ARCADIS GERAGHTY & MILLER

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ENVIRONMENTAL

Aubrey R. Fowler
Fowler & Wiederhoeft
702 North Blackhawk Avenue
Madison, Wisconsin 53705-5326

Dr. Edward R. Hommel
1625 North Golf Glen #E
Madison, Wisconsin 53704

Subject:
Results of Supplemental Site Investigation, Middleton Cleaners, 6617-6619 University Avenue, Middleton, Wisconsin
ARCADIS Geraghty & Miller Project No. WI0008110001

Milwaukee:
25 October 2000

Contact:
Jennine Cota

Extension:
414 277 6203

Dear Dr. Hommel and Mr. Fowler:

In accordance with the June 27, 2000 work plan prepared by ARCADIS Geraghty & Miller, Inc. on behalf of Northern Properties, Inc., additional soil and groundwater investigation activities have been completed at the above-referenced site. The activities included the installation and development of three groundwater monitoring wells and four piezometers, the collection and analysis of soil samples, and low-flow sampling of the new and existing monitoring wells and piezometers. A summary of the sampling procedures and analytical results are presented below.

Site Background

Middleton Cleaners is located within a 3-tenant strip mall. The property was reportedly used for agricultural purposes up until the 1950s. The first development of the property included a dry cleaners (Hi-Way Dry Cleaners). This cleaners reportedly used stoddard solvent as the dry cleaning solvent, stored in four underground storage tanks (USTs), from the 1950s to the 1980s. The cleaning equipment was stored in a small shed south of the main building on the property, and the USTs were located adjacent to the shed. From the 1980s to the present, tetrachloroethene (PCE) has been used as the cleaning solvent. The PCE USTs were removed from the site in the early 1980s.

An initial site investigation was completed in 1996. Eight Geoprobe borings were drilled in the vicinity of the shed and former UST locations to collect soil samples for laboratory analysis. Eight additional Geoprobe borings were advanced by Eder Associates to collect soil and groundwater samples. Based on the initial analytical results, soil and groundwater at the site had been impacted by stoddard solvent and PCE. Additional investigation activities were completed by Strand Associates in

1999. Nine Geoprobe borings, four monitoring wells, and one piezometer were advanced at the site.

Based on the investigation results, soils at the site consist of sands to a depth of at least 80 feet below land surface (ft bls). Groundwater is located at a depth of approximately 50 ft bls. Soil samples collected during the initial investigation contained PCE at concentrations up to 239 milligrams per kilogram (mg/kg); PCE was detected in collected groundwater samples at concentrations up to 7,800 micrograms per liter (µg/L).

Supplemental Investigation Activities

Three new monitoring wells (AGMW-1, AGMW-2, and AGMW-4) and four new piezometers (AGPZ-1, AGPZ-2, AGPZ-3, and AGPZ-4) were installed on the site by Boart Longyear (Schofield, Wisconsin) on July 18-21, 2000, in accordance with Chapter NR 141 of the WAC. The monitoring wells were installed to evaluate the degree and extent of impacts, and assess geologic and hydrogeologic conditions. Figure 1 shows the locations of the new monitoring wells.

Soil Sampling

Soil samples were collected from Monitoring Well AGMW-1 and Piezometers AGPZ-1, AGPZ-2, AGPZ-3, and AGPZ-4. Soil samples were field-screened for the presence of total ionizable volatile organic vapors using a Foxboro Century 108 organic vapor analyzer (OVA), which was calibrated in accordance with the manufacturer's specifications prior to use. The results of the field screening measurements are presented on the boring logs included in Appendix A.

Each soil sample which was selected for the analysis of volatile organic compounds (VOCs) and total organic carbon (TOC) was placed into sterilized laboratory-supplied containers, immediately placed on ice in a cooler and shipped, via lab courier, to EnChem, Inc. (Madison, Wisconsin) using standard chain-of-custody procedures.

Monitoring Well/Piezometer Installation

The groundwater monitoring wells, constructed of 2-inch, schedule 40 polyvinyl chloride (PVC), are fitted with a 15-foot length of factory cut 0.010-inch well screen positioned from 40 to 55 ft bls at the location of Monitoring Wells AGMW-2 and AGMW-4, and from 55 to 70 ft bls at the location of AGMW-1. Each piezometer is constructed of 2-inch, schedule 40 PVC, fitted with a 5-foot length of factory cut 0.010-inch well screen positioned from approximately 80 to 85 ft bls. Each monitoring well and piezometer is equipped with a flush-mount protective casing and a water-tight lockable well cap to ensure the integrity of the surface seal. Monitoring well construction logs are included in Appendix B.

Monitoring Well/Piezometer Development

Each of the new monitoring wells/piezometers was developed following installation to remove sediment and minimize the turbidity of groundwater samples. Well development activities were conducted in accordance with Chapter NR 141 of the Wisconsin Administrative Code (WAC). Monitoring well development forms are included in Appendix C.

Groundwater Sampling

Groundwater samples were collected from each of the new monitoring and pre-existing wells/piezometers on July 24 through 28, 2000. Monitoring well sampling activities were performed using low-flow sampling techniques. Groundwater samples were collected from each well, placed in new laboratory-supplied containers, placed on ice, and shipped via laboratory courier to EnChem, Inc. for analysis of VOCs, and natural attenuation indicator parameters, including TOC, ethene, ethane, and methane. A downhole monitoring probe was used to measure field parameters including pH, temperature, dissolved oxygen (DO), oxidation-reduction potential (ORP), and specific conductance.

Results of Analytical Results

Soil Analysis

The results of the analytical testing performed on the soil samples collected from Monitoring Well AGMW-1 and Piezometers AGPZ-1, AGPZ-2 and AGPZ-4 did not indicate the presence of VOCs above the laboratory method detection limit. PCE was detected at the location of Piezometer AGPZ-3 at a depth of 10-15 ft bls at a concentration of 33 micrograms per kilogram (µg/kg) and at a concentration of 27 µg/kg at a depth of 25-30 ft bls. However, the concentrations of PCE detected in AGPZ-3 are not quantifiable by the laboratory because the value is between the limit of detection and the limit of quantitation. No other VOCs were detected in the soil samples. Table 1 and Figure 2 present the detected soil concentrations at the site.

Groundwater Analysis

Review of the July 24 through 28, 2000 analytical results indicates that low to non-detectable concentrations of VOCs were present in Monitoring Well AGMW-1 and Piezometers AGPZ-1. Further, the concentrations of chlorinated compounds detected in the groundwater samples collected from the pre-existing monitoring wells were less than the concentrations detected in August 1999. Analytical results for Piezometers PZ-1, AGPZ-2, and AGPZ-4 indicate the presence of PCE in exceedance of the Groundwater Quality Enforcement Standard (ES) as established in Chapter NR 140 of the WAC. Groundwater samples collected from Monitoring

Wells MW-1, MW-2, MW-3, MW-4, AGMW-2, AGMW-4, and Piezometer AGPZ-3 indicate the presence of PCE and trichlorethylene (TCE) in exceedance of the Groundwater Quality ES and/or Preventive Action Limit (PAL). In addition, analytical results for Monitoring Well MW-4 indicate the presence of cis-1,2-dichloroethylene (cis-1,2-DCE) at a concentration in exceedance of the Groundwater Quality PAL. The groundwater analytical results are presented in Tables 2 and on Figure 3.

Groundwater Elevation Data

Table 3 presents a summary of water levels measured in the groundwater monitoring wells on July 27, 2000. A groundwater elevation map was generated from the data, and is presented as Figure 4. Review of Figure 4 indicates that the direction of groundwater flow is generally east to southeast, which is consistent with previous groundwater flow patterns.

Closing

ARCADIS Geraghty & Miller appreciates the opportunity to be of service to you on this project. We are looking forward to meeting with you on October 31, 2000 to discuss the results of the supplemental investigation activities. Should you have any questions relating to the information presented herein in advance of the meeting, please feel free to call on us at your convenience.

Sincerely,

ARCADIS Geraghty & Miller, Inc.

Jennine L. Cota
Environmental Engineer

James F. Drought
Principal Scientist/Hydrogeologist

Copies:
Donald P. Gallo – Reinhart, Boerner, VanDeuren, Norris & Rieselbach, S.C.
Michael R. Schmoller – WDNR

Table 1. Summary of Soil Analytical Results, Middleton Cleaners, Middleton, Wisconsin.

Sample I.D.	AGMW-1	AGPZ-1		AGPZ-2			
Sample Depth	60-62'	40-45'	60-65'	10-15'	20-25'	30-35'	75-80'
Sample Date	7/20/00	7/18/00	7/18/00	7/19/00	7/19/00	7/19/00	7/19/00
VOCs							
Tetrachloroethylene	<25	<25	NA	<25	<25	<25	NA
Miscellaneous							
TOC as NPOC (mg/kg)	NA	NA	9,000	NA	NA	NA	21,000

Only detected concentrations are presented.
Results are reported in micrograms per kilogram (µg/kg), unless otherwise indicated.

WDNR	Wisconsin Department of Natural Resources.
RCL	Residual contaminant level.
NA	Not analyzed.
NE	Not established.
Q	Value is between the limit of detection and the limit of quantitation.
TOC as NPOC	Total organic carbon as non-purgable organic carbon.
mg/kg	Milligrams per kilogram.
<	Constituent not detected above the laboratory method detection limit which is the value following the "<" sign.

Table 1. Summary of Soil Analytical Results, Middleton Cleaners, Middleton, Wisconsin.

Sample I.D.	AGPZ-3				AGPZ-4			WDNR
Sample Depth	10-15'	25-30'	35-40'	65-70'	40-45'	50-55'	55-60'	RCL
Sample Date	7/19/00	7/19/00	7/20/00	7/20/00	7/21/00	7/21/00	7/21/00	
VOCs								
Tetrachloroethylene	33 Q	27 Q	<25	NA	<25	<25	NA	NE
Misc.								
TOC as NPOC (mg/kg)	NA	NA	NA	35,000	NA	NA	18,000	NE

Only detected concentrations are presented.
Results are reported in micrograms per kilogram (µg/kg), unless otherwise indicated.

WDNR	Wisconsin Department of Natural Resources.
RCL	Residual contaminant level.
NA	Not analyzed.
NE	Not established.
Q	Value is between the limit of detection and the limit of quantitation.
TOC as NPOC	Total organic carbon as non-purgable organic carbon.
mg/kg	Milligrams per kilogram.
<	Constituent not detected above the laboratory method detection limit which is the value following the "<" sign.

Table 2. Summary of Groundwater Analytical Results, Middleton Cleaners, Middleton, Wisconsin.

Sample I.D. Sample Date	MW-1 7/27/00	MW-2 7/25/00	MW-3 7/25/00	MW-4 7/27/00	AGMW-1 7/24/00	AGMW-2 7/26/00	AGMW-4 7/28/00	PZ-1 7/27/00	AGPZ-1 7/25/00	AGPZ-2 7/26/00
VOCs										
1,1,1-Trichloroethane	<2.1	3.9	<0.21	<4.2	<0.21	4.2	<0.21	<0.21	<0.21	<0.21
Tetrachloroethylene	830	150	120	1800	<0.85	510	130	150	<0.85	36
Trichloroethylene	17	7.5	3.5	31	<0.32	11	0.52 Q	<0.32	<0.32	<0.32
cis-1,2-Dichloroethylene	6.3 Q	3.8	0.42 Q	17	<0.27	5.5	<0.27	<0.27	<0.27	<0.27
Vinyl chloride	<1.9	<0.19	<0.19	<3.8	<0.19	<0.95	<0.19	<0.19	<0.19	<0.19
Methylene chloride	<3.6	<0.36	<0.36	<7.2	<0.36	2.8 Q	<0.36	<0.36	<0.36	<0.36
Methyl-tert-butyl-ether	<2.0	0.21 Q	<0.20	<4.0	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20
Permanent Gases										
Ethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
TOC as NPOC (mg/L)	1.7	2.8 A	3.9 A	1.8	2.9 A	1.9	1.4	1.1	4.0 A	1.4
Field Parameters										
DO (mg/L)	4.92	3.9	7.28	5.68	7.32	4.73	7.94	7.07	1.84	6.68
ORP (mV)	282.7	172	212.9	238.2	374.9	252.8	238	273	-13.7	80.2
pH	6.76	6.62	6.83	6.75	6.88	6.87	7.13	7.01	6.98	7.09
Temperature (°C)	29.1	28.29	24.28	21.78	25.57	28.32	22.05	25.5	22.03	20.84
Specific Conductance (µs/cm)	1076	1645	1186	1705	689	1169	819	1154	814	944

Results are in micrograms per liter (µg/L), unless otherwise indicated.

VOCs	Volatile organic compounds.
WDNR	Wisconsin Department of Natural Resources.
Q	Value is between the limit of detection and the limit of quantitation.
A	Analyte detected in blank.
	Value exceeds the WDNR Enforcement Standard (ES).
	Value exceeds the WDNR Preventive Action Limit (PAL).
TOC as NPOC	Total organic carbon as non-purgeable organic carbon.

mg/L	Milligrams per liter.
NE	Not established.
°C	Degrees Celsius.
mV	Millivolts.
µS/cm	MicroSiemens per centimeter.
DO	Dissolved Oxygen.
ORP	Oxidation Reduction Potential.

Table 2. Summary of Groundwater Analytical Results, Middleton Cleaners, Middleton, Wisconsin.

Sample I.D. Sample Date	AGPZ-3 7/27/00	AGPZ-4 7/26/00	WDNR ES	WDNR PAL
VOCs				
1,1,1-Trichloroethane	<0.42	<0.21	200	40
Tetrachloroethylene	260	18	5	0.5
Trichloroethylene	1.4 Q	<0.32	5	0.5
cis-1,2-Dichloroethylene	<0.54	<0.27	70	7
Vinyl chloride	<0.38	<0.19	0.2	0.02
Methylene chloride	<0.72	<0.36	5	0.5
Methyl-tert-butyl-ether	<0.40	<0.20	60	12
Permanent Gases				
Ethane	<10	<10	NE	NE
Ethene	<10	<10	NE	NE
Methane	<10	<10	NE	NE
TOC as NPOC (mg/L)	4.1	3.2 A	NE	NE
Field Parameters				
DO (mg/L)	1.89	5.69	NE	NE
ORP (mV)	-19.7	-31.9	NE	NE
pH	7.04	7.26	NE	NE
Temperature (°C)	30.71	26.04	NE	NE
Specific Conductance (µs/cm)	865	1046	NE	NE

Results are in micrograms per liter (µg/L), unless otherwise indicated.

VOCs — Volatile organic compounds.

WDNR — Wisconsin Department of Natural Resources

Q — Value is between the limit of detection and the limit of quantitation.

A — Analyte detected in blank.

Value exceeds the WDNR Enforcement Standard (ES).

Value exceeds the WDNR Preventive Action Limit (PAL).

TOC as NPOC — Total organic carbon as non-purgeable organic carbon.

mg/L — Milligrams per liter.

NE — Not established.

°C — Degrees Celsius.

mV — Millivolts.

µS/cm — MicroSiemens per centimeter.

DO — Dissolved Oxygen.

ORP — Oxidation Reduction Potential.

Table 3. Groundwater Elevations, Middleton Cleaners, Middleton, Wisconsin.

Well I.D.	Ground Elevation (ft)	TOC Elevation (ft)	Depth to Water (ft)	Groundwater Elevations 7/27/00
AGMW-1	939.83	939.33	58.33	881.00
AGPZ-1	924.64	924.34	46.05	878.29
AGMW-2	924.48	923.95	45.57	878.38
AGPZ-2	924.40	923.95	45.57	878.38
AGPZ-3	ND	ND	45.38	ND
AGMW-4	922.94	922.68	42.90	879.78
AGPZ-4	922.99	922.28	42.73	879.55
MW-1	924.40	924.05	44.65	879.40
MW-2	925.17	924.71	46.17	878.54
MW-3	927.00	926.57	46.84	879.73
MW-4	924.20	923.62	44.05	879.57
PZ-1	924.36	924.20	44.83	879.37

ND Not determined.
TOC Top of casing.
ft Feet.

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N

0 15 30 60

APPROXIMATE SCALE IN FEET

AGMW-4
AGPZ-4

AGMW-1

RESIDENTIAL

ELMWOOD AVENUE

PARKING

PARKING

MW-4

RETAIL STORES/
BUSINESSES

PZ-1
MW-1

TOBACCO
OUTLET

AGPZ-2
AGMW-2

ALLEY

BOILER
ROOM

DRY
CLEANING
EQUIPMENT

MIDDLETON
CLEANERS

PARKING

UNIVERSITY AVENUE

SHED

MW-3

STORAGE

AGPZ-3

PAPA
JOHN'S

MW-2 AGPZ-1

PARKING

CHURCH

LEGEND

- MONITORING WELL LOCATION (Installed by Strand Associates in July 1999)
- PIEZOMETER LOCATION (Installed by Strand Associates in July 1999)
- MONITORING WELL LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)
- PIEZOMETER LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)
- UTILITY POLE

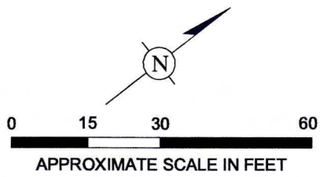
ARCADIS GERAGHTY & MILLER

SITE LAYOUT

MIDDLETON CLEANERS
MIDDLETON, WISCONSIN

FIGURE
1

DRAFTER: ELS | APPROVED: | CHECKED: DB | DRAWING: SOIL_700.AI | FILE NO.: GRAPHICS | PN: NORTHPROP\WI0811\MDLTN_INV | DWG DATE: 25OCT00



AGMW-4
AGPZ-4

AGPZ-4		
40-45'	PCE	<25
50-55'	PCE	<25
55-60'	TOC	18,000

AGMW-1

AGMW-1		
60-62'	PCE	<25

ELMWOOD AVENUE

RESIDENTIAL

PARKING

PARKING

MW-4

RETAIL STORES/
BUSINESSES

AGPZ-2		
10-15'	PCE	<25
20-25'	PCE	<25
30-35'	PCE	<25
75-80'	TOC	21,000

AGPZ-2
AGMW-2

PZ-1
MW-1

TOBACCO
OUTLET

ALLEY

BOILER
ROOM

DRY
CLEANING
EQUIPMENT

MIDDLETON
CLEANERS

PARKING

UNIVERSITY AVENUE

STORAGE

SHED

MW-3

PAPA
JOHN'S

AGPZ-3

AGPZ-3		
10-15'	PCE	33 Q
25-30'	PCE	27 Q
35-40'	PCE	<25
65-70'	TOC	35,000

AGPZ-1		
40-45'	PCE	<25
60-65'	TOC	9,000

MW-2
AGPZ-1

PARKING

CHURCH

NOTE:

1. Soil samples collected for TOC analysis were not analyzed for VOCs.
2. PCE concentrations in micrograms per kilogram (µg/kg)
3. TOC concentrations in milligrams per kilogram (mg/kg).
4. Only detected VOC constituents are presented.

LEGEND

- ● **MONITORING WELL LOCATION (Installed by Strand Associates in July 1999)**
- ⊙ **PIEZOMETER LOCATION (Installed by Strand Associates in July 1999)**
- ● **MONITORING WELL LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)**
- ⊙ **PIEZOMETER LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)**
- ○ **UTILITY POLE**
- 10-15' **SAMPLING INTERVAL (Feet)**
- PCE **TETRACHLOROETHYLENE**
- TOC **TOTAL ORGANIC CARBON**
- Q **VALUE BETWEEN THE LIMIT OF DETECTION AND LIMIT OF QUANTITATION**

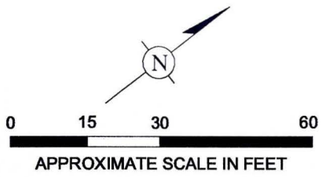
ARCADIS
GERAGHTY & MILLER

SOIL ANALYTICAL RESULTS JULY 2000

MIDDLETON CLEANERS
MIDDLETON, WISCONSIN

FIGURE
2

DRAFTER: ELS | APPROVED: | CHECKED: DB | DRAWING: GW_RESULTS.AI | FILE NO.: GRAPHICS | PN: NORTHPROP\WI0811\MDLTN_INV | DWG DATE: 25OCT00



AGMW-4 (40'-55')

	7/00
VOCs	
PCE	130
TCE	0.52 Q
Permanent Gases	ND

AGMW-4
AGPZ-4

AGPZ-4 (80'-85')

	7/00
VOCs	
PCE	18
Permanent Gases	ND

PARKING

PARKING

MW-4 (44.5'-54.5')

	8/99	7/00
VOCs		
PCE	7,800	1,800
TCE	53	31
cis-1,2-DCE	20 Q	17
Permanent Gases	NA	ND

MW-4

AGMW-1 (55'-70')

	7/00
VOCs	ND
Permanent Gases	ND

AGMW-1

ELMWOOD AVENUE

RESIDENTIAL

MW-1 (44-5'-54.5')

	8/99	7/00
VOCs		
PCE	2,300	830
TCE	18	17
cis-1,2-DCE	8.9 Q	6.3 Q
Permanent Gases	NA	ND

RETAIL STORES/
BUSINESSES

AGPZ-2 (80'-85')

	7/00
VOCs	
PCE	36
Permanent Gases	ND

AGPZ-2
AGMW-2

PZ-1 (74'-79')

	8/99	7/00
VOCs		
PCE	4.7	150
Permanent Gases	NA	ND

PZ-1
MW-1

TOBACCO
OUTLET

AGMW-2 (40'-55')

	7/00
VOCs	
1,1,1-TCA	4.2
PCE	510
TCE	11
cis-1,2-DCE	5.5
MC	2.8 Q
Permanent Gases	ND

ALLEY

BOILER
ROOM

DRY
CLEANING
EQUIPMENT

MIDDLETON
CLEANERS

UNIVERSITY AVENUE

PARKING

STORAGE

MW-2 (44.8'-54.8')

	8/99	7/00
VOCs		
1,1,1-TCA	5.9	3.9
PCE	440	150
TCE	8.2	7.5
cis-1,2-DCE	6.9	3.8
MTBE	<0.31	0.21 Q
Permanent Gases	NA	ND

SHED

MW-3

AGPZ-3

PAPA
JOHN'S

AGPZ-1 (80'-85')

	7/00
VOCs	ND
Permanent Gases	ND

MW-3 (45.5'-55.5')

	8/99	7/00
VOCs		
PCE	300	120
TCE	5.2	3.5
cis-1,2-DCE	0.67 Q	0.42 Q
Permanent Gases	NA	ND

AGPZ-3 (80.5'-85.5')

	7/00
VOCs	
PCE	260
TCE	1.4 Q
Permanent Gases	ND

MW-2
AGPZ-1

PARKING

CHURCH

NOTE:

1. Constituents presented in micrograms per liter (µg/L).
2. Only detected constituents are presented.

LEGEND

- ● MONITORING WELL LOCATION (Installed by Strand Associates in July 1999)
- ⊙ PIEZOMETER LOCATION (Installed by Strand Associates in July 1999)
- ● MONITORING WELL LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)
- ⊙ PIEZOMETER LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)
- ○ UTILITY POLE

(55'-70')	SCREENED INTERVAL IN FEET BELOW LAND SURFACE
1,1,1-TCA	1,1,1-TRICHLOROETHANE
PCE	TETRACHLOROETHYLENE
TCE	TRICHLOROETHYLENE
cis-1,2-DCE	cis-1,2-DICHLOROETHYLENE
MC	METHYLENE CHLORIDE
MTBE	METHYL-TERT-BUTYL-ETHER
VOC	VOLATILE ORGANIC COMPOUNDS
ND	NOT DETECTED
NA	NOT ANALYZED
Q	VALUE BETWEEN THE LIMIT OF DETECTION AND LIMIT OF QUANTITATION
<	THE CONSTITUENT WAS NOT DETECTED ABOVE THE LABORATORY METHOD DETECTION LIMIT, WHICH IS THE VALUE FOLLOWING THE "<" SIGN

ARCADIS GERAGHTY & MILLER

GROUNDWATER ANALYTICAL RESULTS

MIDDLETON CLEANERS
MIDDLETON, WISCONSIN

FIGURE
3

DRAFTER: ELS | APPROVED: | CHECKED: DB | DRAWING: SHALLOW_72700.AI | FILE NO.: GRAPHICS | PN: NORTHPROP\WI0811\MDLTN_INV | DWG DATE: 25OCT00

N

0 15 30 60

APPROXIMATE SCALE IN FEET

880.00

880.50

AGMW-1 (881.00)

RESIDENTIAL

ELMWOOD AVENUE

AGMW-4 (879.78)

AGPZ-4

879.50

PARKING

PARKING

879.00

MW-4 (879.57)

RETAIL STORES/ BUSINESSES

878.50

PZ-1

MW-1 (879.40)

TOBACCO OUTLET

AGPZ-2

AGMW-2 (878.38)

ALLEY

BOILER ROOM

DRY CLEANING EQUIPMENT

MIDDLETON CLEANERS

PARKING

UNIVERSITY AVENUE

STORAGE

AGPZ-3

PAPA JOHN'S

MW-2 (878.54)

AGPZ-1

PARKING

SHED

MW-3 (879.73)

CHURCH

LEGEND

- MONITORING WELL LOCATION (Installed by Strand Associates in July 1999)
- PIEZOMETER LOCATION (Installed by Strand Associates in July 1999)
- MONITORING WELL LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)
- PIEZOMETER LOCATION (Installed by ARCADIS Geraghty & Miller in July 2000)
- UTILITY POLE
- 879 GROUNDWATER CONTOUR
- (879.37) GROUNDWATER ELEVATION
- GENERALIZED DIRECTION OF GROUNDWATER FLOW

ARCADIS GERAGHTY & MILLER

SHALLOW GROUNDWATER CONTOUR ELEVATIONS JULY 27, 2000

MIDDLETON CLEANERS
MIDDLETON, WISCONSIN

FIGURE

4

Appendix A

Boring Logs

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

FILE COPY

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
MIDDLETON CLEANERS		**AGMW-1**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
BOART LONGYEAR **DAVE AND MARVIN**	07 / 20 / 00 (MM DD YY)	07 / 20 / 00 (MM DD YY)	**HOLLOW STEM AUGER**

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		AGMW-1	_____ Feet MSL	_____ Feet MSL	**8.25** inches

Boring Location
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
DANE	**13**	**MIDDLETON**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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		5.0 to 7.0	**0-0.4: Sand, strong brown (7.5 YR 5/6), fine grain, some medium sand, some fines, loose, moist, no odor.** **0.4-0.6: Sand/Silt/Clay, dark yellowish brown (10 YR 3/6), sand fine grain, somewhat cohesive to loose, moist, no odor.** **0.6-1.7: Sand, brownish yellow (10 YR 6/6) to very pale brown (10 YR 7/4), medium grain, some fine sand, trace fine gravel, loose, moist, no odor.**				4						
2	13		10.0 to 12.0	**Sand, very pale brown (10 YR**				3.5						

1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0

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

Signature David M Bu

Firm **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources
Boring Number **AGMW-1**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A
Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Sample: Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
				7/4), as above.										
			13.0											
			14.0											
3	18		15.0	15.0 to 17.0 0-0.8: Sand, color as above, medium to fine grain, loose, moist, no odor.				3.5						
			16.0	0.8-1.5: Sand, color as above, fine grain, loose, moist, no odor.										
			17.0											
			18.0											
			19.0											
4	18		20.0	20.0 to 22.0 0-0.8: Sand, color as above, fine grain, loose, moist, no odor.				3						
			21.0											
			22.0											
			23.0											
			24.0											
5	24		25.0	25.0 to 27.0 0-1.0: Sand, brownish yellow (10 YR 6/8), fine grain, some to trace medium sand, trace fine gravel, loose, moist, no odor.				4.5						
			26.0											
			27.0	1.0-2.0: Sand, very pale brown (10 YR 7/4), medium grain, some to trace fine gravel, some to trace coarse sand, some to trace fine sand, coarse layer 1.6-1.8, loose, moist, no odor.										
			28.0											
			29.0											
			30.0											
6	20		30.0	30.0 to 32.0 0-0.3: Sand, brownish yellow (10 YR 6/6), medium to fine grain, loose, moist, no odor.				3.5						
			31.0											
			32.0	0.3-1.8: Sand, very pale										

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGMW-1**

SOIL BORING LOG INFORMATION SUPPLEMENT
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Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			33.0	brown (10 YR 7/4), fine grain, some silt, loose, moist, no odor.										
			34.0											
7	19		35.0	35.0 to 37.0 Sand, brownish yellow (10 YR 6/6) to very pale brown (10 YR 7/4), medium to fine grain, trace fine gravel, loose, moist, no odor.				4						
			36.0											
			37.0											
			38.0											
			39.0											
8	24		40.0	40.0 to 42.0 Sand, very pale brown (10 YR 7/4), medium to fine grain, loose, mosit, no odor.				4						
			41.0											
			42.0											
			43.0											
			44.0											
9	20		45.0	45.0 to 47.0 0-1.5: Sand, color as above, fine grain, some to trace medium sand, trace fine gravel, 1" silt layers at 0.7 and 1.3 (light yellowish brown, 10 YR 6/4), loose, moist, no odor.				5.5						
			46.0											
			47.0	1.5-1.8: Sand with fines, light yellowish brown (10 YR 6/4), sand fine grain, somewhat cohesive to loose, moist, no odor.										
			48.0											
			49.0											
10	19		50.0	50.0 to 52.0 Sand, color as above, fine grain, silty 0-0.4, loose, moist, no odor.				4						
			51.0											
			52.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGMW-1**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
11	25		55.0	**55.0 to 57.0 Sand, color as above, fine gravel, loose, moist, no odor.**				4.5						
			57.0											
12	15		60.0	**60.0 to 62.0 Sand and silt, light yellowish brown (10 YR 6/4), fine grain, somewhat cohesive to loose, wet, no odor.**				6						
			62.0											
12	19		65.0	**65.0 to 67.0 Sand, color as above, fine grain, trace fine gravel, trace medium sand, trace silt, loose, wet, no odor.**				4.5						
			67.0											
			68.0	**EOB @ 71'.**										

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

FILE COPY

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
MIDDLETON CLEANERS		**AGPZ-1**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
BOART LONGYEAR **MIKE AND DAN**	**07 / 18 / 00** MM DD YY	**07 / 18 / 00** MM DD YY	**ROTOSONIC**

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
___ ___ ___	___ ___ ___ ___ ___ ___	**AGPZ-1**	_____ Feet MSL	_____ Feet MSL	**6.00** inches

Boring Location
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
DANE	**13**	**MIDDLETON**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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	48		1.0 2.0 3.0 4.0 5.0	**0.0 to 5.0** **0-2.5: Silty clay, very dark brown (10 YR 2/2), some fine sand 0-1.0, trace fine gravel 0-1.0, trace fine sand 1.0-2.5, soft, somewhat cohesive, moist, no odor.** **2.5-4.0: Silt, dark yellow brown (10 YR 4/4), some clay, trace fine sand, somewhat cohesive, moist, no odor.**				5.5						
2	48		6.0 7.0 8.0 9.0 10.0 11.0 12.0	**5.0 to 15.0** **0-1.3: Clayey silt, color as above, cohesive, moist, no odor (note: significant amount of bentonite mixed in with sample from drilling activities).** **1.3-2.8: Sand, dark yellowish brown (10 YR 3/6), fine grain, trace fine gravel, clayey 1.3-2.2, somewhat cohesive to loose, moist, no odor.** **2.8-4.0: Sand, yellowish brown (10 YR 5/6) to light yellowish brown (2.5 Y 6/4), loose, moist to dry, no odor.**				20						

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

Signature David M Bo

Firm **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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State of Wisconsin
Department of Natural Resources
Boring Number AGPZ-1

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			13.0											
			14.0											
3	24		15.0	**15.0 to 25.0** **Sand, very pale brown (10 YR 7/3), fine grain, loose, dry, no odor.**				11						
			16.0											
			17.0											
			18.0											
			19.0											
			20.0											
			21.0											
			22.0											
			23.0											
			24.0											
4	27		25.0	**25.0 to 30.0** **0-1.0: Sand, light yellowish brown (2.5 Y 6/3), fine grain, clumpy texture, loose, dry, no odor.** **1.0-2.3: Sand, pale yellow (2.5 Y 7/4), fine grain, loose, moist to dry, no odor.** *** Note: Highest OVA reading from 0-1.0.**				75					
			26.0											
			27.0											
			28.0											
			29.0											
5	15		30.0	**30.0 to 35.0** **Sand, as above.**				27						
			31.0											
			32.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-1**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A
Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			33.0											
			34.0											
6	15		35.0	**35.0 to 40.0 Sand, as above.**				11						
			36.0											
			37.0											
			38.0											
			39.0											
7	25		40.0	**40.0 to 45.0 0-0.8: Sand, pale yellow (2.5 Y 8/2), fine grain, clumpy texture, loose, dry, no odor.**				18						
			41.0											
			42.0	**0.8-2.1: Sand, pale yellow (2.5 Y 7/4), fine grain, loose, moist to dry, no odor.**										
			43.0											
			44.0											
8	78		45.0	**45.0 to 55.0 Sand, light yellowish brown (10 YR 6/4) to yellowish brown (10 YR 5/6), fine grain, trace clay 6.0-6.5, loose, wet, no odor.**				40						
			46.0											
			47.0	*** Note: highest OVA reading from 0-2.5.**										
			48.0											
			49.0											
			50.0											
			51.0											
			52.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-1**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
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Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			53.0											
			54.0											
9	96		55.0	**55.0 to 65.0** **Sand, color as above, fine grain, trace medium sand, loose, wet, no odor.**				10.5						
			56.0											
			57.0											
			58.0											
			59.0											
			60.0											
			61.0											
			62.0											
			63.0											
			64.0											
10	102		65.0	**65.0 to 75.0** **0-5.0: Sand, brownish yellow (10 YR 6/6), medium to fine grain, loose, wet, no odor.** **5.0-8.5: Sand, light yellowish brown (10 YR 6/4), fine grain, some fines 5.0-6.7, somewhat cohesive to loose, wet, no odor.**				7						
			66.0											
			67.0											
			68.0											
			69.0											
			70.0											
			71.0											
			72.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-1**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
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Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
11	102		75.0	**75.0 to 85.0 0-1.0: Sand, color as above, fine grain, some silt, loose, wet, no odor.**				10						
				1.0-8.5: Sand, brownish yellow (10 YR 6/6) to yellow (10 YR 7/6), medium grain, trace fine sand, loose, wet, no odor.										
			85.0	**EOB @ 85'.**										

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

FILE COPY

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
MIDDLETON CLEANERS		**AGMW-2**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
BOART LONGYEAR **MIKE AND DAN**	**07 / 19 / 00** MM DD YY	**07 / 19 / 00** MM DD YY	**ROTOSONIC**

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
____	____ ____ ____ ____ ____	**AGMW-2**	_____ Feet MSL	_____ Feet MSL	**6.00** inches

Boring Location
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ___° ___' ___"
Long ___° ___' ___"

Local Grid Location (If applicable)
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	DNR County Code	Civil Town/City/ or Village
DANE	**13**	**MIDDLETON**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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	40		0	**0.0 to 5.0 0-0.4: Silty clay, dark yellowish brown (10 YR 4/4), trace cobbles, trace fine sand, soft, cohesive to somewhat cohesive, moist, no odor.**				18						
			1.0	**0.4-0.8: Clayey silt, dark yellowish brown (10 YR 4/6), some fine sand, loose, moist, no odor.**										
			2.0	**0.8-3.4: Sand, dark yellowish brown (10 YR 4/6) to yellowish brown (10 YR 5/6), fine grain, trace clay, loose, moist, no odor.**										
			3.0											
			4.0											
2	36		5.0					33						
			6.0	**5.0 to 10.0 0-1.0: Sand, as above, trace medium sand.**										
			7.0	**1.0-3.0: Sand, brownish yellow (10 YR 6/6), medium grain, trace fine sand, loose, moist, no odor.**										
			8.0											
			9.0											
3	48		10.0	**10.0 to 15.0 0-1.5: Sand, very pale brown (10 YR 7/4), medium grain, trace fine gravel, trace coarse sand, trace fine sand, loose, moist, no odor.**				60						
			11.0											
			12.0											

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

Signature David M Bu

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126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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State of Wisconsin
Department of Natural Resources
Boring Number **AGMW-2**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			13.0	1.5-4.0: Sand, pale yellow (2.5 Y 7/4) fine grain, trace silt, loose, moist, no odor.										
			14.0											
			15.0	*Note: Highest OVA reading from 1.0-2.0.										
4	27			15.0 to 20.0 Sand, color as above, medium grain, some fine sand, loose, moist, no odor.				26						
			16.0											
			17.0											
			18.0											
			19.0											
			20.0											
5	36			20.0 to 25.0 0-0.5: Sand and silt, light gray (2.5 Y 7/2), sand fine grain, trace fine gravel, clumpy texture, loose, dry, no odor.				390						
			21.0											
			22.0	0.5-2.5: Sand, pale yellow (2.5 Y 7/4), medium grain, trace fine sand, loose, moist, no odor.										
			23.0											
			24.0	2.5-3.0: And and silt, pale yellow (2.5 Y 7/3), sand fine grain, trace fine gravel, clumpy texture, loose, moist to dry, no odor.										
6	26		25.0					55						
			26.0											
			27.0	*Note: Highest OVA reading from 2.0-3.0.										
				25.0 to 30.0 Sand, color as above, medium to fine grain, loose, moist, no odor.										
			28.0											
			29.0											
			30.0											
7	44			30.0 to 35.0 Sand, pale yellow (2.5 Y 7/4), fine grain, some silt, trace cobbles, losoe, moist, no odor.				150						
			31.0											
			32.0	*Note: Highest OVA reading										

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGMW-2**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			33.0	from 3.0-3.7.										
			34.0											
8	38		35.0	35.0 to 40.0 0-0.7: Sand, light yellowish brown (2.5 Y 6/4), medium to fine grain, trace fine gravel, loose, moist, no odor.				82						
			36.0	0.7-1.5: Snd, pale yellow (2.5 Y 7/3), fine grain, some silt, trace fine gravel, clumpy textures, loose, moist, no odor.										
			37.0											
			38.0											
			39.0	1.5-3.2: Sand, pale yellow (2.5 Y 7/4), fine grain, loose, moist, no odor.										
9	42		40.0	40.0 to 45.0 0-1.0: Sand,light yellowish brown (10YR 6/4), medium to fine grain, trace fine gravel, grayish fine sand and silt layer 0.9-1.0, loose, moist, no odor.				80						
			41.0											
			42.0											
			43.0	1.0-1.3: Sand and silt, light gray (2.5 Y 7/2), sand fine grain, clumpy texture, loose, dry, no odor.										
			44.0											
10	96		45.0	1.3-3.2: Sand, very pale brown (10 YR 7/4), fine grain, loose, moist, no odor.				65						
			46.0											
			47.0	3.2-3.5: Sand and silt, pale yellow (2.5 Y 7/3), sand fine grain, slaty texture, loose, moist to dry, no odor.										
			48.0											
			49.0	45.0 to 55.0 Sand, brownish yellow (10YR 6/6) to light yellowish brown (2.5 Y 6/4), fine grain, trace medium sand, grayish fine sand and silt layer 0.7-0.8, loose, wet to moist 0-3.5, wet 3,5-8.0, no odor.										
			50.0											
			51.0											
			52.0											

State of Wisconsin
Department of Natural Resources
Boring Number **AGMW-2**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A
Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			53.0											
			54.0											
			55.0											
			56.0											
			57.0											
			58.0											
			59.0											
			60.0											
			61.0											
			62.0											
			63.0											
			64.0											
			65.0											
			66.0											
			67.0											
			68.0											
			69.0											
			70.0											
			71.0											
			72.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other _____

FILE COPY

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
MIDDLETON CLEANERS		**AGPZ-2**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
BOART LONGYEAR **MIKE AND DAN**	07 / 19 / 00 MM DD YY	07 / 19 / 00 MM DD YY	**ROTOSONIC**

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
___ ___ ___	___ ___ ___ ___ ___	**AGPZ-2**	_____ Feet MSL	_____ Feet MSL	**6.00** inches

Boring Location
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ___° ___' ___"
Long ___° ___' ___"

Local Grid Location (If applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
DANE	**13**	**MIDDLETON**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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	40		0.0 to 5.0	**0-0.4: Silty clay, dark yellowish brown (10 YR 4/4), trace cobbles, trace fine sand, soft, cohesive to somewhat cohesive, moist, no odor.** **0.4-0.8: Clayey silt, dark yellowish brown (10 YR 4/6), some fine sand, loose, moist, no odor.** **0.8-3.4: Sand, dark yellowish brown (10 YR 4/6) to yellowish brown (10 YR 5/6), fine grain, trace clay, loose, moist, no odor.**				18						
2	36		5.0 to 10.0	**0-1.0: Sand, as above, trace medium sand.** **1.0-3.0: Sand, brownish yellow (10 YR 6/6), medium grain, trace fine sand, loose, moist, no odor.**				33						
3	48		10.0 to 15.0	**0-1.5: Sand, very pale brown (10 YR 7/4), medium grain, trace fine gravel, trace coarse sand, trace fine sand, loose, moist, no odor.**				60						

Depth in Feet: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0

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

Signature David M Bu

Firm **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources
Boring Number AGPZ-2

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			13.0	1.5-4.0: Sand, pale yellow (2.5 Y 7/4), fine grain, trace silt, loose, moist, no odor.										
			14.0											
			15.0	*Note: Highest OVA reading from 1.0-2.0.										
4	27			15.0 to 20.0 Sand, color as above, medium grain, some fine sand, loose, moist, no odor.				26						
			16.0											
			17.0											
			18.0											
			19.0											
			20.0											
5	36			20.0 to 25.0 0-0.5: Sand and silt, light gray (2.5 Y 7/2), sand fine grain, trace fine gravel, clumpy texture, loose, dry, no odor.				390						
			21.0											
			22.0	0.5-2.5: Sand, pale yellow (2.5 Y 7/4), medium grain, trace fine sand, loose, moist, no odor.										
			23.0											
			24.0											
			25.0	2.5-3.0: Sand and silt, pale yellow (2.5 Y 7/3), sand fine grain, trace fine gravel, clumpy texture, loose, moist to dry, no odor.										
6	26		26.0					55						
			27.0	* Note: Highest OVA reading from 2.0-3.0.										
				25.0 to 30.0 Sand, color as above, medium to fine grain, loose, moist, no odor.										
			28.0											
			29.0											
			30.0											
7	44			30.0 to 35.0 Sand, pale yellow (2.5 Y 7/4), fine grain, some silt, trace cobbles, loose, moist, no odor.				150						
			31.0											
			32.0	*Note: Highest OVA reading										

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-2**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			33.0	**from 3.0-3.7.**										
			34.0											
8	38		35.0	**35.0 to 40.0** **0-0.7: Sand, light yellowish brown (2.5 Y 6/4), medium to fine grain, trace fine gravel, loose, moist, no odor.**				82						
			36.0											
			37.0	**0.7-1.5: Sand, pale yellow (2.5 Y 7/3), fine grain, some silt, trace fine gravel, clumpy texture, loose, moist, no odor.**										
			38.0											
			39.0											
9	42		40.0	**1.5-3.2: Sand, pale yellow (2.5 Y 7/4), fine grain, loose, moist, no odor.**				80						
			41.0	**40.0 to 45.0** **0-1.0: Sand, light yellowish brown (10 YR 6/4), medium to fine grain, trace fine gravel, grayish fine sand and silt layer 0.9-1.0, loose, moist, no odor.**										
			42.0											
			43.0	**1.0-1.3: Sand and silt, light gray (2.5 Y 7/2), sand fine grain, clumpy texture, loose, dry, no odor.**										
			44.0											
10	96		45.0	**1.3-3.2: Sand, very pale brown (10 YR 7/4), fine grain, loose, moist, no odor.**				65						
			46.0											
			47.0	**3.2-3.5: Sand and silt, pale yellow (2.5 Y 7/3), sand fine grain, slaty texture, loose, moist to dry, no odor.**										
			48.0											
			49.0	**45.0 to 55.0** **Sand, brownish yellow (10 YR 6/6) to light yellowish brown (2.5 Y 6/4), fine grain, trace medium sand, grayish fine sand and silt layer 0.7-0.8, loose, wet to moist 0-3.5, wet 3.5-8.0, no odor.**										
			50.0											
			51.0											
			52.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-2**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
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Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			53.0											
			54.0											
11	84		55.0	55.0 to 65.0 Sand, color as above, fine grain, red staining 2.5-3.0. loose, wet, no odor.				13						
			56.0											
			57.0											
			58.0											
			59.0											
			60.0											
			61.0											
			62.0											
			63.0											
			64.0											
12	90		65.0	65.0 to 75.0 Sand, light yellowish brown (2.5 Y 6/4), fine grain, trace silt, loose, wet, no odor.				29						
			66.0											
			67.0											
			68.0											
			69.0											
			70.0											
			71.0											
			72.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-2**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A
Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			73.0											
			74.0											
13	90		75.0	**75.0 to 85.0 Sand, color as above, fine grain, some medium sand, some to trace silt, clayey silt layer 4.0-4.3, loose, wet, no odor.**				39						
			76.0											
			77.0											
			78.0											
			79.0											
			80.0											
			81.0											
			82.0											
			83.0											
			84.0											
			85.0	**EOB @ 85'.**										
			86.0											
			87.0											
			88.0											
			89.0											
			90.0											
			91.0											
			92.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

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Facility/Project Name	License/Permit/Monitoring Number	Boring Number
MIDDLETON CLEANERS		**AGPZ-3**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
BOART LONGYEAR **DAN AND MIKE**	07 / 19 / 00 MM DD YY	07 / 20 / 00 MM DD YY	**ROTOSONIC**

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		AGPZ-3	_____ Feet MSL	_____ Feet MSL	**6.00** inches

Boring Location
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
DANE	**13**	**MIDDLETON**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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	36		1.0 2.0 3.0 4.0 5.0	**0.0 to 5.0** **0-0.7: Clayey silt and sand with gravel, dark yellowish brown (10 YR 4/4), sand fine grain, gravel fine grain, trace coarse to medium sand, loose, moist, no odor.** **0.7-3.0: Sand, yellowish brown (10 YR 5/6) to brownish yellow (10 YR 6/6), medium to fine grain, some fines 0.7-1.9, loose, moist, no odor.**				11						
2	36		6.0 7.0 8.0 9.0 10.0	**5.0 to 10.0** **0-0.4: Sand, brownish yellow (10 YR 6/6), medium grain, trace fine sand, loose, moist, no odor.** **0.4-0.8: Clayey sand with gravel, dark yellowish brown (10 YR 4/4), sand fine grain, gravel fine grain, loose, moist, no odor.** **0.8-1.9: Sand, very pale brown (10 YR 7/4), medium grain, trace fine gravel, trace fine sand, loose, moist, no odor.**				30						
3	47		11.0 12.0	**1.9-3.0: Sand, brownish yellow (10 YR 6/6), medium**				85						

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

Signature David M Bu

Firm **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-3**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
				to fine grain, loose, moist, no odor.										
			13.0	10.0 to 15.0 0-2.5: Sand, brownish yellow (10 YR 6/6) to very pale brown (10 YR 7/4), medium to fine grain, loose, moist, no odor.										
			14.0											
4	32		15.0	2.5-3.5: Sand with silt, light yellowish brown (10 YR 6/4), sand fine grain, loose, moist, no odor.				57						
			16.0											
			17.0	3.5-3.9: Sand, very pale brown (10 YR 7/4), medium to fine grain, trace fine gravel, loose, moist, no odor.										
			18.0											
			19.0	* Note: Highest OVA reading from 3.0-3.9.										
5	42		20.0	15.0 to 20.0 0-0.9: Sand, very pale brown (10 YR 7/4), medium grain, some fine sand, trace fine gravel, coarse to medium sand layer 0.8-0.9, moist to dry, no odor.				90						
			21.0											
			22.0	0.9-2.7: Sand, color as above, medium to fine grain, loose, moist, no odor.										
			23.0											
			24.0	* Note: Highest OVA reading from 1.5-2.7.										
6	32		25.0	20.0 to 25.0 0-0.8: Sand, light yellowish brown (10 YR 6/4), fine grain, some to trace medium sand, loose, moist, no odor.				200						
			26.0											
			27.0	0.8-1.1: Sand and silt, pale yellow (2.5 Y 7/3), sand fine grain, trace fine gravel, trace coarse to medium sand, loose, dry, no odor.										
			28.0											
			29.0	1.1-3.5: Sand, pale yellow (2.5 Y 7/4), fine grain, some to trace medium sand, loose, moist, no door.										
7	32		30.0					180						
			31.0											
			32.0	*Note: Highest OVA reading 2.0-3.5.										

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-3**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			32.0	**25.0 to 30.0** 0-0.4: Sand, color as above, fine grain, some silt, loose, moist, no odor.										
			33.0	0.4-1.6: Sand, pale yellow (2.5 Y 8/3), fine grain, trace medium sand, loose, moist, no odor.										
7	44		35.0	1.6-2.7: Sand and silt, pale yellow (2.5 Y 7/4), sand fine grain, clumpy texture, loose, moist, no odor.				38						
			38.0	*Note: Highest OVA reading from 1.5-2.7.										
			39.0	**30.0 to 35.0** 0-0.4: Sand and silt, pale yellow (2.5 Y 7/4), sand fine grain, clumpy texture, loose, dry, no odor.										
8	33		40.0	0.4-1.7: Sand, very pale brown (10 YR 8/3), fine grain, loose, moist to dry, no odor.				55						
			43.0	1.7-2.7: Sand, very pale brown (10YR 7/4), fine grain, some silt, clumpy texture, loose, moist to dry, no odor.										
			45.0	*Note: Highest OVA reading from 0-1.5.										
9	86		46.0	**35.0 to 40.0** 0-1.1: Sand, brownish yellow (10 YR 6/6), medium to fine grain, trace fine gravel, silty 1.1-1.6, losoe, moist, no odor.				48						
			48.0	1.1-1.6: Sand and silt, very pale brown (10 YR 7/4), fine grain, clumpy texture, loose, moist to dry, no odor.										
			50.0	1.6-2.4: Sand, very pale brown (10 YR 8/2), fine grain, loose, moist to dry, no odor.										
			52.0	2.4-3.7: Sand and silt, very pale brown (10 YR 7/4),										

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-3**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			53.0	fine grain, clumpy texture, loose, moist to dry, no odor.										
			54.0	40.0 to 45.0 Sand, pale yellow (2.5 Y 7/4), fine grain, silty layer 1.5-1.8, loose, dry, no odor.										
10	92		55.0	45.0 to 55.0 0-1.0: Sand and silt, light gray (2.5 Y 7/2) to pale yellow (2.5 Y 7/4), fine grain, loose, dry, no odor.				4						
			56.0	1.0-2.2: Sand, light yellowish brown (2.5 Y 6/3) olive yellow (2.5 Y 6/6), medium grain, trace fine sand, loose, wet, no odor.										
			57.0											
			58.0											
			59.0	2.2-4.4: Sand, light yellowish brown (10 YR 6/4), fine grain, some silt 3.4-4.4, loose, wet, no odor.										
			60.0											
			61.0											
			62.0	4.4-7.2: Sand, color as above, medium to fine grain, loose, wet, no odor.										
			63.0	55.0 to 65.0 Sand, pale yellow (2.5 Y 7/4), medium to fine grain, reddish staining 4.5-5.0, loose, wet, no odor.										
			64.0											
11	96		65.0	65.0 to 75.0 Sand, brown yellow (10 YR 6/6), fine grain, some to trace silt, trace medium sand 2.5-2.8, loose, wet, no odor.				18						
			66.0											
			67.0											
			68.0											
			69.0											
			70.0											
			71.0											
			72.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92

Boring Number **AGPZ-3** Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
12	96		75.0	**75.0 to 85.0 0-5.5: Silt, light yellowish brown (10 YR 6/4), some to trace fine sand, somewhat cohesive to loose, wet, no odor.**				16						
				5.5-8.0: Sand, color as above, medium grain, some to trace fine sand, reddish staining 5.5-5.7, loose, wet, no odor.										
			85.0	**EOB @ 85.5'.**										

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other _____

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

FILE COPY

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
MIDDLETON CLEANERS		AGMW-4

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
BOART LONGYEAR MIKE AND DAN	07 / 20 / 00 MM DD YY	07 / 21 / 00 MM DD YY	ROTOSONIC

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
___ ___ ___	___ ___ ___ ___ ___ ___	AGMW-4	_____ Feet MSL	_____ Feet MSL	6.00 inches

Boring Location
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
DANE	13	MIDDLETON

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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	36		0.0	**0.0 to 5.0 0-0.7: Sand, dark yellowish brown (10YR 4/4), medium to fine grain, trace coarse to fine gravel, trace silt, loose, moist, no odor.**				11						
			1.0	**0.7-2.2: Sand, brownish yellow (10 YR 6/6) to very pale brown (10 YR 7/4), medium to fine grain, loose, moist, no odor.**										
			2.0											
			3.0											
			4.0											
2	48		5.0	**2.2-3.0: Sand, very pale brown (10 YR 7/4) fine grain, loose, moist, no odor.**				12						
			6.0	**5.0 to 10.0 0-0.8: Sand, light yellowish brown (10 YR 6/4), medium to fine grain, loose, moist, no odor.**										
			7.0											
			8.0	**0.8-3.1: Sand, very pale brown (10 YR 7/4), fine grain, loose, moist, no odor.**										
			9.0											
3	38		10.0	**3.1-4.0: Sand, color as above, medium to fine grain, loose, moist, no odor.**				9						
			11.0	**10.0 to 15.0 0-2.0: Sand, very pale brown (10 YR 7/4), medium to fine grain, trace fine**										
			12.0	**gravel, loose, moist, no**										

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

Signature David M Bu

Firm **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			13.0	odor.										
			14.0	2.0-3.2: Sand, color as above, fine grain, trace silt, loose, moist, no odor.										
4	30		15.0	15.0 to 25.0 0-1.4: Sand, color as above, medium to fine grain, loose, moist, no odor.				31						
			16.0											
			17.0	1.4-2.5: Sand, light brownish gray (2.5 Y 6/2) to pale yellow (2.5 Y 7/4), medium to fine grain, trace silt, loose, moist to dry, no odor.										
			18.0											
			19.0											
			20.0											
			21.0											
			22.0											
			23.0											
			24.0											
5	25		25.0	25.0 to 30.0 0-0.6: Sand, dark yellowish brown (10 YR 4/6), fien grain, some medium sand, some fines, trace fine gravel, loose, moist, no odor.				6.5						
			26.0											
			27.0	0.6-1.1: Sand and silt, light gray (10 YR 7/1), fine grain, loose, dry, no odor.										
			28.0											
			29.0											
6	33		30.0	1.1-2.1: Sand, very pale brown (10 YR 7/4), medium grain, some fine sand, loose, moist, no odor.				23						
			31.0	30.0 to 35.0 0-0.5: Sand, light brownish gray (2.5 Y 6/2), medium to fine grain, trace silt, clumpy texture, loose, dry, no odor.										
			32.0											

State of Wisconsin
Department of Natural Resources
Boring Number AGMW-4

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			33.0	no odor.										
			34.0	0.5-2.0: Sand, very pale brown (10YR 7/4), medium grain, trace corse sand, trace fine sand, loose, moist, no odor.										
7	32		35.0	2.0-2.8: Sand, color as above, medium to fine grain, trace fine gravel, trace coarse sand, trace silt, loose, moist to dry, no odor.				34						
			36.0											
			37.0											
				35.0 to 40.0 0-1.0: Sand and silt, light gray (10 YR 7/2) to very pale brown (10 YR 8/2), medium to fine grain, trace fine gravel, trace coarse sand, clumpy texture, loose, dry, no odor.										
			38.0											
			39.0											
8	43		40.0	1.0-2.7: Sand, pale yellow (2.5 Y 7/4), fine grain, trace silt, sitly layer 1.8-2.1, loose, moist, no odor.				175						
			41.0											
			42.0											
				40.0 to 45.0 0-1.7: Sand, light yellowish brown (10 YR 6/4), medium to fine grain, trace cobbles, trace coarse to fine gravel, loose, moist, no odor.										
			43.0											
			44.0											
9	92		45.0	1.7-3.6: Sand, dark gray (5 Y 4/1) to very pale brown (10 YR 7/4), fine grain, some silt, loose, moist, no odor.				35						
			46.0											
			47.0	*Note: Highest OVA reading 2.6-3.6.										
				45.0 to 55.0 0-1.3: Sand, light yellowish brown (2.5 Y 6/3), fine grain, trace fine, loose, wet to moist, no odor.										
			48.0											
			49.0											
			50.0	1.3-5.1: Sand and silt, light yellowish brown (10 YR 6/4), fine grain, trace clay, reddish staining 2.8-3.4, loose, wet, no odor.										
			51.0											
			52.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGMW-4**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			53.0	**5.1-6.1: Silt, color as above some to trace clay, silty.**										
			54.0											
			55.0	**6.1-7.8: Sand, color as above, fine grain, some to trace silt, loose, wet, no odor.**										
			56.0											
			57.0											
			58.0											
			59.0											
			60.0											
			61.0											
			62.0											
			63.0											
			64.0											
			65.0											
			66.0											
			67.0											
			68.0											
			69.0											
			70.0											
			71.0											
			72.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

FILE COPY

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
MIDDLETON CLEANERS		AGPZ-4

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started (MM / DD / YY)	Date Drilling Completed (MM / DD / YY)	Drilling Method
BOART LONGYEAR MIKE AND DAN	07 / 20 / 00	07 / 21 / 00	ROTOSONIC

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		AGPZ-4	Feet MSL	Feet MSL	6.00 inches

Boring Location
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	DNR County Code	Civil Town/City/ or Village
DANE	13	MIDDLETON

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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	36		0.0 to 5.0	**0-0.7: Sand, dark yellowish brown (10 YR 4/4), medium to fine grain, trace coarse to fine gravel, trace silt, loose, moist, no odor.** **0.7-2.2: Sand, brownish yellow (10 YR 6/6) to very pale brown (10 YR 7/4), medium to fine grain, loose, moist, no odor.** **2.2-3.0: Sand, very pale brown (10 YR 7/4), fine grain, loose, moist, no odor.**				11						
2	48		5.0 to 10.0	**0-0.8: Sand, light yellowish brown (10 YR 6/4), medium to fine grain, loose, moist, no odor.** **0.8-3.1: Sand, very pale brown (10 YR 7/4), fine grain, loose, moist, no odor.**				12						
3	38		10.0 to 15.0	**3.1-4.0: Sand, color as above, medium to fine grain, loose, moist, no odor.** **0-2.0: Sand, very pale brown (10 YR 7/4), medium to fine grain, trace fine gravel, loose, moist, no**				9						

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

Signature David M Bu

Firm **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-4**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			13.0	odor.										
			14.0	2.0-3.2: Sand, color as above, fine grain, trace silt, loose, moist, no odor.										
4	30		15.0	15.0 to 25.0 0-1.4: Sand, color as above, medium to fine grain, loose, moist, no odor.				31						
			16.0											
			17.0	1.4-2.5: Sand, light brownish gray (2.5 Y 6/2) to pale yellow (2.5 Y 7/4), medium to fine grain, trace silt, loose, moist to dry, no odor.										
			18.0											
			19.0											
			20.0											
			21.0											
			22.0											
			23.0											
			24.0											
5	25		25.0	25.0 to 30.0 0-0.6: Sand, dark yellowish brown (10 YR 4/6), fine grain, some medium sand, some fines, trace fine gravel, loose, moist, no odor.				6.5						
			26.0											
			27.0	0.6-1.1: Sand and silt, light gray (10 YR 7/1), fine grain, loose, dry, no odor.										
			28.0											
			29.0	1.1-2.1: Sand, very pale brown (10 YR 7/4), medium grain, some fine sand, loose, moist, no odor.										
6	33		30.0					23						
			31.0	30.0 to 35.0 0-0.5: Sand, light brownish gray (2.5 Y 6/2), medium to fine grain, trace silt, clumpy texture, loose, dry, no odor.										
			32.0											

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-4**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
				no odor.										
			33.0	0.5-2.0: Sand, very pale brown (10 YR 7/4), medium grain, trace coarse sand, trace fine sand, loose, moist, no odor.										
			34.0											
7	32		35.0	2.0-2.8: Sand, color as above, medium to fine grain, trace fine gravel, trace coarse sand, trace silt, loose, moist to dry, no odor.				34						
			36.0											
			37.0											
				35.0 to 40.0 0-1.0: Sand and silt, light gray (10 YR 7/2) to very pale brown (10 YR 8/2), medium to fine grain, trace fine gravel, trace coarse sand, clumpy texture, loose, dry, no odor.										
			38.0											
			39.0											
8	43		40.0	1.0-2.7: Sand, pale yellow (2.5 Y 7/4), fine grain, trace silt, silty layer 1.8-2.1, loose, moist, no odor.				175						
			41.0											
			42.0											
				40.0 to 45.0 0-1.7: Sand, light yellowish brown (10 YR 6/4), medium to fine grain, trace cobbles, trace coarse to fine gravel, loose, moist, no odor.										
			43.0											
			44.0											
9	92		45.0	1.7-3.6: Sand, dark gray (5 Y 4/1) to very pale brown (10 YR 7/4), fine grain, some silt, loose, moist, no odor.				35						
			46.0											
			47.0	*Note: Highest OVA reading 2.6-3.6.										
				45.0 to 55.0 0-1.3: Sand, light yellowish brown (2.5 Y 6/3), fine grain, trace fines, loose, wet to moist, no odor.										
			48.0											
			49.0											
			50.0	1.3-5.1: Sand and silt, light yellowish brown (10 YR 6/4), fine grain, trace clay, reddish staining 2.8-3.4, loose, wet, no odor.										
			51.0											
			52.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-4**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A
Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			53.0	5.1-6.1: Silt, color as above, some to trace clay, silty.										
			54.0	6.1-7.8: Sand, color as above, fine grain, some to trace silt, loose, wet, no odor.										
10	90		55.0					6.5						
			56.0	55.0 to 65.0 Sand, color as above, fine grain, trace medium sand 3.0-7.5, loose, wet, no odor.										
			57.0											
			58.0											
			59.0											
			60.0											
			61.0											
			62.0											
			63.0											
			64.0											
11	92		65.0	65.0 to 75.0 0-3.0: Sand, yellow (10 YR 7/6), medium to fine grain, loose, wet, no odor.				16						
			66.0											
			67.0	3.0-3.5: Clayey silt, color as above, some to trace fine sand, somewhat cohesive to loose, wet, no odor.										
			68.0											
			69.0	3.5-7.8: Sand, color as above, fine grain, some to trace silt, loose, wet, no odor.										
			70.0											
			71.0											
			72.0											

MIDDLETON CLEANERS
WI0008110001

State of Wisconsin
Department of Natural Resources
Boring Number **AGPZ-4**

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A Rev. 5-92
Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geological 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
			73.0											
			74.0											
12	108		75.0	**75.0 to 85.0 Sand and silt, color as above, fine grain, loose, wet, no odor.**				14						
			76.0											
			77.0											
			78.0											
			79.0											
			80.0											
			81.0											
			82.0											
			83.0											
			84.0											
			85.0	**EOB @ 85'.**										
			86.0											
			87.0											
			88.0											
			89.0											
			90.0											
			91.0											
			92.0											

MIDDLETON CLEANERS
WI0008110001

Appendix B

Monitoring Well Construction Logs

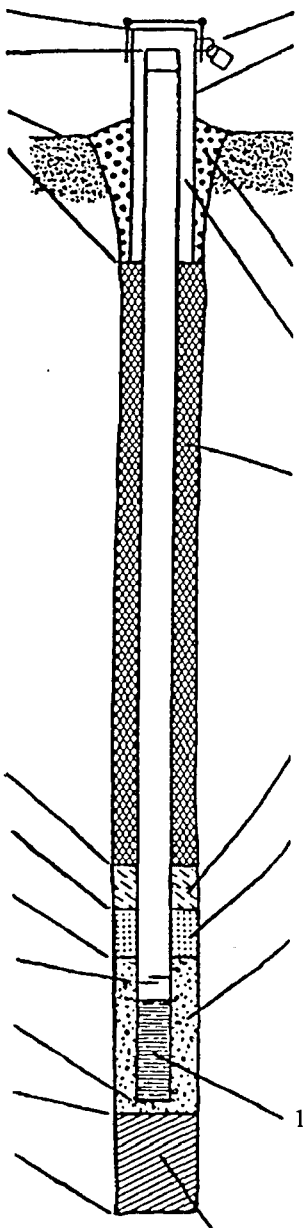
State of Wisconsin
Department of Natural Resources

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

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

FILE COPY

Facility/Project Name **MIDDLETON CLEANERS**	Local Grid Location of Well _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name **AGMW-1**
Facility License, Permit or Monitoring Number _____	Grid Origin Location Lat. ____ ____ ____ Long. ____ ____ ____ or	Wis. Unique Well Number DNR Well Number ____ ____ ____ ____ ____ ____ ____
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	St. Plane _____ ft. N, _____ ft. E.	Date Well Installed 0 7 / 2 0 / 0 0 m m d d y y
Distance Well Is From Waste/Source Boundary ____ ft.	Section Location of Waste/Source ☐ E. ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐ W.	Well Installed By: (Person's Name and Firm) **BOART LONGYEAR** **DAVE AND MARVIN**
Well A Point of Enforcement Std. Application? ☐ Yes ☐ No	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	



A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or __ 1.5 ft.

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

13. Sieve analysis attached? ☐ 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 _____ ft. MSL or __ 1.5 ft.

F. Fine sand, top _____ ft. MSL or __ 51.0 ft.

G. Filter pack, top _____ ft. MSL or __ 53.0 ft.

H. Screen joint, top _____ ft. MSL or __ 55.0 ft.

Well bottom _____ ft. MSL or __ 70.0 ft.

J. Filter pack, bottom _____ ft. MSL or __ 71.0 ft.

K. Borehole, bottom _____ ft. MSL or __ 71.0 ft.

L. Borehole, diameter _ 8.25 in.

M. O.D. well casing _ 2.37 in.

N. I.D. well casing _ 2.06 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: __ 9.00 in.
b. Length: _ 1.0 ft.
c. Material: Steel ☒ 04
_____ Other ☐ __
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐ __

4. Material between well casing and protective pipe:
Bentonite ☐ 30
Annular space seal ☐ __
SAND 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. 18.4 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. _____ Other ☐ __

7. Fine sand material: Manufacturer, product name & mesh size
a. **BADGER MINING BB#7**
b. Volume added 0.7 ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. **RED FLINT #30**
b. Volume added 6.7 ft³

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 BOART LONGYEAR
c. Slot size: 0.010 in.
d. Slotted length: 15.0 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
David M Bur	**ARCADIS Geraghty & Miller, Inc.** 126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs 144,147 & 160, Wis Stats, and ch NR 141, Wis Ad Code. In accordance with ch 144, Wis Stats, failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch 147, Wis Stats, failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

WI0008110001

ate of Wisconsin
epartment of Natural Resources

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

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

FILE COPY

Facility/Project Name -IDDLETON CLEANERS	Local Grid Location of Well ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name AGPZ-1
cility License, Permit or Monitoring Number _ _ _ _ _ _ _	Grid Origin Location Lat. ___ ___ ___ Long. ___ ___ ___ or St. Plane ____ ft. N, ____ ft. E.	Wis. Unique Well Number DNR Well Number ... ...
Type of Well Water Table Observation Well ☐ 11 Piezometer ☒ 12	Section Location of Waste/Source ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐ E. ☐ W.	Date Well Installed 0 7 / 1 8 / 0 0 m m d d y y
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) BOART LONGYEAR MIKE AND DAN
Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL

_ Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

. Surface seal, bottom _____ ft. MSL or 2.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☐ 41
ROTOSONIC 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 _____ ft. MSL or 2.0 ft.

Fine sand, top _____ ft. MSL or 76.0 ft.

G. Filter pack, top _____ ft. MSL or 78.0 ft.

H. Screen joint, top _____ ft. MSL or 80.0 ft.

Well bottom _____ ft. MSL or 85.0 ft.

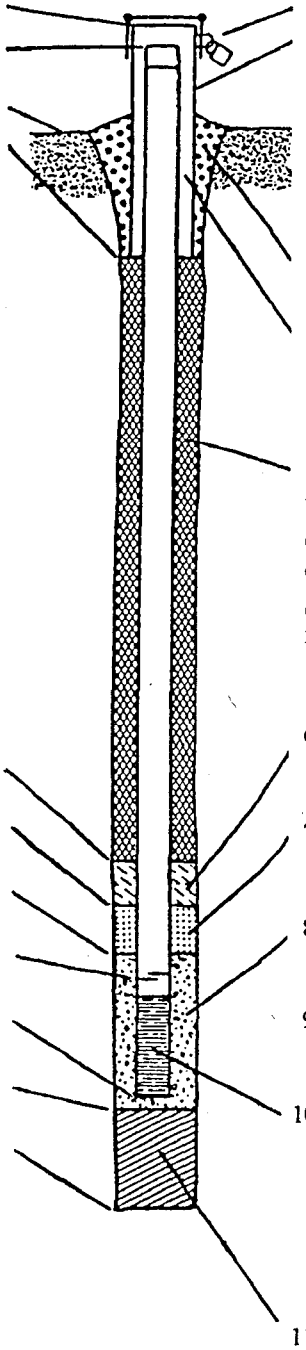
J. Filter pack, bottom _____ ft. MSL or 85.0 ft.

. Borehole, bottom _____ ft. MSL or 85.0 ft.

L. Borehole, diameter 6.00 in.

. O.D. well casing 2.37 in.

. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9.00 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
FLUSHMOUNT Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐

4. Material between well casing and protective pipe:
Bentonite ☐ 30
Annular space seal ☐
SAND 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. 14.5 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. BADGER MINING BB #7
b. Volume added 0.4 ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. RED FLINT #30
b. Volume added 1.4 ft³

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 BOART LONGYEAR
c. Slot size: 0.010 in.
d. Slotted length: 5.0 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 David M Pur

Firm ARCADIS Geraghty & Miller, Inc.
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

se complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs 144,147 & 160, Wis Stats, and ch NR 141, Wis Ad Code. In accordance with ch 144, Wis Stats, failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch 147, Wis Stats, failure to file this form may result in a forfeiture of not more than $10,000 for each of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

WI0008110001

State of Wisconsin
Department of Natural Resources

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

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

FILE COPY

Facility/Project Name MIDDLETON CLEANERS	Local Grid Location of Well _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name AGMW-2
Facility License, Permit or Monitoring Number _____	Grid Origin Location Lat. ___ ___ ___ Long. ___ ___ ___ or	Wis. Unique Well Number DNR Well Number ____ ____ ____ ____ ____ ____ ____ ____ ____
Type of Well Water Table Observation Well ☐ 11 Piezometer ☐ 12	St. Plane _____ ft. N, _____ ft. E.	Date Well Installed 0 7 / 1 9 / 0 0 m m d d y y
Distance Well Is From Waste/Source Boundary ____ ft.	Section Location of Waste/Source ☐ E. ☐ W. ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___	Well Installed By: (Person's Name and Firm) BOART LONGYEAR MIKE AND DAN
Well A Point of Enforcement Std. Application? ☐ Yes ☐ No	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or __2.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

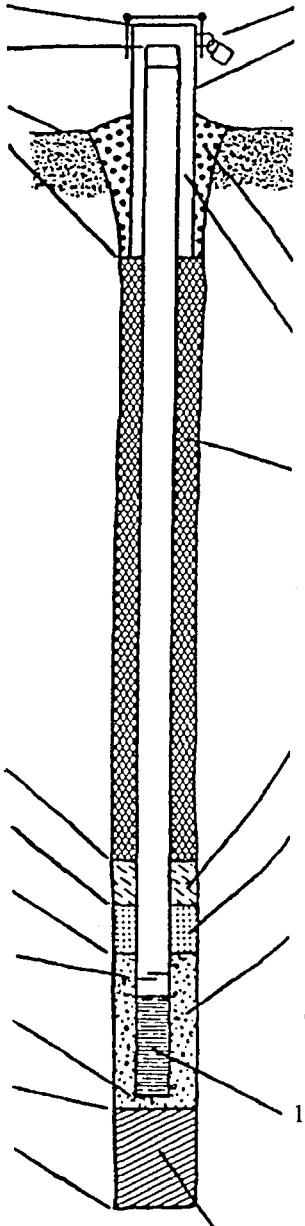
14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☐ 41
ROTOSONIC Other ☒

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 _____ ft. MSL or __2.0 ft.
F. Fine sand, top _____ ft. MSL or __36.0 ft.
G. Filter pack, top _____ ft. MSL or __38.0 ft.
H. Screen joint, top _____ ft. MSL or __40.0 ft.
Well bottom _____ ft. MSL or __55.0 ft.
J. Filter pack, bottom _____ ft. MSL or __55.0 ft.
K. Borehole, bottom _____ ft. MSL or __55.0 ft.
L. Borehole, diameter _6.00 in.
M. O.D. well casing _2.37 in.
N. I.D. well casing _2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: __9.00 in.
b. Length: _1.0 ft.
c. Material: Steel ☒ 04
FLUSHMOUNT Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☐ 30
Annular space seal ☐
SAND 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. 6.7 Ft³ volume added for any of the above.
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. BADGER MINING BB#7
b. Volume added 0.4 ft³
8. Filter pack material: Manufacturer, product name & mesh size
a. RED FLINT #30
b. Volume added 3.3 ft³
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 BOART LONGYEAR
c. Slot size: 0.010 in.
d. Slotted length: 15.0 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 David M Bar	Firm ARCADIS Geraghty & Miller, Inc. 126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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WI0008110001

State of Wisconsin
Department of Natural Resources

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

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

FILE COPY

Facility/Project Name MIDDLETON CLEANERS	Local Grid Location of Well ___ ft. ☐ N. ☐ S. ___ ft. ☐ E. ☐ W.	Well Name AGPZ-2
Facility License, Permit or Monitoring Number _ _ _ _ _ _ _ _	Grid Origin Location Lat. ___ ___ ___ Long. ___ ___ ___ or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number DNR Well Number ... ...
Type of Well Water Table Observation Well ☐ 11 Piezometer ☒ 12	Section Location of Waste/Source ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐ E. ☐ W.	Date Well Installed 0 7 / 1 9 / 0 0 m m d d y y
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n. ☐ Not Known	Well Installed By: (Person's Name and Firm) BOART LONGYEAR MIKE AND DAN
Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or __2.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☐ 41
ROTOSONIC 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 _____ ft. MSL or __2.0 ft.

F. Fine sand, top _____ ft. MSL or __76.0 ft.

G. Filter pack, top _____ ft. MSL or __78.0 ft.

H. Screen joint, top _____ ft. MSL or __80.0 ft.

Well bottom _____ ft. MSL or __85.0 ft.

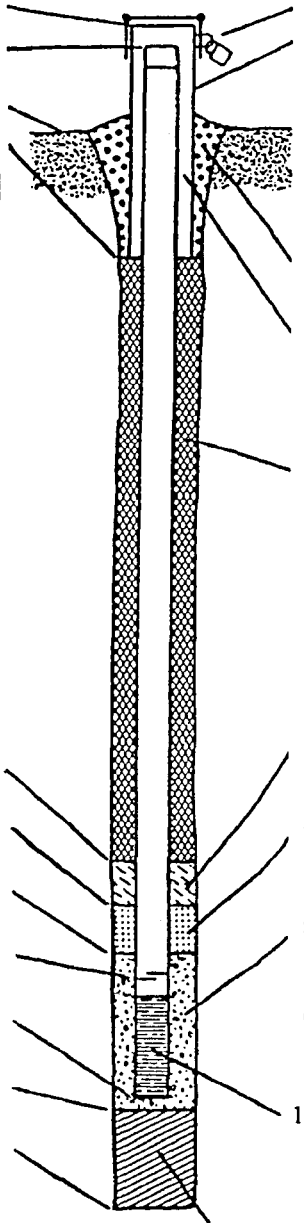
J. Filter pack, bottom _____ ft. MSL or __85.0 ft.

K. Borehole, bottom _____ ft. MSL or __85.0 ft.

L. Borehole, diameter __6.00 in.

M. O.D. well casing __2.37 in.

N. I.D. well casing __2.06 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: __9.00 in.
b. Length: __1.0 ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐

4. Material between well casing and protective pipe:
Bentonite ☐ 30
Annular space seal ☐
SAND 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. 14.5 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. BADGER MINING BB#7
b. Volume added 0.4 ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. RED FLINT #30
b. Volume added 1.4 ft³

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 BOART LONGYEAR
c. Slot size: 0.010 in.
d. Slotted length: __5.0 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: David M Ba

Firm: **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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WI0008110001

State of Wisconsin
Department of Natural Resources

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

FILE COPY

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

Facility/Project Name MIDDLETON CLEANERS	Local Grid Location of Well _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name AGPZ-3
Facility License, Permit or Monitoring Number _____	Grid Origin Location Lat. ___ ___ ___ Long. ___ ___ ___ or	Wis. Unique Well Number DNR Well Number ____ ____ ____ ____ ____ ____ ____ ____ ____
Type of Well Water Table Observation Well ☐ 11 Piezometer ☒ 12	St. Plane _____ ft. N, _____ ft. E.	Date Well Installed m m d d y y 0 7 / 2 0 / 0 0
Distance Well Is From Waste/Source Boundary ft.	Section Location of Waste/Source ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐E. ☐W.	Well Installed By: (Person's Name and Firm) BOART LONGYEAR DAN AND MIKE
Well A Point of Enforcement Std. Application? ☐ Yes ☐ No	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1.5 ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

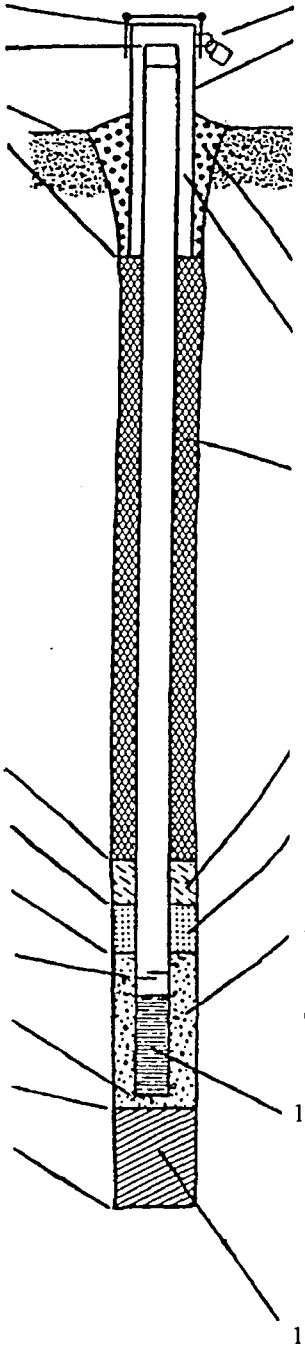
14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☐ 41
ROTOSONIC Other ☒

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 _____ ft. MSL or 1.5 ft.
F. Fine sand, top _____ ft. MSL or 76.0 ft.
G. Filter pack, top _____ ft. MSL or 78.0 ft.
H. Screen joint, top _____ ft. MSL or 80.5 ft.
Well bottom _____ ft. MSL or 85.5 ft.
J. Filter pack, bottom _____ ft. MSL or 85.5 ft.
K. Borehole, bottom _____ ft. MSL or 85.5 ft.
L. Borehole, diameter 6.00 in.
M. O.D. well casing 2.37 in.
N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9.00 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
FLUSHMOUNT Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☐ 30
Annular space seal ☐
SAND 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. 14.6 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. BADGER MINING BB#7
b. Volume added 0.4 ft³
8. Filter pack material: Manufacturer, product name & mesh size
a. RED FLINT #30
b. Volume added 1.5 ft³
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 BOART LONGYEAR
c. Slot size: 0.010 in.
d. Slotted length: 5.0 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 David M Bu

Firm ARCADIS Geraghty & Miller, Inc.
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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WI0008110001

State of Wisconsin
Department of Natural Resources

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

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

FILE COPY

Facility/Project Name **MIDDLETON CLEANERS**	Local Grid Location of Well ☐N. ☐S. ____ ft. ☐E. ☐W. ____ ft.	Well Name **AGMW-4**
Facility License, Permit or Monitoring Number _ _ _ _ _ _ _	Grid Origin Location Lat. ___ ___ ___ Long. ___ ___ ___ or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number DNR Well Number _ _ _ _ _ _ _ _ _ _
Type of Well Water Table Observation Well ☒ 11 Piezometer ☐ 12	Section Location of Waste/Source ☐ E. ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐ W.	Date Well Installed 0 7/2 1/0 0 m m d d y y
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) **BOART LONGYEAR** **MIKE AND DAN**
Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 2.0 ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

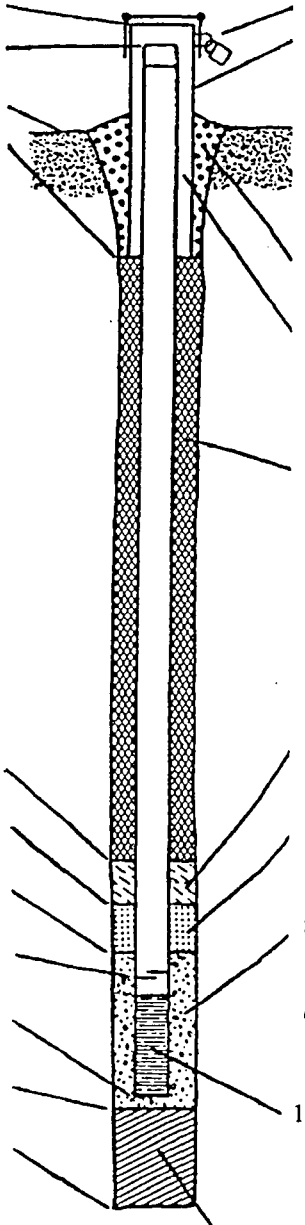
14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☐ 41
ROTOSONIC Other ☒

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 _____ ft. MSL or 2.0 ft.
F. Fine sand, top _____ ft. MSL or 36.0 ft.
G. Filter pack, top _____ ft. MSL or 38.0 ft.
H. Screen joint, top _____ ft. MSL or 40.0 ft.
Well bottom _____ ft. MSL or 55.0 ft.
J. Filter pack, bottom _____ ft. MSL or 55.0 ft.
K. Borehole, bottom _____ ft. MSL or 55.0 ft.
L. Borehole, diameter 6.00 in.
M. O.D. well casing 2.37 in.
N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 9.00 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☐ 30
Annular space seal ☐
SAND 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. 6.7 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. **BADGER MINING BB#7**
b. Volume added 0.4 ft³
8. Filter pack material: Manufacturer, product name & mesh size
a. **RED FLINT #30**
b. Volume added 3.3 ft³
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 **BOART LONGYEAR**
c. Slot size: 0.010 in.
d. Slotted length: 15.0 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: David M Dan
Firm: **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

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WI0008110001

State of Wisconsin
Department of Natural Resources

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

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

FILE COPY

Facility/Project Name **MIDDLETON CLEANERS**	Local Grid Location of Well ☐ N. ☐ E. _____ ft. ☐ S. ☐ W.	Well Name **AGPZ-4**
Facility License, Permit or Monitoring Number _____	Grid Origin Location Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E.	Wis. Unique Well Number DNR Well Number _____ _____
Type of Well Water Table Observation Well ☐ 11 Piezometer ☒ 12	Section Location of Waste/Source ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐ E. ☐ W.	Date Well Installed m m d d y y **0 7/2 1/0 0**
Distance Well Is From Waste/Source Boundary _____ ft.	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm) **BOART LONGYEAR** **MIKE AND DAN**
Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No		

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or **2.0** ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☐ 41
ROTOSONIC 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 _____ ft. MSL or **2.0** ft.

F. Fine sand, top _____ ft. MSL or **76.0** ft.

G. Filter pack, top _____ ft. MSL or **78.0** ft.

H. Screen joint, top _____ ft. MSL or **80.0** ft.

I. Well bottom _____ ft. MSL or **85.0** ft.

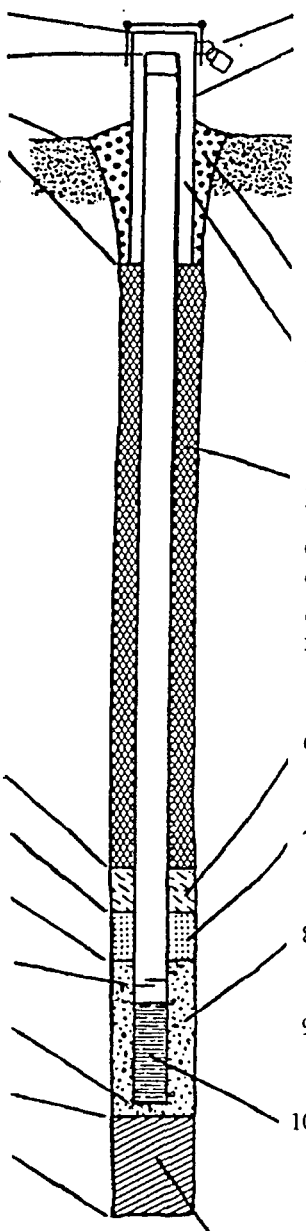
J. Filter pack, bottom _____ ft. MSL or **85.0** ft.

K. Borehole, bottom _____ ft. MSL or **85.0** ft.

L. Borehole, diameter **6.00** in.

M. O.D. well casing **2.37** in.

N. I.D. well casing **2.06** in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: **9.00** in.
b. Length: **1.0** ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
_____ Other ☐

4. Material between well casing and protective pipe:
Bentonite ☐ 30
Annular space seal ☐
SAND 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. **14.5** Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☒ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. **BADGER MINING BB #7**
b. Volume added **0.4** ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. **RED FLINT #30**
b. Volume added **1.4** ft³

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 **BOART LONGYEAR**
c. Slot size: **0.010** in.
d. Slotted length: **5.0** 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 David M Bu

Firm **ARCADIS Geraghty & Miller, Inc.**
126 N. Jefferson St., Ste 400, Milwaukee, WI 53202 (414) 276-7742

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs 144,147 & 160, Wis Stats, and ch NR 141, Wis Ad Code. In accordance with ch 144, Wis Stats, failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch 147, Wis Stats, failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

WI0008110001

Appendix C

Monitoring Well Development Forms

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

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

Facility/Project Name	County	Well Name
Middleton Cleaners	Dane	AGMW-1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	13		

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 _____	☐	80

3. Time spent developing well 38 min.

4. Depth of well (from top of well casing) 69.0 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing 6.9 gal.

7. Volume of water removed from well 50.0 gal.

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

9. Source of water added _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	58.30 ft.	58.28 ft.
Date b.	07/20/2000	07/20/2000
Time c.	05:30 pm	06:08 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Lt Brown	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear
14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

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

16. Well developed by: Person's Name and Firm
D. Morris
Boart Longyear

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: Ron Thalacker

Firm: Boart Longyear

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

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

Facility/Project Name	County	Well Name
Middleton Cleaners	Dane	AGPZ-1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	13		

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 65 min.

4. Depth of well (from top of well casing) 85.0 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing 34.5 gal.

7. Volume of water removed from well 165.0 gal.

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

9. Source of water added _____

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

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	46.10 ft.	46.10 ft.
Date	b.	07/20/2000	07/20/2000
Time	c.	01:25 pm	02:30 pm
12. Sediment in well bottom		0.010 inches	0.0 inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe) Lt Brown Cloudy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

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

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

16. Well developed by: Person's Name and Firm
M. Hansen
Boart Longyear

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: Ron Thalacker

Firm: Boart Longyear

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

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

Facility/Project Name	County	Well Name
Middleton Cleaners	Dane	AGMW-2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	13		

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 casing) 56.3 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing 9.5 gal.

7. Volume of water removed from well 50.0 gal.

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

9. Source of water added _____

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

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	45.46 ft.	45.55 ft.
Date	b.	07/21/2000	07/21/2000
Time	c.	07:08 am	07:38 am
12. Sediment in well bottom		0.010 inches	0.0 inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe) Med Brown	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

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

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

16. Well developed by: Person's Name and Firm
D. Morris
Boart Longyear

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: Ron Thalacker

Firm: Boart Longyear

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

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

Facility/Project Name	County	Well Name
Middleton Cleaners	Dane	AGPZ-2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	13		

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 59 min.

4. Depth of well (from top of well casing) 85.0 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing 34.9 gal.

7. Volume of water removed from well 150.0 gal.

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

9. Source of water added _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	45.47 ft.	45.45 ft.
Date b.	07/20/2000	07/20/2000
Time c.	08:07 pm	09:06 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Med Brown	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

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

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

16. Well developed by: Person's Name and Firm
D. Morris
Boart Longyear

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: Ron Thalacker

Firm: Boart Longyear

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

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

Facility/Project Name	County	Well Name
Middleton Cleaners	Dane	AGPZ-3

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	13		

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: 60 min.

4. Depth of well (from top of well casing): 84.9 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 35.2 gal.

7. Volume of water removed from well: 150.0 gal.

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

9. Source of water added: _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	45.25 ft.	45.25 ft.
Date b.	07/20/2000	07/20/2000
Time c.	06:30 pm	07:30 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Med-Drk Brown	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

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

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

16. Well developed by: Person's Name and Firm
D. Morris
Boart Longyear

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: Ron Thalacker

Firm: Boart Longyear

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

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

Facility/Project Name	County	Well Name
Middleton Cleaners	Dane	AGPZ-4

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	13		

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 60 min.

4. Depth of well (from top of well casing) 86.4 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing 38.9 gal.

7. Volume of water removed from well 150.0 gal.

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

9. Source of water added _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	42.22 ft.	42.10 ft.
Date b.	07/21/2000	07/21/2000
Time c.	10:10 am	11:10 am
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
(Describe)	Lt Brown	Clear

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

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

16. Well developed by: Person's Name and Firm
D. Morris
Boart Longyear

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

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

Signature: _____

Print Name: Ron Thalacker

Firm: Boart Longyear

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