OMNI ASSOCIATES

Initial Soil and Groundwater Investigation

at the

Dennis Malchow Property
3225 W. College Avenue, Appleton, WI

ERRP # 02-45-228649

October 16, 2000

Project #N1556A99

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EXECUTIVE SUMMARY

OMNNI has completed an initial subsurface investigation for Mr. Dennis Malchow at the vacant lot located at 3225 W. College Avenue, Appleton, WI. The investigation was performed in response to the report of solvent contamination discovered during a separate petroleum investigation performed by OMNNI on the adjacent property. The release was reported to the DNR.

Research has shown that the site is a former dry cleaner.

OMNNI was contracted by the owner of the property to conduct an investigation at the site. In April 1999, a total of three soil borings were performed at the site to begin to identify the extent of soil contamination. Groundwater monitoring wells were constructed in all three of the borings to characterize the condition of the groundwater and to determine flow direction. Two wells from the petroleum investigation are also being used to monitor groundwater quality at the former dry cleaner site.

Analytical test results indicated that the extent of soil and groundwater contamination at the site had not been completely defined. Volatile organic compounds (VOCs) were detected above standards in the groundwater at the three new wells.

OMNNI returned to the site on September 7, 2000, to observe the installation of three additional groundwater monitoring wells. Results of testing from these three new wells indicates that the lateral extent of solvent contamination at the site has been defined.

OMNNI recommends that three piezometers be installed to define the vertical extent of groundwater contamination, that geoprobes be completed to investigate a former a utility trench, and that a remedial action plan be developed to address the soil and groundwater contamination. OMNNI also recommends that the monitoring wells and future piezometers be sampled quarterly to continue to monitor the groundwater quality at the site.

INTRODUCTION/BACKGROUND

OMNNI was contracted to perform an investigation of the property. The site is located in the SW ¼, SW ¼, Section 28, T21N, R17E, Town of Grand Chute, Outagamie County, Wisconsin. (See Figure 1 - Site Location Map, Appendix 1.)

An investigation of the former Hardee's restaurant site, located adjacent to the vacant lot, was performed by OMNNI. During the petroleum investigation, a monitoring well (MW2) was placed on the vacant lot. Both petroleum and solvent contamination were present in the well. A second well (MW4) was placed on the vacant lot and more severe solvent contamination was detected. (See Figure 2 - Site Detail Map, Appendix 1.) The solvent contamination was reported to the DNR.

In April 1999, OMNNI coordinated the installation of three soil borings on the vacant lot (SB1 – SB3). Groundwater monitoring wells were installed in all three of the borings (SMW1 – SMW3). Analytical testing of soil and groundwater indicated that the extent of contamination was not defined. OMNNI returned to the site on September 7, 2000, to coordinate the installation of three additional monitoring wells (SMW4 – SMW6). This report documents the investigation performed in April 1999 and September 2000 and the most recent groundwater sampling event performed on September 13, 2000.

A total of eight monitoring wells are being used to monitor the former dry cleaning site. The wells have been sampled between one and four times, depending on the date of their installation.

No private water supply wells are located on the property. The area businesses are serviced by municipal sewer and water.

The following are the primary contacts for the project:

Owner: Mr. Dennis Malchow, N3608 Vista Drive, Campbellsport, WI 53010-1833; (920) 533-3454.

Consultant: OMNNI Associates, One Systems Drive, Appleton, WI 54914; (920) 735-6900. Contact: Mr. Dave Fries.

Driller: M & K Environmental and Soil Drilling, 214 S. Pershing Street, Howards Grove, WI 53083; (800) 227-4158. Contact: Mr. Mike Mc Ardle.

Laboratory: U.S. Analytical Laboratory, 1090 Kennedy Avenue, Kimberly, WI 54136; (920) 735-8285. Contact: Mr. Chris Zabel.

GEOLOGY AND HYDROGEOLOGY

The site is located in the Fox – Wolf River basin of Wisconsin. Surficial deposits in this basin consist of glacial sediment deposited during the Wisconsin glaciation. The glaciers were present during the Pleistocene period. United States Geological Survey maps (Water Resources of Wisconsin – Fox – Wolf River Basin, by Perry G. Alcott, 1968) indicate that the material in the vicinity of the site is composed of lake sediment consisting of silt and clay. These deposits overlie undifferentiated dolomite. These sedimentary rocks were formed during the Ordovician age.

Soil samples collected during drilling activities at the site consisted mostly of clay, silt, or silty clay to a depth of approximately 15 feet. (See Figure 3 - Diagrammatic Cross-Section of Stratigraphy from A – A', and Figure 4 - Diagrammatic Cross-Section of Stratigraphy from B – B', Appendix 1.) Bedrock was not encountered in any of the borings. According to the U.S.G.S. maps, bedrock is expected to be up to 100 feet deep in the vicinity of the site.

Topography on-site is relatively flat. Immediately off-site, the topography slopes downward to the west-southwest toward Mud Creek, which is located approximately ¼ mile from the site. Based on the topography and the investigation performed on the adjacent lot, the regional groundwater movement is expected to be to the west-southwest.

Based on data collected from the monitoring wells on September 13, 2000, the depth to groundwater varies at the site from approximately 5 – 8 feet below the ground surface. The shallow groundwater appears to mound around the former building foundation and flows radially outward in all directions. (See Figure 5 - Groundwater Elevation Contour Map, Appendix 1.)

Changes in the groundwater depth and flow direction typically occur seasonally. Other subsurface structures such as utility trenches may also influence groundwater flow direction at this site due to the shallow depth of the water table aquifer.

FIELD ACTIVITIES

SOIL BORINGS

Soil boring activities were performed on April 20, 1999, and September 7, 2000. A total of six soil borings (SB1 – SB6) were performed on-site to identify the extent of soil contamination. Monitoring wells (SMW1 –

SMW6) were constructed in each of the borings to determine the impact of the contamination on the groundwater.

Borings were installed to depths of approximately 14.5 - 15 feet. (See Soil Boring Log Information Forms, Appendix 3.)

Soil samples were obtained at 2 ½ foot intervals for field screening with a photoionization detector (PID). At each sampling interval, a representative portion of the soil was also collected for possible laboratory analysis. (See Handbook of Field Procedures, Appendix 4.) Soil samples were chosen from each boring for laboratory analysis based on PID screening data, the location of the water table, and visual and olfactory observations.

GROUNDWATER MONITORING WELLS

Monitoring wells were constructed in all six of the borings at the site to identify the extent of groundwater contamination. The monitoring wells were installed and developed according to NR 141 groundwater monitoring well requirements. (See Well Construction and Development Forms, Appendix 3.) Ten-foot screens were placed in the wells to intersect the shallow water table at the site.

OMNNI surveyed the wells. Elevations are based on the USGS datum. Ground elevation was surveyed to the nearest 0.1 foot, and the top of the well casing to the nearest 0.01 foot.

Three of the monitoring wells (SMW1 – SMW3) were developed on April 21, 1999. Initial groundwater samples were obtained from wells SMW1 – SMW3 on April 21, 1999. (See Handbook of Field Procedures, Appendix 4.)

The three wells installed on September 7, 2000, were developed on September 7 and September 13, 2000, and sampled on September 13, 2000. (See Well Specific Field Sheet, Appendix 3.)

FIELD AND ANALYTICAL RESULTS

Headspace screening results from the six soil borings ranged from 0.0 ppm to 43 ppm (isobutylene equivalents). (See Soil Boring Logs for Headspace Data, Appendix 3.) Field headspace results showed evidence of contamination in boring SB1.

The soil samples collected from the borings were tested for VOCs. Laboratory analysis of soil samples collected from the borings confirmed the presence of contamination in SB1 and also showed contamination in SB2 and SB4. (See Table 1 – Summary of Laboratory Analysis, Soil Boring Samples, Appendix 2.) Soil standards do not exist for many of the VOCs that were detected.

The latest groundwater samples collected from the monitoring wells were analyzed for VOCs. Results of previous sampling events were documented in a letter by OMNNI dated June 21, 2000.

Laboratory analysis results showed enforcement standard (ES) exceedances in all of the monitoring wells except SMW6. No detections above method detection limits were found in SMW6, located off-site. The most severe groundwater contamination was found in SMW1 and MW4. (See Table 2 - Summary of Laboratory Analysis, Groundwater – Historical, Appendix 2, and Laboratory Results and Chain of Custody Documentation, Appendix 5.)

ANALYSIS OF DEGREE AND EXTENT OF CONTAMINATION

The extent of soil contamination has been defined to the extent practical. The vertical extent of the soil contamination at the site was determined during the initial investigation. Samples collected during drilling activities from the borings show contamination extending to a depth of between 5 – 7 feet in some areas. The most severe soil contamination was found in borings B8 (MW4), SB1 (SMW1), and SB2 (SMW2).

The initial investigation carried out at the Dennis Malchow property has not completely identified the extent of groundwater contamination at the site. The vertical extent of groundwater contamination needs to be defined. The most severe groundwater contamination seems to be at MW4 and SMW1. Despite having some slight enforcement standard exceedances at the monitoring wells on the fringe of the plume, the lateral extent of groundwater contamination appears to be bounded by SMW4 to the north, by a point between SMW2 and SMW6 to the east, by MW2 to the west, and by SMW5 to the south. Laterally, the extent of groundwater contamination appears to be defined to the extent practical.

Based on the water level elevations collected on September 13, 2000, the water table on-site is between approximately 5 and 8 feet below the ground surface. The shallow groundwater flow appears to be influenced by the former building foundation. Groundwater is mounded near the former foundation and flows radially outward from the foundation in all directions. The regional flow direction is expected to be toward Mud Creek, which is located to the west of the site.

CONCLUSIONS/RECOMMENDATIONS

Based on soil analytical data, unsaturated soil contamination exists in borings B8, SB1, and SB2. Saturated soil contamination extends to a depth of approximately 7 feet in some borings. Analytical data also shows that groundwater is most severely impacted in wells MW4 and SMW1, with less contamination in SMW2 – SMW5 and MW2. No contamination was found in SMW6.

OMNNI recommends that three piezometers be installed to define the vertical extent of groundwater contamination, and that geoprobes be completed to investigate former utility trench(s) at the site. OMNNI also recommends that the monitoring wells and future piezometers on-site be sampled quarterly to continue to monitor the groundwater quality at the site.

Once the extent of contamination is defined a remedial action plan should be developed to address the soil and groundwater contamination.

STANDARD OF CARE

The conclusions presented in this investigation were arrived at using generally accepted hydrogeologic and engineering practices. The conclusions presented herein represent our professional opinions, based on the data collected at the time of the investigation, at the specific boring and sampling locations discussed in this report. Conditions at other locations on the property may be different than described in this investigation. The scope of this report is limited to the specific project and location described herein.

Prepared By:

Dave Fries, P.G.
Hydrogeologist

Reviewed By: Don Brittnacher

Don Brittnacher, P.E.
Environmental Engineer

"I, Dave Fries, 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."

Dave

(Professional Geologist)

WISCONSIN DAVID L. FRIES G-192 KIMBERLY WI PROFESSIONAL GEOLOGIST

(P.G. Number)

"I, Don Brittnacher, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with 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."

Don Brittnacher

(Professional Engineer)

WISCONSIN DONALD J. BRITTNACHER E-30286 KAUKAUNA WI PROFESSIONAL ENGINEER

P.E. Number

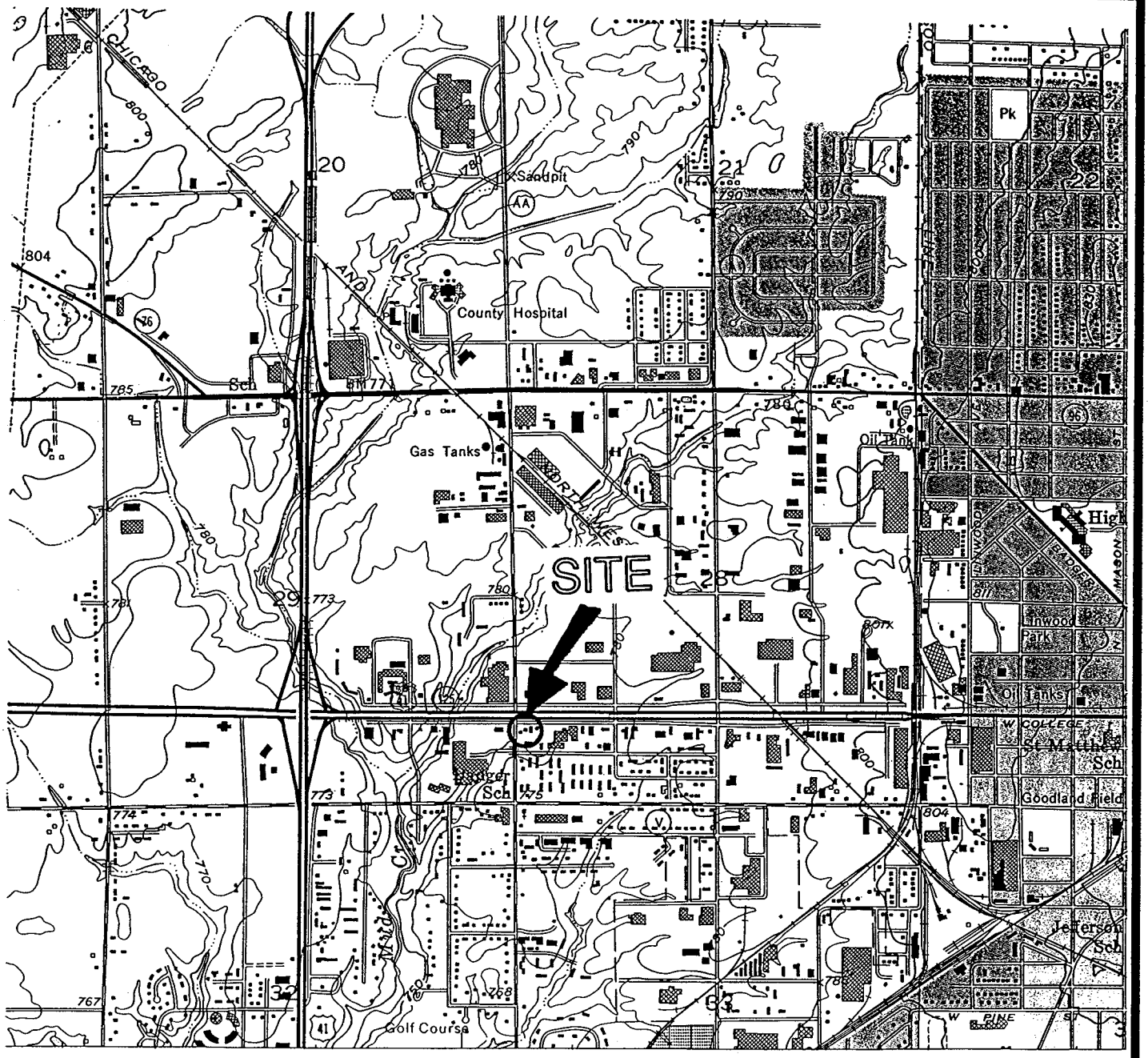
DISTRIBUTION:

Mr. Dennis Malchow
N3608 Vista Drive
Campbellsport, WI 53010

Ms. Jennifer Tobias
DNR – Oshkosh Area Office
625 E. CTY HWY "Y"
Suite 700
Oshkosh, WI 54901-9731

APPENDIX 1

FIGURES



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, APPLETON, WISCONSIN QUADRANGLE, 1984.

0 1000' 2000' 4000'

SCALE 1"= 2000'

N

FIGURE 1
SITE LOCATION MAP

VACANT LOT
3225 W. COLLEGE AVENUE
TOWN OF GRAND CHUTE, WISCONSIN

OMNI ASSOCIATES

ONE SYSTEMS DRIVE
APPLETON, WI 54914

PHONE (920) 735-6900
FAX (920) 830-6100

PROJECT MANAGER:		PROJECT NO:	N1556A99
PROJECT ENGINEER:		CAD FILE NO:	N1556A1
DRAWN BY:	DLD	SCALE:	
REVIEWED BY:		DATE:	8/28/00

ENGINEERING
ARCHITECTURE
ENVIRONMENTAL

OMNI ASSOCIATES

ONE SYSTEMS DRIVE
APPLETON, WI 54914
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FAX 920-830-6100

LETTER OF TRANSMITTAL

To: Ms. Jennifer Tobias
WDNR - Oshkosh
625 CTY HWY "Y" Suite 700
Oshkosh, WI 54901-9731

Date: October 19, 2000
Project No.: N1556A99
Project: Malchow Property
Client: Dennis Malchow

We are sending you ☒ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications ☐ Copy of letter ☐ Change order

☒ Other Figure 2 - Site Detail Map

Copies	Date	No.	Description
1			

R + R - OSH
RECEIVED
OCT 20 2000
TRACKED ☐
REVIEWED ☐

These are transmitted as checked below:

☐ For approval
☒ For your use
☒ As requested
☐ For review and comment
☐ For bids due _____

☐ Approved as submitted
☐ Approved as noted
☐ Returned for corrections
☐ Other _____
☐ **Prints returned after loan to us**

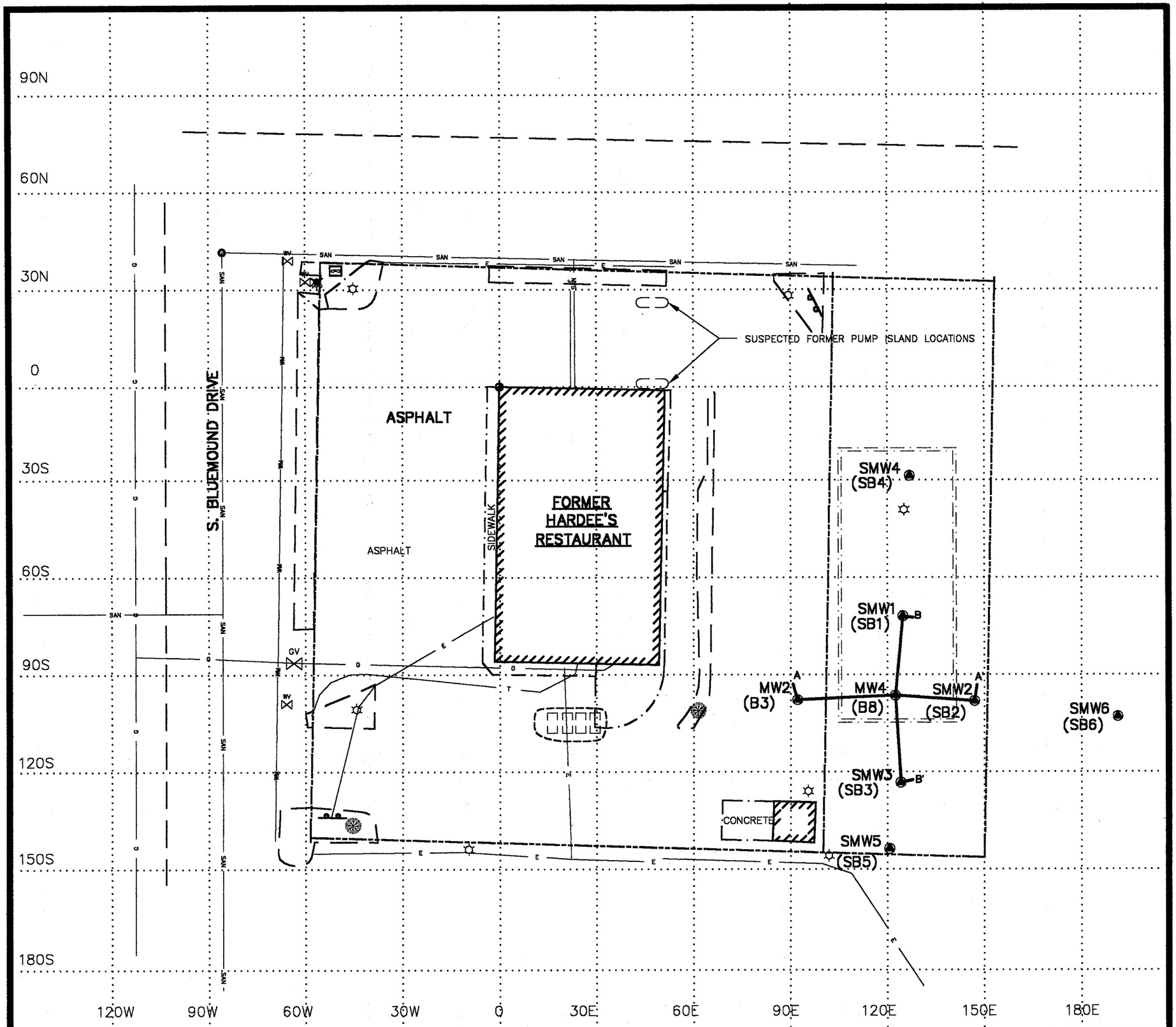
☐ Resubmit _____ copies for approval
☐ Submit _____ copies for distribution
☐ Return _____ corrected prints

Remarks: Jennifer, Enclosed is the revised Figure we spoke about.

Copy to: _____

Signed: _____
Dave Fries

document3



0' 6' 15' 30'

SCALE: 1" = 30'

LOCAL GRID NORTH

N

LEGEND:

- MW4 — Well Location and I.D. No.
- SB1 — Soil Boring Location and I.D No.
- B B' — Cross Section
- Former Building Foundation
- Suspected Former Tank Location 6,000 Gallon Gasoline USTs
- Property Line
- Approximate Limit of Excavation
- Edge of Asphalt
- Edge of Concrete Pavement
- Building Face
- Hydrant
- WV — Water Valve
- GV — Gas Valve
- G — Gas Line
- WM — Watermain
- T — Telephone Cable
- Telephone Booth
- Light Post
- SAN — Sanitary Line with Manhole
- E — Electrical Line
- Reference Point
- 30N ····· Grid Line (30' Interval)

FIGURE 2
SITE DETAIL MAP

VACANT LOT
3225 W. COLLEGE AVENUE
TOWN OF GRAND CHUTE, WISCONSIN

OMNI ASSOCIATES

ONE SYSTEMS DRIVE
APPLETON, WI 54914

PHONE (920) 735-6900
FAX (920) 830-6100

PROJECT MANAGER:		PROJECT NO:	N1556A99
PROJECT ENGINEER:		CAD FILE NO:	N1556A2
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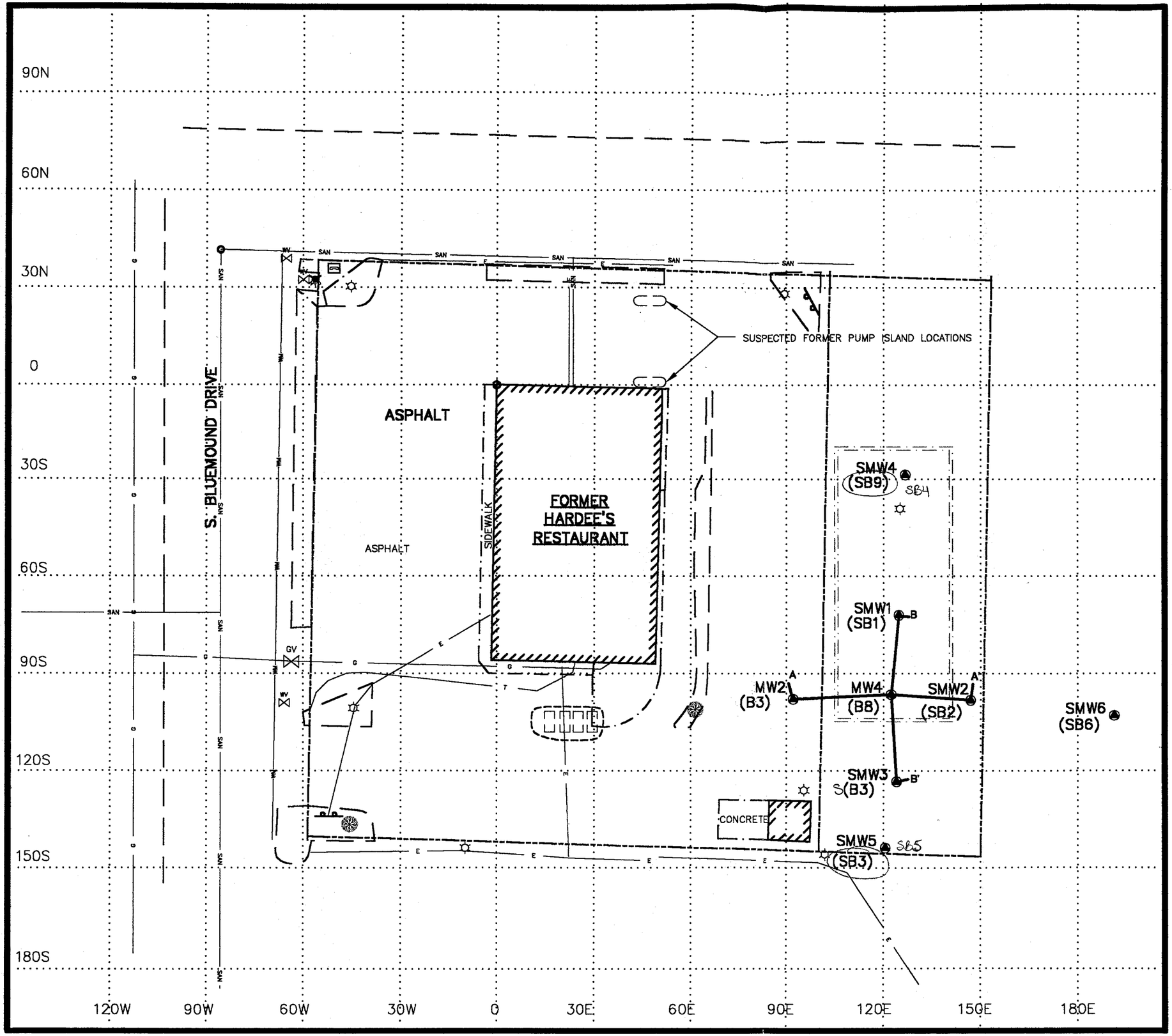
REVIEWED BY:		DATE:	10/2/00



LEGEND:

SCALE: 1" = 30'

LOCAL GRID NORTH

- MW4 — Well Location and I.D. No.
- SB1 — Soil Boring Location and I.D No.
- B B' — Cross Section
- Former Building Foundation
- Suspected Former Tank Location 6,000 Gallon Gasoline USTs
- Property Line
- Approximate Limit of Excavation
- Edge of Asphalt
- Edge of Concrete Pavement
- Building Face
- Hydrant
- WV — Water Valve
- GV — Gas Valve
- G — Gas Line
- WM — Watermain
- T — Telephone Cable
- Telephone Booth
- Light Post
- SAN — Sanitary Line with Manhole
- E — Electrical Line
- Reference Point
- 30N — Grid Line (30' Interval)

FIGURE 2
SITE DETAIL MAP

VACANT LOT
3225 W. COLLEGE AVENUE
TOWN OF GRAND CHUTE, WISCONSIN

OMNNI ASSOCIATES

ONE SYSTEMS DRIVE
APPLETON, WI 54914

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PROJECT MANAGER:		PROJECT NO:	N1556A99
PROJECT ENGINEER:		CAD FILE NO:	N1556A2
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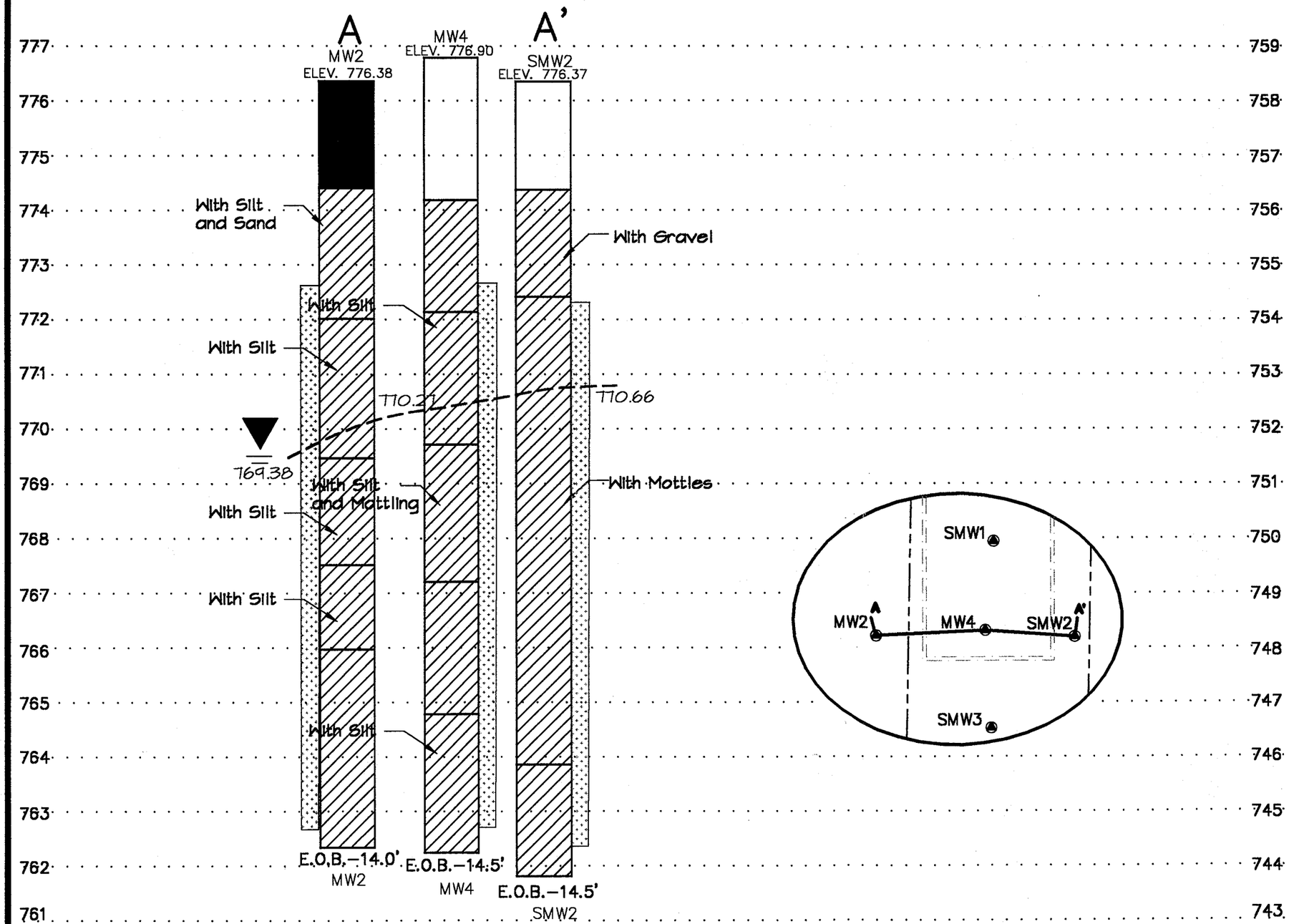
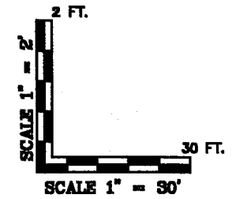
REVIEWED BY:		DATE:	10/2/00





LEGEND:

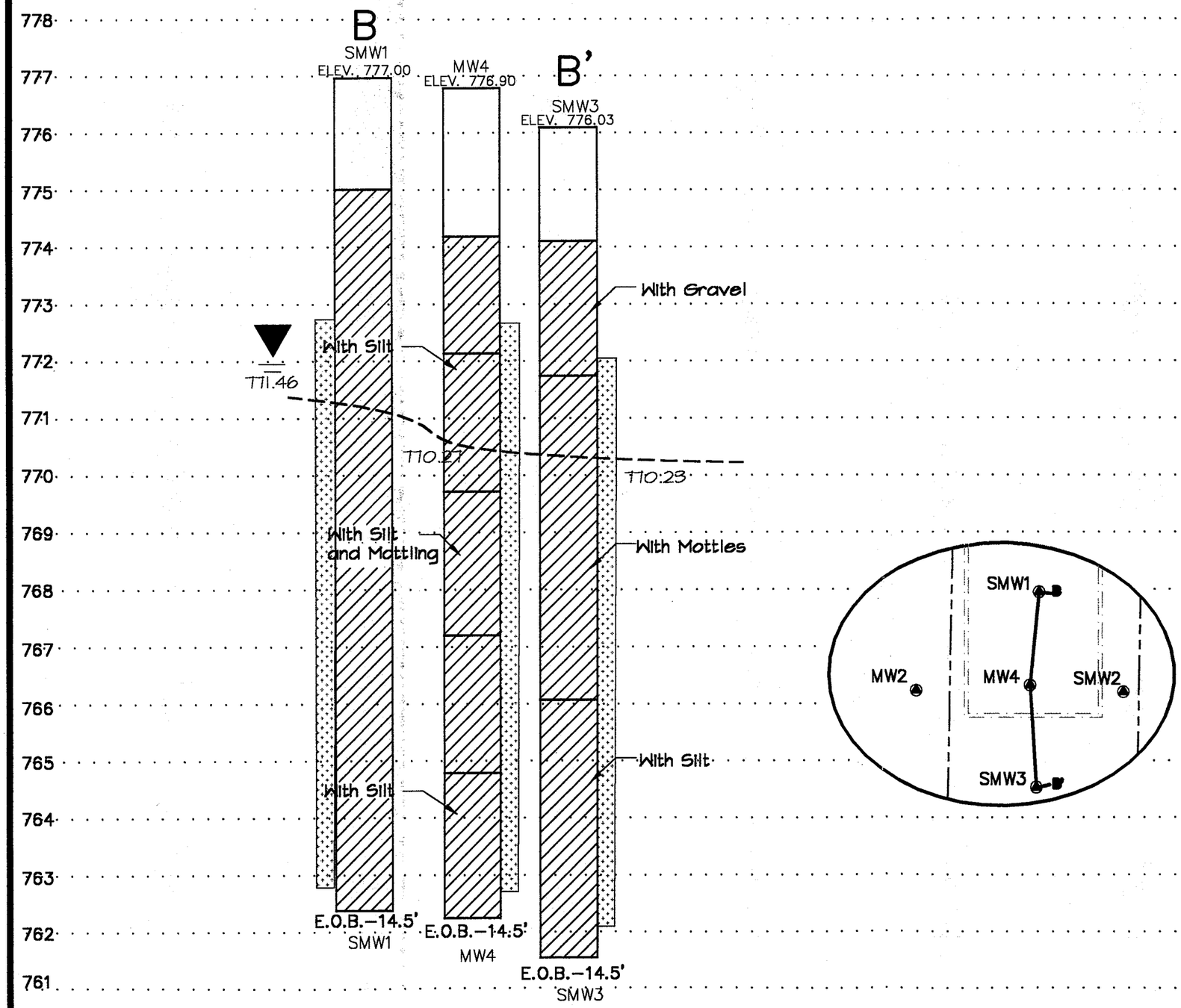
- Asphalt
- Clay
- Screened Interval
- Water Table (9/13/00)
- Groundwater Line

FIGURE 3
DIAGRAMMATIC CROSS-SECTION
OF STRATIGRAPHY FROM A TO A'

VACANT LOT
3225 W. COLLEGE AVENUE
TOWN OF GRAND CHUTE, WISCONSIN

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
PHONE (920) 735-6900
FAX (920) 830-6100

PROJECT MANAGER:		PROJECT NO:	N1556A99
PROJECT ENGINEER:		CAD FILE NO:	N1556A3
DRAWN BY:		SCALE:	
REVIEWED BY:	DLD	DATE:	10/9/00



2 FT.
SCALE 1" = 2'
30 FT.
SCALE 1" = 30'

LEGEND:

Clay

Screened Interval

Water Table (9/13/00)

Groundwater Line

FIGURE 4
DIAGRAMMATIC CROSS–SECTION
OF STRATIGRAPHY FROM B TO B'

VACANT LOT
3225 W. COLLEGE AVENUE
TOWN OF GRAND CHUTE, WISCONSIN

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914
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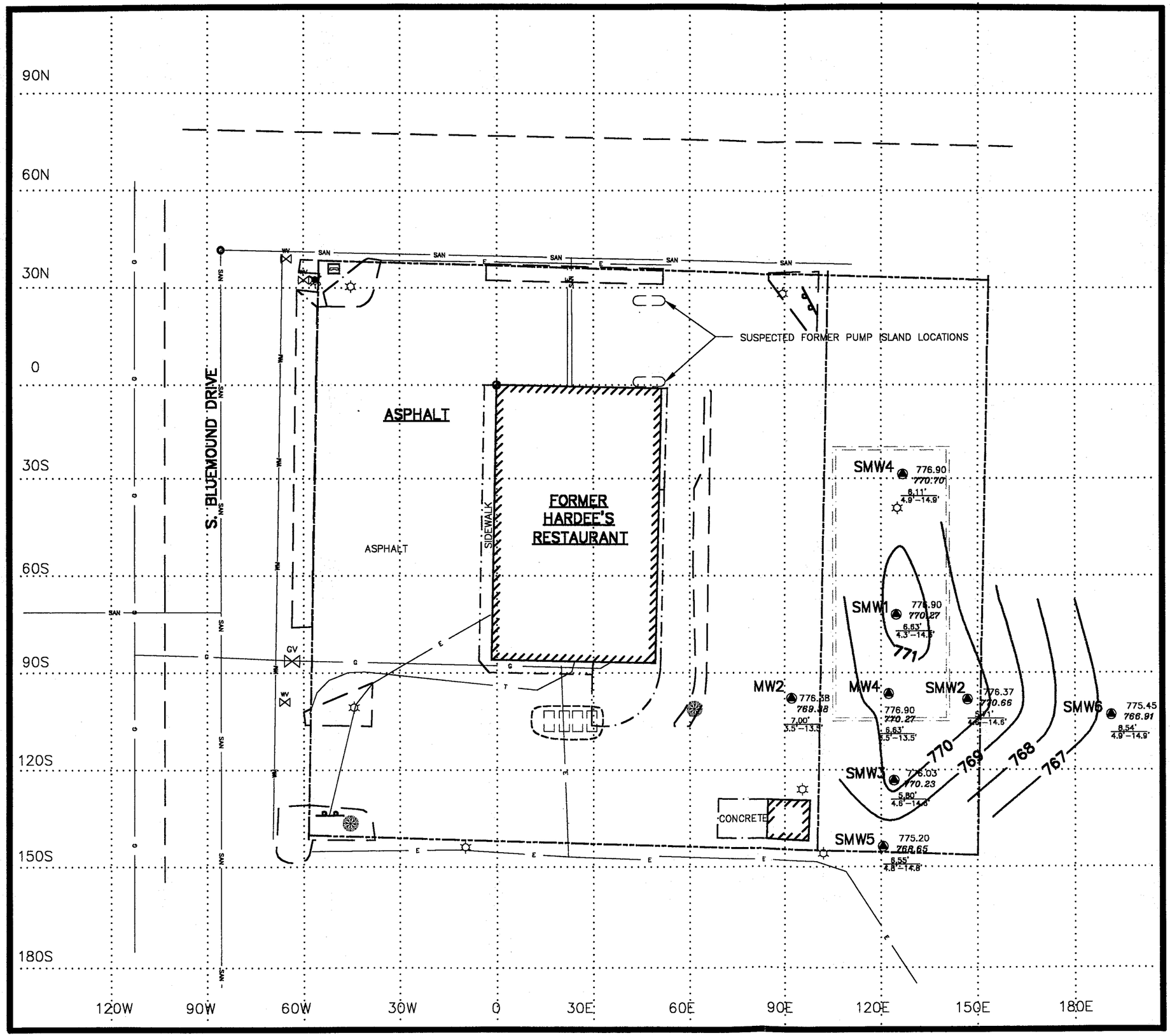
FAX (920) 830-6100

PROJECT MANAGER:		PROJECT NO:	N1556A99
PROJECT ENGINEER:		CAD FILE NO:	N1556A4
DRAWN BY:		SCALE:	
REVIEWED BY:	DLD	DATE:	10/9/00



0' 6' 15' 30'

SCALE: 1" = 30'

LOCAL GRID NORTH

N

LEGEND:

- SMW1 777.00 / 771.46 — Surface Elevation at Well / Groundwater Elevation at Well
- 5.54' / 4.3'–14.3' — Depth to Water from Surface / Screened Interval (ft.)
- -767.00- — Groundwater Contour Line (1.0' Contour Interval)
- MW4 — Well Location and I.D. No.
- Former Building Foundation
- Suspected Former Tank Location 6,000 Gallon Gasoline USTs
- Property Line
- Approximate Limit of Excavation
- Edge of Asphalt
- Edge of Concrete Pavement
- Building Face
- Hydrant
- WV — Water Valve
- GV — Gas Valve
- G — Gas Line
- WM — Watermain
- T — Telephone Cable
- Telephone Booth
- Light Post
- SAN — Sanitary Line with Manhole
- E — Electrical Line
- Reference Point
- 30N — Grid Line (30' Interval)

FIGURE 5
GROUNDWATER ELEVATION CONTOUR MAP (9/13/00)

VACANT LOT
3225 W. COLLEGE AVENUE
TOWN OF GRAND CHUTE, WISCONSIN

OMNNI ASSOCIATES

ONE SYSTEMS DRIVE
APPLETON, WI 54914

PHONE (920) 735-6900
FAX (920) 830-6100

PROJECT MANAGER:		PROJECT NO:	N1556A99
PROJECT ENGINEER:		CAD FILE NO:	N1556A2
DRAWN BY:	DLD	SCALE:	1"=30'
REVIEWED BY:		DATE:	10/2/00

APPENDIX 2

TABLES

N1556A99
DENNIS MALCHOW PROPERTY

TABLE 1
SUMMARY OF LABORATORY ANALYSIS
SOIL BORING SAMPLES

MARCH 30, 1998, JULY 8, 1998, APRIL 20, 1999, AND SEPTEMBER 7, 2000 SAMPLING EVENTS

PARAMETER	STANDARD	B3-3	B8-1	SB1-1	SB2-1	SB3-2	SB4-2	SB6-2
SAMPLE DEPTH		7.0 - 9.0	2.5 - 4.5	2.5 - 4.5	2.5 - 4.5	5.0 - 7.0	5.0-7.0	5.0 - 7.0
DETECTED VOCs (µg/kg)								
TERT-BUTYLBENZENE	_	<25	<25	460 *	<25	<25	<25	<25
N-BUTYLBENZENE	_	<25	<25	1200 *	27	<25	<25	<25
CIS-1,2-DICHLOROETHENE	EPA RCL 400	<25	<25	<25	8600	<25	<25	<25
TRANS-1,2-DICHLOROETHENE	700	<25	<25	<25	170	<25	<25	<25
P-ISOPROPYLTOLUENE	_	<25	<25	280 *	<25	<25	<25	<25
NAPHTHALENE	_	<25	52	300 *	52	<25	<25	<25
N-PROPYLBENZENE	_	<25	<25	320 *	<25	<25	<25	<25
TETRACHLOROETHENE	60 _	<25	5500	8200	1400	<25	160	<25
TOLUENE	1500	<25	<25	<25	50	<25	<25	<25
TRICHLOROETHENE	60 _	<25	<25	210	5300	<25	<25	<25
1,2,4-TRIMETHYLBENZENE	_	<25	<25	350 *	<25	<25	<25	<25
1,3,5-TRIMETHYLBENZENE	_	<25	<25	340 *	<25	<25	<25	<25
VINYL CHLORIDE	10 _	<25	<25	<25	240	<25	<25	<25
XYLENES	4100	<75	<75	<75	35	<75	<75	<75

> EPA RCL for gw pathway

* = petroleum present @ SB-1

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TABLE 2
SUMMARY OF LABORATORY ANALYSIS
GROUNDWATER SAMPLES - HISTORICAL

PARAMETER (µg/L)	ES	PAL	MW2				MW4				SMW1			
SAMPLE DATE			4/21/99	9/24/99	1/6/00	9/13/00	4/21/99	9/24/99	1/6/00	9/13/00	4/21/99	9/24/99	1/6/00	9/13/00
DETECTED VOCs														
CIS-1,2-DICHLOROETHENE	70	7	NA	24	17	7.9	NA	9.5	7.9"J"	5.2	33	32	68	14
TRANS-1,2,-DICHLOROETHENE	100	20	NA	0.53"J"	<0.38	<0.43	NA	<0.38	<3.8	<0.43	1.1"J"	1.2"J"	<3.8	<4.3
TETRACHLOROETHENE	5.0	0.5	NA	<0.35	<0.35	<0.34	NA	260	100	200	410	340	180	330
TRICHLOROETHENE	5.0	0.5	NA	2.1	<0.48	<0.46	NA	15	5.1	13	34	41	78	29
VINYL CHLORIDE	0.2	0.02	NA	0.24"J"	<0.15	<0.87	NA	<0.15	<1.5	<0.87	7.6	2.6	<1.5	<8.7
O-XYLENE	620	124	NA	<0.32	<0.32	<0.64	NA	<0.32	<3.2	<0.64	<0.32	<0.32	<3.2	<6.4

ES = enforcement standard
PAL = preventive action limit
= sample concentration detected above the preventive action limit
= sample concentration detected above the enforcement standard
"J" = Analyte detected between the method of detection and the method of quantification.
NOTE: MW2 AND MW4 were sampled previous to 4/21/99 as part of a separate investigation on the adjacent property. Results are not listed in this table.

N1556A99
DENNIS MALCHOW PROPERTY

TABLE 2
SUMMARY OF LABORATORY ANALYSIS
GROUNDWATER SAMPLES - HISTORICAL

PARAMETER (µg/L)	ES	PAL	SMW2				SMW3				SMW4
SAMPLE DATE			4/21/99	9/24/99	1/6/00	9/13/00	4/21/99	9/24/99	1/6/00	9/13/00	9/13/00
DETECTED VOCs											
CIS-1,2-DICHLOROETHENE	70	7	810	910	720	540	1000	650	910	1000	<0.37
TRANS-1,2,-DICHLOROETHENE	100	20	<19	<19	<19	<4.3	20"J"	<19	9.1"J"	14	<0.43
TETRACHLOROETHENE	5.0	0.5	35"J"	<18	39"J"	10"J"	<18	<18	<7	<3.4	50
TRICHLOROETHENE	5.0	0.5	73"J"	54"J"	57"J"	29	130	63"J"	100	69	<0.46
VINYL CHLORIDE	0.2	0.02	660	580	210	340	50	14"J"	<3	51	<0.87
O-XYLENE	620	124	<16	<16	17"J"	<6.4	<16	<16	<6.4	<6.4	<0.64

ES = enforcement standard
PAL = preventive action limit
= sample concentration detected above the preventive action limit
= sample concentration detected above the enforcement standard
"J" = Analyte detected between the method of detection and the method of quantification.

F:\ENVIRON\1525A98\TABLES\historical

N1556A99
DENNIS MALCHOW PROPERTY

TABLE 2
SUMMARY OF LABORATORY ANALYSIS
GROUNDWATER SAMPLES - HISTORICAL

PARAMETER (µg/L)	ES	PAL	SMW5	SMW6
SAMPLE DATE			9/13/00	9/13/00
DETECTED VOCs				
CIS-1,2-DICHLOROETHENE	70	7	10	<0.37
TRANS-1,2,-DICHLOROETHENE	100	20	1.7	<0.43
TETRACHLOROETHENE	5.0	0.5	<0.34	<0.34
TRICHLOROETHENE	5.0	0.5	<0.46	<0.46
VINYL CHLORIDE	0.2	0.02	1.9"J"	<0.87
O-XYLENE	620	124	<0.64	<0.64

ES = enforcement standard
PAL = preventive action limit
= sample concentration detected above the preventive action limit
= sample concentration detected above the enforcement standard
"J" = Analyte detected between the method of detection and the method of quantification.
Piezometers P1 - P3 were not installed during the September 13, 2000 sampling event.

APPENDIX 3

DNR FORMS

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 6-97

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

Page _____ of _____

Facility/Project Name: Dennis Malchow Property	License/Permit/Monitoring Number	Boring Number: SB1	
Boring Drilled By (Firm name and name of crew chief): M.K. / Tim	Date Drilling Started: 04/20/1999 (m m d d y y y y)	Date Drilling Completed: 04/20/1999 (m m d d y y y y)	Drilling Method: HSA
WI Unique Well No.: _____	DNR Well ID No.: _____	Well Name: SMW1	Final Static Water Level: _____ Feet MSL
Surface Elevation: _____ Feet MSL	Borehole Diameter: 8 inches		

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane _____ N, _____ E S/C/N
SW 1/4 of SW 1/4 of Section 28, T 21 N, R 17 E/W
Lat ° ' "
Long ° ' "
Local Grid Location: ☐ N _____ Feet ☐ S ☐ E _____ Feet ☐ W

Facility ID | County: Outagamie | County Code: 45 | Civil Town/City/or Village: Grand Chute

Sample Number and Type	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
SB1	24"	3 6 9 14	2–4	Red-brown clay w/ no odor				43.0		M				8:10
2	3"	4 5 6 8	6	" " "				3.0		M/W				8:15
3	24"	7 9 12 15	8–10	" " "				2.5		W				8:20
4	24"	2 3 5 6	10–12	Wet red-brown clay w/ no odor				2.5		W				8:30

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

Signature: Dave | Firm: OMNNI

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion 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 used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Page: ____ of: ____

Sample Number and Type	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
5	24"	2 2 2 2	14	Wet red-brown clay w/ no odor				2.0		W/D				8:31
			16	E.O.B. @ 14.5' SMW1 set @ 14.5'										
			18											
			20											
			22											
			24											
			26											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 6-97

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

Page _____ of _____

Facility/Project Name: Dennis Malchow Property	License/Permit/Monitoring Number	Boring Number: SB2
Boring Drilled By (Firm name and name of crew chief): M.K. / Tim	Date Drilling Started: 04/20/1999 (m m d d y y y y)	Date Drilling Completed: 04/20/1999 (m m d d y y y y)
Drilling Method: HSA	WI Unique Well No.: _____	DNR Well ID No.: _____
Well Name: SMW2	Final Static Water Level: _____ Feet MSL	Surface Elevation: _____ Feet MSL
Borehole Diameter: 8 inches	Boring Location or Local Grid Origin (Check if estimated: ☐) State Plane _____ N, _____ E S/C/N	Lat ° ' " Long ° ' "
Local Grid Location: _____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W	SW 1/4 of SW 1/4 of Section 28, T 21 N, R 17 E/W	
Facility ID	County: Outagamie	County Code: 45
Civil Town/City/ or Village: Grand Chute		

Sample Number and Type	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	24"	9 12 9 11	2–4	Black clay w/some gravel & no odor				9.0		M/W				9:25
2	24"	6 6 12 14	6	Red-brown clay w/mottles & no odor				4.7		M				9:28
3	24"	8 11 13 16	8	" " "				4.9		M/W				9:34
4	24"	3 4 6 6	10–12	" " "				5.2		W/				9:40

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

Signature: Dave Firm: OMNNI

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Page ____ of ____

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
5	24"	1 1 2 2	14	Red-brown clay w/ no odor				4.1		wl o				9:45
			16	E.O.D @ 14.5 SMW2 set @ 14.5										
			18											
			20											
			22											
			24											
			26											

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SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 6-97

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

Page _____ of _____

Facility/Project Name: Dennis Malchow Property	License/Permit/Monitoring Number	Boring Number: SB3
Boring Drilled By (Firm name and name of crew chief): M+K / Tim	Date Drilling Started: 04/20/1999 (m m d d y y y y)	Date Drilling Completed: 04/20/1999 (m m d d y y y y)
Drilling Method: HSA	WI Unique Well No.: _ _ _ _ _ _	DNR Well ID No.: _ _ _ _
Well Name: SMW3	Final Static Water Level: _____ Feet MSL	Surface Elevation: _____ Feet MSL
Borehole Diameter: 8 inches	Boring Location or Local Grid Origin (Check if estimated: ☐) State Plane _____ N, _____ E S/C/N	Lat ° ' " Long ° ' "
Local Grid Location: _____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W	SW 1/4 of SW 1/4 of Section 28, T 21 N, R 17 (E)W	
Facility ID	County: Outagamie	County Code: 45
Civil Town/City/ or Village: Grand Chute		

Sample Number and Type	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	20"	4 7 8 10	2–4	Dark-brown clay w/some gravel + no odor				6.1		M				10:35
2	24"	5 6 11 11	6	Red-brown clay w/ mottles + no odor				7.6		M				10:38
3	24"	6 6 9 10	8	" " "				4.4		M/W				10:45
4	24"	3 3 5 9	10–12	Red-brown clay w/silt (wet) - no odor				4.2		W				10:50

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

Signature: Dave Firm: OMNNI

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Page ____ of ____

Sample Number and Type	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
5	24"	1 2 3 3	4	Wet silty clay w/ no odor				3.6		w/ o				10:55
			16	E.O.B @ 14.5' SMW3 set @ 14.5'										
			18											
			20											
			22											
			24											
			26											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 6-97

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

Page ___ of ___

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Dennis Malchow Property		SB4

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started (m m d d y y y y)	Date Drilling Completed (m m d d y y y y)	Drilling Method
M+K / Tim	09/07/2000	09/07/2000	HSA

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _	SMW4	_____ Feet MSL	_____ . ___ Feet MSL	8 inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane _____ N, _____ E S/C/N
SW 1/4 of SW 1/4 of Section 28, T 21 N, R 17 E/W
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Outagamie	45	Grand Chute

Sample Number and Type	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
			2											
1	15"	4 3 3 9	4	Brown clay w/ no odor				1.0		M/W				8:16
2	24"	4 4 8 11	6	Red-brown clay w/ no odor				1.2		W				8:19
3	24"	3 4 4 7	8	" " "				1.1		W				8:23
			10											
4	24"	3 3 5 6	12	Brown silty clay w/ no odor				0.0		W/				8:27

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

Signature Dave | Firm OMNNI

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SOIL BORING LOG INFORMATION

Page ___ of ___

Sample Number and Type	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	P200	RQD/ Comments
		1	12	Silty - brown clay w/ no odor				0.2		W				
5	24"	2	14											8 of 34
		2		E.O.B @ 14.5' SMW4 installed										
			16											
			18											
			20											
			22											
			24											
			26											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

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

Page ____ of ____

Facility/Project Name: Dennis Malchow Property	License/Permit/Monitoring Number	Boring Number: SB5
Boring Drilled By (Firm name and name of crew chief): M+K / Tim	Date Drilling Started: 09/07/2000 (m m d d y y y y)	Date Drilling Completed: 09/07/2000 (m m d d y y y y)
Drilling Method: HSA		
WI Unique Well No.: _ _ _ _ _ _ _	DNR Well ID No.: _ _ _ _ _	Well Name: SMW5
Final Static Water Level: _____ Feet MSL	Surface Elevation: _____ . ___ Feet MSL	Borehole Diameter: 8 inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane _____ N, _____ E S/C/N
SW 1/4 of SW 1/4 of Section 28, T 21 N, R 17 (E)W
Lat ° ' " Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Outagamie	45	Grand Chute

Sample Number and Type	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	24"	4 4 5 10	2–4	Dark brown silty clay w/ no odor				1.2		M/W				9:16
2	24"	4 5 5 5	6	Red-brown clay w/ mottles + no odor				1.2		W				9:18
3	24"	4 5 7 9	8	" " "				0.0		W				9:23
4	24"	2 2 3 3	10–12	Brown silty-clay w/ no odor				0.6		W/O				9:27

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

Signature: Dave | Firm: OMNNI

Sample Number and Type	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
S	24"	1 1 2 2	4	Wet brown clay w/ no odor				0.0		wl				9:33
				E03 @ 14.5										
			6											
			18											
			20											
			22											
			24											
			26											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 6-97

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

Page _____ of _____

Facility/Project Name: Dennis Malchow Property	License/Permit/Monitoring Number	Boring Number: SB6
Boring Drilled By (Firm name and name of crew chief): M+K / Tim	Date Drilling Started: 09/07/2000 (m m d d y y y y)	Date Drilling Completed: 09/07/2000 (m m d d y y y y)
Drilling Method: HSA		
WI Unique Well No.: JK917	DNR Well ID No.:	Well Name: SMW6
Final Static Water Level: _____ Feet MSL	Surface Elevation: _____ Feet MSL	Borehole Diameter: 8 inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane _____ N, _____ E S/C/N
SW 1/4 of SW 1/4 of Section 28, T 21 N, R 17 E/W
Lat ° ' "
Long ° ' "
Local Grid Location: ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Outagamie	45	Grand Chute

Sample Number and Type	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	24"	4 5 7 8	2–4	sand & gravel Brown - silty - clay w/ no odor				0.0		M/W				10:16
2	24"	5 8 9 10	6	" " " " & motles				3.0		M/W				10:18
3	24"	3 4 5 9	8	" " " no motles				0.0		W				10:25
4	24	1 1 1 3	10–12	Wet silty brown clay				0.0		W				10:30

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

Signature: Dave | Firm: OMNNI

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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: P200	RQD/ Comments
5	24"	1 1 1 2	14	Wet silty-clay w/ no odor				0.0		w/				10:34
				E.O.B @ 14.5 SMW6 installed										
			16											
			18											
			20											
			22											
			24											
			26											

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 6-97

Facility/Project Name: Dennis Malchow	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: SMW1
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or St. Plane ____ ft. N, ____ ft. E. S/C/N	Wis. Unique Well No. / DNR Well ID No.
Facility ID		Date Well Installed: 8/4/20 1999 (m m d d y y y y)
Type of Well: Well Code 11 /	Section Location of Waste/Source: SW 1/4 of SW 1/4 of Sec. 28 T. 21 N, R. 17 ☐E ☐W	Well Installed By: (Person's Name and Firm) M+K / Tim
Distance Well Is From Waste/Source Boundary: ____ ft.	Location of Well Relative to Waste/Source: u ☒ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☒ Not Known	

A. Protective pipe, top elevation 776.96 ft. MSL
B. Well casing, top elevation 776.61 ft. MSL
C. Land surface elevation 777.0 ft. MSL
D. Surface seal, bottom 776.5 ft. MSL or 0.5 ft.

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

13. Sieve analysis performed? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis): ____

E. Bentonite seal, top 776.5 ft. MSL or 0.5 ft.
F. Fine sand, top 774.0 ft. MSL or 3.0 ft.
G. Filter pack, top 773.5 ft. MSL or 3.5 ft.
H. Screen joint, top 772.5 ft. MSL or 4.5 ft.
I. Well bottom 762.5 ft. MSL or 14.5 ft.
J. Filter pack, bottom 762.5 ft. MSL or 14.5 ft.
K. Borehole, bottom 762.5 ft. MSL or 14.5 ft.
L. Borehole, diameter 8.3 in.
M. O.D. well casing 2.07 in.
N. I.D. well casing 1.93 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9.0 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 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. #40-60 BMC
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. #65-75 BMC
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐ ____
10. Screen material: PVC
a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐ ____
b. Manufacturer Bedrock
c. Slot size: 0.01 in.
d. Slotted length: 10. ft.
11. Backfill material (below filter pack): None ☒ 14 Other ☐ ____

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

Signature: Dan | Firm: OMNNI

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a 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 these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 6-97

Facility/Project Name: Dennis Malchow	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: SMW2
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or St. Plane ____ ft. N, ____ ft. E. S/C/N	Wis. Unique Well No. / DNR Well ID No.
Facility ID		Date Well Installed: 8/11/20 1999 (m m d d y y y y)
Type of Well: Well Code 11 /	Section Location of Waste/Source: SW 1/4 of SW 1/4 of Sec. 28, T. 21 N, R. 17 ☐E ☐W	Well Installed By: (Person's Name and Firm) M+K / Tim
Distance Well Is From Waste/Source Boundary ____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	

A. Protective pipe, top elevation 776.35 ft. MSL

B. Well casing, top elevation 776.01 ft. MSL

C. Land surface elevation 776.4 ft. MSL

D. Surface seal, bottom 775.9 ft. MSL or 0.5 ft.

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

13. Sieve analysis performed? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis): ____

E. Bentonite seal, top 775.9 ft. MSL or 0.5 ft.

F. Fine sand, top 773.4 ft. MSL or 3.0 ft.

G. Filter pack, top 772.9 ft. MSL or 3.5 ft.

H. Screen joint, top 771.9 ft. MSL or 4.5 ft.

I. Well bottom 761.9 ft. MSL or 14.5 ft.

J. Filter pack, bottom 761.9 ft. MSL or 14.5 ft.

K. Borehole, bottom 761.9 ft. MSL or 14.5 ft.

L. Borehole, diameter 8.3 in.

M. O.D. well casing 2.07 in.

N. I.D. well casing 1.93 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9.0 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; 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. 40-60 BMC
b. Volume added ____ ft^3

8. Filter pack material: Manufacturer, product name and mesh size
a. 6S-7S BMC
b. Volume added ____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ____

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ ____
b. Manufacturer BOLTOCK
c. Slot size: 0.01 in.
d. Slotted length: 10. ft.

11. Backfill material (below filter pack): None ☒ 14; Other ☐ ____

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

Signature: Dave | Firm: OMNNI

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a 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 these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 6-97

Facility/Project Name: Dennis Malchow	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: SMW3
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or St. Plane _____ ft. N, _____ ft. E. S/C/N	Wis. Unique Well No. / DNR Well ID No.
Facility ID		Date Well Installed: 8/1/20/1999 (m m d d y y y y)
Type of Well: Well Code 11 /	Section Location of Waste/Source: SW 1/4 of SW 1/4 of Sec. 28 T. 21 N, R. 17 ☑E ☐W	Well Installed By: (Person's Name and Firm) M+K / Tim
Distance Well Is From Waste/Source Boundary: _____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☑ Downgradient n ☐ Not Known	

A. Protective pipe, top elevation 775.98 ft. MSL
B. Well casing, top elevation 775.61 ft. MSL
C. Land surface elevation 776.0 ft. MSL
D. Surface seal, bottom 775.5 ft. MSL or 0.5 ft.

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

13. Sieve analysis performed? ☐ Yes ☑ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☑ 41
Other ☐ _____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☑ 99

16. Drilling additives used? ☐ Yes ☑ No
Describe _____

17. Source of water (attach analysis):
_____

E. Bentonite seal, top 775.5 ft. MSL or 0.5 ft.
F. Fine sand, top 773.0 ft. MSL or 3.0 ft.
G. Filter pack, top 772.5 ft. MSL or 3.5 ft.
H. Screen joint, top 771.5 ft. MSL or 4.5 ft.
I. Well bottom 761.5 ft. MSL or 14.5 ft.
J. Filter pack, bottom 761.5 ft. MSL or 14.5 ft.
K. Borehole, bottom 761.5 ft. MSL or 14.5 ft.
L. Borehole, diameter 8.3 in.
M. O.D. well casing 2.07 in.
N. I.D. well casing 1.93 in.

1. Cap and lock? ☑ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9.0 in.
b. Length: 7.0 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 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. 40-60 BMC
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. 6-15 BMC
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☑ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☑ 11 Continuous slot ☐ 01 Other ☐ _____
b. Manufacturer Berlock
c. Slot size: 0.01 in.
d. Slotted length: 10. ft.
11. Backfill material (below filter pack): None ☑ 14 Other ☐ _____

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

Signature	Firm
Dan	OMNNI

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a 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 these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 6-97

Facility/Project Name: Dennis Malchow	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: SMW4	
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ____ ° ____ ' ____ . ____ " Long. ____ ° ____ ' ____ . ____ " or St. Plane ____ ft. N, ____ ft. E. S/C/N	Wis. Unique Well No.: JK915	DNR Well ID No.: ____
Facility ID: ____		Date Well Installed: 8 9 / 0 7 / 2 0 0 0 (m m d d y y y y)	
Type of Well: Well Code 11 / 1	Section Location of Waste/Source: SW 1/4 of SW 1/4 of Sec. 28 T. 21 N, R. 17 ☐E ☐W	Well Installed By: (Person's Name and Firm): MTK / Tim	
Distance Well Is From Waste/Source Boundary: ____ ft.	Location of Well Relative to Waste/Source: u ☑ Upgradient s ☑ Sidegradient d ☑ Downgradient n ☐ Not Known		

A. Protective pipe, top elevation 776.92 ft. MSL
B. Well casing, top elevation 776.49 ft. MSL
C. Land surface elevation 776.9 ft. MSL
D. Surface seal, bottom 776.4 ft. MSL or 0.5 ft.

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

13. Sieve analysis performed? ☐ Yes ☑ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☑ 41
Other ☐ ____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☑ 99

16. Drilling additives used? ☐ Yes ☑ No
Describe ____

17. Source of water (attach analysis): ____

E. Bentonite seal, top 776.4 ft. MSL or 0.5 ft.
F. Fine sand, top 773.4 ft. MSL or 3.5 ft.
G. Filter pack, top 772.9 ft. MSL or 4.0 ft.
H. Screen joint, top 772.4 ft. MSL or 4.5 ft.
I. Well bottom 762.4 ft. MSL or 14.5 ft.
J. Filter pack, bottom 762.4 ft. MSL or 14.5 ft.
K. Borehole, bottom 762.4 ft. MSL or 14.5 ft.
L. Borehole, diameter 8.3 in.
M. O.D. well casing 2.07 in.
N. I.D. well casing 1.93 in.

1. Cap and lock? ☑ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9.0 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 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. 40-60 BMC
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name and meshsize
a. 65-75 BMC
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☑ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐ ____
10. Screen material: PVC
a. Screen type: Factory cut ☑ 11 Continuous slot ☐ 01 Other ☐ ____
b. Manufacturer EnviroCK
c. Slot size: 0.01 in.
d. Slotted length: 10. ft.
11. Backfill material (below filter pack): None ☑ 14 Other ☐ ____

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

Signature: Dave | Firm: OMNNI

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a 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 these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 6-97

Facility/Project Name: Dennis Malchow	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: SMW5
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: JK916 / DNR Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 09/07/2000 (m m d d y y y y)
Type of Well: Well Code 11 /	Section Location of Waste/Source: SW 1/4 of SW 1/4 of Sec. 28, T. 21 N, R. 17 ☒E ☐W	Well Installed By: (Person's Name and Firm) M+K / Tim
Distance Well Is From Waste/Source Boundary: 50 ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient; d ☒ Downgradient n ☐ Not Known	

A. Protective pipe, top elevation 775.21 ft. MSL

B. Well casing, top elevation 774.82 ft. MSL

C. Land surface elevation 775.2 ft. MSL

D. Surface seal, bottom 774.7 ft. MSL or 0.5 ft.

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

13. Sieve analysis performed? ☐ Yes ☒ No

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

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

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis): ____

E. Bentonite seal, top 774.7 ft. MSL or 0.5 ft.

F. Fine sand, top 771.7 ft. MSL or 3.5 ft.

G. Filter pack, top 771.2 ft. MSL or 4.0 ft.

H. Screen joint, top 770.7 ft. MSL or 4.5 ft.

I. Well bottom 760.7 ft. MSL or 14.5 ft.

J. Filter pack, bottom 760.7 ft. MSL or 14.5 ft.

K. Borehole, bottom 760.7 ft. MSL or 14.5 ft.

L. Borehole, diameter 8.3 in.

M. O.D. well casing 2.07 in.

N. I.D. well casing 1.93 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9.0 in.
b. Length: 7.6 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; 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. 40-60 BMC
b. Volume added ____ ft^3

8. Filter pack material: Manufacturer, product name and mesh size
a. 65-75 BMC
b. Volume added ____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ ____

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ ____
b. Manufacturer Bedrock
c. Slot size: 0.01 in.
d. Slotted length: 10. ft.

11. Backfill material (below filter pack): None ☒ 14; Other ☐ ____

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

Signature: Dave | Firm: OMNNI

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a 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 these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 6-97

Facility/Project Name: Dennis Malchow	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: SMW6
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or St. Plane ____ ft. N, ____ ft. E. S/C/N	Wis. Unique Well No.: JK917 / DNR Well ID No.: ____
Facility ID: ____	Section Location of Waste/Source: SW 1/4 of SW 1/4 of Sec. 28 T. 21 N, R. 17 ☑E ☐W	Date Well Installed: 8 9 / 0 7 / 2 0 0 0 (m m d d y y y y)
Type of Well — Well Code: 11 / ____	Location of Well Relative to Waste/Source: u ☑ Upgradient s ☑ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm): M+K / Tim
Distance Well Is From Waste/Source Boundary: 100 ft.		

A. Protective pipe, top elevation 775.46 ft. MSL
B. Well casing, top elevation 775.03 ft. MSL
C. Land surface elevation 775.5 ft. MSL
D. Surface seal, bottom 775.0 ft. MSL or 0.5 ft.

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

13. Sieve analysis performed? ☐ Yes ☑ No

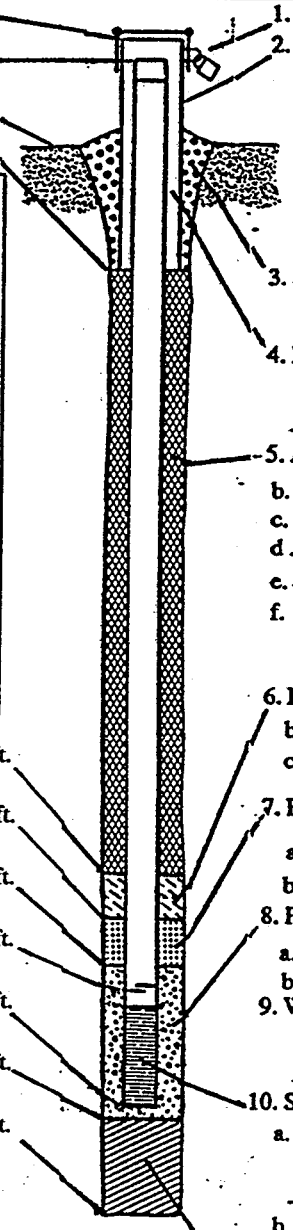
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☑ 41 / Other ☐ ____

15. Drilling fluid used: Water ☐ 02 / Air ☐ 01 / Drilling Mud ☐ 03 / None ☑ 99

16. Drilling additives used? ☐ Yes ☑ No
Describe ____

17. Source of water (attach analysis): ____

E. Bentonite seal, top 775.0 ft. MSL or 0.5 ft.
F. Fine sand, top 772.0 ft. MSL or 3.5 ft.
G. Filter pack, top 771.5 ft. MSL or 4.0 ft.
H. Screen joint, top 771.0 ft. MSL or 4.5 ft.
I. Well bottom 761.0 ft. MSL or 14.5 ft.
J. Filter pack, bottom 761.0 ft. MSL or 14.5 ft.
K. Borehole, bottom 761.0 ft. MSL or 14.5 ft.
L. Borehole, diameter 8.3 in.
M. O.D. well casing 2.07 in.
N. I.D. well casing 1.93 in.



1. Cap and lock? ☑ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9.0 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 / 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. 40-60 BMC
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name and meshsize
a. 65-75 BMC
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☑ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ ____
10. Screen material: PVC
a. Screen type: Factory cut ☑ 11 / Continuous slot ☐ 01 / Other ☐ ____
b. Manufacturer Beloit
c. Slot size: 0.01 in.
d. Slotted length: 10. ft.
11. Backfill material (below filter pack): None ☑ 14 / Other ☐ ____

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

Signature: Dave | Firm: OMNNI

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a 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 these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Malchow Property	Outagamie	SMW1
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	45	_____ / ____

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 30 min.

4. Depth of well (from top of well casisng) 14.4 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 6.5 gal.

7. Volume of water removed from well 10.0 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added None

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. 5.36 ft.	5.44 ft.
Date	b. 04/20/1999 (m m d d y y y y)	04/21/1999
Time	c. 1:13 ☐ a.m. ☒ p.m.	12:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	0.0 inches	0.0 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: Name (first, last) and Firm
First Name: Dave Last Name: Fries
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Dennis Last Name: Malchow
Facility/Firm: _____
Street: 3225 W. College Ave.
City/State/Zip: Appleton, WI 54914

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Dave
Print Name: Dave Fries
Firm: OMNNI Associates

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. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Malchow Property	Outagamie	SMW2
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well ID Number**
	45		

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 ____9 min.

4. Depth of well (from top of well casisng) __14.7 ft.

5. Inside diameter of well __2.0 in.

6. Volume of water in filter pack and well casing __7.4 gal.

7. Volume of water removed from well __50.0 gal.

8. Volume of water added (if any) __0.0 gal.

Source of water added None

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

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	6.22 ft.	13.95 ft.
Date b. (m m d d y y y y)	04/20/1999	04/20/1999
Time c.	1:41 ☐ a.m. ☒ p.m.	1:55 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	0.0 inches	0.0 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: Name (first, last) and Firm
First Name: Dave Last Name: Fries
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Dennis Last Name: Malchow
Facility/Firm: _____
Street: 3225 W. College Ave.
City/State/Zip: Appleton, WI 54914

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Dave
Print Name: Dave Fries
Firm: OMNNI Associates

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. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Malchow Property	Outagamie	SMW3
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well ID Number**
	45	_____	____

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 ____8 min.

4. Depth of well (from top of well casisng) ___14.7 ft.

5. Inside diameter of well __2.0 in.

6. Volume of water in filter pack and well casing ___7.6 gal.

7. Volume of water removed from well ___5.0 gal.

8. Volume of water added (if any) ___0.0 gal.

9. Source of water added None

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. ___5.98 ft.	___13.85 ft.
Date	b. 04/20/1999 (m m d d y y y y)	04/20/1999 (m m d d y y y y)
Time	c. 2:00 ☐ a.m. ☒ p.m.	2:15 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	___0.0 inches	___0.6 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: Name (first, last) and Firm
First Name: Dave Last Name: Fries
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Dennis Last Name: Malchow
Facility/Firm: _____
Street: 3225 W. College Ave.
City/State/Zip: Appleton, WI 54914

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Dave
Print Name: Dave Fries
Firm: OMNNI Associates

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. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Malchow Property	Outagamie	SMW4
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	45	JK915 / ____

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 _____	☐	[illegible]

3. Time spent developing well 4 min.

4. Depth of well (from top of well casisng) 15.0 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 5.1 gal.

7. Volume of water removed from well 3.5 gal.

8. Volume of water added (if any) 0.0 gal.

Source of water added None

9. 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. 9.20 ft.	14.20 ft.
Date	b. 09/07/2000 (m m d d y y y y)	09/07/2000 (m m d d y y y y)
Time	c. 12:40 ☐ a.m. ☒ p.m.	12:50 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	0.0 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) silty	Clear ☒ 20 Turbid ☐ 25 (Describe) slightly silty

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: Name (first, last) and Firm
First Name: Dave Last Name: Fries
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Dennis Last Name: Malchow
Facility/Firm: _____
Street: 3225 W. College Ave.
City/State/Zip: Appleton, WI 54914

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Dave
Print Name: Dave Fries
Firm: OMNNI Associates

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. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Malchow Property	Outagamie	SMW5
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well ID Number**
	45	JK916	____

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 ____7 min.

4. Depth of well (from top of well casisng) __15.0 ft.

5. Inside diameter of well __2.0 in.

6. Volume of water in filter pack and well casing ___6.0 gal.

7. Volume of water removed from well ___4.0 gal.

8. Volume of water added (if any) ___0.0 gal.

9. Source of water added None

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. __8.12 ft.	__14.20 ft.
Date	b. 09/13/2000 (m m d d y y y y)	09/13/2000 (m m d d y y y y)
Time	c. 9:12 ☒ a.m. ☐ p.m.	9:23 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	__0.0 inches	__0.0 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: Name (first, last) and Firm
First Name: Dave Last Name: Fries
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Dennis Last Name: Malchow
Facility/Firm: _____
Street: 3225 W. College Ave.
City/State/Zip: Appleton, WI 54914

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Dave
Print Name: Dave Fries
Firm: OMNNI Associates

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. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Malchow Property	Outagamie	SMW6
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well ID Number**
	45	JK917	___

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 8 min.

4. Depth of well (from top of well casisng) 149 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 7.6 gal.

7. Volume of water removed from well 5.0 gal.

8. Volume of water added (if any) 0.0 gal.

Source of water added None

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 6.17 ft.	9.45 ft.
Date	b. 09/13/2000 (m m d d y y y y)	09/13/2000
Time	c. 9:35 ☒ a.m. ☐ p.m.	9:45 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	0.0 inches	0.0 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: Name (first, last) and Firm
First Name: Dave Last Name: Fries
Firm: OMNNI Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Dennis Last Name: Malchow
Facility/Firm: _____
Street: 3225 W. College Ave.
City/State/Zip: Appleton, WI 54914

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Dave
Print Name: Dave Fries
Firm: OMNNI Associates

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

Well Specific Field Sheet (WSFS) - Monitoring Wells

Fill out one column of this form for each monitoring well which is sampled on each sampling date.

Facility Name: Vacant Lot - 3225 College Ave., Appleton, WI Date: September 13, 2000

License or Permit # : Weather Conditions:

Person(s) Sampling: Dave Fries

Sampling Equipment (for measuring water level, sampling, and filtering.(Include model if appropriate.): ES-60 purge pump, Solonist water level meter, YSI 600 XL multi-probe with 610-D field display unit, Enviroline disposable bailers

Well Name	MW2	MW4	SMW1	SMW2	SMW3	SMW4	SMW5	SMW6
DNR ID No.								
Pipe top elevation (MSL) Reference elev. if different	776.04	776.52	776.61	776.01	775.61	776.49	774.82	775.03
Measured depth to water (ft)	6.66	6.25	5.15	5.35	5.38	5.79	6.17	8.12
Correction	-	-	-	-	-	-	-	-
Total depth to water (ft)	-	-	-	-	-	-	-	-
Water elevation (MSL)	769.38	770.27	771.46	770.66	770.23	770.7	768.65	766.91
Depth to bottom of well (ft)	13.4	13.5	14.35	14.65	14.65	14.95	14.85	14.95
Volume of water in well (gal)	1.10	1.18	1.50	1.52	1.51	1.49	1.41	1.11
Volume to be purged (4x vol. in well)	4.39	4.73	6.00	6.06	6.04	5.97	5.66	4.45
Time purging begun	10:30	11:19	10:50	11:05	10:10	9:53	9:36	9:15
Time purging completed	10:37	11:23	10:55	11:15	10:15	9:58	9:44	9:22
Purged dry? (Y/N)	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Time sample withdrawn	10:40	11:25	11:00	11:17	10:16	10:04	9:48	9:24
Field temperature (°C)								
Field conductivity (uncorrected)								
Field conductivity (at 25°C)								
Time conductivity measured								
Field pH (std. units)								
Time pH measured								
Color (Y/N)	No	No	No	No	No	No	No	No
Odor (Y/N)	No	No	No	No	No	No	No	No
Turbidity (Y/N)	Slight	Slight	Slight	No	No	Slight	No	No
Sample field filtered? (Y/N)	No	No	No	No	No	No	No	No
Time filtered								
Dissolved Oxygen								
Dissolved Oxygen %								
Well cap and lock replaced? (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

F:\ENVIRON\1556A99\TABLES\WSFS4

State of Wisconsin
Department of Natural Resources

G[redacted]W [redacted]ON[redacted]NG W[redacted] INFO[redacted]TION [redacted]M
Chapter 281 and 289, Wis. Stats.
Form 4400-89

Rev. 7-98

Facility Name	Facility ID Number	License, Permit or Monitoring No.	Date	Completed By (Name and Firm)
Malchow Property			10/6/00	Dave Fries, OMNNI Associates

WI Unique Well No	Well Name	DNR Well ID Number	Well Location	Dir. N/E	Dir. S/W	Date Established	Well Casing Diam.	Well Casing Type	Elevations Top of Well Casing	Elevations Ground Surface	Reference MSL (√)	Reference Site Datum (√)	Depths Screen Top	Depths Initial Groundwater	Depths Well Depth	Screen Length	Well Type	Well Status	Enf. Stds.	Grad-ient	Distance to Waste
	MW2					3/30/98	2"	PVC	776.04	776.4	✓		772.9	3.81	13.5'	10'			Y		
	MW4					7/9/98	2"	PVC	776.52	776.9	✓		773.4	6.03	13.5'	10'			Y		
	SMW1					4/20/99	2"	PVC	776.61	777.0	✓		772.5	5.36	14.5'	10'			Y		
	SMW2					4/20/99	2"	PVC	776.01	776.37	✓		771.87	6.22	14.5'	10'			Y		
	SMW3					4/20/99	2"	PVC	775.61	776.03	✓		771.53	5.98	14.5'	10'			Y		
	SMW4					9/7/00	2"	PVC	776.49	776.9	✓		772.4	9.20	15'	10'			Y		
	SMW5					9/7/00	2"	PVC	774.82	775.2	✓		770.7	8.12	15'	10'			Y		
	SMW6					9/7/00	2"	PVC	775.03	775.5	✓		771.0	6.17	15'	10'			Y		

Location Coordinates Are:
☐ State Plane Coordinate ☐ Local Grid System
☐ Northern
☐ Central
☐ Southern

Grid Origin Location: (Check if estimated: ☐)

Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or

St. Plane ____ ft. N. ____ ft. E. S/C/N Zone

Remarks:

Completion of this form is mandatory under s. NR 507.14 and NR 110.25 Wis. Adm. Code. Failure to file this form may result in forfeiture of not less then $10 nor more than $5,000 for each day of violation. Personally identifiable information provided is intended to be used by the Department for the purposes related to the waste management program.

APPENDIX 4

HANDBOOK OF FIELD PROCEDURES

HANDBOOK OF FIELD PROCEDURES

TABLE OF CONTENTS

PERSONNEL QUALIFICATIONS

Kenneth E. Hawk	-	Completed 40-hour hazardous waste training. Bachelors Degree in Geology from University of Wisconsin-Oshkosh. Masters Degree in Environmental Science from University of Wisconsin-Green Bay. Licensed Professional Geologist (no. 197), State of Wisconsin Certified Site Assessor-01660.
Don Brittnacher	-	Completed 40-hour hazardous waste training. Bachelors Degree in Geology from University of Notre Dame. Masters Degree in Environmental Health Engineering from University of Notre Dame. Licensed Professional Geologist (no. 462), State of Wisconsin Licensed Professional Engineer (no. 30286), State of Wisconsin Certified Site Assessor-01658.
David L. Fries	-	Completed 40-hour hazardous waste training. Bachelors Degree in Geology from Lawrence University, Appleton, WI. Masters Degree in Environmental Science from University of Wisconsin-Green Bay. Licensed Professional Geologist (no. 192), State of Wisconsin Certified Site Assessor-01662. Certified Hazardous Materials Manager (no. 10226)
Bill Endter	-	Completed 40-hour hazardous waste training. Associate Degree in Natural Resource Technology from Fox Valley Technical College.
Deanna Drum	-	Completed 40-hour hazardous waste training. Associate Degree in Mechanical Design, Fox Valley Technical College.

SOIL BORING INSTALLATION PROCEDURES

A number of different drilling and geoprobing firms are used for environmental investigations. Borings intended to be converted to monitoring wells are advanced using 7 5/8" O.D. x 4 1/2" I.D. hollow stem augers or 6 1/4" O.D. solid stem augers powered by a truck-mounted drill rig. If bedrock drilling is required, borings are advanced using either air or mud-rotary drilling techniques. Soil borings not intended for monitoring wells are typically advanced using 4" O.D. solid stem augers. The geoprobe typically advances a 2" diameter hole. All soil borings that are not converted to permanent or temporary groundwater monitoring wells are properly abandoned per NR 141.

Samples are typically obtained from each boring at 2.5' intervals by split-spoon sampling according to ASTM D-1586. A portion of each sample is screened with a photoionization detector (PID). At each sampling interval, a representative portion of the soil is also collected for possible laboratory analysis. Soil samples are chosen from each boring for laboratory analysis based on headspace screening data, and visual and olfactory observations. In general, the sample from each boring that exhibits the highest PID reading is chosen for analysis. See the Soil Sampling Procedures below, for further information pertaining to field headspace analysis and sample collection procedures.

SOIL SAMPLING PROCEDURES

All soil sampling is performed in accordance with DNR PUBL-SW-127, Soil Sampling Requirements for LUST Site Investigations and Excavations and DILHR ch. 10, Flammable and Combustible Liquids. The soil samples are collected and analyzed in accordance with DNR PUBL-SW-130 92REV, LUST Analytical Guidance, July, 1993. Our standard instruments and sample collection procedures are as follows:

1. Soil samples are collected from a split-spoon sampler during environmental drilling.

2. Sample collector wears new latex exam gloves when collecting samples to decrease the risk of personal exposure and cross contamination.

3. A portion of the sample is collected in a sampling syringe and placed in new glass 40 ml vials, or new glass 2 oz jars, and immediately placed on ice, and later delivered to the laboratory for analysis. This procedure will be discussed in more detail later in this report. (See Table 1.)

4. The remaining portion of the sample is placed in a clean 4 oz. jar (approx. 1/2 filled), and sealed with aluminum foil and a teflon-lined lid. The headspace sample is then agitated for a minimum of 30 seconds and then allowed to equilibrate. Minimum equilibration time will correspond to the following specifications:

Minimum Sample Headspace Equilibration Time

Ambient Outside Air Temperature at the Time of Sample Collection	Minimum Amount of Time Sample Must Equilibrate at 70° F or Greater Temperature
< 40 F	40 min.
41 - 55 F	20 min.
56 - 69 F	10 min.
> 70	5 min.

INSTRUMENT SPECIFICATIONS

When the sample has completed equilibration, it is promptly field analyzed with a portable photoionization detector (PID). OMNNI uses either a Photovac Inc. Microtip HL-200 or ML-1000 or a Thermo Environmental Instruments Model 580A OVM, both equipped with an 11.2 ev lamp. A background reading is first taken. The PID probe is then inserted into the jar through a single hole in the aluminum foil. The instrument reading is measured at one-half the distance between the foil seal and the sample surface. The measured reading is then recorded.

Isobutylene at a concentration of 100 ppm is used for field calibration gas. The PID meter is field calibrated at the following times:

- At the beginning of each day
- After any significant change in temperature or humidity
- Every three hours
- After any repairs to the instrument are performed

5. All samples are returned to the laboratory as soon as possible, usually the day the sample was collected. All samples are returned to the lab with a chain-of-custody form, form #4400-151. Time of sample collection and sample PID reading are listed. Care is taken to ensure that the chain-of-custody form is properly and fully completed before submitting to the laboratory.

6. The samples are sent to a laboratory certified by the Wisconsin Department of Natural Resources.

7. Table 2 on page 9 outlines the required DNR laboratory analysis for specific UST contaminants.

Soil analyses, other than those in Table 2, will be conducted in accordance with methods approved by the DNR.

MONITORING WELL INSTALLATION AND DEVELOPMENT PROCEDURES

The permanent monitoring wells are typically constructed of two-inch, schedule 40, flush-thread PVC casings and well screens. Temporary wells are one-inch diameter, schedule 40 casings and screens. Prior to use, well parts are individually wrapped in plastic.

Permanent wells are installed and developed according to NR 141, DNR Groundwater Monitoring Well Requirements. The monitoring wells are installed with five to fifteen-foot screens which are placed in the borings to intersect the water table. Piezometers are installed with five-foot screens sealed beneath the water table. Filter pack and annular space seal material are installed by gravity as the augers are withdrawn from the hole. Wells are cut to the required height using a PVC pipe cutter.

An as-constructed well and boring survey is performed by OMNNI once field work is complete. Elevations are either based on a local datum of 100 feet, or a U.S.G.S. elevation, assigned to a mark on a reference point located at the site. Ground elevation is surveyed to the nearest 0.1 foot, and the top of the well casing to the nearest 0.01 foot.

A horizontal grid system is established at the site with the origin of the grid set on the reference point. Wells and borings are located with respect to this grid system.

To properly develop each permanent monitoring well, water is removed until a consistent water quality is obtained. This is done by removing 10 times the water volume in the well and filter pack, removing water until it is free of sediment, or removing the water until the well is purged dry. Water is removed from the wells by bailing the water with as little agitation as possible. If the water level is unaffected by bailing and large amounts of water are to be removed, the well is developed by using the surge and purge method with a Red Lion centrifugal pump. No water is added to the well during development. Temporary wells are typically developed by allowing the peristaltic pump to run until the water is as clear as possible.

The development water is barrelled, pending the results of analytical testing. If the well is suspected to be clean and small volumes of water are to be removed, the water may be spread on pavement to volatilize any possible contaminants.

GROUNDWATER SAMPLING PROCEDURES AND V.O.C. SAMPLING NOTES

A. Devices used to measure water elevation, purge wells and retrieve samples:

1. Groundwater levels are measured with a fiberglass reel tape with a weighted stainless steel "sounder" at the end.

2. In wells that have free product on top of the water surface, depth to water and depth to product are measured with a fiberglass reel tape with an interface probe at the end.

3. Wells are purged and samples are collected by one of the following methods:

   a) Wells are purged with a Voss disposable bailer.

   b) Alternate purging and sampling equipment consists of a peristaltic groundwater sampling pump.

B. Procedures for calculating purge volumes, purging wells and sampling:

1. Wells are normally sampled starting from the upgradient area and progressing toward the downgradient area of the site. When the degree of contamination is known, least contaminated wells are sampled first, the more contaminated wells sampled last.

2. All the wells are opened before the depth to groundwater is determined.

3. Wells are purged by removing four water volumes within a casing or all the water until the well runs dry.

4. Once all the wells have been purged, the samples are drawn using equipment mentioned above. (See Table 3 - Water Sample Preparation Guide)

5. Sample, odor, turbidity, temperature, conductivity and pH are determined on the unfiltered portions of the sample and recorded on the well specific field sheet.

6. When the sample requires filtering, the sample is filtered with an in-line pump (as soon after collection as possible).

7. Quality Assurance/Quality Control Samples

   a) Trip and field blanks will consist of three new 40 ml vials filled with deionized water. These are sent to the laboratory for (P)VOC analysis. If no field contamination has occurred, these samples will have no detectable (P)VOCs.

   b) One trip blank should be analyzed for every 10 samples collected. At least one trip blank is taken per site visit. Trip blanks are poured, labeled, and sealed, then taken out in the field. Trip blanks are kept with all samples collected until reaching the field.

   c) Field blanks are used if the bailers are not dedicated to a specific well. If there is a possibility for field cross-contamination of samples, field blanks may also be taken at the sample collector's discretion.

   d) One temperature blank is collected per batch of samples.

   e) One duplicate sample is collected with every 10 samples.

8. Samples are refrigerated, then transported to a state certified laboratory for testing as soon as possible.

9. A chain-of-custody will be filled out listing all samples collected, requested laboratory analysis, date and time of collection, and the name of the sample collector. This document will remain with the samples at all times and bear the names of all persons handling the samples until the samples are received by the laboratory.

C. Procedures for cleaning equipment:

1. In the field, sampling equipment is rinsed with a 10% methanol solution and then flushed three times with deionized water between each well sampled.

2. Equipment that is still contaminated after field cleaning will be rinsed with tap water, washed off with detergent, rinsed with a 10% methanol solution, and flushed three times with deionized water.

D. Transporting samples to lab:

1. Filtered, preserved, labelled, and sealed samples are iced and transported to the lab for analysis as soon as possible.

2. The laboratory will be notified by the sample collector when courier service is required.

E. The above procedures constitute normal groundwater sampling procedures for permanent groundwater monitoring wells. Modifications to each of the outlined items may be applicable for site specific conditions or special volatile organic sampling considerations. Methods used are consistent with WDNR "Groundwater Sampling Procedures Guidelines" Publ. WR-153, February, 1987.

DECONTAMINATION PROCEDURES

Decontamination is the process of removing and/or neutralizing contaminants that may have accumulated on PPE (personnel protective equipment) and equipment. Proper decontamination is a critical element in the control of hazards which helps ensure the health and safety of workers. Proper decontamination also contains the contamination to the site, thus preventing further environmental problems.

Drilling

The following decontamination procedures should be used when completing borings, installing monitoring wells, and/or installing remediation systems.

A. Between samples, the split spoon will be cleaned in a multiple rinse, surfactant solution (soap and water or Alconox solution.)

B. The sample will be collected while wearing new latex exam gloves.

C. The surface upon which the sample is collected will be cleaned between samples.

D. The latex exam gloves will be changed between samples.

E. Soil which has accumulated around the boring will either be stockpiled or barreled. If the soil is stockpiled, it will be placed on and covered with visqueen. The stockpiled or barreled soil will later be disposed of in compliance with the DNR regulations.

F. Upon completion of the boring, the augers will be decontaminated before they are used again. The following procedures will be followed when decontaminating drilling equipment:

1. A decontamination basin lined with plastic (visqueen) is set up near the work area.

2. All contaminated equipment is placed in the decontamination basin.

3. A pressurized steam cleaner is used to clean all contaminated equipment.

4. Following steam cleaning, the auger is removed from the decontamination basin.

5. Upon completion of the job, the accumulated water in the decontamination basin is pumped out and placed in a barrel. Wash water used for cleaning the split spoons is also added to the barrel. The barrel will be disposed of in compliance with all regulatory agencies.

6. The visqueen used in the decontamination basin is disposed of in compliance with all regulatory agencies.

Table 1
SOIL SAMPLE PREPARATION GUIDE*

TEST	CONTAINER SIZE**	SAMPLE SIZE	PRESERVATIVE	HOLDING TIME
GRO Gasoline Range Organics	2 oz. wide mouth jar or 40 ml vial (2 per sample)	25 g	25 ml Methanol (purge and trap grade)	4 days
DRO Diesel Range Organics	2 oz. wide mouth jar or 40 ml vial (2 per sample)	25 g	None	4 days
Total Lead/ Total Cadmium	4 oz. wide mouth jar (2 per sample)	4 oz.	None	6 months
VOC / PVOC Volatile Organic Compounds	2 oz. wide mouth jar or 40 ml vial (2 per sample)	25 g	25 ml Methanol (purge and trap grade)	4 days
PCB Polychlorinated Biphenyls	4 oz. wide mouth jar (2 per sample)	4 oz.	None	14 days
PAH Polynuclear Aromatic Hydrocarbons	4 oz. wide mouth jar (2 per sample)	4 oz.	None	14 days

* All samples will be sealed, labeled, and placed on ice immediately after collection.

** To ensure a proper seal between the sample container and the cap, no soil shall remain on the jar or cap threads. When samples are collected with the syringe, a 40 ml vial is used and the sample is preserved in the lab.

Table 2
SOIL SAMPLE ANALYSIS GUIDE FOR PETROLEUM CONTAMINATION

PETROLEUM SUBSTANCE	CLOSURE ASSESSMENT	SOLID WASTE PRO./LANDFILLS	SITE INVESTIGATIONS
Gasoline Aviation Fuel	GRO	Free Liquids GRO Benzene Haz. Waste Det.	GRO PVOC/VOC Pb
Diesel Jet Fuel No.'s 1, 2, 4 Fuel Oil	DRO	Free Liquids GRO Benzene Haz. Waste Det.	DRO PVOC PAH
Crude Oil Lubricat. Oil No. 6 Fuel Oil	DRO	Free Liquids DRO Haz. Waste Det.	DRO PAH
Unknown Petroleum	GRO and DRO	Free Liquids GRO and DRO Pb, Cd, CH S Haz Waste Det.	GRO and DRO VOC/PVOC PAH Pb, Cd
Waste Oil	DRO	Free Liquids DRO VOC Pb, Cd, CH S Haz. Waste Det.	DRO VOC/PVOC PAH PCB Pb, Cd

Table 3
WATER SAMPLE PREPARATION GUIDE *

TEST	SAMPLE SIZE / CONTAINER	PRESERVATIVE	HOLDING TIME
VOC / PVOC Volatile Organic Compounds	3 - 40 ml vials filled with no headspace	0.5 ml of 1:1 HC1	14 days
DRO Diesel Range Organics	1 - 1 liter amber glass bottles	5 ml of 1:1 HC1	7 days
GRO Gasoline Range Organics	3 - 40 ml vials filled with no headspace	0.5 ml of 1:1 HC1	14 days
PAH Polynuclear Aromatic Hydrocarbons	1 - 1 liter amber glass bottles	None	7 days
PCB Polychlorinated Biphenyls	1 - 1 liter amber glass bottle	None	7 days
LEAD / CADMIUM metals **	1 - 250 ml plastic bottle	2 ml of HNO_3 or to a pH of <2	6 months

* All samples will be sealed, labeled, and placed on ice immediately after collection.
** When testing for dissolved metals, the sample will be field filtered before preservation.

APPENDIX 5

LABORATORY ANALYSIS RESULTS AND CHAIN OF CUSTODY DOCUMENTATION

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name D. MALKOW PROPERTY
Invoice # E30772

Report Date *15-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030772A						**Sample Type** Soil			
Sample ID SB4-2						**Sample Date** 9/7/00			
Inorganic									
General									
Solids Percent	79.4	%			1	9/8/00	5021	SAD	1
Organic									
VOC's									
Benzene	< 25	ug/kg	9.1	30	1	9/11/00	8021A	CJR	1
Bromobenzene	< 25	ug/kg	13	42	1	9/11/00	8021A	CJR	1
Bromodichloromethane	< 25	ug/kg	7.3	24	1	9/11/00	8021A	CJR	1
tert-Butylbenzene	< 25	ug/kg	10	33	1	9/11/00	8021A	CJR	1
sec-Butylbenzene	< 25	ug/kg	8.5	28	1	9/11/00	8021A	CJR	1
n-Butylbenzene	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
Carbon Tetrachloride	< 25	ug/kg	8.3	28	1	9/11/00	8021A	CJR	4
Chlorobenzene	< 25	ug/kg	8.4	28	1	9/11/00	8021A	CJR	1
Chloroethane	< 25	ug/kg	11	35	1	9/11/00	8021A	CJR	1
Chloroform	< 25	ug/kg	7.9	26	1	9/11/00	8021A	CJR	1
Chloromethane	< 25	ug/kg	5	17	1	9/11/00	8021A	CJR	1
2-Chlorotoluene	< 25	ug/kg	2.4	8.4	1	9/11/00	8021A	CJR	1
4-Chlorotoluene	< 25	ug/kg	2.3	8.5	1	9/11/00	8021A	CJR	1
2,2-DCP, cis-1,2-Dichloroethene	< 50	ug/kg	4.1	20	1	9/11/00	8021A	CJR	1
1,2-Dibromo-3-chloropropane	< 25	ug/kg	11	37	1	9/11/00	8021A	CJR	4
Dibromochloromethane	< 25	ug/kg	9.4	31	1	9/11/00	8021A	CJR	1
1,4-Dichlorobenzene	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
1,3-Dichlorobenzene	< 25	ug/kg	8.6	29	1	9/11/00	8021A	CJR	1
1,2-Dichlorobenzene	< 25	ug/kg	8.9	30	1	9/11/00	8021A	CJR	1
Dichlorodifluoromethane	< 25	ug/kg	8.3	25	1	9/11/00	8021A	CJR	1
1,2-Dichloroethane	< 25	ug/kg	8.6	29	1	9/11/00	8021A	CJR	1
1,1-Dichloroethane	< 25	ug/kg	7.4	25	1	9/11/00	8021A	CJR	1
1,1-Dichloroethene	< 25	ug/kg	8.3	28	1	9/11/00	8021A	CJR	1
cis-1,2-Dichloroethene	< 25	ug/kg	5.7	19	1	9/11/00	8021A	CJR	1
trans-1,2-Dichloroethene	< 25	ug/kg	7.5	25	1	9/11/00	8021A	CJR	1
1,2-Dichloropropane	< 25	ug/kg	8.9	30	1	9/11/00	8021A	CJR	1
1,3-Dichloropropane	< 25	ug/kg	11	35	1	9/11/00	8021A	CJR	1
Di-isopropyl ether	< 25	ug/kg	7.4	25	1	9/11/00	8021A	CJR	1
EDB (1,2-Dibromoethane)	< 25	ug/kg	9.3	31	1	9/11/00	8021A	CJR	1
Ethylbenzene	< 25	ug/kg	7.9	26	1	9/11/00	8021A	CJR	1
Hexachlorobutadiene	< 25	ug/kg	6.4	21	1	9/11/00	8021A	CJR	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name D. MALKOW PROPERTY
Invoice # E30772

Report Date *15-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030772A						**Sample Type** Soil			
Sample ID SB4-2						**Sample Date** 9/7/00			
Isopropylbenzene	< 25	ug/kg	10	33	1	9/11/00	8021A	CJR	1
p-Isopropyltoluene	< 25	ug/kg	9	30	1	9/11/00	8021A	CJR	1
Methylene chloride	< 25	ug/kg	13	42	1	9/11/00	8021A	CJR	1
MTBE	< 25	ug/kg	11	38	1	9/11/00	8021A	CJR	1
Naphthalene	< 25	ug/kg	11	38	1	9/11/00	8021A	CJR	1
n-Propylbenzene	< 25	ug/kg	16	53	1	9/11/00	8021A	CJR	1
1,1,2,2-Tetrachloroethane	< 25	ug/kg	24	81	1	9/11/00	8021A	CJR	1
Tetrachloroethene	160	ug/kg	7.6	25	1	9/11/00	8021A	CJR	1
Toluene	< 25	ug/kg	6.7	22	1	9/11/00	8021A	CJR	1
1,2,4-Trichlorobenzene	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
1,2,3-Trichlorobenzene	< 25	ug/kg	9.3	31	1	9/11/00	8021A	CJR	1
1,1,1-Trichloroethane	< 25	ug/kg	8.4	28	1	9/11/00	8021A	CJR	1
1,1,2-Trichloroethane	< 25	ug/kg	11	36	1	9/11/00	8021A	CJR	1
Trichloroethene	< 25	ug/kg	15	51	1	9/11/00	8021A	CJR	1
Trichlorofluoromethane	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
1,2,4-Trimethylbenzene	< 25	ug/kg	6.9	23	1	9/11/00	8021A	CJR	1
1,3,5-Trimethylbenzene	< 25	ug/kg	16	54	1	9/11/00	8021A	CJR	1
Vinyl Chloride	< 25	ug/kg	8.3	25	1	9/11/00	8021A	CJR	1
m&p-Xylene	< 50	ug/kg	15	48	1	9/11/00	8021A	CJR	1
o-Xylene	< 25	ug/kg	7.9	26	1	9/11/00	8021A	CJR	1
Lab Code 5030772B						**Sample Type** Soil			
Sample ID SB6-2						**Sample Date** 9/7/00			
Inorganic									
General									
Solids Percent	81.5	%			1	9/8/00	5021	SAD	1
Organic									
VOC's									
Benzene	< 25	ug/kg	9.1	30	1	9/11/00	8021A	CJR	1
Bromobenzene	< 25	ug/kg	13	42	1	9/11/00	8021A	CJR	1
Bromodichloromethane	< 25	ug/kg	7.3	24	1	9/11/00	8021A	CJR	1
tert-Butylbenzene	< 25	ug/kg	10	33	1	9/11/00	8021A	CJR	1
sec-Butylbenzene	< 25	ug/kg	8.5	28	1	9/11/00	8021A	CJR	1
n-Butylbenzene	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
Carbon Tetrachloride	< 25	ug/kg	8.3	28	1	9/11/00	8021A	CJR	4
Chlorobenzene	< 25	ug/kg	8.4	28	1	9/11/00	8021A	CJR	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name D. MALKOW PROPERTY
Invoice # E30772

Report Date *15-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030772B						**Sample Type** Soil			
Sample ID SB6-2						**Sample Date** 9/7/00			
Chloroethane	< 25	ug/kg	11	35	1	9/11/00	8021A	CJR	1
Chloroform	< 25	ug/kg	7.9	26	1	9/11/00	8021A	CJR	1
Chloromethane	< 25	ug/kg	5	17	1	9/11/00	8021A	CJR	1
2-Chlorotoluene	< 25	ug/kg	2.4	8.4	1	9/11/00	8021A	CJR	1
4-Chlorotoluene	< 25	ug/kg	2.3	8.5	1	9/11/00	8021A	CJR	1
2,2-DCP, cis-1,2-Dichloroethene	< 50	ug/kg	4.1	20	1	9/11/00	8021A	CJR	1
1,2-Dibromo-3-chloropropane	< 25	ug/kg	11	37	1	9/11/00	8021A	CJR	4
Dibromochloromethane	< 25	ug/kg	9.4	31	1	9/11/00	8021A	CJR	1
1,4-Dichlorobenzene	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
1,3-Dichlorobenzene	< 25	ug/kg	8.6	29	1	9/11/00	8021A	CJR	1
1,2-Dichlorobenzene	< 25	ug/kg	8.9	30	1	9/11/00	8021A	CJR	1
Dichlorodifluoromethane	< 25	ug/kg	8.3	25	1	9/11/00	8021A	CJR	1
1,2-Dichloroethane	< 25	ug/kg	8.6	29	1	9/11/00	8021A	CJR	1
1,1-Dichloroethane	< 25	ug/kg	7.4	25	1	9/11/00	8021A	CJR	1
1,1-Dichloroethene	< 25	ug/kg	8.3	28	1	9/11/00	8021A	CJR	1
cis-1,2-Dichloroethene	< 25	ug/kg	5.7	19	1	9/11/00	8021A	CJR	1
trans-1,2-Dichloroethene	< 25	ug/kg	7.5	25	1	9/11/00	8021A	CJR	1
1,2-Dichloropropane	< 25	ug/kg	8.9	30	1	9/11/00	8021A	CJR	1
1,3-Dichloropropane	< 25	ug/kg	11	35	1	9/11/00	8021A	CJR	1
Di-isopropyl ether	< 25	ug/kg	7.4	25	1	9/11/00	8021A	CJR	1
EDB (1,2-Dibromoethane)	< 25	ug/kg	9.3	31	1	9/11/00	8021A	CJR	1
Ethylbenzene	< 25	ug/kg	7.9	26	1	9/11/00	8021A	CJR	1
Hexachlorobutadiene	< 25	ug/kg	6.4	21	1	9/11/00	8021A	CJR	1
Isopropylbenzene	< 25	ug/kg	10	33	1	9/11/00	8021A	CJR	1
p-Isopropyltoluene	< 25	ug/kg	9	30	1	9/11/00	8021A	CJR	1
Methylene chloride	< 25	ug/kg	13	42	1	9/11/00	8021A	CJR	1
MTBE	< 25	ug/kg	11	38	1	9/11/00	8021A	CJR	1
Naphthalene	< 25	ug/kg	11	38	1	9/11/00	8021A	CJR	1
n-Propylbenzene	< 25	ug/kg	16	53	1	9/11/00	8021A	CJR	1
1,1,2,2-Tetrachloroethane	< 25	ug/kg	24	81	1	9/11/00	8021A	CJR	1
Tetrachloroethene	< 25	ug/kg	7.6	25	1	9/11/00	8021A	CJR	1
Toluene	< 25	ug/kg	6.7	22	1	9/11/00	8021A	CJR	1
1,2,4-Trichlorobenzene	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
1,2,3-Trichlorobenzene	< 25	ug/kg	9.3	31	1	9/11/00	8021A	CJR	1
1,1,1-Trichloroethane	< 25	ug/kg	8.4	28	1	9/11/00	8021A	CJR	1
1,1,2-Trichloroethane	< 25	ug/kg	11	36	1	9/11/00	8021A	CJR	1
Trichloroethene	< 25	ug/kg	15	51	1	9/11/00	8021A	CJR	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name D. MALKOW PROPERTY
Invoice # E30772

Report Date *15-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030772B						**Sample Type** Soil			
Sample ID SB6-2						**Sample Date** 9/7/00			
Trichlorofluoromethane	< 25	ug/kg	8.8	29	1	9/11/00	8021A	CJR	1
1,2,4-Trimethylbenzene	< 25	ug/kg	6.9	23	1	9/11/00	8021A	CJR	1
1,3,5-Trimethylbenzene	< 25	ug/kg	16	54	1	9/11/00	8021A	CJR	1
Vinyl Chloride	< 25	ug/kg	8.3	25	1	9/11/00	8021A	CJR	1
m&p-Xylene	< 50	ug/kg	15	48	1	9/11/00	8021A	CJR	1
o-Xylene	< 25	ug/kg	7.9	26	1	9/11/00	8021A	CJR	1

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

Code	*Comment*
1	All laboratory QC requirements were met for this sample.
4	The check standard failed to meet acceptable QC limits.

Authorized Signature

CHAIN OF CUSTODY RECORD

U.S. Analytical Lab
1090 Kennedy Ave. • Kimberly, WI 54136
(920) 735-8295 • FAX 920-739-1738 • 800-490-4902
LAB@USOIL.COM

Chain # No 20302

Page ____ of ____

Lab I.D. # 5030772

Account No. : Quote No.: Q4527

Project #: N1556A99

Sampler: (signature) Dave

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client Temp. of Temp. Blank: 4 °C On Ice: X
Cooler seal intact upon receipt: ^ Yes ____ No Labcoded By: ____

Project (Name / Location): D. Malkhow Property, 3225 W. College Ave, Appleton, WI

Reports To: D. Fries	Invoice To:
Company OMNNI	Company
Address One Systems Dr.	Address
City State Zip Appleton, WI 54914	City State Zip
Phone 735-6900	Phone

Sample Handling Request

___ Rush Analysis Date Required ____

X Normal Turn Around

Analysis Requested

Lab I.D.	Sample I.D.	Collection Date	Collection Time	No. of Containers Size and Type	Description*	Preservation	DRO (Mod/TPH)	GRO (Mod/TPH)	PVOC (EPA 8021)	BTEX (EPA 8021)	VOC (EPA 8021)	VOC (EPA 8260)	O&G (EPA 413.1)	PAH (EPA 8310)	Pb	Flash Point	Other Analysis						PID/ FID
5030770A	SB4-2	9/7/00	8:19am	2, 40 ml	Soil	—					X												
~~5030770~~	~~SB5-2~~	~~"~~	~~9:18~~	~~2, 40ml~~	~~Soil~~	~~—~~					~~X~~												
B	SB6-2	"	10:18	2, 40ml	"	—					X												

Department Use Only

Split Samples: Offered ? ____ Yes ____ No
Accepted? ____ Yes ____ No
Accepted By: ____

Comments/ Special Instructions
*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", etc.

Department Use Optional for Soil Samples

Disposition of unused portion of sample
Lab Should:
___ Dispose ____ Retain for ___ days
___ Return ____ Other

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Dave	12:05	9/7/00			

Received in Laboratory By: L. Blair Time: 12:05 Date: 9/7/00

In order for U.S. Analytical Lab to return reports in a efficient and accurate manner, please be sure all areas are completely filled out. **BE SURE TO PRINT.**

1.) Quote Number
2.) All addresses and phone numbers are complete and accurate
3.) All names are completely written out
4.) All sample information complete
    a.) Sample I.D.
    b.) Sample date
    c.) Sample matrix
    d.) Analysis requested

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809A						**Sample Type** Water			
Sample ID MW 2						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 0.39	ug/l	0.39	1.3	1	9/15/00	8021A	CAH	1
Bromobenzene	< 0.39	ug/l	0.39	1.3	1	9/15/00	8021A	CAH	1
Bromodichloromethane	< 0.38	ug/l	0.38	1.3	1	9/15/00	8021A	CAH	1
tert-Butylbenzene	< 0.44	ug/l	0.44	1.5	1	9/15/00	8021A	CAH	1
sec-Butylbenzene	< 0.48	ug/l	0.48	1.6	1	9/15/00	8021A	CAH	1
n-Butylbenzene	< 0.43	ug/l	0.43	1.4	1	9/15/00	8021A	CAH	1
Carbon Tetrachloride	< 0.55	ug/l	0.55	1.8	1	9/15/00	8021A	CAH	1
Chlorobenzene	< 0.4	ug/l	0.4	1.3	1	9/15/00	8021A	CAH	1
Chloroethane	< 0.15	ug/l	0.15	0.48	1	9/15/00	8021A	CAH	1
Chloroform	< 0.38	ug/l	0.38	1.3	1	9/15/00	8021A	CAH	1
Chloromethane	< 1.1	ug/l	1.1	3.5	1	9/15/00	8021A	CAH	4
2-Chlorotoluene	< 0.47	ug/l	0.47	1.5	1	9/15/00	8021A	CAH	1
4-Chlorotoluene	< 0.44	ug/l	0.44	1.5	1	9/15/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 0.67	ug/l	0.67	2.2	1	9/15/00	8021A	CAH	1
Dibromochloromethane	< 0.5	ug/l	0.5	1.7	1	9/15/00	8021A	CAH	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.4	1	9/15/00	8021A	CAH	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.5	1	9/15/00	8021A	CAH	1
1,2-Dichlorobenzene	< 0.44	ug/l	0.44	1.5	1	9/15/00	8021A	CAH	1
Dichlorodifluoromethane	< 0.37	ug/l	0.37	1.2	1	9/15/00	8021A	CAH	4
1,2-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/15/00	8021A	CAH	1
1,1-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/15/00	8021A	CAH	1
1,1-Dichloroethene	< 0.66	ug/l	0.66	2.2	1	9/15/00	8021A	CAH	1
cis-1,2-Dichloroethene	7.9	ug/l	0.37	1.2	1	9/15/00	8021A	CAH	1
trans-1,2-Dichloroethene	< 0.43	ug/l	0.43	1.4	1	9/15/00	8021A	CAH	1
1,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	1	9/15/00	8021A	CAH	1
2,2-Dichloropropane	< 0.59	ug/l	0.59	2	1	9/15/00	8021A	CAH	1
Di-isopropyl ether	< 0.37	ug/l	0.37	1.2	1	9/15/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 0.65	ug/l	0.65	2.2	1	9/15/00	8021A	CAH	1
Ethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/15/00	8021A	CAH	1
Hexachlorobutadiene	< 0.62	ug/l	0.62	2.1	1	9/15/00	8021A	CAH	1
Isopropylbenzene	< 0.38	ug/l	0.38	1.3	1	9/15/00	8021A	CAH	1
p-Isopropyltoluene	< 0.44	ug/l	0.44	1.5	1	9/15/00	8021A	CAH	1
Methylene chloride	< 0.57	ug/l	0.57	1.9	1	9/15/00	8021A	CAH	1
MTBE	< 0.47	ug/l	0.47	1.6	1	9/15/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809A						**Sample Type** Water			
Sample ID MW 2						**Sample Date** 9/13/00			
Naphthalene	< 0.53	ug/l	0.53	1.8	1	9/15/00	8021A	CAH	4
n-Propylbenzene	< 0.42	ug/l	0.42	1.4	1	9/15/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 0.68	ug/l	0.68	2.3	1	9/15/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 0.93	ug/l	0.93	3.1	1	9/15/00	8021A	CAH	1
Tetrachloroethene	< 0.34	ug/l	0.34	1.1	1	9/15/00	8021A	CAH	1
Toluene	< 0.37	ug/l	0.37	1.2	1	9/15/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 0.6	ug/l	0.6	2	1	9/15/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 0.49	ug/l	0.49	1.6	1	9/15/00	8021A	CAH	4
1,1,1-Trichloroethane	< 0.54	ug/l	0.54	1.8	1	9/15/00	8021A	CAH	1
1,1,2-Trichloroethane	< 0.46	ug/l	0.46	1.5	1	9/15/00	8021A	CAH	1
Trichloroethene	< 0.46	ug/l	0.46	1.5	1	9/15/00	8021A	CAH	1
Trichlorofluoromethane	< 0.62	ug/l	0.62	2.1	1	9/15/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/15/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2.1	1	9/15/00	8021A	CAH	1
Vinyl Chloride	< 0.87	ug/l	0.87	2.9	1	9/15/00	8021A	CAH	1
m&p-Xylene	< 0.79	ug/l	0.79	2.6	1	9/15/00	8021A	CAH	1
o-Xylene	< 0.64	ug/l	0.64	2.1	1	9/15/00	8021A	CAH	1
Lab Code 5030809B						**Sample Type** Water			
Sample ID MW 4						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromobenzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromodichloromethane	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
tert-Butylbenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
sec-Butylbenzene	< 0.48	ug/l	0.48	1.6	1	9/16/00	8021A	CAH	1
n-Butylbenzene	< 0.43	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
Carbon Tetrachloride	< 0.55	ug/l	0.55	1.8	1	9/16/00	8021A	CAH	1
Chlorobenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Chloroethane	< 0.15	ug/l	0.15	0.48	1	9/16/00	8021A	CAH	1
Chloroform	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
Chloromethane	< 1.1	ug/l	1.1	3.5	1	9/16/00	8021A	CAH	4
2-Chlorotoluene	< 0.47	ug/l	0.47	1.5	1	9/16/00	8021A	CAH	1
4-Chlorotoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 0.67	ug/l	0.67	2.2	1	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809B						**Sample Type** Water			
Sample ID MW 4						**Sample Date** 9/13/00			
Dibromochloromethane	< 0.5	ug/l	0.5	1.7	1	9/16/00	8021A	CAH	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.5	1	9/16/00	8021A	CAH	1
1,2-Dichlorobenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Dichlorodifluoromethane	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	4
1,2-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethene	< 0.66	ug/l	0.66	2.2	1	9/16/00	8021A	CAH	1
cis-1,2-Dichloroethene	5.2	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
trans-1,2-Dichloroethene	< 0.43	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
1,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
2,2-Dichloropropane	< 0.59	ug/l	0.59	2	1	9/16/00	8021A	CAH	1
Di-isopropyl ether	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 0.65	ug/l	0.65	2.2	1	9/16/00	8021A	CAH	1
Ethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Hexachlorobutadiene	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	1
Isopropylbenzene	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
p-Isopropyltoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Methylene chloride	< 0.57	ug/l	0.57	1.9	1	9/16/00	8021A	CAH	1
MTBE	< 0.47	ug/l	0.47	1.6	1	9/16/00	8021A	CAH	1
Naphthalene	< 0.53	ug/l	0.53	1.8	1	9/16/00	8021A	CAH	4
n-Propylbenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 0.68	ug/l	0.68	2.3	1	9/16/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 0.93	ug/l	0.93	3.1	1	9/16/00	8021A	CAH	1
Tetrachloroethene	200	ug/l	0.34	1.1	1	9/16/00	8021A	CAH	1
Toluene	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 0.6	ug/l	0.6	2	1	9/16/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 0.49	ug/l	0.49	1.6	1	9/16/00	8021A	CAH	4
1,1,1-Trichloroethane	< 0.54	ug/l	0.54	1.8	1	9/16/00	8021A	CAH	1
1,1,2-Trichloroethane	< 0.46	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichloroethene	13	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichlorofluoromethane	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2.1	1	9/16/00	8021A	CAH	1
Vinyl Chloride	< 0.87	ug/l	0.87	2.9	1	9/16/00	8021A	CAH	1
m&p-Xylene	< 0.79	ug/l	0.79	2.6	1	9/16/00	8021A	CAH	1
o-Xylene	< 0.64	ug/l	0.64	2.1	1	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809C						**Sample Type** Water			
Sample ID SMW 1						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 3.9	ug/l	3.9	13	10	9/16/00	8021A	CAH	1
Bromobenzene	< 3.9	ug/l	3.9	13	10	9/16/00	8021A	CAH	1
Bromodichloromethane	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
tert-Butylbenzene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
sec-Butylbenzene	< 4.8	ug/l	4.8	16	10	9/16/00	8021A	CAH	1
n-Butylbenzene	< 4.3	ug/l	4.3	14	10	9/16/00	8021A	CAH	1
Carbon Tetrachloride	< 5.5	ug/l	5.5	18	10	9/16/00	8021A	CAH	1
Chlorobenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
Chloroethane	< 1.5	ug/l	1.5	4.8	10	9/16/00	8021A	CAH	1
Chloroform	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
Chloromethane	< 11	ug/l	11	35	10	9/16/00	8021A	CAH	4
2-Chlorotoluene	< 4.7	ug/l	4.7	15	10	9/16/00	8021A	CAH	1
4-Chlorotoluene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 6.7	ug/l	6.7	22	10	9/16/00	8021A	CAH	1
Dibromochloromethane	< 5	ug/l	5	17	10	9/16/00	8021A	CAH	1
1,4-Dichlorobenzene	< 4.2	ug/l	4.2	14	10	9/16/00	8021A	CAH	1
1,3-Dichlorobenzene	< 4.5	ug/l	4.5	15	10	9/16/00	8021A	CAH	1
1,2-Dichlorobenzene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
Dichlorodifluoromethane	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	4
1,2-Dichloroethane	< 3.5	ug/l	3.5	12	10	9/16/00	8021A	CAH	1
1,1-Dichloroethane	< 3.5	ug/l	3.5	12	10	9/16/00	8021A	CAH	1
1,1-Dichloroethene	< 6.6	ug/l	6.6	22	10	9/16/00	8021A	CAH	1
cis-1,2-Dichloroethene	14	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
trans-1,2-Dichloroethene	< 4.3	ug/l	4.3	14	10	9/16/00	8021A	CAH	1
1,2-Dichloropropane	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
2,2-Dichloropropane	< 5.9	ug/l	5.9	20	10	9/16/00	8021A	CAH	1
Di-isopropyl ether	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 6.5	ug/l	6.5	22	10	9/16/00	8021A	CAH	1
Ethylbenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
Hexachlorobutadiene	< 6.2	ug/l	6.2	21	10	9/16/00	8021A	CAH	1
Isopropylbenzene	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
p-Isopropyltoluene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
Methylene chloride	< 5.7	ug/l	5.7	19	10	9/16/00	8021A	CAH	1
MTBE	< 4.7	ug/l	4.7	16	10	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809C						**Sample Type** Water			
Sample ID SMW 1						**Sample Date** 9/13/00			
Naphthalene	< 5.3	ug/l	5.3	18	10	9/16/00	8021A	CAH	4
n-Propylbenzene	< 4.2	ug/l	4.2	14	10	9/16/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 6.8	ug/l	6.8	23	10	9/16/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 9.3	ug/l	9.3	31	10	9/16/00	8021A	CAH	1
Tetrachloroethene	330	ug/l	3.4	11	10	9/16/00	8021A	CAH	1
Toluene	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 6	ug/l	6	20	10	9/16/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 4.9	ug/l	4.9	16	10	9/16/00	8021A	CAH	4
1,1,1-Trichloroethane	< 5.4	ug/l	5.4	18	10	9/16/00	8021A	CAH	1
1,1,2-Trichloroethane	< 4.6	ug/l	4.6	15	10	9/16/00	8021A	CAH	1
Trichloroethene	29	ug/l	4.6	15	10	9/16/00	8021A	CAH	1
Trichlorofluoromethane	< 6.2	ug/l	6.2	21	10	9/16/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 6.3	ug/l	6.3	21	10	9/16/00	8021A	CAH	1
Vinyl Chloride	< 8.7	ug/l	8.7	29	10	9/16/00	8021A	CAH	1
m&p-Xylene	< 7.9	ug/l	7.9	26	10	9/16/00	8021A	CAH	1
o-Xylene	< 6.4	ug/l	6.4	21	10	9/16/00	8021A	CAH	1
Lab Code 5030809D						**Sample Type** Water			
Sample ID SMW 2						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 3.9	ug/l	3.9	13	10	9/16/00	8021A	CAH	1
Bromobenzene	< 3.9	ug/l	3.9	13	10	9/16/00	8021A	CAH	1
Bromodichloromethane	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
tert-Butylbenzene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
sec-Butylbenzene	< 4.8	ug/l	4.8	16	10	9/16/00	8021A	CAH	1
n-Butylbenzene	< 4.3	ug/l	4.3	14	10	9/16/00	8021A	CAH	1
Carbon Tetrachloride	< 5.5	ug/l	5.5	18	10	9/16/00	8021A	CAH	1
Chlorobenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
Chloroethane	< 1.5	ug/l	1.5	4.8	10	9/16/00	8021A	CAH	1
Chloroform	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
Chloromethane	< 11	ug/l	11	35	10	9/16/00	8021A	CAH	4
2-Chlorotoluene	< 4.7	ug/l	4.7	15	10	9/16/00	8021A	CAH	1
4-Chlorotoluene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 6.7	ug/l	6.7	22	10	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809D						**Sample Type** Water			
Sample ID SMW 2						**Sample Date** 9/13/00			
Dibromochloromethane	< 5	ug/l	5	17	10	9/16/00	8021A	CAH	1
1,4-Dichlorobenzene	< 4.2	ug/l	4.2	14	10	9/16/00	8021A	CAH	1
1,3-Dichlorobenzene	< 4.5	ug/l	4.5	15	10	9/16/00	8021A	CAH	1
1,2-Dichlorobenzene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
Dichlorodifluoromethane	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	4
1,2-Dichloroethane	< 3.5	ug/l	3.5	12	10	9/16/00	8021A	CAH	1
1,1-Dichloroethane	< 3.5	ug/l	3.5	12	10	9/16/00	8021A	CAH	1
1,1-Dichloroethene	< 6.6	ug/l	6.6	22	10	9/16/00	8021A	CAH	1
cis-1,2-Dichloroethene	540	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
trans-1,2-Dichloroethene	< 4.3	ug/l	4.3	14	10	9/16/00	8021A	CAH	1
1,2-Dichloropropane	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
2,2-Dichloropropane	< 5.9	ug/l	5.9	20	10	9/16/00	8021A	CAH	1
Di-isopropyl ether	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 6.5	ug/l	6.5	22	10	9/16/00	8021A	CAH	1
Ethylbenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
Hexachlorobutadiene	< 6.2	ug/l	6.2	21	10	9/16/00	8021A	CAH	1
Isopropylbenzene	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
p-Isopropyltoluene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
Methylene chloride	< 5.7	ug/l	5.7	19	10	9/16/00	8021A	CAH	1
MTBE	< 4.7	ug/l	4.7	16	10	9/16/00	8021A	CAH	1
Naphthalene	< 5.3	ug/l	5.3	18	10	9/16/00	8021A	CAH	4
n-Propylbenzene	< 4.2	ug/l	4.2	14	10	9/16/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 6.8	ug/l	6.8	23	10	9/16/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 9.3	ug/l	9.3	31	10	9/16/00	8021A	CAH	1
Tetrachloroethene	10 "J"	ug/l	3.4	11	10	9/16/00	8021A	CAH	1
Toluene	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 6	ug/l	6	20	10	9/16/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 4.9	ug/l	4.9	16	10	9/16/00	8021A	CAH	4
1,1,1-Trichloroethane	< 5.4	ug/l	5.4	18	10	9/16/00	8021A	CAH	1
1,1,2-Trichloroethane	< 4.6	ug/l	4.6	15	10	9/16/00	8021A	CAH	1
Trichloroethene	29	ug/l	4.6	15	10	9/16/00	8021A	CAH	1
Trichlorofluoromethane	< 6.2	ug/l	6.2	21	10	9/16/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 6.3	ug/l	6.3	21	10	9/16/00	8021A	CAH	1
Vinyl Chloride	340	ug/l	8.7	29	10	9/16/00	8021A	CAH	1
m&p-Xylene	< 7.9	ug/l	7.9	26	10	9/16/00	8021A	CAH	1
o-Xylene	< 6.4	ug/l	6.4	21	10	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809E						**Sample Type** Water			
Sample ID SMW 3						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 3.9	ug/l	3.9	13	10	9/16/00	8021A	CAH	1
Bromobenzene	< 3.9	ug/l	3.9	13	10	9/16/00	8021A	CAH	1
Bromodichloromethane	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
tert-Butylbenzene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
sec-Butylbenzene	< 4.8	ug/l	4.8	16	10	9/16/00	8021A	CAH	1
n-Butylbenzene	< 4.3	ug/l	4.3	14	10	9/16/00	8021A	CAH	1
Carbon Tetrachloride	< 5.5	ug/l	5.5	18	10	9/16/00	8021A	CAH	1
Chlorobenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
Chloroethane	< 1.5	ug/l	1.5	4.8	10	9/16/00	8021A	CAH	1
Chloroform	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
Chloromethane	< 11	ug/l	11	35	10	9/16/00	8021A	CAH	4
2-Chlorotoluene	< 4.7	ug/l	4.7	15	10	9/16/00	8021A	CAH	1
4-Chlorotoluene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 6.7	ug/l	6.7	22	10	9/16/00	8021A	CAH	1
Dibromochloromethane	< 5	ug/l	5	17	10	9/16/00	8021A	CAH	1
1,4-Dichlorobenzene	< 4.2	ug/l	4.2	14	10	9/16/00	8021A	CAH	1
1,3-Dichlorobenzene	< 4.5	ug/l	4.5	15	10	9/16/00	8021A	CAH	1
1,2-Dichlorobenzene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
Dichlorodifluoromethane	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	4
1,2-Dichloroethane	< 3.5	ug/l	3.5	12	10	9/16/00	8021A	CAH	1
1,1-Dichloroethane	< 3.5	ug/l	3.5	12	10	9/16/00	8021A	CAH	1
1,1-Dichloroethene	< 6.6	ug/l	6.6	22	10	9/16/00	8021A	CAH	1
cis-1,2-Dichloroethene	1000	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
trans-1,2-Dichloroethene	14	ug/l	4.3	14	10	9/16/00	8021A	CAH	1
1,2-Dichloropropane	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
2,2-Dichloropropane	< 5.9	ug/l	5.9	20	10	9/16/00	8021A	CAH	1
Di-isopropyl ether	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 6.5	ug/l	6.5	22	10	9/16/00	8021A	CAH	1
Ethylbenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
Hexachlorobutadiene	< 6.2	ug/l	6.2	21	10	9/16/00	8021A	CAH	1
Isopropylbenzene	< 3.8	ug/l	3.8	13	10	9/16/00	8021A	CAH	1
p-Isopropyltoluene	< 4.4	ug/l	4.4	15	10	9/16/00	8021A	CAH	1
Methylene chloride	< 5.7	ug/l	5.7	19	10	9/16/00	8021A	CAH	1
MTBE	< 4.7	ug/l	4.7	16	10	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809E						**Sample Type** Water			
Sample ID SMW 3						**Sample Date** 9/13/00			
Naphthalene	< 5.3	ug/l	5.3	18	10	9/16/00	8021A	CAH	4
n-Propylbenzene	< 4.2	ug/l	4.2	14	10	9/16/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 6.8	ug/l	6.8	23	10	9/16/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 9.3	ug/l	9.3	31	10	9/16/00	8021A	CAH	1
Tetrachloroethene	< 3.4	ug/l	3.4	11	10	9/16/00	8021A	CAH	1
Toluene	< 3.7	ug/l	3.7	12	10	9/16/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 6	ug/l	6	20	10	9/16/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 4.9	ug/l	4.9	16	10	9/16/00	8021A	CAH	4
1,1,1-Trichloroethane	< 5.4	ug/l	5.4	18	10	9/16/00	8021A	CAH	1
1,1,2-Trichloroethane	< 4.6	ug/l	4.6	15	10	9/16/00	8021A	CAH	1
Trichloroethene	69	ug/l	4.6	15	10	9/16/00	8021A	CAH	1
Trichlorofluoromethane	< 6.2	ug/l	6.2	21	10	9/16/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 4	ug/l	4	13	10	9/16/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 6.3	ug/l	6.3	21	10	9/16/00	8021A	CAH	1
Vinyl Chloride	51	ug/l	8.7	29	10	9/16/00	8021A	CAH	1
m&p-Xylene	< 7.9	ug/l	7.9	26	10	9/16/00	8021A	CAH	1
o-Xylene	< 6.4	ug/l	6.4	21	10	9/16/00	8021A	CAH	1
Lab Code 5030809F						**Sample Type** Water			
Sample ID SMW 4						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromobenzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromodichloromethane	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
tert-Butylbenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
sec-Butylbenzene	< 0.48	ug/l	0.48	1.6	1	9/16/00	8021A	CAH	1
n-Butylbenzene	< 0.43	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
Carbon Tetrachloride	< 0.55	ug/l	0.55	1.8	1	9/16/00	8021A	CAH	1
Chlorobenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Chloroethane	< 0.15	ug/l	0.15	0.48	1	9/16/00	8021A	CAH	1
Chloroform	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
Chloromethane	< 1.1	ug/l	1.1	3.5	1	9/16/00	8021A	CAH	4
2-Chlorotoluene	< 0.47	ug/l	0.47	1.5	1	9/16/00	8021A	CAH	1
4-Chlorotoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 0.67	ug/l	0.67	2.2	1	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809F						**Sample Type** Water			
Sample ID SMW 4						**Sample Date** 9/13/00			
Dibromochloromethane	< 0.5	ug/l	0.5	1.7	1	9/16/00	8021A	CAH	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.5	1	9/16/00	8021A	CAH	1
1,2-Dichlorobenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Dichlorodifluoromethane	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	4
1,2-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethene	< 0.66	ug/l	0.66	2.2	1	9/16/00	8021A	CAH	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
trans-1,2-Dichloroethene	< 0.43	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
1,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
2,2-Dichloropropane	< 0.59	ug/l	0.59	2	1	9/16/00	8021A	CAH	1
Di-isopropyl ether	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 0.65	ug/l	0.65	2.2	1	9/16/00	8021A	CAH	1
Ethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Hexachlorobutadiene	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	1
Isopropylbenzene	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
p-Isopropyltoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Methylene chloride	< 0.57	ug/l	0.57	1.9	1	9/16/00	8021A	CAH	1
MTBE	< 0.47	ug/l	0.47	1.6	1	9/16/00	8021A	CAH	1
Naphthalene	< 0.53	ug/l	0.53	1.8	1	9/16/00	8021A	CAH	4
n-Propylbenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 0.68	ug/l	0.68	2.3	1	9/16/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 0.93	ug/l	0.93	3.1	1	9/16/00	8021A	CAH	1
Tetrachloroethene	50	ug/l	0.34	1.1	1	9/16/00	8021A	CAH	1
Toluene	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 0.6	ug/l	0.6	2	1	9/16/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 0.49	ug/l	0.49	1.6	1	9/16/00	8021A	CAH	4
1,1,1-Trichloroethane	< 0.54	ug/l	0.54	1.8	1	9/16/00	8021A	CAH	1
1,1,2-Trichloroethane	< 0.46	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichloroethene	< 0.46	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichlorofluoromethane	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2.1	1	9/16/00	8021A	CAH	1
Vinyl Chloride	< 0.87	ug/l	0.87	2.9	1	9/16/00	8021A	CAH	1
m&p-Xylene	< 0.79	ug/l	0.79	2.6	1	9/16/00	8021A	CAH	1
o-Xylene	< 0.64	ug/l	0.64	2.1	1	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809G						**Sample Type** Water			
Sample ID SMW 5						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromobenzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromodichloromethane	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
tert-Butylbenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
sec-Butylbenzene	< 0.48	ug/l	0.48	1.6	1	9/16/00	8021A	CAH	1
n-Butylbenzene	< 0.43	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
Carbon Tetrachloride	< 0.55	ug/l	0.55	1.8	1	9/16/00	8021A	CAH	1
Chlorobenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Chloroethane	< 0.15	ug/l	0.15	0.48	1	9/16/00	8021A	CAH	1
Chloroform	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
Chloromethane	< 1.1	ug/l	1.1	3.5	1	9/16/00	8021A	CAH	4
2-Chlorotoluene	< 0.47	ug/l	0.47	1.5	1	9/16/00	8021A	CAH	1
4-Chlorotoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 0.67	ug/l	0.67	2.2	1	9/16/00	8021A	CAH	1
Dibromochloromethane	< 0.5	ug/l	0.5	1.7	1	9/16/00	8021A	CAH	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.5	1	9/16/00	8021A	CAH	1
1,2-Dichlorobenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Dichlorodifluoromethane	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	4
1,2-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethene	< 0.66	ug/l	0.66	2.2	1	9/16/00	8021A	CAH	1
cis-1,2-Dichloroethene	19	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
trans-1,2-Dichloroethene	1.7	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
1,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
2,2-Dichloropropane	< 0.59	ug/l	0.59	2	1	9/16/00	8021A	CAH	1
Di-isopropyl ether	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 0.65	ug/l	0.65	2.2	1	9/16/00	8021A	CAH	1
Ethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Hexachlorobutadiene	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	1
Isopropylbenzene	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
p-Isopropyltoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Methylene chloride	< 0.57	ug/l	0.57	1.9	1	9/16/00	8021A	CAH	1
MTBE	< 0.47	ug/l	0.47	1.6	1	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809G						**Sample Type** Water			
Sample ID SMW 5						**Sample Date** 9/13/00			
Naphthalene	< 0.53	ug/l	0.53	1.8	1	9/16/00	8021A	CAH	4
n-Propylbenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 0.68	ug/l	0.68	2.3	1	9/16/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 0.93	ug/l	0.93	3.1	1	9/16/00	8021A	CAH	1
Tetrachloroethene	< 0.34	ug/l	0.34	1.1	1	9/16/00	8021A	CAH	1
Toluene	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 0.6	ug/l	0.6	2	1	9/16/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 0.49	ug/l	0.49	1.6	1	9/16/00	8021A	CAH	4
1,1,1-Trichloroethane	< 0.54	ug/l	0.54	1.8	1	9/16/00	8021A	CAH	1
1,1,2-Trichloroethane	< 0.46	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichloroethene	< 0.46	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichlorofluoromethane	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2.1	1	9/16/00	8021A	CAH	1
Vinyl Chloride	1.9 "J"	ug/l	0.87	2.9	1	9/16/00	8021A	CAH	1
m&p-Xylene	< 0.79	ug/l	0.79	2.6	1	9/16/00	8021A	CAH	1
o-Xylene	< 0.64	ug/l	0.64	2.1	1	9/16/00	8021A	CAH	1
Lab Code 5030809H						**Sample Type** Water			
Sample ID SMW 6						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromobenzene	< 0.39	ug/l	0.39	1.3	1	9/16/00	8021A	CAH	1
Bromodichloromethane	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
tert-Butylbenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
sec-Butylbenzene	< 0.48	ug/l	0.48	1.6	1	9/16/00	8021A	CAH	1
n-Butylbenzene	< 0.43	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
Carbon Tetrachloride	< 0.55	ug/l	0.55	1.8	1	9/16/00	8021A	CAH	1
Chlorobenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Chloroethane	< 0.15	ug/l	0.15	0.48	1	9/16/00	8021A	CAH	1
Chloroform	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
Chloromethane	< 1.1	ug/l	1.1	3.5	1	9/16/00	8021A	CAH	4
2-Chlorotoluene	< 0.47	ug/l	0.47	1.5	1	9/16/00	8021A	CAH	1
4-Chlorotoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 0.67	ug/l	0.67	2.2	1	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809H						**Sample Type** Water			
Sample ID SMW 6						**Sample Date** 9/13/00			
Dibromochloromethane	< 0.5	ug/l	0.5	1.7	1	9/16/00	8021A	CAH	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.5	1	9/16/00	8021A	CAH	1
1,2-Dichlorobenzene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Dichlorodifluoromethane	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	4
1,2-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/16/00	8021A	CAH	1
1,1-Dichloroethene	< 0.66	ug/l	0.66	2.2	1	9/16/00	8021A	CAH	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
trans-1,2-Dichloroethene	< 0.43	ug/l	0.43	1.4	1	9/16/00	8021A	CAH	1
1,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
2,2-Dichloropropane	< 0.59	ug/l	0.59	2	1	9/16/00	8021A	CAH	1
Di-isopropyl ether	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 0.65	ug/l	0.65	2.2	1	9/16/00	8021A	CAH	1
Ethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
Hexachlorobutadiene	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	1
Isopropylbenzene	< 0.38	ug/l	0.38	1.3	1	9/16/00	8021A	CAH	1
p-Isopropyltoluene	< 0.44	ug/l	0.44	1.5	1	9/16/00	8021A	CAH	1
Methylene chloride	< 0.57	ug/l	0.57	1.9	1	9/16/00	8021A	CAH	1
MTBE	< 0.47	ug/l	0.47	1.6	1	9/16/00	8021A	CAH	1
Naphthalene	< 0.53	ug/l	0.53	1.8	1	9/16/00	8021A	CAH	4
n-Propylbenzene	< 0.42	ug/l	0.42	1.4	1	9/16/00	8021A	CAH	1
1,1,2,2-Tetrachloroethane	< 0.68	ug/l	0.68	2.3	1	9/16/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 0.93	ug/l	0.93	3.1	1	9/16/00	8021A	CAH	1
Tetrachloroethene	< 0.34	ug/l	0.34	1.1	1	9/16/00	8021A	CAH	1
Toluene	< 0.37	ug/l	0.37	1.2	1	9/16/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 0.6	ug/l	0.6	2	1	9/16/00	8021A	CAH	1
1,2,3-Trichlorobenzene	< 0.49	ug/l	0.49	1.6	1	9/16/00	8021A	CAH	4
1,1,1-Trichloroethane	< 0.54	ug/l	0.54	1.8	1	9/16/00	8021A	CAH	1
1,1,2-Trichloroethane	< 0.46	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichloroethene	< 0.46	ug/l	0.46	1.5	1	9/16/00	8021A	CAH	1
Trichlorofluoromethane	< 0.62	ug/l	0.62	2.1	1	9/16/00	8021A	CAH	4
1,2,4-Trimethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/16/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2.1	1	9/16/00	8021A	CAH	1
Vinyl Chloride	< 0.87	ug/l	0.87	2.9	1	9/16/00	8021A	CAH	1
m&p-Xylene	< 0.79	ug/l	0.79	2.6	1	9/16/00	8021A	CAH	1
o-Xylene	< 0.64	ug/l	0.64	2.1	1	9/16/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809I						**Sample Type** Water			
Sample ID TRIP						**Sample Date** 9/13/00			
Organic									
VOC's									
Benzene	< 0.39	ug/l	0.39	1.3	1	9/14/00	8021A	CAH	1
Bromobenzene	< 0.39	ug/l	0.39	1.3	1	9/14/00	8021A	CAH	1
Bromodichloromethane	< 0.38	ug/l	0.38	1.3	1	9/14/00	8021A	CAH	1
tert-Butylbenzene	< 0.44	ug/l	0.44	1.5	1	9/14/00	8021A	CAH	1
sec-Butylbenzene	< 0.48	ug/l	0.48	1.6	1	9/14/00	8021A	CAH	1
n-Butylbenzene	< 0.43	ug/l	0.43	1.4	1	9/14/00	8021A	CAH	4
Carbon Tetrachloride	< 0.55	ug/l	0.55	1.8	1	9/14/00	8021A	CAH	1
Chlorobenzene	< 0.4	ug/l	0.4	1.3	1	9/14/00	8021A	CAH	1
Chloroethane	< 0.15	ug/l	0.15	0.48	1	9/14/00	8021A	CAH	1
Chloroform	< 0.38	ug/l	0.38	1.3	1	9/14/00	8021A	CAH	1
Chloromethane	< 1.1	ug/l	1.1	3.5	1	9/14/00	8021A	CAH	1
2-Chlorotoluene	< 0.47	ug/l	0.47	1.5	1	9/14/00	8021A	CAH	1
4-Chlorotoluene	< 0.44	ug/l	0.44	1.5	1	9/14/00	8021A	CAH	1
1,2-Dibromo-3-chloropropane	< 0.67	ug/l	0.67	2.2	1	9/14/00	8021A	CAH	1
Dibromochloromethane	< 0.5	ug/l	0.5	1.7	1	9/14/00	8021A	CAH	1
1,4-Dichlorobenzene	< 0.42	ug/l	0.42	1.4	1	9/14/00	8021A	CAH	1
1,3-Dichlorobenzene	< 0.45	ug/l	0.45	1.5	1	9/14/00	8021A	CAH	1
1,2-Dichlorobenzene	< 0.44	ug/l	0.44	1.5	1	9/14/00	8021A	CAH	1
Dichlorodifluoromethane	< 0.37	ug/l	0.37	1.2	1	9/14/00	8021A	CAH	4
1,2-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/14/00	8021A	CAH	1
1,1-Dichloroethane	< 0.35	ug/l	0.35	1.2	1	9/14/00	8021A	CAH	2
1,1-Dichloroethene	< 0.66	ug/l	0.66	2.2	1	9/14/00	8021A	CAH	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	9/14/00	8021A	CAH	1
trans-1,2-Dichloroethene	< 0.43	ug/l	0.43	1.4	1	9/14/00	8021A	CAH	2
1,2-Dichloropropane	< 0.4	ug/l	0.4	1.3	1	9/14/00	8021A	CAH	1
2,2-Dichloropropane	< 0.59	ug/l	0.59	2	1	9/14/00	8021A	CAH	1
Di-isopropyl ether	< 0.37	ug/l	0.37	1.2	1	9/14/00	8021A	CAH	1
EDB (1,2-Dibromoethane)	< 0.65	ug/l	0.65	2.2	1	9/14/00	8021A	CAH	1
Ethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/14/00	8021A	CAH	1
Hexachlorobutadiene	< 0.62	ug/l	0.62	2.1	1	9/14/00	8021A	CAH	1
Isopropylbenzene	< 0.38	ug/l	0.38	1.3	1	9/14/00	8021A	CAH	1
p-Isopropyltoluene	< 0.44	ug/l	0.44	1.5	1	9/14/00	8021A	CAH	1
Methylene chloride	< 0.57	ug/l	0.57	1.9	1	9/14/00	8021A	CAH	2
MTBE	< 0.47	ug/l	0.47	1.6	1	9/14/00	8021A	CAH	1

U.S. Analytical Lab

DAVE FRIES
OMNNI ASSOCIATES INC
ONE SYSTEMS DRIVE
APPLETON WI 54914-1654

Project # N1556A99
Project Name MALCHOW PROPERTY
Invoice # E30809

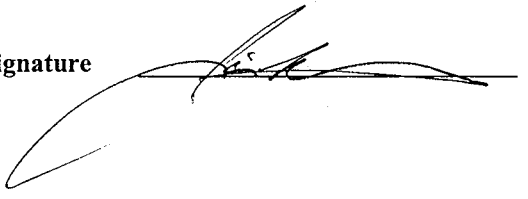
Report Date *19-Sep-00*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5030809I						**Sample Type** Water			
Sample ID TRIP						**Sample Date** 9/13/00			
Naphthalene	< 0.53	ug/l	0.53	1.8	1	9/14/00	8021A	CAH	1
n-Propylbenzene	< 0.42	ug/l	0.42	1.4	1	9/14/00	8021A	CAH	4
1,1,2,2-Tetrachloroethane	< 0.68	ug/l	0.68	2.3	1	9/14/00	8021A	CAH	1
1,3-DCP, Tetrachloroethene	< 0.93	ug/l	0.93	3.1	1	9/14/00	8021A	CAH	1
Tetrachloroethene	< 0.34	ug/l	0.34	1.1	1	9/14/00	8021A	CAH	1
Toluene	< 0.37	ug/l	0.37	1.2	1	9/14/00	8021A	CAH	1
1,2,4-Trichlorobenzene	< 0.6	ug/l	0.6	2	1	9/14/00	8021A	CAH	4
1,2,3-Trichlorobenzene	< 0.49	ug/l	0.49	1.6	1	9/14/00	8021A	CAH	4
1,1,1-Trichloroethane	< 0.54	ug/l	0.54	1.8	1	9/14/00	8021A	CAH	1
1,1,2-Trichloroethane	< 0.46	ug/l	0.46	1.5	1	9/14/00	8021A	CAH	1
Trichloroethene	< 0.46	ug/l	0.46	1.5	1	9/14/00	8021A	CAH	1
Trichlorofluoromethane	< 0.62	ug/l	0.62	2.1	1	9/14/00	8021A	CAH	2
1,2,4-Trimethylbenzene	< 0.4	ug/l	0.4	1.3	1	9/14/00	8021A	CAH	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2.1	1	9/14/00	8021A	CAH	1
Vinyl Chloride	< 0.87	ug/l	0.87	2.9	1	9/14/00	8021A	CAH	1
m&p-Xylene	< 0.79	ug/l	0.79	2.6	1	9/14/00	8021A	CAH	1
o-Xylene	< 0.64	ug/l	0.64	2.1	1	9/14/00	8021A	CAH	1

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

Code	*Comment*
1	All laboratory QC requirements were met for this sample.
2	The duplicate RPD failed to meet acceptable QC limits.
4	The check standard failed to meet acceptable QC limits.

Authorized Signature



CHAIN C CUSTODY RECORD

U.S. Analytical Lab
1090 Kennedy Ave. • Kimberly, WI 54136
(920) 735-8295 • FAX 920-739-1738 • 800-490-4902
LAB@USOIL.COM

Chain # № 20303

Page ____ of ____

Lab I.D. # 5030809

Account No. : Quote No.: 4527

Project #: N1556A99

Sampler: (signature) Dave

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client Temp. of Temp. Blank. 4 °C On Ice: —
Cooler seal intact upon receipt: X Yes ___ No Labcoded By: RMB

Project (Name / Location): Malchow Property, 3225 W. College Ave., Appleton, WI

Reports To: Dave Fries
Company OMNNI
Address One Systems Drive
City State Zip Appleton, WI 54914
Phone 735-6900

Invoice To: D. Malchow
Company C/O D. Fries - OMNNI
Address One Systems Drive
City State Zip Appleton, WI 54914
Phone 735-6900

Sample Handling Request
— Rush Analysis Date Required ____
X Normal Turn Around

Analysis Requested

Lab I.D.	Sample I.D.	Collection Date	Collection Time	No. of Containers Size and Type	Description*	Preservation	DRO (Mod/TPH)	GRO (Mod/TPH)	PVOC (EPA 8021)	BTEX (EPA 8021)	VOC (EPA 8021)	VOC (EPA 8260)	O&G (EPA 413.1)	PAH (EPA 8310)	Pb	Flash Point	Other Analysis						PID/ FID
5030809A	MW2	9/13/00	10:40	2, 40ml	gwater	HCl					X												
B	MW4		11:25								X												
C	SMW1		11:06								X												
D	SMW2		11:17								X												
E	SMW3		10:16								X												
F	SMW4		10:04								X												
G	SMW5		9:24								X												
H	SMW6		9:48								X												
I	trip		8:30								X												

RECEIVED
OMNNI ASSOCIATES

Department Use Only
Split Samples: Offered ? ____ Yes ____ No
Accepted? ____ Yes ____ No
Accepted By: _____

Comments/ Special Instructions
*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", etc.

Department Use Optional for Soil Samples
Disposition of unused portion of sample
Lab Should:
____ Dispose ____ Retain for ___ days
____ Return ____ Other

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Dave	12:00	9/13/00			

Received in Laboratory By: R. Blair Time: 12:00 Date: 9/13/00

In order for U.S. Analytical Lab to return reports in a efficient and accurate manner, please be sure all areas are completely filled out. **BE SURE TO PRINT.**

1.) Quote Number
2.) All addresses and phone numbers are complete and accurate
3.) All names are completely written out
4.) All sample information complete
    a.) Sample I.D.
    b.) Sample date
    c.) Sample matrix
    d.) Analysis requested

OMNNI
ASSOCIATES

ENGINEERING
ARCHITECTURE
ENVIRONMENTAL

OMNNI ASSOCIATES, INC.
ONE SYSTEMS DRIVE
APPLETON, WI 54914
920-735-6900
FAX 920-830-6100