From: Schultz, Josie M - DNR
Sent: Wednesday, May 1, 2024 10:42 AM
To: Andy Delforge
Cc: Ken Juza
Subject: V&L Stripping Methane 02-05-216722
Attachments: FW: Methane Sampling Results

Hi Andy,

Thank you for the conversation this morning. I was able to discuss the methane accumulation in wells with statewide experts, along with the injection oil in MW300. Before DNR can move forward with closure approval, we will need additional information for both of these items:

1. Methane was detected in monitoring well MW800 at concentrations of 4,240 ug/L in November of 2023, and DNR is concerned with potential methane gas accumulation at the neighboring home. DNR is requesting that soil vapor extraction point SVE-4 have methane sampled.
    a. Attached to this email is a submittal for a methane study performed at a site in Milwaukee, which includes sampling procedures. Based on results from this study, DNR is requesting open cap monitoring of SVE-4 with a multi-gas meter.
    b. If elevated methane concentrations are detected in SVE-4, then DNR will request that methane be sampled in the sub-slab of the neighboring home at 856 Mather Street.

2. DNR is requesting that historic CAP-18 injection oil thickness measurement be submitted, if available, and thickness of oil in this monitoring well be measured at time of methane testing.

Please let me know if you have any questions.

Thanks,
Josie

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Josie M. Schultz
Hydrogeologist – Northeast Region Remediation and Redevelopment Team
Wisconsin Department of Natural Resources
110 S. Neenah Avenue, Sturgeon Bay, WI 54235
Cell Phone: 920-366-5685
Josie.Schultz@Wisconsin.gov

dnr.wi.gov

Shaw Environmental, Inc.
111 West Pleasant Street, Suite 105
Milwaukee, WI 53212-3939
Tel 414.291.2350
Fax: 414.291.2385

Shaw™ Shaw Environmental, Inc.

July 13, 2006

Mr. Samuel D. Dickman
Dickman Real Estate
626 East Wisconsin Avenue
Milwaukee, Wisconsin 53202

RE: Methane Study
Selig Drive and Milwaukee Street
Milwaukee, Wisconsin
Shaw Project No. 121921

Dear Mr. Dickman:

Shaw Environmental, Inc. (Shaw) performed a pre-construction limited methane study on the property located at the corner of Selig Drive and Milwaukee Road, Milwaukee, Wisconsin (hereinafter referenced to as the "Site"). The Site encompasses approximately 2.6 acres within Milwaukee's Menomonee River Valley. The Menomonee River Valley was originally a marsh/wetlands area, and historically was filled with various fill materials. The Valley's native soil and fill types are known to generate methane. The purpose of the study was to determine the potential for methane generation of the subsurface materials identified at the Site. The following sections detail the procedures and results of the study, and present recommendations for passive methane abatement of the proposed structure.

Monitoring Point Installation

On June 27, 2006, Shaw supervised the installation of three methane monitoring points (MP-1 to MP-3). Two of the methane monitoring points (MP-1 and MP-2) were installed in the northwest corner (office area) of the proposed structure, and one (MP-3) monitoring point was installed in the warehouse and shop area of the structure. The location of the monitoring points was based on evaluating the building footprint as indicated on the proposed site plan, and utilized the northwestern structures survey corner stake for dimensions. Methane monitoring point locations were influenced by the presence of an underground electric line that leads to a petroleum above ground storage tank, owned and operated by Edgerton Contractors. The proposed Site plan and methane monitoring point locations are presented on the attached Figure 1.

Gestra Engineering, Inc. advanced 2.25 inch diameter hollow stem augers until native sediments and groundwater were encountered at approximately 16 feet below ground surface. One inch diameter flush threaded PVC schedule 40 vapor monitoring points were installed above the native sediments/groundwater table. A sand filter pack was placed around the factory slot cut portion of the wells. On top of the filter pack, fine sand was placed which then was sealed from the surface using hydrated 3/8 inch bentonite chips. A secure cap and sampling port was placed on the monitoring point. The sampling port allows for open-to-the-atmosphere collection or closed-to-the-atmosphere collection gas sampling.

The open cap readings were intended to simulate passive venting conditions. The closed cap readings were intended to simulate gas accumulation in a closed space. The attached monitoring well construction forms detail specifications of the individual vapor monitoring points.

Lithology

Soil samples were collected using a split spoon sampler that was driven into the subsurface. At the surface, approximately 2 feet of clay was encountered at the monitoring point locations. It is believed that the clay was placed on site as a cap covering the imported fill below. The imported fill material was located from below the clay cap to approximately 14 to16 feet below grade (fbg). The fill materials consisted of silty clays, sandy clays, sand with gravel, foundry sands with clinkers, wood debris, and brick. Native estuarine soils, consisting of saturated sand with shells, were encountered at 14-16 feet fbg. Each sample collected was visually classified and field screened using a Photoionization Detector (PID). Results from the PID field screening indicate the presence of volatile vapors in the soil. The attached soil boring logs detail the lithology, provide a monitoring point diagram and include PID results.

Methane Monitoring Procedures

Methane monitoring started on June 29th, 2006 and was completed on July 7th, 2006. A PID and Lantec® Model GEM-500 infrared gas analyzer were used to collect and analyze gas samples. Both instruments we calibrated before each days use. The gas monitoring wells were purged with the objective of recording the conditions of the gas around the probe and not gases that can be pulled to the casing via the purging process.

The monitoring consisted of collecting percent methane, oxygen, carbon dioxide, and lower explosive limit of methane readings from the three monitoring points. Temperature, barometric pressure and PID readings were also recorded.

Two sets of readings were collected from the three monitoring points. One set of readings were collected with the caps open to the atmosphere (June 29, 2006 through July 3, 2006). This set of readings is intended to simulate passive venting conditions, and is called open cap monitoring. The second set of readings was collected with the caps closed to the atmosphere (July 5, 2006 through July 17, 2006). The second set of readings is intended to simulate gas accumulation in a closed space, and is called closed cap monitoring. The results of the methane monitoring are summarized in Table 1.

Methane Monitoring Results

Open Cap Monitoring
Detected concentrations of methane ranged from 0.0 to 9.5 percent. The highest concentrations of methane were reported during the initial two days, and concentrations decreased to zero as the days passed. During the initial two days of testing, all three monitoring points had recorded readings above the Wisconsin Department of Natural Resources (WDNR) recommended limit of 1.25% methane gas.

Closed Cap Monitoring
Detected concentrations of methane ranged from 0.0 to 1.0 percent. The highest concentrations of methane were reported during the first day, and concentrations decreased to zero during the next two days. The three monitoring points did not have recorded readings above the WDNR recommended limit of 1.25% methane gas.

Conclusions

Materials (native sediment and fill) with potential for methane generation are present in the subsurface beneath the Site. Methane concentrations were detected at levels above the WDNR recommended limit of 1.25% methane gas in the three monitoring points during the study; however, the concentrations decreased by the end of the study.

The WDNR recommends that enclosed structures not be built on properties which exhibit methane concentrations greater than 1.25% total methane; however, construction can be completed with the implementation of engineered systems or alternative construction techniques.

The Menomonee River Valley is considered as a historic fill site, and is governed by Wisconsin Administrative Code (WAC), Chapter NR 500. Historic fill sites require an exemption from the WDNR to construct a building.

Recommendations

The following recommendations are provided based on the results of this study, Shaw's experience working in the valley and WDNR regulations:

- Prepare an exemption to construct on a Historic Fill Site, and submit to the WDNR for review;
- Design a passive methane abatement system to incorporate into the structure prior to construction. The system will be highly dependent on the buildings final dimensions, foundation and construction;
- Abandon the three methane monitoring points per WAC NR 141.

Closing

Shaw appreciates the opportunity to be of service on this project. We would be happy to meet with you to discuss this study. If you have any questions regarding the information contained herein, or if we can be of additional service, please contact the undersigned at your convenience.

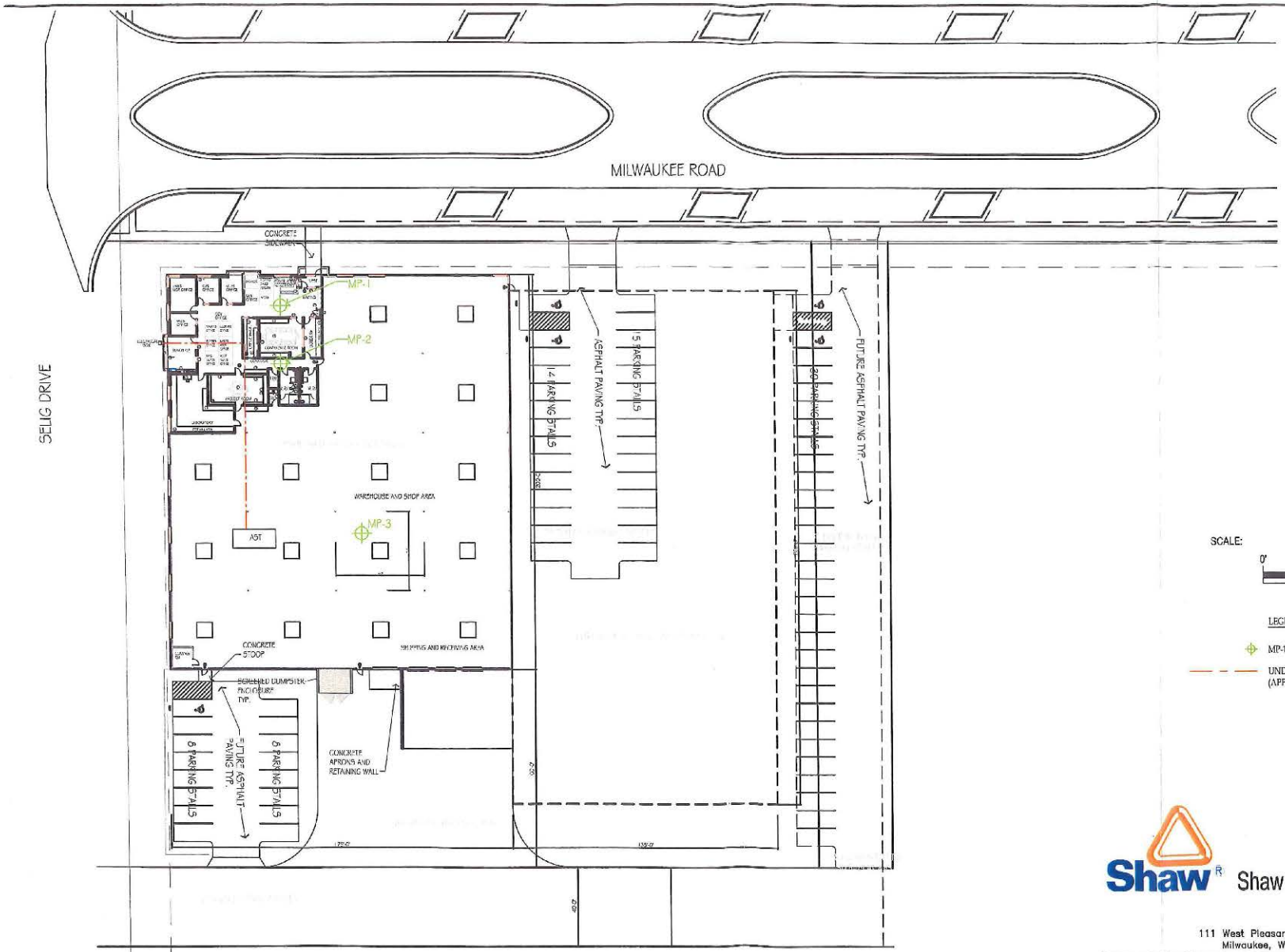
Sincerely,

SHAW ENVIRONMENTAL, INC.

Timothy P. Welch, P.G.
Project Manager

Paul S. Zovic
District Manager

Figure



Shaw® Shaw Environmental, Inc.

111 West Pleasant Street, Suite 105
Milwaukee, Wisconsin 53212

DRAWING:	CALEFFI SITE MENOMONEE VALLEY OVERLOOK
DRAWN BY:	JRD
CHECKED BY:	
APPROVED BY:	
REVISIONS:	
ENGINEER	
DATE	
ENGINEER	
DATE	

PROPOSED SITE PLAN MAP AND METHANE MONITORING POINT LOCATION PLAN

CALEFFI – NORTH AMERICA
SELIG DRIVE & MILWAUKEE ROAD
MILWAUKEE, WISCONSIN

FIGURE NO. 1

Table

Table 1
Summary:
Landfill Gas Field Measurements
Proposed Caleffi Property
Milwaukee Street and Selig Drive
Milwaukee, Wisconsin

Well Number		MP-1					
Measurement Date		6/29/2006	6/30/2006	7/3/2006	7/5/2006	7/6/2006	7/7/2006
Cap	open/closed	open	open	open	closed	closed	closed
Methane (CH_4)	% by volume	4.8	4.6	0.0	0.8	0.0	0.0
Carbon Dioxide (CO_2)	% by volume	0.0	0.0	0.0	0.0	0.0	0.0
Oxygen (O_2)	% by volume	13.6	13.8	6.8	13.5	9.9	10.2
Methane LEL	%	82.0	92.0	0.0	1.6	0.0	0.0
PID	ppmv	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	deg. C	25.56	26.67	22.80	22.00	23.88	22.00
Barometric Pressure	in. Hg	30.18	30.07	30.00	30.09	30.29	30.31

NOTES
deg. C = degrees Celsius, obtained on-line
in. Hg = inches of mercury, obtained on-line
LEL = lower explosive limit
(the LEL for CH4 is 5% CH4 by volume)
MP = methane monitoring point
PID = photoionization detector
ppmv = parts per million by volume

Approved by: CAL Checked by: TAS
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7/13/2006 01 PM

Table 1
Summary:
Landfill Gas Field Measurements
Proposed Caleffi Property
Milwaukee Street and Selig Drive
Milwaukee, Wisconsin

Well Number		MP-2					
Measurement Date		6/29/2006	6/30/2006	7/3/2006	7/5/2006	7/6/2006	7/7/2006
Cap	open/closed	open	open	open	closed	closed	closed
Methane (CH_4)	% by volume	6.4	4.6	0.0	1.0	0.0	0.0
Carbon Dioxide (CO_2)	% by volume	0.3	1.3	1.1	2.0	1.1	1.6
Oxygen (O_2)	% by volume	9.8	10.2	11.4	5.2	8.1	7.1
Methane LEL	%	132.0	92.0	0.0	2.0	0.0	0.0
PID	ppmv	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	deg. C	25.56	26.67	22.80	22.00	22.88	22.00
Barometric Pressure	in. Hg	30.18	30.07	30.00	30.09	30.29	30.31

NOTES
deg. C = degrees Celsius, obtained on-line
in. Hg = inches of mercury, obtained on-line
LEL = lower explosive limit
(the LEL for CH4 is 5% CH4 by volume)
MP = methane monitoring point
PID = photoionization detector
ppmv = parts per million by volume

Approved by: CAL Checked by: TAW
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Table 1
Summary:
Landfill Gas Field Measurements
Proposed Caleffi Property
Milwaukee Street and Selig Drive
Milwaukee, Wisconsin

Well Number		MP-3					
Measurement Date		6/29/2006	6/30/2006	7/3/2006	7/5/2006	7/6/2006	7/7/2006
Cap	open/closed	open	open	open	closed	closed	closed
Methane (CH_4)	% by volume	0.0	9.5	0.0	0.9	0.0	0.0
Carbon Dioxide (CO_2)	% by volume	0.0	2.2	0.2	1.4	0.1	0.8
Oxygen (O_2)	% by volume	18.2	6.8	17.3	14.3	16.7	15.8
Methane LEL	%	0.0	190.0	0.0	1.8	0.0	0.0
PID	ppmv	0.0	0.0	0.0	0.0	0.0	0.0
Temperature	deg. C	25.56	26.67	22.80	22.00	22.88	22.00
Barometric Pressure	in. Hg	30.18	30.07	30.00	30.09	30.29	30.31

NOTES
deg. C = degrees Celsius, obtained on-line
in. Hg = inches of mercury, obtained on-line
LEL = lower explosive limit
(the LEL for CH4 is 5% CH4 by volume)
MP = methane monitoring point
PID = photoionization detector
ppmv = parts per million by volume

Soil Boring Logs

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Caleffi		B-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Adam Woerpel Gestra	6/27/2006	6/27/2006	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MP-1	Feet MSL	Feet MSL	4.3 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N, R

Lat 43° 1' 38.5"
Long 87° 57' 42.7"

Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	41	Milwaukee

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind Drill (Fill)	CL									
SS-1 SS	24 20	21 31 21 21	2 3	SAND with GRAVEL trace CLAY, brown (7.5YR5/4), dry (Fill)	SW			2						
SS-2 SS	24 22	23 27 21 21	4 5					3						
SS-3 SS	24 24	2 4 7 13	6 7	SANDY CLAY with FOUNDRY SAND, black (7.5YR2.5/1), moist (Fill)	CL			11						
SS-4 SS	24 18	7 5 4 9	8 9	SILTY CLAY trace BRICK, black (7.5YR2.5/1), moist (Fill)				74						
SS-5 SS	24 4	3 5 6 9	10 11		CL-ML			83						
			12											

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

Signature

Firm Shaw Environmental & Infrastructure, Inc.
111 West Pleasant Street, Suite 105 Milwaukee, WI 53212-3939
Tel: 414-291-2350
Fax: 414-291-2385

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-1 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
SS-6	24	3		SILTY CLAY trace SAND and GRAVEL, brown (7.5YR5/4), moist to wet at 14 feet below grade (fbg) (fill)	CL-ML			27						
SS	6	2												
		3												
		1	13											
			14											
SS-7	24	2		SAND with SHELLS, brown (7.5YR5/4), wet	SW			13						
SS	16	5												
		4												
		5	15											
			16	End of Boring at 16 fbg Monitoring Well MP-1 set at 14 fbg										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Caleffi		B-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Adam Woerpel Gestra	6/27/2006	6/27/2006	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MP-2	Feet MSL	Feet MSL	4.3 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N, R
Lat 43° 1' 38.5"
Long 87° 57' 42.7"
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	41	Milwaukee

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Blind Drill (Fill)										
			2		CL									
			3											
SS-1	24	5	4	SAND with GRAVEL trace CLAY, brown (7.5Yr5/4), dry (Fill)				24						
SS	20	11												
		21	5		SW									
		23												
SS-2	24	7	6					5						
SS	15	8												
		13		FOUNDRY SAND, black (7.5YR2.5/1), moist (Fill)										
		13	7											
SS-3	24	5	8		SW			7						
SS	17	7												
		8												
		9	9											
SS-4	24	2	10	SAND trace GRAVEL, brown (7.5YR5/4), moist (Fill)				3						
SS	20	3			SW									
		2												
		3	11											
			12											

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

Signature

Firm Shaw Environmental & Infrastructure, Inc.
111 West Pleasant Street, Suite 105 Milwaukee, WI 53212-3939
Tel: 414-291-2350
Fax: 414-291-2385

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-2 Use only as an attachment to Form 4400-122.

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
SS-5	24	3		SANDY CLAY, dark gray (7.5YR5/4), moist to wet at 14 feet below grade (fbg)				3						
SS	22	5												
		3												
		4	13											
			14		CL									
SS-6	24	2						1						
SS	24	3												
		4												
		3	15											
			16											
SS-7	24	1		SAND, brown (7.5YR5/4) wet				0						
SS	20	5												
		3												
		4	17		SP									
			18											
				End Of Boring at 18 fbg Monitoring Well MP-1 set at 15 fbg										

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Caleffi		B-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Adam Woerpel Gestra	6/27/2006	6/27/2006	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MP-3	Feet MSL	Feet MSL	4.3 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
1/4 of 1/4 of Section , T N, R

Lat 43° 1' 38.5"
Long 87° 57' 42.7"

Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	41	Milwaukee

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1											
			2		CL									
			3											
SS-1	24	3	4	SAND with GRAVEL, brown (7.5YR5/4), moist (Fill)				0						
SS	20	7												
		9	5											
		10												
SS-2	24	4	6		SW			3						
SS	20	4												
		5												
		4	7											
SS-3	24	5	8	SILTY CLAY trace WOOD DERIS, brown (7.5YR5/4), moist (Fill)				5						
SS	18	9												
		8												
		11	9											
SS-4	24	5	10		CL-ML			11						
SS	12	8												
		10												
		11	11											
			12											

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

Signature

Firm Shaw Environmental & Infrastructure, Inc.
111 West Pleasant Street, Suite 105 Milwaukee, WI 53212-3939
Tel: 414-291-2350
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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number B-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 Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
SS-5	24	7		SAND with GRAVEL and FOUNDRY SAND, black (7.5YR2.5/1), moist to wet at 15 feet below grade (fbg)				3						
SS	24	6												
		7												
		8	13		SW									
SS-6	24	5	14					2						
SS	20	6												
		7												
		8	15	SILTY CLAY, brown (7.5YR5/4), wet	CL-ML									
SS-7	24	7	16	SAND, brown (7.5YR5/4), wet				0						
SS	18	7												
		8												
		7	17		SP									
			18	End Of Boring at 18 fbg Monitoring Well MP-1 set at 16 fbg										

Monitoring Well Construction Forms

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Caleffi	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MP-1
Facility License, Permit or Monitoring No.	Local Grid Origin [X] (estimated: [X]) or Well Location ☐ Lat. 43 ° 1 ' 38.5 " Long. 87 ° 57 ' 42.7 " or	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID _____	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 6/27/2006 (m m d d y y y y)
Type of Well: Well Code 51 / gp	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec, _____, T. _____ N, R. _____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Adam Woerpel; Gestra
Distance from Waste/Source _____ ft.	Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n [X] Not Known
		Gov. Lot Number: _____

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 8 ft.

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

13. Sieve analysis performed? ☐ Yes [X] No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger [X] 41
Other ☐ _____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None [X] 99

16. Drilling additives used? ☐ Yes [X] No
Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or _____ ft.

F. Fine sand, top _____ ft. MSL or 8 ft.

G. Filter pack, top _____ ft. MSL or 9 ft.

H. Screen joint, top _____ ft. MSL or 9 ft.

I. Well bottom _____ ft. MSL or 14 ft.

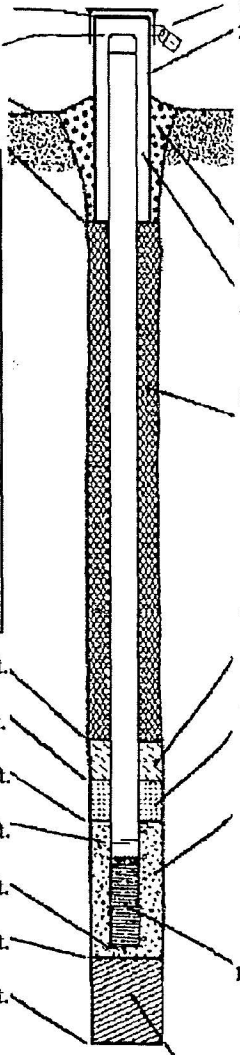
J. Filter pack, bottom _____ ft. MSL or 14 ft.

K. Borehole, bottom _____ ft. MSL or 16 ft.

L. Borehole, diameter 4.25 in.

M. O.D. well casing 1.25 in.

N. I.D. well casing 1 in.



1. Cap and lock? [X] Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 1 in.
b. Length: _____ ft.
c. Material: Steel ☐ 04
PVC _____ Other [X]
d. Additional protection? ☐ Yes [X] No
If yes, describe: _____

3. Surface seal: Bentonite [X] 30
Concrete ☐ 01
_____ Other ☐

4. Material between well casing and protective pipe:
Bentonite [X] 30
_____ Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite [X] 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity [X] 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. [X]3/8 in. ☐1/2 in. Bentonite chips ☐ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. R.W. Sidley #4000
b. Volume added 1 ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. R.W. Sidley #5
b. Volume added 5 ft^3

9. Well casing: Flush threaded PVC schedule 40 [X] 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐

10. Screen material: PVC _____
a. Screen type: Factory cut [X] 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer Monoflex
c. Slot size: 0.01 in.
d. Slotted length: 5 ft.

11. Backfill material (below filter pack): None ☐ 14
sand Other [X]

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

Signature _____ Firm: Shaw E & I

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

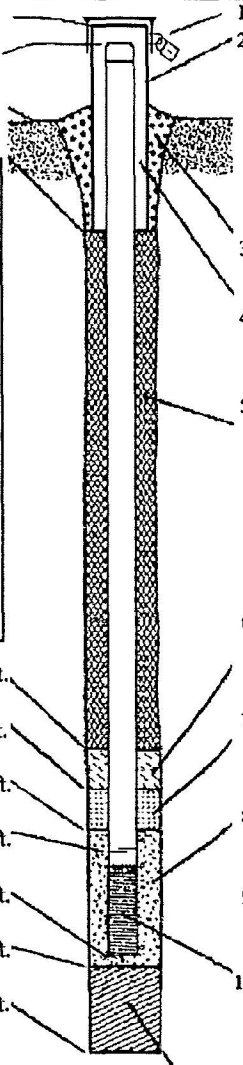
State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Caleffi	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MP-2
Facility License, Permit or Monitoring No.	Local Grid Origin [X] (estimated: [X]) or Well Location ☐ Lat. 43 ° 1 ' 38.45 " Long. 87 ° 57 ' 42.73 " or	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID _____	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 6/27/2006 (m m d d y y y y)
Type of Well: Well Code 51 / gp	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec. _____, T. _____ N, R. _____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Adam Woerpel; Gestra
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n [X] Not Known	Gov. Lot Number: _____



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 4 ft.

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

13. Sieve analysis performed? ☐ Yes [X] No

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

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None [X] 99

16. Drilling additives used? ☐ Yes [X] No

Describe _____

17. Source of water (attach analysis, if required):
_____

E. Bentonite seal, top _____ ft. MSL or _____ ft.

F. Fine sand, top _____ ft. MSL or 4 ft.

G. Filter pack, top _____ ft. MSL or 5 ft.

H. Screen joint, top _____ ft. MSL or 5 ft.

I. Well bottom _____ ft. MSL or 15 ft.

J. Filter pack, bottom _____ ft. MSL or 15 ft.

K. Borehole, bottom _____ ft. MSL or 18 ft.

L. Borehole, diameter 4.25 in.

M. O.D. well casing 1.25 in.

N. I.D. well casing 1 in.

1. Cap and lock? [X] Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 1 in.
b. Length: _____ ft.
c. Material: Steel ☐ 04
PVC _____ Other [X]
d. Additional protection? ☐ Yes [X] No
If yes, describe: _____

3. Surface seal: Bentonite [X] 30
Concrete ☐ 01
_____ Other ☐

4. Material between well casing and protective pipe:
Bentonite [X] 30
_____ Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity [X] 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. [X]3/8 in. ☐1/2 in. Bentonite chips ☐ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. R.W. Sidley #4000
b. Volume added 1 ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. R.W. Sidley #5
b. Volume added 10 ft^3

9. Well casing: Flush threaded PVC schedule 40 [X] 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐

10. Screen material: PVC _____
a. Screen type: Factory cut [X] 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer Monoflex
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter pack): None ☐ 14
sand Other [X]

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

Signature _____ Firm: Shaw E & I

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

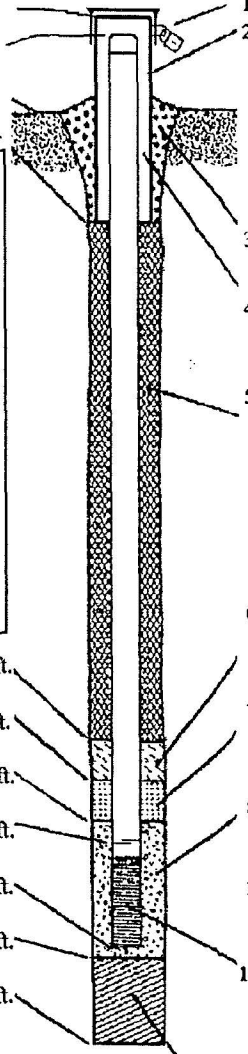
State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Caleffi	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MP-3
Facility License, Permit or Monitoring No.	Local Grid Origin [X] (estimated: [X]) or Well Location ☐ Lat. 43 ° 1 ' 38.5 " Long. 87 ° 57 ' 42.7 " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 6/27/2006 (m m d d y y y y)
Type of Well: Well Code 51 / gp	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec. _____, T. _____ N, R. _____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Adam Woerpel; Gestra
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n [X] Not Known	Gov. Lot Number: _____



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 5 ft.

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

13. Sieve analysis performed? ☐ Yes [X] No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger [X] 41; Other ☐ _____

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

16. Drilling additives used? ☐ Yes [X] No
Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or _____ ft.
F. Fine sand, top _____ ft. MSL or 5 ft.
G. Filter pack, top _____ ft. MSL or 6 ft.
H. Screen joint, top _____ ft. MSL or 6 ft.
I. Well bottom _____ ft. MSL or 16 ft.
J. Filter pack, bottom _____ ft. MSL or 16 ft.
K. Borehole, bottom _____ ft. MSL or 18 ft.
L. Borehole, diameter 4.25 in.
M. O.D. well casing 1.25 in.
N. I.D. well casing 1 in.

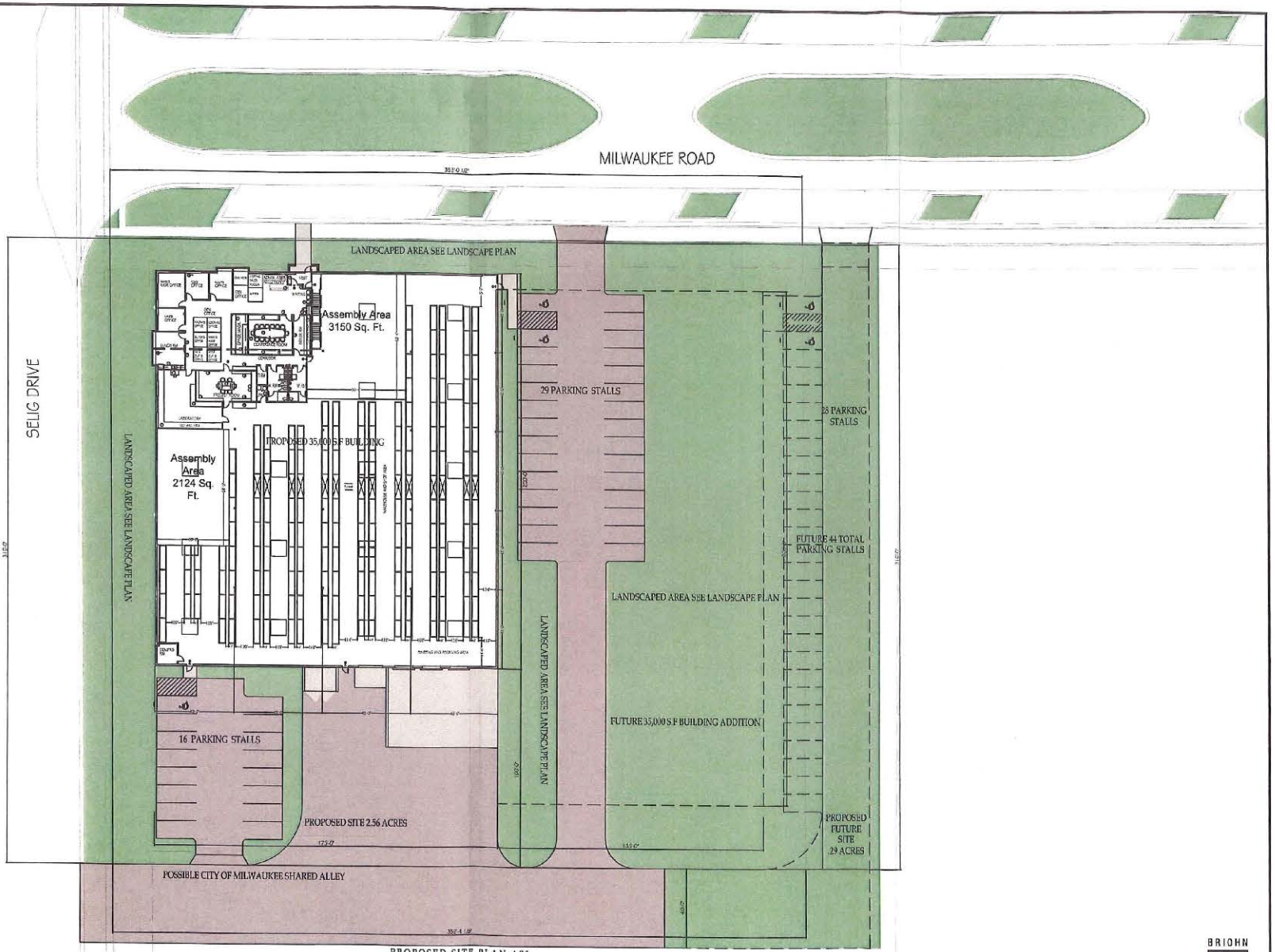
1. Cap and lock? [X] Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 1 in.
b. Length: _____ ft.
c. Material: Steel ☐ 04; PVC _____; Other [X]
d. Additional protection? ☐ Yes [X] No
If yes, describe: _____
3. Surface seal: Bentonite [X] 30; Concrete ☐ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite [X] 30; Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite [X] 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity [X] 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. [X]3/8 in. ☐1/2 in. Bentonite chips ☐ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. R.W. Sidley #4000
b. Volume added 1 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. R.W. Sidley #5
b. Volume added 10 ft^3
9. Well casing: Flush threaded PVC schedule 40 [X] 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ _____
10. Screen material: PVC _____
a. Screen type: Factory cut [X] 11; Continuous slot ☐ 01; Other ☐ _____
b. Manufacturer Monoflex
c. Slot size: 0.01 in.
d. Slotted length: 10 ft.
11. Backfill material (below filter pack): None ☐ 14; Other ☐ sand

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

Signature	Firm
	Shaw E & I

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Attachment C



PROPOSED SITE PLAN A0.1

CALEFFI - NORTH AMERICA

MILWAUKEE , WI

1" = 50'-0"

REVISED JULY 10, 2006

NORTH

BRIOHN DESIGN GROUP