type="checkbox"/> Abandoned with Product	7. <input type="checkbox"/> Out of Service - Provide Date: _____		<input checked="" type="checkbox"/> Town of <u>Dairyland</u>
3. <input type="checkbox"/> Abandoned No Product (empty) or with Water			

A. IDENTIFICATION (Please Print)

1. Tank Site Name

Sandy's Service

City Village Town of:

Dairyland

2. Tank Owner Name

Ray Sandstrom

City Village Town of:

Dairyland

3. Previous Name

4. Tank Age (date installed, if known or years old)

Site Address

16569 South State Rd 35

State Wisconsin Zip Code 54830

Mailing Address

16569 South State Rd 35

State Wisconsin Zip Code 54830

Previous site address if different than #1

Star Rte 3 Box 157

5. Tank Capacity (gallons)

500 - gallons

6. If more than one tank is located at facility, please provide tank #

284695

Site Telephone Number

(715) 244-3447

County

Douglas

Telephone Number

(715) 244-3447

County

Douglas

B. TYPE OF USER (check one)

- | | | | | |
|---|---|---|---|---|
| 1. <input checked="" type="checkbox"/> Gas/Retail Sales | 2. <input type="checkbox"/> Bulk Storage | 3. <input type="checkbox"/> Utility | 4. <input type="checkbox"/> Mercantile/Commercial | 5. <input type="checkbox"/> Industrial |
| 6. <input type="checkbox"/> Government | 7. <input type="checkbox"/> School | 8. <input type="checkbox"/> Residential | 9. <input type="checkbox"/> Agricultural | 10. <input type="checkbox"/> Other (specify): |
| 11. <input type="checkbox"/> Tribal Nation | 12. <input type="checkbox"/> Federal Property | 13. <input type="checkbox"/> Backup Generator | | |

C. TANK CONSTRUCTION (check one)

- | | | |
|---|--|---|
| 1. <input checked="" type="checkbox"/> Bare Steel | 2. <input type="checkbox"/> Cathodically Protected & Coated Steel (Check one: A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> impressed Current) | 9. <input type="checkbox"/> Unknown |
| 3. <input type="checkbox"/> Coated Steel | 4. <input type="checkbox"/> Fiberglass | 7. <input type="checkbox"/> Steel - Fiberglass Reinforced Plastic Composite |
| 6. <input type="checkbox"/> Lined - Date: _____ | 5. <input type="checkbox"/> Other (specify): _____ | |

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. <input checked="" type="checkbox"/> Bare Steel | 2. <input type="checkbox"/> Cathodically Protected & Coated Steel (Check one: A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> Impressed Current) | 9. <input type="checkbox"/> Unknown |
| 3. <input type="checkbox"/> Coated Steel | 4. <input type="checkbox"/> Fiberglass | 5. <input type="checkbox"/> Other (Specify): _____ |

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. <input checked="" type="checkbox"/> Diesel | 2. <input type="checkbox"/> Leaded | 3. <input type="checkbox"/> Unleaded | 4. <input type="checkbox"/> Fuel Oil | 5. <input type="checkbox"/> Gasohol |
| 6. <input type="checkbox"/> Other (Specify): _____ | 7. <input type="checkbox"/> Empty* | 8. <input type="checkbox"/> Sand/Gravel/Slurry* | 9. <input type="checkbox"/> Unknown* | 10. <input type="checkbox"/> Premix |
| 11. <input type="checkbox"/> Waste/Used Motor Oil | 13. <input type="checkbox"/> Chemical _____ | 14. <input type="checkbox"/> Kerosene | 15. <input type="checkbox"/> 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):

November 21, 2001

Has a site assessment been completed (see reverse side for details)

Yes No

Owner or Operator Name (please print):

Ray Sandstrom

Indicate whether:

Owner or Operator

Owner or Operator Signature:

Date Signed

11-21-01

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

State of Wisconsin

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

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

WI Tank ID#: _____

Information Required By Section 101.142, Wis. Stats.

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
- 5. Closed - Filled with Inert Materials
- 6. Out of Service - Provide Date: _____
- 7. Ownership Change (Indicate new owner name in block 2)
- 8. Ownership Change (Indicate new owner name in block 2)

Fire Department providing fire coverage where tank is located:
 City Village
 Town of Davyland

A. IDENTIFICATION (Please Print)

1. Tank Site Name <u>Sandy's Service</u>	Site Address <u>16569 South State Rd 35</u>	Site Telephone Number <u>(715) 244-3447</u>
<input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town of: <u>Davyland</u>	State <u>Wisconsin</u> Zip Code <u>54830</u>	County <u>Douglas</u>
2. Tank Owner Name <u>Ray Sandstrom</u>	Mailing Address <u>16569 South State Rd 35</u>	Telephone Number <u>(715) 244-3447</u>
<input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town of: <u>Davyland</u>	State <u>Wisconsin</u> Zip Code <u>54830</u>	County <u>Douglas</u>
3. Previous Name _____	Previous site address if different than #1 <u>Star Rte 3 Box 157</u>	_____
4. Tank Age (date installed, if known or years old) _____	5. Tank Capacity (gallons) <u>560 - gallon</u>	6. If more than one tank is located at facility, please provide tank # <u>Not currently registered</u>

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
- 8. 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
- 6. Manual tank gauging (only for tanks of 1,000 gallons or less)
- 7. 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): _____
- 6. Unknown

Vapor Recovery/Stage II

- 4. Fiberglass
- 6. Flexible
- 5. Other (specify): _____

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
- 7. SIR

Approval: 1. Nat'l Std. 2. UL 3. Other: _____

Is pipe double walled? Yes No

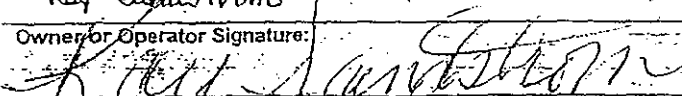
E. TANK CONTENTS

- 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
 - 12. Chemical _____
 - 13. Kerosene
 - 14. 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): November 21, 2001

Has a site assessment been completed (see reverse side for details)
 Yes No

Owner or Operator Name (please print): <u>Ray Sandstrom</u>	Indicate whether: <input checked="" type="checkbox"/> Owner or <input type="checkbox"/> Operator
Owner or Operator Signature: 	Date Signed: <u>11-21-01</u>

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.

APPENDIX B

Checklists for Tank Closure

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.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE; FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE.			
12. Tank vent hole (1/8" in uppermost part of tank) installed prior to moving the tank from site.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
13. Inventory form ERS-7437 filed by owner with the Department of Commerce indicating closure by removal.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
14. Site security is provided while the excavation is open.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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).	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
2. Piping disconnected from tank and removed.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. ...	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
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.			
6. Vent lines left connected until tanks purged.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
7. Tank openings temporarily plugged so vapors exit through vent.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) <u>see Section F.</u>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
9. Tank properly cleaned to remove all sludge and residue.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
10. Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
11. Vent line disconnected or removed.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
12. Inventory form filed by owner with the Department of Commerce indicating closure in place.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>

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.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
2. Do points of obvious contamination exist?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
3. Are there strong odors in the soils?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
4. Was a field screening instrument used to pre-screen soil sample locations?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
5. Was a closure assessment omitted because of obvious contamination?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
6. Was the DNR notified of suspected or obvious contamination?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
Agency, office and person contacted: <u>WDNR RR. Division & Remediation Office, Janet Kozel, Danielle Wencour</u>			
7. Contamination suspected because of: <input checked="" type="checkbox"/> Odor <input type="checkbox"/> Soil Staining <input type="checkbox"/> Free Product <input type="checkbox"/> Sheen on Groundwater <input checked="" type="checkbox"/> 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 (CO₂ or N₂) **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

* Site and owner (print) address: 187 address listed is consistent with DOT database information; 2nd address is the current and correct address
No Inspector on site - for a g

H. REMOVER/CLEANER INFORMATION

Robert Strassburg Robert Strassburg 01065 11/21/01
Remover Name (print) Remover Signature Remover Certification No. Date Signed

I. INSPECTOR INFORMATION

Daniel L. Christ Daniel L. Christ 35105 1/23/02
Inspector Name (print) Inspector Signature Inspector Certification No. Date Signed

1665 715 878 4499

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

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

RETURN COMPLETED CHECKLIST TO:

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

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: Sandy's Service | 2. Owner Name: Ray Sandstrom
 Site Street Address (not P.O. Box): Star Rte B Box 157 / 14569 South State Rd 35 | Owner Street Address: Star Rte B Box 157 / 14569 South State Rd 35
 City Village Town of: Dairyland | City Village Town of: Dairyland | State: WI | Zip Code: 54830
 State: Wisconsin | Zip Code: 54830 | County: Douglas | Telephone No. (include area code): ()
 3. Closure Company Name (print): B&D Pump Inc | Closure Company Street Address: 4750 LIGHTNING DR
 Closure Company Telephone No. (include area code): (218) 729-9696 | Closure Company City, State, Zip Code: Duluth, MN 55811
 4. Name of Company Performing Closure Assessment: Environmental Troubleshooters, Inc. | Assessment Company Street Address, City, State, Zip Code: 102 S. 29th Ave. W. Suite 100 Duluth, MN 55806
 Telephone # (include area code): (218) 722-6018 | Certified Assessor Name (print): Amber A. Wallqvist | Assessor Signature: Amber A Wallqvist | Assessor Certification No.: 253102

Tank ID #	Closure	Temp. Closure	Closure in Place	Tank Capacity	Contents*	Closure Assessment
1. <u>284694</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>560</u>	<u>01</u>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
2. <u>284695</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>560</u>	<u>01</u>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
3. <u>Not registered.</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>560</u>	<u>03</u>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
4. <u>284693</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>1000</u>	<u>03</u>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> Y <input type="checkbox"/> N
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> Y <input type="checkbox"/> 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.

B. TEMPORARILY OUT OF SERVICE

Written inspector approval of temporary closure obtained, which is effective until (provide date) _____

	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
1. Product Removed	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
a. Product lines drained into tank (or other container) and resulting liquid removed, AND	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
b. All product removed to bottom of suction line, OR	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
c. All product removed to within 1" of bottom.	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
3. All product lines at the islands or pumps located elsewhere are removed and capped, OR	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
4. Dispensers/pumps left in place but locked and power disconnected.	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
5. Vent lines left open.	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
6. Inventory form filed indicating temporary closure.	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA

C. CLOSURE BY REMOVAL

1. Product from piping drained into tank (or other container).	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
2. Piping disconnected from tank and removed.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
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.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
7. Tank openings temporarily plugged so vapors exit through vent.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
9. Tank removed from excavation after PURGING/INERTING; placed on level ground and blocked to prevent movement.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
10. Tank cleaned before being removed from site.	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA

APPENDIX C

Bill of Lading and Tank Cleaning Summaries

BILL OF LADING



WRR Environmental Services Co., Inc.

5200 State Road 93, Eau Claire, WI 54701
(715) 834-9624 FAX (715) 836-8785

20119

GENERATOR CLAIMING VERY SMALL QUANTITY

GENERATOR STATUS Scott Peterson / ep
(SIGNED)

Shippers #

Your P.O. No.

All Information must be typed or printed.

<p>1. Generator's Name and Mailing Address DUSTY'S SERVICE ST HWY 35 DAIRYLAND WI 54836</p> <p>2. Generator's Phone (715) 398-0528</p> <p>3. Transporter 1 Company Name ENVIRONMENTAL TROUBLESHOOTERS</p> <p>5. Transporter 2 Company Name COMO LUBE & SUPPLIES INC</p> <p>7. Designated Facility Name and Site Address WRR Environmental Services Co., Inc. 5200 State Road 93 Eau Claire, WI 54701</p>	<p>Mail to: Environ Troubleshooters 102 S 29 Ave W #100 Duluth MN 55806</p> <p>4. US EPA ID Number M N R 0 0 0 0 5 8 2 0 6</p> <p>6. US EPA ID Number M N R 0 0 0 0 3 3 5 9 7</p> <p>8. US EPA ID Number WID 990 829 475</p> <p>A. Profile #</p> <p>B. State Generator's ID</p> <p>C. State Transporter's ID</p> <p>D. Transporter's Phone 218-722-6013</p> <p>E. State Transporter's ID 12/65</p> <p>F. Transporter's Phone 218-722-2920</p> <p>G. State Facility's ID</p> <p>H. Facility's Phone 715-834-9624</p>
---	---

H.M.	9. US DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group)	10. Containers No.	11. Total Quantity	12. Unit Wt/Vol	I. Waste No.
a. R, Q	WASTE FLAMMABLE LIQUID, N.O.S. (GASOLINE/FUEL OIL), 3. UN1993. PGIII (D001)	0, 0, 2	D, M 0, 0, 7, 9, 0	P	0, 0, 0, 1
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. 2002010011-1FA221 ERG 128

K. Handling Code for Wastes Listed Above
a. D018

13. Special Handling Instructions and Additional Information

14. Emergency Phone # 800-962-5417

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations and according to the requirements of the Wisconsin Department of Natural Resources.

<p>Printed/Typed Name & Position Title <u>Environmental Troubleshooters for Dusty's</u></p>	<p>Signature <u>Scott Peterson / ep</u></p>	<p>Date Month Day Year <u>12/31/01</u></p>
<p>16. TRANSPORTER 1 Acknowledgement of Receipt of Materials Printed/Typed Name & Position Title <u>Zane Swanson</u></p>	<p>Signature <u>Zane Swanson</u></p>	<p>Date Month Day Year <u>12/31/01</u></p>
<p>17. TRANSPORTER 2 Acknowledgement of Receipt of Materials Printed/Typed Name & Position Title</p>	<p>Signature</p>	<p>Date Month Day Year</p>

18. Discrepancy Indication Space

19. FACILITY OWNER OR OPERATOR: Certification of receipt of hazardous materials covered by this document except as noted in Item 18.

<p>Printed/Typed Name & Position Title <u>Dean Sabir Superintendent</u></p>	<p>Signature <u>Dean Sabir</u></p>	<p>Date Month Day Year <u>11/04/02</u></p>
---	--	--

GENERATOR LAND DISPOSAL RESTRICTION NOTIFICATION

Generator Name: Dusty's Service
 Generator EPA #: Wisconsin VSQG
 Address: St Hwy 35
 City, State, Zip: Dairyland WI 54836

Ship Date 12/31/01
 Manifest Doc. #:
 State Manifest #: BOL
 Phone (715) 398-0528

Print Name Scott Peterson

Signature Scott Peterson/ll

Note: Generator must attach the original to the manifest & keep a copy of this form on file with their manifest.

Note: The actual numerical treatment standard(s) MUST be completed for waste codes F001-F005, F039, and California list waste(s).

WRR Lab ID#: 2002010011-1FA221

<u>Line</u>	<u>Waste</u>	<u>Waste</u>	<u>Treatment</u>	<u>40 CFR 268</u>
<u>Item #</u>	<u>Code #</u>	<u>Category</u>	<u>Technology</u>	<u>Reference</u>
11-A		INDUSTRY		
	D001	IGNITABLE LIQUID TOC>10% NON WASTEWATER	RORGS, CMBST	268.48
	D018	BENZENE NON WASTEWATER	NA	NA
	Description		All Other Spent Solvent Wastes (mg/l)	

No. C 377157

BAY SIDE RECYCLING CORPORATION

220 SO. 39TH AVE. W.
DULUTH, MINNESOTA 55807
PHONE 218/628-3109

DATE
CR
WEIGHER

CUSTOMER Ford & Trl ET

ADDRESS

ON	OFF	MATERIAL	WEIGHT	PRICE	AMOUNT
01-04-02	08:55 AM		NO VALUE		
12060	lb	lbs. Gross			
		lbs. Tare			
		lbs. Net	2 - FUEL TANKS		

By

PAYMENT RECEIVED

APPENDIX D

Laboratory Analytical Results and Chain of Custody

(Please Print Legibly)

Company Name: Environmental Troubleshooters

Branch or Location: Duluth

Project Contact: Jeff Anderson

Telephone: (715) 522-6066

Project Number: 01-016

Project Name: Seawater Sampling & Analysis

Project State: Minnesota

Sampled By (Print): Robert Waligwan



1241 Bellevue St., Suite 9
Green Bay, WI 54302
920-469-2436
FAX 920-469-8827

525 Science Drive
Madison, WI 53711
608-232-3300
FAX: 608-233-0502

CHAIN OF CUSTODY

*Preservation Codes
 A=None B=HCL C=H2SO4 D=HNO3 E=EnCore F=Methanol G=NaOH
 H= Sodium Bisulfate Solution I= Other

FILTERED? (YES/NO) No No No

PRESERVATION (CODE)* F A E

Page 1 of 1

P.O. # Quote #

Mail Report To: Jeff Anderson

Company: Environmental

Address: Troubleshooters

102 S. 29th Ave. WI #100

Invoice To: Duluth, MN 55806

Company: Accounts Payable

Address: same as above

Mail Invoice To: Accounts Payable/ET

Data Package Options
 (please circle if requested)
 Results Only
 EnChem Level III (Subject to Surcharge)
 EnChem Level IV (Subject to Surcharge)

Regulatory Program
 UST
 RCRA
 SDWA
 NPDES
 CERCLA

Matrix Codes
 W=Water
 S=Soil
 A=Air
 C=Charcoal
 B=Biota
 SL=Sludge

ANALYSES REQUESTED

6RO
 DRO
 PVOB + raphidom
 DW Nitrite

TOTAL # OF BOTTLES SENT

LABORATORY ID (Lab. Use Only)	FIELD ID	COLLECTION		MATRIX	ANALYSES REQUESTED				TOTAL # OF BOTTLES SENT	CLIENT COMMENTS	LAB COMMENTS (Lab. Use Only)	
		DATE	TIME		6RO	DRO	PVOB + raphidom	DW Nitrite				
001	Field # 1: B-1 (7)	11/21/01	11:35	Soil	✓	✓	✓	✓	3		1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.	
002	Field # 3: B-1 (7)	11/21/01	11:50	Soil	✓	✓	✓	✓	2			
003	Method Blank	11/21/01	day	Water	✓	✓			1			
	Temperature Blank	11/21/01	day						1			

Rush Turnaround Time Requested (TAT) - Prelim (Rush TAT subject to approval/surcharge)	Relinquished By: <u>[Signature]</u>	Date/Time: <u>11/21/01 12:25</u>	Received By: <u>[Signature]</u>	Date/Time: <u>11/21/01 12:25</u>	EnChem Project No. <u>815855</u>
Date Needed: _____	Relinquished By: <u>[Signature]</u>	Date/Time: <u>11/21/01 12:25</u>	Received By: <u>[Signature]</u>	Date/Time: <u>11/21/01 12:25</u>	Sample Receipt Temp. <u>32°C / 90°F</u>
Transmit Prelim Rush Results by (circle): Phone Fax E-Mail	Relinquished By: <u>[Signature]</u>	Date/Time: <u>11/21/01 12:25</u>	Received By: <u>[Signature]</u>	Date/Time: <u>11/21/01 12:25</u>	Sample Receipt pH (Wet/Metal) _____
Phone #: _____	Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: _____	Cooler/Custody Seal _____
Fax #: _____	Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: _____	Present / Not Present _____
E-Mail Address: _____	Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: _____	Intact / Not Intact _____

Samples on HOLD are subject to special pricing and release of liability

Corporate Office & Laboratory
1241 Bellevue Street
Green Bay, WI 54302
920-469-2436 • FAX: 920-469-8827
800-7-ENCHEM



Madison Office & Laboratory
525 Science Drive
Madison, WI 53711
608-232-3300 • FAX: 608-233-0502
888-5-ENCHEM

- Analytical Report -

Project Name : FORMER SANDY'S SERVICE

Project Number : 01-1116

Client: ENVIRONMENTAL TROUBLESHOOT

WI DNR LAB ID : 405132750

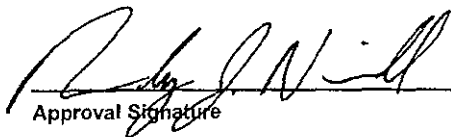
Sample No.	Field ID	Collection Date	Sample No.	Field ID	Collection Date
815855-001	TANK #2; B-1 (7')	11/21/01			
815855-002	TANK #3; B-1 (7')	11/21/01			
815855-003	MEOH BLANK	11/21/01			

Please visit our Internet homepage at: www.enchem.com

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 comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.


Approval Signature

11/30/01
Date

En Chem, Inc. Cooler Receipt Log

Batch No. 815555

Project Name or ID FORBIE R SANANIS Service No. of Coolers: 1 Temps: RO1

A. Receipt Phase: Date cooler was opened: 11-27-01 By: JJ

- | | | | |
|--|--|---------------------------------------|------------------------|
| 1: Were samples received on ice? (Must be ≤ 6 C)..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO ² | |
| 2: Was there a Temperature Blank?..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO | |
| 3: Were custody seals present and intact? (Record on COC)..... | <input type="radio"/> YES | <input checked="" type="radio"/> NO | |
| 4: Are COC documents present?..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO ² | |
| 5: Does this Project require quick turn around analysis?..... | <input type="radio"/> YES | <input checked="" type="radio"/> NO | |
| 6: Is there any sub-work?..... | <input type="radio"/> YES | <input checked="" type="radio"/> NO | |
| 7: Are there any short hold time tests?..... | <input type="radio"/> YES | <input checked="" type="radio"/> NO | |
| 8: Are any samples nearing expiration of hold-time? (Within 2 days)..... | <input type="radio"/> YES ¹ | <input checked="" type="radio"/> NO | Contacted by/Who _____ |
| 9: Do any samples need to be Filtered or Preserved in the lab?..... | <input type="radio"/> YES ¹ | <input checked="" type="radio"/> NO | Contacted by/Who _____ |

B. Check-in Phase: Date samples were Checked-In: 11-27-01 By: JJ

- | | | | |
|---|--------------------------------------|---------------------------------------|-------------------------------------|
| 1: Were all sample containers listed on the COC received and intact?..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO ² | <input type="radio"/> NA |
| 2: Sign the COC as received by En Chem. Completed..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO | |
| 3: Do sample labels match the COC? | <input checked="" type="radio"/> YES | <input type="radio"/> NO ² | |
| 4: Check sample pH of preserved samples. (Not VOCs) Completed..... | <input type="radio"/> YES | <input type="radio"/> NO | <input checked="" type="radio"/> NA |
| 5: Do samples have correct chemical preservation?..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO ² | <input type="radio"/> NA |
| 6: Are dissolved parameters field filtered?..... | <input type="radio"/> YES | <input type="radio"/> NO ² | <input checked="" type="radio"/> NA |
| 7: Are sample volumes adequate for tests requested? | <input checked="" type="radio"/> YES | <input type="radio"/> NO ² | |
| 8: Are VOC samples free of bubbles >6mm | <input type="radio"/> YES | <input type="radio"/> NO ² | <input checked="" type="radio"/> NA |
| 9: Enter samples into logbook. Completed..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO | |
| 10: Place laboratory sample number on all containers and COC. Completed..... | <input checked="" type="radio"/> YES | <input type="radio"/> NO | |
| 11: Complete Laboratory Tracking Sheet (LTS). Completed..... | <input type="radio"/> YES | <input type="radio"/> NO | <input checked="" type="radio"/> NA |
| 12: Start Nonconformance form. | <input type="radio"/> YES | <input type="radio"/> NO | <input checked="" type="radio"/> NA |
| 13: Initiate Subcontracting procedure. Completed..... | <input type="radio"/> YES | <input type="radio"/> NO | <input checked="" type="radio"/> NA |
| 14: Check laboratory sample number on all containers and COC. <u>ci 11/27/01</u> | <input checked="" type="radio"/> YES | <input type="radio"/> NO | <input type="radio"/> NA |

Short Hold-time tests:

- | | |
|------------------------------|-----------------------------------|
| 48 Hours or less | 7 days |
| Coliform (6 hrs) | Flashpoint |
| Hexavalent Chromium (24 Hrs) | TSS |
| BOD | Total Solids |
| Nitrite or Nitrate | TDS |
| Low Level Mercury | Sulfide |
| Ortho Phosphorus | Free Liquids |
| Turbidity | Total Volatile Solids |
| Surfactants | Aqueous Extractable Organics- ALL |
| Sulfite | Unpreserved VOC's |
| En Core Preservation | Ash |
| Color | |

Footnotes

- 1 Notify proper lab group immediately.
- 2 Complete nonconformance memo.

Rev. 9/5/2001, Attachment to 1-REC-5.
Subject to QA Audit.

Reviewed by/date UW 11/28/01

Organic Data Qualifiers

B	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	Elevated detection limit (see Sample Narrative).
D	Analyte value from diluted analysis.
E	Analyte concentration exceeds calibration range (see Sample Narrative).
F	Surrogate results outside control criteria or not available due to sample dilution.
H(n)	Extraction or analysis performed "n" days past holding time.
J	Qualitative evidence of analyte present: concentration detected is greater than the method detection limit but less than the reporting limit.
K	Detection limit may be elevated due to the presence of an unrequested analyte.
N	Spiked sample recovery not within control limits.
P	The relative percent difference between the two GC columns for detected concentrations was greater than 40%.
Q	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
U	The analyte was not detected above the reporting limit.
W	Sample received with headspace.
X	See Sample Narrative.
&	Laboratory Control Spike recovery not within control limits.
*	Duplicate analyses not within control limits.
SUB1	Assay was subcontracted to an approved lab.
SUB2	Assay was subcontracted to En Chem Green Bay WI Cert. #405132750.

En Chem Inc.

1241 Bellevue Street
Green Bay, WI 54302
920-469-2436
800-7-ENCHEM
Fax: 920-469-8827

Lab#:	TestGroupID:	Comment:
815855-002	GRO-S-ME	Early and late eluting peaks were present outside the window of analysis.
TANK #3; B-1 (7)		

- Analytical Report -

Project Name : FORMER SANDY'S SERVICE
 Project Number : 01-1116 Client : ENVIRONMENTAL TROUBLESHOOTERS IN
 Field ID : TANK #2; B-1 (7') Report Date : 11/29/01
 Lab Sample Number : 815855-001 Collection Date : 11/21/01
 WI DNR LAB ID : 405132750 Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	78.3				%		11/28/01	SM2540G	SM2540G	DJB

Organic Results

Preservation Date : 11/28/01
 DIESEL RANGE ORGANICS - SOIL Prep Method: WI MOD DRO Prep Date: 11/27/01 Analyst:

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	1900			91	mg/kg		11/27/01	WI MOD DRO
Blank spike	90.0			1.00	%recov		11/27/01	WI MOD DRO
Blank spike duplicate	91.0			1.00	% recov		11/27/01	WIMOD DRO
Blank	< 5.0			5.0	mg/kg		11/27/01	WIMOD DRO

Organic Results

PVOC + NAPHT - METHANOL PRESERVED SOIL Prep Method: SW846 5030B Prep Date: 11/28/01 Analyst: SMT

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	101				%Recov		11/28/01	SW846 M8021B
Benzene	< 1000	1000	2400		ug/kg	k	11/28/01	SW846 M8021B
Ethylbenzene	6900	1300	3100		ug/kg	k	11/28/01	SW846 M8021B
Methyl-tert-butyl-ether	< 1000	1000	2400		ug/kg	k	11/28/01	SW846 M8021B
Naphthalene	39000	1300	3100		ug/kg	k	11/28/01	SW846 M8021B
Toluene	< 1000	1000	2400		ug/kg	k	11/28/01	SW846 M8021B
1,3,5-Trimethylbenzene	20000	1300	3100		ug/kg	k	11/28/01	SW846 M8021B
1,2,4-Trimethylbenzene	58000	1300	3100		ug/kg	k	11/28/01	SW846 M8021B
Xylenes, -m, -p	20000	1300	3100		ug/kg	k	11/28/01	SW846 M8021B
Xylene, -o	11000	1300	3100		ug/kg	k	11/28/01	SW846 M8021B

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

- Analytical Report -

Project Name : FORMER SANDY'S SERVICE
 Project Number : 01-1116 Client : ENVIRONMENTAL TROUBLESHOOTERS IN
 Field ID : TANK #3; B-1 (7') Report Date : 11/29/01
 Lab Sample Number : 815855-002 Collection Date : 11/21/01
 WI DNR LAB ID : 405132750 Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	81.2				%		11/28/01	SM2540G	SM2540G	DJB

Organic Results

GASOLINE RANGE ORGANICS - SOIL/METHANOL Prep Method: Wi MOD GRO Prep Date: 11/28/01 Analyst: SMT

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	1800			120	mg/kg		11/28/01	WIMODGRO
Blank Spike	99			1.0	%Recov		11/28/01	Wi MOD GRO
Blank Spike Duplicate	100			1.00	%Recov		11/28/01	WIMOD GRO
Blank	< 2.5			2.5	mg/kg		11/28/01	Wi MODGRO

Organic Results

PVOC + NAPHT - METHANOL PRESERVED SOIL Prep Method: SW846 5030B Prep Date: 11/28/01 Analyst: SMT

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	100				%Recov		11/28/01	SW846 M8021B
Benzene	< 1000	1000	2400		ug/kg		11/28/01	SW846 M8021B
Ethylbenzene	9300	1200	2900		ug/kg		11/28/01	SW846 M8021B
Methyl-tert-butyl-ether	< 1000	1000	2400		ug/kg		11/28/01	SW846 M8021B
Naphthalene	43000	1200	2900		ug/kg		11/28/01	SW846 M8021B
Toluene	1300	1200	2900		ug/kg	Q	11/28/01	SW846 M8021B
1,3,5-Trimethylbenzene	25000	1200	2900		ug/kg		11/28/01	SW846 M8021B
1,2,4-Trimethylbenzene	68000	1200	2900		ug/kg		11/28/01	SW846 M8021B
Xylenes, -m, -p	27000	1200	2900		ug/kg		11/28/01	SW846 M8021B
Xylene, -o	14000	1200	2900		ug/kg		11/28/01	SW846 M8021B

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

- Analytical Report -

Project Name : FORMER SANDY'S SERVICE
 Project Number : 01-1116
 Field ID : MEOH BLANK
 Lab Sample Number : 815855-003
 WI DNR LAB ID : 405132750

Client : ENVIRONMENTAL TROUBLESHOOTERS IN
 Report Date : 11/29/01
 Collection Date : 11/21/01
 Matrix Type : METHANOL

Organic Results

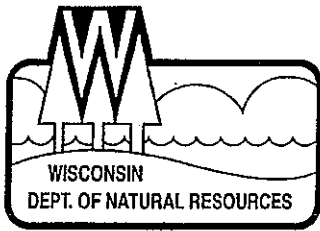
GASOLINE RANGE ORGANICS - METHANOL Prep Method: WiMOD GRO Prep Date: 11/28/01 Analyst: SMT

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2500			2500	ug/L		11/29/01	WiMOD GRO
Blank Spike	99			1.0	%Recov		11/29/01	WiMOD GRO
Blank Spike Duplicate	100			1.00	%Recov		11/29/01	WiMOD GRO
Blank	< 50			50	ug/L		11/29/01	WiMOD GRO

Organic Results

PVOC + NAPHT METHANOL Prep Method: SW846 5030B Prep Date: 11/28/01 Analyst: SMT

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	100				%Recov		11/29/01	SW846 M8021B
Benzene	< 25	25	60		ug/l		11/29/01	SW846 M8021B
Ethylbenzene	< 25	25	60		ug/l		11/29/01	SW846 M8021B
Methyl-tert-butyl-ether	< 25	25	60		ug/l		11/29/01	SW846 M8021B
Naphthalene	< 25	25	60		ug/l		11/29/01	SW846 M8021B
Toluene	< 25	25	60		ug/l		11/29/01	SW846 M8021B
1,3,5-Trimethylbenzene	< 25	25	60		ug/l		11/29/01	SW846 M8021B
1,2,4-Trimethylbenzene	< 25	25	60		ug/l		11/29/01	SW846 M8021B
Xylenes, -m, -p	< 25	25	60		ug/l		11/29/01	SW846 M8021B
Xylene, -o	< 25	25	60		ug/l		11/29/01	SW846 M8021B



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor
Darrell Bazzell, Secretary
William H. Smith, Regional Director

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

February 5, 2002

Sandy's Service
Attn: Ray Sandstrom
16569 S STH 35
Dairyland, WI 54830

Subject: Sandy's Service, 16569 STH 35 (Star Rt 3), Dairyland, WI
WDNR BRRTS # 03-16-286908

Dear Mr. Sandstrom:

On November 21, 2001, Amber Wallgren of Environmental Troubleshooters, notified the Wisconsin Department of Natural Resources (WDNR) that diesel and unleaded gasoline contamination had been detected at the site listed above.

Based on the information submitted to the WDNR, we believe you are responsible for restoring the environment at the referenced site under Section 292, Wisconsin Stats., known as the hazardous substances spills law.

This letter describes your legal responsibilities, explains what you need to do to investigate and clean up the contamination, and provides you with information about cleanups, environmental consultants, possible financial assistance, and working cooperatively with the WDNR and Department of Commerce (Commerce).

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative codes. 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 Code chapters NR 700 through NR 749 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 chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

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 neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and administrative codes, you should hire a professional environmental consultant who understands what needs to be done. These are the first three steps to take:

1. Within the next **30 days**, you must submit written verification (such as a letter from the consultant) that you have hired an environmental consultant.
2. Within the next **60 days**, your consultant must submit a workplan and schedule for the investigation. The consultant must follow the WDNR administrative codes and technical guidance documents. To facilitate prompt agency review of your reports, your consultant should use the site investigation and closure formats which are available on-line at www.dnr.state.wi.us.

Once an investigation has established the degree and extent of contamination involved at your site, your consultant will be able to determine whether Commerce or the WDNR has authority over the case.

3. Within 30 days of completion of the site investigation, you or your consultant must provide a brief report at least every 90 days per NR 724.13(3). Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. Should conditions at your site warrant, we may require more frequent contacts.
4. Sites where discharges to the environment have been reported are entered into the Bureau for Remediation and Redevelopment Tracking System (BRRTS), a version of which appears on the WDNR's internet site. You may view the information related to your site at any time (<http://www.dnr.state.wi.us/org/aw/rr/brrts>) and use the feedback system to alert us to any errors in the data.

If you want a formal response from the agency on a specific submittal, please be aware that a review fee is required in accordance with s. NR 749, Wis. Adm. Code. If a fee is not submitted with your reports, you should proceed under the advice of your consultant to complete the site investigation to maintain your compliance with the spills law and chs. NR 700 through NR 749. **Do not delay the investigation of your site by waiting for an agency response.** We have provided detailed technical guidance to environmental consultants. Your consultant is expected to know our technical procedures and administrative codes and should be able to answer your questions on meeting cleanup requirements.

All correspondence regarding this site should be sent to:

Danielle Lancour
Remediation and Redevelopment Program

Wisconsin Department of Natural Resources
107 Sutliff Ave.
Rhinelander, WI 54501

Unless otherwise requested, please send only one copy of plans and reports. To speed processing, correspondence should reference the BRRTS and FID numbers (if assigned) shown at the top of this letter.

Additional Information for Site Owners:

Information to help you select a consultant, and materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method are enclosed. In addition, *Fact Sheet 2, Voluntary Party Remediation and Exemption from Liability* provides information on obtaining the protection of limited liability under s. 292.15, Stats.

Financial Assistance:

Reimbursement from the Petroleum Environmental Cleanup Fund (PECFA) is available for some of the costs of cleaning up contamination from eligible petroleum storage tanks. Please refer to the enclosed information sheet entitled "*Information About PECFA*" for more information on eligibility and regulations for this program. For more information on the PECFA program, please call the Department of Commerce at 608-266-2424 or visit their web site at: <http://www.commerce.state.wi.us/COM/Com-Petroleum.html>.

Funding is also available for cleanup at some drycleaning sites. Call Jim Hosch at (715) 392-0802 for more information on eligibility or visit the RR web site. <http://www.dnr.state.wi.us/org/aw/rr>. You may also contact this person for all other questions regarding this letter.

Thank you for your cooperation.

Sincerely,



Danielle Lancour
Bureau for Remediation & Redevelopment

cc: Amber Wallgren, Environmental Troubleshooters

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

APPENDIX F/HEALTH AND SAFETY PLAN

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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 #: C2458

Site Name: Sandy's Service (Former)
Site address: 16571 State Highway 35
Dairyland, WI 54830

County: Douglas

WDNR Contact: Ralph Smith
101 S Webster Street
Madison, WI 53707
(608) 261-6543

WDNR BRRTS Case #: 03-16-286908

Purpose of Activity (Check all that apply)

Petroleum Release Investigation	<input checked="" type="checkbox"/>
Ag Chemical Release Investigation	<input type="checkbox"/>
Install Soil Borings/Monitoring Wells	<input checked="" type="checkbox"/>
Tank/Piping Removal	<input type="checkbox"/>
Tank/Piping Closure Assessment	<input type="checkbox"/>
Phase 1/Phase 2 Environmental Site Assessment	<input type="checkbox"/>
Install Remedial System	<input type="checkbox"/>
Other	<input type="checkbox"/>

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

Tank Information

Tank Size (Gallons)	Contents	Age
1,000	Unleaded Gasoline	Removed (2001)
560	Unleaded Gasoline	Removed (2001)
560	Diesel	Removed (2001)
560	Diesel	Removed (2001)

Potential Health and Safety Hazards (Check all that apply)

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

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

	<u>Team Member</u>	<u>Responsibility</u>
1.	Ron Anderson	Senior Project Manager
2.	Jason Powell	Site Project Manager
3.	Eric Dahl	Hydrogeologist
4.	Jon Jensen	Staff Scientist
5.	Matt Michalski	Hydrogeologist
6.	Bryce Kujawa	Hydrogeologist

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

Method to Control Potential Health and Safety Hazards

Monitoring Instruments

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

Action Levels

0-10% LEL (No Explosion Hazard)
Oxygen Deficient (Less Than 21%)
Oxygen Deficient (Less Than 19%)

Action

None
Notify Health & Safety Officer
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
Sandy's Service (Former)**

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 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

X

Water Supply

Contingency Planning

<u>Emergency Contacts</u>	<u>Phone Number</u>
Ambulance: Dairyland	911
Hospital Emergency Room: Spooner Health System	(715) 635-2111
Poison Control Center: Milwaukee	(800) 222-1222
Police: Douglas County	911
Fire Department: Dairyland	911
Hazardous Waste Response Center: Wisconsin	(800) 943-0003
EPA	(800) 424-8802

Location Address: 16571 State Highway 35, Dairyland, WI 54830

Site Investigation Field Procedures Workplan - METCO Sandy's Service (Former)

Hospital: Spooner Health System
819 Ash Street
Spooner, WI 54801
(715) 635-2111

Emergency Route:

Head southwest on WI-35 S toward School Rd	6.8 mi
Turn left onto Springbrook Trail	0.4 mi
Turn right onto Riverside Cutoff Rd	2.5 mi
Turn left onto WI-77 E	16.3 mi
Turn right onto Co Hwy K	15.7 mi
Turn right onto River St	0.3 mi
Turn right onto Ash St	0.4 mi

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: Ray Sandstrom		(612) 801-9747

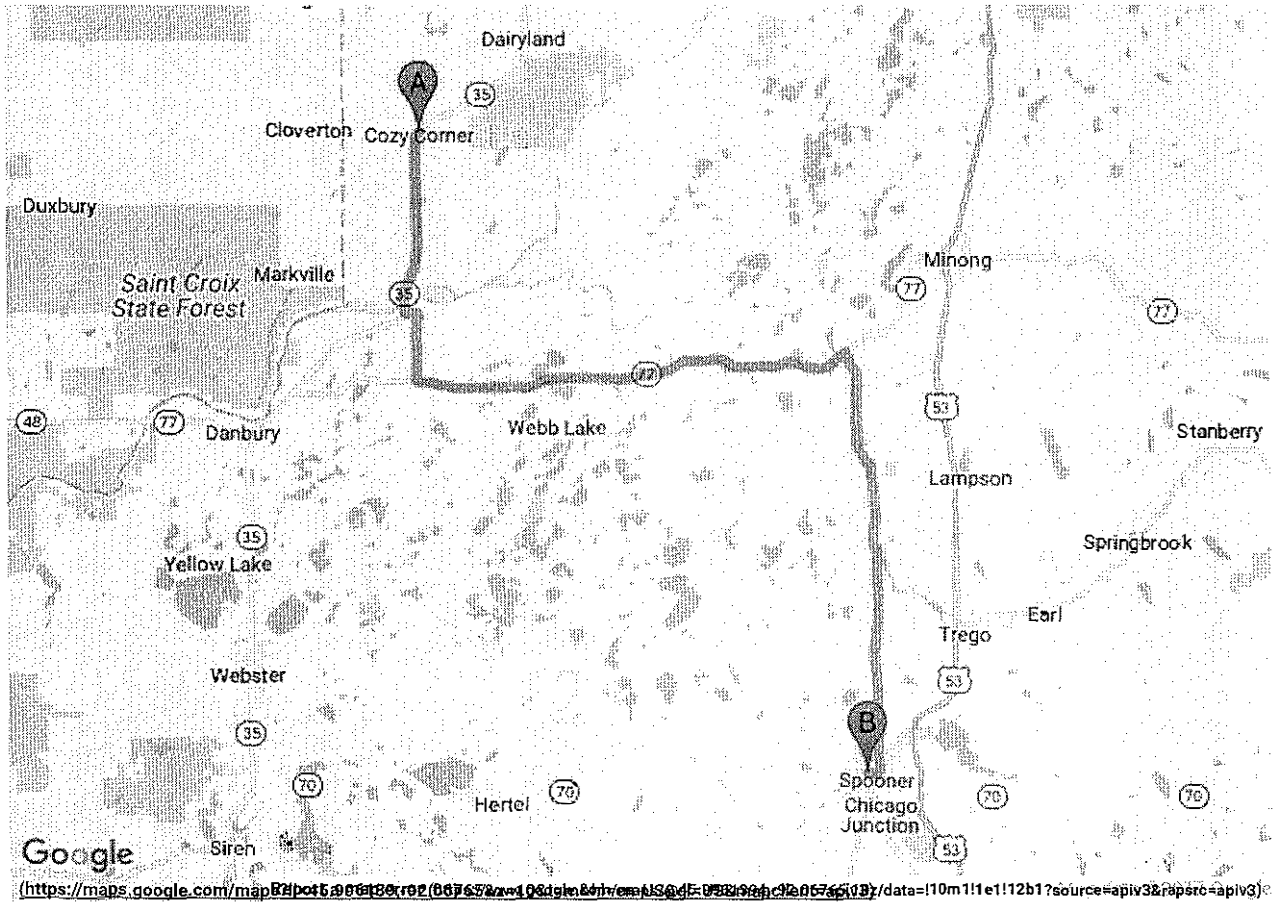
Daily Safety Plan Check

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

US Hospital Finder (I)™: Directions

From: 16571 State Highway 35, Dairyland, WI

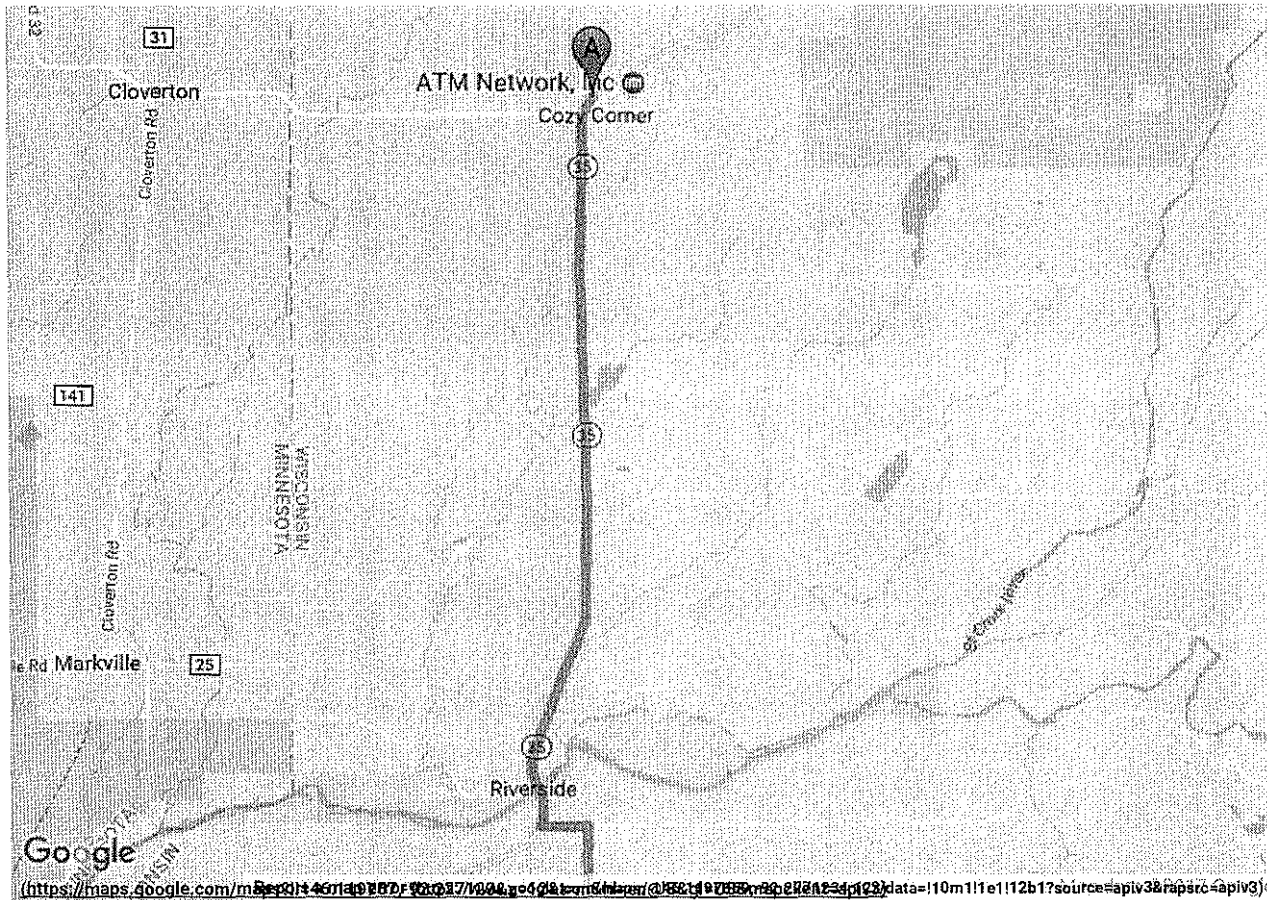
To: Spooner Health System 819 Ash Street Spooner, WI 54801-1299



US Hospital Finder (/)TM: Directions

From: 16571 State Highway 35, Dairyland, WI

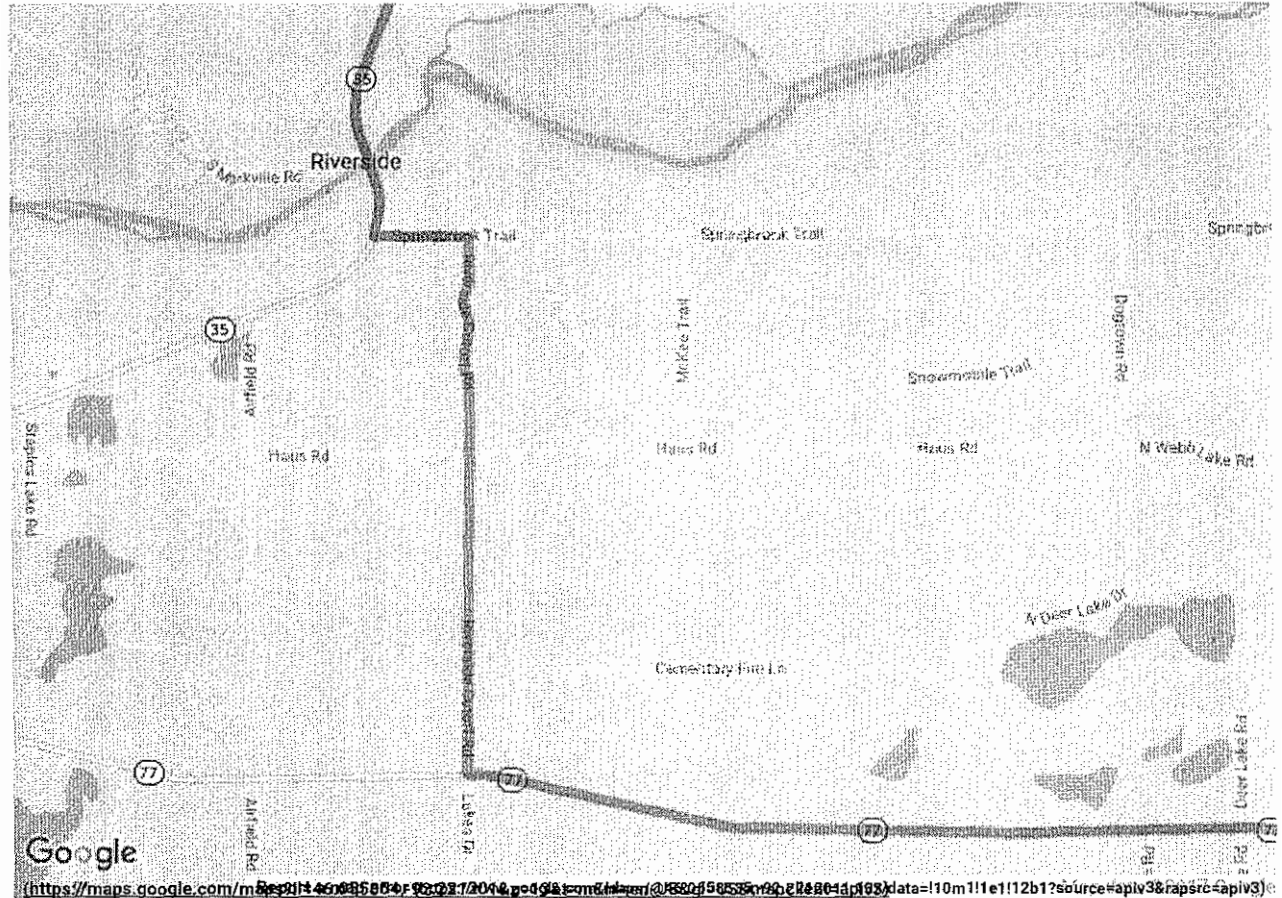
To: Spooner Health System 819 Ash Street Spooner, WI 54801-1299



US Hospital Finder (/)™: Directions

From: 16571 State Highway 35, Dairyland, WI

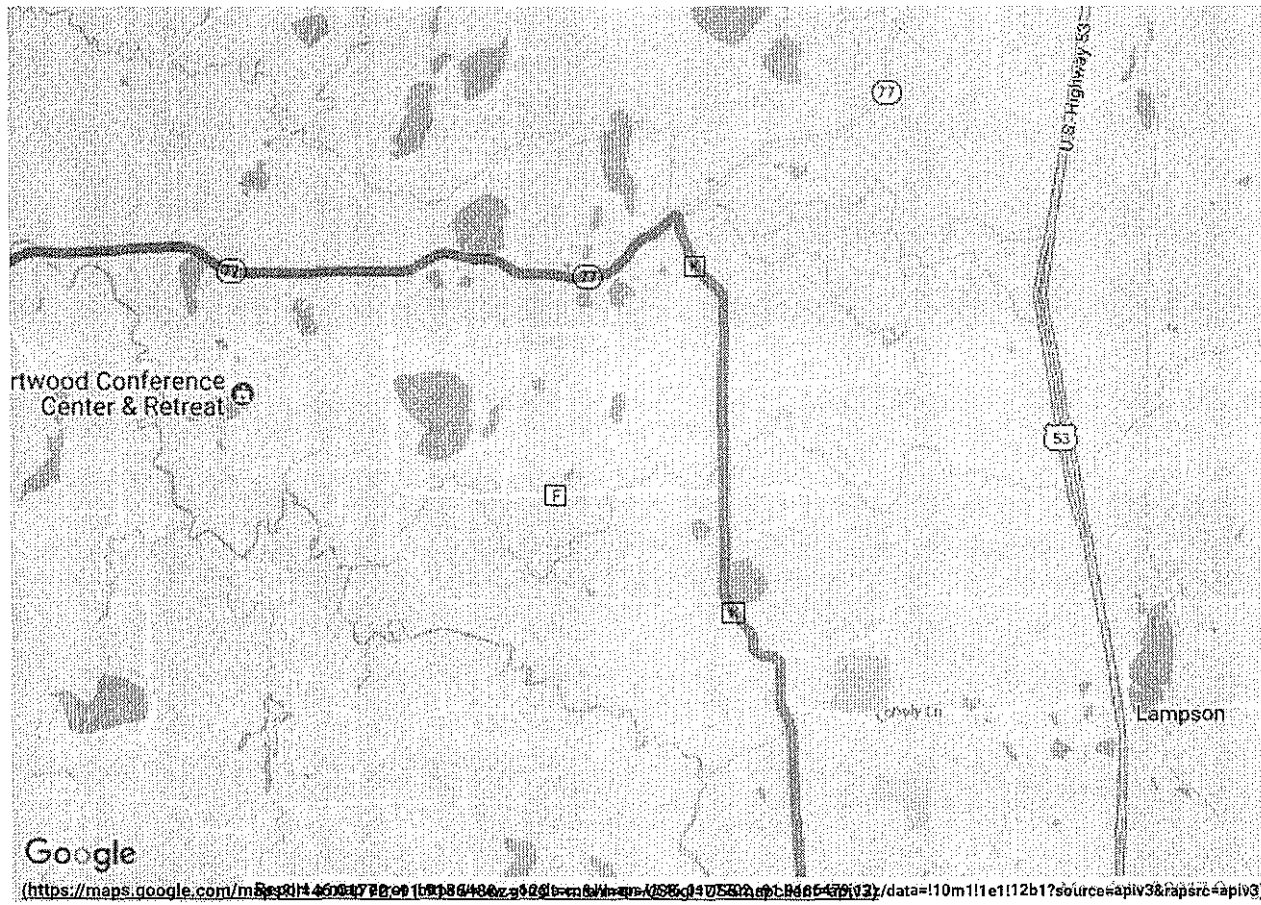
To: Spooner Health System 819 Ash Street Spooner, WI 54801-1299



US Hospital Finder (U)TM: Directions

From: 16571 State Highway 35, Dairyland, WI

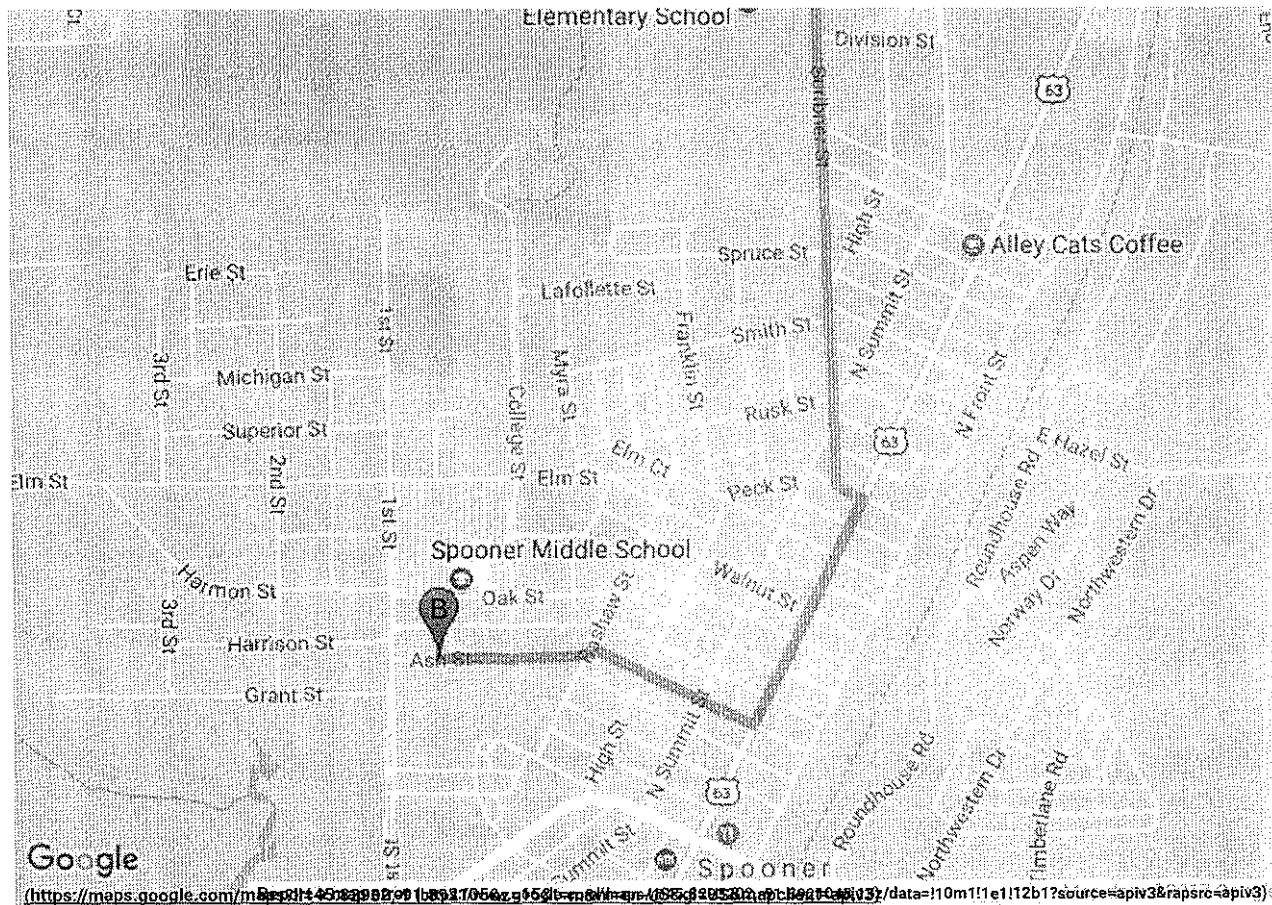
To: Spooner Health System 819 Ash Street Spooner, WI 54801-1299



US Hospital Finder (/)™: Directions

From: 16571 State Highway 35, Dairyland, WI

To: Spooner Health System 819 Ash Street Spooner, WI 54801-1299



**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

APPENDIX G/QUALIFICATIONS

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

Matthew C. Michalski

Professional Title

- Hydrogeologist

Credentials

- Registered through the Wisconsin Department of Safety and Professional Services as a PECFA consultant (#1261443).
- Member of the Wisconsin Groundwater Association
- Member of the Minnesota Groundwater Association
- Member of the National Groundwater Association
- Member of the American Institute of Professional Geologist
- Member of the Geological Society of America

Education

Includes B.S. in Geology with an emphasis in Hydrogeology and Water Chemistry from the University of Wisconsin-Eau Claire, completion of Western Michigan University's Hydrogeology Field Camp, and a B.S. In Geography from the University of Wisconsin-La Crosse.. Applicable courses successfully completed include Hydrogeology, Contaminant Hydrogeology, Aqueous Geochemistry, Geomorphology and Aerial Photography interpretation, Sedimentology and Stratigraphy, Structural Geology, Mineralogy and Petrology, Hazardous Waste Operation and Emergency Response, Surface Geophysics, Principles and Practices of Groundwater Sampling and Monitoring, Principles and Practices of Aquifer Testing, Principles of Well Drilling and Installation, Remediation Design and Implementation, Water Resources, Environmental Hazards and Land Use, and Advanced Map Design.

Post-Graduate Education

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

Work Experience

With METCO since May 2016 as a Hydrogeologist and from August 2012 to August 2014 as a Staff scientist. Duties have included: soil and groundwater sampling, 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), and operation and maintenance of remedial systems, site mapping, data reduction and analysis, and reporting.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

Bryce 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.

**Site Investigation Field Procedures Workplan - METCO
Sandy's Service (Former)**

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