252007140 #5 → RR Egre

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☒ Other ENVIR. RESP. & REPAIR

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

Page 1 of 3

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
TWIN DISC - BROACH PIT -		MW 9

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
GILES ENGINEERING - CHRIS HEAD -	12/29/97 (M M D D Y Y)	12/29/97 (M M D D Y Y)	HOLLOW STEM AUGER

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW 19	____ Feet MSL	____ Feet MSL	4.25 inches

Boring Location
State Plane ____ N, ____ E S/C/N
SW 1/4 of NW 1/4 of Section 19, T 3 N, R 22 E/W
Lat ° ' "
Long ° ' "

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

County	DNR County Code	Civil Town/City/ or Village
RACINE	52	RACINE

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			2.5 / 5	BROWN SILTY CLAY, DRY	CL									
			7.5 / 10 / 12.5											
2			15	BROWN/GREY SILTY CLAY	CL									
			17.5											
3			20	TIGHT GREY CLAY, DAMP	CL									
		EOB	22.5 / 25											

RECEIVED
FEB 12 1998
TECHNICAL SUPPORT SECTION
WASTE MANAGEMENT BUREAU

RECEIVED
MAR 15 2000

WISCONSIN EDWIN E. RAYMOND 932 WIS.

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

Signature Edwin E. Raymond Firm ENVIRONMENTAL AUDITS, INC.

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

Route To:
☐ Solid Waste ☐ Haz. Waste
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SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 5-92

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
TWIN DISC - BROACH PIT -	_ _ _ _ _ _ _ _	MW 20

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
GILES ENGINEERING - CHRIS HEAD -	12/29/97 (M M D D Y Y)	12/29/97 (M M D D Y Y)	HOLLOW STEM AUGER

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _	_ _ _ _ _ _ _ _	MW 20	_____ Feet MSL	_____ Feet MSL	4.25 inches

Boring Location
State Plane _____ N, _____ E S/C/N
SW 1/4 of NW 1/4 of Section 19, T 3 N, R 22 (E) W

Lat ° ' "
Long ° ' "

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

County	DNR County Code	Civil Town/City/ or Village
RACINE	52	RACINE

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			2.5											
			5	BROWN SILTY CLAY, TIGHT	CL									
			7.5											
			10											
			12.5											
2				BROWN SILTY CLAY, TIGHT	CL									
			15											
			17.5											
3				BROWN SILTY CLAY, TIGHT	CL									
			20											
			22.5											
		EOB	25											

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

Signature: Edwin E. Raymond

Firm: ENVIRONMENTAL AUDITS, INC.

WISCONSIN EDWIN E. RAYMOND 932 RACINE

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State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☒ Other ENVIR. RESP. & REPAIR

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

Page 3 of 3

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
TWIN DISC - BROACH PIT -		MW 21

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
GILES ENGINEERING - CHRIS HEAD -	12/29/97 (MM/DD/YY)	12/29/97 (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
		MW 21	_____ Feet MSL	_____ Feet MSL	4.25 inches

Boring Location
State Plane _____ N, _____ E S/C/N
SW 1/4 of NW 1/4 of Section 19, T 3 N, R 22 (E)W
Lat ° ' "
Long ° ' "

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

County	DNR County Code	Civil Town/City/ or Village
RACINE	52	RACINE

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			2.5 – 5	BROWN CLAY, TIGHT	CL									
			7.5 – 10 – 12.5											
2				BROWN CLAY, TIGHT	CL									
			15 – 17.5											
3				GREY CLAY, TIGHT, DAMP	CL									
		EOB	20 – 22.5 – 25											

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

Signature: Edwin E. Faymond

Firm: 932 ENVIRONMENTAL AUDITS, INC.

WISCONSIN EDWIN E. RAYMOND WIS. ENVIRONMENTAL CONSULTANT

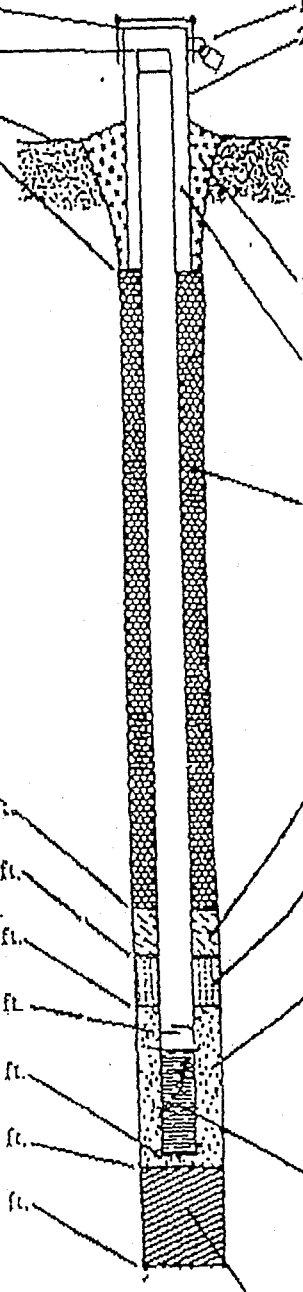
This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss. 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-9

Facility/Project Name: Twin Disc Broach Pit	Local Grid Location of Well: _____ ft. ☐ N. ☐ S. _____ ft. ☐ E. ☐ W.	Well Name: MW 19
Facility License, Permit or Monitoring Number: _____	Grid Origin Location: Lat. _____ Long. _____ or	Wisconsin Well Number / DNR Well Number: [illegible]
Type of Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12	St. Plane _____ ft. N. _____ ft. E.	Date Well Installed: 12/28/97 (m m d d y y)
Distance Well Is From Waste/Source Boundary: _____ ft.	Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 19, T. 3 N, R 22 ☒ E. ☐ W.	Well Installed By: (Person's Name and Firm) Beauford Jones, Giles Engineering
Is 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 25.0 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; 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 10 ft.
F. Fine sand, top _____ ft. MSL or 60 ft.
G. Filter pack, top _____ ft. MSL or 80 ft.
H. Screen joint, top _____ ft. MSL or 100 ft.
I. Well bottom _____ ft. MSL or 250 ft.
J. Filter pack, bottom _____ ft. MSL or 250 ft.
K. Borehole, bottom _____ ft. MSL or 250 ft.
L. Borehole, diameter 8.2 in.
M. O.D. well casing 2.35 in.
N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐ _____
d. Additional protection? ☒ Yes ☐ No
If yes, describe: Expandable Cap
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐ _____; Other ☐ _____
5. Annular space seal: a. Granular Bentonite ☒ 33
b. _____ lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 100 lbs ☒ 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. Chipped Bentonite Other ☒ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. #45-55 Red Flint
b. Volume added 50 lbs
8. Filter pack material: Manufacturer, product name and mesh size
a. #30 Red Flint
b. Volume added 700 lbs
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 Diedrich
c. Slot size: 0.10 in.
d. Slotted length: _____
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: Tim [signature] | Firm: Giles Engineering Assoc. Inc.

Please complete both sides of this form and return to the appropriate DNR office listed [illegible]

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. 4-9

Facility/Project Name: Twin Disc Broach Pit	Local Grid Location of Well: ☐N ☐S ft. ☐E ☐W ft.	Well Name: MW 20
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: SW1/4 of NW 1/4 of Sec. 19, T. 3 N. R22 ☒E ☐W	Date Well Installed: 12/28/97
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) Beanford Jones; Giles Engineering
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 25.0 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; 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 10 ft.
F. Fine sand, top ____ ft. MSL or 60 ft.
G. Filter pack, top ____ ft. MSL or 80 ft.
H. Screen joint, top ____ ft. MSL or 100 ft.
I. Well bottom ____ ft. MSL or 250 ft.
J. Filter pack, bottom ____ ft. MSL or 250 ft.
K. Borehole, bottom ____ ft. MSL or 250 ft.
L. Borehole, diameter 8.2 in.
M. O.D. well casing 2.35 in.
N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐
d. Additional protection? ☒ Yes ☐ No
If yes, describe: Expandable cap
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐; Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ___ lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. ___ lbs/gal mud weight ... Bentonite slurry ☐ 31
d. ___ % Bentonite ... Bentonite-cement grout ☐ 50
e. 100 lbs 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. Chipco Bentonite Other ☒
7. Fine sand material: Manufacturer, product name & mesh size
a. #45-55 Red Flint
b. Volume added 50 lbs
8. Filter pack material: Manufacturer, product name and mesh size
a. #30 Red Flint
b. Volume added 700 lbs
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 Dietrich
c. Slot size: 0.10 in
d. Slotted length: ___ 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: [signature] Firm: Giles Engineering Associates

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

Facility/Project Name: Twin Disc Broach Pit	Local Grid Location of Well: ____ ft. ☐N ☐S ____ ft. ☐E ☐W	Well Name: MW 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: SW1/4 of NW 1/4 of Sec. 19, T. 3 ☒N ☐S, R 22 ☐E ☐W	Date Well Installed: 12/28/97 (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) Beauford Jones / Giles Engineering
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 25.0 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; 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 10 ft.
F. Fine sand, top _____ ft. MSL or 60 ft.
G. Filter pack, top _____ ft. MSL or 80 ft.
H. Screen joint, top _____ ft. MSL or 100 ft.
I. Well bottom _____ ft. MSL or 250 ft.
J. Filter pack, bottom _____ ft. MSL or 25.0 ft.
K. Borehole, bottom _____ ft. MSL or 25.0 ft.
L. Borehole, diameter 8.2 in.
M. O.D. well casing 2.35 in.
N. I.D. well casing 2.00 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Other ☐ ____
d. Additional protection? ☒ Yes ☐ No
If yes, describe: Expandable cap
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ ____
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐ ____; Other ☐ ____
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. 100 lbs 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. Chipped Bentonite Other ☒ ____
7. Fine sand material: Manufacturer, product name & mesh size
a. #45-55 Red Flint
b. Volume added 50 lbs
8. Filter pack material: Manufacturer, product name and mesh size
a. #30 Red Flint
b. Volume added 700 lbs
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 Dicorch
c. Slot size: 0.10 in.
d. Slotted length: ____ 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: Giles Engineering Associates

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form.