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BORING LOG — BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB2
DATE START: 03/30/1994	DEPTH TO WATER: --	LOGGED BY: JM,DM,KJ	GROUND EL.: 10.00
DATE COMPLETED: 03/30/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 22.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	1 6 6 6 6 6 3 6 6 9 6 6	24	11	MF-SD-SB2-0002 2in barrel. Pb, Cu,PCB,Asbestos	S-1(11in) gravelly SILTY SAND - mostly fine to medium sand, trace coarse sand, some silt, little coarse subrounded gravel up to 1in in length, poorly graded, asphalt pieces, root material, brown.	SM/Fill
	2.0	S-2	6 6 6 24 6 6 38 6 6 20 6 6	24	17	MF-SD-SB2-0204 2in barrel. Pb, Cu,PCB,Asbestos	S-2(17in) gravelly SILTY SAND - Similar to S-1 with fine subrounded gravel up to 0.5in length, coarse subrounded gravel up to 1in length, brick pieces, asphalt pieces, rock fragments, dark brown	SM/Fill
	4.0	S-3	8 6 6 16 6 6 17 6 6 16 6 6	24	15	MF-SD-SB2-0406 2in barrel. Pb, Cu,PCB,Asbestos	S-3A(11in) gravelly SILTY SAND - Similar to S-2, brown to black. S-3B(4in) gravelly SILTY SAND - fine to medium sand, poorly graded, trace to some silt, coarse subrounded gravel up to 1in in length, root fibers gray	SM/Fill SM/Fill
	6.0	S-4	10 6 6 10 6 6 8 6 6 15 6 6	24	24	MF-SD-SB2-0608 2in barrel. Pb, Cu,PCB,Asbestos	S-4(24in) SILTY SAND - fine to medium sand, poorly graded, some silt, non plant-like fibrous material asphalt pieces, gray.	SM/Fill
	8.0	S-5	1 6 6 1 6 6 2 6 6 1 6 6	24	15	MF-SD-SB2-0810 2in barrel. Pb, Cu,PCB,Asbestos	S-5(15in) SILTY SAND - Similar to S-4.	SM/Fill
	10.0	S-6	1 6 6 1 6 6 1 6 6 1 6 6	24	14	MF-SD-SB2-1012 2in barrel. Pb, Cu,PCB,Asbestos	S-6(14in) SILTY SAND - fine to medium sand, some silt, trace fine gravel, brick pieces, twigs, asphalt pieces, dark gray.	SM/Fill
	12.0	S-7	1 6 6 1 6 6 1 6 6 1 6 6	24	23	MF-SD-SB2-1214 2in barrel. Pb, Cu,PCB,Asbestos	S-7(23in) SAND - fine to medium sand, trace silt, trace fine gravel, brick pieces, asphalt pieces, dark gray.	SP/Fill
	14.0	S-8	3 6 6 3 6 6 3 6 6 3 6 6	24	14	MF-SD-SB2-1416 3in barrel. Pb, Cu,PCB,Asbestos	(3-inch split spoon used for S-8 to S-11) S-8(14in) SILTY SAND - fine to medium sand, some silt, trace fine gravel, trace coarse subangular gravel up to 1in in length, asphalt.	SM/Fill

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring w/6.25in ID HSA 0-20ft bgs. Advanced 2in OD split-barrel 0-14 ft; 3in split-barrrel 14-22ft w/140 lb hammer. Performed continuous sampling in 2ft increments. Tentative contact identified in S-10 based on recovered sample.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB2_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB2
DATE START: 03/30/1994	DEPTH TO WATER: --	LOGGED BY: JM,DM,KJ	GROUND EL.: 10.00
DATE COMPLETED: 03/30/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 22.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	6 3 6 4 / 6 6 6	24	8	MF-SO-SB2-1618 3in barrel. Pb, Cu,PCB,Asbestos	S-9A(6in) SILTY SAND - fine to medium sand, some silt, trace fine gravel, asphalt pieces, brick pieces, dark gray.	SM/Fill
							S-9B(2in) PEAT - Organic fibrous material.	Pt
	18.0	S-10	2 2 3 2 / 6 6 6	24	24	MF-SO-SB2-1820 3in barrel. Pb, Cu,PCB,Asbestos	S-10A(20in) SILTY SAND - fine to medium sand, some silt, trace fine gravel, gray-black.	SM
							S-10B(4in) PEAT - Organic fibrous material.	Pt
	20.0	S-11	6 6 6 6	24	24	MF-SO-SB2-2022 3in barrel. Pb, Cu,PCB,Asbestos	S-11(24in) ORGANIC SILT - some silt, some peat (fibrous organic-like material), some fine sand, poorly graded, brown.	OL
							EOB @ 22ft bgs. No well installed. Borehole backfilled with alternating amounts of bentonite pellets and silica sand.	
	22.0							

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring w/6.25in ID HSA 0-20ft bgs. Advanced 2in OD split-barrel 0-14 ft; 3in split-barrrel 14-22ft w/140 lb hammer. Performed continuous sampling in 2ft increments. Tentative contact identified in S-10 based on recovered sample.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB2_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB3		
DATE START: 03/31/1994	DEPTH TO WATER: --	LOGGED BY: MES,DM	GROUND EL.: 8.80		
DATE COMPLETED: 03/31/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 20.00		

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	1 3 20 24 / 6 6 6 6	24	16	MF-SO-SB3-0002 Screen for: Pb, Cu,PCB,Asbestos	S-1(16in) SAND - Fine to coarse sand, well graded, trace fine material(2-in thick interval), sub-angular gravel up to 1in, root matter, asphalt, dark brown.	SW
	2.0	S-2	24 18 14 7 / 6 6 6 6	24	11	MF-SO-SB3-0204 Screen for: Pb, Cu,PCB,Asbestos	S-2 (11in) SANDY SILT - sandy silt with cross sections of asphalt and other gravel to 1.5in, dark brown.	ML
	4.0	S-3	4 8 10 8 / 6 6 6 6	24	6	MF-SO-SB3-0406 Screen for: Pb, Cu,PCB,Asbestos	S-3 (6in) SAND - well graded sand, two pieces of subangular gravel up to 2 inches, saturated.	SW
	6.0	S-4	5 4 3 3 / 6 6 6 6	24	17	MF-SO-SB3-0608 Screen for: Pb, Cu,PCB,Asbestos	S-4A(0-8in) SILTY SAND - Similar to S-2, fine to medium sand, silt, saturated, brown.	SM
							S-4B(8-17in) SILTY SAND - Fine sand, silt, some organic material, black.	SM
	8.0	S-5	1 2 2 3 / 6 6 6 6	24	22	MF-SO-SB3-0810 Screen for: Pb, Cu,PCB,Asbestos	S-5 (22in) Organic Silt - Mostly silt with some peat-like organic material.	MO/Pt
	10.0	S-6	1 3 2 2 / 6 6 6 6	24	24	MF-SO-SB3-1012 Screen for: Pb, Cu,PCB,Asbestos	S-6(24in) Organic Silt/Peat - Similar to S-5.	MO/Pt
	12.0	S-7	1 1 2 1 / 6 6 6 6	24	24	MF-SO-SB3-1214 Screen for: Pb, Cu,PCB,Asbestos	S-7A (0-10in) Organic Silt - mostly organic silt, some medium sand, similar to S-5.	MO
							S-7B (10-24in) SILTY SAND - fine to medium sand, silt, organic material, light gray.	SM
	14.0	S-8	20 8 11 13 / 6 6 6 6	24	14	MF-SO-SB3-1416 Screen for: Pb, Cu,PCB,Asbestos	S-8A(4in) SILTY SAND - Similar to S-7B.	SM
							S-8B(10in) SAND - fine to coarse sand, well graded trace silt. Performed jar shake test to get better idea of sand to silt ratio.	SW

LEGEND:

TYPE-NO. - Type of Sample
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BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring with 4.25in ID HSA. Advanced split barrel samplers with a 140lb hammer. Performed continuous soil sampling in 2-foot increments.

ACAD NAME:A:\MF-SB3_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB3
DATE START: 03/31/1994	DEPTH TO WATER: --	LOGGED BY: MES,DM	GROUND EL.: 8.80
DATE COMPLETED: 03/31/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 20.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	6 6 9 6 11 6 11 6	24	17	MF-SO-SB3-1618 Screen for: Pb, Cu,PCB,Asbestos	S-9 (17in) SAND - fine to coarse sand, trace silt, trace coarse gravel up to 1.5 inches.	SW
	18.0	S-10	14 6 15 6 13 6 12 6	24	13	MF-SO-SB3-1820 Screen for: Pb, Cu,PCB,Asbestos	S-10 (13in) SAND - fine to coarse sand, well graded, trace silt, trace fine gravel.	SW
							End of borehole @ 20 ft bgs. No well installed. Backfilled soil boring with bentonite pellets from 18 to 2 ft; sand 2 to 0 ft.	
	20.0							

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: caring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring with 4.25in ID HSA. Advanced split barrel samplers with a 140lb hammer. Performed continuc.. soil sampling in 2-foot increments.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB3_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB4
DATE START: 03/31/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 10.50
DATE COMPLETED: 03/31/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 18.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	6 6 8 6 7 6 8 6	24	12	Interval=0002. Screen data: Asbestos only.	S-1 (0-12in) GRAVELLY SILTY SAND - sand, some fines, some fine gravel, concrete chunk 3in in size, grass on top, brown, dry.	SM
	2.0	S-2	35 6 35 6 55 6 45 6	24	18	Augers Grinding Concrete/Bould. Augers out.	S-2A (0-12in) SILTY SAND - fine to medium sand, poorly graded, silt, trace fine gravel. S-2B (12-18in) FILL - Large chunk of concrete and brick material with silty sand.	SM
	4.0	S-3	22 6 22 6 22 6 39 6	24	15	Interval= 0406' Screen for: Pb, Cu,PCB,Asbestos	S-3A (0-10in) GRAVELLY SILTY SAND - sand, silt, some angular to subrounded gravel up to 1in in length, chunks of concrete, rock frags, brown, dry S-3B (10-14in) ROCK FRAGMENTS - Black platy material similar to shale. S-3C (14-15in) GRAVELLY SILTY SAND - Similar to S-3A.	SM SM
	6.0	S-4	17 6 26 6 36 6 7 6	24	10	Observed water. Screen for: Pb, Cu,PCB,Asbestos	S-4 (0-10in) GRAVELLY SILTY SAND - sand and silt, some fine gravel with crushed concrete chunks up to 3in in length, saturated, brown.	SM
	8.0	S-5	7 6 8 6 5 6 4 6	24	0	NO RECOVERY. FOUND BROKEN BASKET.	S-5 (0in) NO RECOVERY. Due to use of a broken basket, material could not be recovered in the split-barrel.	
	10.0	S-6	6 6 7 6 2 6 3 6	24	5	Interval= 1012' Poten. contact natural soil.	S-6A (0-2in) ORGANIC SILT - silt with organic material, plant fibers, dark brown to gray. S-6B (2-5in) ORGANIC SILT - silt with organic material, trace fine sand.	
	12.0	S-7	4 6 4 6 6 6 7 6	24	24	Interval= 1214' Sreen for: Pb, Cu,PCB,Asbestos	S-7 (24in) ORGANIC SILT - silt with organic material, fibers, gray. Note: Brown fibrous chunk of peat in split-barrel basket.	
	14.0	S-8	4 6 4 6 7 6 9 6	24	17	Interval= 1416' Sreen for: Pb, Cu,PCB,Asbestos	S-8A (0-12in) ORGANIC SILT/PEAT - silt, gray, with peat-like fibers, light brown. S-8B (12-17in) gravelly SAND - fine to medium sand trace coarse sand, poorly graded, some well rounded gravel up to 1.5in, gray.	SP

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring with HSA to 16ft bgs. Advanced 3in split-barrel sampler with a 300lb hamner 0-18ft. Performed continuous sampling in 2ft increments. Backfilled boring. Top of natural material may be near 10ft bgs. Soils appeared to be saturated near 6 ft bgs. NR=Not recorded on log; NM = not measured.

ACAD NAME:A:\MF-SB4_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890 LOCATION: STRATFORD, CT DRILLED BY: PENN DRILLING CO. BORING NO: MF-SB4

DATE START: 03/31/1994 DEPTH TO WATER: -- LOGGED BY: JM GROUND EL.: 10.50

DATE COMPLETED: 03/31/1994 DATE & TIME: --/--/19--/ -- CHECKED BY: TOTAL DEPTH: 18.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	27 6 38 6 49 6 62 6	24	17	Interval= 1618' Sreen for: Pb, Cu,PCB,Asbestos	S-9A (0-7in) ORGANIC SILT - silt with organic material, trace plant fibers, moist, gray. S-9B (7-17in) sandy GRAVEL - mostly fine and coarse well rounded gravel up to 3in in length, some coarse sand. End of Boring @ 18 ft bgs. No well installed. Soil boring backfilled.	GW
	20.0							

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring with HSA to 16ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-18ft. Performed continuous sampling in 2ft increments. Backfilled boring. Top of natural material may be near 10ft bgs. Soils appeared to be saturated near 6 ft bgs. NR=Not recorded on log; NM = not measured.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB4_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB5
DATE START: 03/31/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 8.90
DATE COMPLETED: 03/31/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 22.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	6 6 13 6 12 6 8 6	24	18	Interval= 0002' Sreen for: Pb, Cu,PCB,Asbestos	S-1A (0-5in) TOPSOIL AND GRASS. S-1B (5-18in) GRAVELLY SAND - medium sand, fine and coarse gravel, trace fines, glass, cinders, dry, dark brown.	SM
	2.0	S-2	11 6 22 6 24 6 32 6	24	18	Interval= 0204' Sreen for: Pb, Cu,PCB,Asbestos	S-2A (0-6in) SAND AND GRAVEL - sand, angular gravel, roots, coal/cinder material, glass, dark brown. S-2B (6-18in) gravelly SAND - sand, gravel, tile pieces, dry, light brown.	SW
	4.0	S-3	11 6 13 6 17 6 20 6	24	4	Interval= 0406' Sreen for: Pb, Cu,PCB,Asbestos	S-3 (0-4in) gravelly SAND - coarse sand, some rounded gravel, trace fines, moist, light brown.	SW
	6.0	S-4	25 6 32 6 42 6 33 6	24	4	Interval= 0608' Sreen for: Pb, Cu,PCB,Asbestos	S-4 (0-4in) SAND - sand, trace fine gravel, trace fines, wet, light brown.	SW
	8.0	S-5	6 6 9 6 17 6 16 6	24	20	Interval= 0810' Sreen for: Pb, Cu,PCB,Asbestos	S-5 (0-20in) SAND AND GRAVEL - fine to coarse sand, fine and coarse rounded gravel, trace fines, wet, light brown.	SW
	10.0	S-6	9 6 15 6 17 6 21 6	24	19	Interval= 1012' Sreen for: Pb, Cu,PCB,Asbestos	S-6 (0-19in) SAND AND GRAVEL - Similar to S-5, slightly finer grained.	SW
	12.0	S-7	17 6 22 6 37 6 36 6	24	20	Interval= 1214' Sreen for: Pb, Cu,PCB,Asbestos	S-7 (0-20in) SAND AND GRAVEL - Similar to S-5.	SW
	14.0	S-8	5 6 7 6 9 6 10 6	24	20	Interval= 1416' Sreen for: Pb, Cu,PCB,Asbestos	S-8 (0-20in) SAND AND GRAVEL - Similar to S-7.	SW

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring with HSA to 20ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-22ft. Performed continuous sampling in 2ft increments. Backfilled boring. Soils appeared wet at 6 ft bgs. Possible water table. NR=Not recorded on log.

ACAD NAME:A:\MF-SB5_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB5		
DATE START: 03/31/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 8.90		
DATE COMPLETED: 03/31/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 22.00		

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	7 6 6 6 5 6 7 6	24	0	NO RECOVERY	S-9 (0in) NO RECOVERY. Possibility that a large piece of gravel blocked end of split-barrel and pushed through sand.	
	18.0	S-10	16 6 18 6 21 6 30 6	24	23	Interval= 1820' screen for: Pb, Cu,PCB,Asbestos	S-10A (0-20in) SAND AND GRAVEL - sand and fine gravel, trace fines, gray to brown.	SW
							S-10B (20-23in) SAND - sand, some fines, moist, brown.	SP
	20.0	S-11	12 6 15 6 22 6 20 6	24	24	Interval= 2022' screen for: Pb, Cu,PCB,Asbestos	S-11A (0-16in) SAND AND GRAVEL - sand, fine gravel trace fines, gray to brown.	SW
							S-11B (16-24in) SAND - sand, trace fines, bedding lineaments, brown.	SP
							EOB @ 22 ft bgs. Backfilled, no well installed.	
	22.0							

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
⊻ - Natural groundwater table

NOTES:

Advanced soil boring with HSA to 20ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-22ft. Performed continuous sampling in 2ft increments. Backfilled boring. Soils appeared wet at 6 ft bgs. Possible water table. NR=Not recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB5_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB6
DATE START: 03/31/1994	DEPTH TO WATER: --	LOGGED BY: MS,DM	GROUND EL.: 9.60
DATE COMPLETED: 03/31/1994	DATE & TIME: --/--/19-7 --	CHECKED BY:	TOTAL DEPTH: 18.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	3 5 9 18 / 6 6 6 6	24	18	Interval= 0002' Screen for: Pb, Cu,PCB,Asbestos	S-1A (0-6in) SANDY SILT, some organics, dark brown fine gravel @ 6in, gray. S-1B (6-18in) gravelly SILTY SAND, silt, fine sand some coarse gravel up to 1 in, light brown.	
	2.0	S-2	26 17 19 38 / 6 6 6 6	24	19	Interval= 0204' Screen for: Pb, Cu,PCB,Asbestos	S-2A (0-13in) gravelly SILTY SAND - fine to medium sand, silt, fine and coarse angular gravel from 0.5 to 1.5 inches, light brown. S-2B (13-19in) FILL - black fine grained soil, asbestos fibers, rock fragments, shards, light brown to black.	
	4.0	S-3	8 10 12 9 / 6 6 6 6	24	0	NO RECOVERY.	S-3 (0in) NO RECOVERY. Rock frags may have prevented collection of sample.	
	6.0	S-4	4 5 6 6 / 6 6 6 6	24	8	Water observed. Screen for: Pb, Cu,PCB,Asbestos	S-4 (8in) SAND - fine to coarse sand, well graded, trace silt, trace peat at 4inches, wet at 4inches, brown.	
	8.0	S-5	2 3 3 3 / 6 6 6 6	24	17	Interval= 0810' Screen for: Pb, Cu,PCB,Asbestos	S-5A (0-6in) SAND - fine to medium sand, trace silt, light brown. S-5B (6-17in) clayey SILT - silt with some fine organic material (roots), clay, dark gray.	
	10.0	S-6	1 1 1 2 / 6 6 6 6	24	24	Interval= 1012' Screen for: Pb, Cu,PCB,Asbestos	S-6 (24in) clayey SILT, some organics (roots), dark gray. Similar to S-5.	
	12.0	S-7	1 2 2 2 / 6 6 6 6	24	24	Interval= 1214' Screen for: Pb, Cu,PCB,Asbestos	S-7 (24in) clayey SILT, similar to S-6 with more organic material (peat), dark brown.	
	14.0	S-8	1 2 2 3 / 6 6 6 6	24	24	Interval= 1416' Screen for: Pb, Cu,PCB,Asbestos	S-8 (24in) clayey SILT, some organics (peat is found throughout the split-barrel), dark brown. Less clay than S-7.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced soil boring with HSA to 16ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-18ft. Performed continuous sampling in 2ft increments. Backfilled boring. Soils appeared wet at 6 ft bgs. Possible water table. NR=Not recorded on log.

ACAD NAME:A:\MF-SB6_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-SB6
DATE START:	03/31/1994	DEPTH TO WATER:	--	LOGGED BY:	MS,DM	GROUND EL.:	9.60
DATE COMPLETED:	03/31/1994	DATE & TIME:	--/--/19-/ --	CHECKED BY:		TOTAL DEPTH:	18.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	2 6 2 6 2 6 3 6	24	24	Interval= 1618' Screen for: Pb, Cu,PCB,Asbestos	S-9 (24in) SILTY CLAY - mostly clay, some silt, organic material present (peat). Able to roll soil into thin (1/8in thick) threads. EOB @ 18 ftbgs. Backfill boring from 18 t 2ft with bentonite; 2 to 0 ft with sand. No well installed	
	18.0							

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
⊽ - Natural groundwater table

NOTES:

Advanced soil boring with HSA to 16ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-18ft. Performed continuous sampling in 2ft increments. Backfilled boring. Soils appeared wet at 6 ft bgs. Possible water table. NR=Not recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB6_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB7
DATE START: 04/25/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 10.40
DATE COMPLETED: 04/25/1994	DATE & TIME: --/--/19-7 --	CHECKED BY:	TOTAL DEPTH: 22.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	10 5 8 10 / 6 6 6 6	24	13.5	Interval= 0002' Screen for: Pb, Cu,PCB,Asbestos	S-1 (0-13.5) gravelly SAND - medium sand, poorly graded, some subrounded to angular gravel up to 1 inch, little plant roots and debris, asphalt, dry, brown.	
	2.0	S-2	12 18 13 31 / 6 6 6 6	24	17	Interval= 0204' Screen for: Pb, Cu,PCB,Asbestos	S-2 (0-17in) gravelly silty SAND - medium sand, poorly graded, some silt, some subrounded to sub-angular gravel, trace plant debris, little asphalt little concrete, trace brick, dry, brown.	
	4.0	S-3	15 12 18 21 / 6 6 6 6	24	19	Interval= 0406' Screen for: Pb, Cu,PCB,Asbestos	S-3 (0-19.5in) gravelly SILTY SAND - poorly graded some silt, little subrounded to subangular gravel, little concrete, little asphalt, 1inch layer of fibrous hair-like material with splotches of red color, dry. Splotches typically exclusive to 1-3inch layers.	
	6.0	S-4	14 21 31 18 / 6 6 6 6	24	6	Pot. Water Tab. Screen for: Pb, Cu,PCB,Asbestos	S-4 (6in) SAND and GRAVEL, little silt, bottom of sample wet, dark brown.	GP
	8.0	S-5	6 8 5 3 / 6 6 6 6	24	2	Interval= 0810' Screen for: Pb, Cu,PCB,Asbestos	S-5 (2in) silty SAND, trace gravel, brown, wet.	
	10.0	S-6	3 2 31 46 / 6 6 6 6	24	14	Interval= 1012' Screen for: Pb, Cu,PCB,Asbestos	S-6 (0-14in) SILT and SAND, some gravel, little concrete, trace fibrous hair-like material, brown, wet.	SM
	12.0	S-7	1 1 3 3 / 6 6 6 6	24	13	Interval= 1214' Screen for: Pb, Cu,PCB,Asbestos	S-7A (0-8in) SANDY SILT, some gravel, little fibrous hair-like material (1/2in layer), brown black. S-7B (8-13in) silty SAND, dark gray.	
	14.0	S-8	3 31 38 11 / 6 6 6 6	24	24	TCLP sample. Screen for: Pb, Cu,PCB,Asbestos	S-8A (0-4in) sandy SILT, low plasticity, little fibrous material, brown-gray. S-8B (9-17in) PEAT, some fibrous organic material, some silt, moderate plasticity, gray/black. S-8C (17-24in) PIECE OF WOOD.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring with 6.25in ID HSA to 20ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-22ft. Performed continuous sampling in 2ft increments. Backfilled boring. Soils appeared wet at 6 ft bgs. Possible water table. Possible top of natural material at 18-20ft. NR=Not recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB7_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890 | LOCATION: STRATFORD, CT | DRILLED BY: PENN DRILLING CO. | BORING NO: MF-SB7

DATE START: 04/25/1994 | DEPTH TO WATER: -- | LOGGED BY: JM | GROUND EL.: 10.40

DATE COMPLETED: 04/25/1994 | DATE & TIME: --/--/19-/ -- | CHECKED BY: | TOTAL DEPTH: 22.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	11 8 7 7 / 6 6 6 6	24	9	Interval= 1618' Screen for: Pb, Cu,PCB,Asbestos	S-9 (0-9in) sandy SILT, low plasticity, some wood pieces (fibrous), black.	ML
	18.0	S-10	8 5 8 11 / 6 6 6 6	24	15	Natural mat. ? Screen for: Pb, Cu,PCB,Asbestos	S-10 (0-7in) Fibrous plant debris and SILT, low plasticity, black. S-10B (7-15in) silty SAND, little gravel, dark brown to gray.	
	20.0	S-11	7 8 21 26 / 6 6 6 6	24	24	Natural mat. ? Screen for: Pb, Cu,PCB,Asbestos	S-11A (0-8in) silty SAND, some gravel, trace wood pieces, dark brown/gray. S-11B (8-24in) SAND and GRAVEL, little silt, reddish mottled color. EOB @ 22ft bgs. Backfilled. No well installed.	
	22.0							

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: caring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring with 6.25in ID HSA to 20ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-22ft. Performed continuous sampling in 2ft increments. Backfilled boring. Soils appeared wet at 6 ft bgs. Possible water table. Possible top of natural material at 18-20ft. NR=Not recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB7_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB8
DATE START: 04/24/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 8.90
DATE COMPLETED: 04/24/1994	DATE & TIME: --/--/19-/ --	CHECKED BY:	TOTAL DEPTH: 14.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	5 6 11 6 13 6 38 6	24	18	Interval=0002' Screen for: Pb, Cu,PCB,Asbestos	S-1A (0-12in) SAND, some gravel, trace silts, little roots (bark mulch surface). S-1B (12-18in) SAND, concrete, asphalt, trace glass, dry, brown.	
	2.0	S-2	11 6 18 6 30 6 21 6	24	5	Interval= 0204' Screen for: Pb, Cu,PCB,Asbestos	S-2 (0-5.5in) SAND and GRAVEL, little silt, concrete, trace asphalt, trace brick, dry, dk brown.	
	4.0	S-3	15 6 15 6 11 6 18 6	24	14	Auger scraping. Screen for: Pb, Cu,PCB,Asbestos	S-3A (0-12in) Med. SAND, some asphalt, some concrete, dry, dark brown. S-3B (12-14in) RED BRICK.	
	6.0	S-4	3 6 3 6 5 6 6 6	24	18	TCLP sample. Screen for: Pb, Cu,PCB,Asbestos	S-4A (0-4in) SAND, some gravel, trace silt, dk gray/green, wet. S-4B (4-9in) sandy SILT, moderate plasticity, some wood fibers, black. S-4C (9-18in) PEAT and SILT, little gravel, trace sand, mod. plas., little fibrous hair-like mat.	
	8.0	S-5	5 6 2 6 7 6 9 6	24	4	Interval= 0810' Screen for: Pb, Cu,PCB,Asbestos	S-5 (0-4in) silty SAND, some gravel, trace brick, wet, dk brown.	SW
	10.0	S-6	5 6 10 6 12 6 13 6	24	24	Nat. material ? Screen for: Pb, Cu,PCB,Asbestos	S-6A (0-8in) silty SAND, trace brick, dk gray. S-6B (8-24in) SAND and GRAVEL, reddish mottled color. Possible start of natural material.	
	10.0	S-7	10 6 9 6 9 6 7 6	24	11	Nat. material ?	S-7 SAND and GRAVEL, well graded sand and gravel, subrounded subangular gravel (1"), dark brown, wet.	
	12.0						EOB @ 12ft bgs HSA 4 1/4-inch ID. 14ft bgs ss 3-inch DD.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring with 4.25in ID HSA to 12ft bgs. Advanced 3in split-barrel sampler with a 300lb hammer 0-14ft. Performed continuous sampling in 2ft increments. Backfilled boring. Soils appeared wet at 6 ft bgs. Possible water table. Possible top of natural material at 10-12ft. NR=Not recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB8.DWG (8/25/99)

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB01
PROJECT NO.:	N7491-0320			START DATE:	7-22-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-22-97
DRILLED BY (Company/Driller):	Alliance / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~10.1'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6" (ppm)	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID (PPM)]
0	14 21	1.6	OU3-A1-SB01-0002			Brown	Topsoil – top 2-3" = Root Mat + Grass Silty, SAND, TR Fine subang. gravel		Dry, Loose	0
	20 22	2.0	1515 S-1							
2	6 8	1.2	-0204						Damp	0
	5 3	2.0	1520 S-2							
4	3 3	2.0	-0406	4.7'			S-3A = similar to above (0.7') old 2" root mat @ 4.0 S-3B = SILT mostly silt, few fine med.	ML	Saturated @ 4.7	11
	2 2	2.0	1523 S-3			Dark Grey	Sand TR Clay TR organic debris (root + plant debris)			
6	2 2	1.4	-0608						Saturated	115.8
	2 2	2.0	1530 S-4				Sand lens (med, sand, gray) 2" thick noted near 2.5'			
8	1 2	1.8	-0810				S-5A = 0.5' – silty SAND S-5B = 1.5 similar to S-3 & S-4			
	1 2	2.0	1540 S-5							8
10	2 2	1.45	-1012				S-6A = .5 similar to S-5A S-6B = 1.0' similar to S-5B		S-6A is dry S-6B is damp not saturated	
	2 2	2.0	1548 S-6							0
12	2 2	2.0	-1214				SILT trace – few fine sand Variable amounts org. debris (roots & fibers)		Damp	9.0
	2 3	2.0	1555 S-7							
14	WOH WOH	1.9	-1416							
16	1 1	2.0	1600 S-8				Trace amounts of a whitish-grey paste like Substance in zones approx. 2" thick		Damp	0

EOB @ 16'

TYPE OF DRILLING RIG:	CME-75
METHOD OF ADVANCING BORING:	4.25' I D HSA
METHOD OF SOIL SAMPLING:	3" OD SPLIT SPOON DRIVEN WITH 300 LB HAMMER
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	DRY AS MEAS.
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: A1-SB01

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB02
PROJECT NO.:	N7491-0320			START DATE:	7-22-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-22-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~2.3'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6" (ppm)	SAMPR EC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = FID, (PPM)
0	11 24	1.1	OU3-A1-SB02-0002			Brown	Topsoil loam silty SAND root mat in top 2" w/grass @ surface. Trace few f-c gravel		Loose, dry	0
	13 14	2.0	1330 S-1						Trace Brick	0
2	10 10	1.2	-0204						Trace Brick, dry	0
	12 14	2.0	1340 S-2			Orange Brown	Trace roots & org. debris			
4	5 3	O.T.	-0406						Dry & loose	0
	3 3	2.0	1345 S-3							
6	4 8	0.75	-0608						Dry & Loose	0
	19 21	2.0	1350 S-4							
8	7 5	0.9	-0810			Yellowish Brown	SAND mostly f-m poorly graded SAND. TR - few Silt tr. fine gravel	SP	Saturated	0
	3 3	2.0	1355 S-5							
10	8 8	1.1	-1012			Dark Gray	S-6A = .5' of similar to S-5 S-6B = .6' of SILT some little fine sand			49
	2 2	2.0	1400 S-6	SILT			Little some organic debris (roots & plant) fiber, tr glass		Glass in silt unit	20.5
12	1 2	2.0	-1214	GR&Sand		Brown	S-7A= .5'=gravelly SAND tr silt grl=crs + rounded S-7B = .4' = PEAT brown with 50% SILT & org.			
	2 1	2.0	1410 S-7			Red Brown	S-7C = 1.1' = PEAT red brown fibric peat, high organic content			
14	1 1	1.1	-1416			Black	PEAT, higher water content than above			12.5
16	2 1	2.0	1410 S-8				Mostly plant fibers, less roots EOB 16'			

TYPE OF DRILLING RIG:	CME-75 (truck)
METHOD OF ADVANCING BORING:	4.25' I D HSA
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	14.5' W/AUGERS @ 14
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: A1-SB02

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB03
PROJECT NO.:	N7491-0320			START DATE:	7-24-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-24-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~7.9'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMPREC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID]
0	10 13	1.55	OU3-A1-SB03-0002 0835			Brown	S-1A = 4" topsoil grass @ surface silty SAND below Trace fine gravel		Dry + loose fill	0 ppm
	18 23	2.0	S-1				S-1B = 1.15' SAND little f-c gravel fill inc. Asphalt, brick & poss. gasket material		- poss. gasket material	
2	18 17	1.2	-0204 0845						Fill inc brick	0 ppm
	21 26	2.0	S-2				Fill		concrete + wood Dry + loose	
4	4 2	0.70	-0406 0855						Dry & loose	0 ppm
	1 2	2.0	S-3				Fill		Fill inc. wood + asphalt	
6	2 1	1.6	-0608 0910	7'			Fill		Dry	0
	1 1	2.0	S-4			Reddish Gray Black	Asbestos fill felt-like consistency fine grained sed. (sand + silt) large quanity of asbestos fibers + blotches of white x-talline substance		Moist	90 ppm
8	2 2	1.7	-0810 0925	9'					Saturated @ 9'	18 ppm
	1 1	2.0	S-5			Black	Oily gravelly fill, Inc. SAND + TR. SILT. Fill inc. plastic steel, brake pads		Brake pads + debris	
10	W.O.H. 2	1.6	-1012 0940				SILT top 6" are loose + very wet	ML	Saturated	45 ppm
	2 2	2.0	S-6				Trace. Fine SAND. Few little org. debris (roots + Plant)		Light sheen noted	
12	2 3	1.9	-1214 0955				S-7A – 4" fill – brake pads + silty, gravelly SAND		Saturated	278 ppm
	3 3	2.0	S-7			Gray	S-7B = SILT tr. f-sand some org. debris grading into peat in nose.	PT		
14	3 3	0.9	-1416 1010			Tan	SAND mostly f-m poorly graded	SP	Saturated	45 ppm
16	6 6	2.0	S-8			Gray Mottled	SAND Tr. f-c gravel 1 piece 3.5" Diam. gravel in nose.			

EOB @16'

TYPE OF DRILLING RIG:	CME-75 (truck)		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4.25' I D HSA		
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL SAMPLER DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WATER LEVEL IS 12.2' BGS W/AUGERS @ 14'		
OTHER OBSERVATIONS:	LEVEL C - FROM START (0830) TO FINISH (1015)	BORING NO.: A1-SB03	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB04
PROJECT NO.:	N7491-0320			START DATE:	7-22-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-22-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~8.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG. (ft)	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L (ft)	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0	4 5 7 9	1.0 / 2.0	OU3-A1-SB04-0002 0950 S-1			BRN	S-1A=6" Loam, topsoil soil, silty, SAND, with organic debris		Dry and loose	0
							S-1B=6" - gravelly, SAND, FILL, asphalt + brick.		Trace brick asphalt	
2	3 3 4 5	1.2 / 2.0	-0204 1000 S-2			BRN	Gravelly, silty, SAND. Mostly F, poorly	SP	Trace, asphalt	0
						LT BRN	Graded Sand, some - little silt, little f-c gravel		Fragments dry	
4	7 13 19 25	2.0 / 2.0	-0406 1010 S-3				S-3A=3"- old topsoil brown loam w/roots. S-3B=21"- gravelly, SAND TR. few silt		Dry. Concrete + vit. pipe Frag.	0
							FILL. Gravel is mostly course and subangular		TR. Brick broken cobble + gravel wire	
6	26 26 27 23	1.8 / 2.0	-0608 1020 S-4				SAND. Mostly f-c well graded SAND.		No man-made debris	8
							Some little fine well rounded gravel	SW	Saturated @ 7'	
8	7 11 18 19	1.35 / 2.0	-0810 1030 S-5							0
10	14 18 19 20	1.6 / 2.0	-1012 1040 S-6							0
12	12 27 21 23	1.8 / 2.0	-1214 1055 S-7							0
14	17 17 16 16	1.3 / 2.0	-1416 1100 S-8							0

EOB @ 16

TYPE OF DRILLING RIG:	CME-75 (truck)		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4.25' I D HSA		
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	7.5' MEASURED FROM INSIDE OF AUGERS. BOTTOM OF AUGER @ 14' BGS		
OTHER OBSERVATIONS:		BORING NO.: A1-SB04	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB05
PROJECT NO.:	N7491-0320			START DATE:	7-18-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-18-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~7.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0	9	1.0 / 1.5	OU3-A1-SB05-0002			Brown	4" – Asphalt Fill SAND mostly f-m poorly graded	SP	Dry	0
	16						SAND trace. Few fine gravel, TR silt debris inc. wire, Wire & grass		Wire, wood and glass	
	10		1035 S-1							
2	5	1.8 / 2.0	-0204				2-3.5 – silty, SAND few f-c rounded gravel trace roots Roots and twigs	SM	No Man-made debris noted	0
	4									
	5			3.5			3.5-4 SILT – little fine sand. Little-some roots & plant Plant fibers			
	5		1044 S-2					ML/SM	Dry-moist	
4	3	1.6 / 2.0	-0406			Brown Gray	SILT, few clay, trace F. sand slightly plastic	ML	Moist	4
	4									
	3									
	3		1055 S-3							
6	3	1.7 / 2.0	-0608			Brown	few – little organics (plant fibers & roots)			32
	3									
	3									
	2		1105 S-4							
8	WOH	2.0 / 2.0	-0810							76
	WOH									
	1									
	2		1115 S-5							
10	WOH	2.0 / 2.0	-1012				Trace sand lens or or seams ½" thick			0
	WOH									
	WOH									
	WOH		1130 S-6							
12	WOH	2.0 / 2.0	-1214							71
	WOH									
	2									
	1		1135 S-7							
14	WOH	2.0 / 2.0	-1416				Trace – few sand (med sand) lens or seams ¼" thick			12
	2									
	2									
16	1		1145 S-8							

EOB @ 16"

TYPE OF DRILLING RIG:	CME-75 (truck MT)		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4.25' I D HSA		
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WATER MEAS. @ 12' INSIDE HSA W/AUGERS TO 14'		
OTHER OBSERVATIONS:	H2S ODOR, POSSIBLE METHANE DETECTED 0.0 PPM DETECTED W/PPM	BORING NO.: A1-SB05	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB06
PROJECT NO.:	N7491-0320			START DATE:	7-21-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-21-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~7.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0	12	1.3 / 1.5	OU3-A1-SB06-0002		Med. Dense	Gray Brown	2" - Asphalt 2" – D Gravelly, SAND. mostly f. med. poorly graded	SP	DRY	6.6
	18						sand, f-c subang., subround. Gravel, TR silt			
	20		1330 S-1							
2	16	1.6 / 2.0	-0204							12.0
	12									
	11									
	5		1340 S-2							
4	1	2.0 / 2.0	-0406	4.5	Very Loose		S-3A = Similar to above		Damp	100
	3						S-3B = organic, SILT mostly silt, little organic matter	OL		
	2					Brown	& fibers). A ¼ - ½" thick black silt @ contact with SP			
	1		1355 S-3	Silt			unit above			
6	2	1.5 / 2.0	-0608	Fill			S-4 = Similar to S-3A			38
	2			Silt						
	1						Similiar to S-3B. SILT with plant fibers & roots	ML		0
	1		1400 S-4							
8	WOH	2.0 / 2.0	-0810							48
	WOH									
	1									
	1		1410 S-5							
10	WOH	2.0 / 2.0	-1012							0
	WOH									
	WOH									
	WOH		1420 S-6							
12	WOH	2.0 / 2.0	-1214							12
	1									
	1						Trace fine sand			
	1		1430 S-7							
14	WOH	0.75 / 2.0	-1416	Sand		Yellow Brown	Silty SAND. Mostly F-M poorly graded sand some silt grading coarser downward, TR F-C rounded gravel	SP	Saturated	8
	WOH									
	6									
16	5		1440 S-8							

EOB @ 16"

TYPE OF DRILLING RIG:	CME-75 (truck MT)		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4.25' I D HSA		
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	NONE MEASURED FROM INSIDE AUGERS		
OTHER OBSERVATIONS:		BORING NO.: A1-SB06	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB07
PROJECT NO.:	N7491-0320			START DATE:	7-21-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-22-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~8.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0	7	1.4 / 2.0	OU3-A1-SB07-0002			Light brown	S-1A = Gravelly, SAND TR silt trace grass & weeds		Dry	0
	9									
	5					Dark gray				
	4		1540 S-1				S-1B = sandy, SILT TR fine gravel		Moist. compact	
2	4	1.0 / 2.0	-0204			Dark gray black	Silt TR fine sand trace shell fragments			0
	4									
	4									
	5		1550 S-2							
4	2	2.0 / 2.0	-0406				3" layer of gray fine sand w/poss. asbestos @ bottom of sample			0
	3									
	2									
	2		1555 S-3							
6	2	2.0 / 2.0	-0608				TR fine sand len's			11.6
	3									
	3									
	3		1600 S-4							
8	4	1.1 / 2.0	-0810			Gray	SAND mostly f-c well graded sand	SW	Saturated	4.0
	5									
	5					Light Gray	TR few silt TR fine gravel			
	4		1605 S-5							
10	3	1.1 / 2.0	-1012			Brown			start here on 7-22-97	25
	3									
	6									
	9		0830 S-6							
12	8	2.0 / 2.0	-1214			Yellow Brown				0
	10									
	11									
	13		0840 S-7							
14	21	2.0 / 2.0	-1416						possible pet. odor very light odor	25
	28									
16	12									
	14		0850 S-8							

EOB @ 16'

TYPE OF DRILLING RIG:	CME-75 (truck)		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4.25' I D HSA		
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WATER @ 2.5 BGS @ 0820 – 7/22/97 W/HSA @ 10. WATER @ 8' INSIDE AUGERS @		
OTHER OBSERVATIONS:	EOB. ON 7/21/97. STOP BORING W/HSA @ 10' READY TO SAMPLE 1012	BORING NO.: A1-SB07	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	A1-SB09
PROJECT NO.:	N7491-0320	START DATE:	7-23-97
LOGGED BY:	TRACY DORGAN	COMPLETION DATE:	7-23-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins	MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~12.0	CHECKED BY:	THD
TRANSCRIBED BY:	FMD		
ELEVATION FROM:	Estimated from topo.		

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG / WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]	
0		0.2 / 1.5	OU3-A1-SB09-0002			Brown	2-3" Asphalt silty SAND mostly fine poorly graded sand, some silt	SP	Dry + Loose	0 fid	0 pid
	16										
	21										
	16		0915 S-1								
2	12	0.2 / 2.0	-0204			Orange Brown				0	1.2
	10										
	12						trace fine rounded gravel				
	12		0920 S-2								
4	5	0.7 / 2.0	-0406				SAND mostly F.M poorly graded sand. little F.C. rounded gravel TR silt		Dry moist	0	2.0
	7										
	6										
	4		0930 S-3								
6	3	0.3 / 2.0	-0608						moist	15	8.5
	2										
	1										
	1		0938 S-4								
8	2	1.05 / 2.0	-0810	8.5		Brown	SAND, some gravel mostly F.C. well graded sand tan brown TR silt thin (1/4" thick) bedding noted in mid spoon		saturated in nose, trace	115	25
	1							SW	shell fragments		
	2										
	4		0945 S-5								
10	3	0.7 / 2.0	-1012						trace shell fragments	5	8.5
	4										
	4						no bedding noted				
	6		1000 S-6								
12	6	1.2 / 2.0	-1214				no bedding noted		saturated	0	0
	9										
	7										
	10		1015 S-7								
14	12	1.3 / 2.0	-1416							1.2	5
	23										
16	18										
	13		1025 S-8								

EOB @ 16'

TYPE OF DRILLING RIG:	CME-75 (truck)
METHOD OF ADVANCING BORING:	4.25' I D HSA
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER
METHOD OF ROCK CORING:	
GROUNDWATER LEVELS:	11.1" @ 1030 MEAS. INSIDE AUGERS WITH AUGER @ 14' BGS.
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: A1-SB09

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	A1-SB10
PROJECT NO.:	N7491-0320	START DATE:	7-23-97
LOGGED BY:	TRACY DORGAN	COMPLETION DATE:	7-23-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins	MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~12.0'	CHECKED BY:	THD

TRANSCRIBED BY: FMD

ELEVATION FROM: Estimated from topo.

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID PID]	
0	7	1.2	OU3-A1-SB10-0002			Brown	3" - Asphalt. S-1A = 3" gravelly, SAND, TR. silt.		Dry, clean, fill	0	0
	7 7		1150 S-1			Yellowish brown	S-1B = SAND, mostly f-m poorly graded sand, few fine gravel, TR. silt.	SP			
2	4 3	1.4	-							1.0	
	3 3	2.0	1155 S-2								
4	2 2	1.2	-							0	
	2 2		1200 S-3								
6	3 3	0.2	-0608							0	0
	3 3	2.0	1205 S-4								
8	3 3	1.2	-0810							0	
	5 9	2.0	1210 S-5	9.5'		Brn - gray	FILL - sandy, gravel TR. silt. brick + ceramic				
10	11 14	1.1	-1012	10.25'			S-6A v = .25' – similar to above		Moist wet	9.8	
	12 13	2.0	1220 S-6			Lt. brown	S-6B = .85' - sand, some gravel. mostly f-c		Dry	0	0
12	16 14	1.7	-				Well graded SAND. Some f-c rounded gravel.	SW			
	14 18	2.0	1235 S-7						Dry	4	
14	10 11	1.15	-						Saturated	8	6
16	11 9	2.0	1240 S-8								

EOB @ 16'

TYPE OF DRILLING RIG:	CME-75
METHOD OF ADVANCING BORING:	4.25" I.D. HSA
METHOD OF SOIL SAMPLING:	3" O.D. SPUT BARREL DRIVEN WITH A 300 LB. HAMMER
METHOD OF ROCK CORING:	
GROUNDWATER LEVELS:	14.2' MEAS. INSIDE AUGERS W/AUGERS TO 14'
OTHER OBSERVATIONS:	

BORING NO.: A1-SB10

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB11
PROJECT NO.:	N7491-0320			START DATE:	7-18-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-18-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~7.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID PID]	
0	10 4	1.6 / 2.0	OU3-A1-SB11-0002 1440 S-1			Brown	S-1A = 0.7' - Silty, gravelly, sand. Organic Debris (roots + twigs).		Dry + Loose	0	0.5
	4 4					Red + brown	S-1B = 0.9' - Asbestos FILL fine gravelly (sand) + silt. lg. Qty. of asbestos fibers also possible.		Large QTY of fibers.		
2	5 15	2.0 / 2.0	-0204				Gasket material. Felt-like consistency.		Dry	5.6	3.5
	26 10		1450 S-2				more fine gravel than s-1b. few - little gravel .				
4	5 7	1.8 / 2.0	-0406			Black	SAND. Mostly f-m poorly graded sand few little fine @ gravel, TR. silt.		Dry – Moist	5.4	3.0
	6 6		1505 S-3				less asbestos than S-1 or S-2.				
6	3 4	0.7 / 2.0	-0608			Dark gray	SAND. Some course. round. gravel.		Saturated	104	8.8
	4 5		1515 S-4			black	Poss. oily stain surrounding gravel. No vis. asbestos.		oily in places Esp. surronding gravel		
8	5 9	2.0 / 2.0	-0810			Brown	Color change from black to brown in bottom 4"		oily staining		
	12 10		1525 S-5								
10	10 8	1.8 / 2.0	-1012				S-6 = similar to S-5				
	3 2		1535 S-6								
12	2 2	2.0 / 2.0	-1214			Black Tan/orange	S-7A = 0.7' - Similiar to S-5 S-7B = 0.9' - sandy, SILT, TR. oxidized	SW	Saturated	0	1.2
	7 21		1545 S-7			Brown	Orange seams (vert.) S-7c = SAND. f-c well graded SAND,				
14	10 14	1.7 / 2.0	-1416				TR - few fine gravel (rounded.) TR. Silt.			0	0
16	19 23		1555 S-8								

EOB @16'

TYPE OF DRILLING RIG:			Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:			
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	7.0 INSIDE AUGERS, W/AUGER TO 14' BGS		
OTHER OBSERVATIONS:	LEVEL C-@ 1440 AUGERS @ 4' S-4-DS-8	BORING NO.: A1-SB11	PAGE: 1 OF 1

BORING LOG FOR: RAYMARK – OU3- FERRY CREEK
PROJECT NO.: N7491-0320
LOGGED BY: SCOTT HARDING
DRILLED BY (Company/Driller): ATL / Mike Childs
GRD. SURFACE ELEVATION: ~7.0'

TRANSCRIBED BY: FMD
ELEVATION FROM: Estimated from topo.

BORING NO.: A1-SD01
START DATE: 8-1-97
COMPLETION DATE: 8-1-97
MON. WELL NO.:
CHECKED BY: THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID]
0	WOH 11	0.25 / 2.0	OU3-A1-SD-0002 0730 S-1		Med Dense	Brown	Grayish brown fine SAND, little silt	SP	Sulfate odor	10 ppm
2	8 7									
2	17 7	0.4 / 2.0	-0204 0800 S-2		Med Dense	Gray	Brownish gray fine to grained SAND, some fine subrounded gravel, little silt, trace organic material	SP		1.0 ppm
4	11 20									
4	10 5	0.8 / 2.0	-0406 0825 S-3		Loose	Brown	Grayish brown fine to med. SAND, little silt, trace fine subrounded gravel, trace organic material.	SP		2.0 ppm
6	3 12									
6	24 17	1.0 / 2.0	-0608 0840 S-4		Dense	Brown	Grayish brown, fine to course SAND. Some fine subrounded subrounded gravel	SW		0 ppm
8	17 11						trace (piece of) course gravel, trace silt.			
8	4 12	1.2 / 2.0	-0810 0910 S-5		Dense	Brown	Grayish brown, fine to coarse SAND, trace silt, trace subrounded gravel	SW		2.0 ppm
10	20 18									
10	15 19	0.7 / 2.0	-1012 0935 S-6		Dense	Brown	Brown fine to coarse SAND. Trace f subrounded gravel, trace silt.	SW		2.0 ppm
12	19 28									
12	1 2	1.2 / 2.0	-1214 1000 S-7		Loose	Brown	Same as above.	SW		1.0 ppm
14	2 13									

TYPE OF DRILLING RIG: CME-45 SKID RIG ON PLATFORM
METHOD OF ADVANCING BORING: DRIVE AND WASH
METHOD OF SOIL SAMPLING: 2" SPLIT SPOON, 140 LB HMMER
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING LOG FOR: RAYMARK - OU3- FERRY CREEK
PROJECT NO.: N7491-0320
LOGGED BY: SCOTT HARDING
DRILLED BY (Company/Driller): ATL / Mike Childs
GRD. SURFACE ELEVATION: ~7.0'

TRANSCRIBED BY: FMD
ELEVATION FROM: Estimated from topo.

BORING NO.: A1-SD01
START DATE: 8-1-97
COMPLETION DATE: 8-1-97
MON. WELL NO.:
CHECKED BY: THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
14	7	1.0/2.0	OU3-A1-SD01-1416		dense	Brown	Grayish brown fine to coarse SAND, trace silt	SW		5 ppm
	24									
16	18		1025 S-8							
	10									
16	8	1.05/2.0	-1618		med. dense	brown	Brown fine to coarse SAND trace silt	SW		3 ppm
	7									
18	9		1050 S-9							
	10									
18	9	1.85/2.0	-1820		dense	brown	Same as above	SW		0.5 ppm
	19									
20	19		1115 S-10							
	13									

TYPE OF DRILLING RIG: CME-45 SKID RIG ON PLATFORM
METHOD OF ADVANCING BORING: DRIVE AND WASH
METHOD OF SOIL SAMPLING: 2" SPLIT SPOON, 140 LB HMMER
METHOD OF ROCK CORING:
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: A1-SD01

BORING LOG FOR:	RAYMARK - OU3- FERRY CREEK			BORING NO.:	A1-SD02
PROJECT NO.:	N7491-0320			START DATE:	7-24-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-24-97
DRILLED BY (Company/Driller):	ATL / Mike Childs			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	-1.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0	WOH WOH	.95 / 2.0	OU3-A1-SD02-0002		very loose	gray	dark gray f SAND and SILT trace f rounded gravel	SM	sulfide odor present	4 ppm
2	2 3		1140 S-1							
2	3 3	0.9 / 2.0	-0204		loose	gray	dark gray f/m SAND, some silt	SM		6 ppm
4	2 1		1205 S-2							
4	2 1	0.2 / 2.0	-0406		very loose	brown	gray, brown f/m SAND and SILT	SM		4 ppm
6	1 2		1225 S-3							
6	1 WOH	2.0 / 2.0	-0608		very loose	brown	grayish brown SILT some f sand, little organic material trace f. rounded gravel	SM		0 ppm
8	1 WOH		1255 S-4							
8	1 1	1.4 / 2.0	-0810		very loose	brown	grayish brown SILT, some f sand trace f rounded gravel gravel	SM		0 ppm
10	1 3		1310 S-5							
10	6 8	0.5 / 2.0	-1012		med. dense	brown	fine to coarse SAND, trace silt, trace f subrounded Gravel	SW		0 ppm
12	10 5		1335 S-6							
12	5 6	.85 / 2.0	-1214		loose	gray	fine to med. SAND, little silt	SP		0 ppm
14	2 2		1440 S-7							
							CONTINUED on PG. 2			

TYPE OF DRILLING RIG:	45 on platform		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Drive and wash		
METHOD OF SOIL SAMPLING:	2" S.S. W/140 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A1-SD02	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SD02
PROJECT NO.:	N7491-0320			START DATE:	7-24-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-24-97'
DRILLED BY (Company/Driller):	ATL / Mike Childs			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~1.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
14	4 4	1.75/2.0	OU3-A1-SD02-1416 1515 S-8		Med. Dense	brown	Fine to coarse SAND, trace f subrounded gravel trace silt.	SW		0 ppm
16	11 9									
16	10 7	2.0/2.0	-1618 1540 S-9		Med. Dense	brown	same as above	SW		0 ppm
18	8 7									
18	15 25	1.3/1.7	-1819.5 1605 S-10		Very Dense	brown	Fine to coarse SAND, little fine subrounded gravel, trace silt.	SW	Casing was moving with spoon + hammer out 19.51.	0 ppm
20	50 for 6"									

TYPE OF DRILLING RIG:	CME-45 ON PLAT FORM		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" S.S. W/140 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A1-SD02	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK - OU3- FERRY CREEK			BORING NO.:	A1-SD03
PROJECT NO.:	N7491-0320			START DATE:	7-17-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	
DRILLED BY (Company/Driller):	ATL			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~ <0.0'	Elevation From:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID]
0	2 1	.8 / 2.0	OU3-A1-SD03-0002 (7/17) 1755 S-1		Very Loose	Brown	Fine to coarse SAND, trace to few fine gravel, trace silt, light sheen. subangular trace debris; glass, brick.	SW	1st attempt at 0.2 no recovery (2-1-2-2 blows)	0 ppm
2	2 2									
2	7 7	.55 / 2.0	-0204 (7/18) 0700 S-2		Med Dense	Grayish brown	Fine to coarse SAND, and fine subrounded to subangular gravel some silt.	SW		0 ppm
4	14 18									
4	23 27	.5 / 2.0	-0406 0740 S-3		Dense	Brown	Fine to coarse SAND, little fine subrounded gravel, trace silt, piece of fine gravel in spoon.	SW		0 ppm
6	19 19									
6	22 18	1.3 / 2.0	-0608 0810 S-4		Dense	Reddish Brown	Same as above			0 ppm
8	15 12									
8	10 10	0.8 / 2.0	-0810 0900 S-5		Med. Dense	Reddish brown	Trace fine gravel rounded to subrounded	SW		0
10	10 12									
10	31 37	1.1 / 2.0	-1012 0945 S-6		Very Dense	Brown	Fine trace	SW		0
12	20 22						Gravel (rounded) - mainly located in bottom 3+ inches of spoon.			
12	16 16	0.9 / 2.0	-1214 1030 S-7		Dense	Brown	Same as above	SW		0
14	16 18									
14	13 16	0.7 / 2.0	-1416 1120 S-8		Dense	Brown	Little fine subrounded gravel	SW		0
16	16 20									

TYPE OF DRILLING RIG:	CME-45		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	CASING DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A1-SD03	PAGE: 1 OF 2

BORING LOG FOR: RAYMARK – OU3- FERRY CREEK
PROJECT NO.: N7491-0320
LOGGED BY: SCOTT HARDING
DRILLED BY (Company/Driller): ATL
GRD. SURFACE ELEVATION: ~ <0.0'

TRANSCRIBED BY: FMD
Elevation From: Estimated from topo.

BORING NO.: A1-SD03
START DATE: 7-17-97
COMPLETION DATE:
MON. WELL NO.:
CHECKED BY: THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
16	3 10	1.2 / 2.0	OU3-A1-SD03-1618 1200 S-9		dense	brown	fine to coarse SAND	SW		0
18	22 30									
18	4 14	1.8 / 2.0	-1820 1230 S-10		dense	light brown	medium to coarse SAND, trace fine sand layer of fine sand (2 inches thick) at 18.5 feet	SP		0
20	18 37									

TYPE OF DRILLING RIG: CME-45
METHOD OF ADVANCING BORING: CASING DRIVE AND WASH
METHOD OF SOIL SAMPLING: 2" SPLIT SPOON
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: A1-SD03

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SD05
PROJECT NO.:	N7491-0320			START DATE:	7-29-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-29-97
DRILLED BY Company/Driller):	ATL / MIKE CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~ 1.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID]
0	WOH WOH	.75	OU3-A1-SD02-0002		Very Loose	Gray	Dark gray - SILT, little organic material trace f sand, wet.	OL	-Top 0.45"	3.5 ppm
2	WOH WOH	2.0	1710 S-1			Brown	Grayish brown SILT, some organic material trace f sand.	PT?	Bottom 0.3"	3.5 ppm
2	WOH WOH	1.5	-0204		Very Loose	Gray	Top 0.8' - same as above.	OL		6.0 ppm
4	WOH 2	2.0	1745 S-2				Bottom 0.7' - grayish brown f SAND some silt, little organic material.			
4	WOH WOH	1.2	-0406		Loose	Brown	Brown SILT, some organic material - (top 0.6') grayish brown fine SAND, some silt (bottom 0.6')			0 ppm
6	3 5		0710 S-3				Little subrounded fine gravel.			
6	3 7	.75	-0608		Med. Dense	Brown	Fine to medium SAND, little silt	SP		0 ppm
8	2 8	2.0	0735 S-4				little fine subrounded gravel			
8	16 15	0.9	-0810		Dense	Brown	Fine to coarse SAND, little subrounded gravel, trace silt.	SW		0 ppm
10	19 12		0805 S-5							
10	2 6	0.8	-1012		Med. Dense	Brown	Fine to coarse SAND, trace silt	SW		0 ppm
12	15 19		0825 S-6							
12	6 6	0.7	-1214		Med. Dense	Brown	Fine to coarse SAND, little fine subrounded gravel, trace silt	SW		0 ppm
14	7 6	2.0	0950 S-7							
							Continued on second page			

TYPE OF DRILLING RIG:	CME-45 W/PLAT FORM
METHOD OF ADVANCING BORING:	DRIVE & WASH CASING
METHOD OF SOIL SAMPLING:	2" S.S. 140 LB HAMMER
METHOD OF ROCK CORING:	
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SD05
PROJECT NO.:	N7491-0320			START DATE:	7-29-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-29-97
DRILLED BY Company/Driller):	ATL / MIKE CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~1.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
14	5 6	1.1 / 2.0	OU3-A1-SD05-1416		med. dense	brown	fine to coarse SAND, trace subrounded fine gravel, trace silt	SW		0 ppm
16	13 10		1040 S-8							
16	3 5		-1618				sample is wash sands (slough)			
18	6 8		1215 S-9							
							drive casing to 20' after 30 – 90 seconds approximately 3' of material ran back into casing			
20			1330							
							casing at 22' – approx. 3.5' of material in casing after washing			
22			1400							
							casing at 24' – approx. 4' of material in casing after washing			
24			1430				End of borehole casing – 29'			

TYPE OF DRILLING RIG:	CME-45 W/PLAT FORM		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE & WASH CASING		
METHOD OF SOIL SAMPLING:	2" S.S. 140 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A1-SD05	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK - OU3- FERRY CREEK			BORING NO.:	A1-SD06
PROJECT NO.:	N7491-0320			START DATE:	7-23-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-23-97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~ <0.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID]
0	2 3	.5/2.0	OU3-A1-SD06-0002 0640 S-1		Loose	Gray	Dark brownish gray, fine SAND, little silt, little Subrounded fine gravel, trace organic material (wood)	SM		0 ppm
2	5 7									
2	9 7	.7/2.0	-0204 0715 S-2		Med. Dense	Gray	Brownish gray SILT, little f sand, some organic material, piece of clear plastic wrapper in spoon.	OL	Sulfide odor present	10.5 ppm
4	7 8									
4	3 1	.9/2.0	-0406 0735 S-3		Very Loose	Brown	Grayish brown SILT, some organic material, trace fine subangular gravel (one piece in top of spoon.)	OL	Sulfide odor present	25 ppm
6	1 1									
6	WOH WOH	.5/2.0	-0608 0805 S-4		Very Loose	Brown	Grayish brown SILT, trace organic mat'l, trace f sand, piece of plastic wrapper.	OL		0.7 ppm
8	WOH 4									
8	WOH WOH	.8/2.0	-0810 0835 S-5		Very Loose	Brown	Same soil description as above.	OL		0 ppm
10	2 2									
10	WOH 3	1.45/2.0	-1012 0915 S-6		Loose	Brown	Top 1.1' - brown SILT, some organic mat'l trace fine sand.	OL		0 ppm
12	3 7					Gray	Bottom, .35' - gray f-c SAND, trace silt.	SW	placed bottom of S-6 w/ s-7 sample.	
12	3 7	1.0/2.0	-1214 0935 S-7		Med. Dense	Gray	Gray f-c SAND, some silt, little f gravel top of spoon is more then f-c + gravel, bottom is	SM		0 ppm
14	6 1						Sand and silt.			
							Continued on second page			

TYPE OF DRILLING RIG:	CME-45 - PLAT FORM	COMP. 0002-0204
METHOD OF ADVANCING BORING:	DRIVE AND WASH	COMP. 0608-0810
METHOD OF SOIL SAMPLING:	2" S.S., 140 LB HAMMER	PLACED BOTTLE OF S-6 W/S-
METHOD OF ROCK CORING:		
GROUNDWATER LEVELS:	SOIL DENSITY WAS DECIDED BY ADDING 6" - 12" + 12" - 18" BLOW COUNTS AND USING SPT CLASSIFICATION	
OTHER OBSERVATIONS:		

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK - OU3- FERRY CREEK			BORING NO.:	A1-SD06
PROJECT NO.:	N7491-0320			START DATE:	7-23-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-23-97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~ <0.0'	ELEVATION FROM:	Estimated from topo.	CHECKED BY:	THD

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [ppm]
14	4 4	1..3 / 2.0	OU3-A1-SD06-1416		Med. Dense	Gray	Top 0.7' gray f-m SAND and SILT, trace fine rounded gravel.	SM	placed w/S-7	0 ppm
16	6 7		1020 S-8			Brown	Bottom 0.6' - brown f-c SAND, little rounded, f gravel trace silt.	SW		
16	5 7	0.7 / 2.0	-1618		Med. Dense	Brown	F-m SAND, trace silt.	SP	No recovery 1st attempt placed w/S-8	
18	12 14		1050 S-9							
18	30 50	.8 / 1.0	-1820		Very dense	Brown	F-c SAND, little rounded fine gravel, trace silt.	SW	After hammering 12", casing started moving with spoon.	
20			1125 S-10							

TYPE OF DRILLING RIG:	CME-45 - PLAT FORM		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" S.S., 140 LB HAMMER	PLACED BOTTLE OF S-6 W/S-	
METHOD OF ROCK CORING:		PLACED S-9 W/BOTTOM OF S-8	
GROUNDWATER LEVELS:	SOIL DENSITY WAS DECIDED BY ADDING 6" - 12" + 12" - 18" BLOW COUNTS AND USING SPT CLASSIFICATION		
OTHER OBSERVATIONS:		PLACED S-10 W/9+ BOTTOM OF S8	BORING NO.: A1-SD06

BORING LOG — BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW110D
DATE START: 04/18/1994	DEPTH TO WATER: 6.45	LOGGED BY: KJ	GROUND EL.: 9.60
DATE COMPLETED: 04/18/1994	DATE & TIME: 05/16/1994/1425	CHECKED BY:	TOTAL DEPTH: 55.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION Asphalt & starting area - 0.5-feet	U.S.C.S.
	0.5	S-1	13 6 11 6 10 6	18	15	Fill material. Asphalt = 2in Drill from 0.5'	S-1 (15in) SAND, some gravel, little silt, poorly graded, asphalt shingle pieces, charred wood or charcoal, dk brown. Note: HSA to 16ft; Pull augers and readvance 8in casing. Spin&Wash to 16ft. Telescope 6in casing and advance to EOB.	SM
	2.0	S-2	15 6 15 6 17 6 13 6	24	18	Interval= 0204' Fill material.	S-2 (18in) SAND, some gravel, little silt, similar to S-1 w/slag.	SM
	4.0	S-3	9 6 4 6 4 6 5 6	24	15	Interval= 0406' Fill material.	S-3 (15in) SAND, similar to S-2 w/fired ceramic tiles, nails, charred wood or charcoal.	SM
	6.0	S-4	2 6 2 6 2 6 3 6	24	24	Interval= 0608' Fill material.	S-4 (24in) SILTY SAND, some gravel, poorly graded, white plastic (outlet cover?), plug, plant matter, dk brown.	SM
	8.0	S-5	2 6 2 6 2 6 4 6	24	22	Interval= 0810' Fill material.	S-5A (19in) SILTY SAND, similar to S-4 w/nails, plastic, asphalt shingles, pastey consistency, plant matter, dk brown. S-5B (3in) PEAT, organic material, fibrous, roots, plant matter, dry, brown/red. Note: not likely natural contact; potential fill material.	SM SM
	10.0	S-6	3 6 4 6 3 6 2 6	24	18	Interval= 1012' Fill material.	S-6 (18in) SILTY SAND, similar to S-5A w/plastic outlet piece, asphalt shingle, pastey consistency (sludge-like), 2in thick interbed of peat, root matter.	SM
	12.0	S-7	9 6 7 6 5 6 6 6	24	10	Interval= 1214' Fill material.	S-7 (10in) SILTY SAND, similar to S-6. 14-feet = Base of fill and top of silt/peat.	SM
	14.0	S-8	3 6 3 6 3 6 5 6	24	10	Interval= 1416' Potential nat. material.	S-8 (10in) ORGANIC SILT and PEAT, trace clay, plant matter, fibrous in sections, 2-3in thick interbeds of peat, brown to black.	OL/Pt

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler; coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/4.25in ID HSA to 16ft, a pot. conf. layer. Pull augers. Advance 8in casing to 16 ft. Spin&Wash. Telescope and advance 6in from 16 to EOB @ 55ft. Thin org. layer (4ft max). Continuous sampling 0.5-20ft, Stnd sampling 23-EOB. 3n split-barrel samplers advanced w/140lb hammer. Screen samples. Rock @ 54ft. Set well. Screen@ 52.5-42.5ft.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW110D_A.DWG (8/27/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW110D
DATE START: 04/18/1994	DEPTH TO WATER: 6.45	LOGGED BY: KJ	GROUND EL.: 9.60
DATE COMPLETED: 04/18/1994	DATE & TIME: 05/16/1994/1425	CHECKED BY:	TOTAL DEPTH: 55.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	2 3 3 5 / 6 6 6 6	24	15	Interval= 1618' Natural soil.	S-9 (15in) PEAT, organic fibrous plant matter, roots, some silt, brown. 18-Feet = Base of peat and top of sand.	Pt
	18.0	S-10	7 9 16 18 / 6 6 6 6	24	16	Interval= 1820' Natural soil. Advance to 23ft	S-10 (16in) SILTY SAND, some gravel, poorly graded brown. Note: Initiate standard sampling (approx. every 5 ft).	SM
	23.0	S-11	9 10 16 17 / 6 6 6 6	24	8	Interval= 2325' Stnd sampling.	S-11 (8in) SAND, trace silt, trace coarse gravel, poorly graded, gray-brown.	SP
	28.0	S-12	5 7 6 5 / 6 6 6 6	24	11	Interval= 2830'	S-12 (11in) SAND, trace silt, poorly graded, gray brown.	SP

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler; coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/4.25in ID HSA to 16ft, a pot. conf. layer. Pull augers. Advance 8in casing to 16 ft. Spin&Wash. Telescope and advance 6in from 16 to EOB @ 55ft. Thin org. layer (4ft max). Continuous sampling 0.5-20ft, Stnd sampling 23-EOB. 3n split-barrel samplers advanced w/140lb hammer. Screen samples. Rock @ 54ft. Set well. Screen@ 52.5-42.5ft.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW110D_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW110D
DATE START: 04/18/1994	DEPTH TO WATER: 6.45	LOGGED BY: KJ	GROUND EL.: 9.60
DATE COMPLETED: 04/18/1994	DATE & TIME: 05/16/1994/1425	CHECKED BY:	TOTAL DEPTH: 55.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	33.0	S-13	13 6 26 6 25 6 33 6	24	22	Interval= 3335'	S-13A (10in) SAND, trace silt, reddish colored laminations or streaks.	SP
	38.0	S-14	24 6 27 6 32 6 45 6	24	24	Interval= 3840'	S-14 (24in) SAND, some gravel, trace silt, poorly graded, 2in thick interbed of gray-brown silty sand, brown-red.	SP
	43.0	S-15	27 6 30 6 34 6 40 6	24	10	Interval= 4345'	S-15 (10in) SAND, similar to S-14.	SP

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/4.25in ID HSA to 16ft, a pot. conf. layer. Pull augers. Advance 8in casing to 16 ft. Spin&Wash. Telescope and advance 6in from 16 to EOB @ 55ft. Thin org. layer (4ft max). Continuous sampling 0.5-20ft, Stnd sampling 23-EOB. 3n split-barrel samplers advanced w/140lb hammer. Screen samples. Rock @ 54ft. Set well. Screen@ 52.5-42.5ft.

ACAD NAME:A:\MW110D_C.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW110D
DATE START: 04/18/1994	DEPTH TO WATER: 6.45	LOGGED BY: KJ	GROUND EL.: 9.60
DATE COMPLETED: 04/18/1994	DATE & TIME: 05/16/1994/1425	CHECKED BY:	TOTAL DEPTH: 55.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	48.0	S-16	35 6 23 6 20 6 18 6	24	0	Interval= 4850' NO RECOVERY.	S-16 (0in) NO RECOVERY, possibly pushed a rock.	
							Top of bedrock is >= 54-feet.	
	53.0	S-17	200 8	8	8	Interv.=53-53.6 Casing grinding Barrel refusal.	S-17 (8in) SAND, some gravel, trace silt, similar to S-15 w/metamorphic rock frags, mottled nature. SP Note: Advance casing in attempt to break apart potential cobble. Still grinding. Potential top of rock at approx. 54ft. EOB @ 55ft. Backfill to 52.5 ft. Set well, see log.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/4.25in ID HSA to 16ft, a pot. conf. layer. Pull augers. Advance 8in casing to 16 ft. Spin&Wash. Telescope and advance 6in from 16 to EOB @ 55ft. Thin org. layer (4ft max). Continuous sampling 0.5-20ft, Stnd sampling 23-EOB. 3n split-barrel samplers advanced w/140lb hammer. Screen samples. Rock @ 54ft. Set well. Screen@ 52.5-42.5ft.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW110D_D.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW110M
DATE START: 04/25/1994	DEPTH TO WATER: 6.40	LOGGED BY: DM	GROUND EL.: 9.70
DATE COMPLETED: 04/25/1994	DATE & TIME: 05/16/1994/ 1425	CHECKED BY:	TOTAL DEPTH: 28.80

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	A					SEE BORING LOG SP-MW110D FOR ALL SOIL AND ROCK DESCRIPTIONS.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler; coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

MW110M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW110D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW-110M.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW110M
DATE START: 04/25/1994	DEPTH TO WATER: 6.40	LOGGED BY: DM	GROUND EL.: 9.70
DATE COMPLETED: 04/25/1994	DATE & TIME: 05/16/1994/ 1425	CHECKED BY:	TOTAL DEPTH: 28.80

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	B				Telescope 6" Casing; Spin & Wash Technique		
	28.8	C					EOB @ 28.8 Ft. Installed Well See Construction Log for MF-MW102M	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

MW110M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW110D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW-110M.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	SP-MW110S
DATE START:	05/02/1994	DEPTH TO WATER:	0.10	LOGGED BY:	BW	GROUND EL.:	9.80
DATE COMPLETED:	05/02/1994	DATE & TIME:	05/16/1994/ 1425	CHECKED BY:		TOTAL DEPTH:	32.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	A					SEE BORING LOG SP-MW110D FOR ALL SOIL AND ROCK DESCRIPTIONS.	
	15.0	B					EOB @ 32.0 Ft. Installed well See Construction Log for MF-MW102S	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

MW110S REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW110D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW110S.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW111S
DATE START: 05/03/1994	DEPTH TO WATER: 9.69	LOGGED BY: DM	GROUND EL.: 10.30
DATE COMPLETED: 05/03/1994	DATE & TIME: 05/16/1994/1455	CHECKED BY:	TOTAL DEPTH: 10.50

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	A				Auger to 5ft. Pull augers,in-stall casing.	FOR SOIL AND ROCK DESCRIPTIONS SEE BORING LOG FOR SP-MW111D.	
	5.0	B				Telescope cas-ing. Spin&Wash to 10.5ft.		
	10.5	C					EOB @ 10.5 ft. Set well. See well log.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler; coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

MW111S REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW111D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW-111S.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	SP-MW111D
DATE START:	04/26/1994	DEPTH TO WATER:	9.44	LOGGED BY:	DM	GROUND EL.:	10.50
DATE COMPLETED:	04/27/1994	DATE & TIME:	05/16/1994/1455	CHECKED BY:		TOTAL DEPTH:	90.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"		PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	S-1	3 4 6 4	6 6 6 6	24	12	Interval= 0002' HSA 0-10', 10in casing, 0-10'.	S-1 (12in) SAND, some gravel, well graded. Note: Augers stopped at 10ft due to potential confining layer. Pulled augers, readvanced w/10in casing to 10ft. Spin & wash drill method.	SW
	2.0	S-2	10 11 11 9	6 6 6 6	24	3	Interval= 0204'	S-2 (3in) SAND, similar to S-1.	SW
	4.0	S-3	6 9 6 7	6 6 6 6	24	15	Interval= 0406'	S-3 (15in) SILTY SAND, some gravel, dk brown.	SM
	6.0	S-4	3 3 3 15	6 6 6 6	24	7	Interval= 0608' Pass. H20 table	S-4 (7in) SILTY SAND, one piece of aggregate to 2 in, dk brown.	SM
	8.0	S-5	7 5 7 4	6 6 6 6	24	20	Interval= 0810'	S-5 (20in) SANDY CLAY, fine clay, well graded sand, one aggregate to 1.5in, dk brown.	SC
	10.0	S-6	3 3 3 5	6 6 6 6	24	22	Telesc.8in casing 10'.Advance via spin & wash	S-6 (22in) CLAY, trace sand, organic material, dk brown to black.	CL
	12.0	S-7	4 3 3 2	6 6 6 6	24	6	Interval= 1214'	S-7 (6in) SANDY CLAY, clay w/well graded sand, trace gravel, lt brown.	SC
	14.0	S-8	5 5 5 6	6 6 6 6	24	9	Interval= 1416'	S-8 (9in) SANDY CLAY, similar to S-7.	SC

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/HSA,0-14ft to confining layer. Pull augers Replace w/10in casing to 10ft, telescope 8in casing at 10'& advance to EOB. Perform contin. & stnd. sampling. Primarily advance 3in split-barrels, except where noted,w/140lb hammer Pot. H20 table @ 6-8ft. Top of confining layer @ 10' Screen samples:Pb,Cu,PCB,Asb. Spin&Wash tech. Well screen: 89-79ft

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW111D_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW111D
DATE START: 04/26/1994	DEPTH TO WATER: 9.44	LOGGED BY: DM	GROUND EL.: 10.50
DATE COMPLETED: 04/27/1994	DATE & TIME: 05/16/1994/1455	CHECKED BY:	TOTAL DEPTH: 90.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	20 6 20 6 15 6 16 6	24	10	Interval= 1618'	S-9 (10in) CLAYEY SAND, well graded sand, some clay, trace silt, one piece aggregate, dk brown.	SC
	18.0	S-10	21 6 12 6 32 6 39 6	24	0	Interval= 1820' NO RECOVERY.	S-10 (0in) NO RECOVERY.	
	20.0	S-11	23 6 39 6 39 6 50 6	24	14	Interval= 2022'	S-11 (14in) GRAVEL, some well graded sand, trace silt, gray.	GW
	22.0	S-12	130 3	3	2	Inter.=22-22.25 Advance to 27ft Start stnd smpl	S-12 (2in) GRAVEL, some well graded sand.	GW
	27.0	S-13	13 6 14 6 16 6 15 6	24	12	Interval= 2729'	S-13 (12in) SAND, fine-medium sand, poorly graded, trace silt, trace gravel, one piece 2in aggregate, dark gray.	SP

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/HSA,0-14ft to confining layer. Pull augers Replace w/10in casing to 10ft, telescope 8in casing at 10'& advance to EOB. Perform contin. & stnd. sampling. Primarily advance 3in split-barrels, except where noted,w/140lb hammer Pot. H20 table @ 6-8ft. Top of confining layer @ 10' Screen samples:Pb,Cu,PCB,Asb. Spin&Wash tech. Well screen: 89-79ft

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW111D_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	SP-MW111D
DATE START:	04/26/1994	DEPTH TO WATER:	9.44	LOGGED BY:	DM	GROUND EL.:	10.50
DATE COMPLETED:	04/27/1994	DATE & TIME:	05/16/1994/1455	CHECKED BY:		TOTAL DEPTH:	90.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	32.0	S-14	20 39 29 15 / 6 6 6 6	24	5	Interval= 3234'	S-14 (5in) SAND, similar to S-13 w/more gravel, and dk brown color.	SP
	37.0	S-15	66 59 42 23 / 6 6 6 6	24	0	Interval= 3739' NO RECOVERY.	S-15 (0in) NO RECOVERY.	
	42.0	S-16	100 / 4	4	0	Inter.=42-42.33 NO RECOVERY	S-16 (0in) NO RECOVERY.	
	47.0	S-17	66 52 41 39 / 6 6 6 6	24	0	Interval= 4749' NO RECOVERY.	S-17 (0in) NO RECOVERY, 3in sub-aggregate piece wedged in mouth of sampler.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/HSA,0-14ft to confining layer. Pull augers Replace w/10in casing to 10ft, telescope 8in casing at 10'& advance to EOB. Perform contin. & stnd. sampling. Primarily advance 3in split-barrels, except where noted,w/140lb hammer Pot. H20 table @ 6-8ft. Top of confining layer @ 10' Screen samples:Pb,Cu,PCB,Asb. Spin&Wash tech. Well screen: 89-79ft

ACAD NAME:A:\MW111D_C.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW111D
DATE START: 04/26/1994	DEPTH TO WATER: 9.44	LOGGED BY: DM	GROUND EL.: 10.50
DATE COMPLETED: 04/27/1994	DATE & TIME: 05/16/1994/1455	CHECKED BY:	TOTAL DEPTH: 90.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	47.0	S-17	66 52 41 39 / 6 6 6 6	24	0	Interval= 4749' NO RECOVERY.	S-17 (0in) NO RECOVERY, 3in sub-aggregate piece wedged in mouth of sampler.	
	52.0	S-18	100 / 2	2	0	Inter.=52-52.17 NO RECOVERY	S-18 (0in) NO RECOVERY, large (>3in across) cobble wedged at mouth of spoon.	
	57.0	S-19	8 19 20 15 / 6 6 6 6	24	1	Interval= 5759'	S-19 (1in) GRAVEL, poorly graded, mostly fine gravel some sand, trace silt.	GP
	60.0	S-20	20 31 40 44 / 6 6 6 6	24	14	Interval= 6062' Cont. sampling 60-64'.	S-20 (14in) SAND, well graded, trace silt, lt brown.	SW
	62.0	S-21	54 29 34 45 / 6 6 6 6	24	12	Interval= 6264'	S-21 (12in) SAND, similar to S-20.	SW

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
⊠ - Natural groundwater table

NOTES:

Advanced boring w/HSA,0-14ft to confining layer. Pull augers Replace w/10in casing to 10ft, telescope 8in casing at 10'& advance to EOB. Perform contin. & stnd. sampling. Primarily advance 3in split-barrels, except where noted.w/140lb hammer Pot. H20 table @ 6-8ft. Top of confining layer @ 10' Screen samples:Pb,Cu,PCB,Asb. Spin&Wash tech. Well screen: 89-79ft

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW111D_D.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	SP-MW111D
DATE START:	04/26/1994	DEPTH TO WATER:	9.44	LOGGED BY:	DM	GROUND EL.:	10.50
DATE COMPLETED:	04/27/1994	DATE & TIME:	05/16/1994/1455	CHECKED BY:		TOTAL DEPTH:	90.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	67.0	S-22	56 6 69 6 75 6 71 6	24	0	Lose H20 to FM. NO RECOVERY. Resume stnd smp	S-22 (0in) NO RECOVERY. Note: At 69ft, all water in the wash tub went into the boring and was lost. Drillers had to refill the borehole.	
	72.0	S-23	100 2	2	0	Inter.=72-72.16 NO RECOVERY.	S-23 (0in) NO RECOVERY.	
	77.0	S-24	44 6 51 6 27 6 83 6	24	14	Interval= 7779'	S-24 (14in) SAND, well graded, some gravel, trace silt, lt brown/tan.	SW

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/HSA,0-14ft to confining layer. Pull augers Replace w/10in casing to 10ft, telescope 8in casing at 10'& advance to EOB. Perform contin. & stnd. sampling. Primarily advance 3in split-barrels, except where noted,w/140lb hammer Pat. H20 table @ 6-8ft. Top of confining layer @ 10' Screen samples:Pb,Cu,PCB,Asb. Spin&Wash tech. Well screen: 89-79ft

ACAD NAME:A:\MW111D_E.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW111D
DATE START: 04/26/1994	DEPTH TO WATER: 9.44	LOGGED BY: DM	GROUND EL.: 10.50
DATE COMPLETED: 04/27/1994	DATE & TIME: 05/16/1994/1455	CHECKED BY:	TOTAL DEPTH: 90.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	82.0	S-25	100 4	4	0	Inter.=82-82.33 NO RECOVERY	S-25 (0in) NO RECOVERY.	
	87.0	S-26	100 8	8	0	Inter.=87-87.7' 3in barrel used NO RECOVERY.	S-26 (0in) NO RECOVERY. Note: Resumed continuous sampling 87.7-89.7ft.	
	87.7	S-27	24 6 51 6 59 6 75 6	24	18	Interval= 8789' 2in barrel used Advance to 90'	S-27 (18in) SAND, poorly graded, trace silt, lt brown.	SP
	90.0	S-28	100 1	1	0	Inter.=90-9008 NO RECOVERY Top of rock	S-28 (0in) NO RECOVERY, bedrock @ 90ft bgs. EOB @ approx. 90 ftbgs. Set well, see log.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler; coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/HSA,0-14ft to confining layer. Pull augers Replace w/10in casing to 10ft, telescope 8in casing at 10'& advance to EOB. Perform contin. & stnd. sampling. Primarily advance 3in split-barrels, except where noted,w/140lb hammer Pot. H20 table @ 6-8ft. Top of confining layer @ 10' Screen samples:Pb,Cu,PCB,Asb. Spin&Wash tech. Well screen: 89-79ft

ACAD NAME:A:\MW111D_F.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW111M
DATE START: 04/29/1994	DEPTH TO WATER: 9.85	LOGGED BY: DM	GROUND EL.: 10.80
DATE COMPLETED: 04/29/1994	DATE & TIME: 05/16/1994/1455	CHECKED BY:	TOTAL DEPTH: 35.50

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.0	A				Auger to 10'. Pull augers.10" casing to 10ft.	SEE BORING LOG SP-MW111D FOR ALL SOIL AND ROCK DESCRIPTIONS.	
	10.0	B				Spin&Wash tech. Telesc.6in cas. Advance to 35.5		

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

MW111M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW111D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW111M_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW111M
DATE START: 04/29/1994	DEPTH TO WATER: 9.85	LOGGED BY: DM	GROUND EL.: 10.80
DATE COMPLETED: 04/29/1994	DATE & TIME: 05/16/1994/1455	CHECKED BY:	TOTAL DEPTH: 35.50

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16						NO RESULTS THIS PAGE	
	32							

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

MW111M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW111D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW111M_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW111M
DATE START: 04/29/1994	DEPTH TO WATER: 9.85	LOGGED BY: DM	GROUND EL.: 10.80
DATE COMPLETED: 04/29/1994	DATE & TIME: 05/16/1994/1455	CHECKED BY:	TOTAL DEPTH: 35.50

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	SAMPLE BLOWS PER 6"	SAMPLE PEN. in.	SAMPLE REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	35.5	C					EOB @ 35.5ft. Set well. See well log.	

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

MW111M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW111D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW111M_C.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112B
DATE START: 04/11/1994	DEPTH TO WATER: 3.58	LOGGED BY: KJ,DM	GROUND EL.: 7.00
DATE COMPLETED: 04/18/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 63.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	0.5	S-1	10 6 13 6 6 6	18	10	Fill material. Asphalt=0-2in. Drill @ 0.5ft.	S-1 (10in) SILTY SAND, some gravel, poorly graded, asphalt, concrete, fibers, brick, dk brown/black.	
	2.0	S-2	6 6 7 6 9 6 5 6	24	18	Interval= 0204' Fill material.	S-2 (18in) SILTY SAND, some gravel, similar to S-1 w/similar fill and ceramic-like tiles, root matter	
	4.0	S-3	10 6 3 6 10 6 4 6	24	18	Interval= 0406' Fill material.	S-3 (18in) SILTY SAND, some gravel, similar to S-2 w/similar fill and lots of fibers, fiber pads, matted material.	
	6.0	S-4	2 6 5 6 8 6 7 6	24	16	Interval= 0608' Fill material.	S-4 (16in) SILTY SAND, some gravel, similar to S-3	
	8.0	S-5	3 6 4 6 3 6 4 6	24	18	Interval= 0810' Fill material. Natural contact 9.5' = base of fill	S-5A (15in) SILTY SAND, trace gravel, fibers, coal or charcoal, black. S-5B (3in) PEAT, organic material, some silt, fibrous plant matter, roots, reeds, twigs, dry, brown.	Pt
	10.0	S-6	2 6 2 6 2 6 3 6	24	16	Interval= 1012' Natural soil. See note.	S-6 (16in) PEAT, similar to S-5B w/ 2in thick interbed of silt at top of split-barrel, dk brown. Note: HSA to 10ft; pulled augers and installed 10 in casing (spin&wash). Telescoped and advanced 8in casing to 32ft.	Pt
	12.0	S-7	6 6 3 6 3 6 5 6	24	14	Interval= 1214' Pot. H20 table.	S-7 (14in) PEAT, similar to S-6 w/o silt interbed.	Pt
	14.0	S-8	2 6 2 6 3 6 3 6	24	24	Interval= 1416'	S-8 (24in) PEAT/ORGANIC SILT, fibrous plant and root matter w/some silt, dk brown.	Pt/OL

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/4.25&6.25in ID HSA to 10ft, a pot. conf. layer. Pull augers. Advance 10in casing to 10 ft. Telescope 8in casing & advance to 32ft. Telescope and advance 6in from 32 to 43ft. Spin&Wash technique. Cont. sampling mostly; rock @43ft. H20 @12-14'. Pot. not. cntct. @8-10'. Screen for: Pb, Cu,PCB,Asb. Core 20'. Packer test. Set well. Screen:57-47ft.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW112B_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112B		
DATE START: 04/11/1994	DEPTH TO WATER: 3.58	LOGGED BY: KJ,DM	GROUND EL.: 7.00		
DATE COMPLETED: 04/18/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 63.00		

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	5 6 11 13 / 6 6 6 6	24	0	Interval= 1618' NO RECOVERY.	S-9 (0in) NO RECOVERY. Base of peat = 16-feet.	
	18.0	S-10	15 16 16 17 / 6 6 6 6	24	24	Interval= 1820'	S-10 (24in) SAND, some silt, trace gravel, trace organics, gray, poorly graded.	SM
	20.0	S-11	3 6 10 13 / 6 6 6 6	24	15	Interval= 2022'	S-11 (15in) SILTY SAND, poorly graded, gray.	SM
	22.0	S-12	18 23 33 35 / 6 6 6 6	24	18	Interval= 2224'	S-12A (15in) SILTY SAND, similar to S-11.	SM
							S-12B (3in) SAND, well graded, trace silt, light brown.	SW
	24.0	S-13	6 13 16 17 / 6 6 6 6	24	12	Interval= 2426'	S-13 (12in) SAND, similar to S-12B.	SW
	26.0	S-14	4 12 13 16 / 6 6 6 6	24	17	Interval= 2628'	S-14 (17in) SAND, similar to S-13, except coarser grained.	SW
	28.0	S-15	11 18 24 25 / 6 6 6 6	24	24	Interval= 2830'	S-15 (24in) SAND, poorly graded, trace silt.	SP
	30.0	S-16	9 18 25 46 / 6 6 6 6	24	16	Interval= 3032'	S-16 (16in) SAND, well graded, trace silt, trace gravel.	SW

LEGEND:

TYPE-NO. - Type of Sample
C - Rock core sample
S - Split barrel sample
BLOWS PER 6" - 140 lb. hammer falling 30" to drive a split barrel sampler: coring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Advanced boring w/4.25&6.25in ID HSA to 10ft, a pat. conf. layer. Pull augers. Advance 10in casing to 10 ft. Telescope 8in casing & advance to 32ft. Telescope and advance 6in from 32 to 43ft. Spin&Wash technique. Cont. sampling mostly; rock @43ft. H20 @12-14'. Pot. nat. cntct. @8-10'. Screen for: Pb, Cu,PCB,Asb. Core 20'. Packer test. Set well. Screen:57-47ft.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW112B_B.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112B
DATE START: 04/11/1994	DEPTH TO WATER: 3.58	LOGGED BY: KJ,DM	GROUND EL.: 7.00
DATE COMPLETED: 04/18/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 63.00

ELEV. IN FEET	DEPTH IN FEET	SAMPLE TYPE-NO.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	32.0	S-17	100 3	3	3	Inter.=32-32.25 Telesc.&advance 6in casing @32'	S-17 (3in) SAND, poorly graded, trace silt, trace fine gravel.	SP
	34.0	S-18	25 6 33 6 17 6 17 6	24	4	Inter.=32-32.25 Casing advan.to 34'after S-17.	S-18 (4in) SAND, poorly graded, trace silt, trace gravel, light brown.	SP
	36.0	S-19	31 6 28 6 31 6 25 6	24	6	Interval= 3638'	S-19 (6in) SAND, poorly graded, trace coarse gravel.	SP
	38.0	S-20	46 6 35 6 30 6 32 6	24	12	Interval= 3840'	S-20 (12in) GRAVEL, well graded, some sand.	GW
	40.0	S-21	100 5	5	5	Inter.=40-40.4' Adv.cas. to 42' past refusal.	S-21 (5in) SAND, poorly graded, some fine gravel, trace flaky rock.	SP
	42.0	S-22	100 2	2	0	Inter.=42-42.16 Refusal likely bedrock surface	S-22 (0in) NO RECOVERY. Top of bedrock = 43.0-feet.	
	43.0	C-23		16	16	Run 1:43-44.3ft RQD = 100%	C-23 (16in) Chlorite Mica Schist, dark green, med Note: 6in casing seated in bedrock at 43 ft. to coarse grained, foliated metamorphic rock. Weathered vertical fractures, calcite stringers, pyrite nodules, quartz veins, high angle schistosity common.	
	44.3	C-24		26	26	Run 2:44.3-46.5 RQD = 100%	C-24 (26.4in) Chlorite mica schist, similar to C-23.	
	46.5	C-25		42	42	Run 3:46.5-50ft RQD = 100%	C-25 (42in) Chlorite mica schist, similar to C-24.	

LEGEND:

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NOTES:

Advanced boring w/4.25&6.25in ID HSA to 10ft, a pot. conf. layer. Pull augers. Advance 10in casing to 10 ft. Telescope 8in casing & advance to 32ft. Telescope and advance 6in from 32 to 43ft. Spin&Wash technique. Cont. sampling mostly; rock @43ft. H20 @12-14'. Pot. nat. cntct. @8-10'. Screen for: Pb, Cu,PCB,Asb. Core 20'. Packer test. Set well. Screen:57-47ft.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW112B_C.DWG (9/3/99)