

**CH2MHILL****SOIL BORING LOG**PROJECT NUMBER: **436390**BORING NUMBER: **P58**SHEET **1** OF **2**

PROJECT : Parc à Fûts

LOCATION : Cernay, France (963901.60 N, 322045.42 E)

ELEVATION : 281.10 m

DRILLING CONTRACTOR : Boart Longyear

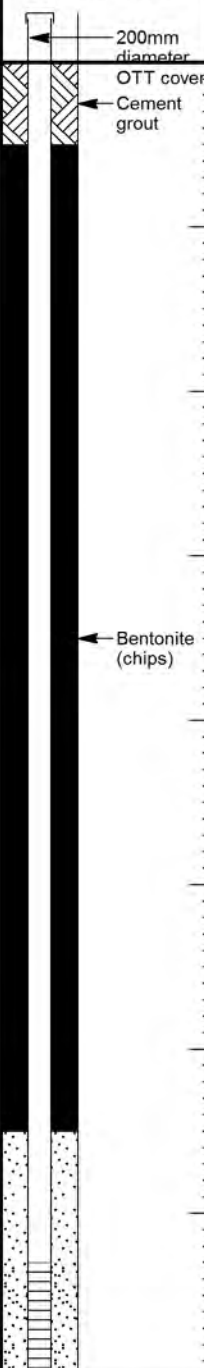



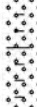



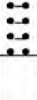

DRILLING METHOD AND EQUIPMENT : Sonic rig DB320, Sonic Drilling /Coring 90mm

WATER LEVELS : 7.01 m below ground surface

START : 03/07/2012

END : 03/07/2012

LOGGER : S. Julia (ASTM)

DEPTH BELOW EXISTING GRADE (m)	INTERVAL (m)		SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	SYMBOLIC LOG	PID-10.6 (ppm)	PID-11.7 (ppm)	COMMENTS	WELL DIAGRAM
	RECOVERY (%)							
281.1			Pre-drilling by vacuum excavation					
1 280.1								
2 279.1		100%	1.5-3.6m: SAND (SW-SM) Dark yellowish brown (10YR 4/4) - well-graded sand (mostly) with gravel (some) and silt (trace). Sand is fine to coarse. Gravel is fine (mostly; up to 2cm) to coarse, subangular, assorted. Moist.		2.2			
					6.3			
3 278.1			> 2.7-3.6m: Transition to well-graded gravel (mostly; 59%) with sand (some; 29%), silt (trace; 2%) and cobble (few; 10%). Sand is medium to coarse. Gravel is coarse (2-4cm), subangular to angular, assorted. Dry.		5.7			
	3.60				10			Bentonite (chips)
4 277.1		100%	3.6-6.9m: SAND (SW-SM) Reddish brown (2.5YR 4/4) - well-graded sand (mostly; 59%) with gravel (some; 33%) and silt (few; 8%). Sand is mostly medium. Gravel is mostly fine, subangular, assorted. Moist. > 3.6-4.1m: presence of cobbles (>10cm). Dry.		6			
					9.1			
5 276.1			> 4.6-5.1m: layer of well-graded gravel (mostly; 70%) with sand (few to little; 20%) and silt (few; 10%). Sand is medium to coarse. Gravel is coarse (3-5cm; up to 7cm), subangular, assorted. Moist.		6.1		Sample 20120706 CER S P58 5.1-5.5 for granulometry analysis. Fines: 8%, sand: 59% (F/M/C: 7%/39%/13%) and gravel: 33% (F/C: 22%/11%).	
	5.50		> 5.5-5.6m: wet.		9.8			
6 275.1		100%	> 6.0-6.9m: transition to well-graded sand (some) and gravel (some) with silt (few). Sand is medium to coarse. Gravel is fine to coarse, angular, assorted. Moist.		1.3			
					1.9			
7 274.1			> 6.5-6.6m: presence of cobble.		1.6		Water entry: 6.9mbgs. Water level: 7.01 mbgs (06/07/12)	
	6.90		> 6.8-6.9m: presence of cobble.		4.3			
8		100%	6.9-9.6m: GRAVEL (GW-GM) Yellowish brown (10YR 5/6) - well-graded sand (mostly; 50%) with gravel (some; 35%), silt (little; 15%) and cobble (trace; <1%). Sand is fine to medium. Gravel is fine to coarse (up to 5cm). Wet (saturated).					

04131X0651/P58

SOIL BORING LOG

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SHEET 2 OF 2

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LOCATION : Cernay, France (963901.60 N, 322045.42 E)

ELEVATION : 281.10 m

DRILLING CONTRACTOR : Boart Longyear

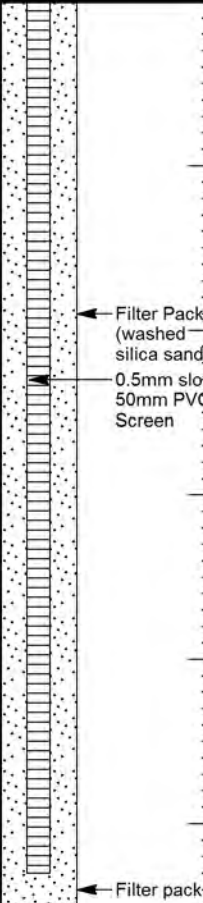
DRILLING METHOD AND EQUIPMENT : Sonic rig DB320, Sonic Drilling /Coring 90mm

WATER LEVELS : 7.01 m below ground surface

START : 03/07/2012

END : 03/07/2012

LOGGER : S. Julia (ASTM)

DEPTH BELOW EXISTING GRADE (m)	INTERVAL (m)		RECOVERY (%)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	SYMBOLIC LOG	PID-10.6 (ppm)	PID-11.7 (ppm)	COMMENTS	WELL DIAGRAM
273.1				> 7.9-9.2m: transition to well-graded gravel (mostly; 51%) with sand (some; 39%) and silt (few; 10%). Sand is mostly medium. Gravel is fine to coarse. Wet (saturated).		2.8		Sample 20120706 CER S P58 7.9-8.6 for granulometry analysis. Fines: 10%, sand: 39% (F/M/C: 8%/22%/10%) and gravel: 51% (F/C: 25%/26%).	
9	8.90					3.5			
272.1						5.7			
10			100%			7.1			
271.1				9.6-10.1m: SAND & GRAVEL (GW/SW-GM/SM) Reddish brown (2.5YR 4/4) -well-graded sand (some) and gravel (some) with silt (little to some) and cobble (trace). Sand is medium to coarse. Gravel is mostly coarse, subangular, assorted. Wet (saturated).		3.5			
11	10.90			10.1-11.9m: SAND & GRAVEL (GW/SW-GM/SM) Greyish brown (10YR 5/2) - well-graded sand (some) and gravel (some) with silt (little to some; 27%) and cobble (trace; up to 8cm). Sand is fine to coarse. Gravel is fine to coarse (up to 5cm), subrounded to subangular, assorted. Moist.		0.3			
270.1				> 10.5-10.9m: dry.		2.4			
12			100%	> 10.9-11.9m: no cobble.		3.5			
269.1				11.9-13.5m: SILT (ML) Yellowish brown (10YR 5/6) - sandy (little) / gravelly (little) silt (mostly). Stratified with red/green/purple/brown coloration caused by oxidation-reduction and black mottling. Hard. Moist.		5.3			
13						6.2			
268.1						3.3			
	13.50			Bottom of Boring at 13.50 m below ground surface					Filter pack

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