APPENDIX D

WELL CONSTUCTION AND STRATIGRAPHIC LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: EW 2
DATE COMPLETED: September 30, 2005
DRILLING METHOD: Rotary/Rotosonic
FIELD PERSONNEL: D. Sheild

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Extraction Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	GROUND SURFACE	936.50					
5	SW/GW-SAND and GRAVEL, well sorted, little silt, medium grained, brownish red, dry (Stratigraphy based on EW-1A)			1			
10							
15	SW-SAND, little gravel, medium grained, well sorted, brown, moist	921.50		2			
20							
25			Cement Grout	3			
30							
35				4			
40			6" Low Carbon Steel Casing				
45				5			
50							
55				6			
60							
65				7			
70							
75	-saturated	863.50		8			

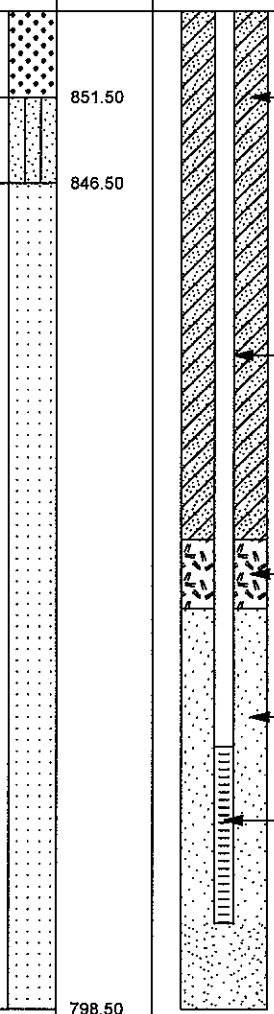
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: EW 2
DATE COMPLETED: September 30, 2005
DRILLING METHOD: Rotary/Rotosonic
FIELD PERSONNEL: D. Sheild

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Extraction Well	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE
85	SM-SAND, silty, interbedded, stratified, medium grained, gray brown, saturated	851.50	Cement Grout	9	G		
90	SANDSTONE-St. Peter, quartz sand, rounded, friable, gray to yellow, saturated	846.50					
95				10	G		
100			6" Low Carbon Steel Casing				
105				11	G		
110			Fine sand				
115				12	G		
120			Coarse Sand				
125			6" Screen	13	G		
130							
135				14	G		
140	END OF BOREHOLE @ 138.0ft BGS G-Grab sample collected.	798.50					
145							
150							
155							



WELL DETAILS
Screened interval:
813.80 to 803.50ft
122.70 to 133.00ft BGS
Length: 10.3ft
Diameter: 6in
Slot Size: .010
Material: Stainless Steel
Seal:
936.50 to 825.80ft
0.00 to 110.70ft BGS
Material: Cement Grout
Sand Pack:
825.80 to 798.50ft
110.70 to 138.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 16B
DATE COMPLETED: October 5, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
	TOP OF CASING GROUND SURFACE	940.71 938.10						
	Fill			1		2.0		0
5	SC-SAND, clayey, with fine gravel, fine to coarse grained, dark brown, moist	933.10						
10				2		5.0		0
15								
20				3		8.0		0
25								
30			Steel Riser Pipe	4		10.0		0
35								
40	-2" fine gravel layer	900.10		5		8.0		0
45								
50			Cement/Bentonite Grout	6		8.0		0
55								
60				7		7.0		0
65								
70	SM-SAND, trace silt, trace gravel, medium to coarse grained, brown, saturated	870.10		8		7.0		0
75								
80				9		8.0		0
85	-3' layer of gravelly sand	855.10						
90				10		8.0		0
95								
	SANDSTONE (St. Peter Formation), poorly	841.10						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 16B
DATE COMPLETED: October 5, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
	consolidated, very fine to fine grained, light gray, moist			11		8.0		0
105								
110				12		8.0		0
115	-2' layer of light brown sandstone	823.10						
120			Steel Riser Pipe	13		10.0		0
125								
130			Cement/Bentonite Grout	14		10.0		0
135								
140				15		10.0		0.7
145			Fine sand					
150			Sand	16		10.0		1.7
155			Screen					
160	END OF BOREHOLE @ 160.0ft BGS	778.10		17		5.0		9.2
165								
170								
175								
180								
185								
190								
195								

WELL DETAILS
Screened interval:
788.10 to 778.10ft
150.00 to 160.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: Stainless Steel
Seal:
795.10 to 790.10ft
143.00 to 148.00ft BGS
Material: Fine sand
Sand Pack:
790.10 to 778.10ft
148.00 to 160.00ft BGS
Material: Coarse Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

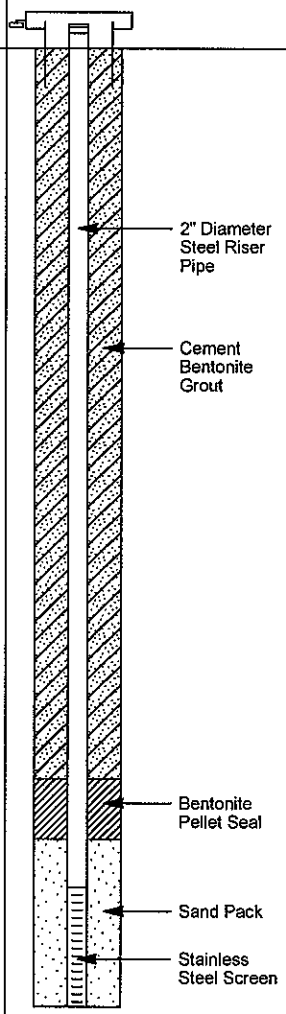
STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 16D
DATE COMPLETED: October 6, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	TOP OF CASING GROUND SURFACE	940.70 938.20
	Fill	
	SC-SAND, clayey, with fine gravel, fine to coarse grained, dark brown, moist	933.20
10		
20		
30		
40	-2" fine gravel layer	900.20
50		
60		
70	SW-SAND, trace silt, trace gravel, medium to coarse grained, brown, saturated	870.20
80	END OF BOREHOLE @ 80.0ft BGS	858.20
90		
100		
110		

Monitoring Well



WELL DETAILS
Screened interval:
868.20 to 858.20ft
70.00 to 80.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: Stainless Steel
Seal:
877.20 to 872.20ft
61.00 to 66.00ft BGS
Material: Bentonite chips
Sand Pack:
872.20 to 858.20ft
66.00 to 80.00ft BGS
Material: Coarse Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
1		2.0		0
2		5.0		0
3		8.0		0
4		10.0		0
5		8.0		0
6		8.0		0
7		7.0		0
8		7.0		0
9		8.0		0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

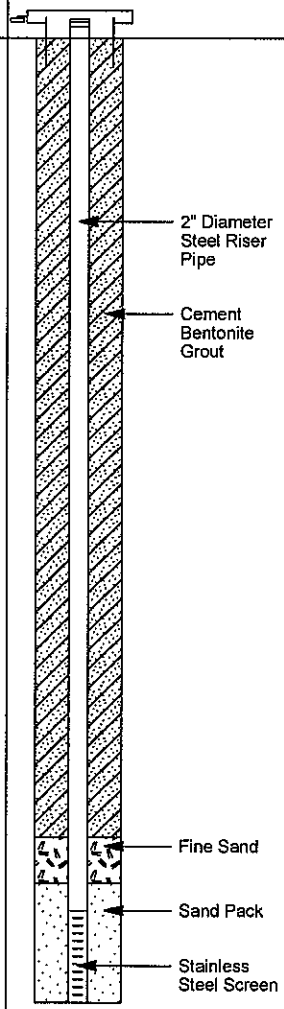
STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 17A
DATE COMPLETED: October 3, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	TOP OF CASING GROUND SURFACE	914.58 912.60
	Topsoil, organic	910.60
	SC-SAND, clayey, with gravel, medium to coarse grained, dark gray, saturated	
10		900.60 899.10
	CL-CLAY, with silt, trace fine gravel, medium plasticity, dark gray, moist -becoming highly plastic, brownish red	
20		887.60
	SW-SAND, with silt, medium grained, brown, saturated	
30	-increasing gravel with depth	881.60 879.60
	GM-GRAVEL, limestone and shale, with sand and silt, fine to 4" gravel, light gray, saturated	
40	CL-CLAY, gravelly (limestone), with silt, low plasticity, light gray, moist	872.60
	SW-SAND, with silt, medium to fine grained, light brown, moist	867.60 865.60
50	-becoming brownish gray -becoming brown	859.60
60		
70	SANDSTONE (St. Peter Formation), poorly consolidated, fine to very fine grained, light gray, moist 5' layer of light brown sandstone	843.60 837.60
80		
90		
100		
	END OF BOREHOLE @ 105.0ft BGS	807.60
110		
120		
130		
140		

Monitoring Well



WELL DETAILS
Screened interval:
817.60 to 807.60ft
95.00 to 105.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: Stainless Steel
Seal:
825.60 to 820.60ft
87.00 to 92.00ft BGS
Material: Fine Sand
Sand Pack:
820.60 to 807.60ft
92.00 to 105.00ft BGS
Material: Coarse Sand

SAMPLE				
NUMBER	INTERVAL	REC (ft)	'N' VALUE	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

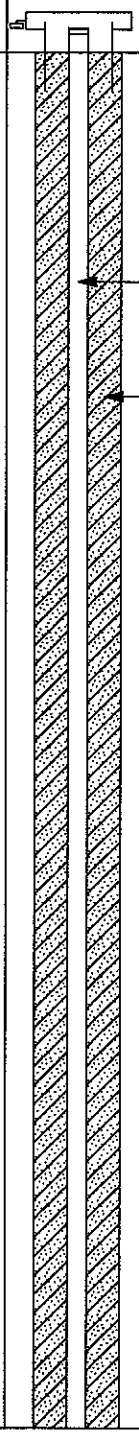
STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 17B
DATE COMPLETED: September 30, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	TOP OF CASING GROUND SURFACE	914.50 912.60
	Topsoil, organic	910.60
	SC-SAND, clayey, with gravel, medium to coarse grained, dark gray, saturated	900.60 899.10
10	CL-CLAY, with silt, trace fine gravel, medium plasticity, dark gray, moist -becoming highly plastic, brownish red	887.60
20	SW-SAND, with silt, medium grained, brown, saturated -increasing gravel with depth	881.60 879.60
30	GM-GRAVEL, limestone and shale, with sand and silt, fine to 4" gravel, light gray, saturated	872.60
40	CL-CLAY, gravelly (limestone), with silt, low plasticity, light gray, moist	867.60 865.60
	SW-SAND, with silt, medium to fine grained, light brown, moist -becoming brownish gray -becoming brown	859.60
50		
60		
70	SANDSTONE (St. Peter Formation), poorly consolidated, fine to very fine grained, light gray, moist 5' layer of light brown sandstone	843.60 837.60
80		
90		
100		
110		

Monitoring Well



SAMPLE				
NUMBER	INTERVAL	REC (ft)	'N' VALUE	

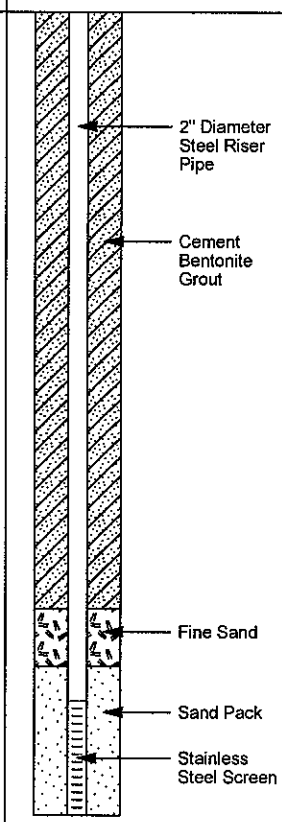
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 17B
DATE COMPLETED: September 30, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE
	-trace gravel	789.60					
130	-1' gravelly layer -trace gravel	783.60 782.60	2" Diameter Steel Riser Pipe				
140	-2' layer of light brown sandstone	772.60	Cement Bentonite Grout				
150	-becoming dark gray/brown	759.60					
	SHALE (St. Peter Formation), poorly consolidated, weathered, very fine grained, dark gray, saturated	757.60					
160	-becoming consolidated, less weathered	749.60					
	SANDSTONE (St. Peter Formation), very fine to medium grained, gray, saturated	744.60					
170			Fine Sand				
180			Sand Pack				
			Stainless Steel Screen				
190	END OF BOREHOLE @ 190.0ft BGS	722.60					
200							
210							
220							
230							



WELL DETAILS
Screened interval:
732.60 to 722.60ft
180.00 to 190.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: Stainless Steel
Seal:
740.60 to 735.60ft
172.00 to 177.00ft BGS
Material: Fine Sand
Sand Pack:
735.60 to 722.60ft
177.00 to 190.00ft BGS
Material: Coarse Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

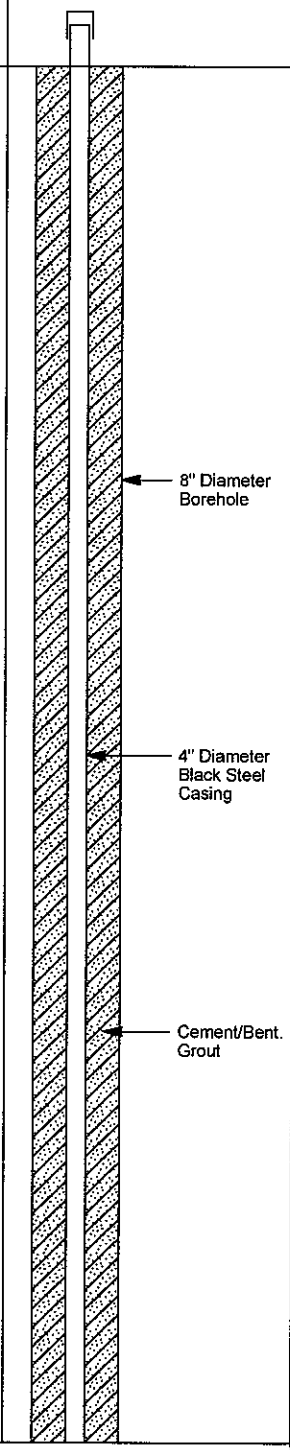
STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 17L
DATE COMPLETED: September 14, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	TOP OF CASING GROUND SURFACE	914.65 912.70
	Topsoil, organic	910.70
5	SC-SAND, clayey, with gravel, medium to coarse grained, dark gray, saturated	
10		900.70
15	CL-CLAY, with silt, trace fine gravel, medium plasticity, dark gray, moist -becoming highly plastic, brownish red	899.20
20		
25	SW-SAND, with silt, medium grained, brown, saturated	887.70
30	-increasing gravel with depth	881.70
35	GM-GRAVEL, limestone and shale, with sand and silt, fine to 4" gravel, light gray, saturated	879.70
40	CL-CLAY, gravelly (limestone), with silt, low plasticity, light gray, moist	872.70
45	SW-SAND, with silt, medium to fine grained, light brown, moist	867.70
50	-becoming brownish gray	865.70
55	-becoming brown	859.70
60		
65		
70	SANDSTONE (St. Peter Formation), poorly consolidated, fine to very fine grained, light gray, moist	843.70
75	5' layer of light brown sandstone	837.70
80		
85		
90		
95		

Monitoring Well



SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
1		2.0		0
2		10.0		0
3		5.0		0
4		10.0		0
5		10.0		0
6		10.0		0
7		10.0		0
8		10.0		0
9		10.0		0
10		10.0		4.3

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 17L
DATE COMPLETED: September 14, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
				11		10.0		0
105								
110				12		10.0		0
115								
120				13		8.0		0
125	-trace gravel	789.70						
130	-1' gravelly layer -trace gravel	783.70 782.70	8" Diameter Borehole	14		8.0		0
135								
140	-2' layer of light brown sandstone	772.70		15		10.0		0
145								
150			4" Diameter Black Steel Casing	16		10.0		0
155	-becoming dark gray/brown SHALE (St. Peter Formation), poorly consolidated, weathered, very fine grained, dark gray, saturated	759.70 757.70		17		5.0		0
160								
165	-becoming consolidated, less weathered	749.70		18		5.0		0
170	SANDSTONE (St. Peter Formation), very fine to medium grained, gray, saturated	744.70	Cement/Bent. Grout	19		10.0		0
175								
180				20		6.0		0
185								
190								
195	-with interbedded layers of weathered shale to 208'	717.70		21		9.0		0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 17L
DATE COMPLETED: September 14, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
205								
210	Dolomitic Limestone (Prairie du Chien Group), weathered, with sand, silt and shale gravel, light gray	704.70	8" Diameter Borehole	22		10.0		1.1
215								
220			4" Diameter Black Steel Casing	23		10.0		0.4
225	-13' fine grained, light gray sand layer	690.70						
230				24		8.0		4
235			Cement/Bent. Grout					
240	-2' layer of sand	672.70		25		8.0		4.1
245	-becoming competent, light gray	667.70						
250				26		9.0		0
255	-with reddish brown tint, very fractured	658.70		27		3.0		1.4
260								
265			3.5" Diameter Open Hole	28		2.0		0
270								
275				29		2.0		0
280								
285				30		2.0		0
290	END OF BOREHOLE @ 290.0ft BGS	622.70						
295								

WELL DETAILS
Material: Open Hole from 250' to 290' feet bgs

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ◯

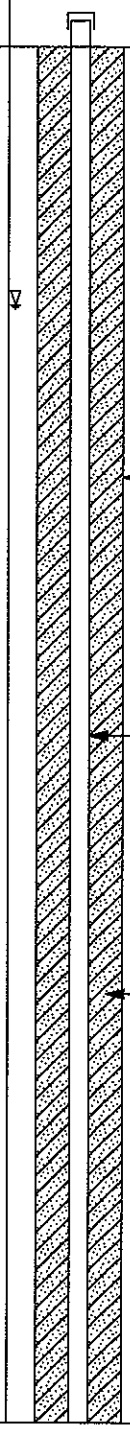
STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 19B
DATE COMPLETED: December 8, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
	TOP OF CASING GROUND SURFACE	913.33 912.00
	Topsoil, organic	910.00
	SW-SAND, trace gravel and silt, medium grained, brown, saturated	
10		
20		
30		
40	-cobbles	874.00
50		859.00
	CL-CLAY, sandy, trace gravel, low plasticity, brown/red, moist	857.00
60	SW-SAND, gravelly, coarse grained, brown, saturated	852.00
	GW-GRAVEL, sandy, fine to 3" gravel, brown, saturated	
70	SANDSTONE (St. Peter Formation), poorly consolidated, fine grained, light tan to white, moist	842.00
80		
90		
100		
110		
120		
130		
140		
150	-becoming gray	764.00
	SHALE (St. Peter Formation), trace sand, very fine grained, gray, dry	762.00

Monitoring Well



SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
1		2.0		0
2		10.0		0
3		5.0		0
4		10.0		0
5		10.0		0
6		10.0		0
7		10.0		0
8		10.0		0
9		10.0		0
10		10.0		0
11		10.0		0
12		10.0		0
13		8.0		2.7
14		8.0		0
15		10.0		0
16		10.0		0
17		5.0		0

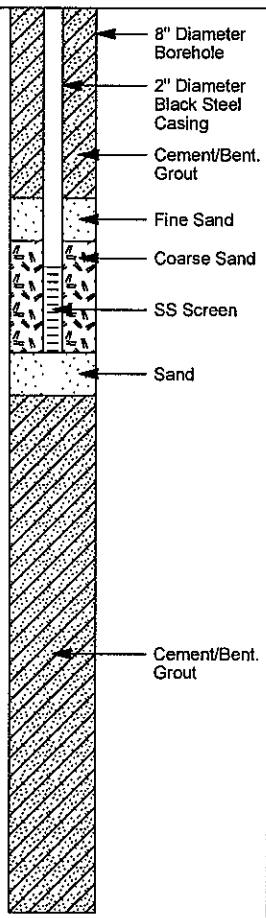
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇
CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 19B
DATE COMPLETED: December 8, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
170	SANDSTONE (St. Peter Formation), poorly consolidated, fine grained, gray to dark gray, moist	742.00
180		
190		
200		
210	Dolomitic Limestone (Prairie du Chien Group), weathered, gravelly, with sand and silt, gray to light gray, saturated	705.00
220		
230		
240	-2' thick brown sand layer	674.00
250	-becoming competent with fractures, reddish brown	667.00
260		
270	END OF BOREHOLE @ 265.0ft BGS	647.00
280	Chemical analysis samples were collected at the following intervals: 50' - 55' bgs 110' - 120' bgs 140' - 150' bgs 190' - 200' bgs	
290	8" casing is stuck in hole from 220' - 240' bgs.	
300		
310		



WELL DETAILS
Screened interval:
722.00 to 712.00ft
190.00 to 200.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: Stainless Steel
Seal:
730.00 to 725.00ft
182.00 to 187.00ft BGS
Material: Fine Sand
Sand Pack:
725.00 to 707.00ft
187.00 to 205.00ft BGS
Material: Coarse Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (PPM)
18		5.0		0
19		5.0		0
20		8.0		0
21		8.0		0
22		5.0		0
23		5.0		0
24		5.0		2.7
25		5.0		1.3
26		10.0		3.4
27		10.0		2.4
28		5.0		0
29		5.0		0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇
CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

PROJECT NAME: Highway 96 Site
PROJECT NUMBER: 2012
CLIENT: Reynolds/Whirlpool
LOCATION: White Bear Township, Minnesota

HOLE DESIGNATION: MW 19L
DATE COMPLETED: December 19, 2005
DRILLING METHOD: Rotosonic
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE
	TOP OF CASING GROUND SURFACE	914.18 911.90					
	Topsoil, organic	909.90					
	SW-SAND, trace gravel and silt, medium grained, brown, saturated						
10							
20							
30			∇				
40	-cobbles	873.90					
50			8" Diameter Borehole				
	CL-CLAY, sandy, trace gravel, low plasticity, brown/red, moist	858.90 856.90					
60	SW-SAND, gravelly, coarse grained, brown, saturated	851.90					
	GW-GRAVEL, sandy, fine to 3" gravel, brown, saturated						
70	SANDSTONE (St. Peter Formation), poorly consolidated, fine grained, light tan to white, moist	841.90					
80			4" Diameter Black Steel Casing				
90							
100							
110			Cement/Bent. Grout				
120							
130							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇

STRATIGRAPHIC AND INSTRUMENTATION LOG
(Overburden/Bedrock)

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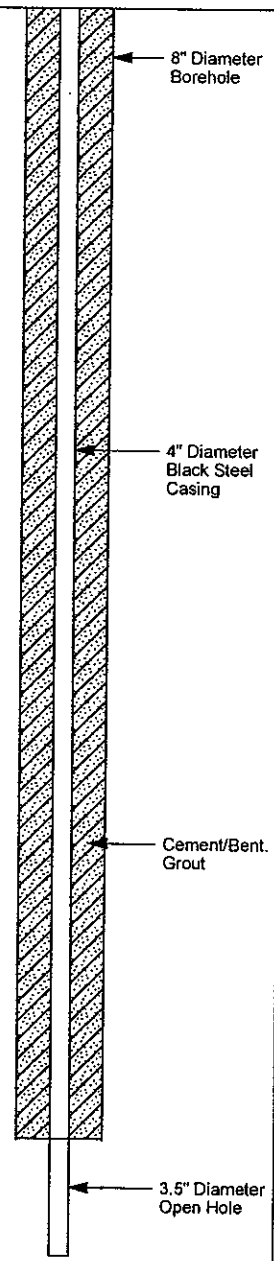
FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
150	-becoming gray	763.90
	SHALE (St. Peter Formation), trace sand, very fine grained, gray, dry	761.90
160		
170	SANDSTONE (St. Peter Formation), poorly consolidated, fine grained, gray to dark gray, moist	741.90
180		
190		
200		
210	Dolomitic Limestone (Prairie du Chien Group), weathered, gravelly, with sand and silt, gray to light gray, saturated	704.90
220		
230		
240	-2' thick brown sand layer	673.90
	-becoming competent with fractures, reddish brown	666.90
250		
260		
270	END OF BOREHOLE @ 267.0ft BGS	644.90

Monitoring Well



WELL DETAILS
Material: Open Hole from 255' to 267' feet bgs

SAMPLE				
NUMBER	INTERVAL	REC (ft)	'N' VALUE	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽