STS CONSULTANTS

STS Consultants, Ltd.
1035 Kepler Drive
Green Bay, Wisconsin 54311

voice 920-468-1978
fax 920-468-3312
web www.stsconsultants.com

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FEB 07 2005

TRACKED ☑ 99
REVIEWED ☑ AB

February 2, 2005

Ms. Jennifer Borski
Wisconsin Department of Natural Resources
625 East County Road Y, Suite 700
Oshkosh, Wisconsin 54901-9731

Re: Record of Monitoring Well Abandonments, Building 58 No. 6 Fuel Oil/Turpentine Site, International Paper-Kaukauna Division, Kaukauna, Wisconsin -- **WDNR BRRTS No. 02-45-000652** -- STS Project No. 4-27463

Dear Ms. Borski:

STS Consultants, Ltd. (STS) is pleased to submit this information recording the abandonment of three monitoring wells at the Building 58 No. 6 Fuel Oil/Turpentine Site at International Paper (IP)-Kaukauna Division in Kaukauna, Wisconsin.

The Wisconsin Department of Natural Resources (WDNR) issued conditional case closure for this project site on July 7, 2004. The conditional closure indicated that closure would be finalized when the WDNR was in receipt of documentation of final closure activities, which included disposal of any soil, recording of deed instruments, and abandonment of groundwater monitoring wells.

The WDNR received notification of the deed filing in November 2004. The purpose of this letter is to present the final case closure documentation.

STS completed monitoring well abandonment of Monitoring Wells B-8, MW-8A, and MW-8B on January 13, 2005. WDNR Well/Drillhole/Borehole Abandonment forms (Form 3300-5) documenting these abandonments are attached to this letter. Soil Boring Log Information forms and, when available, Monitoring Well Installation forms for these wells are also attached in accordance with the requirements on Form 3300-5.

As indicated in the April 2004 Case Closure Request, soils from the site were disposed of at IP's Red Hills Landfill in the mid-1990s. Polyvinyl chloride removed from the monitoring wells during the abandonment activities was properly disposed.

We trust that this information satisfies the remaining conditions for case closure for the Building 58 Site. With this letter and the attached information, we respectfully request that the WDNR issue a final case closure letter for the site.

Please contact us if you have any questions or comments regarding this final case information.

Sincerely,

STS CONSULTANTS, LTD.

Robert J. Mottl

Robert J. Mottl, P.G.
Senior Project Geologist

Paula Leier-Engelhardt

Paula Leier-Engelhardt, P.G.
Senior Project Geologist

Wisconsin Department of Natural Resources
STS Project No. 4-27463
February 2, 2005

Attachments:
WDNR Well/Drillhole/Borehole Abandonment Forms (3)
WDNR Soil Boring Log Information Forms (3)
WDNR Monitoring Well Construction Form (2)

Copy: Mr. Thomas Jayne
International Paper-Kaukauna Division
600 Thilmany Road
P.O. Box 600
Kaukauna, Wisconsin 54130

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

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

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Outagamie

Common Well Name: B-8 Gov't Lot (if applicable): _____

Grid Location: ____ 1/4 of ____ 1/4 of Sec. ____ ; T. 21 N; R. 18 ☒ E ☐ W

____ ft. ☐ N. ☐ S., ____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ___° ___' ___" Long ___° ___' ___" or

State Plane ____ ft. N. ____ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: project closure | WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: International Papers (Building 58)

Facility ID: 445031180 | License/Permit/Monitoring No.: 02-45-000652

Street Address of Well: 600 Thilmany Road

City, Village, or Town: Kaukauna

Present Well Owner: International Papers - Kaukauna | Original Owner: DivInternational Papers

Street Address or Route of Owner: 600 Thilmany Road

City, State, Zip Code: Kaukauna, Wisconsin

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 10/24/1995

☒ Monitoring Well
☐ Water Well
☐ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) (From ground surface): 6.9 Casing Diameter (in.): 2.00
Casing Depth (ft.): 6.9

Lower Drillhole Diameter (in.): 8.0

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown

If Yes, To What Depth? _____ Feet

Depth to Water (Feet): 4.9

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

	Yes	No	Not Applicable
Pump & Piping Removed?	☐	☐	☒
Liner(s) Removed?	☐	☐	☒
Screen Removed?	☐	☒	☐
Casing Left in Place?	☒	☐	

	Yes	No
Was Casing Cut Off Below Surface?	☒	☐
Did Sealing Material Rise to Surface?	☒	☐
Did Material Settle After 24 Hours?	☐	☒
If Yes, Was Hole Retopped?	☐	☐

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain) Gravity

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Concrete	Surface	0.5		
Bentonite - hole plug	0.5	6.9	1	

(6) Comments: Could not remove protector pipe, filled pipe with concrete

(7) Name of Person or Firm Doing Sealing Work: STS Consultants Ltd. | Date of Abandonment: 1/13/05

Signature of Person Doing Work: [signature] | Date Signed: 1/21/05

Street or Route: 1035 Kepler Street | Telephone Number: 920-468-1978

City, State, Zip Code: Green Bay, Wisconsin 54311

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

Comments

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000

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

(1) GENERAL INFORMATION

WI Unique Well No.: PK231
DNR Well ID No.:
County: Outagamie

Common Well Name: MW-8A Gov't Lot (if applicable)

Grid Location: ___ 1/4 of ___ 1/4 of Sec. ___ ; T. 21 N; R. 18 ☒ E ☐ W

___ ft. ☐ N. ☐ S., ___ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ___ ° ___ ' ___ " Long ___ ° ___ ' ___ " or

State Plane ___ ft. N. ___ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: project closure
WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: International Papers (Building 58)
Facility ID: 445031180
License/Permit/Monitoring No.: 02-45-000652
Street Address of Well: 600 Thilmany Road
City, Village, or Town: Kaukauna
Present Well Owner: International Papers - Kaukauna
Original Owner: DivInternational Papers
Street Address or Route of Owner: 600 Thilmany Road
City, State, Zip Code: Kaukauna, Wisconsin

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 9/28/2002

☒ Monitoring Well
☐ Water Well
☐ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify)

Formation Type:
☐ Unconsolidated Formation ☒ Bedrock

Total Well Depth (ft) (From ground surface): 15.0
Casing Diameter (in.): 2.00
Casing Depth (ft.): 15.0
Lower Drillhole Diameter (in.): 6.0

Was Well Annular Space Grouted? ☒ Yes ☐ No ☐ Unknown
If Yes, To What Depth? 3.2 Feet
Depth to Water (Feet): 5.0

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☒ No	☐ Not Applicable
Casing Left in Place?	☒ Yes	☐ No	
Was Casing Cut Off Below Surface?	☒ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☐ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain) Gravity

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Asphalt patch	Surface	0.5	1	
Bentonite - hole plug	0.5	15.0	1	

(6) Comments

(7) Name of Person or Firm Doing Sealing Work: STS Consultants Ltd.
Date of Abandonment: 1/13/05
Signature of Person Doing Work: [signature]
Date Signed: 1/21/05
Street or Route: 1035 Kepler Street
Telephone Number: 920-468-1978
City, State, Zip Code: Green Bay, Wisconsin 54311

FOR DNR OR COUNTY USE ONLY
Date Received
Noted By
Comments

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5 2/2000 Page 1 of 2

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

(1) GENERAL INFORMATION

WI Unique Well No.: PK232
DNR Well ID No.:
County: Outagamie

Common Well Name: MW-8B Gov't Lot (if applicable): _____

Grid Location: ____ 1/4 of ____ 1/4 of Sec. ____ ; T. 21 N; R. 18 ☒ E ☐ W

____ ft. ☐ N. ☐ S., ____ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐

Lat ___° ___' ___" Long ___° ___' ___" or

State Plane ____ ft. N. ____ ft. E. ☐ S ☐ C ☐ N Zone

Reason For Abandonment: project closure
WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: International Papers (Building 58)
Facility ID: 445031180
License/Permit/Monitoring No.: 02-45-000652
Street Address of Well: 600 Thilmany Road
City, Village, or Town: Kaukauna
Present Well Owner: International Papers - Kaukauna
Original Owner: Div International Papers
Street Address or Route of Owner: 600 Thilmany Road
City, State, Zip Code: Kaukauna, Wisconsin

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 9/28/2002

☒ Monitoring Well
☐ Water Well
☐ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☐ Unconsolidated Formation ☒ Bedrock

Total Well Depth (ft) (From ground surface): 14.0
Casing Diameter (in.): 2.00
Casing Depth (ft.): 14.0
Lower Drillhole Diameter (in.): 6.0

Was Well Annular Space Grouted? ☒ Yes ☐ No ☐ Unknown
If Yes, To What Depth? 3.0 Feet
Depth to Water (Feet): 3.5

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☒ No	☐ Not Applicable
Casing Left in Place?	☒ Yes	☐ No	

Was Casing Cut Off Below Surface?	☒ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain) Gravity

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
Black top patch	Surface	0.5		
Bentonite	0.5	14.0	1	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work: STS Consultants Ltd.
Date of Abandonment: 1/13/05
Signature of Person Doing Work: [signature] RPT
Date Signed: 1/21/05
Street or Route: 1035 Kepler Street
Telephone Number: 920-468-1978
City, State, Zip Code: Green Bay, Wisconsin 54311

FOR DNR OR COUNTY USE ONLY
Date Received
Noted By
Comments

State of Wisconsin
Department of Natural Resources

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

Soil Boring Log Information

Form 4400-122 Rev. 5-92

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
International Paper - Thilmany Bldg. 58	45-00652	B-8 (Sump)

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
STS Consultants, Ltd. - J. Denneau - STS 21841XF	10/24/95	10/24/95	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	8.0 Inches

Boring Location
State Plane N, E | Lat ° ' " | Long ° ' "
1/4 of 1/4 of Section 22 T 21 N,R 18 E

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

County	DNR County Code	Civil Town/City/ or Village
Outagamie	45	Kaukauna

Sample: Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				Concrete										
			2	Washed stone (auger cuttings)										
			4											
			6											
				Auger Refusal End of Boring Boring advanced from 0.0 to 6.9 feet with 4 1/4-inch inside diameter hollow-stem auger The boring has a ground surface elevation of 101.2 feet referenced to site benchmark with arbitrary elevation of +100.00 feet 2-inch diameter sump was installed to 6.9 feet and completed with flush-mount protector pipe										

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

Signature: Robert J. Mottl
LLD21841

Firm: STS Consultants, Ltd.
1035 Kepler Drive Green Bay, Wisconsin
Tel: 414-468-1978, Fax: 414-468-3312

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

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Int Papers - No. 6 Fuel Oil/Turp Release Site		MW-8A

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
STS Consultants Ltd. - D. Maroszek - STS Project No. 27463	9/27/2002	9/28/2002	Rock bit

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Elevation	Surface Elevation	Borehole Diameter
PK231		MW-8A	Ft.	623.2 Ft.	6.0 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S/C/N
1/4 of 1/4 of Section , T 21 N, R 18 E
Lat. ___ ° ___ ' ___ "
Long. ___ ° ___ ' ___ "
Local Grid Location (If applicable)
Feet ☐ N ☐ S Feet ☐ E ☐ W

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

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				Asphalt										
1 SS	24/15	53	2	Fill: Black silty fine to coarse sand with fine gravel - slight musty odor - dry										
2 SS	6/2		4	Fill: Yellowish-brown silty fine to coarse sand with occasional fine gravel-sized pieces of weathered dolomite - dry										
			6											
			8											
			10	Bedrock (dolomite)										
			12											
			14											

End of Boring.
Boring advanced from 0.0 feet to 4.5 feet with hollow-stem auger.
6-inch casing advanced to 4.5 feet.
Boring advanced from 0.0 feet to 15.5 feet with 6-inch rock bit and wash water.
Installed 2-inch Schedule 40 PVC monitoring well at 15.0 feet with protective pipe and lock.

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

Signature: Paula Lee Engelhardt

Firm: STS Consultants Ltd.
1035 Kepler Drive, Green Bay, WI 54311
Tel: 920-468-1978
Fax: 920-468-3312

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State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 6-97

Facility/Project Name: Int Papers - No. 6 Fuel Oil/Turp Release Site	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW-8A
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or	Wis. Unique Well No: PK231 / DNR Well Number
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 09/28/2002
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____, T. 21 N, R. 18 ☒E ☐W	Well Installed By: (Person's Name and Firm): Dale Maroszek
Distance Well Is From Waste/Source Boundary: 100 ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☒ Downgradient n ☐ Not Known	STS Consultants Ltd.

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation 622.89 ft. MSL

C. Land surface elevation 623.2 ft. MSL

D. Surface seal, bottom 622.2 ft. MSL or 1.0 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):
Green Bay Water

E. Bentonite seal, top 622.2 ft. MSL or 1.0 ft.

F. Fine sand, top 620.0 ft. MSL or 3.2 ft.

G. Filter pack, top 620.0 ft. MSL or 3.2 ft.

H. Screen joint, top 618.2 ft. MSL or 5.0 ft.

I. Well bottom 608.2 ft. MSL or 15.0 ft.

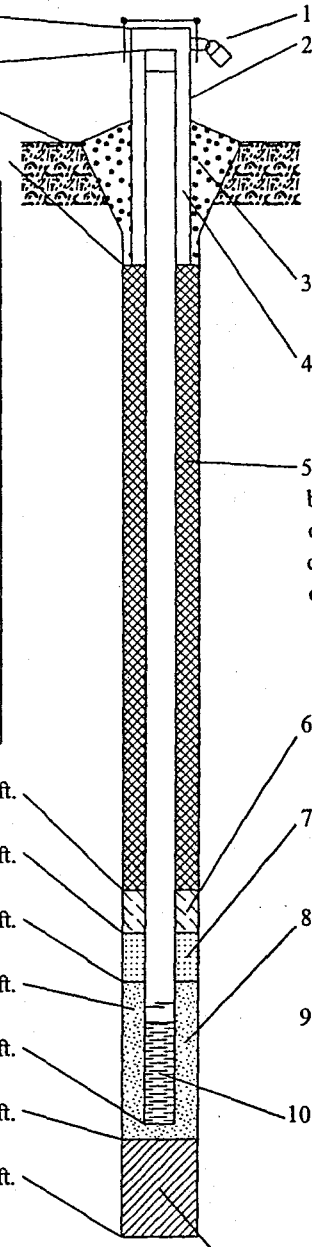
J. Filter pack, bottom 607.7 ft. MSL or 15.5 ft.

K. Borehole, bottom 607.7 ft. MSL or 15.5 ft.

L. Borehole, diameter 6.0 in.

M. O.D. well casing 2.22 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: flush — 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: sand — Bentonite ☐ 30 Other ☒
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud weight . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 50
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name and mesh siz
a. ____
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name and mesh s
a. 20/40 SI SA (5 bags)
b. Volume added 2.5 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 ____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11 Continuous slot ☐ 01 ____ Other ☐
b. Manufacturer Buffalo
c. Slot size: 0.010 in
d. Slotted length: 10.0 ft
11. Backfill material (below filter pack): None ☒ 14 ____ Other ☐

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

Signature: Paula Geier-Engelhardt

Firm: STS Consultants Ltd.
1035 Kepler Drive, Green Bay, Wisconsin
Tel: 920-468-1978
Fax: 920-468-3312

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

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Int Papers - No. 6 Fuel Oil/Turp Release Site		MW-8B

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
STS Consultants Ltd. - D. Maroszek - STS Project No. 27463	9/27/2002	9/27/2002	Rock bit

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Elevation	Surface Elevation	Borehole Diameter
PK232		MW-8B	Ft.	623.0 Ft.	6.0 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐)
State Plane S/C/N
1/4 of 1/4 of Section , T 21 N, R 18 E
Lat. ° ' "
Long. ° ' "
Local Grid Location (If applicable)
Feet ☐ N ☐ S Feet ☐ E ☐ W

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

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 SS	18/18	15		Asphalt										
2 SS	15/6	2	2	Fill: Black to dark gray silty fine to medium sand - trace cinders - trace fine gravel - slight petroleum odor at 2.0 feet - dry										
			4											
			6											
			8	Bedrock (dolomite)										
			10											
			12											
			14	End of Boring. Boring advanced from 0.0 feet to 3.3 feet with hollow-stem auger. SW casing advanced to 3.3 feet. Boring advanced from 0.0 feet to 14.0 feet with 6-inch rock bit and wash water. Installed 2-inch Schedule 40 PVC monitoring well at 14.0 feet with flush mounted protective pipe and lock.										

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

Signature: Paula Geier-Engelhardt
Firm: STS Consultants Ltd.
1035 Kepler Drive, Green Bay, WI 54311
Tel: 920-468-1978
Fax: 920-468-3312

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 6-97

Facility/Project Name: Int Papers - No. 6 Fuel Oil/Turp Release Site	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-8B
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or	Wis. Unique Well No: PK232 / DNR Well Number
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 09/28/2002
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____, T. 21 N, R. 18 ☒ E ☐ W	Well Installed By: (Person's Name and Firm): Dale Maroszek
Distance Well Is From Waste/Source Boundary: 15 ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☒ Downgradient n ☐ Not Known	STS Consultants Ltd.

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation 622.56 ft. MSL

C. Land surface elevation 623.0 ft. MSL

D. Surface seal, bottom 622.0 ft. MSL or 1.0 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 ☒ 5 0
Hollow Stem Auger ☐ 4 1
____ Other ☐

15. Drilling fluid used: Water ☒ 0 2 Air ☐ 0 1
Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis):
Green Bay Water

E. Bentonite seal, top 622.0 ft. MSL or 1.0 ft.

F. Fine sand, top 620.0 ft. MSL or 3.0 ft.

G. Filter pack, top 620.0 ft. MSL or 3.0 ft.

H. Screen joint, top 619.0 ft. MSL or 4.0 ft.

I. Well bottom 609.0 ft. MSL or 14.0 ft.

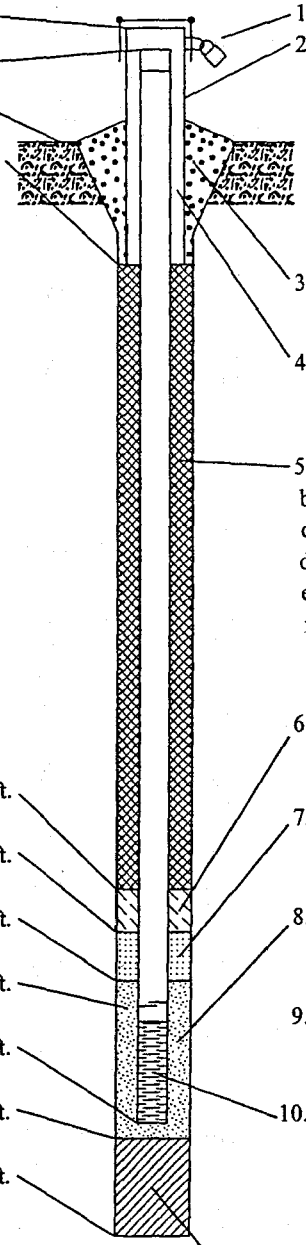
J. Filter pack, bottom 609.0 ft. MSL or 14.0 ft.

K. Borehole, bottom 609.0 ft. MSL or 14.0 ft.

L. Borehole, diameter 6.0 in.

M. O.D. well casing 2.22 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: flush Steel ☐ 0 4 Other ☒
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____
3. Surface seal: Bentonite ☐ 3 0 Concrete ☒ 0 1 ____ Other ☐
4. Material between well casing and protective pipe: granular bentonite Bentonite ☐ 3 0 Other ☒
5. Annular space seal: a. Granular Bentonite ☒ 3 3
b. ____ Lbs/gal mud weight . Bentonite-sand slurry ☐ 3 5
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1 Tremie pumped ☐ 0 2 Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☒ 3 3
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 3 2
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name and mesh siz
a. 40/60 SI SA Badger (1/2 bag)
b. Volume added 0.25 ft^3
8. Filter pack material: Manufacturer, product name and mesh si
a. 20/40 SI SA (5 bags)
b. Volume added 2.5 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 Flush threaded PVC schedule 80 ☐ 2 4 ____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 Continuous slot ☐ 0 1 ____ Other ☐
b. Manufacturer Buffalo
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 ____ Other ☐

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