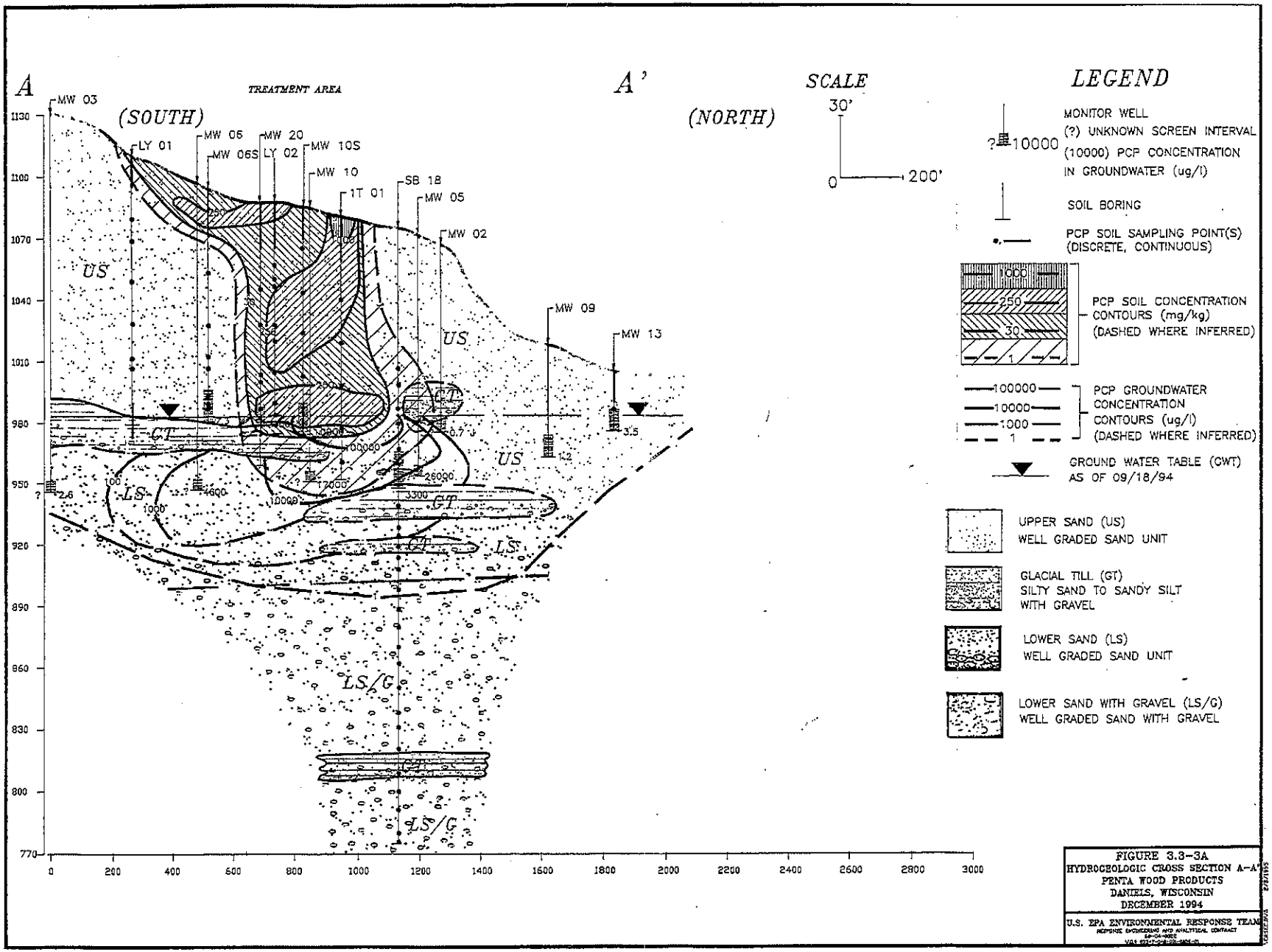


FIGURE 3.3-3A
HYDROGEOLOGIC CROSS SECTION A-A'
PENTA WOOD PRODUCTS
DANIELS, WISCONSIN
DECEMBER 1994

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
68-C4-0022

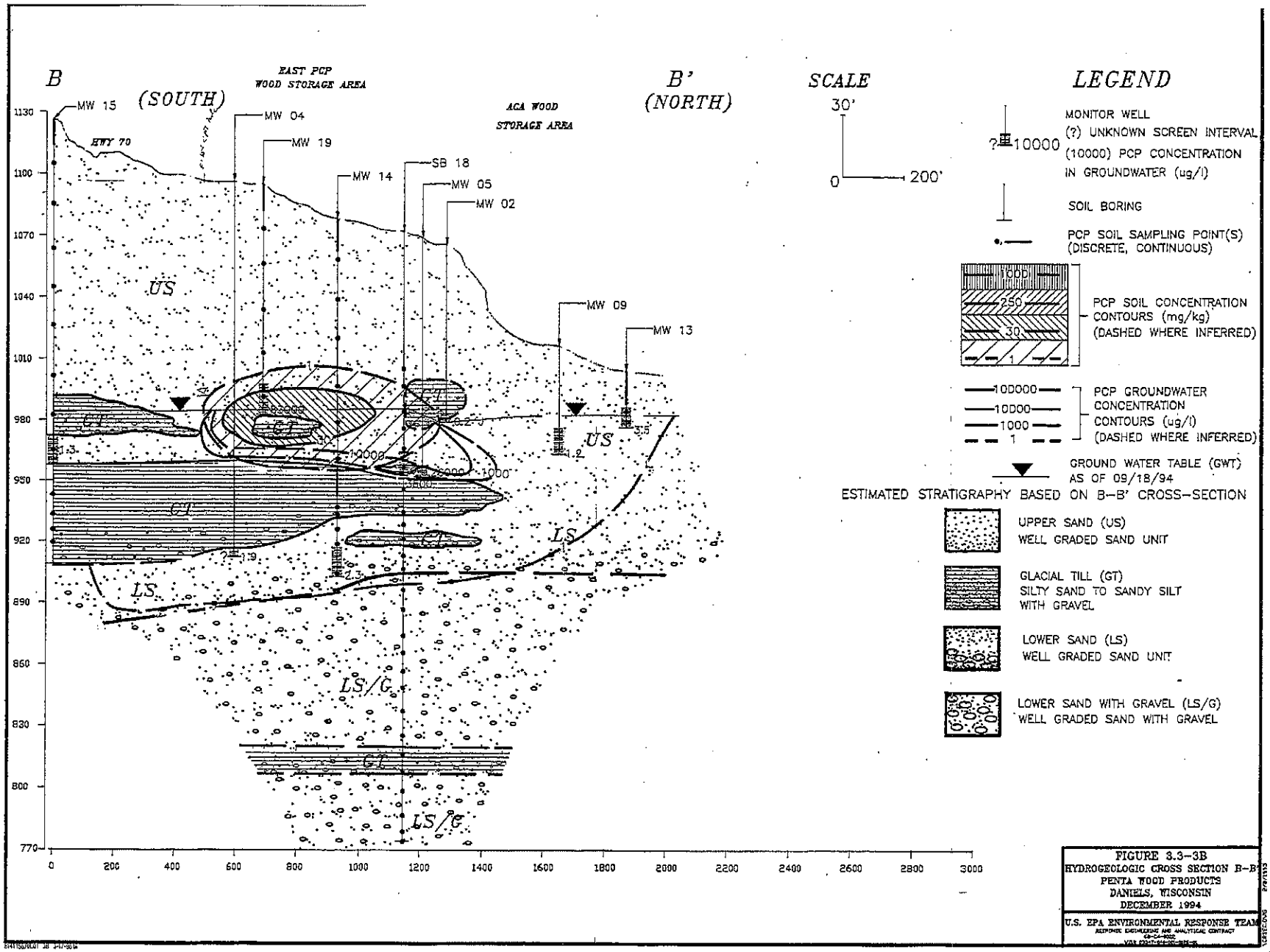


FIGURE 3.3-3B
HYDROGEOLOGIC CROSS SECTION B–B'
PENTA WOOD PRODUCTS
DANIELS, WISCONSIN
DECEMBER 1994

U.S. EPA ENVIRONMENTAL RESPONSE TEAM

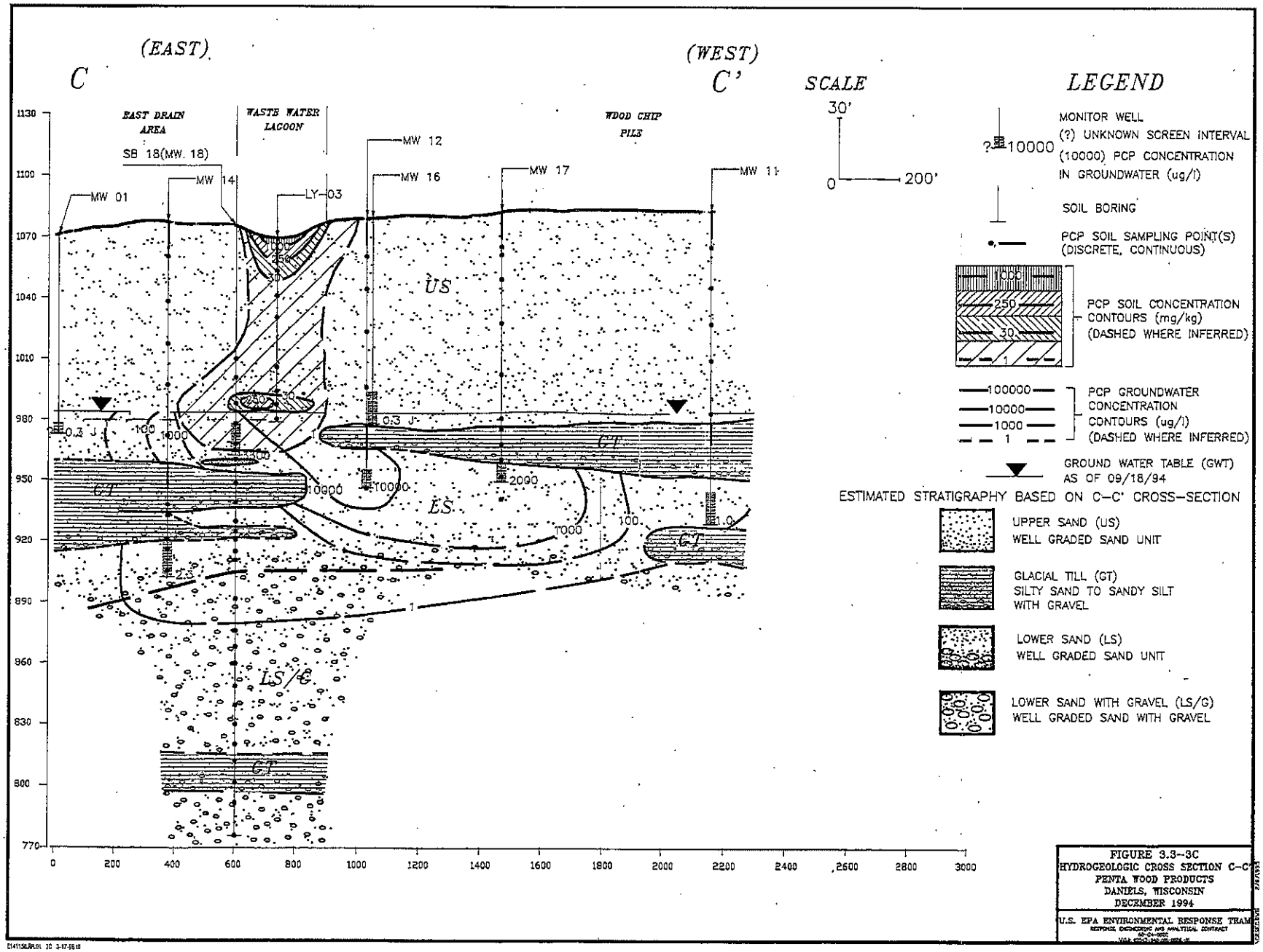


FIGURE 3.3–3C
HYDROGEOLOGIC CROSS SECTION C–C'
PENTA WOOD PRODUCTS
DANIELS, WISCONSIN
DECEMBER 1994

U.S. EPA ENVIRONMENTAL RESPONSE TEAM

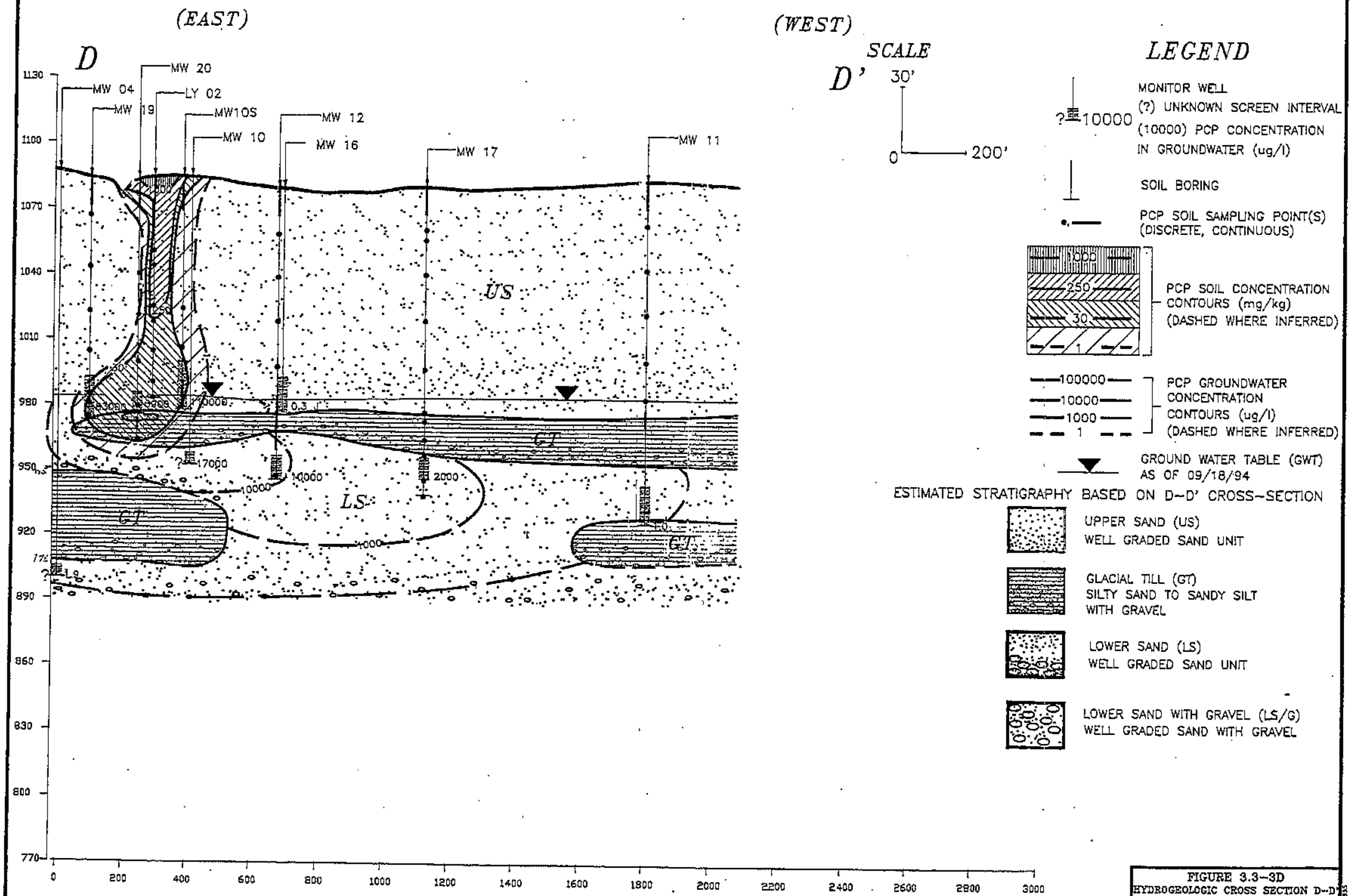


FIGURE 3.3-3D
HYDROGEOLOGIC CROSS SECTION D-D'
PENTA WOOD PRODUCTS
DANIELS, WISCONSIN
DECEMBER 1994

U.S. EPA ENVIRONMENTAL RESPONSE TEAM

See Attached.

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: PENTA WOOD PRODUCTS	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-21
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)
Distance Well Is From Waste/Source Boundary: ____ ft.	Section Location of Waste/Source: ___1/4 of ___ 1/4 of Sec. 11, T. 38 N, R. 17 ☐ E. ☒ W.	Well Installed By: (Person's Name and Firm)
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 _____ 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

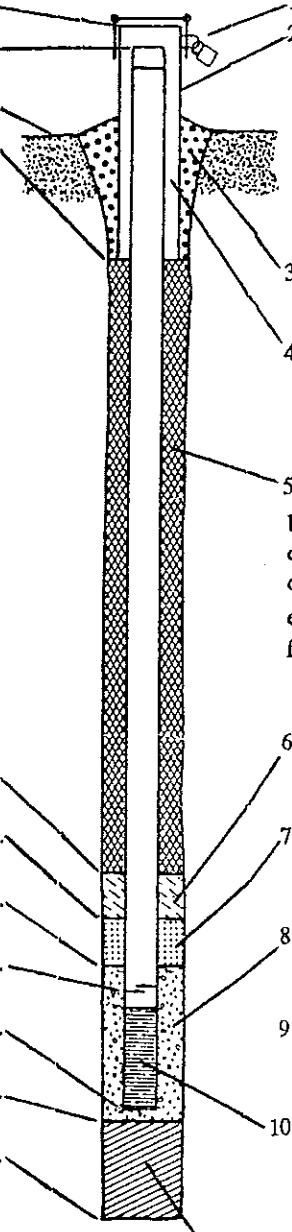
14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☐ 41; Other ☐ _____

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 _____ ft.
F. Fine sand, top _____ ft. MSL or _____ ft.
G. Filter pack, top _____ ft. MSL or _____ ft.
H. Screen joint, top _____ ft. MSL or _____ ft.
I. Well bottom _____ ft. MSL or _____ ft.
J. Filter pack, bottom _____ ft. MSL or _____ ft.
K. Borehole, bottom _____ ft. MSL or _____ ft.
L. Borehole, diameter _____ in.
M. O.D. well casing _____ in.
N. I.D. well casing _____ in.



1. Cap and lock? ☐ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: ____ in.
b. Length: ____ ft.
c. Material: Steel ☐ 04; Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☐ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☐ _____; Other ☐ _____
5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. _____
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☐ 23; Flush threaded PVC schedule 80 ☐ 24; _____ Other ☐ _____
10. Screen material: _____
a. Screen type: Factory cut ☐ 11; Continuous slot ☐ 01; _____ Other ☐ _____
b. Manufacturer _____
c. Slot size: 0. ___ 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

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 and 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.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4-90

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

Facility/Project Name	County Name	Well Name
PENTA WOOD PRODUCTS	BURNETT	MW-21

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

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 _ _ _ _ min.

4. Depth of well (from top of well casisng) 114.9 ft.

5. Inside diameter of well 2.00 in.

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

7. Volume of water removed from well _ _ _ _ . _ 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. _ _ _ . _ _ ft.	_ _ _ . _ _ ft.
Date	b. _ _ / _ _ / _ _ (m m d d y y)	_ _ / _ _ / _ _ (m m d d y y)
Time	c. _ _ : _ _ ☐ a.m. ☐ p.m.	_ _ : _ _ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	_ _ . _ inches	_ _ . _ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: _____

Firm: _____

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

Signature: _____

Print Initials: _ _ _

Firm: _____

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 3

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No. MW-21

GROUND WATER				
	While drilling		Time after drilling	
	Before casing removal		Depth to water	
	After casing removal		Depth to cave-in	

Start 1-24-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Earth Drill					4¼	HSA

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR **FIELD BORING LOG** Sheet 2 of 3

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. MW-21

GROUND WATER: While drilling ____ Time after drilling ____ ____; Before casing removal ____ Depth to water ____ ____; After casing removal ____ Depth to cave-in ____ ____

Start 1-24-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ___	Blows on Probe Size ___	Drilling Method
												4¼HSA
						55						
						60						
						65						
						70						
						75						
						80						
						85						
						90						
						95						
						100						

BOART LONGYEAR **FIELD BORING LOG** Sheet 3 of 3

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. MW-21

Start 1-24-98

Unit 820

Chief JE

GROUND WATER: While drilling ____ Time after drilling ____ ____; Before casing removal ____ Depth to water ____ ____; After casing removal ____ Depth to cave-in ____ ____

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ...	Blows on Probe Size ...	Drilling Method
											4 1/4	HSA

110

E.O.B. 113.0'

Set @112.5'

120

130

140

150

160

170

180

190

200

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME MW-21

DATE INSTALLED 1-24-98

CHIEF John Einum

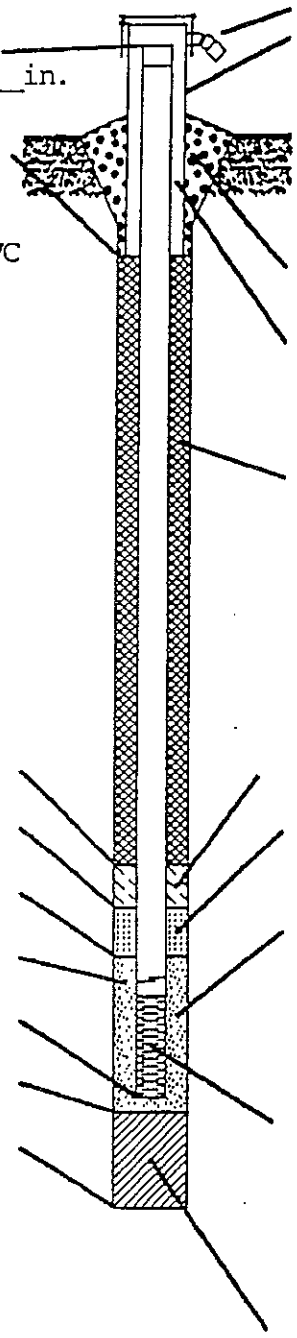
Type of Well: (Water Table Observ.,)
Piezometer or other _____.

A. Height of Well Casing above ground 3.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
_____ Schedule 40
__x__ Schedule 80
_____ Other _____



E. Bentonite Seal Top 95.5 ft.

F. Fine Sand Top 98.5 ft.

G. Filter Pack Top 100.5 ft.

H. Screen Joint Top 102.5 ft.

I. Well Bottom 112.5 ft.

J. Filter Pack Bottom 113.0 ft.

K. Borehole Bottom 113.0 ft.

1. Locking Cap? __x__ Yes ____ No

2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel __x__
      _____ Other ____

   Bumper Post? ____ Yes ____ No
   3" or 4"

3. Surface Seal: Bentonite ____
   Concrete __x__

4. Material between Casing & Protop:
   Bentonite __x__
   _____ Other ____

5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   (b. Bentonite Slurry)
   c. Cement-Bent. Grout

   How installed:
   ____ Gravity
   __x__ Tremie pumped

6. Bentonite Seal: Granules ____
   Pellets __x__

7. Type of Fine Sand:
   30-70

8. Type of Filter Pack:
   10-20

9. Screen Material: pvc
   Type: ~~Factory Cut or~~ Continuous Slot
   Slot Size: 0.010 in.
   Length: 2.00 ft.

10. Backfill Material: (Below filter pack)
    __x__ None
    ____ Other _____

BOART LONGYEAR

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4-90

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

Facility/Project Name	County Name	Well Name
PENTA WOOD PRODUCTS	BURNETT	MW-22
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
_ _ _ _ _ _ _	_ _	_ _ _ _ _ _ _ _ / _ _ _ _

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 _ _ _ _ min.

4. Depth of well (from top of well casisng) 105.2 ft.

5. Inside diameter of well 2.00 in.

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

7. Volume of water removed from well _ _ _ . _ 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. _ _ _ . _ _ ft.	_ _ _ . _ _ ft.
Date	b. _ _ / _ _ / _ _ (m m d d y y)	_ _ / _ _ / _ _ (m m d d y y)
Time	c. _ _ : _ _ ☐ a.m. ☐ p.m.	_ _ : _ _ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	_ _ . _ inches	_ _ . _ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_ _ _ _ . _ mg/l	_ _ _ _ . _ mg/l
15. COD	_ _ _ _ . _ mg/l	_ _ _ _ . _ mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: _____

Firm: _____

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

Signature: _____

Print Initials: _ _ _

Firm: _____

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

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: PENTA WOOD PRODUCTS

Facility License, Permit or Monitoring Number: _____

Type of Well: Water Table Observation Well ☒ 11; Piezometer ☐ 12

Distance Well Is From Waste/Source Boundary: _____ ft.

Is Well A Point of Enforcement Std. Application? ☒ Yes ☐ No

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

Grid Origin Location: Lat. _____ Long. _____ or

St. Plane _____ ft. N, _____ ft. E.

Section Location of Waste/Source: 1/4 of ___ 1/4 of Sec. 11, T. 38 N, R. 17 ☒ W. ☐ E.

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

Well Name: MW-22

Wis. Unique Well Number / DNR Well Number: _____

Date Well Installed: __ __ / __ __ / __ __ (m m / d d / y y)

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

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 _____ 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 _____ ft.

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

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

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

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

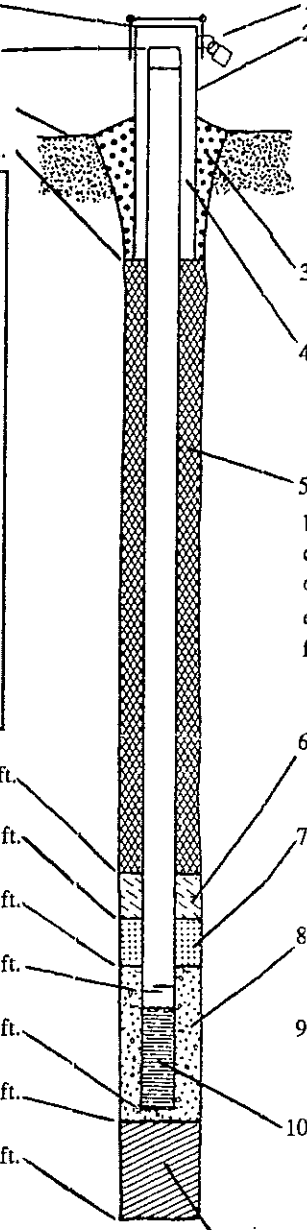
J. Filter pack, bottom _____ ft. MSL or _____ ft.

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

L. Borehole, diameter _____ in.

M. O.D. well casing _____ in.

N. I.D. well casing _____ in.



1. Cap and lock? ☐ Yes ☐ No

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

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

4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☐ _____; Other ☐ _____

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name and mesh size
a. _____
b. Volume added _____ ft^3

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

10. Screen material: _____
a. Screen type: Factory cut ☐ 11; Continuous slot ☐ 01; Other ☐ _____
b. Manufacturer _____
c. Slot size: 0. ___ 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

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 and 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.

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 3

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. _____

Boring No. MW-22

GROUND WATER				
While drilling	_____	Time after drilling	_____	_____
Before casing removal	_____	Depth to water	_____	_____
After casing removal	_____	Depth to cave-in	_____	_____

Start 1-22-98
Unit 818
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
											4¼	HSA

Earth Drill

F-M SAND, Brown

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR FIELD BORING LOG Sheet 2 of 3

For CH2M Hill Penta Wood Job No. 3411-1164

Location Siren, WI Elev. Boring No. MW-22

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 1-22-98
Unit 818
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size __	Blows on Probe Size __	Drilling Method
												4¼ HSA
						Earth Drill						
						55						
						60						
						65						
						70						
						75						
						80						
						85						
						90						
						95						
						100						

BOART LONGYEAR — FIELD BORING LOG

Sheet 3 of 3

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No. MW-22

Start 1-22-98

Unit 818

Chief JE

GROUND WATER — While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Earth Drill						4¼ HSA
						E.O.B. 105.0'						
						110 Set @102.0'						
						120						
						130						
						140						
						150						
						160						
						170						
						180						
						190						
						200						

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME MW-22

DATE INSTALLED 1-22-98

CHIEF John Einum

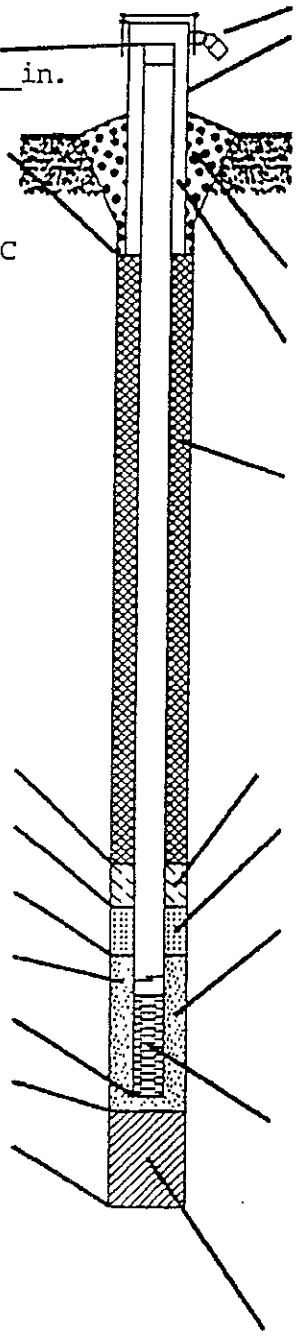
Type of Well: Water Table Observ., Piezometer or other _____.

A. Height of Well Casing above ground 3.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 1.0 ft.

D. Well Casing: Flush threaded PVC
_____ Schedule 40
x Schedule 80
_____ Other _____



E. Bentonite Seal Top 85 ft.

F. Fine Sand Top 88 ft.

G. Filter Pack Top 90 ft.

H. Screen Joint Top 92 ft.

I. Well Bottom 102 ft.

J. Filter Pack Bottom 105 ft.

K. Borehole Bottom 105 ft.

1. Locking Cap? x Yes ____ No

2. Protective Cover:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel x
_____ Other ____

Bumper Post? ____ Yes x No
3" or 4"

3. Surface Seal: Bentonite ____
Concrete x

4. Material between Casing & Protop:
Bentonite x
_____ Other ____

5. Annular Space Seal: (Circle one)
a. Granular Bentonite
b. Bentonite Slurry
c. Cement-Bent. Grout

How installed:
____ Gravity
x Tremie pumped

6. Bentonite Seal: Granules ____
Pellets x

7. Type of Fine Sand:
30-70

8. Type of Filter Pack:
10-20

9. Screen Material: pvc
Type: Factory Cut or Continuous Slot
Slot Size: 0.010in.
Length: 10.0 ft.

10. Backfill Material: (Below filter pack)
x None
____ Other _____

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 3

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. —

Boring No. MW-23

GROUND WATER				
While drilling		Time after drilling		
Before casing removal		Depth to water		
After casing removal		Depth to cave-in		

Start 2-24-98
Unit 1508
Chief SJ

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe	Weight	Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						M-C w/Gravel & Cobbles, Brown							6"	Sonic

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR

FIELD BORING LOG

Sheet 3 of 3

FOR Ch2M Hill Penta Wood

LOCATION Siren, WI Elev. '

Job No. 3411-1164

Boring No. MW-23

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 2-24-98
Unit 1508
Chief SJ

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ____	Blows on Probe Size ____	Drilling Method

105
110
115
120
125
E.O.B. 127.0'
Well Set @125.0'
130
135
140
145
150

MONITORING WELL DEVELOPMENT

WELL NUMBER MW-23

WELL DIAMETER 2"

TOTAL DEPTH 127.0

DEPTH TO WATER BEFORE DEVELOPMENT 30.0

DEPTH TO WATER AFTER DEVELOPMENT 30.0

PROJECT NO. 3411-1164

DATE 2-25-98

DEVELOPED BY DB/SJ

DESCRIPTION OF DEVELOPMENT METHOD

110 Grundfos
and
220 Grundfos

VOLUME OF WATER REMOVED FROM WELL 1600 gallons

CLARITY OF WATER IN WELL BEFORE DEVELOPMENT dark brown

CLARITY OF WATER IN WELL AFTER DEVELOPMENT clear

VOLUME OF WATER ADDED TO WELL -

SOURCE OF WATER ADDED TO WELL -

TIME SPENT FOR DEVELOPMENT 8 hours 15 minutes

COMMENTS:

BOART LONGYEAR

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4-90

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

Facility/Project Name	County Name	Well Name
PENTA WOOD PRODUCTS	BURNETT	MW-24
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
_ _ _ _ _ _ _	_ _	_ _ _ _ _ _ _ _ _ _ / _ _ _ _

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 _ _ _ _ min.

4. Depth of well (from top of well casisng) 125._ ft.

5. Inside diameter of well 2.00 in.

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

7. Volume of water removed from well _ _ _ _ . _ 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. _ _ _ _ . _ _ ft.	_ _ _ _ . _ _ ft.
Date	b. _ _ / _ _ / _ _ m m d d y y	_ _ / _ _ / _ _ m m d d y y
Time	c. _ _ : _ _ ☐ a.m. ☐ p.m.	_ _ : _ _ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	_ _ . _ inches	_ _ . _ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: _____

Firm: _____

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

Signature: _____

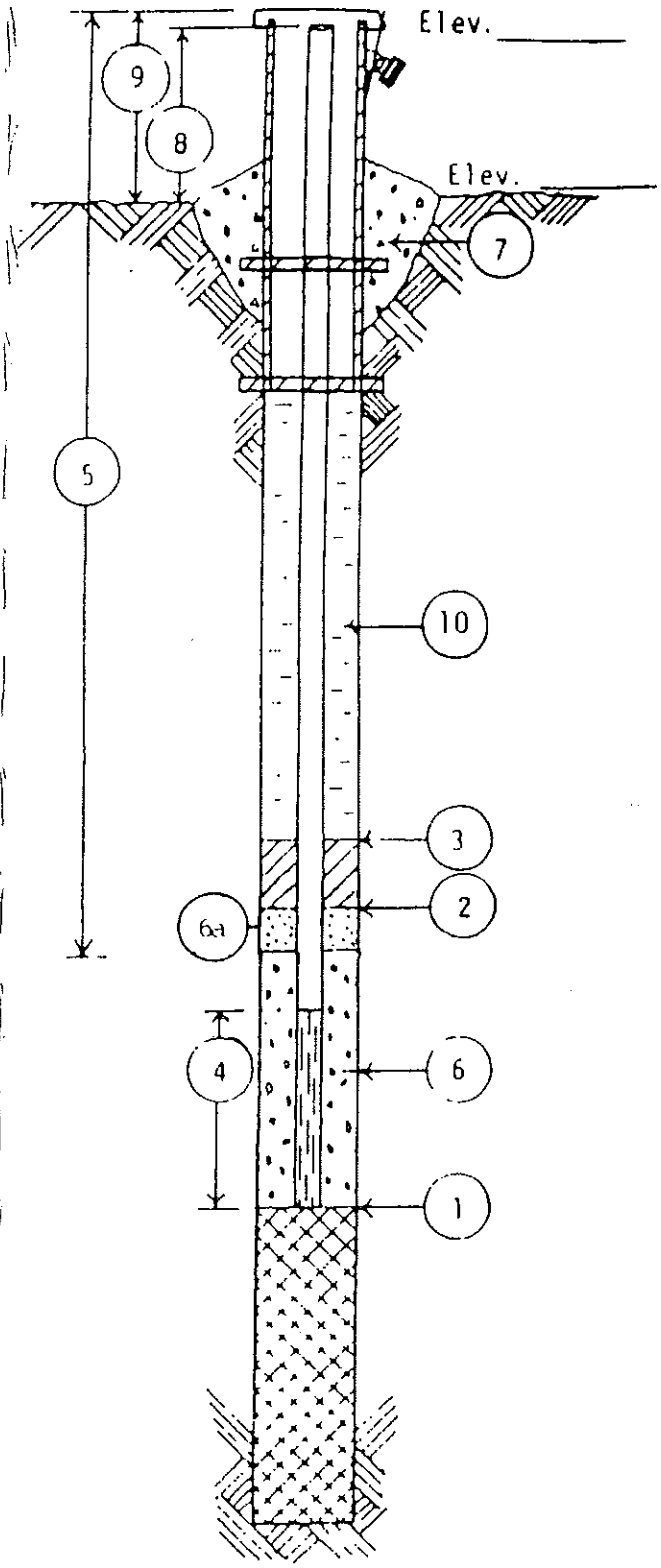
Print Initials: _ _ _

Firm: _____

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

WELL DETAIL INFORMATION SHEET

BOART LONGYEAR



JOB NO. 3411-1164

BORING NO. MW-23

DATE 2-24-98

CHIEF Steve Johnson

LOCATION Siren, WI

All depth measurments of well detail assumed to be from ground surface unless otherwise indicated.

(1) DEPTH TO BOTTOM OF WELL POINT OR SLOTTED PIPE 125.0 FEET.

(2) DEPTH OF BOTTOM OF SEAL (IF INSTALLED) 111.0 FEET.

(3) DEPTH TO TOP OF SEAL (IF INSTALLED) 109.0 FEET.

(4) ~~LENGTH~~ OF WELL SCREEN PVC WELL SCREEN (Sch 40/Sch 80), OR STAINLESS STEEL 10.0 FEET. (Circle One)

(5) TOTAL LENGTH OF PIPE 118.0 FEET @ 2 IN. DIAMETER.

(6) TYPE OF FILTER MATERIAL AROUND WELL POINT OR SLOTTED PIPE BB#2.

(6a) LENGTH OF FINE SAND 2.0 FEET.

(7) CONCRETE CAP, (YES) NO (Circle One)

(8) HEIGHT OF WELL CASING ABOVE GROUND 3.0 FEET.

(9) PROTECTIVE CASING? (YES) NO (Circle One)
HEIGHT ABOVE GROUND 3.5 FEET.
LOCKING CAP? YES (NO) (Circle One)
BUMPER POST? YES (NO) (Circle One)

(10) TYPE OF BACKFILL: high solid bentonite

WATER LEVEL CHECKS

*From top of casing, if protective casing higher, take measurement from top of protective casing.

BORING #	DATE	TIME	DEPTH TO WATER	REMARKS

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: PENTA WOOD PRODUCTS	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-24
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)
Distance Well Is From Waste/Source Boundary: _____ ft.	Section Location of Waste/Source: _ 1/4 of _ 1/4 of Sec. 11, T. 38 N, R. 17 ☐E. ☒W.	Well Installed By: (Person's Name and Firm)
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 _ _ . _ 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 _ _ _ . _ ft.

F. Fine sand, top _ _ _ _ . _ ft. MSL or _ _ _ . _ ft.

G. Filter pack, top _ _ _ _ . _ ft. MSL or _ _ _ . _ ft.

H. Screen joint, top _ _ _ _ . _ ft. MSL or _ _ _ . _ ft.

I. Well bottom _ _ _ _ . _ ft. MSL or _ _ _ . _ ft.

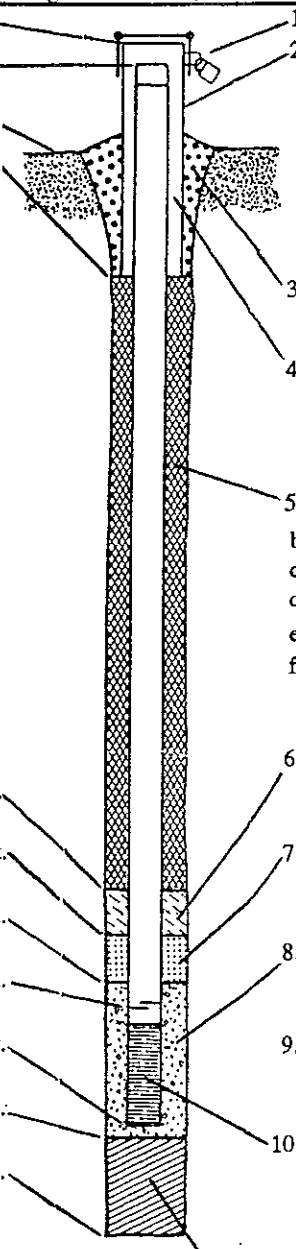
J. Filter pack, bottom _ _ _ _ . _ ft. MSL or _ _ _ . _ ft.

K. Borehole, bottom _ _ _ _ . _ ft. MSL or _ _ _ . _ ft.

L. Borehole, diameter _ _ . _ in.

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

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



1. Cap and lock? ☐ Yes ☐ No

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

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

4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☐ _____; Other ☐ _____

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name and mesh size
a. _____
b. Volume added _____ ft^3

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

10. Screen material: _____
a. Screen type: Factory cut ☐ 11; Continuous slot ☐ 01; Other ☐ _____
b. Manufacturer _____
c. Slot size: 0. _ _ _ 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

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 and 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.

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 3

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No. MW-24

GROUND WATER				
	While drilling		Time after drilling	
	Before casing removal		Depth to water	
	After casing removal		Depth to cave-in	

Start 1-25-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
												4¼ HSA

Earth Drill

M-SAND, Brown

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR FIELD BORING LOG Sheet 2 of 3

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. MW-24

GROUND WATER: While drilling ____ Time after drilling ____ ____; Before casing removal ____ Depth to water ____ ____; After casing removal ____ Depth to cave-in ____ ____

Start 1-25-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ____	Blows on Probe Size ____	Drilling Method
											4¼	HSA
						Earth Drill						
						55						
						60						
						65						
						70						
						75						
						80						
						85						
						90						
						95						
						100						

BOART LONGYEAR **FIELD BORING LOG** Sheet 3 of 3

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. MW-24

GROUND WATER: While drilling 114.0; Before casing removal; After casing removal; Time after drilling; Depth to water; Depth to cave-in

Start 1-25-98

Unit 820

Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
											4¼	HSA
						110						
						120						
						130						
						E.O.B. 130.0'						
						Set @123.0'						
						140						
						150						
						160						
						170						
						180						
						190						
						200						

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME MW-24

DATE INSTALLED 1-25-98

CHIEF John Einum

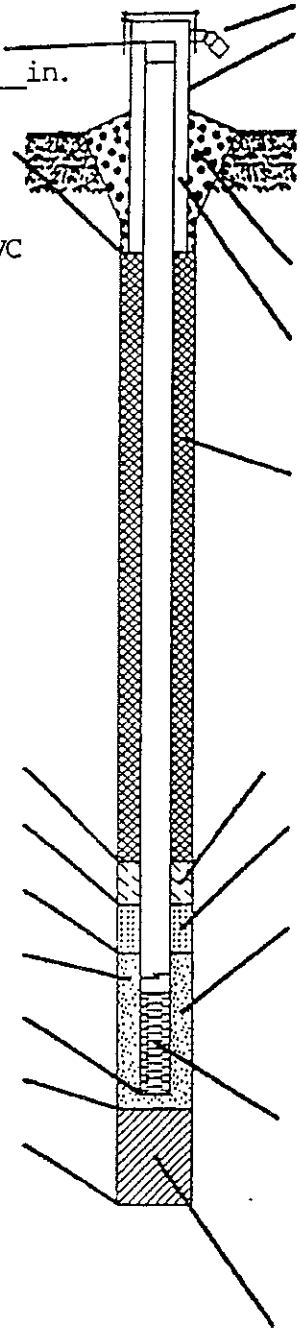
Type of Well: (Water Table Observ.)
Piezometer or other _____.

A. Height of Well Casing above ground 3.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
_____ Schedule 40
__x__ Schedule 80
_____ Other _____



E. Bentonite Seal Top 106 ft.

F. Fine Sand Top 109 ft.

G. Filter Pack Top 111 ft.

H. Screen Joint Top 113 ft.

I. Well Bottom 123 ft.

J. Filter Pack Bottom 130 ft.

K. Borehole Bottom 130 ft.

1. Locking Cap? __x__ Yes ____ No

2. Protective Cover:
   a. Inside diameter: __4__ in.
   b. Length: __5__ ft.
   c. Material: Steel __x__
      _____ Other ____

   Bumper Post? ____ Yes __x__ No
   3" or 4"

3. Surface Seal: Bentonite ____
   Concrete __x__

4. Material between Casing & Protop:
   Bentonite __x__
   _____ Other ____

5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   (b.) Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   ____ Gravity
   __x__ Tremie pumped

6. Bentonite Seal: Granules ____
   Pellets __x__

7. Type of Fine Sand:
   30-70

8. Type of Filter Pack:
   10-20

9. Screen Material: pvc
   Type: Factory Cut or
   (Continuous Slot)
   Slot Size: 0.0 1 0 in.
   Length: 10.00 ft.

10. Backfill Material: (Below filter pack)
    __x__ None
    ____ Other _____

BOART LONGYEAR

BOART LONGYEAR

WELL DEVELOPMENT REPORT

WELL NAME MW-24 JOB NO# 3411-1164

WELL DIAMETER 2" LOCATION Siren, WI

(MEASUREMENTS BELOW FROM TOP OF CASING)
TOTAL DEPTH 123.0 DATE 2-6-98

DEPTH TO WATER BEFORE DEVELOPMENT 113.65 DEVELOPED BY WA, JE

DEPTH TO WATER AFTER DEVELOPMENT _____

DESCRIPTION OF DEVELOPMENT METHOD

(CIRCLE ONE:)

(A.) SURGED W/BAILER & BAILED
B. SURGED W/BAILER & PUMPED
C. SURGED W/BLOCK & BAILED
D. SURGED W/BLOCK & PUMPED
E. OTHER _____

CAN THIS WELL BE PURGED DRY? no

VOLUME OF WATER IN FILTER PACK AND WELL CASING _____

VOLUME OF WATER REMOVED FROM WELL 30 gallons

CLARITY OF WATER BEFORE DEVELOPMENT brown, cloudy

CLARITY OF WATER AFTER DEVELOPMENT brown, cloudy

VOLUME OF WATER ADDED none

SOURCE OF WATER ADDED na

TIME SPENT FOR DEVELOPMENT 90 MIN.

START: 6:00 (A.M.) P.M.

END: 7:30 A.M. (P.M.)

COMMENTS:

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: PENTA WOOD PRODUCTS	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-25
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. 11, T. 38 N, R. 17 ☐ E. ☒ W.	Date Well Installed: 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)
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 _ _._ 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

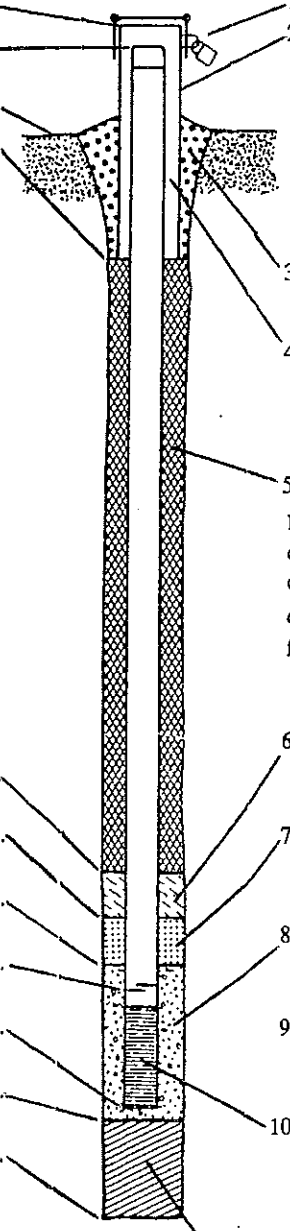
14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☐ 41; Other ☐ _____

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 _ _ _._ ft.
F. Fine sand, top _ _ _ _._ ft. MSL or _ _ _._ ft.
G. Filter pack, top _ _ _ _._ ft. MSL or _ _ _._ ft.
H. Screen joint, top _ _ _ _._ ft. MSL or _ _ _._ ft.
I. Well bottom _ _ _ _._ ft. MSL or _ _ _._ ft.
J. Filter pack, bottom _ _ _ _._ ft. MSL or _ _ _._ ft.
K. Borehole, bottom _ _ _ _._ ft. MSL or _ _ _._ ft.
L. Borehole, diameter _ _._ in.
M. O.D. well casing _ _._ _ in.
N. I.D. well casing _ _._ _ in.



1. Cap and lock? ☐ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: _ _._ in.
b. Length: _ _._ ft.
c. Material: Steel ☐ 04; Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☐ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☐ _____; Other ☐ _____
5. Annular space seal: a. Granular Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. _____
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☐ 23; Flush threaded PVC schedule 80 ☐ 24; _____ Other ☐ _____
10. Screen material: _____
a. Screen type: Factory cut ☐ 11; Continuous slot ☐ 01; _____ Other ☐ _____
b. Manufacturer _____
c. Slot size: 0. _ _ _ 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

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 and 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.

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 3

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev.

Boring No. MW-25

GROUND WATER				
While drilling		Time after drilling		
Before casing removal		Depth to water		
After casing removal		Depth to cave-in		

Start 1-26-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Earth Drill						4¼ HSA
						F-C SAND, Brown						

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR FIELD BORING LOG

Sheet 2 of 3

For CH2M Hill Penta Wood

Job No. 3411-1164

Location Siren, WI Elev.

Boring No. MW-25

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 1-26-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ___	Blows on Probe Size ___	Drilling Method
												4¼ HSA
						Earth Drill						
						F-C SAND, Brown						
						55						
						60						
						65						
						70						
						75						
						80						
						85						
						90						
						95						
						100						

BOART LONGYEAR **FIELD BORING LOG** Sheet 3 of 3

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. MW-25

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 1-26-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
												4¼ HSA

Earth Drill

F-C SAND, Brown

110

120

E.O.B. 120.0'

Set @115.5'

130

140

150

160

170

180

190

200

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

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

Facility/Project Name	County Name	Well Name
PENTA WOOD PRODUCTS	BURNETT	MW - 25

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

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 _ _ _ _ min.

4. Depth of well (from top of well casisng) 117.8 ft.

5. Inside diameter of well 2.00 in.

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

7. Volume of water removed from well _ _ _ . _ 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. _ _ _ . _ _ ft.	_ _ _ . _ _ ft.
Date	b. _ _ / _ _ / _ _ (m m d d y y)	_ _ / _ _ / _ _ (m m d d y y)
Time	c. _ _ : _ _ ☐ a.m. ☐ p.m.	_ _ : _ _ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	_ _ . _ inches	_ _ . _ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)

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

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

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: _____

Firm: _____

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

Signature: _____

Print Initials: _ _ _

Firm: _____

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME MW-25

DATE INSTALLED 1-26-98

CHIEF John Einum

Type of Well: (Water Table Observ.), Piezometer or other _____.

A. Height of Well Casing above ground 3.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
___ Schedule 40
x Schedule 80
___ Other _____

E. Bentonite Seal Top 98.5 ft.

F. Fine Sand Top 101.5 ft.

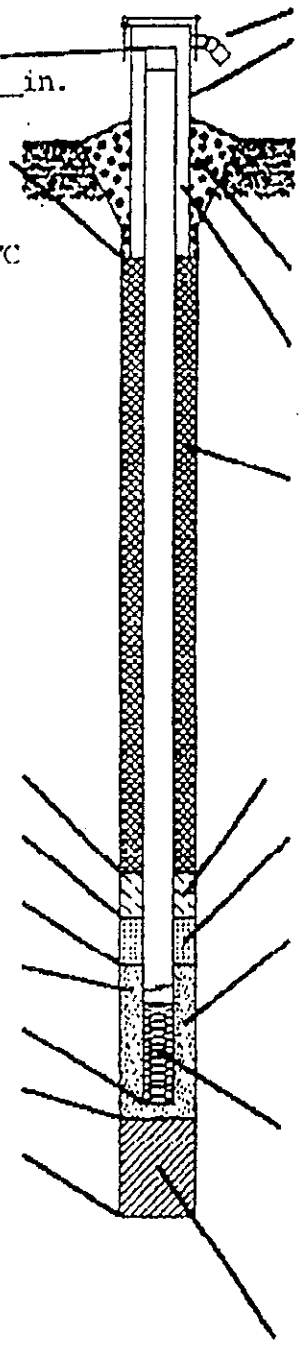
G. Filter Pack Top 103.5 ft.

H. Screen Joint Top 105.5 ft.

I. Well Bottom 115.5 ft.

J. Filter Pack Bottom 120.0 ft.

K. Borehole Bottom 120.0 ft.



1. Locking Cap? ___Yes ___No
2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel ___
   _____ Other ___
   Bumper Post? ___Yes x No
   3" or 4"
3. Surface Seal: Bentonite ___
   Concrete x
4. Material between Casing & Protec
   Bentonite x
   _____ Other ___
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   (b.) Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   x Gravity
   ___ Tremie pumped
6. Bentonite Seal: Granules ___
   Pellets x
7. Type of Fine Sand:
   30-70
8. Type of Filter Pack:
   10-20
9. Screen Material: pvc
   Type: Factory Cut or
   (Continuous Slot)
   Slot Size: 0.010 in.
   Length: 10.0 ft.
10. Backfill Material: (Below filter pack)
    x None
    ___Other _____

BOART LONGYEAR

BOART LONGYEAR

WELL DEVELOPMENT REPORT

WELL NAME MW-25 JOB NO# 3411-1164

WELL DIAMETER 2" LOCATION Siren, WI

(MEASUREMENTS BELOW FROM TOP OF CASING)
TOTAL DEPTH 117.8 DATE 2-7-98

DEPTH TO WATER BEFORE DEVELOPMENT 110.35 DEVELOPED BY WA

DEPTH TO WATER AFTER DEVELOPMENT 110.35

DESCRIPTION OF DEVELOPMENT METHOD

(CIRCLE ONE:)

(A) SURGED W/BAILER & BAILED
B. SURGED W/BAILER & PUMPED
C. SURGED W/BLOCK & BAILED
D. SURGED W/BLOCK & PUMPED
E. OTHER _____

CAN THIS WELL BE PURGED DRY? no

VOLUME OF WATER IN FILTER PACK AND WELL CASING _____

VOLUME OF WATER REMOVED FROM WELL 30 gallons

CLARITY OF WATER BEFORE DEVELOPMENT brown, cloudy

CLARITY OF WATER AFTER DEVELOPMENT brown, cloudy

VOLUME OF WATER ADDED none

SOURCE OF WATER ADDED na

TIME SPENT FOR DEVELOPMENT 150 MIN. START: END:

2:30 (A.M.) P.M. 5:00 A.M. (P.M.)

COMMENTS:

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 3

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. ____

Boring No. EW-1

GROUND WATER

While drilling ____ Time after drilling ____ ____

Before casing removal ____ Depth to water ____ ____

After casing removal ____ Depth to cave-in ____ ____

Start 1-23-98

Unit 1508

Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
										10"		sonic

SAND LOT

F-Silty SAND, Brown

5

10

15

20

25

30

35

40

45

50

BOART LONGYEAR **FIELD BORING LOG** Sheet 2 of 3

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. EW-1

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 1-23-98
Unit 1508
Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ___	Blows on Probe Size ___	Drilling Method
						F-Silty SAND, Brown						
						55						
						60						
						65						
						70						
						75						
						80						
						85						
						90						
						95						
						100						

BOART LONGYEAR

FIELD BORING LOG

Sheet 3 Of 3

FOR CH2M Hill Penta Wood

LOCATION Siren, WI Elev.

Job No. 3411-1164

Boring No. EW-1

GROUND WATER: While drilling — Time after drilling — Before casing removal — Depth to water — After casing removal — Depth to cave-in

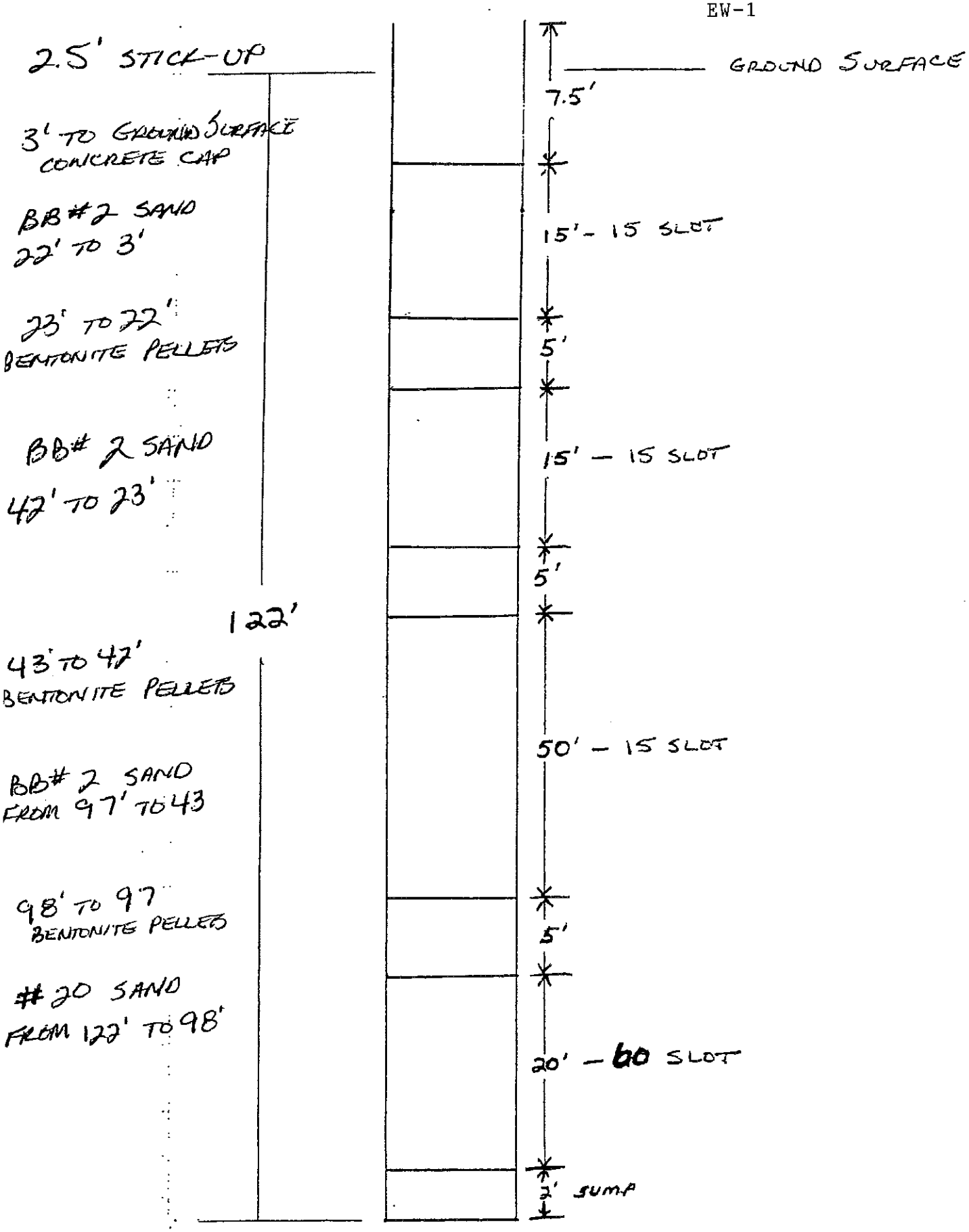
Start 1-23-98
Unit 1508
Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe Weight Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						F-Silty SAND, Brown						
						E.O.B. 122.0'						

105 110 115 120 125 130 135 140 145 150

6" DIAMETER

Well Detail
EW-1



MONITORING WELL DEVELOPMENT

WELL NUMBER EW-1

WELL DIAMETER 6" 6"

TOTAL DEPTH 122.0'

DEPTH TO WATER BEFORE DEVELOPMENT 101.75'

DEPTH TO WATER AFTER DEVELOPMENT 116.25'

PROJECT NO. 3411-1164

DATE 2-7-98

DEVELOPED BY John Einum

DESCRIPTION OF DEVELOPMENT METHOD

4" Submersible Pump
pumped at 2-3 gallons/min. for about three hours
then purged dry 3x, letting recharge full between cycles
pumped for 10-15 min. more after last cycle to check sediment content

VOLUME OF WATER REMOVED FROM WELL 520 gallons

CLARITY OF WATER IN WELL BEFORE DEVELOPMENT silty brown

CLARITY OF WATER IN WELL AFTER DEVELOPMENT

VOLUME OF WATER ADDED TO WELL none

SOURCE OF WATER ADDED TO WELL -

TIME SPENT FOR DEVELOPMENT 4.5 to 5.0 hours

COMMENTS:

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 2

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. —

Boring No. Pilot Hole #1

GROUND WATER

While drilling — Time after drilling —

Before casing removal — Depth to water —

After casing removal — Depth to cave-in —

Start 1-19-98

Unit 1508

Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Sand Lot						sonic
						F-Silty SAND, Brown						

5 10 15 20 25 30 35 40 45 50

BOART LONGYEAR **FIELD BORING LOG** Sheet 2 of 2

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164
Pilot Hole #1
Boring No.

GROUND WATER
While drilling
Before casing removal
After casing removal
Time after drilling
Depth to water
Depth to cave-in

Start 1-19-98
Unit 1508
Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe Weight Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
												sonic

55

60

65 E.O.B. 65.0'

*Note: Broke rod & 2 core barrels

70

75

80

85

90

95

100

BOART LONGYEAR FIELD BORING LOG

Sheet 2 of 3

For CH2M Hill Penta Wood

Job No. 3411-1164

Location Siren, WI Elev.

Boring No. Pilot Hole #2

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 1-20-98
Unit 1508
Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						F-Silty SAND, Brown						sonic
						55						
						60						
						65						
						70						
						75						
						80						
						85						
						90						
						95						
						100						

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 3

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No. Pilot Hole #2

GROUND WATER				
	While drilling		Time after drilling	
	Before casing removal		Depth to water	
	After casing removal		Depth to cave-in	

Start 1-20-98
Unit 1508
Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on 6" Casing Size	Blows on 6" Probe Size	Drilling Method
												sonic
						Sand Lot						
						F-Silty SAND, Brown						

5 10 15 20 25 30 35 40 45 50

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 2

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No.

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 1-23-98
Unit 818
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Earth Drill						8¼HSA
						Pilot Hole For Sonic						

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR FIELD BORING LOG

Sheet 2 of 2

For CH2M Hill Penta Wood

Job No. 3411-1164

Location Siren, WI Elev.

Boring No.

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 1-23-98
Unit 818
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ___	Blows on Probe Size ___	Drilling Method
												8¼ HSA
						55						
						60						
						65						
						70						
						75						
						80						
						85						
						90						
						E.O.B. 92.0'						
						95						
						100						

BOART LONGYEAR — **FIELD BORING LOG** — Sheet 3 of 3

For: CH2M Hill — Penta Wood

Location: Siren, WI — Elev.

Job No. 3411-1164
Boring No. Pilot Hole #2

GROUND WATER: While drilling; Before casing removal; After casing removal; Time after drilling; Depth to water; Depth to cave-in

Start 1-20-98
Unit 1508
Chief PW

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing 6" Size	Blows on Probe Size	Drilling Method
												soni
						F-Silty SAND, Brown						
						110						
						120						
						E.O.B. 125.0'						
						130						
						140						
						150						
						160						
						170						
						180						
						190						
						200						

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 1

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No. SG-1

GROUND WATER				
	While drilling		Time after drilling	
	Before casing removal		Depth to water	
	After casing removal		Depth to cave-in	

Start 2-3-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						EARTH DRILL						4-3/8 HSA
						E.O.B. 9.0'						
						Set @5.0'						

5 10 15 20 25 30 35 40 45 50

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-1

DATE INSTALLED 2-3-98

CHIEF John Einum

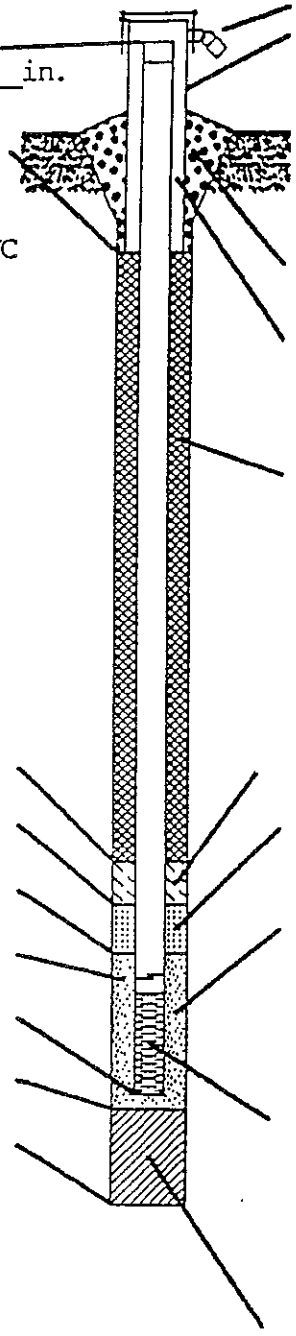
Type of Well: Water Table Observ., Piezometer or other soil gas .

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 1.0 ft.

D. Well Casing: Flush threaded PVC
____ Schedule 40
_x_ Schedule 80
____ Other _____



E. Bentonite Seal Top 1.0 ft.

F. Fine Sand Top _____ ft.

G. Filter Pack Top 2.0 ft.

H. Screen Joint Top 3.0 ft.

I. Well Bottom 5.0 ft.

J. Filter Pack Bottom 5.0 ft.

K. Borehole Bottom 9.0 ft.

1. Locking Cap? x Yes ____ No
2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel x
      _____ Other ____
   Bumper Post? ____ Yes x No
   3" or 4"
3. Surface Seal: Bentonite ____
   Concrete x
4. Material between Casing & Protop
   Bentonite x
   _____ Other ____
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   b. Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   x Gravity
   ____ Tremie pumped
6. Bentonite Seal: Granules ____
   Pellets x
7. Type of Fine Sand:
   30-70
8. Type of Filter Pack:
   10-20
9. Screen Material: pvc
   Type: Factory Cut or
   Continuous Slot
   Slot Size: 0.0 1 0in.
   Length: 2 0 0ft.
10. Backfill Material: (Below filter pack)
    ____ None
    x Other natural

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 1

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No. SG-2

GROUND WATER				
	While drilling		Time after drilling	
	Before casing removal		Depth to water	
	After casing removal		Depth to cave-in	

Start 2-3-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						EARTH DRILL					4-3/8	HSA
						E.O.B. 45.0'						
						Set @40.0'						

5 10 15 20 25 30 35 40 45 50

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren WI

WELL NAME SG-2

DATE INSTALLED 2-3-98

CHIEF John Einum

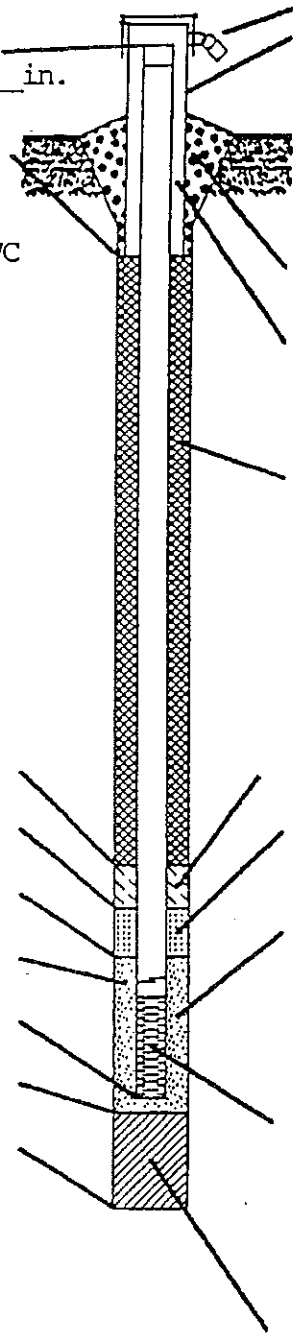
Type of Well: Water Table Observ., Piezometer or other soil gas .

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
____ Schedule 40
x Schedule 80
____ Other ____



E. Bentonite Seal Top 32.0 ft.

F. Fine Sand Top 34 ft.

G. Filter Pack Top 36 ft.

H. Screen Joint Top 38 ft.

I. Well Bottom 40 ft.

J. Filter Pack Bottom 40 ft.

K. Borehole Bottom 45 ft.

1. Locking Cap? x Yes ____ No
2. Protective Cover:
   a. Inside diameter: x in.
   b. Length: 5.0 ft.
   c. Material: Steel x
      _____ Other ____
   Bumper Post? ____ Yes x No
   3" or 4"
3. Surface Seal: Bentonite ____
   Concrete x
4. Material between Casing & Protop
   Bentonite x
   _____ Other ____
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   b. Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   x Gravity
   ____ Tremie pumped
6. Bentonite Seal: Granules ____
   Pellets x
7. Type of Fine Sand:
   30-70
8. Type of Filter Pack:
   10-20
9. Screen Material: pvc
   Type: Factory Cut or
   Continuous Slot
   Slot Size: 0.010in.
   Length: 2.00ft.
10. Backfill Material: (Below filter pack)
    ____ None
    x Other natural

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 2

For CH2M Hill — Penta Wood

Location Siren, WI — Elev.

Job No. 3411-1164

Boring No. SG-3

GROUND WATER: While drilling ____ Time after drilling ____ ____; Before casing removal ____ Depth to water ____ ____; After casing removal ____ Depth to cave-in ____ ____

Start 2-3-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ...	Blows on Probe Size	Drilling Method
						EARTH DRILL						4-3/8 HSA

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR **FIELD BORING LOG** Sheet 2 of 2

For CH2M Hill Penta Wood

Job No. 3411-1164

Location Siren, WI Elev.

Boring No. SG-3

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 2-3-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size ___	Blows on Probe Size ___	Drilling Method
												4-3/8 HSA
						EARTH DRILL						
						55						
						60						
						65						
						70						
						75						
						80						
						85 E.O.B. 85.0'						
						Set @80.0'						
						90						
						95						
						100						

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-3

DATE INSTALLED 2-3-98

CHIEF John Einum

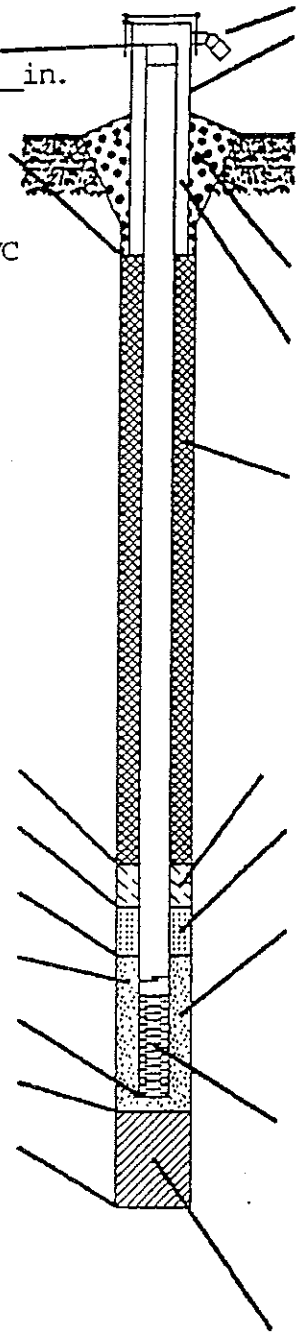
Type of Well: Water Table Observ., Piezometer or other soil gas .

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
____ Schedule 40
_x_ Schedule 80
____ Other ____



E. Bentonite Seal Top 71 ft.

F. Fine Sand Top 74 ft.

G. Filter Pack Top 76 ft.

H. Screen Joint Top 78 ft.

I. Well Bottom 80 ft.

J. Filter Pack Bottom 80 ft.

K. Borehole Bottom 85 ft.

1. Locking Cap? x Yes ___ No

2. Protective Cover:
a. Inside diameter: 4 in.
b. Length: 5 ft.
c. Material: Steel x
_____ Other ___

Bumper Post? ___ Yes x No
3" or 4"

3. Surface Seal: Bentonite ___
Concrete x

4. Material between Casing & Protop:
Bentonite x
_____ Other ___

5. Annular Space Seal: (Circle one)
a. Granular Bentonite
b. Bentonite Slurry
c. Cement-Bent. Grout

How installed:
x Gravity
___ Tremie pumped

6. Bentonite Seal: Granules ___
Pellets x

7. Type of Fine Sand:
30-70

8. Type of Filter Pack:
10-20

9. Screen Material: pvc
Type: Factory Cut or
Continuous Slot
Slot Size: 0.010in.
Length: 20.00ft.

10. Backfill Material: (Below filter pack)
___ None
x Other natural

BOART LONGYEAR

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-4

DATE INSTALLED 2-4-98

CHIEF John Einum

Type of Well: Water Table Observ., Piezometer or other soil gas.

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 1.0 ft.

D. Well Casing: Flush threaded PVC
_____ Schedule 40
_x_ Schedule 80
_____ Other _____

E. Bentonite Seal Top 1 ft.

F. Fine Sand Top _____ ft.

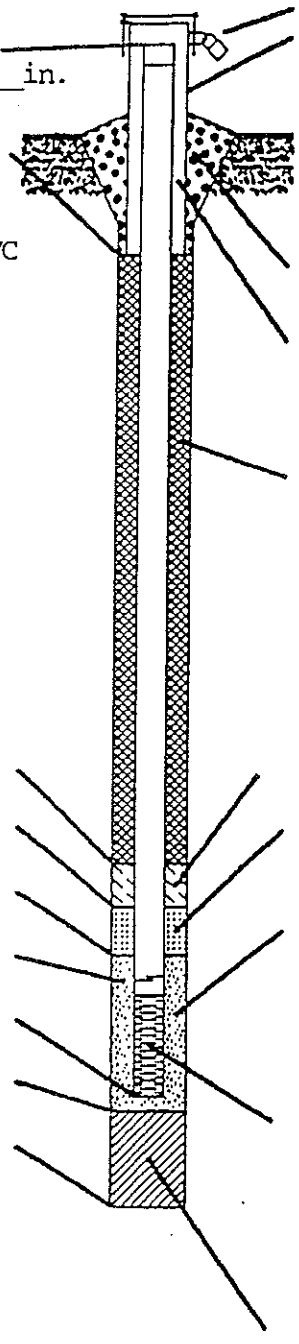
G. Filter Pack Top 2 ft.

H. Screen Joint Top 3 ft.

I. Well Bottom 5 ft.

J. Filter Pack Bottom 5 ft.

K. Borehole Bottom 9 ft.



1. Locking Cap? x Yes ____ No
2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel ____
   _____ Other ____
   Bumper Post? ____ Yes x No
   3" or 4"
3. Surface Seal: Bentonite ____
   Concrete x
4. Material between Casing & Protop:
   Bentonite x
   _____ Other ____
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   (b) Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   x Gravity
   ____ Tremie pumped
6. Bentonite Seal: Granules ____
   Pellets x
7. Type of Fine Sand:
   30-70
8. Type of Filter Pack:
   10-20
9. Screen Material: pvc
   Type: Factory Cut or
   (Continuous Slot)
   Slot Size: 00 1 0 in.
   Length: 2 0 0 ft.
10. Backfill Material: (Below filter pack)
    ____ None
    x Other natural

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 1

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. ____

Boring No. SG-4

GROUND WATER				
	While drilling	____	Time after drilling	____
	Before casing removal	____	Depth to water	____
	After casing removal	____	Depth to cave-in	____

Start 2-4-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
												4-3/8 HSA

Earth Drill

5

E.O.B. 9.0'

10

Set @5.0'

15

20

25

30

35

40

45

50

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-5

DATE INSTALLED 2-4-98

CHIEF John Einum

Type of Well: Water Table Observ., Piezometer or other soil gas.

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
_____ Schedule 40
_x_ Schedule 80
_____ Other _____

E. Bentonite Seal Top 32 ft.

F. Fine Sand Top 34 ft.

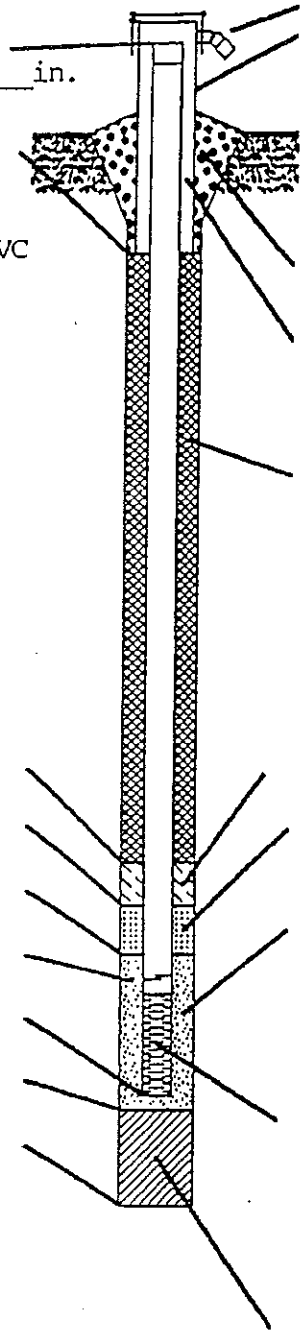
G. Filter Pack Top 36 ft.

H. Screen Joint Top 38 ft.

I. Well Bottom 40 ft.

J. Filter Pack Bottom 40 ft.

K. Borehole Bottom 45 ft.



1. Locking Cap? _x_ Yes ____ No
2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel _x_
      _____ Other ____
   Bumper Post? ____ Yes _x_ No
   3" or 4"
3. Surface Seal: Bentonite ____
   Concrete _x_
4. Material between Casing & Protop:
   Bentonite _x_
   _____ Other ____
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   (b). Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   _x_ Gravity
   ____ Tremie pumped
6. Bentonite Seal: Granules ____
   Pellets _x_
7. Type of Fine Sand:
   30-70
8. Type of Filter Pack:
   10-20
9. Screen Material: pvc
   Type: ~~Factory Cut or~~ Continuous Slot
   Slot Size: 0.010 in.
   Length: 20.0 ft.
10. Backfill Material: (Below filter pack)
    ____ None
    _c_ Other natural

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 1

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. ____

Boring No. SG-5

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 2-4-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size -	Blows on Probe Size	Drilling Method
												4-3/8 HSA

Earth Drill

5
10
15
20
25
30
35
40
45 — E.O.B. 45.0'

Set @40.0'

50

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 2

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. _____

Boring No. SG-6

GROUND WATER				
	While drilling	_____	Time after drilling	_____
	Before casing removal	_____	Depth to water	_____
	After casing removal	_____	Depth to cave-in	_____

Start 2-3-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
											4-3/8	HSA

Earth Drill

5
10
15
20
25
30
35
40
45
50

BOART LONGYEAR **FIELD BORING LOG** Sheet 2 of 2

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. SG-6

GROUND WATER: While drilling ____ Time after drilling ____ ____
Before casing removal ____ Depth to water ____ ____
After casing removal ____ Depth to cave-in ____ ____

Start 2-3-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size __	Blows on Probe Size __	Drilling Method
												4-3/8 HSA
						Earth Drill						
						55						
						60						
						65						
						70						
						75						
						80						
						85 E.O.B. 85.0'						
						Set @80.0'						
						90						
						95						
						100						

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-6

DATE INSTALLED 2-3-98

CHIEF John Einum

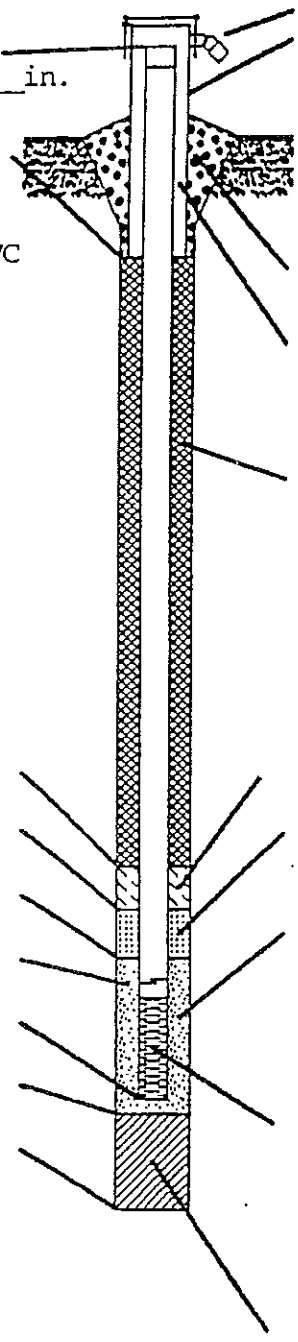
Type of Well: Water Table Observ., Piezometer or other soil gas .

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
____ Schedule 40
__x__ Schedule 80
____ Other ____



E. Bentonite Seal Top 72 ft.

F. Fine Sand Top 74 ft.

G. Filter Pack Top 76 ft.

H. Screen Joint Top 78 ft.

I. Well Bottom 80 ft.

J. Filter Pack Bottom 80 ft.

K. Borehole Bottom 85 ft.

1. Locking Cap? x Yes ____ No
2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel x
      ____ Other ____
   Bumper Post? ____ Yes x No
   3" or 4"
3. Surface Seal: Bentonite ____
   Concrete x
4. Material between Casing & Protop:
   Bentonite x
   ____ Other ____
5. Annular Space Seal:(Circle one)
   a. Granular Bentonite
   (b) Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   ____ Gravity
   ____ Tremie pumped
6. Bentonite Seal: Granules ____
   Pellets x
7. Type of Fine Sand:
   30-70
8. Type of Filter Pack:
   10-20
9. Screen Material: pvc
   Type: ~~Factory Cut or~~ Continuous Slot
   Slot Size: 0.0 1 0 in.
   Length: 2.0 0 ft.
10. Backfill Material:(Below filter pack)
    ____ None
    x Other natural

BOART LONGYEAR

BOART LONGYEAR **FIELD BORING LOG**

Sheet 1 of 1

For CH2M Hill Penta Wood

Job No. 3411-1164

Location Siren, WI Elev.

Boring No. SG-7

GROUND WATER				
	While drilling		Time after drilling	
	Before casing removal		Depth to water	
	After casing removal		Depth to cave-in	

Start 2-2-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe / Weight / Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Earth Drill						4-3/8 HSA
						E.O.B. 7.0'						
						Set @5.0'						

5 10 15 20 25 30 35 40 45 50

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-7

DATE INSTALLED 2-2-98

CHIEF John Einum

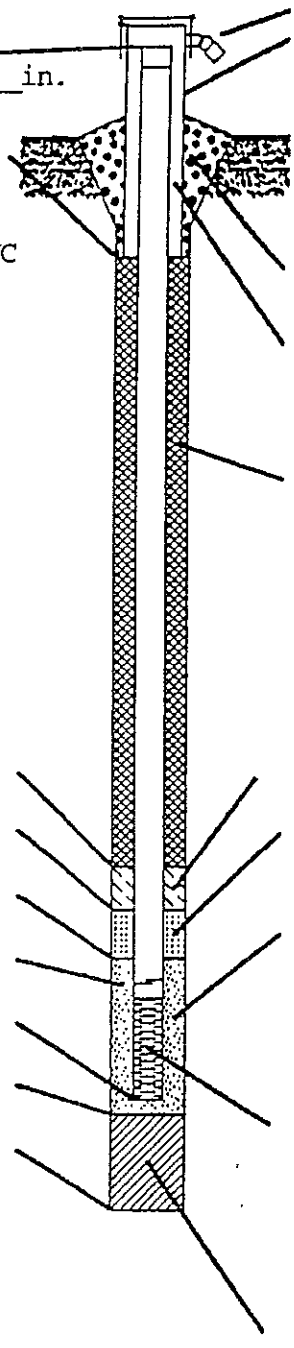
Type of Well: Water Table Observ., Piezometer or other soil gas.

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 1.0 ft.

D. Well Casing: Flush threaded PVC
- ____ Schedule 40
- x Schedule 80
- ____ Other ____



E. Bentonite Seal Top 1.0 ft.

F. Fine Sand Top ____ ft.

G. Filter Pack Top 2.0 ft.

H. Screen Joint Top 3.0 ft.

I. Well Bottom 5.0 ft.

J. Filter Pack Bottom 5.0 ft.

K. Borehole Bottom 7.0 ft.

1. Locking Cap? x Yes ____ No
2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel x ____ Other ____
   Bumper Post? ____ Yes x No 3" or 4"
3. Surface Seal: Bentonite ____ Concrete x
4. Material between Casing & Protop: Bentonite x ____ Other ____
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   (b) Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   - x Gravity
   - ____ Tremie pumped
6. Bentonite Seal: Granules ____ Pellets x
7. Type of Fine Sand: ____
8. Type of Filter Pack: 10-20
9. Screen Material: pvc
   Type: Factory Cut or (Continuous Slot)
   Slot Size: 0.010 in.
   Length: 2.00 ft.
10. Backfill Material: (Below filter pack)
    - ____ None
    - x Other natural

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 1

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. ____

Boring No. SG-8

GROUND WATER				
	While drilling	____	Time after drilling	____ ____
	Before casing removal	____	Depth to water	____ ____
	After casing removal	____	Depth to cave-in	____ ____

Start 2-2-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
											4-3/8	HSA

Earth Drill

5
10
15
20
25
30
35
40
45
50

E.O.B. 45.0'

Set @40.0'

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-8

DATE INSTALLED 2-2-98

CHIEF John Einum

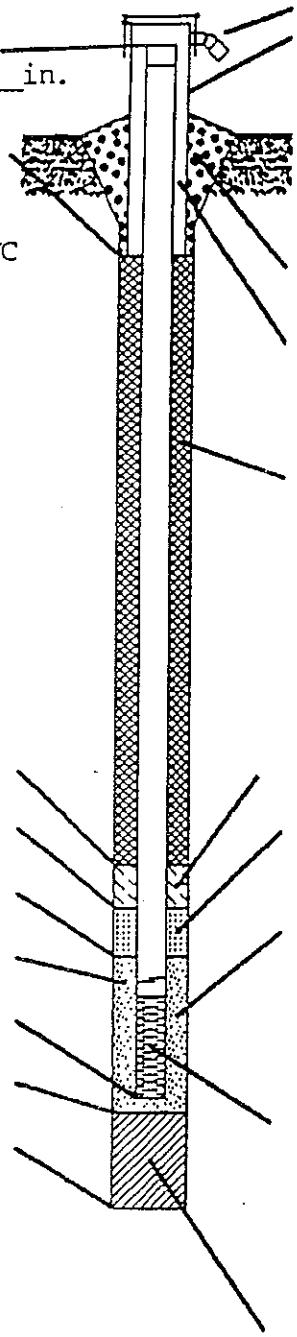
Type of Well: Water Table Observ., Piezometer or other soil gas.

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
- ____ Schedule 40
- x Schedule 80
- ____ Other ____



E. Bentonite Seal Top 31.0 ft.

F. Fine Sand Top 34.0 ft.

G. Filter Pack Top 36.0 ft.

H. Screen Joint Top 38.0 ft.

I. Well Bottom 40.0 ft.

J. Filter Pack Bottom 40.0 ft.

K. Borehole Bottom 45.0 ft.

1. Locking Cap? x Yes ____ No
2. Protective Cover:
   a. Inside diameter: 4 in.
   b. Length: 5 ft.
   c. Material: Steel x
      ____ Other ____
   Bumper Post? ____ Yes x No
   3" or 4"
3. Surface Seal: Bentonite ____
   Concrete x
4. Material between Casing & Protop:
   Bentonite x
   ____ Other ____
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   b. Bentonite Slurry
   c. Cement-Bent. Grout

   How installed:
   - x Gravity
   - ____ Tremie pumped
6. Bentonite Seal: Granules ____
   Pellets x
7. Type of Fine Sand: 30-70
8. Type of Filter Pack: 10-20
9. Screen Material: pvc
   Type: ~~Factory Cut~~ or Continuous Slot
   Slot Size: 0.010in.
   Length: 2.00ft.
10. Backfill Material: (Below filter pack)
    - ____ None
    - x Other natural

BOART LONGYEAR

BOART LONGYEAR — FIELD BORING LOG

Sheet 1 of 2

For CH2M Hill — Penta Wood

Job No. 3411-1164

Location Siren, WI — Elev. —

Boring No. SG-9

GROUND WATER: While drilling — Time after drilling — Before casing removal — Depth to water — After casing removal — Depth to cave-in

Start 1-27-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe — Weight — Drop —	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
												4-3/8 HSA

Earth Drill

F-C SAND, Brown

5 10 15 20 25 30 35 40 45 50

BOART LONGYEAR **FIELD BORING LOG** Sheet 2 of 2

For CH2M Hill Penta Wood

Location Siren, WI Elev.

Job No. 3411-1164

Boring No. SG-9

GROUND WATER: While drilling ____ Time after drilling ____ ____ Before casing removal ____ Depth to water ____ ____ After casing removal ____ Depth to cave-in ____ ____

Start 1-27-98
Unit 820
Chief JE

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe ____ Weight ____ Drop ____	Unconfined Strength	Boulders	Blows on Casing Size __	Blows on Probe Size __	Drilling Method
												4-3/8 HSA
						Earth Drill						
						55						
						60						
						65						
						70						
						75						
						80						
						E.O.B. 83.0'						
						85 Set @80.0'						
						90						
						95						
						100						

WELL CONSTRUCTION REPORT

JOB NO. 3411-1164

LOCATION Siren, WI

WELL NAME SG-9

DATE INSTALLED 1-28-98

CHIEF John Einum

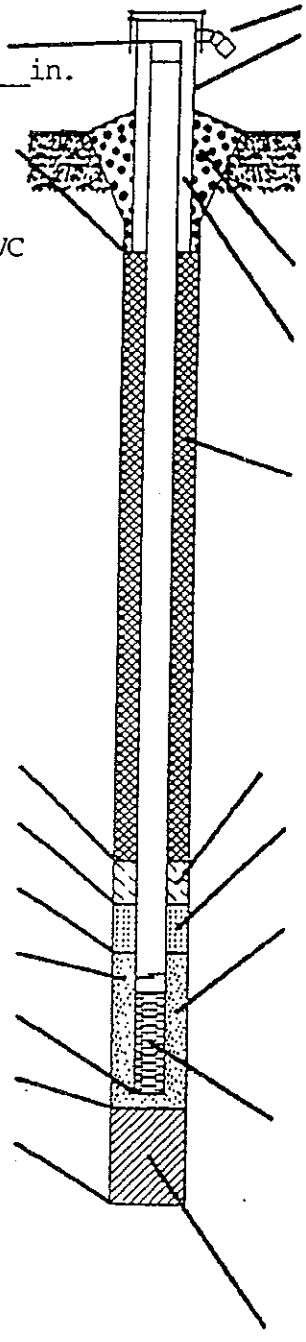
Type of Well: Water Table Observ., Piezometer or other soil gas.

A. Height of Well Casing above ground 2.0 ft.

B. Diameter of Well Casing 2 in.

C. Surface Seal Bottom 2.0 ft.

D. Well Casing: Flush threaded PVC
____ Schedule 40
_x_ Schedule 80
____ Other _____



E. Bentonite Seal Top 72.0 ft.

F. Fine Sand Top 74.0 ft.

G. Filter Pack Top 76.0 ft.

H. Screen Joint Top 78.0 ft.

I. Well Bottom 80.0 ft.

J. Filter Pack Bottom 80.0 ft.

K. Borehole Bottom 83.0 ft.

1. Locking Cap? _x_ Yes ____ No
2. Protective Cover:
   a. Inside diameter: __4_ in.
   b. Length: _5_ ft.
   c. Material: Steel _x_
      _____ Other ____
   Bumper Post? ____ Yes _x_ No
   3" or 4"
3. Surface Seal: Bentonite ____
   Concrete _x_
4. Material between Casing & Protop:
   Bentonite _x_
   _____ Other ____
5. Annular Space Seal: (Circle one)
   a. Granular Bentonite
   (b. Bentonite Slurry)
   c. Cement-Bent. Grout

   How installed:
   _x_ Gravity
   ____ Tremie pumped
6. Bentonite Seal: Granules ____
   Pellets _x_
7. Type of Fine Sand:
   30-70
8. Type of Filter Pack:
   10-20
9. Screen Material: pvc
   Type: Factory Cut or
   (Continuous Slot)
   Slot Size: 0.010in.
   Length: 20ft.
10. Backfill Material: (Below filter pack)
    ____ None
    _x_ Other natural

BOART LONGYEAR