RAYMARK
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FINAL
AREA I
REMEDIAL INVESTIGATION

VOLUME III OF III
APPENDICES

RAYMARK-FERRY CREEK-OPERABLE UNIT 3
STRATFORD, CONNECTICUT

RESPONSE ACTION CONTRACT (RAC), REGION I

For
U.S. Environmental Protection Agency

By
Tetra Tech NUS, Inc.

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APPENDIX A
BORING LOGS

BORING LOG — BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW101D
DATE START: 04/04/1994	DEPTH TO WATER: 7.40	LOGGED BY: JM	GROUND EL.: 8.50
DATE COMPLETED: 04/07/1994	DATE & TIME: 05/16/1994 /1505	CHECKED BY:	TOTAL DEPTH: 72.33

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	8 7 8 9 / 6 6 6 6	24	9	Interval= 0002' Screen for: Pb, Cu,PCB,Asbestos	S-1 (0-9in) SAND, trace silt, asphalt, root matter brown.	SM
	2.0	S-2	11 10 13 20 / 6 6 6 6	24	16	Interval= 0204' Screen for: Pb, Cu,PCB,Asbestos	S-2A (0-7in) SAND, similar to S-1.	SM
							S-2B (7-16in) SILTY SAND, subrounded gravel up to 1-inch, lt. gray.	SM
	4.0	S-3	20 17 25 18 / 6 6 6 6	24	24	Interval= 0406' Screen for: Pb, Cu,PCB,Asbestos	S-3A (0-6in) SILTY SAND, asphalt, wood residue, brown.	SM
							S-3B (6-24in) SILTY SAND, subangular gravel up to 1-inch, tan.	SM
	6.0	S-4	5 15 12 17 / 6 6 6 6	24	18	Sheen observed. Screen for: Pb, Cu,PCB,Asbestos	S-4A (0-14in) SILT, some fine-medium sand, some fine gravels, occasional roots.	ML
							S-4B (14-18in) SAND, fine-medium sand, trace silt.	SP
	8.0	S-5	1 1 2 1 / 6 6 6 6	24	18	Interval= 0810' Screen for: Pb, Cu,PCB,Asbestos	S-5A (0-5in) SILTY SAND, fine-medium sand, some silt, brown.	SM
							S-5B (5-18in) PEAT/ORGANIC SILT, organic matter. some silt.	Pt/MO
	10.0	S-6	2 2 2 4 / 6 6 6 6	24	7	Interval= 1012' Screen for: Pb, Cu,PCB,Asbestos	S-6 (7in) PEAT/ORGANIC SILT - Similar to S-5B.	Pt/MO
	12.0	S-7	1 2 1 3 / 6 6 6 6	24	0	NO RECOVERY. Spinning casing Spin & Wash.	S-7 (0in) NO RECOVERY.	
	14.0	S-8	3 2 2 3 / 6 6 6 6	24	24	Sheen observed. Screen for: Pb, Cu,PCB,ASbestos	S-8A (0-12in) ORGANIC SILT, silt w/ organic matter spread throughout the peat.	MO/Pt
							S-8B (12-24in) SILT, brown. Sheen observed in this interval.	ML

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/8.25in ID HSA to 12ft bgs. Spin 6in casing 12-72ft. Use spin&wash method 12'-EOB. Continuous sampling every 2ft 0-66ft. Advance 3in split-barrel samplers w/140lb hammer 0-66';70',72'. Bedrock @ 72'. Screen above rock. Screen samples for:Pb,Cu,PCB,Asbestos. NM/NR=Not recorded/measured.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW101D_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW101D
DATE START: 04/04/1994	DEPTH TO WATER: 7.40	LOGGED BY: JM	GROUND EL.: 8.50
DATE COMPLETED: 04/07/1994	DATE & TIME: 05/16/1994 /1505	CHECKED BY:	TOTAL DEPTH: 72.33

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 4 7 16 / 6 6 6 6	24	18	Interval= 1618' Screen for: Pb, Cu,PCB,ASbestos	S-9A (0-13in) SILT, similar to S-8B.	ML
							S-9B (13-18in) SILTY SAND, fine-medium graded sand, some silt, brown.	SM
	18.0	S-10	17 18 22 25 / 6 6 6 6	24	12	Interval= 1820' Screen for: Pb, Cu,PCB,ASbestos	S-10 (12in) SILTY SAND, well graded sand, some silt, coarse piece of gravel, gray.	SM
	20.0	S-11	17 20 22 14 / 6 6 6 6	24	18	Interval= 2022' Screen for: Pb, Cu,PCB,ASbestos	S-11 (18in) SILTY SAND, fine-medium graded sand, some silt, subangular gravel, lt. brown.	SM
	22.0	S-12	10 12 17 22 / 6 6 6 6	24	22	Interval= 2224' Screen for: Pb, Cu,PCB,ASbestos	S-12 (22in) SAND, fine-medium sand, trace silt, piece of subangular gravel, lt. brown.	SP
	24.0	S-13	26 24 32 17 / 6 6 6 6	24	20	Interval= 2426' Screen for: Pb, Cu,PCB,Asbestos	S-13 (20in) SAND, fine-medium sand, subrounded and subangular gravels, trace silt, lt. brown.	SP
	26.0	S-14	36 24 35 42 / 6 6 6 6	24	0	Interval= 2628' Screen for: Pb, Cu,PCB,Asbestos	S-14 (0in) NO RECOVERY.	
	28.0	S-15	15 16 23 21 / 6 6 6 6	24	22	Interval= 2830'	S-15 (22in) SAND - fine sand, trace silt, lt brown	SP
	30.0	S-16	15 25 32 20 / 6 6 6 6	24	4	Interval= 3032'	S-16 (4in) SAND, similar to S-15.	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/8.25in ID HSA to 12ft bgs. Spin 6in casing 12-72ft. Use spin&wash method 12'-EOB. Continuous sampling every 2ft 0-66ft. Advance 3in split-barrel samplers w/140lb hammer 0-66';70',72'. Bedrock @ 72'. Screen above rock. Screen samples for:Pb,Cu,PCB,Asbestos. NM/NR=Not recorded/measured.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW101D_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW101D
DATE START: 04/04/1994	DEPTH TO WATER: 7.40	LOGGED BY: JM	GROUND EL.: 8.50
DATE COMPLETED: 04/07/1994	DATE & TIME: 05/16/1994 /1505	CHECKED BY:	TOTAL DEPTH: 72.33

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	26 6 34 6 45 6 49 6	24	24	Interval= 3234'	S-17 (24in) SAND, fine-medium sand, trace of coarse sand, lt. brown.	SP
	34.0	S-18	25 6 20 6 22 6 30 6	24	20	Interval= 3436'	S-18 (20in) SAND, similar to S-17.	SP
	36.0	S-19	5 6 7 6 13 6 17 6	24	14	Interval= 3638'	S-19 (14in) SAND, fine-coarse sand, trace silt, trace of fine gravels, lt. brown.	SP
	38.0	S-20	9 6 15 6 24 6 25 6	24	20	Interval= 3840'	S-20 (20in) SAND, fine-coarse sand, trace silt, trace fine gravels.	SW
	40.0	S-21	17 6 20 6 22 6 24 6	24	17	Interval= 4042'	S-21 (17in) SAND, similar to S-20.	SW
	42.0	S-22	12 6 17 6 25 6 24 6	24	18	Interval= 4244'	S-22 (18in) SILTY SAND, fine-medium sand, some silt, light brown/tan.	SM
	44.0	S-23	14 6 22 6 33 6 45 6	24	22	Interval= 4446'	S-23 (22in) SAND, poorly sorted sand, trace silt, lt brown.	SP
	46.0	S-24	49 6 32 6 46 6 50 6	24	24	Interval= 4648'	S-24 (24in) SAND, trace silt, lt brown.	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/8.25in ID HSA to 12ft bgs. Spin 6in casing 12-72ft. Use spin&wash method 12'-EOB. Continuous sampling every 2ft 0-66ft. Advance 3in split-barrel samplers w/140lb hammer 0-66';70',72'. Bedrock @ 72'. Screen above rock. Screen samples for:Pb,Cu,PCB,Asbestos. NM/NR=Not recorded/measured.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW101D_C.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-MW101D
DATE START:	04/04/1994	DEPTH TO WATER:	7.40	LOGGED BY:	JM	GROUND EL.:	8.50
DATE COMPLETED:	04/07/1994	DATE & TIME:	05/16/1994 /1505	CHECKED BY:		TOTAL DEPTH:	72.33

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.
	48.0	S-25	12 6 23 6 33 6 37 6	24	22	Interval= 4850'	S-25 (22in) SAND, trace silt, lt brown.	
	50.0	S-26	27 6 32 6 25 6 28 6	24	0	Interval= 5052' NO RECOVERY	S-26 (0in) NO RECOVERY.	
	52.0	S-27	26 6 22 6 30 6 29 6	24	0	No Recovery. l'mat.in casing Switch baskets.	S-27 (0in) NO RECOVERY. Advance to next interval.	
	54.0	S-28	10 6 12 6 25 6 33 6	24	8	Interval= 5456'	S-28 (8in) SAND, fine-medium sand, trace coarse sand, light brown.	SP
	56.0	S-29	15 6 24 6 25 6 25 6	24	7	Interval= 5658'	S-29 (7in) SAND, trace silt, trace gravel, lt brown.	SP
	58.0	S-30	16 6 18 6 20 6 18 6	24	18	Interval= 5860'	S-30 (18in) SAND, similar to S-29.	SP
	60.0	S-31	7 6 10 6 12 6 13 6	24	24	Interval= 6062'	S-31 (24in) SAND, similar to S-30.	SP
	62.0	S-32	8 6 10 6 20 6 23 6	24	16	Interval= 6264'	S-32 (16in) SAND, trace silt, trace fine gravels, lt. brown.	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/8.25in ID HSA to 12ft bgs. Spin 6in casing 12-72ft. Use spin&wash method 12'-EOB. Continuous sampling every 2ft 0-66ft. Advance 3in split-barrel samplers w/140lb hammer 0-66';70',72'. Bedrock @ 72'. Screen above rock. Screen samples for:Pb,Cu,PCB,Asbestos. NM/NR=Not recorded/measured.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW101D_D.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW101D
DATE START: 04/04/1994	DEPTH TO WATER: 7.40	LOGGED BY: JM	GROUND EL.: 8.50
DATE COMPLETED: 04/07/1994	DATE & TIME: 05/16/1994 /1505	CHECKED BY:	TOTAL DEPTH: 72.33

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.
	64.0	S-33	7 6 10 6 14 6 12 6	24	18	Interval= 6466'	S-33 (18in) SAND, trace coarse sand, trace silt, trace gravel, lt. brown.	SP
	66.0	S-34	100 5	5	0	Interval= 66 to 66.4ft. Spin casing to 70ft.	S-34 (0in) NO RECOVERY. POSSIBLY HIT BEDROCK.	
	70.0	S-35	200 3	3	3	Interval= 70 to 70.25ft. Casing advanced to 72	S-35 (3in) GRAVEL, trace sand, trace silt, weathering evident, pieces are plate-like.	
	72.0	S-36	100 4	4	4	Interval= 72 to 72ft 4in. Confirm bedrock	S-36 (4in) BEDROCK. Used a split-barrel to penetrate and confirm top of rock. EOB @ 72ft 4in bgs. Set monitoring well MF-MW101D. See well construction log for details.	

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/8.25in ID HSA to 12ft bgs. Spin 6in casing 12-72ft. Use spin&wash method 12'-EOB. Continuous sampling every 2ft 0-66ft. Advance 3in split-barrel samplers w/140lb hammer 0-66';70',72'. Bedrock @ 72'. Screen above rock. Screen samples for:Pb,Cu,PCB,Asbestos. NM/NR=Not recorded/measured.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW101D_D.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW101M
DATE START: 04/12/1994	DEPTH TO WATER: 8.05	LOGGED BY: DM	GROUND EL.: 9.10
DATE COMPLETED: 04/12/1994	DATE & TIME: 05/16/1994/1505	CHECKED BY:	TOTAL DEPTH: 27.08

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'. Readvance w/10" casing.	FOR SOIL AND ROCK DESCRIPTIONS SEE BORING LOG FOR MF-MW101D.	
	10.0	B				Telescope 6in casing @ 10'. Spin & Wash.		

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:

MW101M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW101D FOR SOIL AND/OR ROCK DESCRIPTIONS.

ACAD NAME:A:\MW101M_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW101M
DATE START: 04/12/1994	DEPTH TO WATER: 8.05	LOGGED BY: DM	GROUND EL.: 9.10
DATE COMPLETED: 04/12/1994	DATE & TIME: 05/16/1994/1505	CHECKED BY:	TOTAL DEPTH: 27.08

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.
	27.0	C					EOB AT 27FT (IN. WELL INSTALLED. SEE CONSTRUCTION LOG FOR MF-MW101M.	

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:

MW101M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW101D FOR SOIL AND/OR ROCK DESCRIPTIONS.

ACAD NAME:A:\MW101M_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO	BORING NO: MF-MW101S
DATE START: 04/12/1994	DEPTH TO WATER: 6.39	LOGGED BY: DM	GROUND EL.: 8.60
DATE COMPLETED: 04/12/1994	DATE & TIME: 05/16/1994 1505	CHECKED BY:	TOTAL DEPTH: 15.40

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 borehole Readvance w/10 in casing 0-10'	FOR SOIL AND ROCK DESCRIPTIONS SEE BORING LOG FOR MF-MW101D.	
	10.0	B				Telescope 6in casing; Spin & Wash technique.		
	15.0	C					EOB @ 15.4FT. INSTALLED WELL, SEE CONSTRUCTION LOG FOR MF-MW101S.	

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:

MW101S REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW101D FOR SOIL AND/OR ROCK DESCRIPTIONS.

ACAD NAME:A:\MW101S_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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	2 7 12 48 / 6 6 6 6	24	11	Interval=0002 Screen for: Pb, Cu,PCB,Asbestos	S-1(11in) SILTY SAND - silty sand with very angular black chips, gravel piece up to 3/4in, brown.	
	2.0	S-2	16 8 8 8 / 6 6 6 6	24	18	Interval=0204. Screen for: Pb, Cu,PCB,Asbestos	S-2A(0-6in) SILTY SAND - Similar to S-1. S-2B(6-12in) SANDY SILT - sandy silt, brown, with fibers present throughout. S-2C(12in-18in) SILTY SAND - fine sand, silt, dark gray.	
	4.0	S-3	2 3 5 8 / 6 6 6 6	24	24	Interval=0406. Screen for: Pb, Cu,PCB,Asb.,Org	S-3A(0-6in) SANDY SILT, some organics, light brown S-3B(6-12in) SILTY SAND, fine gravel up to 1/2in, light gray. S-3C(12-18in) SANDY SILT - Similar to S-3A. S-3D(18-24in) SILTY SAND, fine sand, silt, sub-rounded gravel up to 1/2in, light gray.	
	6.0	S-4	9 3 4 7 / 6 6 6 6	24	18	Water observed. Screen for: Pb, Cu,PCB,Asbestos	S-4A(0-6in) SANDY SILT interspersed with pink fibrous material. HS reading 3.0ppm. S-4B(6-18in) SILTY SAND with subrounded gravel up to 1 in, light gray. No HS reading.	
	8.0	S-5	2 2 3 6 / 6 6 6 6	24	24	Interval=8-10ft Screen for: Pb, Cu,PCB,Asbestos	S-5(24in) SILT - silt, some sand, 2-inch thick interval of fine sand at 2in-4in, light gray, asbestos fibers, iron and copper staining.	ML
	10.0	S-6	2 2 2 4 / 6 6 6 6	24	14	End HSA drill. Screen for: Pb, Cu,PCB,Asbestos	S-6(14in) SANDY SILT, organics, roots, brown.	OL
	12.0	S-7	1 3 7 9 / 6 6 6 6	24	24	Start D&W drill Screen for: Pb, Cu,PCB,Asbestos	S-7(24in) SANDY SILT with organics, roots, dark brown. Nose of split barrel has approximately 2in of medium sand in it.	OL
	14.0	S-8					NOTE: According to the boring log, there is no sample description for the 14-16ft interval. This interval should have been S-8.	

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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log REineed to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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-8	3 7 2 4 / 6 6 6 6	24	8	Interval=16-18. Screen for: Pb, Cu,PCB,Asbestos	S-8 (8in) SANDY SILT, organics, dark brown.	OL
	18.0	S-9	7 9 1 6 / 6 6 6 6	24	9	Interval=18-20. Screen: Pb,Cu, PCB,Asbestos	S-9 (9in) SILTY SAND, fine to medium grains, some angular gravel, subrounded gravel up to 1/2in, black.	SM
	20.0	S-10	6 7 12 49 / 6 6 6 6	24	10	Interval=20-22. Screen: Pb,Cu, PCB,Asbestos	S-10 (10in) SILTY SAND, fine to medium sand, trace coarse sand, trace gravel.	SM
	22.0	S-11	20 22 36 47 / 6 6 6 6	24	15	Interval=22-24. Screen: Pb,Cu, PCB,Asbestos	S-11 (15in) SAND, medium to coarse sand, rounded gravels from 1/4 to 3in interspersed, well graded, orange.	SW
	24.0	S-12	27 39 47 67 / 6 6 6 6	24	9	Interval=24-26. Screen: Pb,Cu, PCB,Asbestos	S-12 (9in) SANDY GRAVEL, well graded gravel from 1/4 to >3in with medium to coarse sand.	GW
	26.0	S-13	36 47 56 29 / 6 6 6 6	24	10	Interval=26-28 Screen: Pb,Cu, PCB,Asbestos	S-13 (10in) SANDY GRAVEL - Similar to S-12.	GW
	28.0	S-14	33 33 27 36 / 6 6 6 6	24	16	Interval=28-30 Screen: Pb,Cu, PCB,Asbestos	S-14A (0-6in) SANDY GRAVEL, similar to S-13. S-14B (6-16in) SAND, fine to medium, light brown.	
	30.0	S-15	5 6 7 11 / 6 6 6 6	24	24	Interval=30-32 Screen: Pb,Cu, PCB,Asbestos	S-15 (24in) gravelly SAND, fine to medium sand, trace coarse sand, light brown, some rounded gravel up to 1/4in.	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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log RE:need to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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.
	32.0	S-16	57 6 100 4	10	0	NO RECOVERY	S-16 (0in) NO RECOVERY.	
	34.0	S-17	65 6 78 6 87 6 98 6	24	24	Interval=34-36' Screen for: Pb, Cu,PCB,Asbestos	S-17 (24in) SAND, well graded, light brown, some gravel from 1/4in to 1.5in.	
	36.0	S-18	7 6 13 6 14 6 28 6	24	24	Interval=36-38' Screen for: Pb, Cu,PCB,Asbestos	S-18 (24in) SAND, fine grained, poorly graded, light brown.	SP
	38.0	S-19	7 6 9 6 12 6 22 6	24	6	Interval=38-40' Screen for: Pb, Cu,PCB,Asbestos	S-19 (6in) SAND - fine sand, poorly graded, rounded gravel >3in in nose of split-barrel.	SP
	40.0	S-20	16 6 19 6 22 6 27 6	24	24	Interval=40-42' Screen for: Pb, Cu,PCB,Asbestos	S-20 (24in) SILTY SAND - fine sand, some silt, light brown.	SM
	42.0	S-21	14 6 14 6 14 6 28 6	24	18	Interval=42-44' Screen for: Pb, Cu,PCB,Asbestos	S-21 (18in) SILTY SAND - fine sand, some silt, light brown.	SM
	44.0	S-22	5 6 11 6 14 6 17 6	24	15	Interval=44-46' Screen for: Pb, Cu,PCB,Asbestos	S-22 (15in) SILTY SAND - fine sand, silt, light brown.	
	46.0	S-23	11 6 15 6 22 6 24 6	24	24	Interval=46-48' Screen for: Pb, Cu,PCB,Asbestos	S-23 (24in) SANDY SILT - silt, fine sand, light brown.	

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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log RE:need to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_C.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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.
	48.0	S-24	15 6 7 6 9 6 13 6	24	4	Interval=48-50' Screen for: Pb, Cu,PCB,Asbestos	S-24 (4in) SANDY SILT.	
	50.0	S-25	6 6 9 6 16 6 20 6	24	24	Interval=50-52' Screen for: Pb, Cu,PCB,Asbestos	S-25 (24in) SANDY SILT - silt, fine sand, light brown, 1in thick interval of fine sand above thin (2in) clay layer near bottom.	
	52.0	S-26	8 6 9 6 11 6 10 6	24	12	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-26 (12in) SILTY SAND - fine to medium sand, silt light brown.	
	54.0	S-27	15 6 17 6 23 6 28 6	24	24	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-27 (24in) SILTY SAND - Similar to S-27.	
	56.0	S-28	5 6 7 6 11 6 13 6	24	10	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-28 (10in) SAND - fine sand, light brown.	
	58.0	S-29	8 6 7 6 16 6 18 6	24	15	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-29 (15in) SILTY SAND - fine to medium sand, silt light brown.	
	60.0	S-30	4 6 7 6 11 14 14 6	24	16	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-30 (10in) SAND - medium sand with some fines, light brown.	
	62.0	S-31	11 6 12 6 13 6 17 6	24	24	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-31 (24in) SAND - fine to medium sand, light brown.	

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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log RE:need to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_D.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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.
	64.0	S-32	12 6 4 6 10 6 13 6	24	24	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-32 (24in) SAND - mostly fine to medium sand, some coarse sand, light brown.	
	66.0	S-33	9 6 12 6 13 6 17 6	24	24	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-33 (24in) SAND - fine to medium sand, some coarse sand, light brown. No coarse sand in bottom 3'.	
	68.0	S-34	8 6 7 6 8 6 11 6	24	19	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-34 (19in) SAND - fine to medium sand, light brown.	
	70.0	S-35	6 6 7 6 10 6 15 6	24	18	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-35 (18in) SAND - fine to medium sand, some coarse sand, light brown.	
	72.0	S-36	5 6 7 6 10 6 15 6	24	0	NO RECOVERY	S-36 (0in) NO RECOVERY.	
	74.0	S-37	4 6 7 6 10 6 11 6	24	10	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-37 (10in) SAND - fine to medium sand, light brown.	
	76.0	S-38	15 6 10 6 11 6 15 6	24	18	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-38(18in) SAND - fine to coarse sand, well graded, light brown. Thin gray layer approx. 2in from bottom of barrel.	
	78.0	S-39	14 6 17 6 25 6 10 6	24	24	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-39 (24in) gravelly SAND - mostly fine to coarse sand, well graded, some fine gravel, light brown.	

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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log RE:need to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_E.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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.
	80.0	S-40	17 6 16 6 20 6 19 6	24	18	2in barrel used Screen for: Pb, Cu,PCB,Asbestos	S-40 (18in) gravelly SAND - fine to medium sand, trace silt, brown, coarse angular gravel of various color in last 3inches of barrel. Large fragment of white quartz at bottom.	
	82.5	S-41				Confirming if top of bedrock encountered.	S-41 - NOT BEDROCK. Able to drive a 2in barrel through rock layer. Encountered sand beneath the layer of rock.	
	87.0	S-42	37 6 100 5	24	8	Driller reports problem. Casing slips to 87ft.	S-42 (8in) SAND - coarse sand, poorly graded, brown.	
	93.0	S-43	100 5	5	5	Advanced boring 6 ft from prev. interval.	S-43 (5in) SAND - fine to medium sand, poorly graded, trace micaceous silt, 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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log RE:need to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_F.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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.
	98.0	S-44	17 6 48 6 63 6 82 6	24		Advanced boring 5 ft from prev. interval.	S-45 - SAND - fine to medium sand, trace silt, tan to orange in color. Orange colored sand coarser than tan.	
	103.0	S-45	17 6 38 6 38 6 52 6	24	24	Advanced boring 5 ft from prev interval.	S-45A(18in) SAND - medium grained, tan. S-45B(5.5in) SAND - coarser than S-46A. S-46C(0.5in) clayey SAND - medium grained.	
	108.0	S-46	30 6 33 6 32 6 32 6	24	9	Advanced boring 5 ft from prev interval.	S-46 (9in) clayey SAND - fine to medium grained sand, slightly clayey, gray, 3in piece of quartzite in end of barrel.	

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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log RE:need to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_G.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102D
DATE START: 04/04/1994	DEPTH TO WATER: 8.20	LOGGED BY: MS,BW	GROUND EL.: 9.70
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 115.00

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.
	113.0	S-47	23 25 25 34	24	12	Advanced boring 5 ft from prev interval.	S-47 (12in) SAND - medium grained sand, angular pieces of gray to black schist. May be indicative of top of altered bedrock surface.	
	114.0	S-48	100	3	3	Casing grinding @ 114ft bgs. REFUSAL@114.25'	S-48 (3in) SCHIST FRAGMENTS. POTENTIAL BEDROCK SURFACE @ 114.25 FT BGS.	
							End of boring @ 114.25 ft bgs. Monitoring well MF-MW102D installed. See well log. Found break in well after installation. Readvanced original bore-hole; ground-out PVC; install well 2 @ same depth.	

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/8in HSA,10'bgs. Pull augers & readvance w/ casing using spin&wash tech. Perform cont. sampling w/3in (0 -52')& 2in (52-115') split-barrel samplers advanced w/140lb hammer. Sampled in 5-6' increments below 82'. Rock likely @ approx. 114'bgs. Well screen:111.5-101.5'. See boring log RE:need to redrill after well installed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102D_H.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-MW102M
DATE START:	04/28/1994	DEPTH TO WATER:	6.65	LOGGED BY:	BW	GROUND EL.:	9.60
DATE COMPLETED:	04/28/1994	DATE & TIME:	05/16/1994/1510	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					FOR SOIL AND ROCK DESCRIPTIONS SEE BORING LOG FOR MF-MW102D.	
	10.0	B				Telescope 6" Casing; Spin & Wash Technique		

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:

MW102M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW102D FOR SOIL AND/OR ROCK DESCRIPTIONS.

ACAD NAME:A:\MW102M.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102M
DATE START: 04/28/1994	DEPTH TO WATER: 6.65	LOGGED BY: BW	GROUND EL.: 9.60
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994/1510	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	C					EOB @ 32.0 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:

MW102M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW102D FOR SOIL AND/OR ROCK DESCRIPTIONS.

ACAD NAME:A:\MW102M_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW102S
DATE START: 04/28/1994	DEPTH TO WATER: 6.31	LOGGED BY: BW	GROUND EL.: 9.60
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994/1510	CHECKED BY:	TOTAL DEPTH: 15.40

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 borehole Readvance w/10 in casing 0-10'	FOR SOIL AND ROCK DESCRIPTIONS SEE BORING LOG FOR MF-MW101D.	
	10.0	B				Telescope 6in casing; Spin & Wash technique.	EOB @ 15.4FT. INSTALLED WELL, SEE CONSTRUCTION LOG FOR MF-MW101S.	

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:

MW102S REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW102D FOR SOIL AND/OR ROCK DESCRIPTIONS.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW102S.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-MW103D
DATE START:	04/13/1994	DEPTH TO WATER:	12.32	LOGGED BY:	MH,MS,KJ	GROUND EL.:	13.00
DATE COMPLETED:	04/21/1994	DATE & TIME:	05/16/1994/ 1515	CHECKED BY:		TOTAL DEPTH:	108.00

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	11 21 11 11 / 6 6 6 6	24	12	Interval= 0002'	S-1 (12in) SAND, widely graded, some gravel, trace silt, one pocket med sand.	SW
	2.0	S-2	6 7 9 11 / 6 6 6 6	24	18	Interval= 0204'	S-2 (18in) SAND, similar to S-1 except silt pockets.	SW
	4.0	S-3	12 50 / 6 3	9	3	Interval= 4 to 4.75ft. 6in cobble.	S-3 (3in) SILTY SAND, widely graded sand, some fine gravel, some silt.	SW/SM
	6.0	S-4	9 7 8 7 / 6 6 6 6	24	18	Interval= 0608'	S-4 (18in) SILTY SAND, apparent asbestos fibers, some red tile.	SM/SP
	8.0	S-5	2 2 2 5 / 6 6 6 6	24	24	Interval= 0810'	S-5 (24in) SILTY SAND, similar to S-4 with apparent asbestos.	SM/SP
	10.0	S-6	1 1 1 4 / 6 6 6 6	24	16	Interval= 1012'	S-6 (16in) SILTY SAND, similar to S-4 except with silt and fibrous waste (asbestos) and piece of red slag, wet.	SM/SP
	12.0	S-7	1 2 2 1 / 6 6 6 6	24	3	Interval= 1214'	S-7 (3in) SILTY SAND, asbestos fibers.	
	14.0	S-8	1 1 2 4 / 6 6 6 6	24	24	Interval= 1416'	S-8 (24in) PEAT, roots and rootlets, some organic silt, slightly plastic.	Pt/ML

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 6in casing. Spin&Wash to 88ft. Perform continuous sampling in 2ft increments w/3in barrel & 140lb hammer to 60ft. Samping every 5ft approx. from 63-88ft using 3in barrel and 140lb hammer. Top of rock @ 88ft. Cored 20ft. Perform packer test. Backfill to 83ft and set well. Samples screened for Pb,Cu,PCB,Asbestos. NR,NM=not recorded/measured

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW103D_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW103D		
DATE START: 04/13/1994	DEPTH TO WATER: 12.32	LOGGED BY: MH,MS,KJ	GROUND EL.: 13.00		
DATE COMPLETED: 04/21/1994	DATE & TIME: 05/16/1994/ 1515	CHECKED BY:	TOTAL DEPTH: 108.00		

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 2 3 5 / 6 6 6 6	24	12	Interval= 1618'	S-9 (12in) PEAT, similar to S-8, except some fine gravel.	Pt
	18.0	S-10	3 4 4 5 / 6 6 6 6	24	24	Interval= 1820'	S-10 (24in) PEAT, similar to S-8 except fewer roots and rootlets, more silt.	Pt/ML
	20.0	S-11	3 4 4 5 / 6 6 6 6	24	17	Interval= 2022'	S-11 (17in) SILT, fibers, slight layering roots and rootlets.	ML/Pt
	22.0	S-12	3 5 5 8 / 6 6 6 6	24	24	Interval= 2224'	S-12 (24in) SILT, similar to S-11.	ML/Pt
	24.0	S-13	5 17 12 15 / 6 6 6 6	24	18	Interval= 2426'	S-13 (24in) SAND and PEATY SILT, stratified, widely graded sand with trace silt and silt with some peat layers.	SW Pt/ML
	26.0	S-14	19 21 19 22 / 6 6 6 6	24	20	Interval= 2628'	S-14 (20in) SAND, widely graded & stratified, some gravel, 3in peat, fine sand layers to 1in thick.	SW Pt
	28.0	S-15	23 14 23 17 / 6 6 6 6	24	14	Interval= 2830'	S-15 (14in) sandy GRAVEL, trace silt, brown.	GW
	30.0	S-16	43 33 18 22 / 6 6 6 6	24	13	Interval= 3032'	S-16 (13in) sandy GRAVEL, similar to S-16.	GW

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 6in casing. Spin&Wash to 88ft. Perform continuous sampling in 2ft increments w/3in barrel & 140lb hammer to 60ft. Sampling every 5ft approx. from 63-88ft using 3in barrel and 140lb hammer. Top of rock @ 88ft. Cored 20ft. Perform packer test. Backfill to 83ft and set well. Samples screened for Pb,Cu,PCB,Asbestos. NR,NM=not recorded/measured

ACAD NAME:A:\MW103D_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW103D
DATE START: 04/13/1994	DEPTH TO WATER: 12.32	LOGGED BY: MH,MS,KJ	GROUND EL.: 13.00
DATE COMPLETED: 04/21/1994	DATE & TIME: 05/16/1994 1515	CHECKED BY:	TOTAL DEPTH: 108.00

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	23 6 25 6 24 6 20 6	24	16	Interval= 3234'	S-17 (16in) SAND, some fine gravel, trace silt, trace coarse gravel to 1-inch.	SW
	34.0	S-18	12 6 16 6 8 6 11 6	24	18	Interval= 3436'	S-18 (18in) SAND, some gravel to 1in, trace silt, layered.	SP
	36.0	S-19	10 6 7 6 5 6 13 6	24	0	Interval= 3638'	S-19 (0in) NO RECOVERY.	
	38.0	S-20	26 6 30 6 35 6 42 6	24	1	Interval= 3840'	S-20 (1in) SAND, trace silt.	SW
	40.0	S-21	30 6 15 6 26 6 35 6	24	9	Interval= 4042'	S-21 (9in) SAND, well graded sand, some subrounded gravel to 2-inch, trace silt.	
	42.0	S-22	33 6 26 6 20 6 30 6	24	15	Interval= 4244'	S-22 (15in) well graded sand, trace silt, gravel rounded to angular up to 2-inches.	
	44.0	S-23	33 6 35 6 26 6 36 6	24	10	Interval= 4446'	S-23 (10in) gravelly SAND, similar to S-27, 4in long rock.	
	46.0	S-24	24 6 20 6 20 6 18 6	24	18	Interval= 4648'	S-24 (18in) SAND, medium-coarse sand, some fines, some well roundd gravel to 1.5-inches.	

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 6in casing. Spin&Wash to 88ft. Perform continuous sampling in 2ft increments w/3in barrel & 140lb hammer to 60ft. Samping every 5ft approx. from 63-88ft using 3in barrel and 140lb hammer. Top of rock @ 88ft. Cored 20ft. Perform packer test. Backfill to 83ft and set well. Samples screened for Pb,Cu,PCB,Asbestos. NR,NM=not recorded/measured

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW103D_C.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-MW103D
DATE START:	04/13/1994	DEPTH TO WATER:	12.32	LOGGED BY:	MH,MS,KJ	GROUND EL.:	13.00
DATE COMPLETED:	04/21/1994	DATE & TIME:	05/16/1994/ 1515	CHECKED BY:		TOTAL DEPTH:	108.00

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.
	48.0	S-25	24 6 18 6 19 6 20 6	24	5	Interval= 4850'	S-25 (5in) SAND, well graded.	
	50.0	S-26	14 6 16 6 17 6 20 6	24	9	Interval= 5052'	S-26A (0-4in) SAND, similar to S-25. S-26B (4-9in) SAND, coarse, and fine GRAVEL, trace fine sand.	
	52.0	S-27	25 6 27 6 20 6 18 6	24	12	Interval= 5254'	S-27 (12in) GRAVELLY SAND, widely graded to 2in.	
	54.0	S-28	16 6 17 6 17 6 21 6	24	12	Interval= 5456'	S-28 (12in) GRAVELLY SAND, trace silt, widely graded, gravels to 2in.	
	56.0	S-29	17 6 12 6 17 6 14 6	24	15	Interval= 5658'	S-29 (15in) GRAVELLY SAND, widely graded, cobbles to 2in.	
	58.0	S-30	20 6 24 6 28 6 25 6	24	0	Interval= 5860' Hard advance. GRAVELS.	S-30 (0in) NO RECOVERY, pushed a rock.	
	63.0	S-31	74 6 86 6 25 6 32 6	24	0	Hard advance. Cobbles. Lost 500gals.	S-31 (0in) NO RECOVERY. Possibly a cobble or large gravel zone.	

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 6in casing. Spin&Wash to 88ft. Perform continuous sampling in 2ft increments w/3in barrel & 140lb hammer to 60ft. Sampling every 5ft approx. from 63-88ft using 3in barrel and 140lb hammer. Top of rock @ 88ft. Cored 20ft. Perform packer test. Backfill to 83ft and set well. Samples screened for Pb,Cu,PCB,Asbestos. NR,NM=not recorded/measured

ACAD NAME:A:\MW103D_D.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-MW103D
DATE START:	04/13/1994	DEPTH TO WATER:	12.32	LOGGED BY:	MH,MS,KJ	GROUND EL.:	13.00
DATE COMPLETED:	04/21/1994	DATE & TIME:	05/16/1994/ 1515	CHECKED BY:		TOTAL DEPTH:	108.00

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.
	63.0	S-31	74 86 25 32 / 6 6 6 6	24	0	Hard advance. Cobbles. Lost 500gals.	S-31 (0in) NO RECOVERY. Possibly a cobble or large gravel zone.	
	68.0	S-32	33 25 27 30 / 6 6 6 6	24	10	Hard advance. Lost another 500 gals.	s-32 (10in) sandy GRAVEL, trace silt, fine-coarse sand, well graded, coarse gravel up to 1.5' in length, 2 cobble size 3' gravels, cobbles brown.	GW
	73.0	S-33	20 9 8 13 / 6 6 6 6	24	7	Hard advance. Cobble/gravel zone	S-33 (7in) sandy GRAVEL, trace silt, similar to S-32.	GW
	78.0	S-34	10 11 19 16 / 6 6 6 6	24	8	Interval= 7880'	S-34 (8in) sandy GRAVEL, trace silt, similar to S-33.	GW

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 6in casing. Spin&Wash to 88ft. Perform continuous sampling in 2ft increments w/3in barrel & 140lb hammer to 60ft. Samping every 5ft approx. from 63-88ft using 3in barrel and 140lb hammer. Top of rock @ 88ft. Cored 20ft. Perform packer test. Backfill to 83ft and set well. Samples screened for Pb,Cu,PCB,Asbestos. NR,NM=not recorded/measured

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW103D_E.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW103D
DATE START: 04/13/1994	DEPTH TO WATER: 12.32	LOGGED BY: MH,MS,KJ	GROUND EL.: 13.00
DATE COMPLETED: 04/21/1994	DATE & TIME: 05/16/1994/ 1515	CHECKED BY:	TOTAL DEPTH: 108.00

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.
	83.0	S-35	200 1	1	0	Casing grinding 6in cobble.	S-35 (0in) NO RECOVERY. Broken rock at end of split-barrel. Rollerbit broke through cobble.	
	83.5	S-36	1 18 12 6	24	0	Broke boulder. 2in barrel used No basket in SB	S-36 (0in) NO RECOVERY. Advance to 88ft. Grinding terribly. No water return.	
	88.0	S-37	200 15	1	0	2in barrel. Boring flushed. Top of bedrock	S-37 (0in) NO RECOVERY. Metamorphic rock chips in sampler. Refusal @ 88ft. Bedrock.	
	90.5	C-39		84	84	Run 2:90.5-97.5 Run time: 14min No jams.	C-39 Chlorite mica schist. Foliated, med. grained dk green coloration, 45 degree angle schistosity in middle of run, garnets (?), RQD= 50%	

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 6in casing. Spin&Wash to 88ft. Perform continuous sampling in 2ft increments w/3in barrel & 140lb hammer to 60ft. Sampling every 5ft approx. from 63-88ft using 3in barrel and 140lb hammer. Top of rock @ 88ft. Cored 20ft. Perform packer test. Backfill to 83ft and set well. Samples screened for Pb,Cu,PCB,Asbestos. NR,NM=not recorded/measured

ACAD NAME:A:\MW103D_F.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890 LOCATION: STRATFORD, CT DRILLED BY: PENN DRILLING CO. BORING NO: MF-MW103M

DATE START: 04/27/1994 DEPTH TO WATER: 11.88 LOGGED BY: JM GROUND EL.: 12.60

DATE COMPLETED: 04/28/1994 DATE & TIME: 05/16/1994 1515 CHECKED BY: TOTAL DEPTH: 40.00

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				4.25in ID auger Smooth advance Grass/gravel	SAND, poorly graded, little gravel, organic matter branch debris, dry, dk brown to light brown.	SP
	12.0	B				Possible H2O table. Wet soil off HSA flights	silty SAND, poorly graded, mod plasticity, some silt, little subrounded gravel, tree branch stuck in the bit.	
	14.5	C				Pull augers. Adv.w/10in cas. Telesc. 6in cas	Spin & Wash 6in casing below 14.5ft. PEAT & SILT, organic debris. Water is dk brown w/ floating organic debris.	

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:

MW103M REPRESENTS ONE OF TWO WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW103D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS. OBSERVATIONS ON THIS LOG WERE REPORTED FROM THE ADVANCE OF THE AUGERS OR FROM SOIL CUTTINGS AS CASING WAS ADVANCED.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW103M_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW103M
DATE START: 04/27/1994	DEPTH TO WATER: 11.88	LOGGED BY: JM	GROUND EL.: 12.60
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994 1515	CHECKED BY:	TOTAL DEPTH: 40.00

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.
	20.0	D					PEAT AND SILT	
	27.0	E					SAND, poorly graded, fine to medium sand.	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:

MW103M REPRESENTS ONE OF TWO WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW103D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS. OBSERVATIONS ON THIS LOG WERE REPORTED FROM THE ADVANCE OF THE AUGERS OR FROM SOIL CUTTINGS AS CASING WAS ADVANCED.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW103M_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW103M
DATE START: 04/27/1994	DEPTH TO WATER: 11.88	LOGGED BY: JM	GROUND EL.: 12.60
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994 1515	CHECKED BY:	TOTAL DEPTH: 40.00

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.
	40.0	F					EOB @ 40 ft. Set well.	

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:

MW103M REPRESENTS ONE OF TWO WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW103D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS. OBSERVATIONS ON THIS LOG WERE REPORTED FROM THE ADVANCE OF THE AUGERS OR FROM SOIL CUTTINGS AS CASING WAS ADVANCED.

ACAD NAME:A:\MW103M_D.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104D		
DATE START: 04/07/1994	DEPTH TO WATER: 8.46	LOGGED BY: JM	GROUND EL.: 8.80		
DATE COMPLETED: 04/14/1994	DATE & TIME: 05/16/1994/1525	CHECKED BY:	TOTAL DEPTH: 80.90		

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	2 3 6 11 / 6 6 6 6	24	17	Interval= 0002. Fill material. 10.25in HSA	S-1 (0-17in) silty SAND, little gravel, poorly graded, asphalt, grass roots, red-brown.	
	2.0	S-2	3 10 25 27 / 6 6 6 6	24	21	Interval= 0204' Fill material. HSA drill tech.	S-2A (0-9in) silty SAND, poorly graded sand, little gravel, grass roots, damp, lt brown. S-2B (9-21in) silty SAND, little gravel, little asphalt, trace brick.	
	4.0	S-3	16 13 9 9 / 6 6 6 6	24	18	Interval= 0406' Fill material. HSA drill tech.	S-3A (0-6in) silty SAND, some silt, little gravel, grass roots, damp, lt brown. S-3B (6-18in) silty SAND, little gravel, asphalt, organic fibrous material, brick, wood chips, damp, black.	
	6.0	S-4	9 15 15 37 / 6 6 6 6	24	15	Interval= 0608' Fill material. HSA. Rig Noisy.	S-4A (0-5in) silty SAND, grass roots (may have fallen into hole), lt brown. S-4B (5-15in) silty SAND, well graded, some gravel trace asphalt, concrete, wood pieces, wet. Note:At 7ft, a rubber shoe sole came off auger flt	
	8.0	S-5	4 4 7 9 / 6 6 6 6	24	6	Interval= 0810' Top natural. 8in casing @9ft	S-5A (0-2in) silty SAND, grass roots, lt brown. S-5B (2-6in) silty SAND, well graded, trace gravel trace clay, wet, dk gray. Note: Measured water table @ 8.5ft bgs.	
	10.0	S-6	15 6 6 7 / 6 6 6 6	24	13	Interval= 1012' Natural.	S-6A (0-5in) SAND and SILT, fine-coarse sand, little gravel, trace, clay, well graded, wet. S-6B (5-8in) silty SAND, poorly graded, little gravel, trace roots, damp, lt brown. S-6C (8-13in) Peat, little gravel, little silt, little fine sand.	SM
	12.0	S-7	2 3 3 2 / 6 6 6 6	24	20	Interval= 1214' Natural.	S-7 (0-20in) Peat, trace gravel, white roots, organic debris, dry, dk brown.	
	14.0	S-8	5 2 2 3 / 6 6 6 6	24	4	Interval= 1416' Natural.	S-8 (0-4in) Silt, med plasticity, some peat, damp, black.	

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 10.25in ID HSA,0-9ft; 8in casing to 29ft; telescoped 6in casing and advanced from 29ft to EOB Performed continuous sampling w/2in & 3in OD split-barrel samplers to top of rock at approx. 81ft. Possible natural material @ 8-10ft interval. Possible top of water @ 8.5ft. Screen samples. Well screen @ 79-69ft. NM/NR=Not meas./rec.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW104D_A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104D		
DATE START: 04/07/1994	DEPTH TO WATER: 8.46	LOGGED BY: JM	GROUND EL.: 8.80		
DATE COMPLETED: 04/14/1994	DATE & TIME: 05/16/1994/1525	CHECKED BY:	TOTAL DEPTH: 80.90		

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	3 6 2 6 2 6 2 6	24	22	Interval= 1618' Natural.	S-9 (0-22in) Similar to above w/ fine fibrous material in soil that may or may not be organic.	OL
	18.0	S-10	2 6 3 6 3 6 3 6	24	24	Interval= 1820' Natural.	S-10 (0-24in) Peat, fibrous root and stems, damp, brown.	Pt
	20.0	S-11	4 6 4 6 4 6 4 6	24	24	Interval= 2022' Natural.	S-11 (0-24in) Similar to above, trace wood chips, damp. (Note: Water Table measured at 8.5' bgs)	Pt
	22.0	S-12	2 6 3 6 5 6 11 6	24	17	Interval= 2224' Natural. PID hit (A)=220	S-12A (0-9in) Similar to above, little fine sand. S-12B (9-17in) SAND, poorly graded, trace gravel, trace silt, trace organic debris, damp, dk brown gray.	
	24.0	S-13	8 6 10 6 10 6 13 6	24	14	Interval= 2426' Natural.	S-13A (0-7in) SAND, fine w/little med to coarse, sand, bedded 2in layers, little peat, little fine gravel, damp, gray.	
	26.0	S-14	4 6 5 6 7 6 11 6	24	15	Interval= 2628' Natural.	S-14 (0-15in) silty fine SAND, poorly graded, trace gravel, trace clay, 1/2in to 1/8in thick bedding throughout sample.	
	28.0	S-15	26 6 22 6 20 6 20 6	24	15	Interval= 2830' Telescope 6in. casing @ 29ft.	S-15 (0-15in) SAND and gravel, well graded, fine-course sand, subangular-subrounded gravel, wet, red-brown.	GP
	30.0	S-16	20 6 27 6 19 6 22 6	24	11	Interval= 3032' Natural mat.	S-16 (0-11in) SAND and Gravel, poorly graded, little fines, trace fibrous organic matter, wet, dk gray.	GP

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 10.25in ID HSA,0-9ft; 8in casing to 29ft; telescoped 6in casing and advanced from 29ft to EOB Performed continuous sampling w/2in & 3in OD split-barrel samplers to top of rock at approx. 81ft. Possible natural material @ 8-10ft interval. Possible top of water @ 8.5ft. Screen samples. Well screen @ 79-69ft. NM/NR=Not meas./rec.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW104D_B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104D		
DATE START: 04/07/1994	DEPTH TO WATER: 8.46	LOGGED BY: JM	GROUND EL.: 8.80		
DATE COMPLETED: 04/14/1994	DATE & TIME: 05/16/1994/1525	CHECKED BY:	TOTAL DEPTH: 80.90		

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	38 6 30 6 38 6 31 6	24	13	Interval= 3234' Natural mat.	S-17 (0-13in) SAND and Gravel, trace silt, apparent bedding, moist, dk gray to red-brown.	GP
	34.0	S-18	32 6 26 6 28 6 20 6	24	6	Interval= 3436' Natural mat.	S-18A (0-4in) GRAVEL, subrounded-subangular, poorly sorted, trace coarse sand. S-18B (4-6in) Silt and Gravel, trace sand, dk gray	GP GM
	36.0	S-19	5 6 10 6 19 6 22 6	24	11	Interval= 3638' Used 2in barrel	S-19A (0-5in) Silt, some gravel, little sand, fine to coarse, gray. S-19B (5-11in) Sand, well graded, some gravel, trace silt, red-brown.	ML SW
	38.0	S-20	24 6 19 6 23 6 9 6	24	7	Interval= 3840' Natural mat.	S-20 (0-7in) Sand and gravel, well graded, trace fines, lt brown.	SW/GW
	40.0	S-21	40 6 21 6 20 6 23 6	24	12	Interval= 4042' Natural mat.	S-21A (0-3in) Gravel, one piece. S-21B (3-12in) SAND, poorly graded, trace gravel, light brown.	SP
	42.0	S-22	40 6 48 6 28 6 17 6	24	7	Interval= 4244' Natural mat.	S-22A (0-6in) SAND, similar to S-21A&B. S-22B (6-7in) SAND, and fine gravel, similar to S-22A.	SP SP
	44.0	S-23	13 6 11 6 13 6 10 6	24	8	Interval= 4446' Natural mat.	S-23A (0-2in) Gravel, poorly graded. S-23B (2-8in) SAND, well graded, trace gravel, lt brown.	GP SW
	46.0	S-24	6 6 36 6 44 6 24 6	24	8	Interval= 4648'	S-24A (0-6.5in) Silt, mod to high plasticity, little sand, dk gray. S-24B (6.5-8.5in) SAND, poorly graded, trace silt, lt brown.	MH 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 10.25in ID HSA,0-9ft; 8in casing to 29ft; telescoped 6in casing and advanced from 29ft to EOB Performed continuous sampling w/2in & 3in OD split-barrel samplers to top of rock at approx. 81ft. Possible natural material @ 8-10ft interval. Possible top of water @ 8.5ft. Screen samples. Well screen @ 79-69ft. NM/NR=Not meas./rec.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW104D_C.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104D
DATE START: 04/07/1994	DEPTH TO WATER: 8.46	LOGGED BY: JM	GROUND EL.: 8.80
DATE COMPLETED: 04/14/1994	DATE & TIME: 05/16/1994/1525	CHECKED BY:	TOTAL DEPTH: 80.90

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.
	48.0	S-25	22 6 42 6 23 6 20 6	24	0	NO RECOVERY	S-25 (0in) NO RECOVERY.	
	50.0	S-26	38 6 27 6 26 6 16 6	24	10	Interval= 5052'	S-26A (0-3in) SAND, and Gravel, well graded. S-26B (3-7in) Gravel, trace silt, lt brown.	GW/SW GW
	52.0	S-27	42 6 52 6 53 6 47 6	24	13	Interval= 5254'	S-27A (0-2in) Gravel, one 2in piece. S-27B (2-13in) SAND and Gravel, well graded, trace silt, red color patches.	 SW
	54.0	S-28	25 6 67 6 44 6 35 6	24	15	Interval= 5456'	S-28A (0-5.5in) Gravel, poorly graded, little silt S-28B (5.5-15in) SAND and Gravel, well graded, trace silt.	GP SW
	56.0	S-29	40 6 57 6 32 6 26 6	24	13	Interval= 5658'	S-29 (0-13in) SAND and Gravel, well graded, trace silt.	GW
	58.0	S-30	50 6 40 6 47 6 28 6	24	11	Interval= 5860'	S-30 (0-11in) SAND and Gravel, well graded, 1/2in layer of highly plastic silt below sand.	SW/GW
	60.0	S-31	60 6 70 6 50 6 39 6	24	13	Interval= 6062'	S-31 (0-13in) SAND and Gravel, well graded, trace silt.	SW
	62.0	S-32	30 6 40 6 50 6 50 6	24	12	Interval= 6264'	S-32 (0-12in) SAND and Gravel, similar to S-31 w/ more gravel.	GW

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 10.25in ID HSA,0-9ft; 8in casing to 29ft; telescoped 6in casing and advanced from 29ft to EOB Performed continuous sampling w/2in & 3in OD split-barrel samplers to top of rock at approx. 81ft. Possible natural material @ 8-10ft interval. Possible top of water @ 8.5ft. Screen samples. Well screen @ 79-69ft. NM/NR=Not meas./rec.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW104D_D.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-MW104D
DATE START:	04/07/1994	DEPTH TO WATER:	8.46	LOGGED BY:	JM	GROUND EL.:	8.80
DATE COMPLETED:	04/14/1994	DATE & TIME:	05/16/1994/1525	CHECKED BY:		TOTAL DEPTH:	80.90

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.
	64.0	S-33	30 50 55 35 / 6 6 6 6	24	13	Interval= 6466'	S-33 (0-13in) SAND and Gravel, similar to S-32.	GW
	66.0	S-34	10 12 25 35 / 6 6 6 6	24	12	Interval= 6668' 2in barrel used	S-34 (0-12in) SAND and GRAVEL, well graded, little silt.	SW
	68.0	S-35	15 20 25 35 / 6 6 6 6	24	10	Interval= 6870' 2in barrel used	S-35 (0-10in) SAND and GRAVEL, similar to S-34.	SW
	70.0	S-36	35 90 60 55 / 6 6 6 6	24	11	Interval= 7072' 3in barrel used	S-36 (0-11in) GRAVEL, well graded, some sand, some silt (2in thick layer, mod. plastic), mottled color.	GW
	72.0	S-37	40 50 40 42 / 6 6 6 6	24	11	Interval= 7274' Water not flowing into fm.	S-37 (0-11in) SAND and GRAVEL, well graded, little silt, mottled. Note: Water not escaping from the bottom of the casing, non-permeable geology.	SW/GW
	74.0	S-38	30 25 30 25 / 6 6 6 6	24	8	Interval= 7476' Water is not escaping casing	S-38 (0-8.5in) SAND and GRAVEL, similar to S-37.	SW/GW
	76.0	S-39	12 35 55 89 / 6 6 6 6	24	10	Interval= 7678' Water escaping. Rock in spoon.	S-39 (0-10.5in) SAND and GRAVEL, similar to S-38. Note: Water is not flowing out of the 6in casing into the formation at the noted depth.	SW/GW
	78.0	S-40	23 49 55 63 / 6 6 6 6	24	5	Interval= 7880' Rig chattering 2in barrel.	S-40 (0-5in) SAND and Gravel, well graded gravel, poorly graded sand, some silt, gray.	GW

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 10.25in ID HSA,0-9ft; 8in casing to 29ft; telescoped 6in casing and advanced from 29ft to EOB Performed continuous sampling w/2in & 3in OD split-barrel samplers to top of rock at approx. 81ft. Possible natural material @ 8-10ft interval. Possible top of water @ 8.5ft. Screen samples. Well screen @ 79-69ft. NM/NR=Not meas./rec.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW104D_E.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104D
DATE START: 04/07/1994	DEPTH TO WATER: 8.46	LOGGED BY: JM	GROUND EL.: 8.80
DATE COMPLETED: 04/14/1994	DATE & TIME: 05/16/1994/1525	CHECKED BY:	TOTAL DEPTH: 80.90

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.
	80.0	S-41	65 100 6 5	11	6	Inter.=80-80.9'	S-41 (0-6in) SAND and Gravel, well graded gravel, little silt, trace flaky gravel w/metallic luster.	SW/GW
	80.5	S-42	100 5	5	3	Rig chatter. Top of rock.	S-42 (3in) BEDROCK, broken up schistose bedrock.	
							EOB @ 80ft 11in. 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: caring time per foot of rock
PEN – Penetration length of sampler
REC – Length of sample recovered
▽ – Natural groundwater table

NOTES:

Advanced soil boring with 10.25in ID HSA,0-9ft; 8in casing to 29ft; telescoped 6in casing and advanced from 29ft to EOB Performed continuous sampling w/2in & 3in OD split-barrel samplers to top of rock at approx. 81ft. Possible natural material @ 8-10ft interval. Possible top of water @ 8.5ft. Screen samples. Well screen @ 79-69ft. NM/NR=Not meas./rec.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW104D_F.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	MF-MW104M
DATE START:	04/19/1994	DEPTH TO WATER:	8.70	LOGGED BY:	JM	GROUND EL.:	9.40
DATE COMPLETED:	04/19/1994	DATE & TIME:	05/16/1994/1525	CHECKED BY:		TOTAL DEPTH:	29.00

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				8.25in ID auger Fill material.	Grass, tan silt, some sand.	
	2.0	B				Material from auger flights	Silt, sand, gravel, trace concrete evident to 7ft.	
	4.0	C				Rig chatter to 7ft.		
	7.0	D				Auger flights empty. Chatter mechanical.		
	9.0	E				Pull augers.Re-advan. 8in cas. Telsc. 6in& adv	Wash water is dk gray to black.	
	15.0	F				Pass. artesian conditions. Tub gains H20.		

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:

MW104M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW104D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS. OBSERVATIONS ON THIS LOG WERE REPORTED FROM THE ADVANCE OF THE AUGERS OR FROM SOIL CUTTINGS AS CASING WAS ADVANCED.

ACAD NAME:A:\MW104M_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104M
DATE START: 04/19/1994	DEPTH TO WATER: 8.70	LOGGED BY: JM	GROUND EL.: 9.40
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1525	CHECKED BY:	TOTAL DEPTH: 29.00

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.
	15.0	F				Poss. artesian conditions. Tub gains H20.		
	19.5	G					Wash water dk brown, milky brown.	
	23.5	H				Slt screech frm rig. Rig chattr periodic.	Formation seems to be taking water (slightly).	
	29.0	I					EOB @ 29ft. Set well.	

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:

MW104M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW104D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS. OBSERVATIONS ON THIS LOG WERE REPORTED FROM THE ADVANCE OF THE AUGERS OR FROM SOIL CUTTINGS AS CASING WAS ADVANCED.

ACAD NAME:A:\MW104M_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104M
DATE START: 04/19/1994	DEPTH TO WATER: 8.70	LOGGED BY: JM	GROUND EL.: 9.40
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1525	CHECKED BY:	TOTAL DEPTH: 29.00

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.

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:

MW104M REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW104D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS. OBSERVATIONS ON THIS LOG WERE REPORTED FROM THE ADVANCE OF THE AUGERS OR FROM SOIL CUTTINGS AS CASING WAS ADVANCED.

ACAD NAME:A:\MW104M_C.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-MW104S
DATE START: 04/20/1994	DEPTH TO WATER: 6.67	LOGGED BY: JM	GROUND EL.: 8.70
DATE COMPLETED: 04/20/1994	DATE & TIME: 05/16/1994 1525	CHECKED BY:	TOTAL DEPTH: 11.00

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					8.25inID augers Fill matreial.	Grassy rubble.	
		A						
	1.0					Fill material.	Dk brown sand and gravel cuttings, trace brick,	
		B						
	2.0					Rig chatter.	trace metal rods (alloy, 3mm thick in diameter).	
		C						
	3.0	D				Rig chatter and screeching. Wet soil.		
	3.5	E						
	4.5					Pull augers.Re-advance w/6in casing. Spn/Wsh	Washwater is milky gray.	
		F						
	6.5					Rig screeching.	Wash water is dk brown w/ plant debris (floating).	
		G						
	8.5						White speckles floating in washwater.	
		I						
	11.0						EOB @ 11ft. Set well.	
		K						

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:

MW104S REPRESENTS ONE OF THREE WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG MF-MW104D FOR COMPLETE SOIL AND ROCK DESCRIPTIONS. OBSERVATIONS ON THIS LOG WERE REPORTED FROM THE ADVANCE OF THE AUGERS OR FROM SOIL CUTTINGS AS CASING WAS ADVANCED.

ACAD NAME:A:\MW104S.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB1
DATE START: 03/30/1994	DEPTH TO WATER: --	LOGGED BY: DM,MS,JM	GROUND EL.: 9.60
DATE COMPLETED: 03/30/1994	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	2 1 3 7 / 6 6 6 6	24	12	MF-SO-SB1-0002 Screen for:Pb, Cu,PCB,Asbestos	S-1A(0-2in) Humus - Organic, leaves, sticks, black S-1B(2-12in) Silty Sand - Fine to medium sand, some organic material, rounded pebbles up to 1.5in diameter, light brown to olive drab.	SP
	2.0	S-2	16 23 17 11 / 6 6 6 6	24	13	MF-SO-SB1-0204 Screen for: Pb, Cu,PCB,Asbestos	S-2A (0-6in) Silty Sand - Fine to medium sand, poorly sorted, 1/8 to 1/4in diameter rock chips, brick fragments, light brown. S-2B (6-13in) Sandy silt - alot of rock fragments, 1/8 to 1/4in cinders(?), light gray. Possibly fill due to the cinder fragments.	SM SM
	4.0	S-3	37 24 7 3 / 6 6 6 6	24	3	MF-SO-SB1-0406 Used 3in barrel Not screened	S-3 (0in) No recovery. A 3-in cobble blocked end of sample barrel.	
	6.0	S-4	5 5 4 4 / 6 6 6 6	24	24	MF-SO-SB1-0608 3in barrel. Pb, Cu,PCB,Asbestos	S-4A(0-14in) Sandy silt, some organic material, 1in rock fragments, dark grey. S-4B(14-24in) Silty Sand, rock fragments to 2in.	
	8.0	S-5	5 7 6 6 / 6 6 6 6	24	24	MF-SO-SB1-0810 3in barrel. Pb, Cu,PCB,Asbestos	S-5A(0-16in) Silty Sand, rock fragments up to 2in dark gray. S-5B(16-24in) Sand, fine to medium grained, dark gray.	
	10.0	S-6	7 4 4 4 / 6 6 6 6	24	11	MF-SO-SB1-1012 3in barrel. Pb, Cu,PCB,Asbestos	S-6 (0-11in) Silty Sand - Fine to medium sand, angular rock fragments up to 3/4in diameter, dark gray.	SM
	12.0	S-7	5 2 2 4 / 6 6 6 6	24	20	MF-SO-SB1-1214 3in barrel. Pb, Cu,PCB,Asbestos	S-7A(0-12in) Silty Sand - fine to medium sand, some silt, trace gravel, dark gray, wet. PID deflection on sample = 0ppm. S-7B(12-20in) Peat, plant debris up to 70 percent. PID deflection up to 25 ppm on sample.	SM Pt
	14.0	S-8	4 3 3 2 / 6 6 6 6	24	24	MF-SO-SB1-1416 3in barrel. Pb, Cu,PCB,Asbestos	S-8A(0-8in) Peat, brown. S-8B(8-16in) Sand, fine to medium. S-8C(16-24in) Peat, brown.	Pt SP 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 soil boring with 6.25in ID HSA. Advanced 2in and 3in split-barrel samplers with a 140lb hammer. Performed continuous soil sampling in 2-foot increments.

ACAD NAME:A:\MF-SB1_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: MF-SB1		
DATE START: 03/30/1994	DEPTH TO WATER: --	LOGGED BY: DM,MS,JM	GROUND EL.: 9.60		
DATE COMPLETED: 03/30/1994	DATE & TIME: --/--/19-/ --	CHECKED BY:	TOTAL DEPTH: 18.00		

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.
	16.0	S-9	4 4 3 4 / 6 6 6 6	24	22	MF-SD-SB1-1618 3in barrel. Pb, Cu,PCB,Asbestos	S-9(0-22in) Peat - approximately 70 percent plant debris, damp, brown. PID deflection on sample up to 25ppm. End of Boring @ 18ft bgs. No well installed. Borehole collapsed as augers were removed. Void space from 0 to 4 Ft bgs filled with cement.	Pt
	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 6.25in ID HSA. Advanced 2in and 3in split-barrel samplers with a 140lb hammer. Performed continuous soil sampling in 2-foot increments.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MF-SB1_B.DWG (8/25/99)

Boring Logs
from 3/30/94 to 4/11/94
(pages 54-106)
are available
in a separate file (size: 4 MB).

Click here to view.

Boring Logs
from 4/11/94 to 7/23/97
(pages 107-165)
are available
in a separate file (size: 4 MB).

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Appendices B & C
(pages 166-182)
are available
in a separate file (size: 1 MB).

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