LETTER OF TRANSMITTAL

Northern Environmental℠
Hydrologists • Engineers • Geologists

954 Circle Drive
Green Bay, Wisconsin 54304

920-592-8400
1-800-854-0606
Fax 920-592-8444

DATE	PROJECT NO.
3-19-99	KJP 03-1408-0663

ATTENTION

RE: Former V & L Stripping, Inc.
Green Bay, WI
LUST ID # 03-05-174885

TO: Kristin Nell
WDNR - Northeast Region

WE ARE SENDING YOU

- [x] Attached
- [ ] Under separate cover
- [ ] Shop Drawings
- [ ] Specifications
- [ ] Plans
- [ ] Copy of letter
- [ ] Samples
- [ ] Change order
- [ ] _____

COPIES	DESCRIPTION
1	Site Investigation of a Petroleum Release

THESE ARE TRANSMITTED (see code)

A. For Approval
B. For Your Use
C. As Requested
D. For Review and Comment
E. For Bids Due _____ 19 ____
F. No Exceptions Taken
G. Make Noted Corrections
H. Amend & Resubmit
I. _____
J. Resubmit _____ Copies for Review
K. Submit _____ Copies for Distribution
L. Return _____ Corrected Prints
M. Review and Sign _____

REMARKS: Kristin,
Enclosed is a Site Investigation report for former V & L Stripping, Inc., Green Bay, Wisconsin for your review. We will be submitting a case closure request for the petroleum release shortly.
Thanks,

COPY TO: _____

SIGNED: Nicole L. LaMent

RECEIVED
MAR 2 2 1999
LMD SOLID WASTE

SITE INVESTIGATION OF A PETROLEUM RELEASE

FORMER V&L STRIPPING, INC.
864 MATHER STREET
GREEN BAY, WISCONSIN

(LUST ID #03-05-174885)
(PECFA CLAIM #54303-3681-64)

March 19, 1999

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SITE INVESTIGATION OF A PETROLEUM RELEASE

FORMER V&L STRIPPING, INC.
864 MATHER STREET
GREEN BAY, WISCONSIN

(LUST ID #03-05-174885)
(PECFA CLAIM #54303-3681-64)

March 19, 1999

Prepared For:

Mr. Kenneth Juza
1478 Norfield Road
Suamico, Wisconsin 54173

Prepared By:

Northern Environmental Technologies, Incorporated
954 Circle Drive
Green Bay, Wisconsin 54304-5537

Project Number: KJP03-1408-0663

Nicole L. LaPlant
Geologist

Lynelle P. Caine
Project Manager

NLL/vej

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2.0 INTRODUCTION AND BACKGROUND

2.1 Site Location

Northern Environmental Technologies, Incorporated (Northern Environmental) has completed a site investigation for a petroleum release identified at the Former V&L Stripping, Inc., 864 Mather Street, Green Bay, Wisconsin (the Site). The Site is in the northwest half of French Long Lot Section 1, Township 24 North, Range 20 East (44 degrees, 31 minutes, 37 seconds north latitude and 88 degrees, 1 minute, 27 seconds west longitude) in the City of Green Bay, Brown County, Wisconsin. The Site location is shown in Figure 1 (United States Geological Survey [USGS], 1992).

2.2 Background

The Site has been vacant since February 1999. A furniture repair business, V&L Stripping, Inc., previously occupied the Site. Prior to being a furniture repair business, One Hour Martinizing Dry Cleaning Service occupied the Site. According to historical records of the City of Green Bay, the Site was a gasoline station from the 1930s through the 1960s. Based on Sanborn Fire Insurance Maps from the 1930s, it appears there were three underground storage tanks (USTs) in operation at the Site. The UST system consisted of three 1,000-gallon leaded gasoline USTs, associated piping, and dispensers. It is believed the UST system was subsequently removed from the Site after the gasoline station ceased operation.

On October 21, 1997, Northern Environmental conducted a limited Phase II Environmental Site Assessment at the Site to ascertain the presence or absence of petroleum contamination associated with the former UST system. Petroleum odors and elevated photoionization detector (PID) readings were detected in soil samples collected from a soil boring advanced near the location of the former USTs. Laboratory analysis of the soil sample detected 30 milligrams per kilogram (mg/kg) gasoline range organics (GRO). Laboratory analysis of a water sample collected from the same boring detected a benzene concentration of 0.7 micrograms per liter (μg/l) in the ground water at the Site. Based on laboratory analytical results, a release was reported to the Wisconsin Department of Natural Resources (WDNR) on October 29, 1997. Subsequently, the WDNR issued a release notification letter directing that appropriate investigative and remedial activities be performed at the Site to restore the environment. A leaking underground storage tank (LUST) identification number (LUST ID#03-05-174885) was assigned to the Site. A site layout with the approximate location of the UST system are shown in Figure 2.

On December 5, 1997, Mr. Kenneth Juza retained Northern Environmental to perform a site investigation to determine the nature and extent of the petroleum release. A site investigation workplan was submitted to the WDNR on January 16, 1998, detailing the proposed investigative activities (Northern Environmental, 1998). Included in the workplan were the results of site scoping, required by section NR 716.07, Wisconsin Administrative Code, to confirm the scope of the investigation was appropriate for the complexity of the site.

This report presents and interprets the results of the site investigation conducted to evaluate the petroleum release. The investigation was designed to fulfill WDNR and Wisconsin Department of Commerce requirements and to determine the magnitude and extent of released petroleum identified at the Site. This report describes the methods used to conduct the investigation, presents and interprets the data collected, and discusses conclusions and recommendations. A list of project contacts is included as Appendix A.

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3.0 METHODS OF INVESTIGATION

3.1 Soil Investigation

Northern Environmental personnel observed the advancement of four soil borings at the Site to evaluate the vertical and lateral extent of the petroleum release. The borings were drilled in conformance with American Society for Testing and Materials (ASTM) Standard Method 1452. The locations of the soil borings are illustrated in Figure 3.

On August 26, 1998, four soil borings (B100 through B400) were advanced by Environmental Drilling Services (EDS) using a drill rig equipped with hollow-stem augers (HSA) to maximum depths of 14.5 feet below grade (fbg). The purpose of the soil borings was to collect soil samples to determine the magnitude and extent of unsaturated soil impacted by the petroleum release and to install ground-water monitoring wells.

All downhole drilling and sampling equipment was cleaned before use on site and was cleaned with a high-pressure washer between borings. No lubricants or solvents were used on the downhole drilling or sampling equipment. Sampling devices were washed with a detergent solution and double-rinsed between sampling intervals and each boring.

Soil samples were collected in the borings at 2.5-foot intervals from a 24-inch-long split-barrel sampling device using the standard split-barrel sampling techniques from ASTM Standard Method 1586. Each soil sample was described in the field by Northern Environmental personnel. Soil boring logs were prepared on WDNR forms in general conformance with ASTM Standard Method 2488. The logs include information on soil type (USCS Classification), geologic origin, color (Munsell notation), relative moisture content, texture, odor, and the presence of volatile constituents, as indicated by PID responses. The soil boring logs are included as Appendix B1. Soil cuttings from all of the soil borings were placed in 55-gallon metal drums and stored on site pending disposal arrangements.

The soil samples collected during drilling were properly containerized for field-screening and laboratory analysis. Soil sample collection, handling, and field-screening procedures followed WDNR guidance (WDNR, 1992). Field-screening was performed using a Thermal Environmental Instruments, Inc. Model 580S PID outfitted with a 10.6 eV lamp and calibrated daily for direct response to isobutylene. The soil samples collected above the apparent water table that exhibited the highest field-screening results were selected for laboratory analysis.

The soil samples selected for laboratory analysis were placed on ice and transported under chain-of-custody protocol to U.S. Analytical Laboratory (WDNR Certification #445027660) in Kimberly, Wisconsin. The soil samples were analyzed for combinations of volatile organic compounds (VOCs) (EPA Method SW846 8021), GRO (WDNR Modified Method), and total lead (EPA Method SW846 6010). One soil sample, collected from B300, was analyzed for petroleum volatile organic compounds (PVOCs) (EPA Method SW846 8020).

3.2 Ground-Water Investigation

On August 26, 1998, EDS personnel constructed four ground-water monitoring wells (MW100 through MW400) within the respective soil borings (B100 through B400) to evaluate ground-water quality. Due to slow recharge, the wells were developed and sampled between August 26 and August 31, 1998. The monitoring well locations are shown in Figure 4.

Temperature, pH, and specific conductance readings were recorded during the development of each well. Ground-water elevation data was collected from the monitoring wells on four occasions between August 28 and October 29, 1998. Bailer recovery tests were performed at MW200 and MW400 on August 31, 1998. To evaluate petroleum contaminant concentration trends, a second round of ground-water samples was collected on October 29, 1998.

Well construction and development was conducted in accordance with NR 141, Wis. Adm. Code. Ground-water sampling was conducted in accordance with WDNR guidance (WDNR, 1996). WDNR Monitoring Well Construction and Development Forms are included as Appendix B2, and the WDNR Monitoring Well Information Form is included as Appendix B3.

All ground-water samples were placed on ice and transported under chain-of-custody protocol to U.S. Analytical Laboratory for analysis. Ground-water samples collected on August 31, 1998, were analyzed for VOCs (EPA Method SW846 8021), GRO (WDNR Modified Method), and dissolved lead (EPA Method SW846 7421). Ground-water samples collected on October 29, 1998, were analyzed for PVOCs (EPA Method SW846 8260).

To evaluate the geochemistry of ground water and the potential for natural attenuation of petroleum compounds at the Site, ground-water samples collected on October 29, 1998, were also field-analyzed for inorganic parameters. The inorganic parameters analyzed include temperature, pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), high-range nitrate, manganese, ferrous iron, and sulfate. HACH Company colorimetric field test kits were used to test ground-water samples for nitrate, manganese II, ferrous iron, and sulfate. An Oakton Brand ORP Pocket Probe was used to measure ORP in the ground-water samples. A YSI Model 55 Handheld DO Meter was used to measure DO in each monitoring well. The manufacturer's instructions on calibration and use of instruments and test kits were followed for each test.

4.0 APPLICABLE CLEANUP CRITERIA

The Wis. Adm. Code establishes soil cleanup standards for several petroleum-related compounds. These standards, or residual contaminant levels (RCLs), are presented in NR 720, Wis. Adm. Code. Under NR 720, Wis. Adm. Code, soil cleanup standards for GRO and diesel range organics have been established at 100 mg/kg for permeable soils and 250 mg/kg for less permeable soils. Permeable soils are described as soils having a saturated hydraulic conductivity greater than 1×10^{-6} centimeters per second (cm/sec). Less permeable soils are described as soils having a saturated hydraulic conductivity less than 1×10^{-6} cm/sec. By these standards, the silty sand and clay found at the Site are permeable soils.

Generic RCLs have also been established for benzene, toluene, ethylbenzene, xylene, and 1,2-dichloroethane in soil. The RCLs are 5.5, 1,500, 2,900, 4,100, and 4.9 micrograms per kilogram, respectively. Generic RCLs are established to protect ground-water quality in typical Wisconsin environments and are generally conservative.

Site-specific cleanup standards can be established using contaminant fate and transport models, leach tests, or any WDNR-approved method. These methods can demonstrate that contaminant concentrations several orders of magnitude higher than the generic RCLs can be left in place and be protective of ground-water quality. Because soil in the vadose zone at the Site does not contain significant concentrations of petroleum compounds, Northern Environmental determined that the additional cost of modeling or leach testing to establish site-specific standards was not necessary.

Water quality standards for ground water are established in NR 140, Wis. Adm. Code. A preventive action limit (PAL) and enforcement standard (ES) are established for some of the polynuclear aromatic hydrocarbons and many VOCs. If the concentration of any compound exceeds its PAL, a wide range of actions may be required, ranging from no action to active remediation to restoration of ground-water quality. If the concentration of any compound exceeds the ES, some action must be taken. This ranges from monitoring to active remediation, depending on characteristics of the contaminants and the site.

5.0 RESULTS OF INVESTIGATION

5.1 Hydrogeology

The Site is in an area once occupied by the western half of the Green Bay Lobe of the Laurentides Ice Sheet. Based on regional and local information from *Pleistocene Geology of Brown County*, reddish-brown loam glacial till of the Middle Inlet Member of the Kewaunee Formation is the surface unit in western Brown County and is discontinuously present beneath the more recent lacustrine sediment in the Fox River lowland and along the western side of Green Bay (Need, 1985). Northern Environmental identified one distinct stratigraphic unit in the upper 14.5 feet of sediment at the Site. The unit may be described as a Lacustrine Offshore Deposit. It consists of a yellowish-brown lacustrine sand, silty sand, and clay. This unit is well stratified with smooth, nearly level topography and was deposited in Lake Michigan when it stood at the Nipissing beach level in Middle Holocene time (Need, 1985). A geologic cross-section showing site stratigraphy is included as Figure 5.

Based on regional information gathered from the *Ground-Water Quality Atlas of Wisconsin*, two aquifers are present at the Site: a shallow glacial drift aquifer and an underlying bedrock aquifer (USGS, 1981). The glacial drift aquifer consists of saturated coarse-grained glacial sediment ranging in thickness from 0 to 200 feet. The underlying bedrock aquifer consists of the St. Peter Sandstone, dolomite of the Sinnipee Group, and Cambrian-aged sandstone. Ground water in the glacial drift aquifer generally moves from areas of higher elevation to areas of lower elevation. A possible discharge area for the glacial drift aquifer is the Fox River, approximately three-quarters of a mile southeast of the Site. However, local variations in ground-water flow may exist within the unconsolidated materials due to site-specific factors, such as fractures in the unconsolidated materials and manmade disturbances (utility lines, fill, etc.). Potable water for the Site is supplied by the City of Green Bay's municipal distribution system, deriving water from Lake Michigan and a series of ground-water production wells.

To measure the shallow ground-water flow direction and estimated horizontal hydraulic gradients, water level measurements were taken at the ground-water monitoring wells. Water levels were found to stabilize between 7.5 and 8.5 fbg at the Site. Using data collected on October 29, 1998, the shallow ground-water flow direction is to the south with a horizontal hydraulic gradient of 0.001 feet per foot. The ground-water elevation data is included in Table 1. The shallow ground-water flow direction is shown in Figure 6.

To determine the hydraulic conductivity, bailer recovery tests were performed on monitoring wells MW200 and MW400. Using the Bouwer and Rice Method, an average hydraulic conductivity of 3.9×10^{-5} cm/sec was measured for the Site. Based on the hydraulic conductivity, horizontal hydraulic gradient, and an assumed effective porosity of 20 percent, the shallow ground-water velocity is approximately 0.20 feet per year. The results of the bailer recovery tests are included as Appendix C.

5.2 Extent of Petroleum Compounds in Soil

Field screening of soil samples produced PID responses ranging from 0 to 187 instrument units as isobutylene. The highest PID responses were produced from saturated samples collected from B100 (completed north of the former dispenser island location) and B300 (completed in the vicinity of the former USTs). Field-screening results of the soil samples collected from borings B200 and B400 did not contain significant volatile vapor concentrations. The field-screening results are presented in Table 2.

Laboratory analysis detected low levels of trimethylbenzenes in a soil sample collected from 5 to 7 fbg in B300. No petroleum compounds were detected in any of the other soil borings at the Site. In addition to the discovery of trimethylbenzenes in B300, significant concentrations of tetrachloroethene were also detected in the soil samples collected from B100 and B200.

Based on the soil sampling results, the extent of petroleum compounds in the soil has been adequately characterized and defined. No concentrations of petroleum compounds in excess of NR 720, Wis. Adm. Code RCLs were detected in the soil at the Site. The laboratory analytical results of the soil sampling are summarized in Table 3. Copies of the laboratory reports and chain-of-custody forms are included as Appendix D1.

5.3 Extent of Petroleum Compounds in Ground Water

Ground-water monitoring wells were installed in the vicinity of the former UST system to define the degree and extent of the petroleum release in ground water and to provide suitable sampling points for natural attenuation monitoring. During the initial round of ground-water sampling on August 31, 1998, laboratory analysis detected concentrations of benzene and 1,2-dichloroethane (1,2-DCA) in excess of NR 140, Wis. Adm. Code PAL in MW200, in the vicinity of the former USTs. Concentrations of GRO were also detected in all four of the monitoring wells at the Site. No other petroleum-related compounds were detected in any of the wells at the Site. In addition to the detection of petroleum compounds, laboratory analysis detected concentrations of several halogenated compounds in excess of NR 140, Wis. Adm. Code PAL and/or ES in each of the monitoring wells.

A second round of ground-water samples was collected on October 29, 1998, from the Site to further evaluate petroleum contaminant concentration trends. No concentrations of PVOCs were detected above laboratory detection limits in any of the monitoring wells during the October 1998 sampling event. The laboratory results of the ground-water samples are summarized in Table 4. Copies of the laboratory analytical reports are included as Appendix D2.

To evaluate the geochemistry of the ground water, ground-water samples collected on October 29, 1998, were also field-analyzed for inorganic parameters. The sampling results indicated that electron acceptors are available for intrinsic biodegradation of petroleum compounds in

ground water at the Site. Aerobic bacteria can effectively degrade dissolved petroleum when DO concentrations are greater than 0.5 milligrams per liter (mg/l) (Wiedemeier, 1995). Typically, when DO concentrations are below 0.5 mg/l, anaerobic bacteria can degrade dissolved petroleum compounds. DO concentrations in the monitoring wells at the Site within the ground-water contaminant plume range from 6.88 to 0.75 mg/l, indicating sufficient oxygen is available for aerobic bacteria to degrade petroleum compounds in groundwater. Results of inorganic ground-water quality data are included in Table 5.

Based on the results of ground-water sampling, the extent of petroleum compounds in ground water has been adequately characterized and defined. Concentrations of petroleum compounds that were initially detected in the area of the former UST system have decreased to below the PAL. The decrease in petroleum contaminant concentrations indicates that intrinsic bioremediation may be effectively remediating gasoline compounds in ground water. The magnitude and extent of the halogenated compounds in ground water at the Site have not been defined. Further investigation of the halogenated compounds will be completed at a later date.

5.4 Contaminant Sources and Exposure Pathways

The source of the released petroleum identified during the site investigation is the former UST system. Since petroleum compounds above RCLs were not detected in unsaturated soil near the former UST system, it appears the USTs may have released the petroleum directly into the capillary fringe or ground water. At the water table, petroleum compounds were further spread by the ground-water flow and ground-water elevation fluctuations. A water line trench was identified as a potential pathway for contaminant migration. To evaluate if petroleum compounds in the soil and ground water extended to the utility trench, Northern Environmental advanced soil boring B200, which was completed as MW200. Based on soil and ground-water sampling results, petroleum compounds do not appear to extend to the utility trench.

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6.0 ENVIRONMENTAL FACTORS

In accordance with COMM 47.337, Wis. Adm. Code, the scope of a site investigation shall include determining the presence of the following environmental factors: (1) documented expansion of plume margin; (2) verified contaminant concentrations in a private or public potable well that exceeds the PAL established under Chapter 160, Stats.; (3) contamination within bedrock or within 1 meter of bedrock; (4) petroleum product that is not in the dissolved phase is present with a thickness of 0.01 feet or more and verified by more than one sampling event; and (5) documented contamination discharges to a surface water or wetland.

Northern Environmental has determined that none of the environmental factors listed above are present at the Site based on the following facts:

1) Based on the ground-water laboratory analytical results, it appears the contaminant plume is not expanding. Concentrations of petroleum compounds at the Site have decreased to below the PAL.

2) There is not a private well on site, and the Site is not in the vicinity of a public potable well. Potable water for the Site is supplied by the City of Green Bay municipal distribution system.

3) According to the *Depth to Bedrock of Wisconsin* map, bedrock is greater than 50 fbg (Trotta, 1973).

4) Free-phase gasoline was not observed in any well during the site investigation.

5) The contaminant plume has been adequately defined, and there are no surface water or wetland areas within the plume margins.

7.0 CONCLUSIONS

The investigation has adequately characterized and defined the extent of soil and ground water impacted by the petroleum release at the Site. Petroleum compounds in excess of NR 720, Wis. Adm. Code RCLs were not detected in unsaturated soil at the Site. Petroleum compounds in the ground water have decreased to concentrations below NR 140, Wis. Adm. Code PALs and do not extend off site. During the site investigation, halogenated compounds were also detected in unsaturated soil and ground water at the Site. Halogenated compounds in excess of the PAL and/or ES were identified in each monitoring well. Further investigation of halogenated compounds will be completed at a later date.

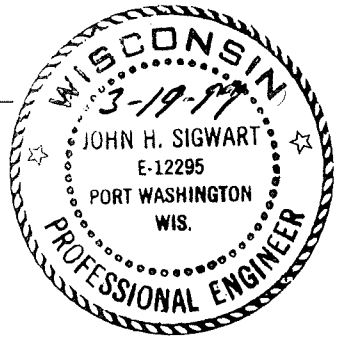
Because petroleum compounds in excess of the RCLs were not detected in unsaturated soil at the Site, Northern Environmental recommends no further soil investigation with regard to the petroleum release. In addition, a comparison of the results from two rounds of ground-water sampling at the Site indicate that petroleum compound concentrations in ground water at the Site do not extend off site and have decreased to below the PAL. As a result, Northern Environmental believes no further action is necessary to address petroleum-impacted ground water and recommends case closure under NR 726, Wis. Adm. Code.

The results of this study are based on interpretation of the information available to Northern Environmental. Northern Environmental has assumed the information provided by the cited references is complete and correct. Northern Environmental does not warrant that this report represents an exhaustive study of all possible environmental concerns potentially associated with the Site. However, the items investigated as part of this study do represent the most likely sources of environmental concerns associated with the release and are, consequently, believed to adequately address the responsible party's needs at this time.

8.0 PROFESSIONAL CERTIFICATIONS

I, John H. Sigwart, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

John H. Sigwart, PE, #E-12295
Director of Engineering



I, Lynelle P. Caine, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Lynelle P. Caine
Project Manager

3-19-99
Date

9.0 REFERENCES

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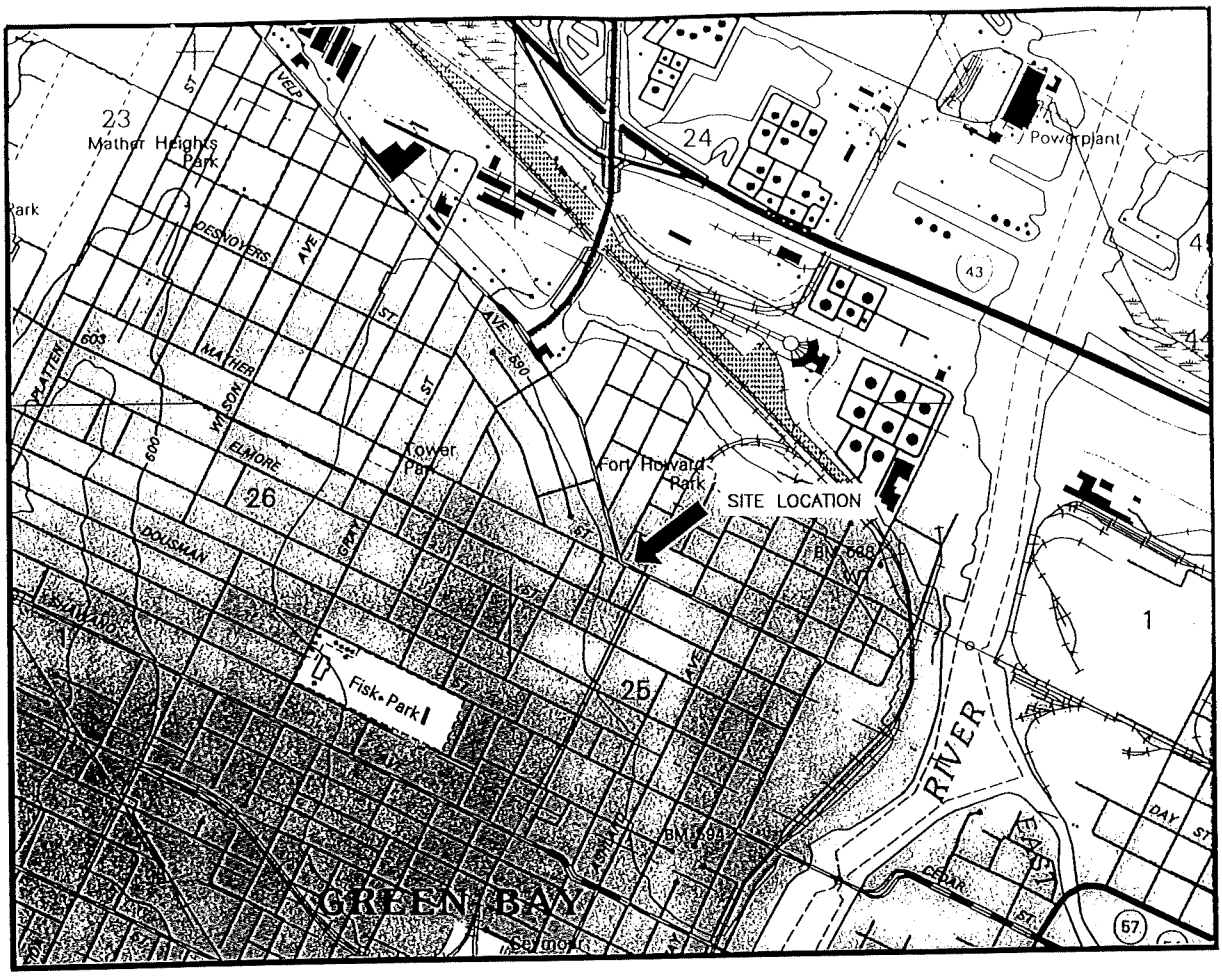

SCALE IN FEET

1" = 2000'

0 1000 2000 3000 4000 5000 6000 7000 8000

N

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

BASE MAP SOURCE: USGS GREEN BAY WEST, WISCONSIN 7.5 MINUTE QUADRANGLE (REVISED 1992)

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FIGURE 1
SITE LOCATION AND LOCAL TOPOGRAPHY
FORMER V & L STRIPPING INC.
GREEN BAY, WISCONSIN

FOR: MR. KENNETH JUZA

Northern Environmental℠
Hydrologists · Engineers · Geologists

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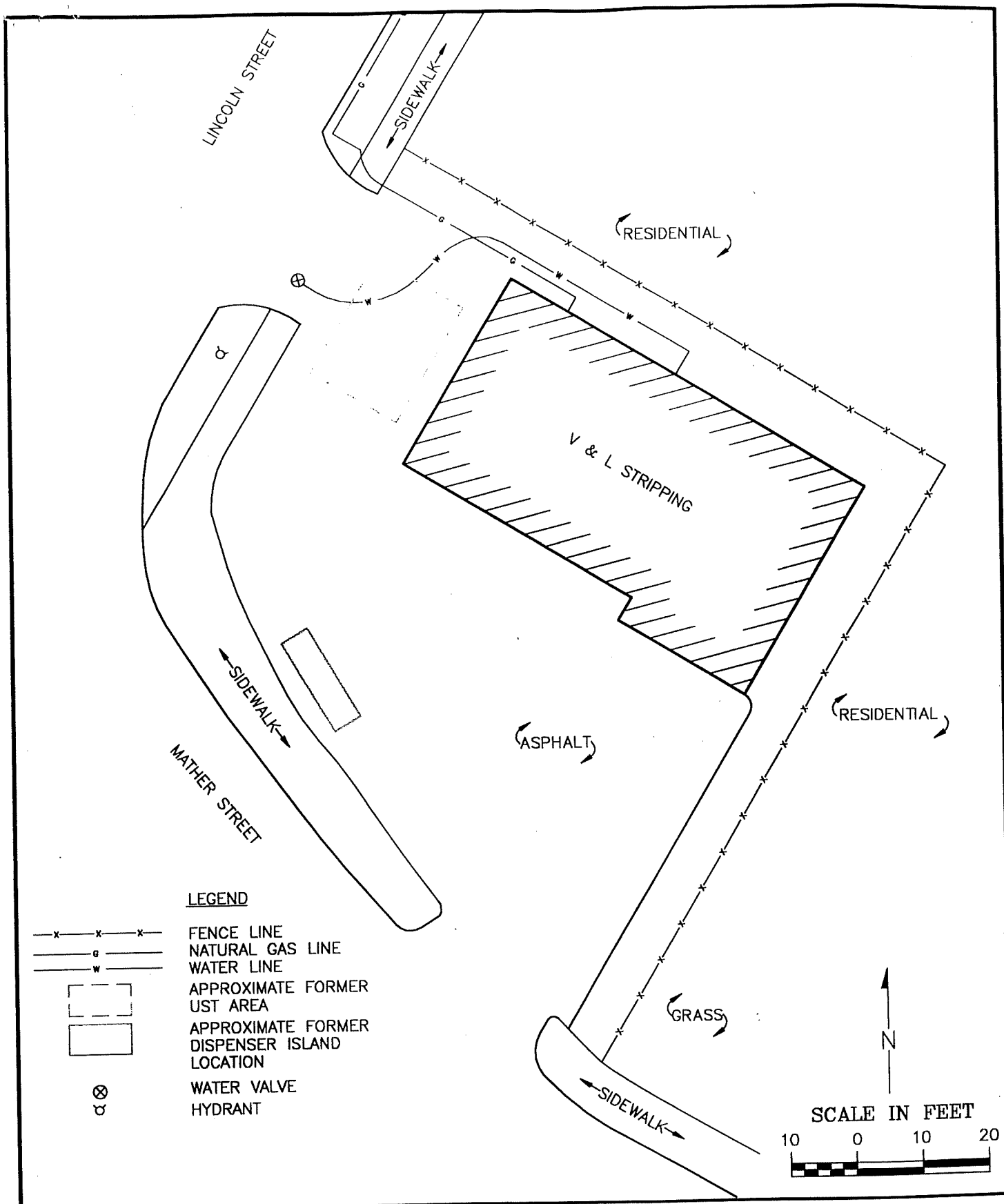

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Northern Environmental SM Hydrologists · Engineers · Geologists		FOR: MR. KENNETH JUZA

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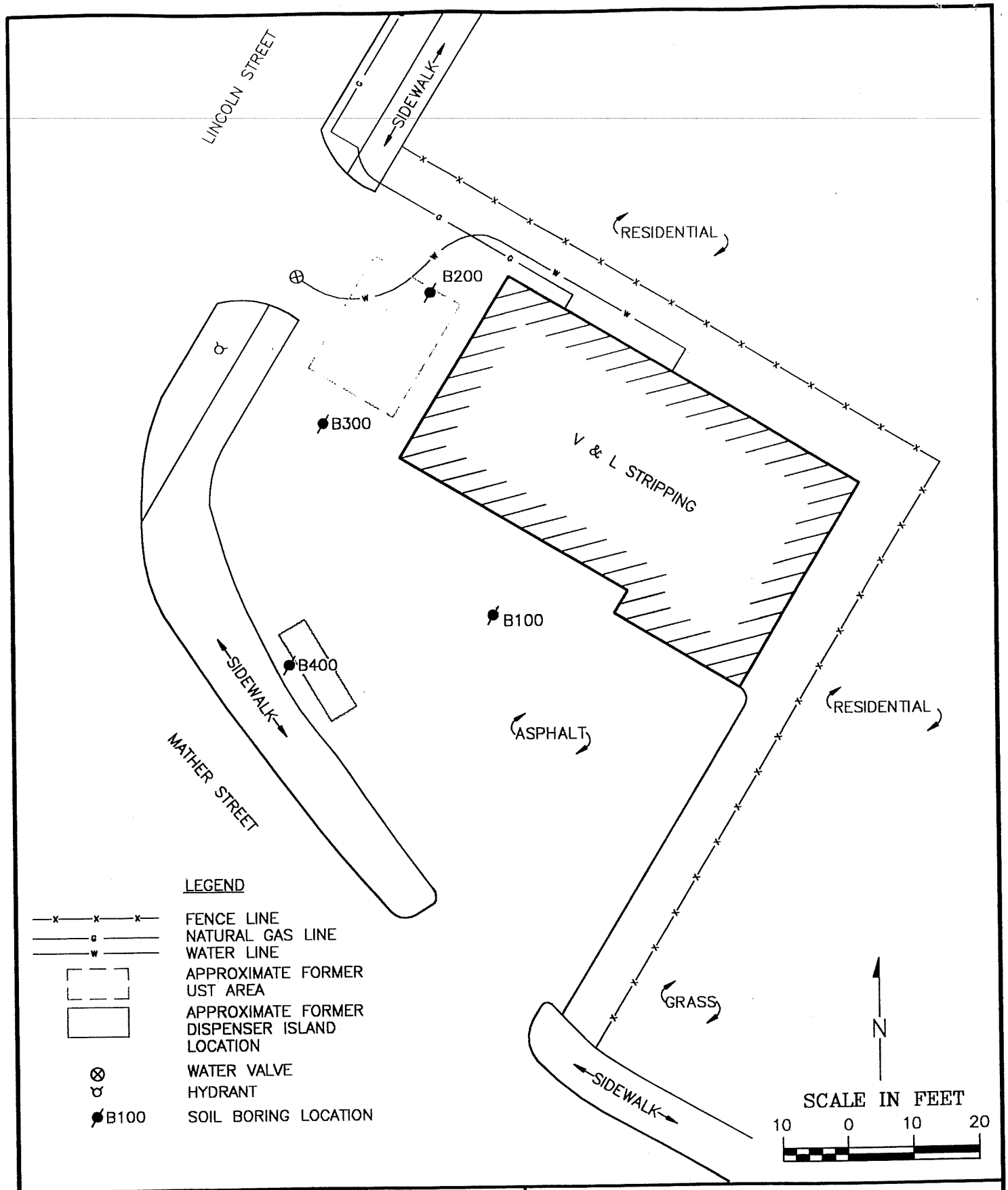

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	Northern Environmental℠ Hydrologists • Engineers • Geologists	FOR: MR. KENNETH JUZA

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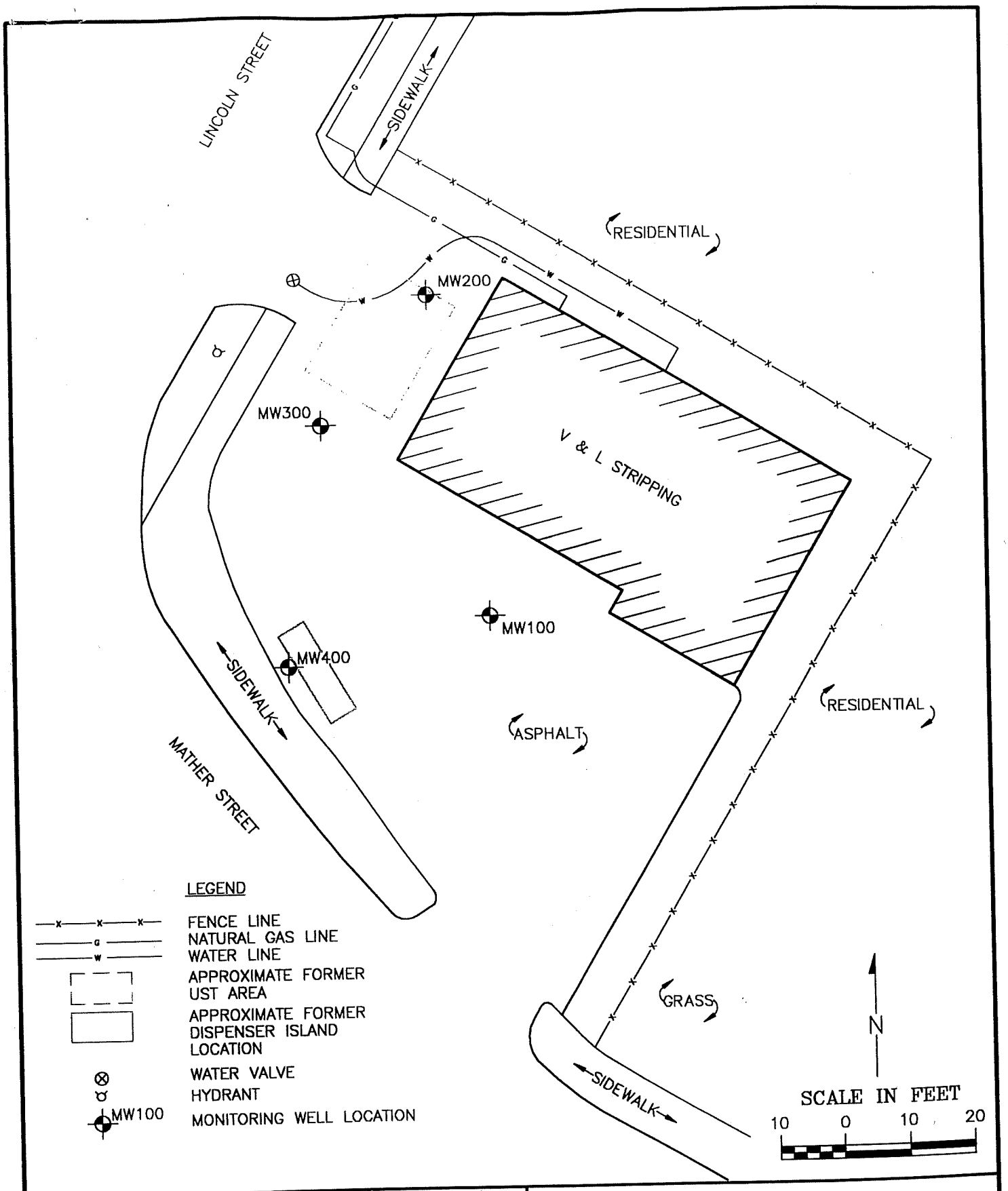

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Northern Environmental SM Hydrologists • Engineers • Geologists		FOR: MR. KENNETH JUZA

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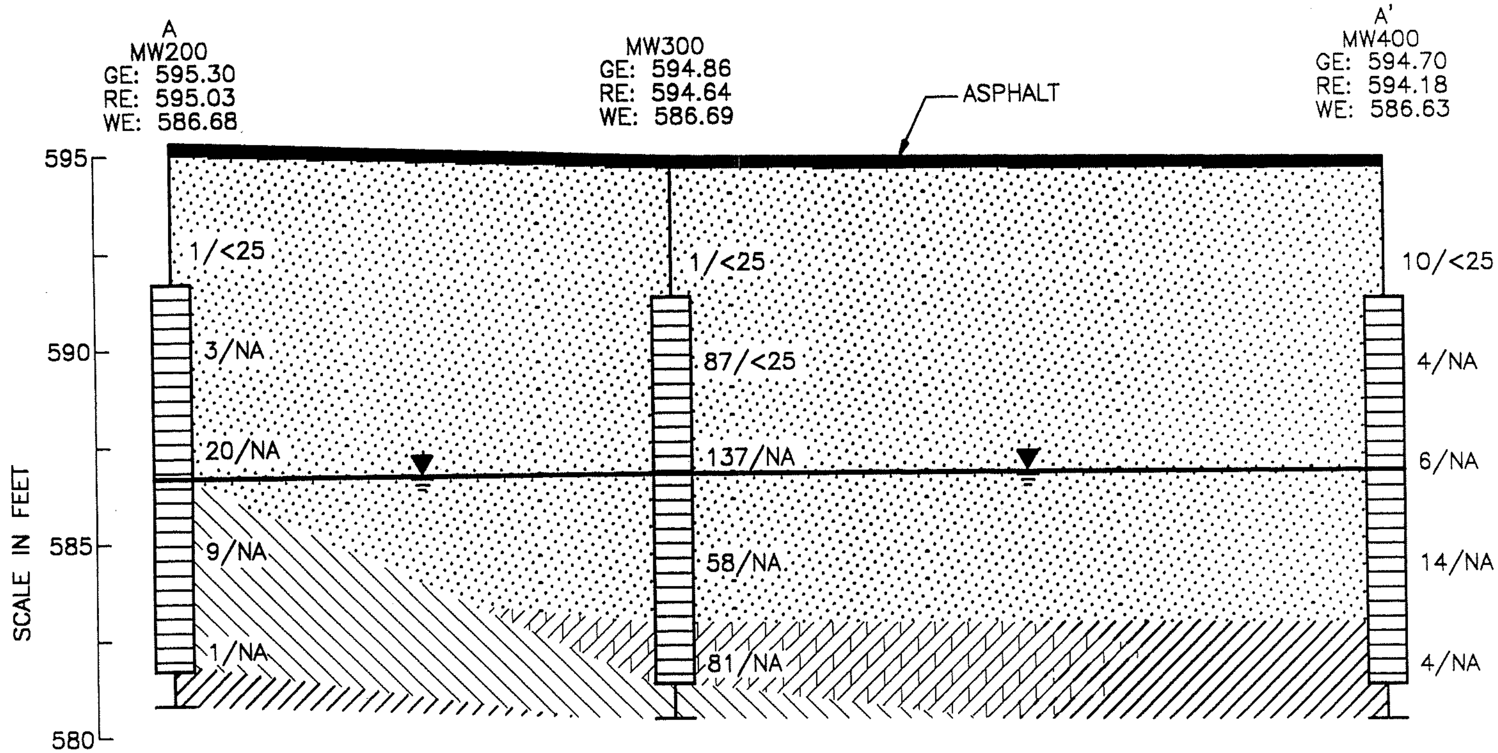
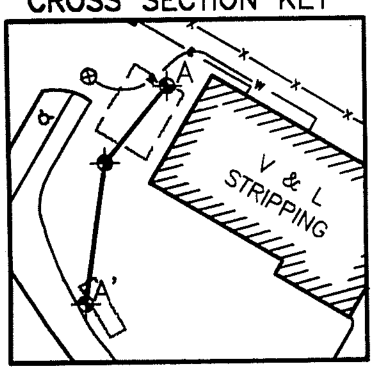
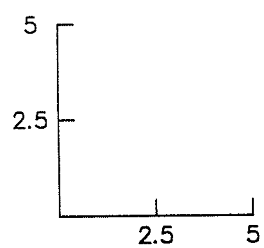


CROSS SECTION KEY





LEGEND

1/<25 PID/BENZENE RESULT

PID = PHOTOIONIZATION DETECTOR READING MEASURED IN INSTRUMENT UNITS AS ISOBUTYLENE (iui)

BENZENE CONCENTRATIONS MEASURED IN MICORGRAMS PER KILOGRAM (µg/kg)

NA = NOT ANALYZED
GE = GROUND ELEVATION (IN FEET)
RE = RISER ELEVATION (IN FEET)
WE = GROUND WATER ELEVATION (IN FEET)
WATER TABLE ELEVATION

CH = CLAY
CL = CLAY
ML = SILT
SW = WELL GRADED SANDS

NOTE:
- WATER MEASUREMENTS TAKEN ON 10/29/98
- ELEVATIONS REFERENCED TO MEAN SEA LEVEL
- COLUMN WIDTHS ARE NOT TO SCALE

DRAWN BY: SXM	PROJECT: KJP-0663	DATE: 2/24/99
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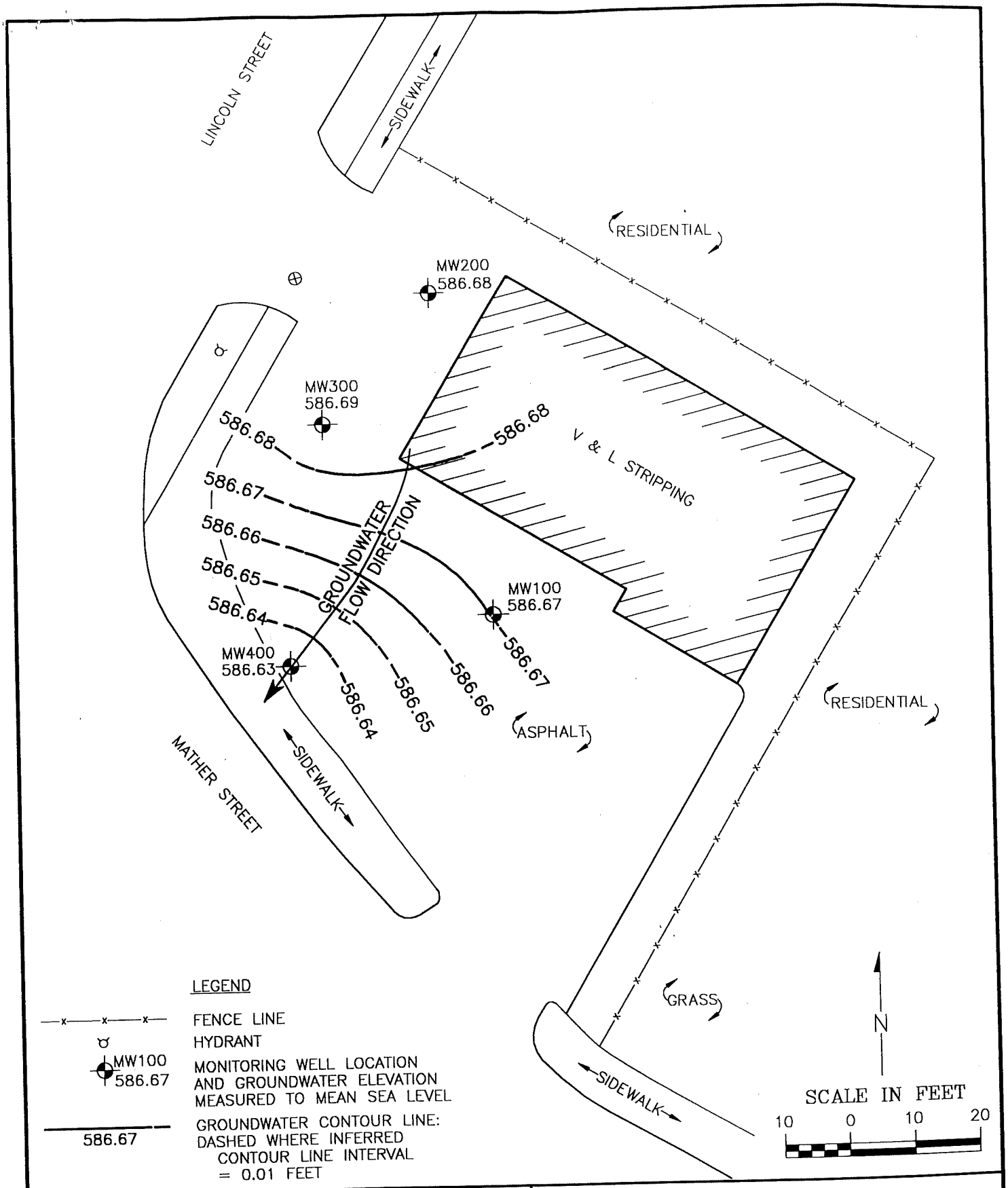
FIGURE 5
GEOLOGIC CROSS SECTION A–A'
FORMER V & L STRIPPING
GREEN BAY, WISCONSIN

FOR: MR. KENNETH JUZA



DRAWN BY: SXM	PROJECT: KJP-0663	DATE: 2/25/99
REV. DATE 3/15/99	THIS DRAWING AND ALL INFORMATION CONTAINED THEREON IS THE PROPERTY OF NORTHERN ENVIRONMENTAL INCORPORATED AND SHALL NOT BE COPIED OR USED EXCEPT FOR THE PURPOSE FOR WHICH IT IS EXPRESSLY FURNISHED.	FIGURE 6 GROUNDWATER ELEVATION CONTOUR MAP (10/29/98) FORMER V & L STRIPPING GREEN BAY, WISCONSIN
	Northern Environmental SM Hydrologists · Engineers · Geologists	FOR: MR. KENNETH JUZA

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Table 1 Water Level Data, Former V&L Stripping, Inc., Green Bay, Wisconsin

Well I.D.	Ground Surface Elevation (feet)	Reference Point Elevation (feet)	Date	Depth to Water (feet) Below Riser	Depth to Water (feet) Below Grade	Water Table Elevation (feet)
MW100	595.13	594.74	08/28/98	7.98	8.37	586.76
			08/31/98	8.02	8.41	586.72
	595	594.68	09/15/98	8.12	8.44	586.56
			10/29/98	8.01	8.33	586.67
MW200	595.31	595.1	08/28/98	8.37	8.58	586.73
			08/31/98	8.43	8.64	586.67
	595.3	595.03	09/15/98	8.47	8.74	586.56
			10/29/98	8.35	8.62	586.68
MW300	595.07	594.71	08/28/98	7.92	8.28	586.79
			08/31/98	7.96	8.32	586.75
	594.86	594.64	09/15/98	8.01	8.23	586.63
			10/29/98	7.95	8.17	586.69
MW400	594.78	594.25	08/28/98	7.48	8.01	586.77
			08/31/98	7.52	8.05	586.73
	594.7	594.18	09/15/98	7.6	8.12	586.58
			10/29/98	7.55	8.07	586.63

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Table 2 Soil Field-Screening Results, Former V&L Stripping, Inc., Green Bay, Wisconsin

Boring Number	Sample Label	Depth (feet)	Sample Odor	Moisture Content	Sample Description	Date Collected	PID Headspace Analysis		
							Time Collected	Time Analyzed	PID Response (iui)
B100	*S101	2.5 - 4.5	None	Dry	Sand, Some Gravel	08/26/98	0909	1010	0
	S102	5 - 7	None	Moist	Sand, Trace Silt	08/26/98	0912	1011	5
	S103	7.5 - 9.5	Organic	Saturated	Silty Sand	08/26/98	0925	1012	89
	S104	10 - 12	Organic	Saturated	Clayey Silt	08/26/98	0935	1013	82
	S105	12.5 - 14.5	None	Saturated	Clayey Silt	08/26/98	0945	1014	3
B200	*S201	2.5 - 4.5	None	Dry	Sand, Concrete	08/26/98	1020	1117	1
	S202	5 - 7	None	Moist	Sand, Crushed Concrete	08/26/98	1035	1118	3
	S203	7.5 - 9.5	Chemical	Saturated	Sand, Silt, Trace Clay	08/26/98	1044	1119	20
	S204	10 - 12	Chemical	Saturated	Clayey Silt	08/26/98	1051	1120	9
	S205	12.5 - 14.5	None	Saturated	Clayey Silt	08/26/98	1055	1121	1
B300	*S301	2.5 - 4.5	Petroleum	Dry	Fine Sand	08/26/98	1134	1212	1
	*S302	5 - 7	Petroleum	Moist	Fine Sand	08/26/98	1138	1216	87
	S303	7.5 - 9.5	Petroleum	Saturated	Fine Sand, Some Silt	08/26/98	1143	1217	137
	S304	10 - 12	Petroleum	Saturated	Fine Sand, Trace Clay	08/26/98	1150	1218	58
	S305	12.5 - 14.5	Petroleum	Saturated	Clay, Some Silt	08/26/98	1156	1219	81
B400	*S401	2.5 - 4.5	None	Dry	Medium Sand	08/26/98	1308	1425	10
	S402	5 - 7	None	Moist	Medium Sand	08/26/98	1312	1426	4
	S403	7.5 - 9.5	None	Saturated	Fine Sand, Some Silt	08/26/98	1317	1427	6
	S404	10 - 12	Organic	Saturated	ine Sand, Some Clay, Trace Sil	08/26/98	1321	1428	14
	S405	12.5 - 14.5	Organic	Saturated	Clay, With Silt	08/26/98	1329	1429	4

Key:
PID = Photoionization Detector
iui = instrument units as isobutylene
* = Submitted for laboratory analysis

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Table 3 Soil Analytical Results, Former V&L Stripping, Inc. Green Bay, Wisconsin

Boring Number	Sample Number	Sample Depth (feet)	Date Sampled	GRO (mg/kg)	Relevant an Relevant and Significant Analytical Results (µg/kg)								
					Lead (mg/kg)	Benzene	1,2-Dichloroethane	Ethylbenzene	Tetrachloroethene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Xylenes
Residual Contaminant Level				250	50	5.5	4.9	2900	NE	1500	NE	NE	4100
B100	S101	2.5-4.5	08/26/98	< 10	7 "J"	< 25	< 25	< 25	29	< 25	< 25	< 25	< 75
B200	S201	2.5-4.5	08/26/98	< 10	14 "J"	< 25	< 25	< 25	190	< 25	< 25	< 25	< 75
B300	S301	2.5-4.5	08/26/98	< 10	8 "J"	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 75
	S302	5-7	08/26/98	—	—	< 25	—	< 25	—	< 25	170	140	<50
B400	S401	2.5-4.5	08/26/98	< 10	8 "J"	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 75

Key:

mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
— = Not Analyzed
NE = Not Established by the Wisconsin Administrative Code
120 = Residual Contaminant Level Exceeded

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Table 4 Ground-Water Analytical Results, Former V&L Stripping, Inc., Green Bay, Wisconsin

Well ID	Date Sampled	Relevant and Significant Analytical Results (µg/l)									
		GRO	Benzene	n-Butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2- Dichloroethene	Tetrachloroethene	Trichloroethene	Trimethylbenzenes
PAL (µg/l)		NE	0.5	NE	0.5	0.7	7	20	0.5	0.5	96
ES (µg/l)		NE	5	NE	5	7	70	100	5	5	480
MW100	08/31/98	2600	< 32	< 23	< 36	< 39	**200**	< 38	**10000**	**3800**	< 99
	10/29/98	---	< 0.25	---	---	---	---	---	---	---	< 0.70
MW200	08/31/98	280	**1.4**	< 0.23	**1.4**	0.52 "J"	**310**	**93**	**140**	**520**	0.4 "J"
	10/29/98	---	0.73 "J"	---	---	---	---	---	---	---	< 0.70
MW300	08/31/98	120	< 0.32	3.4	< 0.36	< 0.39	**50**	**75**	**2.4**	**2.4**	0.84 "J"
	10/29/98	---	0.61 "J"	---	---	---	---	---	---	---	0.66 "J"
MW400	08/31/98	170	< 0.32	< 0.23	< 0.36	< 0.39	**120**	**280**	**34**	**77**	< 0.99
	10/29/98	---	< 0.25	---	---	---	---	---	---	---	< 0.70

Key:

GRO = Gasoline Range Organics
µg/l = micrograms per liter
PAL = Preventive Action Limit
ES = Enforcement Standard
"J" = Analyte detected between Limit of Detection and Limit of Quantitation
NE = Not established by the Wisconsin Administrative Code
--- = Not analyzed
32 = Preventive Action Limit Exceeded
32 = Enforcement Standard Exceeded

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Table 5 Inorganic Ground-Water Quality Data, Former V&L Stripping, Inc., Green Bay, Wisconsin

Well Number	Sample Date	Temperature (° F)	pH (su)	Conductivity (µmho/cm)	O.R.P. (mV)	D.O. (mg/l)	Nitrate (mg/l)	Manganese (mg/l)	Iron (mg/l)	Sulfate (mg/l)
MW100	10/29/98	62.2	7.3	1120	135	1.14	0	0.30	2.2	125
MW200	10/29/98	62.0	7.0	1200	180	5.88	0	0.30	1.8	80
MW300	10/29/98	61.4	7.0	2360	170	6.88	0	0.62	3.8	75
MW400	10/29/98	58.9	7.3	1240	20	0.75	0	0.35	1.2	85

KEY:
D.O. = dissolved oxygen
O.R.P. = oxygen-reduction potential
mg/l = milligrams per liter
mV = millivolts
su = standard units
µMho/cm = microMhos per centimeter

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APPENDIX A

PROJECT CONTACTS

PROJECT CONTACTS

Site Owner:	Mr. Kenneth Juza 1478 Norfield Road Suamico, Wisconsin 54173
Project Consultant:	Northern Environmental Technologies, Incorporated 954 Circle Drive Green Bay, Wisconsin 54304 (920) 592-8400
Drilling Contractor:	Environmental Drilling Services 3671 Monroe Road De Pere, Wisconsin 54115 (920) 497-2977
Laboratory:	U.S. Analytical Laboratory (WDNR #445027660) 1090 Kennedy Avenue Kimberly, Wisconsin 54136 (800) 490-4902

APPENDIX B

WDNR FORMS

APPENDIX B1

SOIL BORING LOGS
(FORM 4400-122)

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Former V & L Stripping, Inc.		B100

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
EDS. Crew Chief was Brian Repinski	8/26/1998	8/26/1998	HSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW100	Feet MSL	595.1 Feet MSL	8.0 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S/C/N
NW 1/4 of 1/4 of Section 1, T 24 N, R 20 E
Lat. 44° 31' 37.0"
Long. 85° 1' 27.0"
Local Grid Location (If applicable)
Feet ☐ N Feet ☐ E
Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Brown	5	Green Bay

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	ASPHALT SAND and GRAVEL FILL.										
S101 SS	24 22	3 4 5 5	2 3					0						
			4	SAND, trace silt increasing with depth from (5 to 7) feet, well graded, coarse grained from (3.5 to 5) feet, fine grained from (5 to 7) feet, yellowish brown (10YR 5/6), saturated at 6.5 feet. (SW, Lacustrine Offshore Deposit)										
S102 SS	24 24	3 4 4 5	5 6		SW			5						
			7	SILTY SAND with discontinous sand layers, well graded, fine grained, brown (10YR 4/3), organic odor, saturated. (SW, Lacustrine Offshore Deposit)										
S103 SS	24 24	2 3 3 2	8 9		SM			89						
S104 SS	24 24	1 1 1 1	10 11					82						
			12	CLAY with silt, trace organics, 2 inch layer of organics at 13.5 feet, high										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Nicole L. LaPlant

Firm Northern Environmental
954 Circle Drive Green Bay, Wisconsin 54304
Tel: (920) 592-8400
Fax: (920) 592-8444

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A Rev 5-97

Boring Number B100 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
S105 SS	24 24	1 1 1 2	13 14	plasticity, brown (10YR 4/3), organic odor, saturated. (CH, Lacustrine Offshore Deposit)	CH			3						
				End of Boring at 14.5 feet.										

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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Former V & L Stripping, Inc.		B200

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
EDS. Crew Chief was Brian Repinski	8/26/1998	8/26/1998	HSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW200	Feet MSL	595.3 Feet MSL	8.0 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S/C/N
NW 1/4 of 1/4 of Section 1, T 24 N, R 20 E
Lat. 44° 31' 37.0"
Long. 85° 1' 27.0"
Local Grid Location (If applicable)
Feet ☐ N ☐ E
Feet ☐ S ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Brown	5	Green Bay

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	ASPHALT.										
S101 SS	24 12	6 >50	2 3 4	SAND, layer of organics from (2.5 to 2.75) feet, well graded, fine grained, yellowish brown (10YR 5/6) from (2.5 to 5) feet, dark yellowish brown (10YR 4/4) from (5 to 8.5) feet, No recovery from (3 to 5) feet (construction debris), lithology assumed to be SAND, dry becoming moist at 6 feet. (SW, Lacustrine Offshore Deposit)	SW			1						
S102 SS	24 12	20 25 3 9	5 6 7					3						
S103 SS	24 24	2 3 2 2	8 9					20						
				SILT, trace clay increasing with depth, dark grayish brown (10YR 4/2), chemical odor, saturated. (SP, Lacustrine Offshore Deposit)										
S104 SS	24 24	1 1 1 1	10 11 12		ML			9						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Nicole R. LaBlanc | Firm: Northern Environmental, 954 Circle Drive Green Bay, Wisconsin 54304 | Tel: (920) 592-8400 Fax: (920) 592-8444

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Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A Rev. 5-97

Boring Number B200 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S105 SS	24 24	3 5 7 8	13					1						
			14	CLAY, 3 inch yellowish brown (10YR 5/6) sand and silt layer at 13.5 feet, low plasticity, brown (10YR 4/3), slight odor. (CL, Lacustrine Offshore Deposit) End of Boring at 14.5 feet.	CL									

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Former V & L Stripping, Inc.		B300

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
EDS. Crew Chief was Brian Repinski	8/26/1998	8/26/1998	HSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW300	Feet MSL	595.1 Feet MSL	8.0 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S/C/N
NW 1/4 of 1/4 of Section 1, T 24 N, R 20 E
Lat. 44° 31' 37.0"
Long. 85° 1' 27.0"
Local Grid Location (If applicable) ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Brown	5	Green Bay

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	ASPHALT.										
S101 SS	24 24	3 3 4 4	2 3 4	SAND, trace subrounded gravel from (3 to 3.5) feet, trace silt from (7.5 to 12) feet, trace clay, organics and marine fossils from (10 to 12) feet, well graded, medium to fine grained, brownish yellow (10YR 6/8) from (2.5 to 6) feet, yellowish brown (10YR 5/4) from (6 to 7) and (8.5 to 9.5) feet, brown (10YR 4/3) from (7 to 8.5) and (9.5 to 12) feet, petroleum odor from (6 to 12) feet, moist at 6 feet becoming saturated at 8 feet. (SW, Lacustrine Offshore Deposit)				1						
S102 SS	24 24	2 2 4 5	5 6 7		SW			87						
S103 SS	24 24	1 2 2 1	8 9					137						
S104 SS	24 24	2 1 1 1	10 11 12					58						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Nicole L. LaPlant
Firm: Northern Environmental
954 Circle Drive Green Bay, Wisconsin 54304
Tel: (920) 592-8400
Fax: (920) 592-8444

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SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A Rev 5-97

Boring Number B300 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S105 SS	24 24	1 1 1 2	13	CLAY, some silt, discontinuous layers of black organics, 1 inch layer of wood fragments at 12.5 feet, medium plasticity, brown (10YR 4/3), petroleum odor. (CL, Lacustrine Offshore Deposit)	CH			81						
			14	SILT, some clay, discontinuous layers of fine grained sand, brown (10yr 4/3), petroleum odor. (ML, Lacustrine Offshore Deposit)	ML									
				End of Boring at 14.5 feet.										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Former V & L Stripping, Inc.		B400

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
EDS. Crew Chief was Brian Repinski	8/26/1998	8/26/1998	HSA

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW400	Feet MSL	594.8 Feet MSL	8.0 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S/C/N
NW 1/4 of 1/4 of Section 1, T 24 N, R 20 E
Lat. 44° 31' 37.0"
Long. 85° 1' 27.0"
Local Grid Location (If applicable)
☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Brown	5	Green Bay

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
	0			ASPHALT.										
S101 SS	24 24	3 3 4 4	1–4	SAND, some silt from (8.5 to 12) feet, trace organics and some clay from (9.5 to 12) feet, well graded, medium grained from (2.5 to 8.5) feet, fine grained from (8.5 to 12) feet, dark yellowish brown (10YR 4/6) from (2.5 to 8.5) feet, dark grayish brown (10YR 4/2) from (8.5 to 12) feet, slight organic odor from (10 to 12) feet, saturated at 8.5 feet. (SW, Lacustrine Offshore Deposit)	SW			10						
S102 SS	24 24	3 3 6 6	5–6					4						
S103 SS	24 24	2 2 2 1	7–8					6						
S104 SS	24 24	2 1 1 1	10–11					14						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Nicole L. Kallenbach Firm Northern Environmental
954 Circle Drive Green Bay, Wisconsin 54304
Tel: (920) 592-8400
Fax: (920) 592-8444

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

SOIL BORING LOG INFORMATION SUPPLEMENT

Form 4400-122A Rev. 5-97

Boring Number B400 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
105 SS	24 24	0 1 1 1	13 14	CLAY, with silt, discontinuous layers of organics from (12.5 to 13) feet, low plasticity, dark grayish brown (10YR 4/2), slight organic odor. (CL, Lacustrine Offshore Deposit)	CL			4						
				End of Boring at 14.5 feet.										

APPENDIX B2

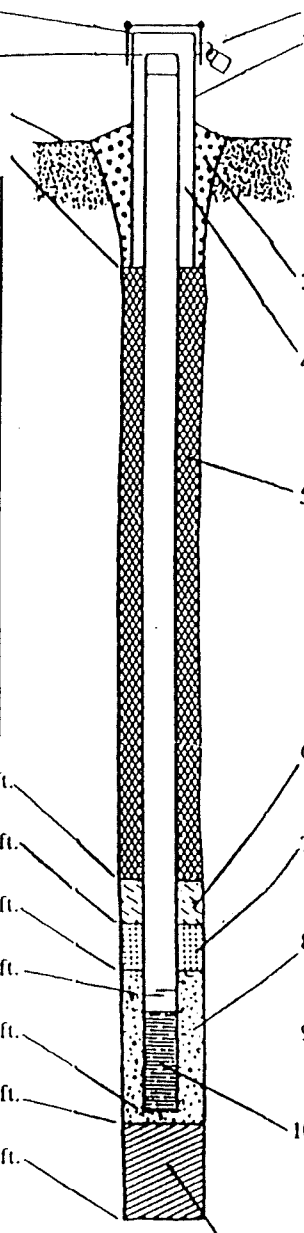
MONITORING WELL CONSTRUCTION FORMS (FORM 4400-113A) and MONITORING WELL DEVELOPMENT FORMS (FORM 4400-113B)

Wisconsin ent of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐ Env. Response & Repair ☐ Underground Tanks ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Project Name: STRIPPING	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-100
License, Permit or Monitoring Number: _____	Grid Origin Location: Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number / DNR Well Number: [redacted]
Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12	Section Location of Waste/Source: NW 1/4 of _____ 1/4 of Sec. 1, T. 27 N, R. 20 ☒E. ☐W.	Date Well Installed: 08/26/98 (mm dd yy)
Well Is From Waste/Source Boundary: _____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient; s ☒ Sidegradient; d ☐ Downgradient; n ☐ Not Known	Well Installed By: (Person's Name and Firm): BRIAN REPINSKI / EDS
Point of Enforcement Std. Application? ☐ Yes ☐ No		



tive pipe, top elevation _____ ft. MSL
asing, top elevation 594.68 ft. MSL
urface elevation 595.0 ft. MSL
e seal, bottom 594.0 ft. MSL or ____ ft.

S classification of soil near screen:
☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
ock ☐

analysis attached? ☐ Yes ☒ No

ing method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐ _____

ing fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

ing additives used? ☐ Yes ☒ No

ribe _____

ce of water (attach analysis): _____

nite seal, top 594.0 ft. MSL or 1.0 ft.
nd, top 592.0 ft. MSL or 3.0 ft.
pack, top 592.0 ft. MSL or 3.0 ft.
joint, top 591.5 ft. MSL or 3.5 ft.
ottom 581.5 ft. MSL or 13.5 ft.
pack, bottom 580.5 ft. MSL or 14.5 ft.
ole, bottom 580.5 ft. MSL or 14.5 ft.
ole, diameter 8.0 in.
well casing 2.37 in.
ell casing 2.04 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
   a. Inside diameter: 8.9 in.
   b. Length: 1.0 ft.
   c. Material: Steel ☒ 04; Other ☐ _____
   d. Additional protection? ☐ Yes ☒ No
      If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐; Other ☐ _____
5. Annular space seal: a. Granular Bentonite ☒ 33
   b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
   c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
   d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
   e. _____ Ft^3 volume added for any of the above
   f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
   b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite pellets ☐ 32
   c. _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
   a. N/A
   b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
   a. BMC 20-40
   b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ _____
10. Screen material: BOART
    a. Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ _____
    b. Manufacturer BOART
    c. Slot size: 0.010 in.
    d. Slotted length: ___.__ ft.
11. Backfill material (below filter pack): None ☒ 14; Other ☐ _____

I certify that the information on this form is true and correct to the best of my knowledge.

Signature: Repinski | Firm: EDS

Both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than y of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

of Wisconsin
tment of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

ty/Project Name
-L STRIPPING

ty License, Permit or Monitoring Number

Local Grid Location of Well ☐N ☐S _____ ft. ☐E ☐W _____ ft.

Well Name
MW-200

Grid Origin Location
Lat. _____ Long. _____ or
St. Plane _____ ft. N, _____ ft. E.

Wis. Unique Well Number DNR Well Number

Date Well Installed
08/26/98
m m d d y y

of Well Water Table Observation Well ☒ 11
Piezometer ☐ 12

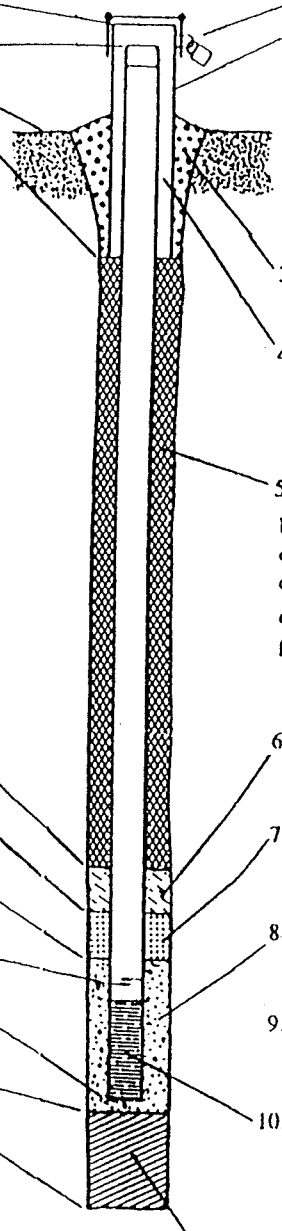
Section Location of Waste/Source
NW 1/4 of ___ 1/4 of Sec. 1, T. 24 N, R. 20 ☒E ☐W

ice Well Is From Waste/Source Boundary
_____ ft.

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known

Well Installed By: (Person's Name and Firm)
BRIAN REPINSKI
EDS

ll A Point of Enforcement Std. Application?
☐ Yes ☐ No



tective pipe, top elevation _____ ft. MSL
ll casing, top elevation 595.03 ft. MSL
d surface elevation 595.3 ft. MSL
face seal, bottom 594.3 ft. MSL or ___ ft.

SCS classification of soil near screen:
P ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
M ☐ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐
edrock ☐

eve analysis attached? ☐ Yes ☒ No

illing method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

rilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

illing additives used? ☐ Yes ☒ No

escribe _____

urce of water (attach analysis):

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Annular space seal ☐
_____ Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. N/A
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. BMC 20-40
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐
10. Screen material: BOART
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer BOART
c. Slot size: 0.010 in.
d. Slotted length: ___.__ ft.
11. Backfill material (below filter pack): None ☒ 14
_____ Other ☐

itonite seal, top 594.3 ft. MSL or 1.0 ft.
: sand, top 593.3 ft. MSL or 3.0 ft.
er pack, top 593.3 ft. MSL or 3.0 ft.
:en joint, top 591.8 ft. MSL or 3.5 ft.
l bottom 581.8 ft. MSL or 13.5 ft.
:r pack, bottom 580.8 ft. MSL or 14.5 ft.
ehole, bottom 580.8 ft. MSL or 14.5 ft.
:hole, diameter 8.0 in.
D. well casing 2.37 in.
. well casing 2.04 in.

by certify that the information on this form is true and correct to the best of my knowledge.

ge
Brian Repinski

Firm
EDS

complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., NR 141, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

f Wisconsin
nent of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☒ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400 113A Rev. 4-90

Project Name: L STRIPPING	Local Grid Location of Well: _____ ft. ☐N ☐S _____ ft. ☐E ☐W	Well Name: MW-300
License, Permit or Monitoring Number: _____	Grid Origin Location: Lat. _____ Long. _____ or	Wis. Unique Well Number / DNR Well Number
Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12	St. Plane _____ ft. N, _____ ft. E.	Date Well Installed: 08/26/98 (m m d d y y)
e Well Is From Waste/Source Boundary: _____ ft.	Section Location of Waste/Source: NW 1/4 of __ 1/4 of Sec. 1, T. 24 N, R. 20 ☒E ☐W	Well Installed By: (Person's Name and Firm): BRIAN REPINSKI / EDS
A Point of Enforcement Std. Application? ☐ Yes ☐ No	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient; d ☐ Downgradient n ☐ Not Known	

ctive pipe, top elevation _____ ft. MSL
casing, top elevation 595.07 ft. MSL
surface elevation 594.9 ft. MSL
ce seal, bottom 593.9 ft. MSL or ___ ft.

CS classification of soil near screen:
☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
rock ☐

e analysis attached? ☐ Yes ☒ No

ling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐ ___

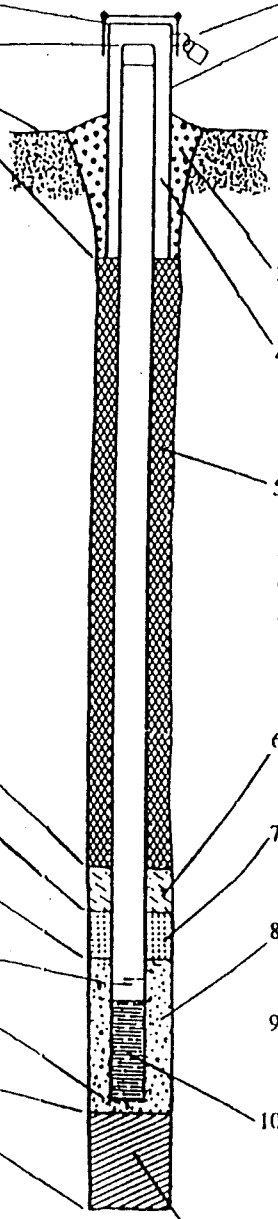
ling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

ing additives used? ☐ Yes ☒ No

cribe _____

ce of water (attach analysis): _____

nite seal, top 593.9 ft. MSL or 1.0 ft.
and, top 591.9 ft. MSL or 3.0 ft.
pack, top 591.9 ft. MSL or 3.0 ft.
joint, top 591.4 ft. MSL or 3.5 ft.
ottom 581.4 ft. MSL or 13.5 ft.
pack, bottom 580.4 ft. MSL or 14.5 ft.
ole, bottom 580.4 ft. MSL or 14.5 ft.
le, diameter 8.0 in.
well casing 2.37 in.
ell casing 2.04 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
   a. Inside diameter: 8.9 in.
   b. Length: 1.9 ft.
   c. Material: Steel ☒ 04; Other ☐ ___
   d. Additional protection? ☐ Yes ☒ No
      If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ ___
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐; Other ☐ ___
5. Annular space seal: a. Granular Bentonite ☒ 33
   b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
   c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
   d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
   e. _____ Ft³ volume added for any of the above
   f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
   b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite pellets ☐ 32
   c. _____ Other ☐ ___
7. Fine sand material: Manufacturer, product name & mesh size
   a. N/A
   b. Volume added _____ ft³
8. Filter pack material: Manufacturer, product name and mesh size
   a. BMC 20-40
   b. Volume added _____ ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ___
10. Screen material: BOART
    a. Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ ___
    b. Manufacturer BOART
    c. Slot size: 0.010 in.
    d. Slotted length: ___ ft.
11. Backfill material (below filter pack): None ☒ 14; Other ☐ ___

I certify that the information on this form is true and correct to the best of my knowledge.

Signature: Brian Repinski | Firm: EDS

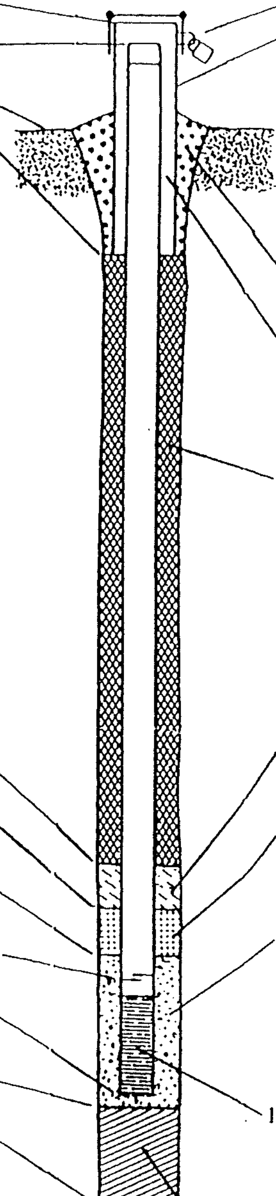
Complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., Wis. Ad. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than ___ of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each
NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

te of Wisconsin
partment of Natural Resources

Route to: Solid Waste ☐ Haz Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☒ Other ☐ ______

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

cility/Project Name: H+L STRIPPING	Local Grid Location of Well: ______ ft. ☐ N. ☐ S. ______ ft. ☐ E. ☐ W.	Well Name: MW-400
cility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ______ Long. ______ or St. Plane ______ ft. N, ______ ft. E.	Wis. Unique Well Number / DNR Well Number
pe of Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12	Section Location of Waste/Source: NW 1/4 of ___ 1/4 of Sec. 1, T. 24 N, R. 20 ☒ E. ☐ W.	Date Well Installed: 08/26/98 (m m d d y y)
tance Well Is From Waste/Source Boundary: ______ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient; s ☐ Sidegradient; d ☒ Downgradient; n ☐ Not Known	Well Installed By: (Person's Name and Firm) BRIAN REPINSKI, EDS
ell A Point of Enforcement Std. Application? ☐ Yes ☐ No		



Protective pipe, top elevation ______ ft. MSL
Well casing, top elevation 597.16 ft. MSL
Land surface elevation 594.7 ft. MSL
Surface seal, bottom 593.7 ft. MSL or ____ ft.

. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

. Sieve analysis attached? ☐ Yes ☒ No

. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐

. Drilling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

. Drilling additives used? ☐ Yes ☒ No

Describe ______

. Source of water (attach analysis):

Bentonite seal, top 593.7 ft. MSL or 1.0 ft.
Fine sand, top 591.7 ft. MSL or 3.0 ft.
Filter pack, top 591.7 ft. MSL or 3.0 ft.
Screen joint, top 591.2 ft. MSL or 3.5 ft.
Well bottom 581.2 ft. MSL or 13.5 ft.
Filter pack, bottom 580.2 ft. MSL or 14.5 ft.
Borehole, bottom 580.2 ft. MSL or 14.5 ft.
Borehole, diameter 8.0 in.
O.D. well casing 2.37 in.
I.D. well casing 2.04 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
   a. Inside diameter: 8.0 in.
   b. Length: 1.0 ft.
   c. Material: Steel ☒ 04; Other ☐
   d. Additional protection? ☐ Yes ☒ No
   If yes, describe: ______
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐; Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
   b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
   c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
   d. ____ % Bentonite . . . . . . Bentonite-cement grout ☐ 50
   e. ______ Ft^3 volume added for any of the above
   f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
   b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
   c. ______ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
   a. N/A
   b. Volume added ―― ft^3
8. Filter pack material: Manufacturer, product name and mesh size
   a. Bmc 20-40
   b. Volume added ______ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐
10. Screen material: BOART
   a. Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐
   b. Manufacturer BOART LC
   c. Slot size: 0.010 in.
   d. Slotted length: ____ ft.
11. Backfill material (below filter pack): None ☒ 14; Other ☐

ereby certify that the information on this form is true and correct to the best of my knowledge.

nature	Firm
[signature]	EDS

ise complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than 00 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	County	Well Name
Former V & L Stripping, Inc.	Brown	MW100

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	5		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☒	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well: 15 min.

4. Depth of well (from top of well casing): 14.5 ft.

5. Inside diameter of well: 2.04 in.

6. Volume of water in filter pack and well casing: 6.3 gal.

7. Volume of water removed from well: 7.2 gal.

8. Volume of water added (if any): gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	7.98 ft.	8.12 ft.
Date b.	08/28/1998	09/15/1998
Time c.	08:55 am	12:00 am
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Jeremy J. Klaas
Northern Environmental

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Jeremy Klaas

Print Name: Jeremy Klaas

Firm: Northern Environmental

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	County	Well Name
Former V & L Stripping, Inc.	Brown	MW200
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
	5		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☒	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well 10 min.

4. Depth of well (from top of well casing) 14.5 ft.

5. Inside diameter of well 2.04 in.

6. Volume of water in filter pack and well casing 5.8 gal.

7. Volume of water removed from well 2.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 8.37 ft.	8.47 ft.
Date	b. 08/28/1998	09/15/1998
Time	c. 10:00 am	12:00 am
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Jeremy Klaas

Print Name: Jeremy Klaas

Firm: Northern Environmental

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	County	Well Name
Former V & L Stripping, Inc.	Brown	MW300
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	5	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☒	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well: 20 min.

4. Depth of well (from top of well casing): 14.5 ft.

5. Inside diameter of well: 2.04 in.

6. Volume of water in filter pack and well casing: 6.4 gal.

7. Volume of water removed from well: 10.0 gal.

8. Volume of water added (if any): gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	7.92 ft.	8.01 ft.
Date b.	08/28/1998	09/15/1998
Time c.	11:00 am	12:00 am
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Jeremy Klaas

Print Name: Jeremy Klaas

Firm: Northern Environmental

E: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	County	Well Name
Former V & L Stripping, Inc.	Brown	MW400
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	5	

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☒	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	

3. Time spent developing well 22 min.

4. Depth of well (from top of well casing) 14.5 ft.

5. Inside diameter of well 2.04 in.

6. Volume of water in filter pack and well casing 7.0 gal.

7. Volume of water removed from well 12.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 7.48 ft.	7.60 ft.
Date	b. 08/28/1998	09/15/1998
Time	c. 12:00 pm	12:00 am
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☒ 10 Turbid ☐ 15 (Describe)	Clear ☒ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Person's Name and Firm

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Jeremy Klaas

Print Name: Jeremy Klaas

Firm: Northern Environmental

NOTE: See instructions for more information including a list of county codes and well type codes.

Northern Environmental℠
Hydrologists • Engineers • Geologists

APPENDIX B3

GROUND-WATER MONITORING WELL INFORMATION FORM (FORM 4400-89)

ment of Natural Resources

Chapter 144. Wis. Stats.
Form 4400-89

Rev. 1-90

Name: Former V & L Stripping Inc.

Facility ID Number

Date: 3-1-99

Completed By (Name and Firm): Jeremy Klaas Northern Environmental

Well Name	DNR Well ID Number	Well Location	N	E	S	W	Date Established	Well Casing Diam.	Well Casing Type	Elevations Top of Well Casing	Elevations Ground Surface	Reference MSL (3)	Reference Site Datum (3)	Screen Length	Well Depth	Type of Well (3) Plez	OW	PW	LYS	Other	Abandoned	Enf. Stds. Apply	Gradient U, S, D or N
MW100							8-26-98	2.04	SCH40	594.68	595	X		10	14.5		X						S
MW200							8-26-98	2.04	SCH40	595.03	595.3	X		10	14.5		X						U
MW300							8-26-98	2.04	SCH40	594.64	594.86	X		10	14.5		X						N
MW400							8-26-98	2.04	SCH40	954.18	594.7	X		10	14.5		X						D

Location Coordinates Are:

Local Grid System ☐ (perferred)

State Plane Coordinates ☐ Northern ☐ Central

Remarks:

PSS Use:

File Maint. Completed:

Other

s:\proj\kjp\330663\DNRGWINF.WK4

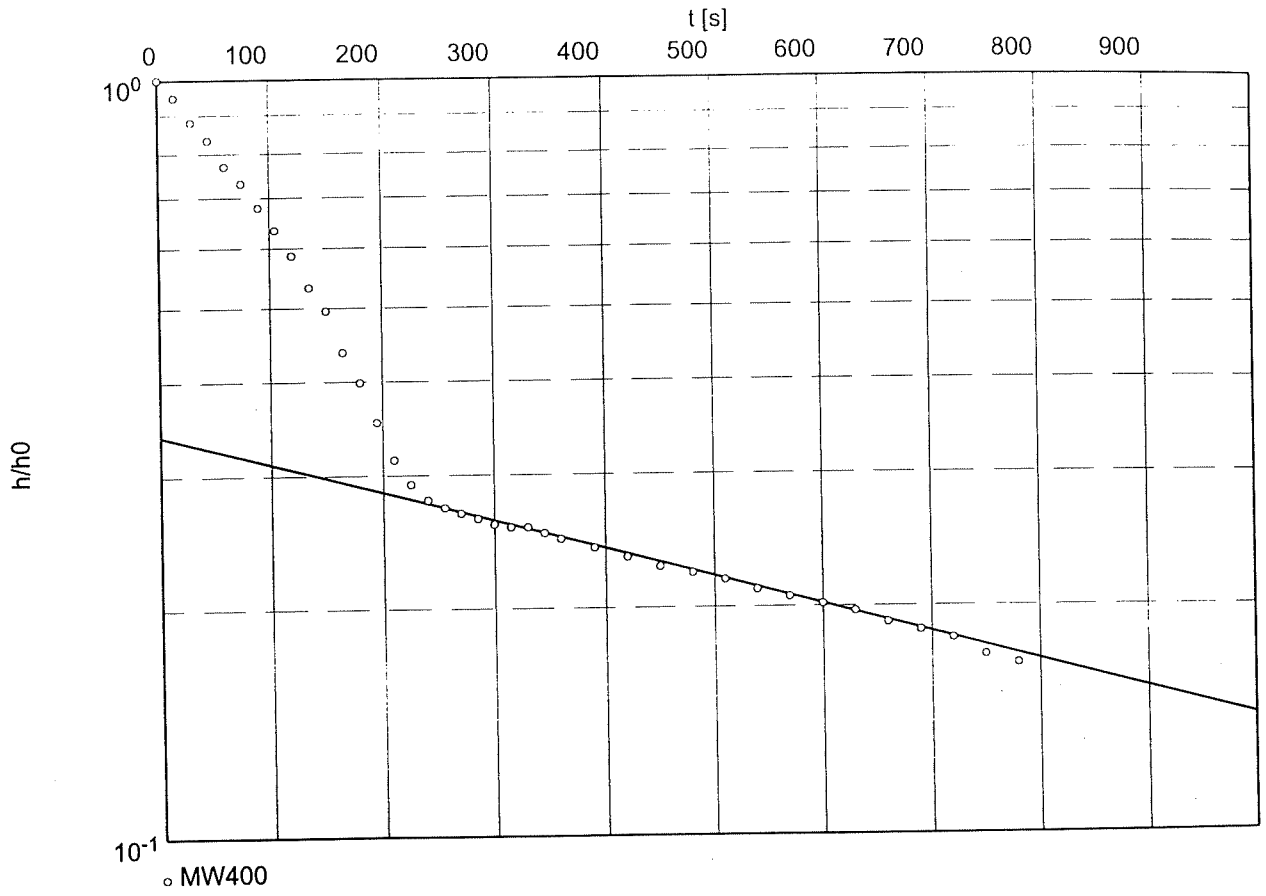
APPENDIX C

BAILER RECOVERY TEST RESULTS

Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis HVORSLEV's method	Page 1 Project: KJP0314080663 Evaluated by: JJK | Date: 19.02.1999

Slug Test No. 2 Test conducted on: 8-31-98

MW400



Hydraulic conductivity [cm/s]: 4.78×10^{-5}

Waterloo Hydrogeologic
180 Columbia St. W.
Waterloo,Ontario,Canada
ph.(519)746-1798

slug/bail test analysis
HVORSLEV's method

Project: KJP0314080663

Evaluated by: JJK | Date: 19.02.1999

Slug Test No. 2 | Test conducted on: 8-31-98

MW400 | MW400

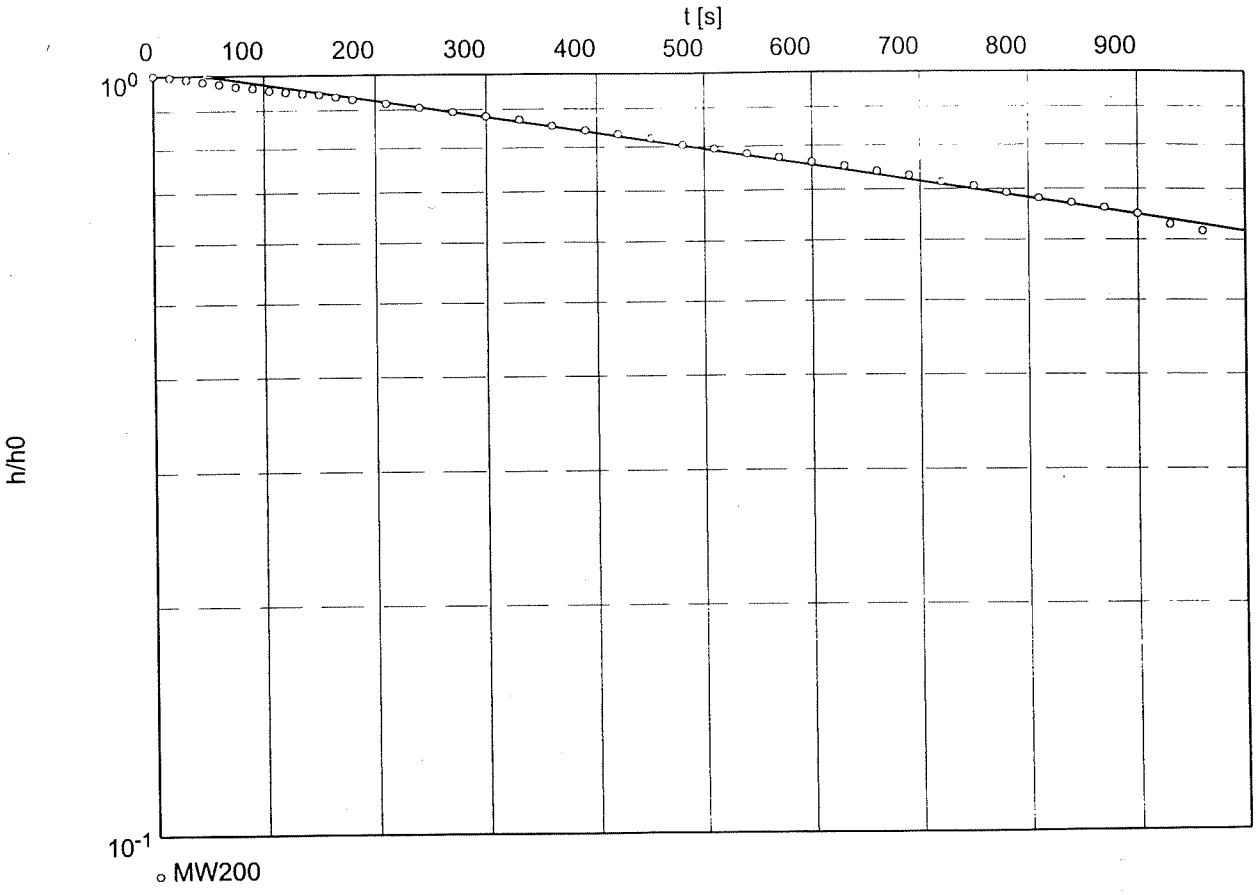
Static water level: 229.2 cm below datum

	Pumping test duration [s]	Water level [cm]	Change in Waterlevel [cm]
1	0	363.9	134.7
2	15	356.9	127.7
3	30	347.8	118.6
4	45	341.4	112.2
5	60	332.8	103.6
6	75	327.7	98.5
7	90	320.6	91.4
8	105	314.6	85.3
9	120	308.2	78.9
10	135	300.8	71.6
11	150	296.0	66.8
12	165	288.0	58.8
13	180	282.9	53.6
14	195	276.8	47.5
15	210	271.6	42.4
16	225	268.5	39.3
17	240	266.7	37.5
18	255	265.8	36.6
19	270	265.2	36.0
20	285	264.6	35.4
21	300	264.0	34.7
22	315	263.7	34.4
23	330	263.7	34.4
24	345	263.0	33.8
25	360	262.4	33.2
26	390	261.5	32.3
27	420	260.6	31.4
28	450	259.7	30.5
29	480	259.1	29.9
30	510	258.5	29.3
31	540	257.6	28.3
32	570	256.9	27.7
33	600	256.3	27.1
34	630	255.7	26.5
35	660	254.8	25.6
36	690	254.2	25.0
37	720	253.6	24.4
38	750	252.4	23.2
39	780	251.8	22.6

Waterloo Hydrogeologic 180 Columbia St. W. Waterloo,Ontario,Canada ph.(519)746-1798	slug/bail test analysis HVORSLEV's method	Page 1 Project: KJP0314080663 Evaluated by: JJK | Date: 19.02.1999

Slug Test No. 1 Test conducted on: 8-31-98

MW200



Hydraulic conductivity [cm/s]: 3.17×10^{-5}

Waterloo Hydrogeologic
180 Columbia St. W.
Waterloo,Ontario,Canada
ph.(519)746-1798

slug/bail test analysis
HVORSLEV's method

Project: KJP0314080663

Evaluated by: JJK | Date: 19.02.1999

Slug Test No. 1 | Test conducted on: 8-31-98

MW200 | MW200

Static water level: 256.9 cm below datum

	Pumping test duration [s]	Water level [cm]	Change in Waterlevel [cm]
1	0	384.7	127.8
2	15	384.0	127.1
3	30	383.1	126.2
4	45	382.2	125.3
5	60	381.3	124.4
6	75	380.4	123.5
7	90	379.8	122.9
8	105	378.9	122.0
9	120	378.3	121.4
10	135	377.6	120.7
11	150	377.3	120.4
12	165	376.4	119.5
13	180	375.5	118.6
14	210	374.0	117.1
15	240	372.5	115.6
16	270	370.9	114.0
17	300	369.4	112.5
18	330	368.2	111.3
19	360	366.1	109.2
20	390	364.5	107.6
21	420	363.3	106.4
22	450	361.8	104.9
23	480	359.7	102.8
24	510	358.4	101.5
25	540	356.9	100.0
26	570	355.7	98.8
27	600	354.2	97.3
28	630	353.0	96.1
29	660	351.4	94.5
30	690	350.2	93.3
31	720	348.4	91.5
32	750	347.2	90.3
33	780	345.3	88.4
34	810	343.8	86.9
35	840	342.6	85.7
36	870	341.4	84.5
37	900	339.9	83.0
38	930	337.1	80.2
39	960	335.6	78.7

APPENDIX D

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY FORMS

APPENDIX D1

SOIL SAMPLES

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 08-Sep-98

Project #: KJP0314080663
Project : Green Bay
Sample ID: S101
Lab Code: 5022618A
Sample Type: Soil
Sample Date: 26-Aug-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	91.0			%		28-Aug-98	JHL	1
LEAD								
SW846 6010	7 "J"	6	20	MG/KG	1	02-Sep-98	SRF	1
MODIFIED GRO								
WDNR SEP 95	< 10	0.3	1.1	MG/KG	1	29-Aug-98	BDB	1

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

nalytical Laboratory
)90 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

YNELLE CAINE
ORTHERN ENVIRONMENTAL
54 CIRCLE DRIVE
REEN BAY WI 54304

eport Date: 08-Sep-98
nalyzed By: CJR

Project #: KJP0314080663
Project : Green Bay
Sample ID: S101
Lab Code: 5022618A
Sample Type: Soil
Sample Date: 26-Aug-98
Date Analyzed: 31-Aug-98

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
enzene	< 25	5.9	20	1
romobenzene	< 25	3.1	10	1
romodichloromethane	< 25	2.7	8.9	1
-Butylbenzene	< 25	2.5	8.4	1
ec-Butylbenzene	< 25	4.8	16	1
ert-Butylbenzene	< 25	2.3	7.7	1
arbon Tetrachloride	< 25	2.2	7.2	1
hlorobenzene	< 25	2.5	8.2	1
hloroethane	< 25	5	17	1
hloroform	< 25	2.8	9.2	1
hloromethane	< 25	7.3	24	1
-Chlorotoluene	< 25	2.4	7.9	1
-Chlorotoluene	< 25	2.3	7.8	1
,2-Dibromo-3-Chloropropane	< 25	2.1	7.1	1
ibromochloromethane	< 25	2	6.7	1
,2-Dichlorobenzene	< 25	2.2	7.2	1
,3-Dichlorobenzene	< 25	2.2	7.4	1
,4-Dichlorobenzene	< 25	2.2	7.2	1
ichlorodifluoromethane	< 25	4.3	14	1
,1-Dichloroethane	< 25	2.3	7.6	1
,2-Dichloroethane	< 25	2.7	9.1	1
,1-Dichloroethene	< 25	2.2	7.5	1
is-1,2-Dichloroethene	< 25	2.8	9.3	1
rans-1,2-Dichloroethene	< 25	3.5	12	1
,2-Dichloropropane	< 25	2.4	8	1
,3-Dichloropropane	< 25	2.2	7.3	1

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	4.1	14	1
Di-isopropyl Ether	< 25	3.9	13	1
Ethylbenzene	< 25	6.2	11	1
EDB (1,2-Dibromoethane)	< 25	4.2	14	1
Hexachlorobutadiene	< 25	4.8	16	1
Isopropylbenzene	< 25	5	17	1
p-Isopropyltoluene	< 25	3.4	11	1
Methylene Chloride	< 25	3.3	11	1
MTBE	< 25	7	23	1
Naphthalene	< 25	7	23	1
n-Propylbenzene	< 25	2.8	9.2	1
1,1,2,2-Tetrachloroethane	< 25	7.1	24	1
Tetrachloroethene	29	3.6	12	1
Toluene	< 25	5.1	17	1
1,2,3-Trichlorobenzene	< 25	5.4	18	1
1,2,4-Trichlorobenzene	< 25	5.1	17	1
1,1,1-Trichloroethane	< 25	2.3	7.6	1
1,1,2-Trichloroethane	< 25	2	6.7	1
Trichloroethene	< 25	4.6	15	1
Trichlorofluoromethane	< 25	19	65	1
1,2,4-Trimethylbenzene	< 25	2.4	8	1
1,3,5-Trimethylbenzene	< 25	3.8	13	1
Vinyl Chloride	< 25	4.7	16	1
m&p-Xylene	< 50	5.6	19	1
o-Xylene	< 25	2.7	9	1

Fluorobenzene Surrogate	106 % Rec.
1,4-Dichlorobutane Surrogate	98 % Rec.
Total % Solids	91

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060453

GC #6

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0314080663 Report Date: 08-Sep-98
Sample ID: S101 Lab Code: 5022618A

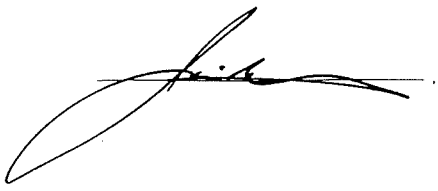
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	F	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	F	F	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	F	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-DCP,cis-1,2-DCE	P	F	P	P	P	P	P
Di-isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	F	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	P	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	F	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	F	P	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	P	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 060453

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0314080663
Project : Green Bay
Sample ID: S201
Lab Code: 5022618B
Sample Type: Soil
Sample Date: 26-Aug-98

Report Date: 08-Sep-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By	QC Code
TOTAL SOLIDS	96.2			%		28-Aug-98	JHL	1
LEAD SW846 6010	14 "J"	6	20	MG/KG	1	02-Sep-98	SRF	1
MODIFIED GRO WDNR SEP 95	< 10	0.3	1.1	MG/KG	1	29-Aug-98	BDB	1

LOD = Limit of Detection

"J" Flag: Analyte detected between LOD and LOQ.

LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 08-Sep-98
Analyzed By: CJR

Project #: KJP0314080663
Project : Green Bay
Sample ID: S201
Lab Code: 5022618B
Sample Type: Soil
Sample Date: 26-Aug-98
Date Analyzed: 31-Aug-98

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
Benzene	< 25	5.9	20	1
Bromobenzene	< 25	3.1	10	1
Bromodichloromethane	< 25	2.7	8.9	1
n-Butylbenzene	< 25	2.5	8.4	1
sec-Butylbenzene	< 25	4.8	16	1
tert-Butylbenzene	< 25	2.3	7.7	1
Carbon Tetrachloride	< 25	2.2	7.2	1
Chlorobenzene	< 25	2.5	8.2	1
Chloroethane	< 25	5	17	1
Chloroform	< 25	2.8	9.2	1
Chloromethane	< 25	7.3	24	1
2-Chlorotoluene	< 25	2.4	7.9	1
4-Chlorotoluene	< 25	2.3	7.8	1
1,2-Dibromo-3-Chloropropane	< 25	2.1	7.1	1
Dibromochloromethane	< 25	2	6.7	1
1,2-Dichlorobenzene	< 25	2.2	7.2	1
1,3-Dichlorobenzene	< 25	2.2	7.4	1
1,4-Dichlorobenzene	< 25	2.2	7.2	1
Dichlorodifluoromethane	< 25	4.3	14	1
1,1-Dichloroethane	< 25	2.3	7.6	1
1,2-Dichloroethane	< 25	2.7	9.1	1
1,1-Dichloroethene	< 25	2.2	7.5	1
cis-1,2-Dichloroethene	< 25	2.8	9.3	1
trans-1,2-Dichloroethene	< 25	3.5	12	1
1,2-Dichloropropane	< 25	2.4	8	1
1,3-Dichloropropane	< 25	2.2	7.3	1

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	4.1	14	1
Di-isopropyl Ether	< 25	3.9	13	1
Ethylbenzene	< 25	6.2	11	1
EDB (1,2-Dibromoethane)	< 25	4.2	14	1
Hexachlorobutadiene	< 25	4.8	16	1
Isopropylbenzene	< 25	5	17	1
p-Isopropyltoluene	< 25	3.4	11	1
Methylene Chloride	< 25	3.3	11	1
MTBE	< 25	7	23	1
Naphthalene	< 25	7	23	1
n-Propylbenzene	< 25	2.8	9.2	1
1,1,2,2-Tetrachloroethane	< 25	7.1	24	1
Tetrachloroethene	190	3.6	12	1
Toluene	< 25	5.1	17	1
1,2,3-Trichlorobenzene	< 25	5.4	18	1
1,2,4-Trichlorobenzene	< 25	5.1	17	1
1,1,1-Trichloroethane	< 25	2.3	7.6	1
1,1,2-Trichloroethane	< 25	2	6.7	1
Trichloroethene	< 25	4.6	15	1
Trichlorofluoromethane	< 25	19	65	1
1,2,4-Trimethylbenzene	< 25	2.4	8	1
1,3,5-Trimethylbenzene	< 25	3.8	13	1
Vinyl Chloride	< 25	4.7	16	1
m&p-Xylene	< 50	5.6	19	1
o-Xylene	< 25	2.7	9	1

Fluorobenzene Surrogate 103 % Rec.
1,4-Dichlorobutane Surrogate 99 % Rec.
Total % Solids 96.2

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060453

GC #6

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0314080663 Report Date: 08-Sep-98
Sample ID: S201 Lab Code: 5022618B

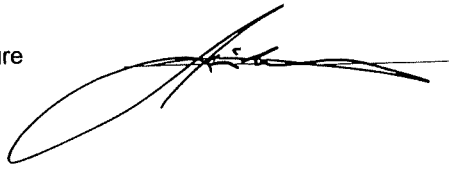
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	F	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	F	F	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	F	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-DCP,cis-1,2-DCE	P	F	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	F	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	P	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	F	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	F	P	P	P	P
Trichlorofluoromethane	P	P	P	P	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	P	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 060453

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
11090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0314080663
Project : Green Bay
Sample ID: S301
Lab Code: 5022618C
Sample Type: Soil
Sample Date: 26-Aug-98

Report Date: 04-Sep-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	93.0			%		28-Aug-98	JHL	1
LEAD **SW846 6010**	8 "J"	6	20	MG/KG	1	02-Sep-98	SRF	1
MODIFIED GRO **WDNR SEP 95**	< 10	0.3	1.1	MG/KG	1	29-Aug-98	BDB	1

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 04-Sep-98
Analyzed By: CJR

Project #: KJP0314080663
Project : Green Bay
Sample ID: S301
Lab Code: 5022618C
Sample Type: Soil
Sample Date: 26-Aug-98
Date Analyzed: 31-Aug-98

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
Benzene	< 25	5.9	20	1
Bromobenzene	< 25	3.1	10	1
Bromodichloromethane	< 25	2.7	8.9	1
n-Butylbenzene	< 25	2.5	8.4	1
sec-Butylbenzene	< 25	4.8	16	1
tert-Butylbenzene	< 25	2.3	7.7	1
Carbon Tetrachloride	< 25	2.2	7.2	1
Chlorobenzene	< 25	2.5	8.2	1
Chloroethane	< 25	5	17	1
Chloroform	< 25	2.8	9.2	1
Chloromethane	< 25	7.3	24	1
2-Chlorotoluene	< 25	2.4	7.9	1
4-Chlorotoluene	< 25	2.3	7.8	1
1,2-Dibromo-3-Chloropropane	< 25	2.1	7.1	1
Dibromochloromethane	< 25	2	6.7	1
1,2-Dichlorobenzene	< 25	2.2	7.2	1
1,3-Dichlorobenzene	< 25	2.2	7.4	1
1,4-Dichlorobenzene	< 25	2.2	7.2	1
Dichlorodifluoromethane	< 25	4.3	14	1
1,1-Dichloroethane	< 25	2.3	7.6	1
1,2-Dichloroethane	< 25	2.7	9.1	1
1,1-Dichloroethene	< 25	2.2	7.5	1
cis-1,2-Dichloroethene	< 25	2.8	9.3	1
trans-1,2-Dichloroethene	< 25	3.5	12	1
1,2-Dichloropropane	< 25	2.4	8	1
1,3-Dichloropropane	< 25	2.2	7.3	1

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	4.1	14	1
Di-isopropyl Ether	< 25	3.9	13	1
Ethylbenzene	< 25	6.2	11	1
EDB (1,2-Dibromoethane)	< 25	4.2	14	1
Hexachlorobutadiene	< 25	4.8	16	1
Isopropylbenzene	< 25	5	17	1
p-Isopropyltoluene	< 25	3.4	11	1
Methylene Chloride	< 25	3.3	11	1
MTBE	< 25	7	23	1
Naphthalene	< 25	7	23	1
n-Propylbenzene	< 25	2.8	9.2	1
1,1,2,2-Tetrachloroethane	< 25	7.1	24	1
Tetrachloroethene	< 25	3.6	12	1
Toluene	< 25	5.1	17	1
1,2,3-Trichlorobenzene	< 25	5.4	18	1
1,2,4-Trichlorobenzene	< 25	5.1	17	1
1,1,1-Trichloroethane	< 25	2.3	7.6	1
1,1,2-Trichloroethane	< 25	2	6.7	1
Trichloroethene	< 25	4.6	15	1
Trichlorofluoromethane	< 25	19	65	1
1,2,4-Trimethylbenzene	< 25	2.4	8	1
1,3,5-Trimethylbenzene	< 25	3.8	13	1
Vinyl Chloride	< 25	4.7	16	1
m&p-Xylene	< 50	5.6	19	1
o-Xylene	< 25	2.7	9	1

GC #6

Fluorobenzene Surrogate	110 % Rec.
1,4-Dichlorobutane Surrogate	95 % Rec.
Total % Solids	93

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060453

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0314080663
Project : Green Bay
Sample ID: S401
Lab Code: 5022618D
Sample Type: Soil
Sample Date: 26-Aug-98

Report Date: 04-Sep-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	87.9			%		28-Aug-98	JHL	1
LEAD SW846 6010	8 "J"	6	20	MG/KG	1	02-Sep-98	SRF	1
MODIFIED GRO WDNR SEP 95	< 10	0.3	1.1	MG/KG	1	29-Aug-98	BDB	1

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 04-Sep-98
Analyzed By: CJR

Project #: KJP0314080663
Project : Green Bay
Sample ID: S401
Lab Code: 5022618D
Sample Type: Soil
Sample Date: 26-Aug-98
Date Analyzed: 31-Aug-98

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
Benzene	< 25	5.9	20	1
Bromobenzene	< 25	3.1	10	1
Bromodichloromethane	< 25	2.7	8.9	1
n-Butylbenzene	< 25	2.5	8.4	1
sec-Butylbenzene	< 25	4.8	16	1
tert-Butylbenzene	< 25	2.3	7.7	1
Carbon Tetrachloride	< 25	2.2	7.2	1
Chlorobenzene	< 25	2.5	8.2	1
Chloroethane	< 25	5	17	1
Chloroform	< 25	2.8	9.2	1
Chloromethane	< 25	7.3	24	1
2-Chlorotoluene	< 25	2.4	7.9	1
4-Chlorotoluene	< 25	2.3	7.8	1
1,2-Dibromo-3-Chloropropane	< 25	2.1	7.1	1
Dibromochloromethane	< 25	2	6.7	1
1,2-Dichlorobenzene	< 25	2.2	7.2	1
1,3-Dichlorobenzene	< 25	2.2	7.4	1
1,4-Dichlorobenzene	< 25	2.2	7.2	1
Dichlorodifluoromethane	< 25	4.3	14	1
1,1-Dichloroethane	< 25	2.3	7.6	1
1,2-Dichloroethane	< 25	2.7	9.1	1
1,1-Dichloroethene	< 25	2.2	7.5	1
cis-1,2-Dichloroethene	< 25	2.8	9.3	1
trans-1,2-Dichloroethene	< 25	3.5	12	1
1,2-Dichloropropane	< 25	2.4	8	1
1,3-Dichloropropane	< 25	2.2	7.3	1

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	4.1	14	1
Di-isopropyl Ether	< 25	3.9	13	1
Ethylbenzene	< 25	6.2	11	1
EDB (1,2-Dibromoethane)	< 25	4.2	14	1
Hexachlorobutadiene	< 25	4.8	16	1
Isopropylbenzene	< 25	5	17	1
p-Isopropyltoluene	< 25	3.4	11	1
Methylene Chloride	< 25	3.3	11	1
MTBE	< 25	7	23	1
Naphthalene	< 25	7	23	1
n-Propylbenzene	< 25	2.8	9.2	1
1,1,2,2-Tetrachloroethane	< 25	7.1	24	1
Tetrachloroethene	< 25	3.6	12	1
Toluene	< 25	5.1	17	1
1,2,3-Trichlorobenzene	< 25	5.4	18	1
1,2,4-Trichlorobenzene	< 25	5.1	17	1
1,1,1-Trichloroethane	< 25	2.3	7.6	1
1,1,2-Trichloroethane	< 25	2	6.7	1
Trichloroethene	< 25	4.6	15	1
Trichlorofluoromethane	< 25	19	65	1
1,2,4-Trimethylbenzene	< 25	2.4	8	1
1,3,5-Trimethylbenzene	< 25	3.8	13	1
Vinyl Chloride	< 25	4.7	16	1
m&p-Xylene	< 50	5.6	19	1
o-Xylene	< 25	2.7	9	1

Fluorobenzene Surrogate	111 % Rec.
1,4-Dichlorobutane Surrogate	96 % Rec.
Total % Solids	87.9

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060453

GC #6

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0314080663 Report Date: 04-Sep-98
Sample ID: S401 Lab Code: 5022618D

ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	F	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	F	F	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	F	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-DCP,cis-1,2-DCE	P	F	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	F	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	P	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	F	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	F	P	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	P	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 060453

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 04-Sep-98

Project #: KJP0314080663
Project : Green Bay
Sample ID: S302
Lab Code: 5022618E
Sample Type: Soil
Sample Date: 26-Aug-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	90.8			%		28-Aug-98	JHL	1
VOC						02-Sep-98	BDB	
SW846 8020 (Meth Pres.)								
Benzene	< 25	5.9	20	UG/KG	1			1
Ethylbenzene	< 25	6.2	11	UG/KG	1			1
MTBE	< 25	7	23	UG/KG	1			1
Toluene	< 25	5.1	17	UG/KG	1			1
1,2,4-Trimethylbenzene	170	2.4	8	UG/KG	1			1
1,3,5-Trimethylbenzene	140	3.8	13	UG/KG	1			1
Xylenes	< 50	8.3	28	UG/KG	1			1
Fluorobenzene Surrogate	94			% Rec.				

LOD = Limit of Detection

"J" Flag: Analyte detected between LOD and LOQ.

LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

CHAIN OF CUSTODY REC AD REQUEST FOR ANALYSIS

Northern Environmental℠

No: 10748

☐ 1214 W. Venture Ct. Mequon, WI 53092 414-241-3133 FAX 414-241-8222

☐ 372 West County Road D New Brighton, MN 55112 612-635-9100 FAX 612-635-0643

☒ 954 Circle Driver Green Bay, WI 54304 920-592-8400 FAX 920-592-8444

☐ 330 South 4th Avenue Park Falls, WI 54552 715-762-1544 FAX 715-762-1844

☐ 1203 Storbeck Drive Waupun, WI 53963 920-324-8600 FAX 920-324-3023

☐ 217 S. 7th Street Suite 208 Brainerd, MN 56401 218-825-9001 FAX 218-825-9002

Check office originating request

5022618

Project No: KJP 03 1408 0663 Task No: 150	Laboratory: U.S. OIL
Project Location: (city) Green Bay	Wisconsin DNR Certification #: 445027660
Project Manager: Lynelle Caine	Laboratory Contact: Mike Ricker
Sampler: (name) Jeremy Klaas	Price Quote:
Sampler: (Signature) Jeremy Klaas	TURNAROUND TIME REQUIRED ☒ Normal ☐ Rush
Sampling Date(s): 8-26-98	Date Needed 9-3-98
Reports to be Sent to: Lynelle Caine	

Sample Integrity - To be completed by receiving lab
Seal intact upon receipt ☒ yes ☐ no
Method of shipment Courier
Contents Temperature Ice °C Refrigerator No.

(4)

ANALYSES REQUESTED

Lab ID No.	Sample No.	Collection Date	Collection Time	No. of Containers, Size & Type	Description Water	Description Soil	Description Other	Preservative	DRO (WI Modified Method)	GRO (WI Modified Method)	BETX (EPA Method 8020)	PVOC (EPA Method 8020)	VOC (EPA Method 8021)	PAH (EPA Method)	Pb (EPA Method)
26168A	S101	8-26	9:09	1-202 glass 1-25ml glass		X		none (ice)		X			X		X
B	S201	8-26	10:20	1-202 1-25ml glass		X		none (ice)		X			X		X
C	S301	8-26	11:34	1-202 1-25ml		X		none (ice)		X			X		X
D	S401	8-26	1:08	1-202 1-25ml		X		none (ice)		X			X		X
E	S302	8-26	11:38	1-202 1-25ml		X		none (ice)				X			

Packed for Shipping by: KESWAN

Shipment Date: 8/27/98

Comments:

Relinquished By:	Date: 8/27/98	Relinquished By:	Date:	Relinquished By: Kea Haas	Date: 8-27-98
Company: NETI	Time: 7820	Company:	Time:	Company: US OIL	Time: 2:00
Received By: Kea Haas	Date: 8-27-98	Received By:	Date:	Received By: Linda Smith	Date: 8/27-98
Company: US OIL	Time: 9:30	Company:	Time:	Company: US OIL	Time: 2:00

APPENDIX D2

GROUND-WATER SAMPLES

U.S. Oil Co., Inc.

nalytical Laboratory
90 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

COLE LAPLANT
ORTHERN ENVIRONMENTAL
54 CIRCLE DRIVE
REEN BAY WI 54304

eport Date: 11-Sep-98

Project #: KJP0663
Project : Green Bay
Sample ID: MW100
Lab Code: 5022665A
Sample Type: Water
Sample Date: 31-Aug-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
AD									
W846 7421	< 1.0	1	3.3	UG/L	1.0	1	09-Sep-98	SRF	1
DIFIED GRO									
DNR SEP 95	2600	9.3	31	UG/L	1.8	1	04-Sep-98	BDB	1

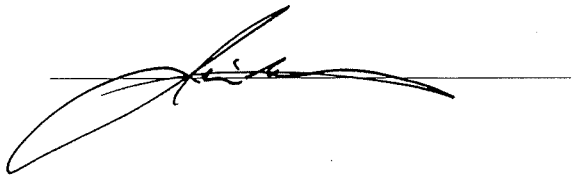
D = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

Method 8021 Volatile Organic Compounds

NICOLE LAPLANT
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 11-Sep-98
Analyzed By: DRL

Project #: KJP0663
Project : Green Bay
Sample ID: MW100
Lab Code: 5022665A
Sample Type: Water
Sample Date: 31-Aug-98
Date Analyzed: 10-Sep-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
Benzene	< 32	32	110	100
Bromobenzene	< 32	32	110	100
Bromodichloromethane	< 38	38	130	100
n-Butylbenzene	< 23	23	78	100
sec-Butylbenzene	< 34	34	110	100
tert-Butylbenzene	< 33	33	110	100
Carbon Tetrachloride	< 47	47	160	100
Chlorobenzene	< 31	31	100	100
Chloroethane	< 13	13	42	100
Chloroform	< 40	40	130	100
Chloromethane	< 18	18	59	100
2-Chlorotoluene	< 31	31	100	100
4-Chlorotoluene	< 31	31	100	100
1,2-Dibromo-3-Chloropropane	< 22	22	73	100
Dibromochloromethane	< 37	37	120	100
1,2-Dichlorobenzene	< 29	29	100	100
1,3-Dichlorobenzene	< 28	28	94	100
1,4-Dichlorobenzene	< 28	28	92	100
Dichlorodifluoromethane	< 28	28	92	100
1,1-Dichloroethane	< 34	34	130	100
1,2-Dichloroethane	< 36	36	120	100
1,1-Dichloroethene	< 39	39	130	100
cis 1,2-Dichloroethene	200	32	110	100
trans-1,2-Dichloroethene	< 38	38	130	100
1,2-Dichloropropane	< 38	38	130	100
1,3-DCP, Tetrachloroethene	< 75	75	250	100

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 56	56	190	100
Di-isopropyl Ether	< 32	32	110	100
Ethylbenzene	< 34	34	110	100
EDB (1,2-Dibromoethane)	< 35	35	120	100
Hexachlorobutadiene	< 27	27	91	100
Isopropylbenzene	< 34	34	110	100
p-Isopropyltoluene	< 31	31	100	100
Methylene Chloride	< 29	29	100	100
MTBE	< 31	31	100	100
Naphthalene	< 88	88	290	100
n-Propylbenzene	< 30	30	100	100
1,1,2,2-Tetrachloroethane	< 35	35	120	100
Tetrachloroethene	10000	35	120	100
Toluene	< 35	35	120	100
1,2,3-Trichlorobenzene	< 45	45	150	100
1,2,4-Trichlorobenzene	< 41	41	140	100
1,1,1-Trichloroethane	< 45	45	150	100
1,1,2-Trichloroethane	< 37	37	120	100
Trichloroethene	3800	48	160	100
Trichlorofluoromethane	< 15	15	50	100
1,2,4-Trimethylbenzene	< 35	35	120	100
1,3,5-Trimethylbenzene	< 64	64	210	100
Vinyl Chloride	< 15	15	49	100
m&p-Xylene	< 66	66	220	100
o-Xylene	< 32	32	110	100

Fluorobenzene Surrogate	91 % Rec.
1,4-Dichlorobutane Surrogate	95 % Rec.
Sample pH	1.3

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 010672

GC #1

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0663 Report Date: 11-Sep-98
Sample ID: MW100 Lab Code: 5022665A

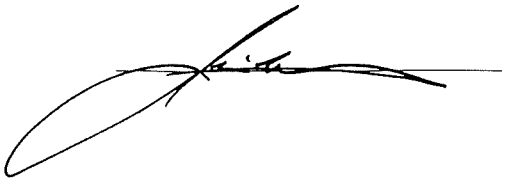
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	P	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	F	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	F	P	P	P	P
m & p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 010672

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

NICOLE LAPLANT
NORTHERN ENVIRONMENTAL
)54 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0663
Project : Green Bay
Sample ID: MW200
Lab Code: 5022665B
Sample Type: Water
Sample Date: 31-Aug-98

Report Date: 11-Sep-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
LEAD									
SW846 7421	< 1.0	1	3.3	UG/L	1.0	1	09-Sep-98	SRF	1
MODIFIED GRO									
WDNR SEP 95	280	9.3	31	UG/L	1.8	1	04-Sep-98	BDB	1

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

\nalytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

Method 8021 Volatile Organic Compounds

IICOLE LAPLANT
IORTHERN ENVIRONMENTAL
54 CIRCLE DRIVE
iREEN BAY WI 54304

.eport Date: 11-Sep-98
nalyzed By: DRL

Project #: KJP0663
Project : Green Bay
Sample ID: MW200
Lab Code: 5022665B
Sample Type: Water
Sample Date: 31-Aug-98
Date Analyzed: 05-Sep-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
enzene	1.4	0.32	1.1	1
romobenzene	< 0.32	0.32	1.1	1
romodichloromethane	< 0.38	0.38	1.3	1
-Butylbenzene	< 0.23	0.23	0.78	1
ec-Butylbenzene	< 0.34	0.34	1.1	1
rt-Butylbenzene	< 0.33	0.33	1.1	1
arbon Tetrachloride	< 0.47	0.47	1.6	1
hlorobenzene	< 0.31	0.31	1	1
hloroethane	< 0.13	0.13	0.42	1
hloroform	< 0.4	0.4	1.3	1
hloromethane	< 0.18	0.18	0.59	1
-Chlorotoluene	< 0.31	0.31	1	1
-Chlorotoluene	< 0.31	0.31	1	1
,2-Dibromo-3-Chloropropane	< 0.22	0.22	0.73	1
ibromochloromethane	< 0.37	0.37	1.2	1
,2-Dichlorobenzene	< 0.29	0.29	1	1
,3-Dichlorobenzene	< 0.28	0.28	0.94	1
,4-Dichlorobenzene	< 0.28	0.28	0.92	1
ichlorodifluoromethane	< 0.28	0.28	0.92	1
,1-Dichloroethane	< 0.34	0.34	1.3	1
,2-Dichloroethane	1.4	0.36	1.2	1
,1-Dichloroethene	0.52 "J"	0.39	1.3	1
is 1,2-Dichloroethene	310	32	110	100
ans-1,2-Dichloroethene	93	0.38	1.3	1
,2-Dichloropropane	< 0.38	0.38	1.3	1
,3-DCP, Tetrachloroethene	< 0.75	0.75	2.5	1

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 0.56	0.56	1.9	1
Di-isopropyl Ether	< 0.32	0.32	1.1	1
Ethylbenzene	< 0.34	0.34	1.1	1
EDB (1,2-Dibromoethane)	< 0.35	0.35	1.2	1
Hexachlorobutadiene	< 0.27	0.27	0.91	1
Isopropylbenzene	< 0.34	0.34	1.1	1
p-Isopropyltoluene	0.32 "J"	0.31	1	1
Methylene Chloride	< 0.29	0.29	1	1
MTBE	< 0.31	0.31	1	1
Naphthalene	< 0.88	0.88	2.9	1
n-Propylbenzene	< 0.3	0.3	1	1
1,1,2,2-Tetrachloroethane	< 0.35	0.35	1.2	1
Tetrachloroethene	140	0.35	1.2	1
Toluene	< 0.35	0.35	1.2	1
1,2,3-Trichlorobenzene	< 0.45	0.45	1.5	1
1,2,4-Trichlorobenzene	< 0.41	0.41	1.4	1
1,1,1-Trichloroethane	< 0.45	0.45	1.5	1
1,1,2-Trichloroethane	< 0.37	0.37	1.2	1
Trichloroethene	520	48	160	100
Trichlorofluoromethane	< 0.15	0.15	0.5	1
1,2,4-Trimethylbenzene	0.4 "J"	0.35	1.2	1
1,3,5-Trimethylbenzene	< 0.64	0.64	2.1	1
Vinyl Chloride	< 0.15	0.15	0.49	1
m&p-Xylene	< 0.66	0.66	2.2	1
o-Xylene	< 0.32	0.32	1.1	1

luorobenzene Surrogate	96 % Rec.
,4-Dichlorobutane Surrogate	93 % Rec.
ample pH	1.4

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 010670

GC #1

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0663 Report Date: 11-Sep-98
Sample ID: MW200 Lab Code: 5022665B

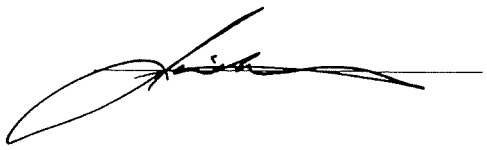
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	P	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	F	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	F	F	P	P	P	P
m & p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 010670

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

ICOLE LAPLANT
ORTHERN ENVIRONMENTAL
54 CIRCLE DRIVE
REEN BAY WI 54304

Project #: KJP0663
Project : Green Bay
Sample ID: MW300
Lab Code: 5022665C
Sample Type: Water
Sample Date: 31-Aug-98

Report Date: 11-Sep-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
EAD SW846 7421	< 1.0	1	3.3	UG/L	1.0	1	09-Sep-98	SRF	1
ODIFIED GRO WDNR SEP 95	120	9.3	31	UG/L	1.8	1	04-Sep-98	BDB	1,2

OD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

2 GRO chromatogram indicates contamination outside of the GRO window.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

Method 8021 Volatile Organic Compounds

NICOLE LAPLANT
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 11-Sep-98
Analyzed By: DRL

Project #: KJP0663
Project : Green Bay
Sample ID: MW300
Lab Code: 5022665C
Sample Type: Water
Sample Date: 31-Aug-98
Date Analyzed: 09-Sep-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
Benzene	< 0.32	0.32	1.1	1
Bromobenzene	< 0.32	0.32	1.1	1
Bromodichloromethane	< 0.38	0.38	1.3	1
n-Butylbenzene	3.4	0.23	0.78	1
sec-Butylbenzene	< 0.34	0.34	1.1	1
tert-Butylbenzene	< 0.33	0.33	1.1	1
Carbon Tetrachloride	< 0.47	0.47	1.6	1
Chlorobenzene	< 0.31	0.31	1	1
Chloroethane	< 0.13	0.13	0.42	1
Chloroform	< 0.4	0.4	1.3	1
Chloromethane	< 0.18	0.18	0.59	1
2-Chlorotoluene	< 0.31	0.31	1	1
4-Chlorotoluene	< 0.31	0.31	1	1
1,2-Dibromo-3-Chloropropane	< 0.22	0.22	0.73	1
Dibromochloromethane	< 0.37	0.37	1.2	1
1,2-Dichlorobenzene	< 0.29	0.29	1	1
1,3-Dichlorobenzene	< 0.28	0.28	0.94	1
1,4-Dichlorobenzene	< 0.28	0.28	0.92	1
Dichlorodifluoromethane	< 0.28	0.28	0.92	1
1,1-Dichloroethane	< 0.34	0.34	1.3	1
1,2-Dichloroethane	< 0.36	0.36	1.2	1
1,1-Dichloroethene	< 0.39	0.39	1.3	1
cis 1,2-Dichloroethene	50	0.32	1.1	1
trans-1,2-Dichloroethene	75	0.38	1.3	1
1,2-Dichloropropane	< 0.38	0.38	1.3	1
1,3-DCP, Tetrachloroethene	< 0.75	0.75	2.5	1

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 0.56	0.56	1.9	1
Di-isopropyl Ether	< 0.32	0.32	1.1	1
Ethylbenzene	< 0.34	0.34	1.1	1
EDB (1,2-Dibromoethane)	< 0.35	0.35	1.2	1
Hexachlorobutadiene	< 0.27	0.27	0.91	1
Isopropylbenzene	< 0.34	0.34	1.1	1
p-Isopropyltoluene	0.61 "J"	0.31	1	1
Methylene Chloride	< 0.29	0.29	1	1
MTBE	< 0.31	0.31	1	1
Naphthalene	< 0.88	0.88	2.9	1
n-Propylbenzene	< 0.3	0.3	1	1
1,1,2,2-Tetrachloroethane	< 0.35	0.35	1.2	1
Tetrachloroethene	2.4	0.35	1.2	1
Toluene	< 0.35	0.35	1.2	1
1,2,3-Trichlorobenzene	< 0.45	0.45	1.5	1
1,2,4-Trichlorobenzene	< 0.41	0.41	1.4	1
1,1,1-Trichloroethane	< 0.45	0.45	1.5	1
1,1,2-Trichloroethane	< 0.37	0.37	1.2	1
Trichloroethene	2.4	0.48	1.6	1
Trichlorofluoromethane	< 0.15	0.15	0.5	1
1,2,4-Trimethylbenzene	< 0.35	0.35	1.2	1
1,3,5-Trimethylbenzene	0.84 "J"	0.64	2.1	1
Vinyl Chloride	< 0.15	0.15	0.49	1
m&p-Xylene	< 0.66	0.66	2.2	1
o-Xylene	< 0.32	0.32	1.1	1

Fluorobenzene Surrogate 92 % Rec.
1,4-Dichlorobutane Surrogate 97 % Rec.
Sample pH 1.3

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 010671

GC #1

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0663 Report Date: 11-Sep-98
Sample ID: MW300 Lab Code: 5022665C

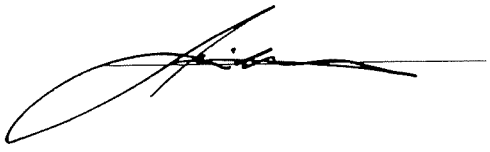
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	F	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	F	P	P	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	F	P	P	P	P	P
m & p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 010671

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

NICOLE LAPLANT
NORTHERN ENVIRONMENTAL
154 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0663
Project : Green Bay
Sample ID: MW400
Lab Code: 5022665D
Sample Type: Water
Sample Date: 31-Aug-98

Report Date: 11-Sep-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
LEAD									
SW846 7421	< 1.0	1	3.3	UG/L	1.1	1	09-Sep-98	SRF	1
MODIFIED GRO									
WDNR SEP 95	170	9.3	31	UG/L	1.8	1	04-Sep-98	BDB	1

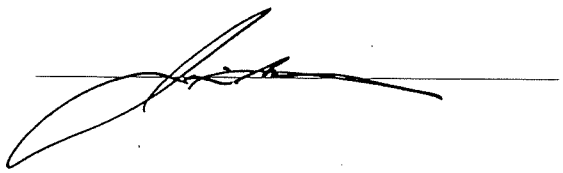
LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

Method 8021 Volatile Organic Compounds

ICOLE LAPLANT
ORTHERN ENVIRONMENTAL
54 CIRCLE DRIVE
iREEN BAY WI 54304

eport Date: 11-Sep-98
nalyzed By: DRL

Project #: KJP0663
Project : Green Bay
Sample ID: MW400
Lab Code: 5022665D
Sample Type: Water
Sample Date: 31-Aug-98
Date Analyzed: 05-Sep-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
enzene	< 0.32	0.32	1.1	1
romobenzene	< 0.32	0.32	1.1	1
romodichloromethane	< 0.38	0.38	1.3	1
-Butylbenzene	< 0.23	0.23	0.78	1
ec-Butylbenzene	< 0.34	0.34	1.1	1
rt-Butylbenzene	< 0.33	0.33	1.1	1
arbon Tetrachloride	< 0.47	0.47	1.6	1
hlorobenzene	< 0.31	0.31	1	1
hloroethane	< 0.13	0.13	0.42	1
hloroform	< 0.4	0.4	1.3	1
hloromethane	< 0.18	0.18	0.59	1
-Chlorotoluene	< 0.31	0.31	1	1
-Chlorotoluene	< 0.31	0.31	1	1
,2-Dibromo-3-Chloropropane	< 0.22	0.22	0.73	1
ibromochloromethane	< 0.37	0.37	1.2	1
,2-Dichlorobenzene	< 0.29	0.29	1	1
,3-Dichlorobenzene	< 0.28	0.28	0.94	1
,4-Dichlorobenzene	< 0.28	0.28	0.92	1
ichlorodifluoromethane	< 0.28	0.28	0.92	1
,1-Dichloroethane	< 0.34	0.34	1.3	1
,2-Dichloroethane	< 0.36	0.36	1.2	1
,1-Dichloroethene	< 0.39	0.39	1.3	1
is 1,2-Dichloroethene	120	0.32	1.1	1
rans-1,2-Dichloroethene	280	19	65	50
,2-Dichloropropane	< 0.38	0.38	1.3	1
,3-DCP, Tetrachloroethene	< 0.75	0.75	2.5	1

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 0.56	0.56	1.9	1
Di-isopropyl Ether	< 0.32	0.32	1.1	1
Ethylbenzene	< 0.34	0.34	1.1	1
EDB (1,2-Dibromoethane)	< 0.35	0.35	1.2	1
Hexachlorobutadiene	< 0.27	0.27	0.91	1
Isopropylbenzene	< 0.34	0.34	1.1	1
p-Isopropyltoluene	< 0.31	0.31	1	1
Methylene Chloride	< 0.29	0.29	1	1
MTBE	< 0.31	0.31	1	1
Naphthalene	< 0.88	0.88	2.9	1
n-Propylbenzene	< 0.3	0.3	1	1
1,1,2,2-Tetrachloroethane	< 0.35	0.35	1.2	1
Tetrachloroethene	34	0.35	1.2	1
Toluene	< 0.35	0.35	1.2	1
1,2,3-Trichlorobenzene	< 0.45	0.45	1.5	1
1,2,4-Trichlorobenzene	< 0.41	0.41	1.4	1
1,1,1-Trichloroethane	< 0.45	0.45	1.5	1
1,1,2-Trichloroethane	< 0.37	0.37	1.2	1
Trichloroethene	77	24	80	50
Trichlorofluoromethane	< 0.15	0.15	0.5	1
1,2,4-Trimethylbenzene	< 0.35	0.35	1.2	1
1,3,5-Trimethylbenzene	< 0.64	0.64	2.1	1
Vinyl Chloride	< 0.15	0.15	0.49	1
m&p-Xylene	< 0.66	0.66	2.2	1
o-Xylene	< 0.32	0.32	1.1	1

Fluorobenzene Surrogate 96 % Rec.
1,4-Dichlorobutane Surrogate 96 % Rec.
Sample pH 1.3

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 010670

GC #1

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0663 Report Date: 11-Sep-98
Sample ID: MW400 Lab Code: 5022665D

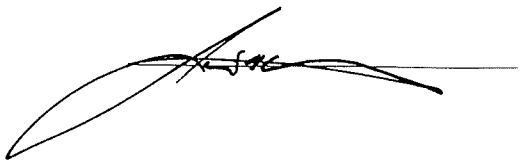
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	P	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	F	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	F	F	P	P	P	P
m & p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 010670

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

Method 8021 Volatile Organic Compounds

NICOLE LAPLANT
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 11-Sep-98
Analyzed By: DRL

Project #: KJP0663
Project : Green Bay
Sample ID: DUP
Lab Code: 5022665E
Sample Type: Water
Sample Date: 31-Aug-98
Date Analyzed: 09-Sep-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
Benzene	< 0.32	0.32	1.1	1
Bromobenzene	< 0.32	0.32	1.1	1
Bromodichloromethane	< 0.38	0.38	1.3	1
n-Butylbenzene	3	0.23	0.78	1
sec-Butylbenzene	< 0.34	0.34	1.1	1
tert-Butylbenzene	< 0.33	0.33	1.1	1
Carbon Tetrachloride	< 0.47	0.47	1.6	1
Chlorobenzene	< 0.31	0.31	1	1
Chloroethane	< 0.13	0.13	0.42	1
Chloroform	< 0.4	0.4	1.3	1
Chloromethane	< 0.18	0.18	0.59	1
2-Chlorotoluene	< 0.31	0.31	1	1
4-Chlorotoluene	< 0.31	0.31	1	1
1,2-Dibromo-3-Chloropropane	< 0.22	0.22	0.73	1
Dibromochloromethane	< 0.37	0.37	1.2	1
1,2-Dichlorobenzene	< 0.29	0.29	1	1
1,3-Dichlorobenzene	< 0.28	0.28	0.94	1
1,4-Dichlorobenzene	< 0.28	0.28	0.92	1
Dichlorodifluoromethane	< 0.28	0.28	0.92	1
1,1-Dichloroethane	< 0.34	0.34	1.3	1
1,2-Dichloroethane	< 0.36	0.36	1.2	1
1,1-Dichloroethene	< 0.39	0.39	1.3	1
cis 1,2-Dichloroethene	44	0.32	1.1	1
trans-1,2-Dichloroethene	74	0.38	1.3	1
1,2-Dichloropropane	< 0.38	0.38	1.3	1
1,3-DCP, Tetrachloroethene	< 0.75	0.75	2.5	1

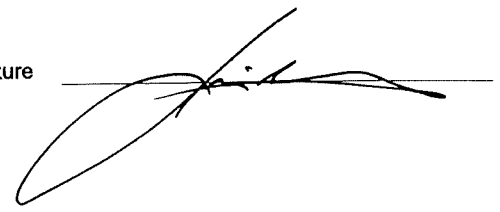
ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 0.56	0.56	1.9	1
Di-isopropyl Ether	< 0.32	0.32	1.1	1
Ethylbenzene	< 0.34	0.34	1.1	1
EDB (1,2-Dibromoethane)	< 0.35	0.35	1.2	1
Hexachlorobutadiene	< 0.27	0.27	0.91	1
Isopropylbenzene	< 0.34	0.34	1.1	1
p-Isopropyltoluene	0.6 "J"	0.31	1	1
Methylene Chloride	< 0.29	0.29	1	1
MTBE	< 0.31	0.31	1	1
Naphthalene	< 0.88	0.88	2.9	1
n-Propylbenzene	< 0.3	0.3	1	1
1,1,2,2-Tetrachloroethane	< 0.35	0.35	1.2	1
Tetrachloroethene	2.1	0.35	1.2	1
Toluene	< 0.35	0.35	1.2	1
1,2,3-Trichlorobenzene	< 0.45	0.45	1.5	1
1,2,4-Trichlorobenzene	< 0.41	0.41	1.4	1
1,1,1-Trichloroethane	< 0.45	0.45	1.5	1
1,1,2-Trichloroethane	< 0.37	0.37	1.2	1
Trichloroethene	2.4	0.48	1.6	1
Trichlorofluoromethane	< 0.15	0.15	0.5	1
1,2,4-Trimethylbenzene	< 0.35	0.35	1.2	1
1,3,5-Trimethylbenzene	0.94 "J"	0.64	2.1	1
Vinyl Chloride	< 0.15	0.15	0.49	1
m&p-Xylene	< 0.66	0.66	2.2	1
o-Xylene	< 0.32	0.32	1.1	1

Fluorobenzene Surrogate	82 % Rec.
1,4-Dichlorobutane Surrogate	96 % Rec.
Sample pH	1.3

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 010671

GC #1

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0663 Report Date: 11-Sep-98
Sample ID: DUP Lab Code: 5022665E

ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	F	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	F	P	P	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	F	P	P	P	P	P
m & p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 010671

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

Method 8021 Volatile Organic Compounds

NICOLE LAPLANT
NORTHERN ENVIRONMENTAL
054 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 11-Sep-98
Analyzed By: DRL

Project #: KJP0663
Project : Green Bay
Sample ID: FIELD
Lab Code: 5022665F
Sample Type: Water
Sample Date: 31-Aug-98
Date Analyzed: 04-Sep-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
Benzene	< 0.32	0.32	1.1	1
Bromobenzene	< 0.32	0.32	1.1	1
Bromodichloromethane	< 0.38	0.38	1.3	1
n-Butylbenzene	< 0.23	0.23	0.78	1
sec-Butylbenzene	< 0.34	0.34	1.1	1
tert-Butylbenzene	< 0.33	0.33	1.1	1
Carbon Tetrachloride	< 0.47	0.47	1.6	1
Chlorobenzene	< 0.31	0.31	1	1
Chloroethane	< 0.13	0.13	0.42	1
Chloroform	< 0.4	0.4	1.3	1
Chloromethane	< 0.18	0.18	0.59	1
2-Chlorotoluene	< 0.31	0.31	1	1
4-Chlorotoluene	< 0.31	0.31	1	1
1,2-Dibromo-3-Chloropropane	< 0.22	0.22	0.73	1
Dibromochloromethane	< 0.37	0.37	1.2	1
1,2-Dichlorobenzene	< 0.29	0.29	1	1
1,3-Dichlorobenzene	< 0.28	0.28	0.94	1
1,4-Dichlorobenzene	< 0.28	0.28	0.92	1
Dichlorodifluoromethane	< 0.28	0.28	0.92	1
1,1-Dichloroethane	< 0.34	0.34	1.3	1
1,2-Dichloroethane	< 0.36	0.36	1.2	1
1,1-Dichloroethene	< 0.39	0.39	1.3	1
cis 1,2-Dichloroethene	< 0.32	0.32	1.1	1
trans-1,2-Dichloroethene	< 0.38	0.38	1.3	1
1,2-Dichloropropane	< 0.38	0.38	1.3	1
1,3-DCP, Tetrachloroethene	< 0.75	0.75	2.5	1

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 0.56	0.56	1.9	1
Di-isopropyl Ether	< 0.32	0.32	1.1	1
Ethylbenzene	< 0.34	0.34	1.1	1
EDB (1,2-Dibromoethane)	< 0.35	0.35	1.2	1
Hexachlorobutadiene	< 0.27	0.27	0.91	1
Isopropylbenzene	< 0.34	0.34	1.1	1
p-Isopropyltoluene	< 0.31	0.31	1	1
Methylene Chloride	< 0.29	0.29	1	1
MTBE	< 0.31	0.31	1	1
Naphthalene	< 0.88	0.88	2.9	1
n-Propylbenzene	< 0.3	0.3	1	1
1,1,2,2-Tetrachloroethane	< 0.35	0.35	1.2	1
Tetrachloroethene	< 0.35	0.35	1.2	1
Toluene	< 0.35	0.35	1.2	1
1,2,3-Trichlorobenzene	< 0.45	0.45	1.5	1
1,2,4-Trichlorobenzene	< 0.41	0.41	1.4	1
1,1,1-Trichloroethane	< 0.45	0.45	1.5	1
1,1,2-Trichloroethane	< 0.37	0.37	1.2	1
Trichloroethene	< 0.48	0.48	1.6	1
Trichlorofluoromethane	< 0.15	0.15	0.5	1
1,2,4-Trimethylbenzene	< 0.35	0.35	1.2	1
1,3,5-Trimethylbenzene	< 0.64	0.64	2.1	1
Vinyl Chloride	< 0.15	0.15	0.49	1
m&p-Xylene	< 0.66	0.66	2.2	1
o-Xylene	< 0.32	0.32	1.1	1

Fluorobenzene Surrogate 91 % Rec.
1,4-Dichlorobutane Surrogate 103 % Rec.
Sample pH 1.4

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 010670

GC #1

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0663 Report Date: 11-Sep-98
Sample ID: FIELD Lab Code: 5022665F

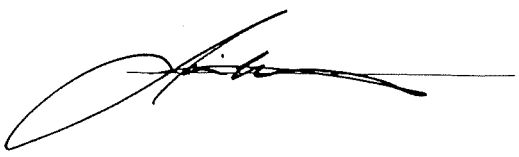
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	P	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	F	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	F	F	P	P	P	P
m & p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 010670

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
)20-735-8295

WI DNR Certified Lab #445027660

Method 8021 Volatile Organic Compounds

NICOLE LAPLANT
NORTHERN ENVIRONMENTAL
)54 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 11-Sep-98
Analyzed By: DRL

Project #: KJP0663
Project : Green Bay
Sample ID: TRIP
Lab Code: 5022665G
Sample Type: Water
Sample Date: 31-Aug-98
Date Analyzed: 04-Sep-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
Benzene	< 0.32	0.32	1.1	1
Bromobenzene	< 0.32	0.32	1.1	1
Bromodichloromethane	< 0.38	0.38	1.3	1
n-Butylbenzene	< 0.23	0.23	0.78	1
sec-Butylbenzene	< 0.34	0.34	1.1	1
tert-Butylbenzene	< 0.33	0.33	1.1	1
Carbon Tetrachloride	< 0.47	0.47	1.6	1
Chlorobenzene	< 0.31	0.31	1	1
Chloroethane	< 0.13	0.13	0.42	1
Chloroform	< 0.4	0.4	1.3	1
Chloromethane	< 0.18	0.18	0.59	1
2-Chlorotoluene	< 0.31	0.31	1	1
4-Chlorotoluene	< 0.31	0.31	1	1
1,2-Dibromo-3-Chloropropane	< 0.22	0.22	0.73	1
Dibromochloromethane	< 0.37	0.37	1.2	1
1,2-Dichlorobenzene	< 0.29	0.29	1	1
1,3-Dichlorobenzene	< 0.28	0.28	0.94	1
1,4-Dichlorobenzene	< 0.28	0.28	0.92	1
Dichlorodifluoromethane	< 0.28	0.28	0.92	1
1,1-Dichloroethane	< 0.34	0.34	1.3	1
1,2-Dichloroethane	< 0.36	0.36	1.2	1
1,1-Dichloroethene	< 0.39	0.39	1.3	1
cis 1,2-Dichloroethene	< 0.32	0.32	1.1	1
trans-1,2-Dichloroethene	< 0.38	0.38	1.3	1
1,2-Dichloropropane	< 0.38	0.38	1.3	1
1,3-DCP, Tetrachloroethene	< 0.75	0.75	2.5	1

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 0.56	0.56	1.9	1
Di-isopropyl Ether	< 0.32	0.32	1.1	1
Ethylbenzene	< 0.34	0.34	1.1	1
EDB (1,2-Dibromoethane)	< 0.35	0.35	1.2	1
Hexachlorobutadiene	< 0.27	0.27	0.91	1
Isopropylbenzene	< 0.34	0.34	1.1	1
p-Isopropyltoluene	< 0.31	0.31	1	1
Methylene Chloride	< 0.29	0.29	1	1
MTBE	< 0.31	0.31	1	1
Naphthalene	< 0.88	0.88	2.9	1
n-Propylbenzene	< 0.3	0.3	1	1
1,1,2,2-Tetrachloroethane	< 0.35	0.35	1.2	1
Tetrachloroethene	< 0.35	0.35	1.2	1
Toluene	< 0.35	0.35	1.2	1
1,2,3-Trichlorobenzene	< 0.45	0.45	1.5	1
1,2,4-Trichlorobenzene	< 0.41	0.41	1.4	1
1,1,1-Trichloroethane	< 0.45	0.45	1.5	1
1,1,2-Trichloroethane	< 0.37	0.37	1.2	1
Trichloroethene	< 0.48	0.48	1.6	1
Trichlorofluoromethane	< 0.15	0.15	0.5	1
1,2,4-Trimethylbenzene	< 0.35	0.35	1.2	1
1,3,5-Trimethylbenzene	< 0.64	0.64	2.1	1
Vinyl Chloride	< 0.15	0.15	0.49	1
m&p-Xylene	< 0.66	0.66	2.2	1
o-Xylene	< 0.32	0.32	1.1	1

Fluorobenzene Surrogate 92 % Rec.
1,4-Dichlorobutane Surrogate 101 % Rec.
Sample pH 1.6

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 010670

GC #1

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: KJP0663 Report Date: 11-Sep-98
Sample ID: TRIP Lab Code: 5022665G

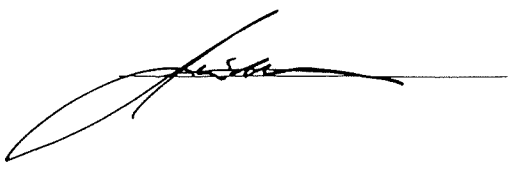
ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	P	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-Isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	F	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	F	F	P	P	P	P
m & p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 010670

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature



CHAIN OF CUSTODY RECORD REQUEST FOR ANALYSIS

No: 10762

Northern Environmental℠

☐ 1214 W. Venture Ct.
Mequon, WI 53092
414-241-3133
FAX 414-241-8222

☐ 372 West County Road D
New Brighton, MN 55112
612-635-9100
FAX 612-635-0643

☒ 954 Circle Driver
Green Bay, WI 54304
920-592-8400
FAX 920-592-8444

☐ 330 South 4th Avenue
Park Falls, WI 54552
715-762-1544
FAX 715-762-1844

☐ 1203 Storbeck Drive
Waupun, WI 53963
920-324-8600
FAX 920-324-3023

☐ 217 S. 7th Street Suite 208
Brainerd, MN 56401
218-825-9001
FAX 218-825-9002

Check office originating request

5022665

Project No: KJP 0663 Task No: 150

Project Location: (city) Green Bay

Project Manager: Lynelle P. Caine

Sampler: (name) Jeremy Klaas

Sampler: (Signature) Jeremy Klaas

Sampling Date(s): 8-31-98

Reports to be Sent to: Nicole LaPlant

Laboratory: U.S. Oil Analytical

Wisconsin DNR Certification #: 445027660

Laboratory Contact: Jim Stevens

Price Quote:

TURNAROUND TIME REQUIRED

☒ Normal ☐ Rush

Date Needed _____

Sample Integrity - To be completed by receiving lab
Seal intact upon receipt ☒ yes ☐ no
Method of shipment Courier
Contents Temperature ice °C Refrigerator No. _____ LG-5

ANALYSES REQUESTED

Lab ID No.	Sample No.	Collection Date	Collection Time	No. of Containers, Size & Type	Description Water	Description Soil	Description Other	Preservative	DRO (WI Modified Method)	GRO (WI Modified Method)	BETX (EPA Method 8020)	PVOC (EPA Method 8020)	VOC (EPA Method 8021)	PAH (EPA Method	Pb (EPA Method
22665A	MW100	8-31-98	910	5-40ml, 1-250ml	X			HCl/HNO3/ICE		X			X		X
B	MW200		950		X					X			X		X
C	MW300		1645		X					X			X		X
D	MW400		1020		X					X			X		X
E	DUP		—	3-40ml	X			HCl/ICE					X		
F	FIELD		1055	3-40ml	X			"					X		
G	TRIP	—	—	1-40ml	X			"					X		

Packed for Shipping by: SFB

Shipment Date: 9-1-98

Comments:

Relinquished By: [signature]	Date: 9-1-98	Relinquished By: [signature]	Date: 9-1-98
Company: NETI	Time: 7:00	Company: US Oil	Time: 3:10
Received By: [signature]	Date: 8-1-98	Received By: Linda Smith	Date: 9-1-98
Company: US Oil	Time: 7:00	Company: US Oil	Time: 3:10

Relinquished By:	Date:		
Company:	Time:		
Received By:	Date:		
Company:	Time:		

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0314080663
Project : Green Bay
Sample ID: MW100
Lab Code: 5023387A
Sample Type: Water
Sample Date: 29-Oct-98

Report Date: 12-Nov-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
PVOC									
MOD SW846 8260					1.9	1	11-Nov-98	CJR	
Benzene	< 0.25	0.25	0.85	UG/L					1
Ethylbenzene	< 0.32	0.32	1.1	UG/L					1
MTBE	< 0.21	0.21	0.69	UG/L					1
Toluene	< 0.38	0.38	1.3	UG/L					1
1,2,4-Trimethylbenzene	< 0.34	0.34	1.1	UG/L					1
1,3,5-Trimethylbenzene	< 0.36	0.36	1.2	UG/L					1
Xylenes	< 1.0	1	3.4	UG/L					1
1,2-Dichloroethane-d4 Surrogate	101			% Rec.					

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
20-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Report Date: 12-Nov-98

Project #: KJP0314080663
Project : Green Bay
Sample ID: MW200
Lab Code: 5023387B
Sample Type: Water
Sample Date: 29-Oct-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
PVOC									
MOD SW846 8260					1.9	1	11-Nov-98	CJR	
Benzene	0.73 "J"	0.25	0.85	UG/L					1
Ethylbenzene	< 0.32	0.32	1.1	UG/L					1
MTBE	< 0.21	0.21	0.69	UG/L					1
Toluene	< 0.38	0.38	1.3	UG/L					1
1,2,4-Trimethylbenzene	< 0.34	0.34	1.1	UG/L					1
1,3,5-Trimethylbenzene	< 0.36	0.36	1.2	UG/L					1
Xylenes	< 1.0	1	3.4	UG/L					1
1,2-Dichloroethane-d4 Surrogate	101			% Rec.					

LOD = Limit of Detection

"J" Flag: Analyte detected between LOD and LOQ.

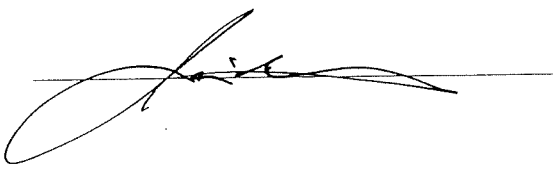
LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0314080663
Project : Green Bay
Sample ID: MW300
Lab Code: 5023387C
Sample Type: Water
Sample Date: 29-Oct-98

Report Date: 12-Nov-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
PVOC									
MOD SW846 8260					1.9	1	11-Nov-98	CJR	
Benzene	0.61 "J"	0.25	0.85	UG/L					1
Ethylbenzene	< 0.32	0.32	1.1	UG/L					1
MTBE	< 0.21	0.21	0.69	UG/L					1
Toluene	< 0.38	0.38	1.3	UG/L					1
1,2,4-Trimethylbenzene	< 0.34	0.34	1.1	UG/L					1
1,3,5-Trimethylbenzene	0.66 "J"	0.36	1.2	UG/L					1
Xylenes	< 1.0	1	3.4	UG/L					1
1,2-Dichloroethane-d4 Surrogate	102			% Rec.					

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

nalytical Laboratory
90 Kennedy Ave. Kimberly, WI 54136
0-735-8295

WI DNR Certified Lab #445027660

YNELLE CAINE
IORTHERN ENVIRONMENTAL
54 CIRCLE DRIVE
;REEN BAY WI 54304

Project #: KJP0314080663
Project : Green Bay
Sample ID: MW400
Lab Code: 5023387D
Sample Type: Water
Sample Date: 29-Oct-98

:eport Date: 12-Nov-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
VOC									
MOD SW846 8260					1.9	1	11-Nov-98	CJR	
Benzene	< 0.25	0.25	0.85	UG/L					1
Ethylbenzene	< 0.32	0.32	1.1	UG/L					1
MTBE	< 0.21	0.21	0.69	UG/L					1
Toluene	< 0.38	0.38	1.3	UG/L					1
1,2,4-Trimethylbenzene	< 0.34	0.34	1.1	UG/L					1
1,3,5-Trimethylbenzene	< 0.36	0.36	1.2	UG/L					1
Xylenes	< 1.0	1	3.4	UG/L					1
1,2-Dichloroethane-d4 Surrogate	98			% Rec.					

:OD = Limit of Detection

"J" Flag: Analyte detected between LOD and LOQ.

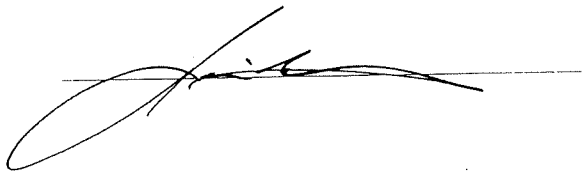
LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

LYNELLE CAINE
NORTHERN ENVIRONMENTAL
954 CIRCLE DRIVE
GREEN BAY WI 54304

Project #: KJP0314080663
Project : Green Bay
Sample ID: TRIP
Lab Code: 5023387E
Sample Type: Water
Sample Date: 29-Oct-98

Report Date: 12-Nov-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
PVOC									
MOD SW846 8260					1.9	1	11-Nov-98	CJR	
Benzene	< 0.25	0.25	0.85	UG/L					1
Ethylbenzene	< 0.32	0.32	1.1	UG/L					1
MTBE	< 0.21	0.21	0.69	UG/L					1
Toluene	< 0.38	0.38	1.3	UG/L					1
1,2,4-Trimethylbenzene	< 0.34	0.34	1.1	UG/L					1
1,3,5-Trimethylbenzene	< 0.36	0.36	1.2	UG/L					1
Xylenes	< 1.0	1	3.4	UG/L					1
1,2-Dichloroethane-d4 Surrogate	98			% Rec.					

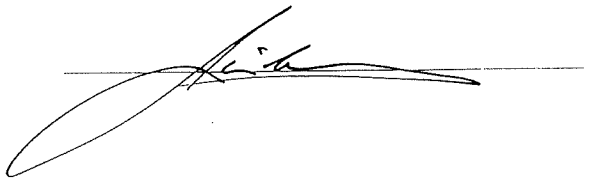
LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature



CHAIN OF CUSTODY REC. RD REQUEST FOR ANALYSIS

____ of ____

No: 10698

Northern Environmental℠

☐ 1214 W. Venture Ct. Mequon, WI 53092 414-241-3133 FAX 414-241-8222

☐ 372 West County Road D New Brighton, MN 55112 612-635-9100 FAX 612-635-0643

☒ 954 Circle Driver Green Bay, WI 54304 920-592-8400 FAX 920-592-8444

☐ 330 South 4th Avenue Park Falls, WI 54552 715-762-1544 FAX 715-762-1844

☐ 1203 Storbeck Drive Waupun, WI 53963 920-324-8600 FAX 920-324-3023

☐ 217 S. 7th Street Suite 208 Brainerd, MN 56401 218-825-9001 FAX 218-825-9002

Check office originating request

5023387

Project No: KVP 03 1408 0663 Task No:	Laboratory: U.S. Oil
Project Location: (city) Green Bay	Wisconsin DNR Certification #: 44 5027660
Project Manager: Lynelle P. Caine	Laboratory Contact: Mike Ricker
Sampler: (name) Jeremy Klaas	Price Quote:
Sampler: (Signature) Jeremy Klaas	TURNAROUND TIME REQUIRED ☒ Normal ☐ Rush
Sampling Date(s): 10-29-98	
Reports to be Sent to: Lynelle Caine	Date Needed ____

Sample Integrity - To be completed by receiving lab
Seal intact upon receipt ☒ yes ☐ no
Method of shipment Courier
Contents Temperature 1.2 °C Refrigerator No. ____ LOS

ANALYSES REQUESTED

Lab ID No.	Sample No.	Collection Date	Collection Time	No. of Containers, Size & Type	Description Water	Description Soil	Description Other	Preservative	DRO (WI Modified Method)	GRO (WI Modified Method)	BETX (EPA Method 8020)	PVOC (EPA Method 8020)	VOC (EPA Method 8021)	PAH (EPA Method	Pb (EPA Method
5023387 A	MW100	10-29	1:55	3-40ml glass	X			HCl ice				X			
B	MW200	10-29	2:15	3-40ml glass	X							X			
C	MW300		2:35	3-40ml glass	X							X			
D	MW400		3:00	3-40ml glass	X							X			
E	trip			3-40ml glass	X							X			

Shipment Date: 10-30							
Relinquished By: JFC	Date: 10-30-98	Relinquished By:	Date:	Relinquished By: Doo Huss	Date: 10-30-98
Company: NETI	Time: 7:20	Company:	Time:	Company: US Oil	Time: 5:10
Received By: Doo Huss	Date: 10-30-98	Received By:	Date:	Received By: Linda Imdo	Date: 10/30/98
Company: US Oil	Time: 7:20	Company:	Time:	Company: US Oil	Time: 5:10