APPENDIX A

BORING LOGS AND WELL CONSTRUCTION LOGS

BORING LOGS

TtNUS Borings

100-series
MF-MW101D
MF-MW101M
MF-MW101S
MF-MW102D
MF-MW102M
MF-MW102S
MF-MW103D
MF-MW103M
SB-104B
MF-MW104D
MF-MW104M
MF-MW104S
SP-MW110D
SP-MW110M
SP-MW110S
SP-MW111D
SP-MW111M
SP-MW111S
SB-111SG
SP-MW112B
SP-MW112D
SP-MW112M
SP-MW113B
SP-MW113M
MW-120S

(soil borings)
MF-SB1
MF-SB2
MF-SB3
MF-SB4
MF-SB5
MF-SB6
MF-SB7
MF-SB8
SP-SB1
SP-SB2
SP-SB3
SP-SB4
SP-SB5
SP-SB6
SP-SB7
SP-SB8
SP-SB9

200-series
SB-201B
201D
202D
SB-202S
SB-202SG
203D
SB-203S
SB-203SG
204D
205D
206D
SB-206M
SB-206MR
SB-206SR
SB-207B
207D
SB-207DR
SB-207DR Replacement
SB-207M
SB-207MR
SB-207SR
SB-208B
SB-208D
SB-209
SB-210(OLD)
MW-210B
MW-210D (NEW)
SB-211
MW-211D,M
SB-212
MW-212M,D
SB-213
SB-213DB
SB-213SG
SB-214
SB-214B
SB-214
SB-214SG
SB-215
SB-215DB
SB-215SG
SB-216B
SB-216DB
SB-217
SB-217S
SB-217SG

300-series
SB-301B
SB-301D
SB-301S
MW-302B
SB-302D
SB-302S
SB-302SG
SB-303B
MW-304B
SB-304D
SB-304S
SB-305B
SB-305S
SB-305BR
SB-305D
SB-305DR
SB-305SR
SB-306B
SB-306DB
SB-307B
SB-307DB
SB-308B
SB-308DB
SB-309B
SB-309D
SB-309D 1st Attempt
SB-309S
SB-310
SB-310D
SB-310S
SB-311B
SB-311D
SB-311S
SB-312B
MW-312D
SB-312S
SB-313B
SB-313D
SB-313S

400-series
SB-401B
SB-401S
SB-402B
SB-402S

400-series (cont.)
(soil borings)
SB-421
SB-422
SB-423
SB-424
SB-425
SB-426
SB-427
SB-428
SB-429
SB-430

500-series
SB-501B
SB-501D
SB-501S
SB-502B
SB-502D
SB-502S
SB-503B
SB-503D
SB-503M
SB-503S
SB-504B
SB-504D
SB-504S
SB-505B
SB-505D
SB-505M
SB-505S
SB-506B
SB-506B Replacement
SB-506D
SB-506M
SB-506S
SB-507B
SB-507D
SB-507S
SB-507SG
SB-508B
SB-508D
SB-508S
SB-508SG
SB-509M
SB-510M
SB-511M

BORING LOGS

TtNUS Borings (cont.)

500-series (cont.)
SB-512M
SB-513S
SB-513SG
SB-514B
SB-514D
SB-514S
SB-514SG
SB-515S
SB-515SG
SB-516M
SB-517S
SB-517SG
SB-518S
SB-518SG
SB-519S
SB-519SG
SB-520S
SB-520SG
SB-521S
SB-522S
SB-523S
SB-523SGD
SB-523SGM
SB-523SGS
SB-524B
SB-525S
SB-525SG
SB-526S
SB-526SGD
SB-526SGM
SB-526SGS
SB-527S
SB-527SG
SB-528S
SB-528SG
SB-529S
SB-529SG
SB-530S
SB-531S
SB-532S
SB-533B
SB-533D
SB-533S
SB-534S
SB-534SG
SB-535S
SB-535SG

500-series (cont.)
SB-536S
SB-536SG

Aquifer Test Well
SB-TW01

Ferry Creek Borings
A1-SB01
A1-SB02
A1-SB03
A1-SB04
A1-SB05
A1-SB06
A1-SB07
A1-SB09
A1-SB10
A1-SB11
A1-SD01
A1-SD02
A1-SD03
A1-SD05
A1-SD06
A2-SB01
A2-SB02
A2-SB03
A2-SB04
A2-SB04A
A3-SB01
A3-SB02
A3-SB03
A3-SD01
A3-SD02
A3-SD03
A3-SD04
A3-SD05
A3-SD06
A3-SD07
A3-SD08
A3-SD09
A3-SD10
A3-SD11
B2-SB01
B2-SB02
B2-SB03
B2-SB04
B2-SB05
B2-SB06
B2-SB07

Ferry Creek Borings (cont.)
B2-SB08
B2-SB09
B2-SD01
B2-SD02
B2-SD04
B2-SD04D
B2-SD05
B2-SD06
B2-SD07
B2-SD08
B2-SD09
B2-SD10
D-SB01
D-SB02
D-SB03
D-SB04
D-SB05
D-SB06
D-SB07
D-SB08
D-SB09

Housatonic Boat Club Borings
BC-SA1
BC-SA2
BC-SA3
BC-SA4
BC-SA5
BC-SA6
BC - SB1
BC - SB2
BC - SB3
BC - SB4
BC - SB5
BC - SB6
BC - SB7
BC - SB8
BC - SB8A
BC - SB9

Shelby Pond Borings
SP-08
SP-09
SP-10
SP-11
SP-12
SP-13
SP-14
SP-15
SP-16
SP-17
SP-18
SP-19

Selected OU6 Borings
DI-201
DI-203
DI-210
DPW-104
VPA95-106

BORING LOGS

Other Contractors' Borings

Foster-Wheeler OU1 Data
(Post Closure Borings)
PC-01B
PC-01D
PC-01M
PC-01S
PC-02B
PC-02D
PC-02M
PC-02S
PC-03B
PC-03D
PC-03S
PC-04B
PC-04D
PC-04S
PC-05B
PC-05D
PC-05M
PC-05S
PC-06B
PC-06D
PC-06M
PC-06S
PC-07S
PC-08B
PC-08D
PC-08S
PC-09D
PC-09S
PC-10B
PC-10D
PC-10M
PC-10S
PC-11B
PC-11D
PC-11M
PC-11S
PC-12B
PC-12D
PC-12S
PC-13B
PC-13D
PC-13M
PC-13S
PC-14B
PC-14D
PC-14S
PC-15B
PC-15D

Foster-Wheeler OU1 Data (cont.)
PC-15S
PC-16B
PC-16D
PC-16M
PC-16S

Conestoga-Rovers & Assoc.
375 Barnum Ave.
SB-1(CRA-1D, 1S)
SB-1A
SB-1B
SB-1C
SB-2 (CRA-2D,2S)
SB-3
SB-3A
SB-4
SB-4A
SB-5
SB-5A
SB-6 (CRA-3)
SB-9 (CRA-6D)
SB-9A (CRA-6S)
SB-10
SB-11 (CRA-7)
SB-12
SB-13 (CRA-8)
SB-13A

540 Longbrook Ave.
MW-1
MW-1B
MW-2
MW-2A
MW-3
MW-3A
MW-4
MW-5
MW-6
MW-7
MW-8
MW-Z
MW-X
MW-Y
MW-BR-1
MW-BR-2

The Dock
MW-1 (B, M)
MW-4

Weston Wells
SPDA-E222,S132

DOT Borings
1-B
2-B
3-B
4-B
5-B
6-B
7-B
8-B
9-B
1-C
2-C
3-C
4-C
5-C
6-C
7-C
8-C
1-E.M.
2-E.M.
3-E.M.
4-E.M.
5-E.M.
6-E.M.
7-E.M.
8-E.M.
1-HR
2-HR
3-HR
4-HR
5-HR
6A-HR
6-HR
7-HR
8A-HR
8-HR
9-HR
10A-HR
10-HR
11-HR
12-HR
13-HR
14-HR
15-HR
16-HR
17-HR
18-HR

DOT Borings (cont.)
19-HR
20-HR
21-HR
22-HR
23-HR
24A-HR
24-HR
25-HR
26A-HR
26-HR
27-HR
28A-HR
28-HR
29-HR
30-HR
31-HR
32-HR
33-HR
34-HR
35-HR
36-HR
37-HR
38-HR
39-HR
40-HR
1-L
2-L
3-L
4-L
5-L
6-L
7-L
8-L
9-L
10-L
11-L
12-L
1-M
2-M
3-M
4-M
5-M
6-M
7-M
8-M
9-M
10-M
11-M
12-M

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= 3639'	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 45 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. 1'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,PCE,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
Ψ - 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 1IN. 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.	BLOWS PER 6"	PEN. in.	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 RE:need 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 REineed 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.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	32.0	S-16	57 100 6 4	10	0	NO RECOVERY	S-16 (0in) NO RECOVERY.	
	34.0	S-17	65 78 87 98 6 6 6 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 13 14 28 6 6 6 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 9 12 22 6 6 6 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 19 22 27 6 6 6 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 14 14 28 6 6 6 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 11 14 17 6 6 6 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 15 22 24 6 6 6 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 7 9 13 / 6 6 6 6	24	4	Interval=48-50' Screen for: Pb, Cu,PCB,Asbestos	S-24 (4in) SANDY SILT.	
	50.0	S-25	6 9 16 20 / 6 6 6 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 9 11 10 / 6 6 6 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 17 23 28 / 6 6 6 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 7 11 13 / 6 6 6 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 7 16 18 / 6 6 6 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 7 11 14 / 6 6 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 12 13 17 / 6 6 6 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_0.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.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	96.0	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 REneed 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.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	113.0	S-47	23 6 / 25 6 / 25 6 / 34 6	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	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.	BLOWS PER 6"	PEN. in.	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 25 24 20 / 6 6 6 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 16 8 11 / 6 6 6 6	24	18	Interval= 3436'	S-18 (18in) SAND, some gravel to 1in, trace silt, layered.	SP
	36.0	S-19	10 7 5 13 / 6 6 6 6	24	0	Interval= 3638'	S-19 (0in) NO RECOVERY.	
	38.0	S-20	26 30 35 42 / 6 6 6 6	24	1	Interval= 3840'	S-20 (1in) SAND, trace silt.	SW
	40.0	S-21	30 15 26 35 / 6 6 6 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 26 20 30 / 6 6 6 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 35 26 36 / 6 6 6 6	24	10	Interval= 4446'	S-23 (10in) gravelly SAND, similar to S-27, 4in long rock.	
	46.0	S-24	24 20 20 18 / 6 6 6 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. Soin&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. 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: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 29 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= 78-80'	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,PCE,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. 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: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 FOR:	RAYMARK OU2/OU4 RI/FS			BORING NO.:	SB-104B
PROJECT NO.:				START DATE:	2/3/99
LOGGED BY:	A. Putnam / D. Whalen	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2/11/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc. / K. Kutarnia			MON. WELL NO.:	MW-104B
GRD. SURFACE ELEVATION:	8.6'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0	BLOWS PER 6" RQD	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)]
10							no soil samples taken – refer to boring log 104d details		piece of waste fill near surface – hard tile FID=2.2 to 16.3 in B.Z. while washing out to 22' bgs	5" CASING TO 22'
20										4" CASING
30										
40										
50										
60										
70										
80							rollerbit into cobbles & weathered rock and then into gravel continue to draw 4" casing. Top of bedrock rollerbit 1" drive casing rollerbit to 87.5 and drive casing to 87' refusal at 87.5' * top of bedrock at 87.0'			
85										
85.5										
87.5				87.0' Top of bedrock						
			4:31			Gray to Dark Green	chlorite/ mica schist some quartz and small garnets low angle foliation	BR		
90			4:37						small vugs at 90.1' some rust staining at 90.2'	
			4:26							
92	84%	120" / 120"	C-1 87.51' 97.5' 3:40					BL		
			4:46					BR		

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing & 5 in. ID drive & Wash Casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Strong rotten egg odor while washing out at 20' bgs. FID fluctuated from 0 – 163 while washing out	BORING NO.: SB-104B	PAGE: 1 OF 3

BORING LOG FOR:	RAYMARK OU2/OU4 RI/FS			BORING NO.:	SB-104B
PROJECT NO.:				START DATE:	2/3/99
LOGGED BY:	A. Putnam / D. Whalen	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2/11/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc. / K. Kutarnia			MON. WELL NO.:	MW-104B
GRD. SURFACE ELEVATION:	8.6'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" RQD	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)]
94			C1 (cont.) 4:19			Gray to Dk. green	Chlorite / mica schist some quartz and small garnets Low angle foliation	BR	No alteration on break surfaces	
			4:37							
96			4:28				45 ° foliation			
			4:09							
98			3:51				Low angle foliation			
			4:38							
100			5:06							
			4:29						100.5' rust-staining, small vugs 101' rust-stained	
102	63%	121" / 120'	C – 2 3:28 97.5'-107.5'						102' rust stained 102.5' rust-stain 102.8' soft rock, rust	
			2:30							
104			2:51						No alteration on break surfaces	
			3:05							
106			4:13							
108			C-3 3:04 107.5'-117.5'					BL		
			5:16							

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-104B	PAGE: 2 OF 3

BORING LOG FOR:	RAYMARK OU2/OU4 RI/FS			BORING NO.:	SB-104B
PROJECT NO.:				START DATE:	2/3/99
LOGGED BY:	A. Putnam / D. Whalen	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2/11/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc. / K. Kutarnia			MON. WELL NO.:	MW-104B
GRD. SURFACE ELEVATION:	8.6'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
110			3:54			gray	Mica schist Some quartz and small garnets	br vbr	No evidence of weathering / alteration on break surfaces	
			4:02				Low angle foliation	br		
112		121"	C-3 3:54							
	85%	120"	107.5'-117.5' 2:55							
114			3:03							
			3:15			Dk. Green	Gneiss White quartz veins throughout			
116			4:11							
			5:45							
118			C-4 4:38			gray		bl		
	92%	22" / 24"	117.5'-119.5' 4:47							
119.5			6:13					br		

TYPE OF DRILLING RIG:	Mobile drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-104B	PAGE: 3 OF 3

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	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 30 38 31 / 6 6 6 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 26 28 20 / 6 6 6 6	24	6	Interval= 3436' Natural mat.	S-18A (0-4in) GRAVEL, subrounded-subangular, poorly sorted, trace coarse sand.	GP
							S-18B (4-6in) Silt and Gravel, trace sand, dk gray	GM
	36.0	S-19	5 10 19 22 / 6 6 6 6	24	11	Interval= 3638' Used 2in barrel	S-19A (0-5in) Silt, some gravel, little sand, fine to coarse, gray.	ML
							S-19B (5-11in) Sand, well graded, some gravel, trace silt, red-brown.	SW
	38.0	S-20	24 19 23 9 / 6 6 6 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 21 20 23 / 6 6 6 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 48 28 17 / 6 6 6 6	24	7	Interval= 4244' Natural mat.	S-22A (0-6in) SAND, similar to S-21A&B.	SP
							S-22B (6-7in) SAND, and fine gravel, similar to S-22A.	SP
	44.0	S-23	13 11 13 10 / 6 6 6 6	24	8	Interval= 4446' Natural mat.	S-23A (0-2in) Gravel, poorly graded.	GP
							S-23B (2-8in) SAND, well graded, trace gravel, lt brown.	SW
	46.0	S-24	6 36 44 24 / 6 6 6 6	24	8	Interval= 4648'	S-24A (0-6.5in) Silt, mod to high plasticity, little sand, dk gray.	MH
							S-24B (6.5-8.5in) SAND, poorly graded, trace silt, lt 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 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.	GW/SW
							S-26B (3-7in) Gravel, trace silt, lt brown.	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	GP
							S-28B (5.5-15in) SAND and Gravel, well graded, trace silt.	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 51 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 21 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 29 30 29 / 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: 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_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				Poss. 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-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	A				8.25inID augers Fill matreial.	Grassy rubble.	
	1.0	B				Fill material.	Dk brown sand and gravel cuttings, trace brick,	
	2.0	C				Rig chatter.	trace metal rods (alloy, 3mm thick in diameter).	
	3.0	D				Rig chatter and screeching. Wet soil.		
	3.5	E						
	4.5	F				Pull augers.Re-advance w/6in casing. Spn/Wsh	Washwater is milky gray.	
	6.5	G				Rig screeching.	Wash water is dk brown w/ plant debris (floating).	
	8.5	I					White speckles floating in washwater.	
	11.0	K					EOB @ 11ft. 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:

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: 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.	BLOWS PER 6"	PEN. in.	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. 3in 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.	BLOWS PER 6"	PEN. in.	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 15 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-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: M. Healey (12/12/94)	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.	SW
							Note: Augers stopped at 10ft due to potential confining layer. Pulled augers, readvanced w/10in casing to 10ft. Spin & wash drill method.	
	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~~ silt, fine clay, well graded sand, one aggregate to 1.5in, dk brown.	ML ~~SC~~ mlt
	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~~ silt mlt, trace sand, organic material, dk brown to black.	ML ~~SC~~ mlt
	12.0	S-7	4 3 3 2 / 6 6 6 6	24	6	Interval= 1214'	S-7 (6in) SANDY ~~CLAY~~ silt, clay w/well graded sand, trace gravel, lt brown.	ML ~~SC~~
	14.0	S-8	5 5 5 6 / 6 6 6 6	24	9	Interval= 1416'	S-8 (9in) SANDY, ~~CLAY~~ silt, similar to S-7.	ML ~~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 hanner Pot. H20 table @ 6-8ft. Top of confining layer @ 10' Screen samples:Pb,Cu,PCE,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-MW11D
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 20 15 16 / 6 6 6 6	24	10	Interval= 1618'	S-9 (10in) ~~CLAYEY~~ SAND, well graded sand, some clay, trace silt, one piece aggregate, dk brown.	~~SC~~ SM
	18.0	S-10	21 12 32 39 / 6 6 6 6	24	0	Interval= 1820' NO RECOVERY.	S-10 (0in) NO RECOVERY.	
	20.0	S-11	23 39 39 50 / 6 6 6 6	24	14	Interval= 2022'	S-11 (14in) GRAVEL, some well graded sand, trace silt, gray.	GW
	22.0	S-12	100	3	3	Inter.=22-22.25 Advance to 27ft Start stnd smpl	S-12 (2in) GRAVEL, some well graded sand.	GW
	27.0	S-13	13 14 16 15 / 6 6 6 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\MW11D_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 hamner 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
Ψ - 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 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_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.=90-90.08 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-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.	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 5ft. Pull augers, install casing.	FOR SOIL AND ROCK DESCRIPTIONS SEE BORING LOG FOR SP-MW111D.	
	5.0	B				Telescope casing. 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 FOR:	Raymark OU2			BORING NO.:	SB-111SG
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/3/02
DRILLED BY (Company/Driller):	ADT/Marques Larabie			MON. WELL NO.:	MW-111SG
GRD. SURFACE ELEVATION:	10.4 ft	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
							Borehole not logged. For soil profile details, see MW-111B			
2							boring log. Drive 5" open casing to 5', then remove with material inside. Drive 3" open casing to 6' then remove			PID = 0.0 FID = 0.0
							with soil. After cleaning out 3" casing add point and drive to 6'.			
4										
										PID = 0.0 FID = 0.0
6										
				EOB @ 6.0' bgs						
8										

TYPE OF DRILLING RIG:	Truck mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL at MW111S=8.2'			
OTHER OBSERVATIONS:	Field screening for breathing zone only.	BORING NO.:	SB-111SG	PAGE: 1 OF 1

TtNUS Form 0018

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 13 6 / 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 7 9 5 / 6 6 6 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 3 10 4 / 6 6 6 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 5 8 7 / 6 6 6 6	24	16	Interval= 0608' Fill material.	S-4 (16in) SILTY SAND, some gravel, similar to S-3	
	8.0	S-5	3 4 3 4 / 6 6 6 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 2 2 3 / 6 6 6 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.	Pt
							Note: HSA to 10ft; pulled augers and installed 10 in casing (spin&wash). Telescoped and advanced 8in casing to 32ft.	
	12.0	S-7	6 3 2 5 / 6 6 6 6	24	14	Interval= 1214' Pot. H2O table.	S-7 (14in) PEAT, similar to S-6 w/o silt interbed.	Pt
	14.0	S-8	2 2 3 3 / 6 6 6 6	24	24	Interval= 1416'	S-8 (24in) PEAT/ORGANIC SILT, fibrous plant and root matter w/some silt, dk brown.	Pt/CL

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; boring 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. H2O @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\MW1123_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 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_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 5 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' post 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 to coarse grained, foliated metamorphic rock. Weathered vertical fractures, calcite stringers, pyrite nodules, quartz veins, high angle schistosity common. Note: 6in casing seated in bedrock at 43 ft.	
	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:

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_C.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.
	46.5	C-25		42	42	Run 3:46.5-50ft RQD = 100%	C-25 (42in) Chlorite mica schist, similar to C-24.	
	50.0	C-26		108	108	Run 4: 50-59ft RQD = 100%	C-26 (108in) Chlorite mica schist, similar to C-25	
	59.0	C-27		48	48	Run 4: 59-63ft RQD = 100%	C-27 (48in) Chlorite mica schist, similar to C-26. EOC @ 63ft bgs. Perform packer test @ 46.3-63ft. No flow @ 20 psi(water),100psi(packer). Takes H2O (approx 2-3gal/min) @ 40psi(water), 100psi(packer) Ream hole w/6in rollerbit to 59.5ft. Backfill to 57ft. Install well. Set screen 57-47ft.	

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. H2O @12-14'. Pot. nat. cntct. @8-10'. Screen for: Pb, Cu,PCB,Asb. Core 20'. Packer test. Set well. Screen:57-47ft.

ACAD NAME:A:\MW112B_D.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112D
DATE START: 04/20/1994	DEPTH TO WATER: 3.90	LOGGED BY: DM	GROUND EL.: 7.00
DATE COMPLETED: 04/20/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 42.50

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 10', pull & advance 10in. casing to 10ft.	SOIL AND ROCK DESCRIPTIONS FOR DEPTHS 0-42.5FT CAN BE FOUND ON BORING LOG SP-MW112B.	
	10.0	B				Telescope 6in casing. Spin & Wash to 42.5ft.		

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:

MW112D 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-MW112B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW112D_A.DWG (8/27/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112D
DATE START: 04/20/1994	DEPTH TO WATER: 3.90	LOGGED BY: DM	GROUND EL.: 7.00
DATE COMPLETED: 04/20/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 42.50

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:

MW112D 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-MW112B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW112D_B.DWG (8/27/99)

BROWN & ROOT ENVIRONMENTAL

BORING LOG

PROJECT NO: 0890
LOCATION: STRATFORD, CT
DRILLED BY: PENN DRILLING CO.
BORING NO: SP-MW112D
DATE START: 04/20/1994
DEPTH TO WATER: 3.90
LOGGED BY: DM
GROUND EL.: 7.00
DATE COMPLETED: 04/20/1994
DATE & TIME: 05/16/1994/1445
CHECKED BY:
TOTAL DEPTH: 42.50

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.
	38.0	C				Roller bit is used and washed out.		
	42.5	D					EOB @ 42.5 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:

MW112D 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-MW112B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW112D_C.DWG (8/27/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112M
DATE START: 04/19/1994	DEPTH TO WATER: 3.90	LOGGED BY: DM	GROUND EL.: 7.10
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 35.30

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 10'. Pull augers,advance 10' casing 10ft	SOIL AND ROCK DESCRIPTIONS FOR DEPTHS 0-35.3FT CAN BE FOUND ON BORING LOG SP-MW112B.	
	10.0	B				Telescope 6in casing. Spin & Wash to 35.3ft.		

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.

MW112M 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-MW112B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW112M_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112M
DATE START: 04/19/1994	DEPTH TO WATER: 3.90	LOGGED BY: DM	GROUND EL.: 7.10
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 35.30

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:

MW112M 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-MW112B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW112M_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW112M
DATE START: 04/19/1994	DEPTH TO WATER: 3.90	LOGGED BY: DM	GROUND EL.: 7.10
DATE COMPLETED: 04/19/1994	DATE & TIME: 05/16/1994/1445	CHECKED BY:	TOTAL DEPTH: 35.30

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.
	35.3	C					EOB @ 35.3 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:

MW112M 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-MW112B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW112M_C.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113B
DATE START: 04/26/1994	DEPTH TO WATER: 6.63	LOGGED BY: KJ,JM	GROUND EL.: 7.10
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 112.50

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	S-1	3 3 4 5	6 6 6 6	24	16	HSA to 14'pull augers, advance 8in casing 14'	S-1 (16in) silty SAND, trace gravel, root matter, leaves, twigs, brown.	SM
	2.0	S-2	6 7 5 7	6 6 6 6	24	24	Interval= 0204' Fill material.	S-2A (12in) silty SAND, poorly graded, brown. S-2B (12in) SILT and SAND, poorly graded, fibers, plastic pieces, consistency of a sludge-like processed waste, black.	SM
	4.0	S-3	6 9 7 8	6 6 6 6	24	24	Interval= 0406' Fill material.	S-3 (24in) SILT and SAND, similar to S-2B w/ green fiber laden tiles, organic matter (leaves and roots).	
	6.0	S-4	6 9 1 2	6 6 6 6	24	10	Interval= 0608' Fill material.	S-4 (10in) SILT and SAND, similar to S-3 w/tiles.	
	8.0	S-5	1 1 1 2	6 6 6 6	24	18	Interval= 0810' Fill material.	S-5 (18in) ORGANIC SILT, trace clay, trace sand, fibrous plant matter, green fiber laden tiles, gray-brown.	OL
	10.0	S-6	1 2 1 3	6 6 6 6	24	20	Interval= 1012' Possible nat. material.	S-6 (20in) ORGANIC SILT, similar to S-5 w/o fill.	OL
	12.0	S-7	2 2 2 2	6 6 6 6	24	24	Interval= 1214'	S-7 (24in) ORGANIC SILT, similar to S-6.	OL
	14.0	S-8	1 1	12 12	24	24	Interval= 1416' Telescope 6in casing&advance.	S-8 (24in) SILT, some clay, trace organics, root matter, reeds, dk brown to black.	OL/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/4.25inID HSA,0-14ft. Pull augers. Spin 8in casing to 29ft. Telescope 6in casing to 94ft. Perform cont. sampling 0-30ft. Advance 3in barrels w/140lb hammer. Stnd. sampling @ 33ft to 93ft. Rock likely @ 90-93ft. Cored 20ft to 112.5ft. Packer test done. Nat. mat. likely @1012ft. Set well screen 106.5 to 96.5ft. Samples screened:Pb,Cu,PCB,Asb.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW113B_A.DWG (8/27/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113B
DATE START: 04/26/1994	DEPTH TO WATER: 6.63	LOGGED BY: KJ,JM	GROUND EL.: 7.10
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 112.50

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.
	16.0	S-9	1 1 1 1 / 6 6 6 6	24	24	Interval= 1618'	S-9 (24in) SILT, similar to S-8 w/trace gravel.	OL/ML
	18.0	S-10	1 1 1 1 / 6 6 6 6	24	24	Interval= 1820'	S-10 (24in) SILT, similar to S-8.	OL/ML
	20.0	S-11	1 1 2 3 / 6 6 6 6	24	17	Interval= 2022'	S-11 (17in) SILT, similar to S-10.	OL/ML
	22.0	S-12	1 2 2 3 / 6 6 6 6	24	24	Interval= 2224'	S-12 (24in) SILT, similar to S-11.	OL/ML
	24.0	S-13	1 1 3 3 / 6 6 6 6	24	24	Interval= 2426'	S-13 (24in) SILT, similar to S-12.	OL/ML
	26.0	S-14	1 2 3 2 / 6 6 6 6	24	24	Interval= 2628'	S-14 (24in) SILT, some clay, little sand, poorly graded.	ML
	28.0	S-15	2 2 4 6 / 6 6 6 6	24	19	Interval= 2830'	S-15 (19in) silty SAND, poorly graded, greyish black.	SM

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/4.25inID HSA,0-14ft. Pull augers. Spin 8in casing to 29ft. Telescope 6in casing to 94ft. Perform cont. sampling 0-30ft. Advance 3in barrels w/140lb hammer. Stnd. sampling @ 33ft to 93ft. Rock likely @ 90-93ft. Cored 20ft to 112.5ft. Packer test done. Nat. mat. likely @1012ft. Set well screen 106.5 to 96.5ft. Samples screened:Pb,Cu,PCB,Asb.

ACAD NAME:A:\MW113B_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113B
DATE START: 04/26/1994	DEPTH TO WATER: 6.63	LOGGED BY: KJ,JM	GROUND EL.: 7.10
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 112.50

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.
	33.0	S-16	18 16 12 15 / 6 6 6 6	24	0	Interval= 3335' Stnd. sampling Grinding/Cobble	S-16 (0in) NO RECOVERY, pushed a rock.	
	38.0	S-17	12 10 12 20 / 6 6 6 6	24	0	Interval= 3840' Grinding/cobble	S-17 (0in) NO RECOVERY, pushed a rock.	
	43.0	S-18	16 20 35 33 / 6 6 6 6	24	18	Interval= 4345'	S-18 (18in) SAND, trace silt, trace gravel, poorly graded, 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,0-14ft. Pull augers. Spin 8in casing to 29ft. Telescope 6in casing to 94ft. Perform cont. sampling 0-30ft. Advance 3in barrels w/140lb hammer. Stnd. sampling @ 33ft to 93ft. Rock likely @ 90-93ft. Cored 20ft to 112.5ft. Packer test done. Nat. mat. likely @101.2ft. Set well screen 106.5 to 96.5ft. Samples screened:Pb,Cu,PCB,Asb.

ACAD NAME:A:\MW113B_C.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	SP-MW113B
DATE START:	04/26/1994	DEPTH TO WATER:	6.63	LOGGED BY:	KJ,JM	GROUND EL.:	7.10
DATE COMPLETED:	04/28/1994	DATE & TIME:	05/16/1994/1459	CHECKED BY:		TOTAL DEPTH:	112.50

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.
	48.0	S-19	12 15 20 22 / 6 6 6 6	24	14	Interval= 4850'	S-19 (14in) SAND, trace silt, poorly graded, brown w/red-brown mottling near top of split-barrel.	SP
	53.0	S-20	17 12 26 30 / 6 6 6 6	24	24	Interval= 5355'	S-20 (24in) SAND, trace silt, poorly graded, bedding observed, brown.	SP
	58.0	S-21	12 21 25 27 / 6 6 6 6	24	12	Interval= 5860'	S-21 (12in) SAND, similar to S-20, except mottled color and no bedding visible.	SP
	63.0	S-22	10 13 15 20 / 6 6 6 6	24	20	Interval= 6365'	S-22A (12in) SILT, some sand, trace clay, poorly graded, brown to light gray.	ML
							S-22B (8in) SILT, similar to S-22A except for presence of medium sand and all gray color.	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/4.25inID HSA,0-14ft. Pull augers. Spin 8in casing to 29ft. Telescope 6in casing to 94ft. Perform cont. sampling 0-30ft. Advance 3in barrels w/140lb hammer. Stnd. sampling @ 33ft to 93ft. Rock likely @ 90-93ft. Cored 20ft to 112.5ft. Packer test done. Nat. mat. likely @1012ft. Set well screen 106.5 to 96.5ft. Samples screened:Pb,Cu,PCB,Asb.

ACAD NAME:A:\MW113B_D.DWG

BORING LOG — BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113B
DATE START: 04/26/1994	DEPTH TO WATER: 6.63	LOGGED BY: KJ,JM	GROUND EL.: 7.10
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 112.50

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.
	63.0	S-22	10 13 15 20 / 6 6 6 6	24	20	Interval= 6365'	S-22A (12in) SILT, some sand, trace clay, poorly graded, brown to light gray.	ML
							S-22B (8in) SILT, similar to S-22A except for presence of medium sand and all gray color.	ML
	68.0	S-23	25 70 87 100 / 6 6 6 6	24	22	Interval= 6870'	S-23A (12in) SILTY SAND, fine sand, poorly graded, brown-gray.	SM
							S-23B (10in) silty sandy GRAVEL, schist rock chips brown-red.	GM
	73.0	S-24	17 28 39 51 / 6 6 6 6	24	10	Interval= 7375' Grinding/Cobble 76-78'. Loud.	S-24 (10in) silty sandy GRAVEL, poorly graded, red-brown.	GM
	78.0	S-25	8 8 6 8 / 6 6 6 6	24	10	Interval= 7880' 2in barrel used Grinding to 83'	S-25 (10in) SAND, trace silt, trace gravel, poorly graded, 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/4.25inID HSA,0-14ft. Pull augers. Spin 8in casing to 29ft. Telescope 6in casing to 94ft. Perform cont. sampling 0-30ft. Advance 3in barrels w/140lb hammer. Stnd. sampling @ 33ft to 93ft. Rock likely @ 90-93ft. Cored 20ft to 112.5ft. Packer test done. Nat. mat. likely @1012ft. Set well screen 106.5 to 96.5ft. Samples screened:Pb,Cu,PCB,Asb.

ACAD NAME:A:\MW113B_E.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING CO.	BORING NO:	SP-MW113B
DATE START:	04/26/1994	DEPTH TO WATER:	6.63	LOGGED BY:	KJ,JM	GROUND EL.:	7.10
DATE COMPLETED:	04/28/1994	DATE & TIME:	05/16/1994/1459	CHECKED BY:		TOTAL DEPTH:	112.50

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.
	83.0	S-26	25 6 35 6 37 6 50 6	24	12	Interval= 8385' 3in barrel used	S-26 (12in) SAND, trace silt, bedding visible, poorly graded, brown.	SP
	88.0	S-27	176 6 78 6 55 6 63 6	24	19	Interval= 8890' Grinding to 88' Advance casing.	S-27A (12in) sandy GRAVEL, trace silt, poorly graded, gravel/cobbles to 3in., brown. S-27B (7in) sandy GRAVEL, similar to S-27A w/ altered rock frags/chips. Cobbles to 3.5in in length.	GP
	93.0	S-28	100 6	6	0	Casing to 93'. Attempt. sample Bedrock	S-28 (0in) NO RECOVERY except few altered meta rock chips. Top of rock between 90-93ft bgs. Note: Seated 6in casing after S-28. Change water. Driller starts coring at 92.5' w/series 8 bit. Run 1 starts above last interval.	
		C-29		18	18	Run 1 C-29: 92.5'-94'	C-29 Dk. green-gray, foliated and fractured with 80° from ground surface - quartz (milky), veins 3/4-inch thick, little muscovite content.	
	94.0							

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 boring w/4.25inID HSA,0-14ft. Pull augers. Spin 8in casing to 29ft. Telescope 6in casing to 94ft. Perform cont. sampling 0-30ft. Advance 3in barrels w/140lb hammer. Stnd. sampling @ 33ft to 93ft. Rock likely @ 90-93ft. Cored 20ft to 112.5ft. Packer test done. Nat. mat. likely @1012ft. Set well screen 106.5 to 96.5ft. Samples screened:Pb,Cu,PCB,Asb.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW113B_F.DWG (8/27/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113B		
DATE START: 04/26/1994	DEPTH TO WATER: 6.63	LOGGED BY: KJ,JM	GROUND EL.: 7.10		
DATE COMPLETED: 04/28/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 112.50		

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.
	94.0	C-31		24	24	Run 2 = C-2A&B Tot.Time:4min+ Jam @ 2.0ft.	C-30 (24in) BEDROCK, similar to C-29 RQD=0%.	
	96.0	C-31		24	24	Run 3 = C-3A&B Tot.Time:5min Jam @ 1.8ft.	C-31 (22in) BEDROCK, similar to C-30 w/trace of red-brown staining (weathered). RQD=20%.	
	98.0	C-32		48	48	Run4=C-4AtoC-4D Tot.Time:7min Jam/Clear mat.	C-32 (48in) BEDROCK, similar to C-31, weathered rock from 100.2 to 101.0ft, soft red-brown rock. Note: Coring difficult, soft material, change bit.	
	102.0	C-33		76	78	Run5=C-5AtoC-5F Tot.Time:15min Lose H2o @ 108'	C-33A (12in) Bedrock, similar to C-32. C-33B (66in) Bedrock, white & lime-green, foliated at 80 degrees, fracture at 40 degrees to gs. High quartz vein content. Bedrock taking on water at 108ft. RQD= 84%	
	108.5	C-34		48	48	Run6=C-6AtoC-6D Tot.Time:9min Runs 1-6 = 20ft	C-34 (48in) Bedrock, similar to C-33 w/o fractures Uneven. End of carehole @ 112.5ft bgs. Performed packer tests at 94-112.5ft. At 20psi (water) and 100psi (packer), flow rate approx. 1.5gal/min. At 40psi (water), flow rate= approx. 2gal/min.	

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/4.25inID HSA,0-14ft. Pull augers. Spin 8in casing to 29ft. Telescope 6in casing to 94ft. Perform cont. sampling 0-30ft. Advance 3in barrels w/140lb hammer. Stnd. sampling @ 33ft to 93ft. Rock likely @ 90-93ft. Cored 20ft to 112.5ft. Packer test done. Nat. mat. likely @101.2ft. Set well screen 106.5 to 96.5ft. Samples screened:Pb,Cu,PCB,Asb.

ACAD NAME: RAYMARK\BORINGS_ALTERED\MW113B_G.DWG (8/27/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113M
DATE START: 05/02/1994	DEPTH TO WATER: 6.27	LOGGED BY: KJ	GROUND EL.: 7.10
DATE COMPLETED: 05/02/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 38.50

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				4.25inID auger 5ft,pull & advance 8in cas.	NO SOIL SAMPLES COLLECTED. SEE BORING LOG SP-113B FOR SOIL DESCRIPTION INFORMATION 0-38.5FT.	
	13.5	B				8'casing,13.5' Spin&Wash.Telescope 6in,adv.		

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:

MW113M REPRESENTS ONE OF TWO WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW113B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW113M_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113M
DATE START: 05/02/1994	DEPTH TO WATER: 6.27	LOGGED BY: KJ	GROUND EL.: 7.10
DATE COMPLETED: 05/02/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 38.50

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:

MW113M REPRESENTS ONE OF TWO WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW113B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW113M_B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: SP-MW113M
DATE START: 05/02/1994	DEPTH TO WATER: 6.27	LOGGED BY: KJ	GROUND EL.: 7.10
DATE COMPLETED: 05/02/1994	DATE & TIME: 05/16/1994/1459	CHECKED BY:	TOTAL DEPTH: 38.50

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.
	38.5	C				End 6in advance	EOB @ 38.5 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:

MW113M REPRESENTS ONE OF TWO WELLS IN A CLUSTER. SOIL AND ROCK DESCRIPTIONS WERE RECORDED FROM THE DEEPEST BORING IN EACH CLUSTER. SEE BORING LOG SP-MW113B FOR COMPLETE SOIL AND ROCK DESCRIPTIONS.

ACAD NAME:A:\MW113M_C.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: BC-MW120
DATE START: 04/05/1994	DEPTH TO WATER: 5.57	LOGGED BY: JM	GROUND EL.: 8.20
DATE COMPLETED: 04/06/1994	DATE & TIME: 05/16/1994/1535	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	5 11 13 14 / 6 6 6 6	24	18	Interval= 0002' 8in casing	S-1 (0-18in) SAND, little silt, little gravel, little organics, dry, brown.	SP
	2.0	S-2	7 20 40 47 / 6 6 6 6	24	18	Interval= 0204' 8in casing.	S-2A (0-16in) silty SAND, poorly graded, some silt little gravel, trace organics, dry, brown.	SM
							S-2B (11-18in) silty SAND, similar to above w/ black asphalt.	SM
	4.0	S-3	2 3 3 2 / 6 6 6 6	24	15	Interval= 0406' Switch to 6in casing.	S-3A (0-11in) sandy SILT, low plas., some fine sand, little gravel, glass, red ceramic fibrous material, dry, gray.	SM
							S-3B (11-15in) sandy SILT, similar to S-3A w/ more organic fibrous material.	SM
	6.0	S-4	2 3 8 10 / 6 6 6 6	24	23	Interval= 0608' 6in casing. Water table?	S-4A (0-16in) sandy SILT, similar to S-3, w/ more glass, black shell pieces.	SM
							S-4B (16-23in) SAND, poorly graded, little gravel, moist, gray.	SP
							Tentative contact w/ nat material.	
	8.0	S-5	7 11 12 13 / 6 6 6 6	24	0	Interval= 0810' NO RECOVERY.	S-5 (0in) NO RECOVERY - PUSHING STONES.	
	10.0	S-6	12 16 18 19 / 6 6 6 6	24	0	Interval= 1012' NO RECOVERY.	S-6 (0in) NO RECOVERY - PUSHING STONES.	
	12.0	S-7	7 8 9 15 / 6 6 6 6	30	18	Interval= 1214'	S-7A (0-2in) GRAVEL - 1 3in piece, it was probably pushed.	
							S-7B (2-18in) SAND, poorly graded, little silt, bedding to 1in thick, brown.	SP
	14.0	S-8	4 8 14 15 / 6 6 6 6	24	15	Interval= 1416'	S-8 (0-15in) SILT, occasional gravel, micaceous, moist, brown.	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 8in casing 0-4ft. Telescoped 6in casing 4-22ft. Spin&Wash drill method. Perform cont. sampling 0-22 ft. Advance 3in split-barrels w/140lb hammer. Pot. natural material at 6-8ft. Pot. water table at 8ft. Screen samples for Pb,Cu,PCB,Asbestos. NM/NR= Nor measured or recorded on log. Set well screen @ 21.9 to 11.9ft bgs. See well log. S-7 was penetrated 30' in order to hammer through push gravel.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BCMW120A.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	PENN DRILLING	BORING NO:	BC-MW120
DATE START:	04/05/1994	DEPTH TO WATER:	5.57	LOGGED BY:	JM	GROUND EL.:	8.20
DATE COMPLETED:	04/06/1994	DATE & TIME:	05/16/1994/1535	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	5 6 4 6 8 6 10 6	24	19	Interval= 1618'	S-9 (0-19in) SILT, trace fine sand, brown.	ML
	18.0	S-10	4 6 8 6 10 6 12 6	24	17	Interval= 1820'	S-10 (0-17in) SILT, similar to S-9.	ML
	20.0	S-11	4 6 13 6 20 6 23 6	24	16	Interval= 2022'	S-11 (0-10in) SILT, similar to S-10.	ML
							EOB @ 22 ft bgs. Set well. See well log.	
	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 boring with 8in casing 0-4ft. Telescoped 6in casing 4-22ft. Spin&Wash drill method. Perform cont. sampling 0-22 ft. Advance 3in split-barrels w/140lb hammer. Pot. natural material at 6-8ft. Pot. water table at 8ft. Screen samples for Pb,Cu,PCB,Asbestos. NM/NR= Nor measured or recorded on log. Set well screen @ 21.9 to 11.9ft bgs. See well log.
S-7 was penetrated 30' in order to hammer through push gravel.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BCMW120B.DWG (8/25/99)

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.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	4 6 4 6 3 6 4 6	24	22	MF-SO-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 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 UD 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 6	24	8	MF-SD-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 6	24	24	MF-SD-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-SD-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. S-4B(8-17in) SILTY SAND - Fine sand, silt, some organic material, black.	SM 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. S-7B (10-24in) SILTY SAND - fine to medium sand, silt, organic material, light gray.	MO 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. 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.	SM 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 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 9 11 11 / 6 6 6 6	24	17	MF-SD-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 15 13 12 / 6 6 6 6	24	13	MF-SD-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; 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: 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 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: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= 16-18' Screen 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 5 7 / 6 6 6 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 18 21 30 / 6 6 6 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 15 22 20 / 6 6 6 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-/ --	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
Ψ - 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 2 2 3 / 6 6 6 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.	
	18.0						EOB @ 18 ftbgs. Backfill boring from 18 t 2ft with bentonite; 2 to 0 ft with sand. No well installed	

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-/ --	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: curing 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.	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	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; 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_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. EOB @ 12ft bgs HSA 4 1/4-inch ID. 14ft bgs ss 3-inch DD.	
	12.0							

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 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

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB1
DATE START: 04/04/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 12.30
DATE COMPLETED: 04/04/1994	DATE & TIME: --/--/19-- / --	CHECKED BY:	TOTAL DEPTH: 10.00

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.
	0.2	S-1	30 43 29 18 / 6 6 6 3	21	21	Asphalt = 0-3in Interval= 0.2-2 Fill material.	S-1A (12in) SILTY SAND, some gravel, rock frags, asphalt pieces, gray-brown to black S-1B (9in) GRAVELLY SAND, little silt, grayish colored glue-like matter.	
	2.0	S-2	7 8 8 6 / 6 6 6 6	24	17	Interval= 0204. PID hit not sustained.	S-2 (17in) SAND, some gravel, little silt, poorly graded, metamorphic rock frags, quartz pebbles, wet, grayish-brown to black. Potential top of water. Possible fill material.	SP-SM
	4.0	S-3	6 7 4 4 / 6 6 6 6	24	24	Interval= 0406' PID hit not sustained.	S-3A (9in) SILTY SAND, some gravel, poorly graded, brown to black. Possible fill material ? S-3B (15in) PEAT, some silt, organic soil w/dry fibrous plant material, twigs, roots. Possible natural material.	SM? Pt
	6.0	S-4	7 8 5 7 / 6 6 6 6	24	6	Interval= 0608.	S-4 (6in) SAND, poorly graded, little silt, trace gravel, rock frags, twigs, brown.	SM
	8.0	S-5	7 3 3 3 / 6 6 6 6	24	24	Interval= 0810' Patched black top.	S-5A (11in) SILTY CLAYEY SAND, some gravel, organic fibers, twigs, gray-black. S-5B (13in) ORGANIC SILT, trace clay, fibrous plant material, interbeds/layers of dry peat-like material, brown to black. EOB @ 10 ft. Backfilled boring. No well installed.	SM-SC OL
	10.0							

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 boring w/4.25inID HSA,0-8ft. Performed continuous sampling in 2ft increments below asphalt w/3in split-barrels and 140lb hammer, 0-10ft. Screen samples for: Pb,Cu,PCB, Asbestos. Possible water table at 2-4ft. Possible natural material at 4-6ft interval. NM/NR= Not measured or recorded on log. Backfilled borehole.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB1.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB2
DATE START: 04/06/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 9.40
DATE COMPLETED: 04/06/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 12.00

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.
	0.1	S-1	7 6 17 6 23 6 8 4	22	16	Interval= 0.1-2 Asphalt=0-2in Fill material.	S-1 (16in) SILTY SAND, some gravel, poorly graded, met rock frags, concrete, asphalt, fibers, dk brown.	
	2.0	S-2	21 6 10 6 8 6 7 6	24	20	Interval= 0204' Fill material	S-2A (12in) SILTY SAND, some gravel, similar to S-1 w/ash&cinders, fibers, roots, dk brown. S-2B (8in) FILL, man-made material only, red-brown pressed fiber mats or pads.	
	4.0	S-3	4 6 17 6 24 6 31 6	24	14	Interval= 0406' Fill material	S-3A (7in) FILL, similar to S-2B. S-3B (7in) SILTY SAND, some gravel, poorly graded, met. rock frags, quartz pebble frag., brown.	
	6.0	S-4	6 6 6 6 7 6 7 6	24	0	Interval= 0608' NO RECOVERY.	S-4 (0in) NO RECOVERY, pushed large pebble.	
	8.0	S-5	5 6 4 6 3 6 4 6	24	24	Interval= 0810' Possible nat. material.	S-5 (24in) ORGANIC SILT, trace gravel, trace clay, plant fibers, twigs, rock frags., dk brown to black.	OL
	10.0	S-6	2 6 2 6 3 6 2 6	24	24	Interval= 1012' Possible nat. material.	S-6 (24in) ORGANIC SILT, trace gravel, trace clay, similar to S-5. EOB @ 12ft bgs. Backfilled boring. No well.	OL
	12.0							

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 boring w/4.25inID HSA,0-10ft. Performed continuous sampling in 2ft increments below asphalt w/3in split-barrels and 140lb hammer, 0-12ft. Screen samples for: Pb,Cu,PCB, Asbestos. Possible natural material at 8ft bgs. NM/NR= Not measured or recorded on log. Backfilled borehole. Patched asphalt.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB2.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB3
DATE START: 04/07/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 6.90
DATE COMPLETED: 04/07/1994	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.
	0.1	S-1	6 14 39 25 / 6 6 6 4	22	11	Asphalt = 0-2in Interval= 0.1-2 Fill material.	S-1 (11in) SILTY SAND, trace gravel, poorly graded met. rock frags., asphalt, brown.	
	2.0	S-2	13 14 50 / 6 6 6	18	16	Interval= 2-3.6 Fill material Hard advance.	S-2A (12in) SILTY SAND, some gravel, poorly graded rock frags., asphalt, charcoal clinkers, fiber pads, plant material, brown. S-2B (4in) FILL, man-made material, red-colored ceramic tile, wood chunks.	
	4.0	S-3	50 / 6	6	0	Interval= 4-4.5 Grinding augers Hard advance.	S-3 (0in) NO RECOVERY.	
	6.0	S-4	40 50 / 6 6 6 6	12	0	Interval= 6-7' Grinding augers Hard advance.	S-4 (0in) NO RECOVERY - pushed a cobble-sized piece of brick or slag material.	
	8.0	S-5	3 7 6 6 / 6 6 6 6	24	0	Interval= 0810' Hard advance. Augers grinding	S-5 (0in) NO RECOVERY.	
	10.0	S-6	21 50 / 6 6	12	12	Interval= 1011' Fill material. Grind/Hrd Advan	S-6 (12in) SILTY SAND, poorly graded, man-made fiber pads, large wood chunks, concrete, brick, dk brown to black. Note: Silty sand appeared smeared over fill material; resembled processed waste or sludge-like waste.	
	12.0	S-7	29 34 29 45 / 6 6 6 6	24	8	Interval= 1214' Fill material. Grind/Hrd Advan	S-7 (8in) FILL, man-made material, compressed fiber pads, wood chunks, fibers/stringers w/a smeared silty appearance, dk brown to black.	
	14.0	S-8	9 5 4 6 / 6 6 6 6	24	19	Interval= 1416' Possible nat. material.	S-8 (19in) PEAT, organic soil, fibrous and dry plant/root matter, interseds of silt, brown.	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,0-16ft. Interupted attempt at cont. sampling to get through fill material. Difficult advance from surface to 14ft. Driller advanced 3in split barrels w/140lb hammer to refusal, collected sample, and augered through the fill material to the next interval. Backfilled boring. Patched blacktop.

ACAD NAME:A:\SP-SB3.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB3
DATE START: 04/07/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 6.90
DATE COMPLETED: 04/07/1994	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	8 6 3 4 / 6 6 6 6	24	24	Interval= 1618' Possible nat. material.	S-9 (24in) PEAT, organic soil, similar to S-8.	Pt
							EOB @ 18 ft bgs. Backfilled boring. No well.	
	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 boring w/4.25inID HSA,0-16ft. Interupted attempt at cont. sampling to get through fill material. Difficult advance from surface to 14ft. Driller advanced 3in split barrels w/140lb hammer to refusal, collected sample, and augered through the fill material to the next interval. Backfilled boring. Patched blacktop.

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

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB4		
DATE START: 04/07/1994	DEPTH TO WATER: --	LOGGED BY: MS	GROUND EL.: 9.50		
DATE COMPLETED: 04/07/1994	DATE & TIME: --/--/19-7 --	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.
	0.1	S-1	3 9 14 17 / 6 6 6 6	24	0	Interval= 0.1-2 Asphalt 0-2in	S-1 (0in) NO RECOVERY, cobble in end of spoon.	
	2.0	S-2	6 9 14 9 / 6 6 6 6	24	5	Interval= 0204'	S-2 (5in) SILTY SAND, some gravel, well graded, brown.	SM
	4.0	S-3	15 7 6 12 / 6 6 6 6	24	12	Interval= 0406' Fill material	S-3A (0-6in) SILTY SAND, well graded, similar to S-2.	SM
							S-3B (6-12in) SANDY SILT, fibrous material, plastic-like material, dk brown.	SM
	6.0	S-4	6 6 4 4 / 6 6 6 6	24	6	Interval= 0608'	S-4 (6in) SILTY SAND, gravels to 1in, well graded, lt brown.	SM
	8.0	S-5	4 4 4 3 / 6 6 6 6	24	18	Interval= 0810' Fill material.	S-5 (18in) SANDY SILT, fibers throughout, dk brown	SM
	10.0	S-6	3 3 5 4 / 6 6 6 6	24	24	Interval= 1012' Fill material.	S-6 (24in) SANDY SILT, fibers throughout, red brick chips.	ML-SM
	12.0	S-7	3 3 4 4 / 6 6 6 6	24	24	Interval= 1214' Possible nat. material.	S-7A (0-8in) SANDY SILT, similar to S-6.	SM-ML
							S-7B (8-24in) SILT, organics (roots), black.	ML-OM
							EOB @ 14ft bgs. Backfilled boring.	
	14.0							

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 boring w/4.25inID HSA,0-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer to 14 ft bgs. Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 12-14ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB4.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB5
DATE START: 04/06/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 10.30
DATE COMPLETED: 04/06/1994	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.
	0.2	S-1	7 13 20 25 / 6 6 6 3	21	16	Interval= 0.2-2 Asphalt = 0-2in Possible fill.	S-1 (16in) SILTY SAND, some gravel, poorly graded, rock frags., brown.	
	2.0	S-2	17 31 20 32 / 6 6 6 6	24	19	Interval= 0204' Fill material.	S-2 (19in) SILTY SAND, some gravel, similar to S-1 with coal clinkers, glass, asphalt, ash&cinder, dk brown.	
	4.0	S-3	31 20 17 10 / 6 6 6 6	24	6	Interval= 0406' Possible fill.	S-3 (6in) SILTY SAND, some gravel, rock frags., dk brown.	
	6.0	S-4	11 10 18 12 / 6 6 6 6	24	15	Interval= 0608' Fill material.	S-4A (8in) SILTY SAND, some gravel, similar to S-3 with concrete, asphalt or charcoal clinkers, rock frags. S-4B (7in) FILL, man-made material, fiber pads, glass shards, very hard red & white ceramic-like shingles, brown.	
	8.0	S-5	18 10 7 6 / 6 6 6 6	24	0	Interval= 0810' NO RECOVERY	S-5 (0in) NO RECOVERY.	
	10.0	S-6	5 5 4 5 / 6 6 6 6	24	9	Interval= 1012' Fill material.	S-6 (9in) SILTY SAND, poorly graded, black wire casings up to 10 in in length, brown.	
	12.0	S-7	4 6 6 5 / 6 6 6 6	24	22	Interval= 1214' Possible nat. material.	S-7 (22in) ORGANIC SILT, trace clay, plant fibers, interbeds of peat, brown to black.	Pt
	14.0	S-8	7 5 6 7 / 6 6 6 6	24	22	Interval= 1416' Possible nat. material.	S-8 (22in) ORGANIC SILT, trace clay, interbed of peat, plant matter, 5in thick interbed of sand and gravel.	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/4.25inID HSA,0-18ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.25-20 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 12-14ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

ACAD NAME:A:\SP-SP5_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890 LOCATION: STRATFORD, CT DRILLED BY: PENN DRILLING BORING NO: SP-SB5

DATE START: 04/06/1994 DEPTH TO WATER: -- LOGGED BY: KJ GROUND EL.: 10.30

DATE COMPLETED: 04/06/1994 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	7 6 6 5 / 6 6 6 6	24	12	Interval= 1618' Possible nat. material.	S-9 (12in) ORGANIC SILT, trace clay, plant matter, brown.	OL
	18.0	S-10	5 7 7 4 / 6 6 6 6	24	24	Interval= 1820' Possible nat. material.	S-10 (24in) ORGANIC SILT, trace clay, fibrous plant matter, peat interbed, black to brown.	OL
							EOB @ 20 ft bgs. Backfilled boring.	
	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 boring w/4.25inID HSA,0-18ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.25-20 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 12-14ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

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

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB6		
DATE START: 04/06/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 8.90		
DATE COMPLETED: 04/06/1994	DATE & TIME: --/--/19-7 --	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.
	0.1	S-1	14 10 11 7 / 6 6 6 4	22	11	Interval= 0.1-2 Fill material	S-1 (11in) SILTY SAND, some gravel, concrete, asphalt, fiber pads, leather, slag, brown.	
	2.0	S-2	7 4 4 3 / 6 6 6 6	24	18	Interval= 0204' Fill material	S-2A (7in) SILTY SAND, trace gravel, rock frags, slag, concrete, asphalt, brown. S-2B (11in) ORGANIC SILT, some sand, trace clay, roots, ash & cinders, fiber material, rock frags, brown to black.	
	4.0	S-3	10 14 7 17 / 6 6 6 6	24	6	Interval= 0406' Fill material	S-3 (6in) SILTY SAND, leather-like pieces, rock frags., ash & cinders, brown.	
	6.0	S-4	7 10 4 7 / 6 6 6 6	24	24	Interval= 0608' Fill material & Nat. contact.	S-4A (12in) SILTY SAND, trace gravel, leather-like material, glass, ash & cinders, glass, slag, sea shells, brown to black. S-4B (12in) ORGANIC SILT, trace clay, plant matter low plas., brown/black.	OL
	8.0	S-5	4 4 4 6 / 6 5 6 6	24	12	Interval= 0810' Natural mat.	S-5 (12in) ORGANIC SILT, trace clay, similar to S-4B.	OL
	10.0	S-6	7 10 4 7 / 6 6 6 6	24	15	Interval= 1012' Natural mat.	S-6 (12in) ORGANIC SILT, trace clay, similar to S-5, w/seashells.	OL
	12.0	S-7	6 4 8 6 / 6 6 6 6	24	24	Interval= 1214' Natural mat.	S-7 (24in) ORGANIC SILT, trace clay, similar to S-6. EOB @ 14ft bgs. Backfilled boring.	OL
	14.0							

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 boring w/4.25inID HSA,0-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.25-14 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 4-6ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB6.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB7		
DATE START: 05/04/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 8.20		
DATE COMPLETED: 05/04/1994	DATE & TIME: --/--/19-- --	CHECKED BY:	TOTAL DEPTH: 12.00		

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 12 13 / 6 6 6	18	12	Interval= 0.5-2 Asphlt/Cthr=6in Fill material	S-1 (12in) SILTY SAND, some gravel, leather-like material or plastic, brown.	
	2.0	S-2	10 5 7 6 / 6 6 6 6	24	14	Interval= 0204' Fill material	S-2 (14in) SILTY SAND, some gravel, charcoal-like pieces, tile-like pieces, nails, dk brown.	
	4.0	S-3	5 7 6 8 / 6 6 6 6	24	22	Interval= 0406' Fill material	S-3A (11in) SILTY SAND, some gravel, similar to S-2, with seashells and like fill material, inter bed of dk brown silt (2in thick). S-3B (11in) SILTY SAND, 1-2in thick interbeds of silt, brown to black.	
	6.0	S-4	1 2 1 3 / 6 6 6 6	24	24	Interval= 0608' Possible nat. material.	S-4 (24in) ORGANIC SILT/PEAT, fibrous plant roots and interbeds of silt, trace clay, dk brown.	Pt/OL
	8.0	S-5	5 3 4 3 / 6 6 6 6	24	20	Interval= 0810' Possible nat. material.	S-5 (20in) ORGANIC SILT w/peat, similar to S-4, w/more silt than peat, trace clay.	OL
	10.0	S-6	3 3 5 7 / 6 6 6 6	24	23	Interval= 1012' Possible nat. material.	S-6 (23in) ORGANIC SILT, trace clay, trace peat, similar to S-5. EOB @ 12ft bgs. Boring backfilled.	OL
	12.0							

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 boring w/4.25inID HSA,2-10ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.5-12 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 6-8ft interval. Backfilled boring. NM/NR= Not measured or recorded on log. Low tide, no water table indicators observed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB7.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB8
DATE START: 05/31/1994	DEPTH TO WATER: --	LOGGED BY: BW	GROUND EL.: 7.90
DATE COMPLETED: 05/31/1994	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	14 21 6 6	12	12	Interval= 0002'	S-1A (4in) ASPHALT SURFACE S-1B (8in) AGGREGATE - sand, silty sand, rock.	
	2.0	S-2	25 25 17 19 6 6 6 6	24	24	Interval= 0204'	S-2 SAND, various colors, pebble, rock frags.	
	4.0	S-3	13 13 34 26 6 6 6 6	24	24	Interval= 0406'	S-3 SAND, some gravel, poorly graded, rock frags., various colors.	
	6.0	S-4	7 10 12 6 6 6 6 6	24	12	Interval= 0608'	S-4 SAND, little gravel, few clay, rock frags.	
	8.0	S-5	9 5 6 7 6 6 6 6	24	3	Interval= 0810' Rock jammed in spoon.	S-5 CLAYEY SAND, oil-like covering, possibly start of peat layer.	
	10.0	S-6	1 3 5 2 6 6 6 6	24	3	Interval= 1012' Rock jammed in spoon.	S-6 Black clayey-like material with organic matter including shell fragments. Start of peat.	
	12.0	S-7	3 3 3 3 6 6 6 6	24	24	Interval= 1214'	S-7 SILT, organic matter (peat), brown to black. EOB @ 14ft bgs. Backfilled boring.	
	14.0							

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 boring w/4.25InID HSA,0-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0-14 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 10-12ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

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

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB9
DATE START: 05/03/1994	DEPTH TO WATER: --	LOGGED BY: BW	GROUND EL.: 8.60
DATE COMPLETED: 05/03/1994	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.
	1.0	S-1	15 17 / 6 6	12	12	Interval= 1-2' Asphalt=0-4in Aggregate=4-8in	S-1 (12in) SAND, possible asbestos (reddish paper) pebbles, few rock frags.	
	2.0	S-2	17 25 69 37 / 6 6 6 6	24	24	Interval= 0204' Fill material	S-2 (24in) SAND, pebbles, brick, broken brake shoes (?).	
	4.0	S-3	7 9 11 12 / 6 6 6 6	24	12	Interval= 0406'	S-3 (12in) SAND, poorly graded, pebbles, shell material.	SP
	6.0	S-4	15 6 7 2 / 6 6 6 6	24	12	Interval= 0608' Possible nat. material	S-4 (12in) clayey SAND, poorly graded, rock frags, root-like vegetation. Possible start of peat.	SP
	8.0	S-5	5 2 3 4 / 6 6 6 6	24	10	Interval= 0810'	S-5 (10in) CLAYEY SAND, poorly graded, pebbles, minor amt of vegetation.	
	10.0	S-6	1 2 1 2 / 6 6 6 6	24	24	Interval= 1012'	S-6 (24in) Clayey-like material, gray-black with areas of red and roots. Peat layer.	Pt
	12.0	S-7	3 4 3 6 / 6 6 6 6	24	24	Interval= 1214'	S-7 (24in) Clayey-like material mixed w/roots and vegetation, peat, gray to reddish black.	Pt
	14.0						EOB @ 14ft bgs. Backfilled boring.	

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/4.25inID HSA,1-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 1-14 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 6-8ft interval. Backfilled boring. NM/NR= Not measured or recorded on log. 'Soil' column may contain process wastes which give soils a highly plastic character.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB9.DWG (8/25/99)

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.	BLOWS PER 6"	PEN. in.	REC. in.	REMARKS ON ADVANCE OF BORING	SOIL & ROCK DESCRIPTION	U.S.C.S.
	16.0	S-9	4 6 4 6 3 6 4 6	24	22	MF-SO-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 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 UD 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 6	24	8	MF-SD-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 6	24	24	MF-SD-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-SD-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. S-4B(8-17in) SILTY SAND - Fine sand, silt, some organic material, black.	SM 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. S-7B (10-24in) SILTY SAND - fine to medium sand, silt, organic material, light gray.	MO 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. 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.	SM 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 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 9 11 11 / 6 6 6 6	24	17	MF-SD-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 15 13 12 / 6 6 6 6	24	13	MF-SD-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; 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: 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 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: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= 16-18' Screen 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 5 7 / 6 6 6 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 18 21 30 / 6 6 6 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 15 22 20 / 6 6 6 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-/ --	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
Ψ - 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 2 2 3 / 6 6 6 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.	
	18.0						EOB @ 18 ftbgs. Backfill boring from 18 t 2ft with bentonite; 2 to 0 ft with sand. No well installed	

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-/ --	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: curing 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.	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	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; 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_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. EOB @ 12ft bgs HSA 4 1/4-inch ID. 14ft bgs ss 3-inch DD.	
	12.0							

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 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

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB1
DATE START: 04/04/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 12.30
DATE COMPLETED: 04/04/1994	DATE & TIME: --/--/19-- / --	CHECKED BY:	TOTAL DEPTH: 10.00

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.
	0.2	S-1	30 43 29 18 / 6 6 6 3	21	21	Asphalt = 0-3in Interval= 0.2-2 Fill material.	S-1A (12in) SILTY SAND, some gravel, rock frags, asphalt pieces, gray-brown to black S-1B (9in) GRAVELLY SAND, little silt, grayish colored glue-like matter.	
	2.0	S-2	7 8 8 6 / 6 6 6 6	24	17	Interval= 0204. PID hit not sustained.	S-2 (17in) SAND, some gravel, little silt, poorly graded, metamorphic rock frags, quartz pebbles, wet, grayish-brown to black. Potential top of water. Possible fill material.	SP-SM
	4.0	S-3	6 7 4 4 / 6 6 6 6	24	24	Interval= 0406' PID hit not sustained.	S-3A (9in) SILTY SAND, some gravel, poorly graded, brown to black. Possible fill material ? S-3B (15in) PEAT, some silt, organic soil w/dry fibrous plant material, twigs, roots. Possible natural material.	SM? Pt
	6.0	S-4	7 8 5 7 / 6 6 6 6	24	6	Interval= 0608.	S-4 (6in) SAND, poorly graded, little silt, trace gravel, rock frags, twigs, brown.	SM
	8.0	S-5	7 3 3 3 / 6 6 6 6	24	24	Interval= 0810' Patched black top.	S-5A (11in) SILTY CLAYEY SAND, some gravel, organic fibers, twigs, gray-black. S-5B (13in) ORGANIC SILT, trace clay, fibrous plant material, interbeds/layers of dry peat-like material, brown to black. EOB @ 10 ft. Backfilled boring. No well installed.	SM-SC OL
	10.0							

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 boring w/4.25inID HSA,0-8ft. Performed continuous sampling in 2ft increments below asphalt w/3in split-barrels and 140lb hammer, 0-10ft. Screen samples for: Pb,Cu,PCB, Asbestos. Possible water table at 2-4ft. Possible natural material at 4-6ft interval. NM/NR= Not measured or recorded on log. Backfilled borehole.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB1.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB2
DATE START: 04/06/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 9.40
DATE COMPLETED: 04/06/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 12.00

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.
	0.1	S-1	7 6 17 6 23 6 8 4	22	16	Interval= 0.1-2 Asphalt=0-2in Fill material.	S-1 (16in) SILTY SAND, some gravel, poorly graded, met rock frags, concrete, asphalt, fibers, dk brown.	
	2.0	S-2	21 6 10 6 8 6 7 6	24	20	Interval= 0204' Fill material	S-2A (12in) SILTY SAND, some gravel, similar to S-1 w/ash&cinders, fibers, roots, dk brown. S-2B (8in) FILL, man-made material only, red-brown pressed fiber mats or pads.	
	4.0	S-3	4 6 17 6 24 6 31 6	24	14	Interval= 0406' Fill material	S-3A (7in) FILL, similar to S-2B. S-3B (7in) SILTY SAND, some gravel, poorly graded, met. rock frags, quartz pebble frag., brown.	
	6.0	S-4	6 6 6 6 7 6 7 6	24	0	Interval= 0608' NO RECOVERY.	S-4 (0in) NO RECOVERY, pushed large pebble.	
	8.0	S-5	5 6 4 6 3 6 4 6	24	24	Interval= 0810' Possible nat. material.	S-5 (24in) ORGANIC SILT, trace gravel, trace clay, plant fibers, twigs, rock frags., dk brown to black.	OL
	10.0	S-6	2 6 2 6 3 6 2 6	24	24	Interval= 1012' Possible nat. material.	S-6 (24in) ORGANIC SILT, trace gravel, trace clay, similar to S-5. EOB @ 12ft bgs. Backfilled boring. No well.	OL
	12.0							

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 boring w/4.25inID HSA,0-10ft. Performed continuous sampling in 2ft increments below asphalt w/3in split-barrels and 140lb hammer, 0-12ft. Screen samples for: Pb,Cu,PCB, Asbestos. Possible natural material at 8ft bgs. NM/NR= Not measured or recorded on log. Backfilled borehole. Patched asphalt.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB2.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB3
DATE START: 04/07/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 6.90
DATE COMPLETED: 04/07/1994	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.
	0.1	S-1	6 14 39 25 / 6 6 6 4	22	11	Asphalt = 0-2in Interval= 0.1-2 Fill material.	S-1 (11in) SILTY SAND, trace gravel, poorly graded met. rock frags., asphalt, brown.	
	2.0	S-2	13 14 50 / 6 6 6	18	16	Interval= 2-3.6 Fill material Hard advance.	S-2A (12in) SILTY SAND, some gravel, poorly graded rock frags., asphalt, charcoal clinkers, fiber pads, plant material, brown. S-2B (4in) FILL, man-made material, red-colored ceramic tile, wood chunks.	
	4.0	S-3	50 / 6	6	0	Interval= 4-4.5 Grinding augers Hard advance.	S-3 (0in) NO RECOVERY.	
	6.0	S-4	40 50 / 6 6 6 6	12	0	Interval= 6-7' Grinding augers Hard advance.	S-4 (0in) NO RECOVERY - pushed a cobble-sized piece of brick or slag material.	
	8.0	S-5	3 7 6 6 / 6 6 6 6	24	0	Interval= 0810' Hard advance. Augers grinding	S-5 (0in) NO RECOVERY.	
	10.0	S-6	21 50 / 6 6	12	12	Interval= 1011' Fill material. Grind/Hrd Advan	S-6 (12in) SILTY SAND, poorly graded, man-made fiber pads, large wood chunks, concrete, brick, dk brown to black. Note: Silty sand appeared smeared over fill material; resembled processed waste or sludge-like waste.	
	12.0	S-7	29 34 29 45 / 6 6 6 6	24	8	Interval= 1214' Fill material. Grind/Hrd Advan	S-7 (8in) FILL, man-made material, compressed fiber pads, wood chunks, fibers/stringers w/a smeared silty appearance, dk brown to black.	
	14.0	S-8	9 5 4 6 / 6 6 6 6	24	19	Interval= 1416' Possible nat. material.	S-8 (19in) PEAT, organic soil, fibrous and dry plant/root matter, interseds of silt, brown.	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,0-16ft. Interupted attempt at cont. sampling to get through fill material. Difficult advance from surface to 14ft. Driller advanced 3in split barrels w/140lb hammer to refusal, collected sample, and augered through the fill material to the next interval. Backfilled boring. Patched blacktop.

ACAD NAME:A:\SP-SB3.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB3
DATE START: 04/07/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 6.90
DATE COMPLETED: 04/07/1994	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	8 6 3 4 / 6 6 6 6	24	24	Interval= 1618' Possible nat. material.	S-9 (24in) PEAT, organic soil, similar to S-8.	Pt
							EOB @ 18 ft bgs. Backfilled boring. No well.	
	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 boring w/4.25inID HSA,0-16ft. Interupted attempt at cont. sampling to get through fill material. Difficult advance from surface to 14ft. Driller advanced 3in split barrels w/140lb hammer to refusal, collected sample, and augered through the fill material to the next interval. Backfilled boring. Patched blacktop.

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

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB4		
DATE START: 04/07/1994	DEPTH TO WATER: --	LOGGED BY: MS	GROUND EL.: 9.50		
DATE COMPLETED: 04/07/1994	DATE & TIME: --/--/19-7 --	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.
	0.1	S-1	3 9 14 17 / 6 6 6 6	24	0	Interval= 0.1-2 Asphalt 0-2in	S-1 (0in) NO RECOVERY, cobble in end of spoon.	
	2.0	S-2	6 9 14 9 / 6 6 6 6	24	5	Interval= 0204'	S-2 (5in) SILTY SAND, some gravel, well graded, brown.	SM
	4.0	S-3	15 7 6 12 / 6 6 6 6	24	12	Interval= 0406' Fill material	S-3A (0-6in) SILTY SAND, well graded, similar to S-2.	SM
							S-3B (6-12in) SANDY SILT, fibrous material, plastic-like material, dk brown.	SM
	6.0	S-4	6 6 4 4 / 6 6 6 6	24	6	Interval= 0608'	S-4 (6in) SILTY SAND, gravels to 1in, well graded, lt brown.	SM
	8.0	S-5	4 4 4 3 / 6 6 6 6	24	18	Interval= 0810' Fill material.	S-5 (18in) SANDY SILT, fibers throughout, dk brown	SM
	10.0	S-6	3 3 5 4 / 6 6 6 6	24	24	Interval= 1012' Fill material.	S-6 (24in) SANDY SILT, fibers throughout, red brick chips.	ML-SM
	12.0	S-7	3 3 4 4 / 6 6 6 6	24	24	Interval= 1214' Possible nat. material.	S-7A (0-8in) SANDY SILT, similar to S-6.	SM-ML
							S-7B (8-24in) SILT, organics (roots), black.	ML-OM
							EOB @ 14ft bgs. Backfilled boring.	
	14.0							

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 boring w/4.25inID HSA,0-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer to 14 ft bgs. Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 12-14ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB4.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB5
DATE START: 04/06/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 10.30
DATE COMPLETED: 04/06/1994	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.
	0.2	S-1	7 13 20 25 / 6 6 6 3	21	16	Interval= 0.2-2 Asphalt = 0-2in Possible fill.	S-1 (16in) SILTY SAND, some gravel, poorly graded, rock frags., brown.	
	2.0	S-2	17 31 20 32 / 6 6 6 6	24	19	Interval= 0204' Fill material.	S-2 (19in) SILTY SAND, some gravel, similar to S-1 with coal clinkers, glass, asphalt, ash&cinder, dk brown.	
	4.0	S-3	31 20 17 10 / 6 6 6 6	24	6	Interval= 0406' Possible fill.	S-3 (6in) SILTY SAND, some gravel, rock frags., dk brown.	
	6.0	S-4	11 10 18 12 / 6 6 6 6	24	15	Interval= 0608' Fill material.	S-4A (8in) SILTY SAND, some gravel, similar to S-3 with concrete, asphalt or charcoal clinkers, rock frags. S-4B (7in) FILL, man-made material, fiber pads, glass shards, very hard red & white ceramic-like shingles, brown.	
	8.0	S-5	18 10 7 6 / 6 6 6 6	24	0	Interval= 0810' NO RECOVERY	S-5 (0in) NO RECOVERY.	
	10.0	S-6	5 5 4 5 / 6 6 6 6	24	9	Interval= 1012' Fill material.	S-6 (9in) SILTY SAND, poorly graded, black wire casings up to 10 in in length, brown.	
	12.0	S-7	4 6 6 5 / 6 6 6 6	24	22	Interval= 1214' Possible nat. material.	S-7 (22in) ORGANIC SILT, trace clay, plant fibers, interbeds of peat, brown to black.	Pt
	14.0	S-8	7 5 6 7 / 6 6 6 6	24	22	Interval= 1416' Possible nat. material.	S-8 (22in) ORGANIC SILT, trace clay, interbed of peat, plant matter, 5in thick interbed of sand and gravel.	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/4.25inID HSA,0-18ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.25-20 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 12-14ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

ACAD NAME:A:\SP-SP5_A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890 LOCATION: STRATFORD, CT DRILLED BY: PENN DRILLING BORING NO: SP-SB5

DATE START: 04/06/1994 DEPTH TO WATER: -- LOGGED BY: KJ GROUND EL.: 10.30

DATE COMPLETED: 04/06/1994 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	7 6 6 5 / 6 6 6 6	24	12	Interval= 1618' Possible nat. material.	S-9 (12in) ORGANIC SILT, trace clay, plant matter, brown.	OL
	18.0	S-10	5 7 7 4 / 6 6 6 6	24	24	Interval= 1820' Possible nat. material.	S-10 (24in) ORGANIC SILT, trace clay, fibrous plant matter, peat interbed, black to brown.	OL
							EOB @ 20 ft bgs. Backfilled boring.	
	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 boring w/4.25inID HSA,0-18ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.25-20 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 12-14ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

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

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB6		
DATE START: 04/06/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 8.90		
DATE COMPLETED: 04/06/1994	DATE & TIME: --/--/19-7 --	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.
	0.1	S-1	14 10 11 7 / 6 6 6 4	22	11	Interval= 0.1-2 Fill material	S-1 (11in) SILTY SAND, some gravel, concrete, asphalt, fiber pads, leather, slag, brown.	
	2.0	S-2	7 4 4 3 / 6 6 6 6	24	18	Interval= 0204' Fill material	S-2A (7in) SILTY SAND, trace gravel, rock frags, slag, concrete, asphalt, brown. S-2B (11in) ORGANIC SILT, some sand, trace clay, roots, ash & cinders, fiber material, rock frags, brown to black.	
	4.0	S-3	10 14 7 17 / 6 6 6 6	24	6	Interval= 0406' Fill material	S-3 (6in) SILTY SAND, leather-like pieces, rock frags., ash & cinders, brown.	
	6.0	S-4	7 10 4 7 / 6 6 6 6	24	24	Interval= 0608' Fill material & Nat. contact.	S-4A (12in) SILTY SAND, trace gravel, leather-like material, glass, ash & cinders, glass, slag, sea shells, brown to black. S-4B (12in) ORGANIC SILT, trace clay, plant matter low plas., brown/black.	OL
	8.0	S-5	4 4 4 6 / 6 5 6 6	24	12	Interval= 0810' Natural mat.	S-5 (12in) ORGANIC SILT, trace clay, similar to S-4B.	OL
	10.0	S-6	7 10 4 7 / 6 6 6 6	24	15	Interval= 1012' Natural mat.	S-6 (12in) ORGANIC SILT, trace clay, similar to S-5, w/seashells.	OL
	12.0	S-7	6 4 8 6 / 6 6 6 6	24	24	Interval= 1214' Natural mat.	S-7 (24in) ORGANIC SILT, trace clay, similar to S-6. EOB @ 14ft bgs. Backfilled boring.	OL
	14.0							

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 boring w/4.25inID HSA,0-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.25-14 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 4-6ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB6.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB7		
DATE START: 05/04/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 8.20		
DATE COMPLETED: 05/04/1994	DATE & TIME: --/--/19-- --	CHECKED BY:	TOTAL DEPTH: 12.00		

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 12 13 / 6 6 6	18	12	Interval= 0.5-2 Asphlt/Cthr=6in Fill material	S-1 (12in) SILTY SAND, some gravel, leather-like material or plastic, brown.	
	2.0	S-2	10 5 7 6 / 6 6 6 6	24	14	Interval= 0204' Fill material	S-2 (14in) SILTY SAND, some gravel, charcoal-like pieces, tile-like pieces, nails, dk brown.	
	4.0	S-3	5 7 6 8 / 6 6 6 6	24	22	Interval= 0406' Fill material	S-3A (11in) SILTY SAND, some gravel, similar to S-2, with seashells and like fill material, inter bed of dk brown silt (2in thick). S-3B (11in) SILTY SAND, 1-2in thick interbeds of silt, brown to black.	
	6.0	S-4	1 2 1 3 / 6 6 6 6	24	24	Interval= 0608' Possible nat. material.	S-4 (24in) ORGANIC SILT/PEAT, fibrous plant roots and interbeds of silt, trace clay, dk brown.	Pt/OL
	8.0	S-5	5 3 4 3 / 6 6 6 6	24	20	Interval= 0810' Possible nat. material.	S-5 (20in) ORGANIC SILT w/peat, similar to S-4, w/more silt than peat, trace clay.	OL
	10.0	S-6	3 3 5 7 / 6 6 6 6	24	23	Interval= 1012' Possible nat. material.	S-6 (23in) ORGANIC SILT, trace clay, trace peat, similar to S-5. EOB @ 12ft bgs. Boring backfilled.	OL
	12.0							

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 boring w/4.25inID HSA,2-10ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0.5-12 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 6-8ft interval. Backfilled boring. NM/NR= Not measured or recorded on log. Low tide, no water table indicators observed.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB7.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB8
DATE START: 05/31/1994	DEPTH TO WATER: --	LOGGED BY: BW	GROUND EL.: 7.90
DATE COMPLETED: 05/31/1994	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	14 21 6 6	12	12	Interval= 0002'	S-1A (4in) ASPHALT SURFACE S-1B (8in) AGGREGATE - sand, silty sand, rock.	
	2.0	S-2	25 25 17 19 6 6 6 6	24	24	Interval= 0204'	S-2 SAND, various colors, pebble, rock frags.	
	4.0	S-3	13 13 34 26 6 6 6 6	24	24	Interval= 0406'	S-3 SAND, some gravel, poorly graded, rock frags., various colors.	
	6.0	S-4	7 10 12 6 6 6 6 6	24	12	Interval= 0608'	S-4 SAND, little gravel, few clay, rock frags.	
	8.0	S-5	9 5 6 7 6 6 6 6	24	3	Interval= 0810' Rock jammed in spoon.	S-5 CLAYEY SAND, oil-like covering, possibly start of peat layer.	
	10.0	S-6	1 3 5 2 6 6 6 6	24	3	Interval= 1012' Rock jammed in spoon.	S-6 Black clayey-like material with organic matter including shell fragments. Start of peat.	
	12.0	S-7	3 3 3 3 6 6 6 6	24	24	Interval= 1214'	S-7 SILT, organic matter (peat), brown to black. EOB @ 14ft bgs. Backfilled boring.	
	14.0							

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 boring w/4.25InID HSA,0-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 0-14 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 10-12ft interval. Backfilled boring. NM/NR= Not measured or recorded on log.

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

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING	BORING NO: SP-SB9
DATE START: 05/03/1994	DEPTH TO WATER: --	LOGGED BY: BW	GROUND EL.: 8.60
DATE COMPLETED: 05/03/1994	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.
	1.0	S-1	15 17 / 6 6	12	12	Interval= 1-2' Asphalt=0-4in Aggregate=4-8in	S-1 (12in) SAND, possible asbestos (reddish paper) pebbles, few rock frags.	
	2.0	S-2	17 25 69 37 / 6 6 6 6	24	24	Interval= 0204' Fill material	S-2 (24in) SAND, pebbles, brick, broken brake shoes (?).	
	4.0	S-3	7 9 11 12 / 6 6 6 6	24	12	Interval= 0406'	S-3 (12in) SAND, poorly graded, pebbles, shell material.	SP
	6.0	S-4	15 6 7 2 / 6 6 6 6	24	12	Interval= 0608' Possible nat. material	S-4 (12in) clayey SAND, poorly graded, rock frags, root-like vegetation. Possible start of peat.	SP
	8.0	S-5	5 2 3 4 / 6 6 6 6	24	10	Interval= 0810'	S-5 (10in) CLAYEY SAND, poorly graded, pebbles, minor amt of vegetation.	
	10.0	S-6	1 2 1 2 / 6 6 6 6	24	24	Interval= 1012'	S-6 (24in) Clayey-like material, gray-black with areas of red and roots. Peat layer.	Pt
	12.0	S-7	3 4 3 6 / 6 6 6 6	24	24	Interval= 1214'	S-7 (24in) Clayey-like material mixed w/roots and vegetation, peat, gray to reddish black.	Pt
	14.0						EOB @ 14ft bgs. Backfilled boring.	

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/4.25inID HSA,1-12ft. Performed continuous sampling w/3in split-barrels and 140lb hammer 1-14 ft bgs Screen samples for: Pb,Cu,PCB,Asbestos. Possible natural material at 6-8ft interval. Backfilled boring. NM/NR= Not measured or recorded on log. 'Soil' column may contain process wastes which give soils a highly plastic character.

ACAD NAME: RAYMARK\BORINGS_ALTERED\SP-SB9.DWG (8/25/99)

BORING LOG FOR:	RAYMARK OU2/ PHASE I GROUNDWATER			BORING NO.:	SB-201B
PROJECT NO.:				START DATE:	11-30-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY	LAC	COMPLETION: DATE:	12-02-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC. / M. HARRINGTON			MON. WELL NO.:	MW-201B
GRD. SURFACE ELEVATION:	15.0'	ELEVATION FROM	NGVD-1929	CHECKED BY:	

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							Grass surface			
2							No soil samples collected. Refer to SB-201D boring			
4							log for detail.			
6										0.0 in B.Z. &
8							Sand & gravel, trace silt based on inspection of			borehole.
10							D & W cuttings.			
12										
14										
16										
18										
20									(Fuel oil odor) Petroleum odor & sheen	
22							Petroleum odor & sheen noted on wash water & cuttings.		noted while washing out casing @ 20-28 ft.	38 ppm in B.Z. peak, no steady readings
24									bgs.	
26										
28										
30										
32										

TYPE OF DRILLING RIG:	Mobile drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID flush-joint threaded drive & wash casing. Roller-bit has carbides button rollers		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	Wire-line NQ dual wall core w/ series 6 bit.		
GROUNDWATER LEVELS:	W. L. @ 19' bgs in A.M. on 12-1-98 prior to start (inside casing).		
OTHER OBSERVATIONS:	Total water lost to FM. during coring=100-120.	BORING NO.: SB-201B	PAGE: 1 OF 5

BORING LOG FOR:	RAYMARK OU2/ PHASE I GROUNDWATER	BORING NO.:	SB-201B
PROJECT NO.:		START DATE:	11-30-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY: LAC	COMPLETION: DATE: 12-02-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC. / M. HARRINGTON	MON. WELL NO.:	MW-201B
GRD. SURFACE ELEVATION:	15.0'	ELEVATION FROM: NGVD-1929	CHECKED BY:

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)]
32										
					(core time)		Similar to above, sands & gravel with trace silt			
34							based on visual inspection of D & W cuttings.			
36										
38										
40										
							Possible cobbles from 40-42'.		Slightly harder driving casing @ 40'. Possible	
42									cobbles 40-42' roller-bit jumping.	
						dark gray-	Possible top of bedrock. 42.36' Chlorite, quartz, garnet, mica, schist.		Seat casing to 42.8' Roller-bit to 44'	0.0 in B.Z.
44						green	High angle foliation, near vertical.			& borehole.
			C-1=44-54.2' ~0920 RQD=75% Run length =10.2' Recov. " =10.0'		3 min.		~60% angle fracture @ 44-45.5'.			
46					3.5 min.		Unopen frac. near horiz. @ 45.8'			
					3.5 min.				Approx. 20 gal. lost inc.	
48					3.5 min.		Horiz. frac, w/ oxidation stains @ 47.3'		cutting rate.	

11-30-98 – 1600 casing @ 42.8'. Roller-bit from 42-44'. Clean up & secure borehole. 12-1-98 – Add fresh H_2O @ 0700. Get H_2O & set up to core.

TYPE OF DRILLING RIG:	Mobile drill B-59
METHOD OF ADVANCING BORING:	4 in. ID flush-joint threaded drive & wash casing. Roller-bit has carbides button rollers
METHOD OF SOIL SAMPLING:	N/A
METHOD OF ROCK CORING:	Wire-line NQ dual wall core w/ series 6 bit.
GROUNDWATER LEVELS:	W. L. inside casing @ 0700 (12-1-98) = 19' bgs
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK OU2/ PHASE I GROUNDWATER	BORING NO.:	SB-201B
PROJECT NO.:		START DATE:	11-30-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY: LAC	COMPLETION: DATE: 12-02-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC. / M. HARRINGTON	MON. WELL NO.:	MW-201B
GRD. SURFACE ELEVATION:	15.0'	ELEVATION FROM: NGVD-1929	CHECKED BY:

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)]
48										
					(core time) 3 min 20 sec	dark gray-green	Similar to above. Horiz. frac. w/ fresh surface @ 48.3'=machine break		Only loosing ~20 gal./ core run.	
50					2 min 50 sec					
					2 min 45 sec		Numerous high angle frac. w/ oxidation & calcite mineralization along frac. Face. From 50-51'			
52					2 min 40 sec		Horiz. jagged frac. @ 51' w/ calcite coating in places.			
					2 min 50 sec		Numerous horiz. & high angle frac. (zone) from 52-52.8'. Calcite, quartz, & _____ veins closed horiz. crack @ 53'.		Oxidation & gouge in fracture.	
54										
			C-2=54.2-64' Pen.=9.8 Rec.= RQD.=		4 min 45 sec		High angle frac. & horiz. frac. @ 55' w/ slight calcite deposition. Solid core to 59.3'.			
56					3 min 10 sec		+		~20 gal. lost during core run.	
					3 min 15 sec					
58					3 min 28 sec					
					3 min 40 sec					
60					6 min 10 sec		Low angle frac. @ 59.3' Solid core to 63'			
					6 min 10 sec					
62					6 min 12 sec					
					7 min 10 sec		Near horiz. frac. @ 63' no oxid. or calcite			
64					6 min 11 sec					

TYPE OF DRILLING RIG:	Mobile drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID flush-joint threaded drive & wash casing. Roller-bit has carbides button rollers		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	Wire-line NQ dual wall core w/ series 6 bit.		
GROUNDWATER LEVELS:	W. L. @ 19' bgs in A.M. on 12-1-98 prior to start (inside casing).		
OTHER OBSERVATIONS:	Total water lost to FM. during coring=100-120.	BORING NO.: SB-201B	PAGE: 3 OF 5

BORING LOG FOR:	RAYMARK OU2/ PHASE I GROUNDWATER	BORING NO.:	SB-201B
PROJECT NO.:		START DATE:	11-30-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY: LAC	COMPLETION: DATE: 12-02-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC. / M. HARRINGTON	MON. WELL NO.:	MW-201B
GRD. SURFACE ELEVATION:	15.0'	ELEVATION FROM: NGVD-1929	CHECKED BY:

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)]
64										
			C-3 – 64-69'		6 min 30 sec	dark	Similar to above.			
			Pen.=5.0		6 min 48 sec	gray &	Solid core to EOB @ 74.5'			
66			Rec.=5.0		7 min 12 sec	green				
			RQD=100%							
					6 min 10 sec					0.0 in B.Z. &
68					7 min					And casing
70			C-4 – 69-74.5'		5 min 40 sec					
			Pen.=5.5'		9 min 12 sec					
72			Rec.=5.3'		11 min					
			RQD=100%							
					9 min 30 sec					
74					4 min/1/2'					
			C-5=74.5-84.3'				Solid core to 75'. Drilling break between		Diff. to recover in C-5. Left	
			Pen.=9.8+0.2'		3.5 min/1/2'		C-4 & C-5		Left ~2.2' tub in core hole.	
76			Rec.=7.8'		4 min 40 sec		Horiz. frac. @ 75'		(Broke cable during recov.)	
			RQD length=72"						Packer tests, warrant	
			RQD-(pen)=61%		3 min 50 sec				further coring.	
78			" (rec)=76%		4 min					
					3 min 45 sec					
80					4 min					

12-1-98/Stopped coring @ 74.5'. 12-2-98/Packer test indicates little or no water movement in top 30' of bedrock, cont. coring to 84.5'. 12-3-98/Core addit. 2' to recover remaining core from C-5. Construct well.

TYPE OF DRILLING RIG:	Mobile drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID flush-joint threaded drive & wash casing. Roller-bit has carbides button rollers		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	Wire-line NQ dual wall core w/ series 6 bit.		
GROUNDWATER LEVELS:	W. L. @ 19' bgs in A.M. on 12-1-98 prior to start (inside casing).		
OTHER OBSERVATIONS:	Total water lost to FM. during coring=100-120.	BORING NO.: SB-201B	PAGE: 4 OF 5

BORING LOG FOR:	RAYMARK OU2/ PHASE I GROUNDWATER		BORING NO.: SB-201B
PROJECT NO.:			START DATE: 11-30-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED LAC	COMPLETION: DATE: 12-02-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC. / M. HARRINGTON		MON. WELL NO.: MW-201B
GRD. SURFACE ELEVATION:	15.0'	ELEVATION NGVD-1929	CHECKED BY:

DEPTH (FEET) 80	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)]
					3 min 50 sec	dark gray-green	Similar to above			
82					4 min					
					4 min 10 sec					
84					3 min 30 sec		Solid core			
			C-6=84-86' (cored extra 2' to pick up ~2.2' of plug left from C-5.		3 min 30 sec					
86					4 min 30 sec					
			Pen=2.0' Rec=4 RQD=100%				END OF BORING @ 86' bgs.			
							4" D & W casing to 42.8'			
							Top of bedrock at ~ 42.0'			
							Roller-bit 42-44.0'			
							NQ core 44-86' bgs.			
							Lost approx. 100-120 gal. during core runs 1-6.			

TYPE OF DRILLING RIG:	Mobile drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID flush-joint threaded drive & wash casing. Roller-bit has carbides button rollers		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	Wire-line NQ dual wall core w/ series 6 bit.		
GROUNDWATER LEVELS:	W. L. @ 19' bgs in A.M. on 12-1-98 prior to start (inside casing).		
OTHER OBSERVATIONS:	Total water lost to FM. during coring=100-120.	BORING NO.: SB-201B	PAGE: 5 OF 5

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	4847	LOCATION:	STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 201D
DATE START:	03/19/1996	DEPTH TO WATER:	8.7'	LOGGED BY: Tracy Dargan	GROUND EL.: 14.92
DATE COMPLETED:	03/20/1996	DATE & TIME:	03/21/1996/0730	CHECKED BY:	TOTAL DEPTH: 38.20

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	S-1	29 26 39 34 / 6 6 6 6	24	18	Spin 7in.casing to 5ft.bgs. grinding3.5-4.5	S-1A (4) topsoil, silty SAND, mostly fine sand, poorly graded. few silt, trace med-coarse sand brown, with grass and roots at surface S-1B (11) silty SAND, mostly fine-coarse sand, well graded, trace-few silt, dry, loose, brown S-1C (3) SAND mostly fine-med sand, poorly graded trace coarse sand, dry, loose, tan	SM SM SP
	4	S-2	3 3 5 8 / 6 6 6 6	24	9	Drive casing to 9ft. Grinding at 8.5ft.	S-2 silty SAND. mostly f sand, poorly graded, few med sand, few silt, trace-few fine-coarse angular to subangular gravel found in the top 0.5' of sample.	SM
	9	S-3	19 21 33 47 / 6 6 6 6	24	9	drive casing to 14ft. Grinding from 10-14ft.	S-3 gravelly SAND, mostly f-crs sand, well grade Few-little subangular gravel, up to 1" diam.(Qtz gneiss, K-Feldpar fragments), tan colored sediment	SW
	14	S-4	18 18 14 15 / 6 6 6 6	24	7	Pet. odor noted while advancing boring.	S-4 gravelly SAND, mostly f-crs sand, well graded, few subrounded gravel, trace silt, grey, Petroleum odor noted(PID readings = peak of 400ppm, but not consistant)	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:

Drive 7" casing with 300lb. hammer to 29'bgs. Telescope with 6"casing from 29 to 38.0' bgs. Petroleum odor noticed at 20' bgs (approx.). Approx. 250 gal. of water lost to fm. Completed as MW-201D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\201D_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	4847	LOCATION:	STRATFORD, CT	DRILLED BY:	J. Galvin-Geologic	BORING NO:	201D
DATE START:	03/19/1996	DEPTH TO WATER:	8.7'	LOGGED BY:	Tracy Dorgan	GROUND EL.:	14.92
DATE COMPLETED:	03/20/1996	DATE & TIME:	03/21/1996/0730	CHECKED BY:		TOTAL DEPTH:	38.20

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.
	19	S-5	14 12 11 13 / 6 6 6 6	24	7	drive casing to 24ft.bgs.	S-5 similar to S-4 above, tan color, not grey, very slight petroleum odor noticed.	SW
	24	S-6	24 22 21 23 / 6 6 6 6	24	5	Odor noted,will collect 3in.SS from 26-28ft.	S-6 fine-coarse GRAVEL, slough material	GW
	26	S-7	5 7 9 11 / 6 6 6 6	24	7	No recovery. 3in. spoon & 300lb. hammer	S-7 slough material, similar to above	GW
	29	S-8	15 18 24 37 / 6 6 6 6	24	16	Drive casing to 34ft. bgs.	S-8 silty SAND, mostly f-med sand, poorly graded, trace fine gravel in lower 3' of sample med sands located in 1-2' layers, few silt, tan	SM

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:

Drive 7' casing with 300lb. hammer to 29'bgs. Telescope with 6"casing from 29 to 38.0' bgs. Petroleum odor noticed at 20' bgs (approx.). Approx. 250 gal. of water lost to fm. Completed as MW-201D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\201D_B.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	4847	LOCATION:	STRATFORD, CT	DRILLED BY:	J. Galvin-Geologic	BORING NO:	201D
DATE START:	03/19/1996	DEPTH TO WATER:	8.7'	LOGGED BY:	Tracy Dorgan	GROUND EL.:	14.92
DATE COMPLETED:	03/20/1996	DATE & TIME:	03/21/1996/0730	CHECKED BY:		TOTAL DEPTH:	38.20

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.
	34	S-9	30 6 42 6 100 6 120 5	23	15	Hard driving. grey schist in wash water.	S-9 gravelly SAND, mostly f-crs sand, well graded, few-little gravel(subangular schist), trace silt, compact, tan	SW
	38	S-10	120 0 0 0 0	0		Roller bit for confirmation of bedrock. Roller bit to 38.2'. Rock fragments in wash water - water is clearing up.	S-10 no recovery, possible bedrock at 37.9 ft bgs rods were bouncing and ringing. EOB @38.2' bgs.	

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:

Drive 7" casing with 300lb. hammer to 29'bgs. Telescope with 6"casing from 29 to 38.0' bgs. Petroleum odor noticed at 20' bgs (approx.). Approx. 250 gal. of water lost to fm. Completed as MW-201D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\201D_C.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD,CT	DRILLED BY: T. Galvin-Geologic	BORING NO: 202D
DATE START: 03/19/1996	DEPTH TO WATER:	LOGGED BY: D. MacDougall	GROUND EL.: 11.66
DATE COMPLETED: 03/20/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 35.00

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	S-1	6 6 8 6 22 6 25 6	24	17	Interval - 0002 140 lb Hammer	S-1A (10) silty SAND, mostly fine sand, some med sand, some silt, root matter, topsoil,dark brown S-1B (7) sandy GRAVEL, fine to crs sand, trace silt, well graded gravel up to 1.5", fill material present (asphalt, brick), light brown Fill >= 2-feet.	SM GW
	5	S-2	77 6 66 6 90 6 120 4	12	22	Interval - 0406 140 lb Hammer	S-2 sandy GRAVEL, fine to crs sand, gravels greater than 1.5", trace silt, mostly subrounded coarse sands subrounded, light brown	GW
	9	S-3	4 6 4 6 5 6 5 6	24	7	Interval - 0911 300 lb Hammer	S-3 silty SAND, fine to medium sand, some coarse sand, little silt, light brown	SM
	14	S-4	6 6 6 6 7 6 12 6	24	10.5	Interval - 1416 300 lb Hammer	S-4 silty SAND, fine to medium sand, some silt, mostly fines, light brown	SM

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:

Used 300lb. hammer to drive 7 in. casing to 19 ft. Telescope with 6in. casing from 19ft. to EOB.
Used 140lb. hammer to drive 2in. split-barrel sampler.
Complete boring as MW-202D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\202D_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD,CT	DRILLED BY: T. Galvin-Geologic	BORING NO: 202D		
DATE START: 03/19/1996	DEPTH TO WATER:	LOGGED BY: D. MacDougall	GROUND EL.: 11.66		
DATE COMPLETED: 03/20/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 35.00		

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.
	19	S-5	6 6 4 8 / 6 6 6 6	24	6	Interval - 1921 300 lb Hammer	S-5 silty SAND, fine to med sand, some silt, trace fine gravels, dark brown	SM
	24	S-6	7 9 16 23 / 6 6 6 6	24	13	Interval - 2426 300 lb Hammer	S-6 SAND, poorly graded, mostly medium sand, little coarse sand, Trace fines, brown	SP
	29	S-7	5 6 9 9 / 6 6 6 6	24	7	Interval - 2931 300 lb Hammer	S-7 SAND, well graded, fine to crs sand, mostly medium sand, some coarse sand fragments (sub-angular and sub-rounded), 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:

Used 300lb. hammer to drive 7 in. casing to 19 ft. Telescope with 6in. casing from 19ft. to EOB.
Used 140lb. hammer to drive 2in. split-barrel sampler.
Complete boring as MW-202D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\202D_B.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD,CT	DRILLED BY: T. Galvin-Geologic	BORING NO: 202D
DATE START: 03/19/1996	DEPTH TO WATER:	LOGGED BY: D. MacDougall	GROUND EL.: 11.66
DATE COMPLETED: 03/20/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 35.00

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.
	34	S-8	48 120	6 4	10	5	Interval - 3436 140 lb Ham. 6in 300 lb Ham. 4in	S-8 gravelly SAND, poorly graded sand, med to coarse sand, some sub-angular gravels, dark brown	SP
							Bedrock >= 34.5-feet bgs.	

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:

Used 300lb. hammer to drive 7 in. casing to 19 ft. telescope with 6in. casing from 19ft. to EOB.
Used 140lb. hammer to drive 2in. split-barrel sampler.
Complete boring as MW-202D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\202D_C.DWG (9/3/99)

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-202S
PROJECT NO.:	N4236-0320			START DATE:	9/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/17/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-202S
GRD. SURFACE ELEVATION:	11.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
9/16/03	2	1.4 / 2.0	OU2-SO-202S-0002		Medium Loose	Dark Brown	Fine-medium SAND, some gravel, trace silt	SW	2" spoon	FID = 0.0 PID = 0.0
	6									
	11					Light Brown	Medium-coarse SAND, some gravel	SW		
2	16		1410							
	14	1.3 / 2.0	OU2-SO-202S-0204		Dense	Light Brown	Fine-coarse SAND, some gravel, gravel has rounded grains	SW	2" spoon cobble at 3 ft.	FID = 0.0 PID = 0.0
	15									
	16									FID = 0.0
4	14		1420							PID = 0.0
	4	0.8 / 2.0	OU2-SO-202S-0406		Dense	Light Brown	Fine-coarse SAND, some gravel	SW	2" spoon cobble at 5.5 ft.	
	18									
9/16/03	16									FID = 0.0
6	34		1435							PID = 0.0
9/17/03	12	1.0 / 2.0	OU2-SO-202S-0608		Dense	Light Brown	Fine-coarse SAND, some gravel	SW	2" spoon	
	23									
	18									FID = 0.0
8	10		0810							PID = 0.0
	9	0.9 / 2.0	OU2-SO-202S-0810		Medium Dense	Light Brown	Fine-coarse SAND, some gravel 0.1'- band of iron staining at 9 ft.	SW	2" spoon quartz cobble at 9.5 ft.	
	7									
	8									FID = 1.0
10	10		0815	0.1 ft						PID = 2.5
	1	1.0 / 2.0	OU2-SO-202S-1012	Grade	Medium Loose	Light Brown	Fine SAND, trace medium sand	SP	2" spoon	
	8									
	8									FID = 0.0
12	9		0825							PID = 0.0
	4	0.8 / 2.0	OU2-SO-202S-1214		Loose	Light Brown	Fine SAND, trace medium sand	SP	2" spoon	
	4									
	3									FID = 0.0
14	6		0830							PID = 2.5
	6	1.0 / 2.0	OU2-SO-202S-1416	14.5'	Medium Dense	Light Brown	Fine SAND, trace medium sand, bands of slightly darker	SP	3" spoon	
	9									
	12			14.7'			Fine-medium sand at 14.5, 14.7			FID = 0.4
16	12		0850							PID = 3.1

TYPE OF DRILLING RIG:	CME 75 (Rig 2)
METHOD OF ADVANCING BORING:	Drive & Wash
METHOD OF SOIL SAMPLING:	Split spoon – 2' sample length
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: SB-202S

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-202S
PROJECT NO.:	N4236-0320			START DATE:	9/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/17/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-202S
GRD. SURFACE ELEVATION:	11.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	6	1.5 / 2.0	OU2-SO-202S-1618		Medium	Light Brown	Fine SAND, trace medium sand,	SP	2" spoon	FID = 0.0
	8				Dense					PID = 0.0
	14						Fine SAND, trace medium sand, trace gravel	SP		
18	17		0900							
				EOB @ 18' bgs						

TYPE OF DRILLING RIG:	CME 75 (Rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-202S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-202SG
PROJECT NO.:	N4236-0320			START DATE:	10/15/002 @ 1400
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/15/02 @ 1545
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-202SG
GRD. SURFACE ELEVATION:	11.9 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
		NA	No sample collecting				Refer to boring log no. SB-202S for details			
2										
							Advanced 4" casing with 300 lb. Hammer to depth of 8.0 ft bgs Removed 8.0 ft. of 4" casing with soil plug in casing,			FID = 0.0 PID = 0.0 *
4							taped depth of open boring to 8.0 ft. bgs Set well @ 7.5 ft bgs, water level measured in MW-202S			@ 1500
							@ 7.89' bgs, soil observed to be sand & gravel			
6										
8										
				EOB @ 8' bgs						

TYPE OF DRILLING RIG:	CME 75	Note: * - breathing zone ambient air screening		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash			
METHOD OF SOIL SAMPLING:				
METHOD OF ROCK CORING:				
GROUNDWATER LEVELS:	WL – 8.12 bgs for MW-202S			
OTHER OBSERVATIONS:	FID (B) PID (B);	BORING NO.: SB-202SG		PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 203D
DATE START: 03/21/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 13.24
DATE COMPLETED: 03/21/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 30.00

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	S-1	10 29 22 22 / 6 6 6 6	24	10	Spin 7in.casing to 4ft. bgs.	S-1A (3) Silty SAND, mostly fine sand, few silt grass and root material, dark brown S-1B (7) silty SAND, mostly fine sand, poorly graded, few silt, trace gravelin nose of spoon brown, damp (from recent precipitation)	SM SM
	4	S-2	85 54 43 40 / 6 6 6 6	24	13	Drive casing to 09ft. bgs.	S-2 sandy GRAVEL, mostly subangular to subrounded gravel, up to 1" diameter, little fine to med sand, tan	GW
	9	S-3	25 34 39 43 / 6 6 6 6	24	12	DUP location tight& grinding at 12 to 14ft.	S-3 gravelly SAND, mostly med sand, poorly graded, little subraunded gravel, up to 1" diam. trace coarse sand, tan	SP
	14	S-4	10 12 14 22 / 6 6 6 6	24	13	drive casing to 19 ft. bgs	S-4 SAND, mostly med sand, poorly graded, trace fine subangular gravel, tan	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:

Drive 7" casing to 19 ft bgs. Telescope with 6" casing from 19ft. to 28.3 ft. bgs. 2" split-barrel sampler used with 140 lb. hammer. Poss. bedrock surface at 29.75' bgs. EOB at 30.0' bgs, with roller-bit. 140 gal. of water lost to Fm. Boring completed as MW-203D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\203D_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 203D
DATE START: 03/21/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 13.24
DATE COMPLETED: 03/21/1996	DATE & TIME: --/--/19-/ --	CHECKED BY:	TOTAL DEPTH: 30.00

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.
	19	S-5	3 7 10 14 / 6 6 6 6	24	13	Telescope with 6in. casing to 24ft. bgs.	S-5 SAND, mostly f-sand, poorly graded, trace med sand, trace silt, tan, no structure noted	SP
	24	S-6	7 7 14 20 / 6 6 6 6	24	18	Casing hard to drive at 28.3ft schist in wash.	S-6 similar to S-5	SP
	29	S-7	48 120 / 6 4	10	7	Roller bit to 30'bgs, grey schist fragment	S-7 (6) gravelly SAND, mostly fine to coarse sand, well graded, little subangular gravel, tan S-7B (1), dark grey mica-schist Bedrock >= 29.5-feet bgs - outcrops nearby.	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:

Drive 7" casing to 19 ft bgs. Telescope with 6" casing from 19ft. to 28.3 ft. bgs. 2" split-barrel sampler used with 140 lb. hammer. Poss. bedrock surface at 29.75' bgs. EOB at 30.0' bgs, with roller-bit. 140 gal. of water lost to Fm. Boring completed as MW-203D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\203D_B.DWG (9/3/99)

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-203S
PROJECT NO.:	N4236-0320			START DATE:	9/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/17/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-203S
GRD. SURFACE ELEVATION:	13.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	2				Loose	Dark Brown	0'-0.5' - Fine-medium SAND, trace silt, trace gravel	SP	2" spoon	
	4	1.2'/2.0'	OU2-SO-203S-0002			Brown	0.5'-2' - Fine-medium SAND, trace silt, trace gravel		some organics, roots, charcoal piece at 1.5 ft., glass at 2 ft.	
	5									PID = 0.0
2	5		1220							FID = 0.0
	5				Medium		Fine-coarse SAND, some gravel, trace silt, spoon blocked	SW	2" spoon	
	7	0.6'/2.0'	OU2-SO-203S-0204		Dense		By brick		cobble-sized brick at 4 ft.	
	8									PID = 0.0
4	14		1230							FID = 0.0
	13				Dense	Light Brown	Medium-coarse SAND, some gravel		2" spoon	
	17	0.9'/2.0'	OU2-SO-203S-0406						cobble at 4.5, 5.0, and 5.8 ft.	
	19									PID = 0.0
6	20		1240							FID = 0.0
	4						Medium-coarse SAND, some gravel, trace fine sand		2" spoon	
	18	0.8'/2.0'	OU2-SO-203S-0608				Several large gravel pieces			
	15									PID = 2.0
8	17		1250							FID = 0.0
	29						Coarse SAND, some gravel, trace medium sand	SP	2" spoon	
	16	1.1'/2.0'	OU2-SO-203S-0810						cobble at 9.0 and 9.8 ft.	
	26									PID = 0.0
10	25		1310							FID = 0.0
	12						Medium-coarse SAND, some gravel, more coarse sand	SW	2" spoon	
	19	0.7'/2.0'	OU2-SO-203S-1012				At 10 ft. fines down to 12 ft.			
	16									PID = 1.8
12	24		1320							FID = 0.0
	13				Medium		Medium-coarse SAND, some gravel	SP	2" spoon	
	11	0.8'/2.0'	OU2-SO-203S-1214	3" grading zone	Dense					
	7						Fine-medium SAND, trace coarse gravel			PID = 0.0
14	15		1335							FID = 0.0
	6				Medium		Fine-medium SAND		3" spoon	
	7	0.8'/2.0'	OU2-SO-203S-1416		Dense					
	9			15'			0.1' layer of fine-coarse SAND			PID = 0.0
16	11		1345				Fine-coarse SAND			FID = 0.0

TYPE OF DRILLING RIG:	CME 45 (rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	9.3 in MW-203D		
OTHER OBSERVATIONS:		BORING NO.: SB-203S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-203S
PROJECT NO.:	N4236-0320			START DATE:	9/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/17/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-203S
GRD. SURFACE ELEVATION:	13.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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	1.2' / 2.0'	OU2-SO-203S-1618		Loose	Light Brown	Fine-medium SAND	SP	2" spoon	
	3									
	4						0.05' band of iron staining at 17.6 ft.			PID = 0.0
18	6		1300							FID = 0.0
				EOB @ 18' bgs						

TYPE OF DRILLING RIG:	CME 45 (rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	9.3' in MW-203D		
OTHER OBSERVATIONS:		BORING NO.: SB-203S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-203SG
PROJECT NO.:	N4236-0320			START DATE:	10/1/002
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/1/02
DRILLED BY (Company/Driller):	ADT/ Marques Larabie			MON. WELL NO.:	MW-203SG
GRD. SURFACE ELEVATION:	13.1 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
							Direct push- no samples logged for soil profile details,			
2							See boring log for MW203S. 5" open casing driven 4 ft. Then removed with soil.			
							3" casing with point drive, then well built + casing removed.			
4										
										FID = 0.0 PID = 0.0
6										
8				EOB @ 7.8' bgs						

TYPE OF DRILLING RIG:	Truck-mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL = 9.6' at MW203S			
OTHER OBSERVATIONS:	Filed screening for breathing zone only	BORING NO.:	SB-203SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: T. Galvin-Geologic	BORING NO: 204D		
DATE START: 03/21/1996	DEPTH TO WATER: --	LOGGED BY: D. MacDougall	GROUND EL.: 11.5		
DATE COMPLETED: 03/22/1996	DATE & TIME: --/--/19--/ --	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.
	0	S-1	2 5 24 14 / 6 6 6 6	24	22	Interval = 0002	S-1 silty SAND, fine to medium sand, some silt, trace coarse sand, root matter present, fill material present (ceramic material), dark brown	SM
	4	S-2	8 4 4 4 / 6 6 6 6	24	8	Interval = 0406	S-2 silty SAND, fine to medium sand, some silt, little coarse sand, brown	SM
	9	S-3	37 54 43 34 / 6 6 6 6	24	12	Interval = 0911	S-3 gravelly SAND, poorly graded sand, medium to coarse sand, trace fine sand, some fine gravels (sub-rounded), brown	SP
	14	S-4	25 26 23 24 / 6 6 6 6	24	5	Interval = 1416	S-4 SAND, poorly graded sand, fine to medium sand, trace silt, trace coarse (sub-rounded) gravel (1.5"), light 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: caring time per foot of rock
PEN - Penetration length of sampler
REC - Length of sample recovered
▽ - Natural groundwater table

NOTES:

Drive and wash with 7in. casing to 19ft. Telescope with 6in. casing to EOB. Roller-bit resistance at approx. 8ft. bgs. Used 140 lb. hammer to drive 2" split-barrel sampler, except at 24-26 ft. interval used 3" sampler to improve recovery. Bedrock @ 51'bgs (approx.) very weathered. Completed boring as MW-204D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\204D_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: T. Galvin-Geologic	BORING NO: 204D
DATE START: 03/21/1996	DEPTH TO WATER: --	LOGGED BY: D. MacDougall	GROUND EL.: 11.5
DATE COMPLETED: 03/22/1996	DATE & TIME: --/--/19--/ --	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.
	19	S-5	8 12 14 20	24	6	Interval = 1921	S-5 SAND, poorly graded, medium to coarse sand trace fines, gray	SP
			17 6					
	24	S-6	6 9 16	24	15	Interval = 2426	S-6 SAND, well graded, fine to coarse sand, little silt, trace cobbles (rounded fine gravel) (1/4"), brown	SW
	29	S-7	12 15 18 16	24	12	Interval = 2931	S-7 SAND, well graded sand, fine to coarse sand, little silt, 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:

Drive and wash with 7in. casing to 19ft. Telescope with 6in. casing to EOB. Roller-bit resistance at approx. 8ft. bgs. Used 140 lb. hammer to drive 2" split-barrel sampler, except at 24-26 ft. interval used 3" sampler to improve recovery. Bedrock @ 51'bgs (approx.) very weathered. Completed boring as MW-204D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\204D_B.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: T. Galvin-Geologic	BORING NO: 204D
DATE START: 03/21/1996	DEPTH TO WATER: --	LOGGED BY: D. MacDougall	GROUND EL.: 11.5
DATE COMPLETED: 03/22/1996	DATE & TIME: --/--/19--/ --	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.
	34	S-8	7 10 14 20 / 6 6 6 6	24	6	Interval = 3436	S-8 SAND, poorly graded, fine to medium sand, little silt, brown	SP
	39	S-9	10 12 19 21 / 6 6 6 6	24	14	Interval = 3941	S-9 SAND, poorly graded sand, fine to medium sand, little silt, brown	SP
	44	S-10	10 15 35 55 / 6 6 6 6	24	15	Interval = 4446	S-10A (9) SAND, poorly graded sand, medium to coarse sand, trace fines, trace fine gravel light brown S-10B (6) SAND, well graded sand, fine to coarse sand, trace silt, trace fine rounded gravel, brown	SP 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:

Drive and wash with 7in. casing to 19ft. Telescope with 6in. casing to EOB. Roller-bit resistance at approx. 8ft. bgs. Used 140 lb. hammer to drive 2' split-barrel sampler, except at 24-26 ft. interval used 3' sampler to improve recovery. Bedrock @ 51'bgs (approx.) very weathered. Completed boring as MW-204D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\204D_C.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: T. Galvin-Geologic	BORING NO: 204D
DATE START: 03/21/1996	DEPTH TO WATER: --	LOGGED BY: D. MacDougall	GROUND EL.: 11.5
DATE COMPLETED: 03/22/1996	DATE & TIME: --/--/19--/ --	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.
	49	S-11	20 16 26 25 / 6 6 6 6	24	16	Interval = 4951 300 lb Hammer Rock @ 51 feet	S-11 sandy GRAVEL, poorly graded gravel, mostly f gravel, trace coarse (sub-rounded) gravel, some medium to coarse sand, trace fines, brown	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:

Drive and wash with 7in. casing to 19ft. Telescope with 6in. casing to EOB. Roller-bit resistance at approx. 8ft. bgs. Used 140 lb. hammer to drive 2" split-barrel sampler, except at 24-26 ft. interval used 3" sampler to improve recovery. Bedrock @ 51'bgs (approx.) very weathered. Completed boring as MW-204D.

ACAD NAME: RAYMARK\BORINGS_ALTFRED\204D_D.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 205D
DATE START: 03/26/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 18.24
DATE COMPLETED: 03/27/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 63.25

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	N/A				Interval(0-2.7) Hand dig 2.7ft to clear utilty	Hand dug, silty SAND, some silt, trace gravel ashalt present	SM
	4	S-1	12 6 20 6 32 6	21	14	Interval = 0406 Spoon stopped @ 21 inches.	S-1A (3) organic SILT, peat present, dark grey S-1B (10) silty SAND, mostly fine sand, poorly graded, few silt, trace medium sand, trace shell fragments, tan to brown S=1C (1) asphalt-like magterial, very fine grained with coarse fragments, black-dark grey	OL SM
	9	S-2	28 6 12 6 7 6 14 6	24	6	Interval = 0911	S-2 silty SAND, mostly fine to medium sand, poorly graded, little silt, trace fine angular gravel, dark brown	SM
	14	S-3	17 6 40 6 51 6 58 6	24	8	Interval = 1416	S-3 gravelly SAND, mostly f-crs sand, well graded, few subrounded fine to coarse gravel, trace silt, dense material, 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:

Advance 7" casing to 4'bgs. Telescope 6" casing from 4' to 62.75'bgs. Used 300lb. hammer to drive casing, used 140lb. hammer to drive 2" split-barrel sampler. Approx. 150 gal. of water lost to Fm.
Boring completed as MW-205D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\205D_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 205D
DATE START: 03/26/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 18.24
DATE COMPLETED: 03/27/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 63.25

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.
	19	S-4	15 10 8 9 / 6 6 6 6	24	12	Interval = 1921	S-4 silty SAND, mostly fine sand, poorly graded, few silt, trace medium sand, tan to orange (Color change only, composition same), alternating layers, approx. 2" thick	SM
	24	S-5	12 15 21 26 / 6 6 6 6	24	10	Interval = 2426	S-5 SAND, mostly medium sand, poorly graded trace silt, trace fine sand, tan	SP
	29	S-6	13 18 20 25 / 6 6 6 6	24	13	Interval = 2931	S-6 SAND, mostly f-med sand, poorly graded sand, trace silt, tan with alternating bands of brown color, no change in composition, bands of brown approx. 0.25" thick	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:

Advance 7" casing to 4'bgs. Telescope 6" casing from 4' to 62.75'bgs. Used 300lb. hammer to drive casing, used 140lb. hammer to drive 2" split-barrel sampler. Approx. 150 gal. of water lost to Fm.
Boring completed as MW-205D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\205D_B.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 205D
DATE START: 03/26/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 18.24
DATE COMPLETED: 03/27/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 63.25

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.
							Top of silty sand at 32.5-feet.	
	34	S-7	7 14 23 25 / 6 6 6 6	24	15	Interval = 3436	S-7 silty SAND, mostly fine sand, poorly graded sand. trace-few silt, trace coarse sand, tan	SM
	39	S-8	7 9 10 13 / 6 6 6 6	24	22	Interval = 3941	S-8 silty SAND, mostly fine sand, poorly graded sand, little silt, tan, no structure or changes noted	SM
	44	S-9	8 8 14 7 / 6 6 6 6	24	21	Interval = 4446	S-9 silty SAND, similar to S-8	SM

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:

Advance 7" casing to 4'bgs. Telescope 6" casing from 4' to 62.75'bgs. Used 300lb. hammer to drive casing, used 140lb. hammer to drive 2" split-barrel sampler. Approx. 150 gal. of water lost to Fm.
Boring completed as MW-205D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\205D_C.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 205D
DATE START: 03/26/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 18.24
DATE COMPLETED: 03/27/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 63.25

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.
	49	S-10	6 6 12 6 16 6 19 6	24	0	Interval = 4951 No Recovery.	S-10 no recovery from split spoon	
	50	S-11	0 6 0 6 0 6 0 6	24	1	Interval = 5052 No recovery,WOR	S-11 no recovery, poly sample bag placed at nose of spoon to hold soil in spoon, did not work	
							52-feet base of silty, fine sand strata.	
	54	S-12	20 6 37 6 47 6 89 6	24	13	Interval = 5456	S-12 gravelly, silty SAND, mostly fine to medium sand, poorly graded sand, few-little sub-angular to rounded gravel (quartz and mica shist) up to 1" diameter, few silt, tan	SP
	59	S-13	32 6 37 6 42 6 49 6	24	13	Interval = 5961 Bedrock @ 62.6'	S-13 gravelly SAND, mostly medium to coarse sand, well graded sand, little-some rounded to angular fine-coarse gravel, trace fine sand, trace silt, tan to brown	SW
							Bedrock >= 63-feet.	
	63	S-14	120 0	0	0	No penetration. No recovery.	S-14 spoon does not penetrate, rods bouncing and ringing, mica shist fragments in wash water, consistant size and composition indicate bedrock, no recovery EOB 63.25' bgs.	

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:

Advance 7" casing to 4'bgs. Telescope 6" casing from 4' to 62.75'bgs. Used 300lb. hammer to drive casing, used 140lb. hammer to drive 2" split-barrel sampler. Approx. 150 gal. of water lost to Fm.
Boring completed as MW-205D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\205D_D.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 205D
DATE START: 03/26/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 18.24
DATE COMPLETED: 03/27/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 63.25

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.
							SEE PREVIOUS PAGE	

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:

Advance 7" casing to 4'bgs. Telescope 6" casing from 4' to 62.75'bgs. Used 300lb. hammer to drive casing, used 140lb. hammer to drive 2" split-barrel sampler. Approx. 150 gal. of water lost to Fm.
Boring completed as MW-205D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\205D_E.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 206D		
DATE START: 03/28/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 11.59		
DATE COMPLETED: 04/01/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 66.50		

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	S-1	5 14 24 51 / 6 6 6 6	24	19	Interval = 0002 No Sample Taken	S-1A (4) silty SAND, mostly fine sand poorly graded, little silt, grass and root mat on surface and interwoven, brown S-1B (5) sandy SILT, mostly silt, some fine sand, trace roots, brown S-1C (10) gravelly, silty SAND, mostly fine, poorly graded sand,few silt,few gravel,light brown	SM ML SM
	4	S-2	11 6 3 4 / 6 6 6 6	24	5	Interval = 0406	S-2 silty GRAVEL, mostly angular, coarse to fine gravel, some silt, trace fine sand, gravel is quartz, gneiss, feldspar, brown	GM
	9	S-3	5 4 4 2 / 6 6 6 6	24	5	Interval = 0911 Telescoping Starts at 9 ft.	S-3 PEAT, brown	Pt
	14	S-4	4 2 2 9 / 6 6 6 6	24	15	Interval = 1416	S-4A (8) gravelly SAND, mostly well graded, fine-coarse sand, few little sub-angular fine to coarse gravel, brown S-4B (7) silty SAND, mostly fine sand, poorly graded, little silt, trace medium sand trace fine gravel, brown	SW SM

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:

Spin 7" casing to 1.5'bgs. Drive 7" casing to 9'bgs. Telescope with 6"casing from 9'. Use 300 lb. hammer to drive casing and 140lb. hammer to drive 2" split-barrel sampler. No samples collected from 0002 and 0406 int. Lost approx. 100 gal of water to the formation. Completed boring as MW-206D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\206D_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	4847	LOCATION:	STRATFORD, CT	DRILLED BY:	J. Galvin-Geologic	BORING NO:	206D
DATE START:	03/28/1996	DEPTH TO WATER:	--	LOGGED BY:	TRACY DORGAN	GROUND EL.:	11.59
DATE COMPLETED:	04/01/1996	DATE & TIME:	--/--/19--/ --	CHECKED BY:		TOTAL DEPTH:	66.50

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.
	19	S-5	49 6 32 6 22 6 21 6	24	13	Interval = 1921	S-5A (0.5) clayey SILT, mostly silt, few clay, trace fine sand, grey S-5B (11.5) gravelly SAND, mostly fine to coarse well graded sand, little subangular gravel, up to 1" diam, grey with and orange zone S-5C (1) sandy SILT, mostly silt, little fine sand, grey	ML SW
	24	S-6	9 6 16 6 19 6 20 6	24	1	Interval = 2426 No sample taken	S-6 gravelly SAND, similar to S-5B	SW
	29	S-7	11 6 18 6 13 6 12 6	24	12	Interval = 2931	S-7 gravelly SAND, similar to S-5B	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:

Spin 7" casing to 1.5'bgs. Drive 7" casing to 9'bgs. Telescope with 6"casing from 9'. Use 300 lb. hammer to drive casing and 140lb. hammer to drive 2" split-barrel sampler. No samples collected from 0002 and 0406 int. Lost approx. 100 gal of water to the formation. Completed boring as MW-206D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\206D_B.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	4847	LOCATION:	STRATFORD, CT	DRILLED BY:	J. Galvin-Geologic	BORING NO:	206D
DATE START:	03/28/1996	DEPTH TO WATER:	--	LOGGED BY:	TRACY DORGAN	GROUND EL.:	11.59
DATE COMPLETED:	04/01/1996	DATE & TIME:	--/--/19--/ --	CHECKED BY:		TOTAL DEPTH:	66.50

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.
	34	S-8	10 12 13 13 / 6 6 6 6	24	10	Interval = 3436	S-8 gravelly SAND, similar to S-5B	SW
	39	S-9	7 14 15 16 / 6 6 6 6	24	12	Interval = 3941	S-9 SAND, mostly fine to coarse sand, well graded trace-few rounded gravel, up to 1' diameter, trace silt, tan	SW
	44	S-10	6 10 16 21 / 6 6 6 6	24	6	Interval = 4446	S-10 SAND, similar to S-9	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:

Spin 7" casing to 1.5'bgs. Drive 7" casing to 9'bgs. Telescope with 6"casing from 9'. Use 300 lb. hammer to drive casing and 140lb. hammer to drive 2" split-barrel sampler. No samples collected from 0002 and 0406 int. Lost approx. 100 gal of water to the formation. Completed boring as MW-206D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\206D_C.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	4847	LOCATION:	STRATFORD, CT	DRILLED BY:	J. Galvin-Geologic	BORING NO:	206D
DATE START:	03/28/1996	DEPTH TO WATER:	--	LOGGED BY:	TRACY DORGAN	GROUND EL.:	11.59
DATE COMPLETED:	04/01/1996	DATE & TIME:	--/--/19--/ --	CHECKED BY:		TOTAL DEPTH:	66.50

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.
	49	S-11	8 8 21 26 / 6 6 6 6	24	11	Interval = 4951	S-11 gravelly SAND, mostly medium to coarse sand well graded, little subrounded fine to coarse gravel, trace to few fine sand, trace silt, tan	SW
	54	S-12	25 20 21 29 / 6 6 6 6	24	14	Interval = 5456	S-12 gravelly SAND, similar to S-11, tan, lower 5' of sample is reddish orange stained	SW
	59	S-13	0 1 12 14 / 8 4 6 6	24	18	Interval = 5961 1st blow is fro m wt. of rods.	S-13 silty SAND, mostly fine sand, poorly graded little to some silt, olive green to tan, some plasticity	SM

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:

Spin 7' casing to 1.5'bgs. Drive 7' casing to 9'bgs. Telescope with 6"casing from 9'. Use 300 lb. hammer to drive casing and 140lb. hammer to drive 2' split-barrel sampler. No samples collected from 0002 and 0406 int. Lost approx. 100 gal of water to the formation. Completed boring as MW-206D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\206D_D.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 206D
DATE START: 03/28/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 11.59
DATE COMPLETED: 04/01/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 66.50

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.
	64	S-14	43 29 120 / 6 6 6	18	15	Interval = 6466 Rock at approx. 65.5 feet.	S-14 sandy GRAVEL, mostly fine to coarse angular gravel, some fine to coarse sand, trace silt, tan to olive green	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:

Spin 7" casing to 1.5'bgs. Drive 7" casing to 9'bgs. Telescope with 6"casing from 9'. Use 300 lb. hammer to drive casing and 140lb. hammer to drive 2" split-barrel sampler. No samples collected from 0002 and 0406 int. Lost approx. 100 gal of water to the formation. Completed boring as MW-206D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\206D_E.DWG (9/3/99)

BORING LOG FOR:	Raymark/ OU2 / Phase I Groundwater			BORING NO.:	SB-206M
PROJECT NO.:				START DATE:	10/22/97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/22/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-206M+S
GRD. SURFACE ELEVATION:	12.21'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							Grass surface			
	0.0	5.5/10	0830 S-1: 0'-10.0'			Dark Brown	(f) SAND <30% some silt, <30% some organics, <3% Organics, 3% Trace clay	SP	Top soil	
2	0.0 / 0.0					Light Gray	(f) SAND, <30% some angular (f) gravel, <15% little silt	SP		
	0.0 / 0.0					Light Gray				
4	0.0 / 0.0									
	1.4 / 0.0									
6						Dark Brown Yellowish Orange				
							(f) SAND ,30% some silt ,30% some (f-c) Gravel (angular to rounded, ,3" diam) <3%			
8							Trace silt			
10										
		5/5	0900 S-2: 10.0'-15.0'				(f) SAND, <30% some gravel (rounded <2" Diam), Little, (m-c) sand, trace silt			
12	0.0						Fine to coarse SAND <15% little gravel <2" Diam)	SW		
	0.0 / 0.0									
14	0.0 / 0.0									
	0.0 / 0.0						(f-c) SAND & GRAVEL (f-c, rounded, <1" diam)	SW/GP		
16	0.0/0.7 / 0.0/00	5/10	0920 S-3			Yellowish Orange	(f-c) SAND < 15% little gravel (rounded <0.5" Diam)	SW	2" fell out of sampler	

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:	DTW is 8.5 fbgs @ MW 206D		
OTHER OBSERVATIONS:	Voc Headspace sampling from 20-38 every 2.5 feet	BORING NO.: SB-206M	PAGE: 1 OF 3

BORING LOG FOR:	Raymark/ OU2 / Phase I Groundwater			BORING NO.:	SB-206M
PROJECT NO.:				START DATE:	10/22/97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/22/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-206M+S
GRD. SURFACE ELEVATION:	12.21'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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										
	0.0/0.7					Yellowish				
	0.0/1.8					Orange		SW		
	0.0/0.9		S-3: 15.0'-25.0'				(f-c) SAND & GRAVEL (f rounded,<0.5" diam)			
18	0.0/2.7							SW/GP		
	0.8									
	1.9									
	4.1									
20										
										20-22.5=1.1 ppm
22										
									Lost 2 feet of sample	
24										
	2.7						(m-c) SAND, t. gravel (fine, rounded,<0.25" diam)			
26	2.4	10/13	1020 S-4			Gray	Diam.)	SP		25-27.6=6.0
	2.1		S-4: 25.0'-35.0'							
	0.4									
	0.5						(f-c) SAND, some gravel (fine, rounded, <0.5")			27.5-30.0=2.8
28	0.9						Trace <30% silt	SW		
	1.6									
	0.1									
	0.0									
30	3.0									30-32.5=7.1
	0.0					Yellowish				
	0.0					Orange	- gravel (<2" diam)			
	1.7									
32	1.1									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:	PID cal ckecked prior to Headspace 106 ppm w/100 ppm Isobutylene		
OTHER OBSERVATIONS:	" " after the " 111 ppm " " "	BORING NO.: SB-206M	PAGE: 2 OF 3

BORING LOG FOR:	Raymark/ OU2 / Phase I Groundwater			BORING NO.:	SB-206M
PROJECT NO.:				START DATE:	10/22/97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/22/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-206M+S
GRD. SURFACE ELEVATION:	12.21’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 32	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 1.7		(cont.) S-4 13 ft.			Yellowish orange	See page 2	SW		32.5-35.0=3.1
34	1.2 2.3					↓				
	0.5 1.6					↓	(f) SAND, trace silt, no gravel	SP		35.0-38.0=2.4
36	1.7					↓				
						↓	(f-m) SAND, <15% little gravel, rounded <1” diam). trace silt	SP		
38						↓				
			EOB 38							

TYPE OF DRILLING RIG:	Sonic		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	6” + 8” vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4” vibrate + spin		
METHOD OF ROCK CORING:	4” vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-206M	PAGE: 3 OF 3

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-206MR
PROJECT NO.:	N4236-0320			START DATE:	1/8/03
LOGGED BY:	G. Quinn	TRANSCRIBED BY:	LAH	COMPLETION DATE:	1/9/03
DRILLED BY (Company/Driller):	Roger Buley			MON. WELL NO.:	MW-206MR
GRD. SURFACE ELEVATION:	11.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
							See SB-206M boring log from 10/22/97 for material		4 ¼" hollow stem augers used to 15', then pulled and 4" casing used with drive and wash	
10							Classification and description			
20										
30										
40				EOB @ 35' bgs						

TYPE OF DRILLING RIG:	Mobil B-59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 ¼" H.S.A. to 15', then drive & wash with a 4" casing			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	6.3' bgs while drilling			
OTHER OBSERVATIONS:		BORING NO.:	SB-206MR	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-206SR
PROJECT NO.:	N4236-0320			START DATE:	12/18/02
LOGGED BY:	Garrett Quinn	TRANSCRIBED BY:	LJD	COMPLETION DATE:	12/19/02
DRILLED BY (Company/Driller):	ADT/ Roger Buley			MON. WELL NO.:	MW-206SR
GRD. SURFACE ELEVATION:	12.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
							See boring log MW-206M+S for material classification			
5							And information.			
							No soil samples taken.			
10							Replacement boring/well.			
15										
20										
25				EOB @ 23.5' bgs						

TYPE OF DRILLING RIG:	Mobile drill B-59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	140 # safety hammer, 4" casing, 4 ¼ " HSAs, 300 lb. hammer, drive + wash			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	N/A			
OTHER OBSERVATIONS:		BORING NO.:	SB-206SR	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207B
PROJECT NO.:	N4236-0320			START DATE:	12/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	12/20/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-207B
GRD. SURFACE ELEVATION:	20.7	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
							See boring log for SB207B for soil profile details			
10									Light brown wash water	PID = 0.0 NS FID = 0.0
						Light Brown	Fine-coarse SAND	SW	Drilling going slower, hard layer	PID = 0.0 BZ FID = 0.0
20						Light Brown	Fine-medium GRAVEL, some coarse sand, trace shell Possibly old roadbed	GW		
						Light Brown	Fine-coarse SAND, trace silt, some gravel	SW		PID = 0.0 NS FID = 0.0
30										PID = 0.0 BZ FID = 0.0
										PID = 0.0 NS FID = 0.0
40										PID = 0.0 BZ FID = 0.0
						Light Brown	Fine-coarse SAND, some fine gravel, trace medium gravel	SW		
50										
60										
										PID = 0.0 NS FID = 0.0
70										PID = 0.0 BZ FID = 0.0
80										

TYPE OF DRILLING RIG:	CME 75	Notes: BZ – breathing zone NS – near source (wash water outflow)	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Visual check of cuttings only		
METHOD OF ROCK CORING:	Nx		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-207B	PAGE: 1 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207B
PROJECT NO.:	N4236-0320			START DATE:	12/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	12/20/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-207B
GRD. SURFACE ELEVATION:	20.7	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
						Light Brown	Fine-coarse SAND, some fine gravel, trace medium gravel	SW	Light brown wash water	
82										
										PID = 0.0 NS FID = 0.0
84				Top of Bedrock						PID = 0.0 BZ FID = 0.0
						White/ Green/	Schist; some quartz		Rock is extremely hard, slow going, begin losing water at 84.5'	
86				Bottom of Socket		Gray				
	7.5 min/ft		Run 1 –86 = 91' RQD = 3.3/5 = 66% Recovery = 5'/5'		Medium	Gray-	Schist, foliations 20° from vertical, trace quartz veining.	Massive		
88	5.5 min/ft				Hard	Green			Light gray wash water	
	3.5 min/ft							Broken		
90	4.0 min/ft								Lost ~20 gal on run 1	
	4.5 min/ft									PID = 0.0 NS FID = 0.0
92	3.5 min/ft		Run 2 – 91' - 93' RQD = 0 %		Medium Soft		(Highly fractured zone), calcite	Very		PID = 0.0 BZ FID = 0.0
	4.0 min/ft		Recovery = 1.9/2				Secondary growth on surface of fractures	Broken		
94	4.5 min/ft		Run 3 – 93' – 96'		Medium		Trace pyrite on fracture surfaces	Broken	Lost ~30 gal on run 2	
	4.5 min/ft		Recovery 2.5/3 RQD = 83%		Hard		Similar to above, several near			
96	5.0 min/ft						Horizontal drillers breaks (not shown)		Lost ~ 30 gal on run 3	

TYPE OF DRILLING RIG:	CME 75	Notes: BZ – breathing zone NS – near source (wash water outflow)	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Visual check of cuttings only		
METHOD OF ROCK CORING:	Nx		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-207B	PAGE: 2 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207B
PROJECT NO.:	N4236-0320			START DATE:	12/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	12/20/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-207B
GRD. SURFACE ELEVATION:	20.7	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
96										
	5.0 min/ft						Note – due to long fragments from ~ 93 – 96', cannot Retrieve last 3' and cannot drill further without jamming core			
98							Barrel. Will clean out with 3" rollerbit before setting well			PID = 0.0 NS FID = 0.0
										PID = 0.0 BZ FID = 0.0
100				EOB @ 99' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: BZ – breathing zone NS – near source (wash water outflow)	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Visual check of cuttings only		
METHOD OF ROCK CORING:	Nx		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-207B	PAGE: 3 OF 3

TtNUS Form 0018

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 207D
DATE START: 04/02/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 20.27
DATE COMPLETED: 04/04/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 104.40

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	S-1	5 10 10 19 / 6 6 6 6	24	19	Interval = 0002	S-1A (2) silty SAND, mostly fine sand, poorly graded, few-little silt, trace debris (glass and metal), brown S-1B (2) SAND, mostly fine sand, poorly graded, trace-few silt, dry, reddish brown S-1C (15) SAND, mostly fine-medium sand poorly graded, trace silt, light tan, no structure	SM SP
	4	S-2	13 6 7 9 / 6 6 6 6	24	9	Interval = 0406	S-2 silty SAND, mostly fine sand, poorly graded, little silt, trace shell fragments, greyish-tan	SM
	9	S-3	120 32 26 20 / 6 6 6 6	24	14	Interval = 0911 300 lb. Hammer for last 18'.	S-3A (2) silty, sandy GRAVEL, mostly fine gravel, little fine-medium sand, few silt, tan, very dense and tight S-3B (4) sandy GRAVEL, mostly angular gravel, little sand, trace silt, black, slightly sticky, creosote or asphalt odor S-3C (8) silty, sandy GRAVEL, similar to 3A	GM GP
	14	S-4	12 13 19 22 / 6 6 6 6	24	3	Interval = 1416	S-4 sandy GRAVEL, mostly sub-rounded to s-ang fine to coarse gravel, some fine to medium sand, tan	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:

Drive and wash 7in. casing. Telescope with 6in. casing from 19ft. to 103.7ft. A sheen was noted in the wash water during clean-up on 4-2-96. Rollerbit through cobble from 88-88.75'. Bedrock at approx. 103.7' bgs. Completed boring as MW-207D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\207D_A.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 207D
DATE START: 04/02/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 20.27
DATE COMPLETED: 04/04/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 104.40

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.
	19	S-5	12 15 14 12 / 6 6 6 6	24	8	Interval = 1921	S-5 silty SAND, mostly f sand, poorly graded, few to little silt, trace medium sand, trace fine gravel, tan ~4-inches fine gravel wash on top of sample.	SM
	24	S-6	30 24 29 20 / 6 6 6 6	24	10	Interval = 2426	S-6A (7) gravelly SAND, mostly fine to coarse sand, well graded, little sub-rounded gravel, brown.	SW
							S-6B (3) silty SAND, mostly fine sand, poorly graded, few to little silt, reddish brown	SM
	29	S-7	12 14 16 29 / 6 6 6 6	24	15	Interval = 2931	S-7 silty SAND, similar to S-6B	SM

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:

Drive and wash 7in. casing. Telescope with 6in. casing from 19ft. to 103.7ft. A sheen was noted in the wash water during clean-up on 4-2-96. Rollerbit through cobble from 88-88.75'. Bedrock at approx. 103.7' bgs. Completed boring as MW-207D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\207D_B.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 207D
DATE START: 04/02/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 20.27
DATE COMPLETED: 04/04/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 104.40

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.
	34	S-8	16 19 24 31 / 6 6 6 6	24	15	Interval = 3436	S-8 silty SAND, similar to S-6B	SM
	39	S-9	17 20 26 29 / 6 6 6 6	24	16	Interval = 3436	S-9 silty SAND, similar to S-6B	SM
	44	S-10	20 20 20 20 / 6 6 6 6	24	16	Interval = 4446	S-10 silty SAND, similar to S-6B	SM

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:

Drive and wash 7in. casing. Telescope with 6in. casing from 19ft. to 103.7ft. A sheen was noted in the wash water during clean-up on 4-2-96. Rollerbit through cobble from 88-88.75'. Bedrock at approx. 103.7' bgs. Completed boring as MW-207D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\207D_C.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 207D
DATE START: 04/02/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 20.27
DATE COMPLETED: 04/04/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 104.40

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.
	49	S-11	16 17 18 24 / 6 6 6 6	24	13	Interval = 4951	S-11 SAND, mostly F-Crs sand, well graded trace to few silt, brown	SW
	54	S-12	36 88 26 25 / 6 6 6 6	24	0	Interval = 5456 No Recovery.	S-12 no recovery	
	59	S-13	0 5 29 16 30 / 3 3 6 6 6	24	13	Interval = 5961	S-13A (5) silty SAND, mostly fine sand poorly graded, few silt, trace medium sand, tan S-13B (8) SAND, mostly medium to coarse sand poorly graded, trace fine sand, trace fine gravel, grey-tan	SM 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:

Drive and wash 7in. casing. Telescope with 6in. casing from 19ft. to 103.7ft. A sheen was noted in the wash water during clean-up on 4-2-96. Rollerbit through cobble from 88-88.75'. Bedrock at approx. 103.7' bgs. Completed boring as MW-207D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\207D_D.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 207D		
DATE START: 04/02/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 20.27		
DATE COMPLETED: 04/04/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 104.40		

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	S-14	11 10 34 27 / 6 6 6 6	24	15	Interval = 6466	S-14 SAND, mostly fine to crs sand, well graded, trace silt, tan, no structure noted, one piece of 1.5' x 2' angular quartz in nose of spoon	SW
	69	S-15	11 18 21 28 / 6 6 6 6	24	12	interval=6971.	similar to S-14 above.	SW
	74	S-16	26 43 47 51 / 6 6 6 6	24	18	Interval=7476.	S-16 similar to S-15 above, bottom 2' reddish-orange color	SW
	79	S-17	12 20 23 28 / 6 6 6 6	24	15	interval 7981	S-17A (10) SAND, mostly fine-medium poorly graded sand, trace-few silt, tan S-17B (5) similar to S-16	SP 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:

Drive and wash 7in. casing. Telescope with 6in. casing from 19ft. to 103.7ft. A sheen was noted in the wash water during clean-up on 4-2-96. Rollerbit through cobble from 88-88.75'. Bedrock at approx. 103.7' bgs. Completed boring as MW-207D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\207D_E.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847	LOCATION: STRATFORD, CT	DRILLED BY: J. Galvin-Geologic	BORING NO: 207D
DATE START: 04/02/1996	DEPTH TO WATER: --	LOGGED BY: TRACY DORGAN	GROUND EL.: 20.27
DATE COMPLETED: 04/04/1996	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 104.40

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.
	84	S-18	64 68 93 118 / 6 6 6 6	24	16	Hard driving-83 83.5.Pass. .75' of blow-in.	0.75' of blow-in, mostly fine-medium sand. S-18A (14) silty, sandy GRAVEL, mostly fine sub-rounded gravel, some f-med sand, trace-few silt S-18B (2) mica-schist. very poor condition, easily broken	GP-GM
	89	S-19	18 32 47 54 / 6 6 6 6	24	5	Poss. drilled through cobble Appx.19"blow-in	19" blow-in, fine-medium sand, tan S-19 (5) sandy GRAVEL, mostly fine-coarse gravel, some fine-coarse sand, gravel includes reddish-grey mica-schist (Poor condition, easily broken)	GP
	94	S-20	40 44 40 42 / 6 6 6 6	24	13	Grinding and hopping from 89 to 94.	S-20 sandy GRAVEL,mostly s-rnd gravel,3/4-1" diam, little medium-coarse sand, trace fine sand, grey-tan, very tight, dense	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:

Drive and wash 7in. casing. Telescope with 6in. casing from 19ft. to 103.7ft. A sheen was noted in the wash water during clean-up on 4-2-96. Rollerbit through cobble from 88-88.75'. Bedrock at approx. 103.7' bgs. Completed boring as MW-207D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\207D_F.DWG (9/3/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 4847 LOCATION: STRATFORD, CT DRILLED BY: J. Galvin-Geologic BORING NO: 207D

DATE START: 04/02/1996 DEPTH TO WATER: -- LOGGED BY: TRACY DORGAN GROUND EL.: 20.27

DATE COMPLETED: 04/04/1996 DATE & TIME: --/--/19--/ -- CHECKED BY: TOTAL DEPTH: 104.40

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.
	99	S-21	30 6 43 6 47 6 66 6	26	20	overdrive 2' to improve recov. Poss.6' blow-in	S-21A (3) silty SAND, mostly fine-medium poorly graded sand, trace-few silt, tan S-21B (8) silty SAND mostly fine sand, poorly graded, few-ltl silt, tan S-21C (4) similar to S-21A S-21D (5) slt,gr SAND mostly f-crs well graded snd ltl f s-ang-ang gravel, few slt, top 2'gry, 3' tan	SP SP-SM 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:

Drive and wash 7in. casing. Telescope with 6in. casing from 19ft. to 103.7ft. A sheen was noted in the wash water during clean-up on 4-2-96. Rollerbit through cobble from 88-88.75'. Bedrock at approx. 103.7' bgs. Completed boring as MW-207D.

ACAD NAME: RAYMARK\BORINGS_ALTERED\207D_G.DWG (9/3/99)

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207DR
PROJECT NO.:	N4236-0320			START DATE:	1/8/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	1/9/03
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-207DR
GRD. SURFACE ELEVATION:	20.7 FT	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
							See boring log for SB-207B for soil profile details			
0										
						Light Brown	Fine-coarse SAND, some gravel	SW	Light brown wash water	
10										
						Black	10-11' GRAVEL, some shell fragments (angular gravel)	GW	10-11' very hard drilling	
						Light Brown	Fine-coarse SAND, some gravel	SW		
20										
30										
40										
50										PID=0.0 BZ FID=0.0
										PID=0.0 NS FID=0.0
60										
70										

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source (wash water stream)	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Visula inspection of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	~16' from previous boring open borehole		
OTHER OBSERVATIONS:	This is a replacement of original 207DR, which was damaged. See boring log SB-207DR (1)	BORING NO.: SB-207DR	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207DR
PROJECT NO.:	N4236-0320			START DATE:	1/8/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	1/9/03
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-207DR
GRD. SURFACE ELEVATION:	20.7 FT	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
70										
						Light brown	Fine-coarse SAND, some gravel	SW	Light brown wash water	
80										PID=0.0 BZ FID=0.0
					Bedrock 84.5'					PID=0.0 NS FID=0.0
90				EOB @ 85' bgs						
70										

TYPE OF DRILLING RIG:	CME 75	Notes:		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash	BZ = breathing zone NS = near source (wash water stream)		
METHOD OF SOIL SAMPLING:	Visula inspection of cuttings only			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	~16' from previous boring open borehole			
OTHER OBSERVATIONS:	This is a replacement of original 207DR, which was damaged. See boring log SB-207DR (1)	BORING NO.:	SB-207DR	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207DR(replacement)
PROJECT NO.:	N4236-0320			START DATE:	1/7/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	1/8/03
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	20.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 *see boring log for SB-207B for soil profile details*	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light	Fine-coarse SAND, some gravel	SW	Dark Brown wash water	
10						Brown				PID=0.0 BZ FID=0.0
					Very hard	Black/ gray	GRAVEL, some shell	GP		PID=0.0 NS FID=0.0
20						Light Brown	Fine-coarse SAND, some gravel	SW		
									Light Brown wash water	
30										
40										PID=0.0 BZ FID=0.0
										PID=0.0 NS FID=0.0
50										
										PID=0.0 BZ FID=0.0
60										PID=0.0 NS FID=0.0
						Light Brown	Fine-coarse SAND, trace gravel			
70										
				Bedrock		Gray/ Green	SCHIST with some quartz fragments		Slight sheen in water	
				EOB @ 74'	Note- casing broke when well construction began – casing stuck at 68-73'. Abandoned borehole by adding ~100 gal. of grout and 1.5 bags of bentonite chips, see rig 1 log for details					

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Visual check of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	~16' in open borehole		
OTHER OBSERVATIONS:		BORING NO.: SB-207DR(1)	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-207M
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/21/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-207M + S
GRD. SURFACE ELEVATION:	20.37'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	PID PER 6" (ppm)	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 Grass Surface	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [PID, Jar HS]
	1.5	4'/5'	1310 S-1	0.25		Dark	Organic (f) SAND and SILT		Topsoil, damp	
	8.4					brown				
	5.5					Brown	(f-m) SAND, <3% trace silt, no gravel	SP	damp	
2	0.3									
	7.5					Light			@ 1.5 fbgs dry	
	9.7					gray			@ 4.0 fbgs a piece of	
	3.6								Rounded 2" diam gravel	
4	3.1								Fining downwards Bottom	
									80% (f) sand, seashells from	
									5-8 fbgs	
	2.2	8'/10'	1325 S-2			Brown	(f-m) SAND, trace (c) sand, no silt, trace (f) gravel			
6	1.7						(rounded)			
	6.5									
	4.1									
	10.5									
8	16.9									
	23.9									
							(f) SAND, trace silt, trace (f) gravel (rounded)			
	6.7									
10	208.									
	72.5						(f) SAND and GRAVEL (angular to subrounded,		@ 12 fbgs a 1" layer of	
	45.7						<1" diam), trace silt		Asphalt gravel	
	28.2									
12	35.5									
	22.6									
14										
	3.9	7.5/10	1340 S-3				(f-c) SAND some (f) gravel, no fines	SW		
16	2.6									

TYPE OF DRILLING RIG:	Sonic			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash			
METHOD OF SOIL SAMPLING:	4" vibrate + spin			
METHOD OF ROCK CORING:	4" vibrate + spin + wash			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	All recovered soils are included in recovery measurements, and PID screening every 6"	BORING NO.:	SB-207M	PAGE: 1 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-207M
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/21/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-207M + S
GRD. SURFACE ELEVATION:	20.37'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
	3.0		S-3 (cont.)						Bedding planes visible	
	2.4									
	2.0						(f-m) SAND, no silt, no gravel	SP		
18	0.5									
	14.0									
	7.0									
20	7.3					Yellowish orange				
	5.9									
	7.1									
	1.9									
22	2.7									
	5.2									
	11.7									
24							(f-c) SAND some gravel (rounded) trace silt	SW		
						Brown	(f) SAND and SILT	SM		
	7.8	10.5/10	1410 S-4			Yellowish Orange				
26	6.6						(f) SAND, trace silt, no gravel	SP		
	3.3									
	1.4									
	50.6									
28	26.3									
	108									
	137									
	118					w/gray	(f) SAND and SILT	SM		
30	60									
	107									
	96									
	131						(f) SAND, trace silt, no gravel			
32	99							SP		

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-207M	PAGE: 2 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-207M
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/21/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-207M + S
GRD. SURFACE ELEVATION:	20.37'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 32	PID PER 6" (ppm)	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* = [PID, Jar HS]
	156					w/gray	(f) SAND AND SILT, no gravel	SM		
	86									
	58						(f)SAND, trace silt, no gravel	SP		
34	21									
	69						(f-m) SAND, trace silt, no gravel	SP		
	33									
	24	10.5/10	1425 S-5			w/gray	(f) SAND and SILT, trace clay, no gravel	SM		
36	21						(f) SAND little silt (<15%), no clay, or gravel	SM/SP		
	21									
	19									
	16									
38	29									
	116									
	10.1									
	21									
40	12									
	60									
	38									
	21						(f) SAND, trace silt, no gravel	SP		
42	86									
	62									
	82									
	196									
44	22									
	0.0 *									
	1.8/0.0*									
	0.0*	10/10	1500 S-6				(f) SAND, trace silt, no gravel	SP		45 - 47.5=5.8
46	10.1/0.0*									
	14									
	13									
	22									47.5 – 50=15.2
48	23									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	* PID error. Corrected value / error	BORING NO.: SB-207M	PAGE: 3 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-207M
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/21/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-207M + S
GRD. SURFACE ELEVATION:	20.37'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 48	PID PER 6" (ppm)	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* = [PID, Jar HS]
	17					Yellowish orange	trace (m) SAND	SP		
	16									
	10								a piece of subrounded gravel	
50	15						no (m) sand			
	17									50-52.5=14.3
	16									
	10									
52	15									
	17									52.5 – 55=1.4
	9.2									
	7.9									
54	3.7									
	13									55 - 57.5=1.6 ppm
							trace (m) sand			
		9'/10'	1515 S-7				(f-c) SAND little (<15%) gravel (rounded<0.75 in	SW		
56	6.8						Inch diam.) no silt			
	5.9									
	8.5									57.5 – 60=6.2 ppm
	10.0									
58	6.0									
	5.1									
	8.7									
	8.2									
60	4.1						SILT, trace (f) sand	ML		
	5.3						(f-c) SAND little (<15%) gravel (rounded <0.75 in	SW		60-62.5=2.1
	7.3						Inch diam.) no silt			ppm
	3.7									
62	4.8									
	2.4									
	1.6									
	15.2									62.5 – 65=1.7
64	8.2									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-207M	PAGE: 4 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-207M
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/21/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-207M + S
GRD. SURFACE ELEVATION:	20.37'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 64	PID PER 6" (ppm)	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* = [PID, Jar HS]
			S-7 (cont.)							65-70=9.1
	5.7	9/10	1540 S-8			Olive				
66	42.					gray	(f-c) SAND, trace silt, trace gravel (rounded)	SW		
	8.0									
	16									
	40									
68	12									
	15									
	25									
	19									70. – 75=2.4
70	26									
	5.6									
	15									
	5.3									
72	6.7									
	10									
	4.4									
	8.6									
74	7.3									
										75 –80=1.7
	1.4	10/10	1550 S-9							
76	1.6									
	7.2									
	5.2									
	9.8									
78	5.3									
	5.1									
	20									
	21									
80	24									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-207M	PAGE: 5 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-207M
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/21/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-207M + S
GRD. SURFACE ELEVATION:	20.37'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
80										
	35		S-9 (cont.)			Yellowish orange	(f-m) SAND <3% trace silt, <15% little gravel (rounded Rounded, <1" diam)	SP		80 – 85=3.2
	5.9									
	8.7									
82	7.0									
	3.6									
	8.2									
	20									
84	6.6									
	1.6									85 – 90=1.7
	1.6									
	0.7	7/10	1600 S-10							
86	0.2									
	9.2									
	9.3									
	6.3									
88	8.8									
	1.3									
	1.5									
	0.0									
90	0.0									
	1.6									
	3.1									
92										
94										
			EOB 95 fbgs							
96										

TYPE OF DRILLING RIG:	Sonic			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash			
METHOD OF SOIL SAMPLING:	4" vibrate + spin			
METHOD OF ROCK CORING:	4" vibrate + spin + wash			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	ending H_2O meter 141,274 approx. 500 gal used - 200 contained	BORING NO.:	SB-207M	PAGE: 6 OF 6

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207MR
PROJECT NO.:	N4236-0320			START DATE:	1/9/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	1/9/03
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-207MR
GRD. SURFACE ELEVATION:	20.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See boring log for SB-207B for soil profile details	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light Brown	Fine-coarse SAND, some gravel	SW	Light brown wash water	PID=0.0 BZ FID=0.0
10							FILL-MMM in borehole			
						Black Light Brown	10'-11' - GRAVEL, some shells (shale) Fine-coarse SAND, some gravel	GP SW	10'-11' very hard drilling	PID=0.0 NS FID=0.0
20										
30										
40										
50										
60				EOB @ 53' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: MMM = man made material BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Visual inspection of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	~16' in borehole of 207DR		
OTHER OBSERVATIONS:		BORING NO.: SB-207MR	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-207SR
PROJECT NO.:	N4236-0320			START DATE:	1/9/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	1/9/03
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-207SR
GRD. SURFACE ELEVATION:	20.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 *see boring log for SB-207B for soil profile details*	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light Brown	Fine-coarse SAND, some gravel	SW	Light brown wash water	PID=0.0 BZ
5										PID=0.0 NS
10										
					Very hard Layer	Black/ White	10'-11' - GRAVEL (shale) and shell fragments	GP		
15						Light Brown	11'-28' - Fine-coarse SAND, some gravel	SW		
20										
25										
30				EOB @ 28' bgs						

TYPE OF DRILLING RIG:	CME 75		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Drive & wash	Notes: BZ = breathing zone NS = near source	
METHOD OF SOIL SAMPLING:	Visual check of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	16'		
OTHER OBSERVATIONS:		BORING NO.: SB-207SR	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	RAYMARK OU2/PHASE I GROUNDWATER			BORING NO.:	SB-208B
PROJECT NO.:				START DATE:	01/25/99
LOGGED BY:	D.WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/28/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing/K.KUTAENIN			MON. WELL NO.:	MW-208B
GRD. SURFACE ELEVATION:	24.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	BLOWS PER 6" RQD	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)]
							No soil samples taken. Refer to boring log 208B for description			FID = 0.0
20										In B.Z.
40										
60										
67									Hit rock at 67' – roller bit Into it and determine it as a cobble	
70										
72							Top of bedrock – roller bit to 72' and drive 4" casing down		Roller bit to 74'	
74				Top of Bedrock @ 72'						
			5:30			Dk grn - gray	Chlorite/mica schist, some pea-sized and smaller garnets, Occasional quartz veins. Near vertical, wavy foliation.		74.5' 45º fracture	
76			5:46						75.5' jagged horiz. Fracture	
			5:40						76.2 jagged horiz. frac. 76.8' 45° fracture	
78		120"	5:00						77.8' 45º fracture	
	88%	120"	C-1 74.0'-84.0' 5:30						78.9' 60º fracture, slight weathering	
80			RQD = 88% 4:40						79.7' 30º fracture	
			4:53							

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	No alteration on fracture surfaces unless noted	BORING NO.: SB-208B	PAGE: 1 OF 4

BORING LOG FOR:	RAYMARK OU2/PHASE I GROUNDWATER			BORING NO.:	SB-208B
PROJECT NO.:				START DATE:	01/25/99
LOGGED BY:	D.WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/28/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing/K.KUTAENIN			MON. WELL NO.:	MW-208B
GRD. SURFACE ELEVATION:	24.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" RQD	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)]
82			5:20			Dark green	Chlorite/mica schist with pea-sized and smaller garnets, High angle foliation a few quartz veins		81.3' jagged horiz. Fracture	
			5:15						83.0 to 83.7 – 4 high angle fractures	
84			4:20							
			5:00							
86			3:32						85.2 horiz. fracture	
			3:37						86.4 high angle fracture 86.7 low angle fracture	
88		115"	3:10						87.2 horiz. Fracture 88.0 45° fracture	
	75%	120"	C-2 84.0'-94.0' RQD=75% 3:12						88.3 45º fracture	
90			3:20						89.8 high angle fracture	
			3:25						90.7 high angle fracture	
92			3:10						91.4 30° fracture	
			3:25						92.4 broken pieces	
94			3:40						93.0-94.0 8 fractures ~45°	
			5:05			Dark green	Chlorite schist, some quartz and pea-sized garnets High angle foliation		94.8 45º fracture 95' 30º fracture	
96			6:04						95.4' 45º fracture	
			5:07						96.5 60º fracture	

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	No alteration on fracture surfaces unless noted	BORING NO.: SB-208B	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK OU2/PHASE I GROUNDWATER			BORING NO.:	SB-208B
PROJECT NO.:				START DATE:	01/25/99
LOGGED BY:	D.WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/28/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing/K.KUTAENIN			MON. WELL NO.:	MW-208B
GRD. SURFACE ELEVATION:	24.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" RQD	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)]
98			5:22			Gray	Mostly quartz 96.8-98'		97.4 horiz. Fracture	
			6:10			Dark Green	Chlorite – mica schist, pea-size garnets, some Quartz; high angle foliation		98.1 irregular break 98.6 jagged horiz.	
100	89%	120" / 120"	5:45 C-3 94.0'-103.0' RQD=89% 5:05						99.4 high angle fracture 100.5 high angle fract. 100.9 low angle fracture	
102			5:26							
			6:10				Mostly quartz 102-103		102.1 horiz. Fracture 102.3 horiz. Fracture	
104	100%	24" / 24"	6:18 C-4 103.0'-106.0' RQD=100% 8:00			Dark Green	Chlorite – mica schist with garnets and quartz, high angle foliation		102.9 30° fracture 104.7 30° fracture	
106			7:45							
			7:10						108.7 jagged horiz. Fracture	
108			7:35			Dark Green	Chlorite schist / gneiss (less foliation) Pea-sized garnets, some quartz			
			6:04						109" high angle fracture	
110	100%	109" / 108"	5:21 C-5 106.0'-115.0' RQD=100% 5:38				Chlorite schist		109.8 jagged low angle fracture 110.6 jagged low angle fracture	
112			5:39						111.4 jagged 30°	
			5:43						112.7 jagged horiz. fracture	

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	No alteration on fracture surfaces unless noted	BORING NO.: SB-208B	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK OU2/PHASE I GROUNDWATER			BORING NO.:	SB-208B
PROJECT NO.:				START DATE:	01/25/99
LOGGED BY:	D.WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/28/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing/K.KUTAENIN			MON. WELL NO.:	MW-208B
GRD. SURFACE ELEVATION:	24.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" RQD	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)]
114			6:24			Dark Green	Chlorite/quartz/garnet schist/ gneiss (less foliation)			
			5:45							
116			3:07				Chlorite/mica schist with pea-sized garnets and Quartz veins high angle foliation		115.2 low angle break	
			7:10						116.2 high angle break	
118			4:19						117.7 low angle break	
			4:26						118.1 high angle break	
120		119"	5:07						119.3 horiz. Break	
	97%	116"	C-6 115.0'-124.7' RQD=97% 5:12						121' low angle break	
122			6:22						122' high angle break	
			4:45						122.5 high angle break	
124			5:40						123.9 low angle break	
124.7			3:40							

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	No alteration on fracture surfaces unless noted	BORING NO.: SB-208B	PAGE: 4 OF 4

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-208D
PROJECT NO.:				START DATE:	9-29-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	09/30/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-208D,S,M
GRD. SURFACE ELEVATION:	23.99'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	SAMP REC. / SAMP LENG.(ft)	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L(ft)	SOIL MOISTURE / CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [PID, Jar HS]
0	0.0	4.5/6	0825 S-1	1.5'	Moist - Wet -	Dark Brown	ORGANICS + SILTS, trace (f-c) sand + gravel	OL	Top soil	
2	0.0			3.0	Damp - Moist -	Brown	Silty (F) SAND, trace gravel (subrounded < 1.5' diam) Trace clay	SM	No bedding planes 2-6" of moderately cohesive soil	
	0.0									
4	0.0				Dry	Light Brown	Inorganic SILT some (v.f.) Sand, trace gravel (subrounded to sub-angular, <15% diam)	ML		
	0.0									
6	0.0								Boulder in sampler bit muscovite + qtz rich	
	0.0	6.5/10	0849 S-2							
8	0.0			8.0						
	0.0				Dry	Brown	(f) SAND & SILT, trace (m-c) sand, trace gravel (subrounded, <1.5" diam)	SM	Change starts w/a 5" layer of dark brown	
10	0.0									
	0.0									
12	0.0									
	0.0					Reddish brown				
14	0.0									
	0.0									
16	0.0									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Moisture: Dry, Damp, Moist, Wet	BORING NO.: SB-208D	PAGE: 1 OF 5

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-208D
PROJECT NO.:				START DATE:	9-29-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	09/30/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-208D,S,M
GRD. SURFACE ELEVATION:	23.99'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
16										
	0.0	4.5/10	0950 S-3		Dry-Damp	Reddish brown	(f) SAND & SILT, trace (m-c) sand, trace gravel (subrounded-subangular, <1.5" diam)	SM		
18	0.0									
	0.0									
20	0.3									
	0.0									
22	0.0				Damp-Moist	Light olive gray	(f)SAND & SILT	SM		0.0
	2.9									
	0.0									
24	0.0									
	0.0									
	3.1									
26	0.0		1010 S-4							0.0
	0.0									
28	0.0									
	0.0									
30	0.0					Brown	SILT and (f) SAND	ML-SM	Slightly more silt	
	0.0									4.6
32	0.0									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin		
GROUNDWATER LEVELS:	Approx. water table 20-24'		
OTHER OBSERVATIONS:		BORING NO.: SB-208D	PAGE: 2 OF 5

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-208D
PROJECT NO.:				START DATE:	9-29-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	09/30/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-208D,S,M
GRD. SURFACE ELEVATION:	23.99'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 32	PID PER 6" (ppm)	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* = [PID, Jar HS]
34										
36								SM	More (f) Sand than Silt	
		6/10	1050 S-5							
38										
						Yellowish brown	SILT and CLAY, inorganic, med-high Plasticity-	CL-CH		
40										
										0.0
42										
						Reddish brown	(f-c) SAND & GRAVEL (subrounded - subangular, <3" diam) trace fines	GW		
44										
46						Light gray				0.0/2.8
		8/10	1110 S-6			Reddish brown				6.3
48										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-208D	PAGE: 3 OF 5

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-208D
PROJECT NO.:				START DATE:	9-29-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	09/30/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-208D,S,M
GRD. SURFACE ELEVATION:	23.99'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 48	PID PER 6" (ppm)	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* = [PID, Jar HS]
			S - 6 (cont.)					GW		5.0
50										
52										5.2
54										
56							(f-c) SAND, trace Silt	SW		5.4
	1.9	10/10	1145 S-7		Wet		(f-c) SAND and GRAVEL (rounded and subangular, <2" diam) trace silt	GW		3.9
58	2.0									
	1.7									
	4.5									6.4
	2.7									
60	4.5									
	2.6									
	3.6									
	2.6									
62	6.5					Dark gray	-little, silt trace clay	GM		4.5
	5.0									
	9.7									
	4.1									
64	8.9									
	10.6									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-208D	PAGE: 4 OF 5

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-208D
PROJECT NO.:				START DATE:	9-29-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	09/30/97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-208D,S,M
GRD. SURFACE ELEVATION:	23.99'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 64	PID PER 6" (ppm)	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* = [PID, Jar HS]
	5.4					Orange brown	(M) SAND, trace (f+c) sand, trace (f) gravel, trace silt	SP		4.2
	8.0									
	17.9					Reddish brown	(f-c) SAND and GRAVEL (rounded to sub-angular, <2" diam.)	GW		
66	26.7									
	8.9	7/7	1230 S-8							4.6
	6.6									
	8.0									
68	9.8									
	9.7					Reddish brown	(f-c) SAND and GRAVEL (rounded to subangular, <1.5" diam.) <10% little silt, trace clay <3%	GM		7.1
	20.2									
	21.7									
70	7.6									
	10.8					Reddish brown	(m) SAND, little (f+c) sand, trace gravel (rounded to Subangular, <1" Diam.) <3% trace silt		2" piece of schist gravel	
	11.1									
	20.9									6.8
72	21.2									
	19.4						(f-c) SAND + GRAVEL, <3% trace silt			
	10.9							GW		
			1350 S-9		25%RQD	Dark gray	SCHIST bedrock; mica rich w/ vertical foliation	BR		
74	7.8									
76										
78										
			EOB							

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-208D	PAGE: 5 OF 5

BORING LOG FOR:	Raymark			BORING NO.:	SB-209
PROJECT NO.:				START DATE:	10-8-97
LOGGED BY:	J. Holden/J. MacManus	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-15-97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-209 D+S
GRD. SURFACE ELEVATION:	12.26	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0	PID PER 6" (ppm)	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* = [PID, Jar HS]
	8.5		1430 S-1			OL/GR	Silty gravelly Sand	SM-	Dry, Fill	
1	17.0						Mostly F-crs Sand, some F-crs	GM		
	19.0						ang gravel (up to 4")		Cement, brick, glass	
2	24.1									
	19.6									
3	28.2									
	30.4	5.7/5					Petroleum odor			
4	46.0					Black	trace silt			
	35.9		10/8/97			Red	Brick crushed			
5	117.0					OL-GR				
	14.4		0800 S-2							
6	14.6					GR	Mud dark gray silty gravel	GM	Broken concrete	
	16.5						Old tiles		Rebar	
7	0									
	3.8									
8	17.3									
	18.8	9/10								
9	25.2		10/09/97				Tar, old parking lot material			
	30						roofing material, asphalt shingles, and scrap wood,			
10	36.2						silty mud			
	42.7					BR	PEAT + organic silt	PT	Roots + Fibrous	
11	45.6								Organic	
	48.7									
12	37.4									
	40.1									
13	52.4									
	28.4									
14	32.6									
	36.7									
15	0									
	0	10/10	1020 S-3							
16	0					Tan	SAND, med	SP		

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Rig broken from coring concrete w/rebar @ 0820 on 10/9 until 1000.	BORING NO.: SB-209	PAGE: 1 OF 5

BORING LOG FOR:	Raymark			BORING NO.:	SB-209
PROJECT NO.:				START DATE:	10-8-97
LOGGED BY:	J. Holden/J. MacManus	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-15-97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-209 D+S
GRD. SURFACE ELEVATION:	12.26	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
16										
	ND		S-3 Cont.							
17	ND					Tan	Sand, med	SP		
	ND									
18	19.4					GR	Silty med SAND	SM		
	60									
19	60.7					Tan	SAND, med	SP		
	45.2									
20	52.0									
	4.7									
21	11.5									
	1.3									
22	6.0									
	7.1									
23	4.6									
	11.7									
24	10.1					GR	SAND, fine	SP		
	4.1									
25	ND									
			1025 S-4							
26						Tan	SAND, med	SP		
27										
28		6/10								
29										28-30.5=0
30										
31										30.5-33=0 ppm
32	ND									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-209	PAGE: 2 OF 5

BORING LOG FOR:	Raymark			BORING NO.:	SB-209
PROJECT NO.:				START DATE:	10-8-97
LOGGED BY:	J. Holden/J. MacManus	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-15-97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-209 D+S
GRD. SURFACE ELEVATION:	12.26	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
32										
	ND		S-4 cont.							
33						GR	Silty med SAND	SM		
34										33-35= 0 ppm
35	ND									
	11.5		1030 S-5							35-37.5 = 0 ppm
36	ND					GR	fine SAND	SP		
	ND									
37	ND									
	6.5									
38	ND									37.5-40 = 0 ppm
39										
40										40-42.5= 0 ppm
41										
42										42.5-45= 0 ppm
43										
44										45-47.5 =0 ppm
45										
			1050 S-6							
46										45-47.5= 0 ppm
47	ND									
48										47.5-50= 0 ppm

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-209	PAGE: 3 OF 5

BORING LOG FOR:	Raymark			BORING NO.:	SB-209
PROJECT NO.:				START DATE:	10-8-97
LOGGED BY:	J. Holden/J. MacManus	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-15-97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-209 D+S
GRD. SURFACE ELEVATION:	12.26	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 48	PID PER 6" (ppm)	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* = [PID, Jar HS]
49	0		S-6 cont.							
50	0 1.0									
51	5.5 0					Tan	med SAND	SP		50-52.5=0 ppm
52	20 25									
53	8 0									52.5-55= 0 ppm
54	33 14									
55	35 19									
56	3.6 0		1110 S-7			TAN	F-M SAND, tr silt	SM		
57	0 0									55-57.5=0 ppm
58	16.8 14.1									
59	0 11.5	10/10				GR	F-CRS SAND, few gravel			57.5-60=0 ppm
60	28.8 14.2					Tan	F-M SAND, tr silt	SM		
61	62.3 46.8					Tan	Med SAND	SP		
62	57.0 70.1					Tan	Fine SAND	SP		60-62.5=0 ppm
63	12.5 20.1					Tan	Med SAND	SP		
64	44.9 54.9					Tan	Med SAND	SP		62.5-65=0 ppm

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-209	PAGE: 4 OF 5

BORING LOG FOR:	Raymark			BORING NO.:	SB-209
PROJECT NO.:				START DATE:	10-8-97
LOGGED BY:	J. Holden/J. MacManus	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-15-97
DRILLED BY (Company/Driller):	Alliance/Ron Ball			MON. WELL NO.:	MW-209 D+S
GRD. SURFACE ELEVATION:	12.26	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
64										
	100						tr silt ↓			
65	103							SP		
	80		1130 S-8							65-68=0 ppm
66	12.9					Tan	Coarse SAND	SP		
	24.7									
67	33.2									
	30.2									
68	34.6									
	20.7									68-69=0 ppm
69	38.4					Tan	fine SAND w/cobbles			
	52.4							Very		
70	61.1					Green	Fractured rock (Schist)	broken		
			1145 C-9							
							broken during coring			
							some weathered surfaces			
75							Not able to determine fracture orientation			
			1216 C-10			Green	Angular SAND, mostly med Sand		Pulverized bedrock, does not look like SAND in overburden	
80										
85										
			1230 C-11							
							Schist			
90										

TYPE OF DRILLING RIG:	Sonic	*Note : This boring log was initially intended for a bedrock well. Due to drilling complications this boring became the deep overburden well. A second boring was used for the bedrock well, but it was not logged. The total depth achieved at the bedrock well was 101.5ft. Refer to log book #002 7/28/97 for additional details.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-209	PAGE: 5 OF 5

BORING LOG FOR:	Raymark/OU2? Phase I Groundwater		BORING NO.: SB-210 (old)
PROJECT NO.:			START DATE: 10-20-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY: MES	COMPLETION: DATE: 10-20-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball		MON. WELL NO.:
GRD. SURFACE ELEVATION:		ELEVATION FROM: NGVD-1929	CHECKED BY:

Soil Boring SB-210 (OLD) abandoned. MW-210 (new) advanced at Stratford Shopping Center

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* = [PID, Jar HS]
0							Asphalt surface (4")			
	0.0	4/5	0850 S-1	SW		Light	(f-c) SAND <15% little (f) gravel (subangular, <2"			
	0.0		S-1:0'-5.0'			Brow	<3% trace silt	SW		
	0.0									
2	0.0									
	0.0									
	0.0			4" ML			SILT, piece of root	ML		
	0.0						(f-m) SAND <3% trace silt, piece of subangular			
4	0.0			SP			3" diam.	SP		
			S-2				(f-c) SAND <3% trace (f) gravel subrounded. <3%			
6	0.0/.0	4.5/8	0910	SW			trace silt	SW		
	0.0/.5		S-2:5.0'-13.0'							
	0.0/.0								4" diam. cobble	
	0.0/.5									
8	0.0/.4									
	0.0/.0									
	0.0/.4									
	0.0/.8									
10	11.7									
12						Red			lineaments visible	
			Top of Bedrock							
			13.0'	SP		Gray	(V.F.) SAND (silt some <30%)	SP	piece of angular schist	
	0	9.5/12	1139 C-1	BR						
14			C-1:13.0'-25.0'			Gray	Schist Bedrock (mica + qtz rich)	BR	Broken - up	
					25% RQD		Vertical Foliatoin			
16									competent	

TYPE OF DRILLING RIG:	Sonic
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash
METHOD OF SOIL SAMPLING:	4" vibrate + spin
METHOD OF ROCK CORING:	4" vibrate + spin + wash
GROUNDWATER LEVELS:	Believed to be @ 13 fbgs where red color change lineaments exists.
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: SB-210(old)

BORING LOG FOR: Phase 1 Groundwater Investigation
PROJECT NO: 7607*0320
LOGGED BY: Joe Mello TRANSCRIBED BY: FMD
DRILLED BY (Company/Driller): Alliance / Ron Ball
GRD. SURFACE ELEVATION: ELEVATION FROM:

BORING NO. : 210 (old)
START DATE: 10-20-97
COMPLETION DATE:
MON. WELL NO.:
CHECKED BY :

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
18			(cont.) C-1			Gray green	Schist Bedrock - (mica + qtz rich) -vertical foliation	BR	Broken-up	
20										
22									Competent	
24	3.4									
26	1.4 0	6.5/10	1230 C-2						Broken-up	
28	0 0				30% RQD	Gray green			Competent	
30	0 0									
32	0 0								Broken-up	
34	0 1.4				20% RQD	Gray green				
36	3.0 0.0	5/10	C-3							
38									Competent	
40									Broken-up	
42										
44										
46			EOB 45 fbgs							
48										

TYPE OF DRILLING RIG: Sonic
METHOD OF ADVANCING BORING: 6" + 8" vibrate, spin, and wash
METHOD OF SOI L SAMPLING: 4" vibrate + spin
METHOD OF ROCK CORING: 4" vibrate + spin + wash

GROUNDWATER LEVELS:
OTHER OBSERVATIONS: Depth interval change from page 1. No recharge from top 20ft of Bedrock. The green color in the Bedrock may be chlorite.

Brown & Root Environmental

BORING NO.: 210

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-210B
PROJECT NO.:	N4236-0320			START DATE:	8/29/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/4/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-210B
GRD. SURFACE ELEVATION:	10.5 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
			No samples taken				Refer to boring log SB-210 for complete lithologic description		Logging wash cuttings only	
2				Drive & Wash						
4										
6							5' – SAND and GRAVEL with tile fragments – Fill			
8										
10							10' – SAND and GRAVEL			
12										
14									Telescope	
16							15' - Sandy cuttings		4" casing through 5" @ 14'	

TYPE OF DRILLING RIG:	CME 45
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 14' 4" to 25'
METHOD OF SOIL SAMPLING:	2" split spoon, 2' sample length
METHOD OF ROCK CORING:	3" diamond bit core barrel
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: SB-210B

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-210B
PROJECT NO.:	N4236-0320			START DATE:	8/29/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/4/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-210B
GRD. SURFACE ELEVATION:	10.5 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
18										FID = 0.0 PID = 0.0
20							20' - Sandy cuttings			FID = 0.0 PID = 0.0
22									Unable to push 4" Past 24'	FID = 0.0 PID = 0.0
24			S-1 @ 1546 24' – 26'				Spoon refusal @ 24'			FID = 0.0 PID = 0.0
26				Boulder			Roller bit from 24' – 26.5' broke through boulder Sandy cuttings			FID = 0.0 PID = 0.0
28				Drive & Wash						FID = 0.0 PID = 0.0
30										FID = 0.0 PID = 0.0
32										FID = 0.0 PID = 0.0

TYPE OF DRILLING RIG:	CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 14' 4" to 25'		
METHOD OF SOIL SAMPLING:	2" split spoon, 2' sample length		
METHOD OF ROCK CORING:	3" diamond bit core barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	2" well screened from 38.5' – 48.5', sump from 48.5' – 49.7'	BORING NO.: SB-210B	PAGE: 2 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-210B
PROJECT NO.:	N4236-0320			START DATE:	8/29/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/4/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-210B
GRD. SURFACE ELEVATION:	10.5 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
34										
							Rock @ 35.5' Rock socket from 35.5' – 36'			
36										
38										
	12:12	4' / 5'	C-1 @ 1800 38' – 43' RQD = 50%		Hard	Green	38 – 39' - Schist, mica rich horizontal fractures	BROKEN	High angle micro laminations	
40	13:14						39 – 39.5' - Very weathered Schist, sandy	VERY BROKEN		
	14:21						39.5 – 41 - Schist with micas, quartz, pyrite	MS	High angle micro laminations	
42	10:01					Pink	41 – 42' - Quartz vein with trace Schist	MS		
	8:24					Green	42 – 43' - Very weathered Schist, sandy	VERY BROKEN		
44	8:11		C-2 @ 0917				43 – 44.7' - Schist with micas, quartz, pyrite	MS		
	8:47	5' / 5'	43'-48' RQD = 100 %			Green/ White	44.7 – 45.2' - High angle quartz veins			
46	7:12						45.2 – 47.6' - High angle to vertical quartz vein			
	7:42									
48	9:11					Green	47.6 – 49' - Schist			

TYPE OF DRILLING RIG:	CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 14' 4" to 25'		
METHOD OF SOIL SAMPLING:	2" split spoon, 2' sample length		
METHOD OF ROCK CORING:	3" diamond bit core barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-210B	PAGE: 3 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-210B
PROJECT NO.:	N4236-0320			START DATE:	8/29/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/4/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-210B
GRD. SURFACE ELEVATION:	10.5 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
			C-3 @ 1018				49 – 51.5' - Schist with quartz, micas & pyrite	MS	High angle micro laminations	
	11:42	3.5'/3.5'	48'-51.5'							
			RQD = 100 %							
50	10:17									
										FID = 0.0
	12:01					Green	Quartz, mica, and pyrite Schist	MS		PID = 0.0
				EOB @						
52				51.5' bgs						

TYPE OF DRILLING RIG:	CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 14' 4" to 25'		
METHOD OF SOIL SAMPLING:	2" split spoon, 2' sample length		
METHOD OF ROCK CORING:	3" diamond bit core barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-210B	PAGE: 4 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-210 (new)
PROJECT NO.:				START DATE:	10-26-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-27-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-210 D, S
GRD. SURFACE ELEVATION:	10.38'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

SB-210 (OLD) at VFW abandoned. SB-210 (NEW) advanced at Stratford Shopping Center.

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
0							Asphalt Surface 4"			
		3.5/5	1130 S-1			Dark	(c) GRAVEL (rounded-angular, 1-3" diam)	GM	Fill Dry moist pieces of	
	1.7		S-1:0'-5.0'			gray	<50% silt, <15% Little sand		tile (probably ACM)	
	1.7									
2	1.9									
	2.6									
	2.4									
	2.1					White	Pieces + crushed white fibrous tile			
4	3.4							Fill	Dry	
						Dark				
						Brown	(m) SAND, <15% little gravel	SP		
		10/10	1203 S-2			Yellowish	(f-m) SAND, <3% trace silt, no gravel		Tile slough from above	
6	4.9		S-2:5.0'-15.0'			orange	-<15% little silt <3% trace gravel (rounded	SP	2' thick	
	4.7						Rounded <2" diam)			
	3.5							SP		
	3.4	←	Zero Instrument							
8	0.1									
	1.0									
	2.6									
	4.3						(f-c) SAND, <3% trace silt, < 15% little rounded			
10	7.6						Rounded gravel <2" diam)	SW		
	9.9									
	8.4									
	9.4					Brown				
12	7.5						(f-m) SAND, <3% trace silt, no gravel	SP		
	2.3									
	6.1									
	7.9									
14	5.0									
	8.2									
	3.9									
			1215 S-3							
16	0.0	8/10								

TYPE OF DRILLING RIG:	Sonic			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash			
METHOD OF SOIL SAMPLING:	4" vibrate + spin			
METHOD OF ROCK CORING:	4" vibrate + spin + wash			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	ACM Asbestos containing material	BORING NO.:	SB-210 (new)	PAGE: 1 OF 3

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-210 (new)
PROJECT NO.:				START DATE:	10-26-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-27-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-210 D, S
GRD. SURFACE ELEVATION:	10.38'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

SB-210 (OLD) at VFW abandoned. SB-210 (NEW) advanced at Stratford Shopping Center.

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
	1.7		(cont.) S-3				Very fine, mdeium sand, < 3% trace silt <1% trace gravel (rounded <1" diam)	SP		
	7.4		S-3:15.0'-25.0'			Brown				
	3.0									
18	4.1									
	5.1									
	2.6									
	6.4									
20	3.8									
	3.7									
	3.3									
	2.9									
22	3.1									
	3.3									
	1.7									
24										
							(f-m) SAND and <50% © gravel (angular, <4" diam.)		Gravel may include small Boulder pieces tool	
		6/8	1230 S-4				(f-c) SAND<15% little gravel (rounded <1.5" diam)			
26	1.2		S-4:25.0'-33.0'							
	3.2									25-28=0.4 ppm
	2.0							SW	<20% (f) sand	
	4.9									
28	2.9		grain - size taken							
	2.7									
	2.8									
	3.1									
30	1.8									
	3.0									28-32=0.1 ppm
	0.4									
32									to 33 fbgs, then Bedrock	

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-210 (new)	PAGE: 2 OF 3

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-210 (new)
PROJECT NO.:				START DATE:	10-26-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-27-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-210 D, S
GRD. SURFACE ELEVATION:	10.38'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

SB-210 (OLD) at VFW abandoned. SB-210 (NEW) advanced at Stratford Shopping Center.

DEPTH (FEET) 32	PID PER 6" (ppm)	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* = [PID, Jar HS]
			S-4 (cont.)				(f-c) SAND <15% gravel (rounded)	SW	Boulder in very bottom	
34		5.5/7	1300 C-1 Top of Bedrock 33.0' C-1:33.0'-40.0'		45% RQD	Gray-Green	Schist - 70° Foliation	BR	Broken - up	
									Competent	
36							-1" thick Qtz vein (white)			
38										
							- orange deposits		Broken-up	
40										
			EOB 40.0							
42										
44										
46										
48										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-210 (new)	PAGE: 3 OF 3

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
0							Grass surface			
	0.3	3.5/5	1550 S-1				(f)SAND little <15% gravel (rounded to subangular			
	0.3		S-1: 0.0'-5.0'			Brown	<2" diam), trace asphalt	SP	Damp	
	0.3					Light	Trace organics (grass), 3" piece of concrete @ 2.5			
2	0.7					Brown	Fbgs. No fines.		Dry	
	0.0									
	0.9								Shell at 3 fbgs	
4										
		6/10	1605 S-2				(f) SAND, <3% trace shells, <15% little			
6	0.0		S-2:5.0'-15.0'				gravel (rounded <1" diam)			
	1.1									
	0.7									
	0.9									
8	3.9									
	0.9									
	1.0									
	2.1									
10	0.0									
	1.0									
	1.7									
	0.6									
12									bedding visible	
14										
			S-3							
16	2.1	7/10	1615							

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" = 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate, spin, and wash		
GROUNDWATER LEVELS:	17 fbgs – DTW		
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 1 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
	2.5		S-3 (cont.)							
	3.0		S-3: 15.0'-25.0'					SP		
	0.8									
18	6.2									
	2.6									
	5.1									
	1.0									
20	1.9									
	4.2									
	1.7									
	2.8									
22	4.0									
	6.6									
24										
						Gray				
		10/10	1625 S-4							
26	4.4									
	1.9		S-4:-25.0'-35.0'							
	2.8									
	1.9									
28	0.6						-trace (m) Sand			
	4.4									
	3.0									
	3.7					Dark				
30	3.1					gray	Organic SILT <35% some brown peat	OL	Organic odor	
	0.0									
	0.0									
	0.0					Dark				
32	0.0					brown	Organic SILT <3% trace peat			

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 2 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
32										
	2.1		S-4 (cont.)		med	Dark			Organic odor	
	2.5		S-4:25.0'-35.0'		plast.	brown	Organic Clay (fat)	OH		
	3.3									
34	3.1									
	3.4									
	1.1						(f) SAND	SP		
	2.0	11/10	1450 S-5		low		SILT<15% little clay, <15% little peat, trace			
36	0.9		S-5:35.0'-45.0'		plast.	Brown	(f-c) sand, trace rounded gravel	OL		
	2.3									
	2.6									
	3.6									
38	5.1									
	4.9									
	4.7						<15% little (f-c) sand, <3% trace peat			
	6.0									
40	4.6									
	7.2				high	Olive	CLAY and SILT, little (f-c) sand, trace gravel			
	7.0				plast.	gray	(rounded, <1/2" diam.)	OH		
	3.7									
42	4.7									
	3.8									
	4.3									
	3.8									
44	3.2									
	5.2									
	4.9									45-47.5=2.8
	19.3	7/10	1455 S-6				SILT and (f) SAND, trace gravel (rounded <1/4" diam).			
46	2.9		S-6:45.0'-55.0'			Gray	trace clay	ML		
	2.8									
	3.1									
	1.4									47.5-50.0=4.9
48	6.3									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 3 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 48	PID PER 6" (ppm)	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* = [PID, Jar HS]
	6.4		S-6 (cont.)							
	4.0		S-6:45.0'-55.0'			Gray	(f) SAND and SILT, trace (f) gravel	SP/ML		
	4.3									50-52.5=8.5
50	5.8									
	4.2									
	9.9									
	9.5									
52	7.3									
	11.4									52.5-55=6.0
54							(f-c) SAND and <15% little silt, trace gravel	SW		
							(f) SAND and SILT, trace gravel	SP/SM		55-57.5=1.7
							(f-c) SAND little silt gravel	SW		
		6.5/10	1700 S-7							
56	6.8		S-7:55.0'-65.0'				(f-c) SAND, trace silt, trace rounded gravel	SW		
	8.0									57.5-60=3.8
	5.7									
	7.5		bottom 3ft lost							
58	5.6		while retrieving							
	8.2		sample							
	5.9									
	4.8									
60	7.6					Brown				
	6.9									
	8.3									
			grain size taken							60-62.5=4.3
62			SW w/gravel				-little gravel (rounded <3" diam)			
64										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 4 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 64	PID PER 6" (ppm)	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* = [PID, Jar HS]
			S-7 (cont.)							
	1.9	10/10	0745, S-8				(f-c) SAND <30% some gravel (rounded,<2" diam) no fines			65-67.5=0.0
66	4.4		10/11/97			Brown	fines	SW		
	3.7									
	4.6		S-8:65.0'-75.0'							
	4.7									62.5-70=0.0
68	3.8									
	5.7					Yellowish				
	4.6					orange				
	10									70.-72.5=1.2
70	17						(f) SAND, no fines, no gravel	SP		
	16									
	8.6									
	8.0									72.5-75=5.4
72	5.6						(f-c) SAND, <30% some gravel (rounded, <1" diam)	SW	no fines	
	5.2									
	5.5						(f) SAND, no fines, no gravel	SP		
	12									75-77.5=7.7
74	2.8									
	6.6									
	1.0	9.5/10	S-9							
76	3.3		S-9: 75.0'-85.0'							
	3.7									77.5-80.=3.2
	3.2									
	5.6									
78	5.8									
	16									
	14						(f-c) SAND <30% gravel (rounded, <1.5" diam),	SW		
	16									
80	7.2						no fines			

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 5 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
80										
	13		S-9 (cont.)			Yellowish orange	(f-c) SAND, <30% some gravel (rounded, <2" diam), no fines			80-82.5=6.0
	22		S-9:75.0'-85.0'					SW		
	21									
82	17									
	17									82.5-85=6.4
	14									
	6.8									
84										
										85-87.5=4.8
	0.2	10/10	0835 S-10				(f-c) SAND little <15% gravel (rounded <1" diam)			
86	0.3		S-10:85.0'-95.0'				<3% trace silt	SW		
	5.1									87.5-90=5.6
	0.9									
	1.1									
88	2.8									
	5.2									
	2.2									
	0.0									90-92.5=6.9
90	2.3									
	16									
	1.5									
	6.4									92.5-95=23
92	3.8						(f) SAND little <15% silt, no gravel	SP		
	4.2									
	12						(f-m) SAND, trace <3" silt, no gravel	SP		
	16									
94	4.4									
	18									
		9.5/10	0855 S-11							
96	0.0									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 6 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 96	PID PER 6" (ppm)	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* = [PID, Jar HS]
	0.0		S-11 (cont.)			Yellowish	(f-c) SAND, <3% trace gravel (rounded, <1/4 " diam)			95-97.5=7.1
	4.2		S-11:95.0'-105.0'			orange	trace silt	SW		
	15									
98	17									
	14									97.5-100=43
	17									
	6.7									
100	13.4						(f) SAND, little (<15%) silt, no gravel	SP		
	38									100-102.5=65
	37									
	27									
102	31									
	15		grain size							102.5-105=31
	33		100-102.5							
	40									
104	36									
	27									105-107.5=NS
	0.1	7.5/10	0920 S-12				(f-m) SAND, no silt, <3% trace gravel (rounded<4"	SP		
106	5.4		S-12: 105.0' -				diam)			
	5.7		115.0'							107.5-110=1.3
	4.8									
	0.0									
108	0.0									
	3.0									
	0.0									
	7.3									110-112.5=2.5
110	156									
	3.3									
	11									
	27									
112										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 7 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 112	PID PER 6" (ppm)	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* = [PID, Jar HS]
			S-12 (cont.) 105.0'-115.0'			Yellowish orange	(f-m) SAND <15% little gravel (rounded, <1" diam) <3% trace silt	SP		112.5-115=6.7
114										
										115-117.5=14
116	5.5	6/10	1000 S-13 S-13: 115.0' - 125.0'				(f-m) SAND, <3% trace silt, no gravel	SP		
	3.3									
	0.0									117.5-120=13
	1.4									
118	16						(f-c) SAND and GRAVEL (rounded, <1" diam) trace silt	SW/GW		
	18									
	17									
	31									
120	33									120-122.5=0.0
	57									
	56						(f-m) SAND little (<15%) gravel (rounded, (<3/4" diam.) trace silt	SP		
	58									
122										
124										122.5-125=8.2
126		4.5/10	S-14 1015 S-14: 125.0' - 135.0'				(f-c) SAND some <30% gravel (rounded <3"diam) 3" diam.) little gravel	SW		
	6.2									
	14									125-127.5=13
	32									
128	87									
	47									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 8 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 128	PID PER 6" (ppm)	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* = [PID, Jar HS]
	85		S-14 (cont..)			Yellowish				127.5-13=77
	159		S-14: 125.0' -			orange				
	235		135.0'							
130	207									
										130-132.5=350
132										
										132.5-135=82
134										
										135-137.5=304
	270	10/10	1035 S-15							
136	521		S-15: 135.0' -				(f-m) SAND, <3% trace silt, no gravel	SP		
	672		145.0'							137.5-140=60
	436									
	395		grain size							
138	227		135-139							
	254									
	328						(f-c) SAND, <3% trace (f) gravel, <3% trace silt	SW		
	333									140-142.5=40
140	286									
	254									
	119						(f-c) SAND, some <30% (f) gravel, ,3" trace silt	SW		
	186									
142	138									
	276									
	315						-<3% trace (f) gravel	SW		
	87						(f) SAND <15% little silt, <15% little gravel			142.5-145=50
144	95						(rounded <3"diam)	SP		

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 9 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 144	PID PER 6" (ppm)	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* = [PID, Jar HS]
			S-15 (cont.)			Gray	SILT <30% some (f-c) sand, <30% some gravel (rounded<4" diam) trace <3% clay	ML	Boulder @ 144 fbgs not bedrock	145-147.5=109
146	60	4/5	1150 S-16 S-16: 145.0' - 150.0'							
	Too wet									147.5-150=231
148										
	150									
150				150.0'		Dark gray	Weathered bedrock (SCHIST)			
		5/10	1400 C-1 C-1: 150.0' - 160.0'	Top of bedrock	0% RQD		SCHIST (mica + qtz) rich -horizontal foliation	BR		
152										
154										
156										
158										
160										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 10 OF 11

BORING LOG FOR:	Raymark /OU2/Phase I Groundwater			BORING NO.:	SB-211
PROJECT NO.:				START DATE:	10-10-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/13/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-211 B+S
GRD. SURFACE ELEVATION:	19.58'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 160	PID PER 6" (ppm)	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* = [PID, Jar HS]
		5/10	1450 C-2				SCHIST (mica + qtz rich)			
			C-2: 160.0' -		0%RQD	Gray	- horizontal foliation	BR		
			171.0'							
162									Very broken up	
									↓	
164										
166										
168										
170										
							↓			
172			EOB @ 171'							
174										
175										
176										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211	PAGE: 11 OF 11

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-211D,M
PROJECT NO.:	N0003			START DATE:	10/25/97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	10/26/97
DRILLED BY (Company/Driller):	ALLIANCE/BEN GRIM			MON. WELL NO.:	MW-211D,M
GRD. SURFACE ELEVATION:	19.56'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No samples taken Refer to Boring Log SB-211B,S For Description.			
144'										

TYPE OF DRILLING RIG:	VIBRA-SONIC		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" +8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-211D,M	PAGE: 1 OF 1

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-212
PROJECT NO.:				START DATE:	09/25/97
LOGGED BY:	Jeff MacManus	TRANSCRIBED BY:	MES	COMPLETION: DATE:	09/26/97
DRILLED BY (Company/Driller):	Alliance/ Ron Ball			MON. WELL NO.:	MW-212 B+S
GRD. SURFACE ELEVATION:	12.04	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" (ppm) Screen	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)]
1	6.1 5.8	3'.6"/ 3'.6"	S-1 1148	6'		Dark Brown	Organics, SAND, dry	SW	Dry	
2	5.5 6.8			3.0'		Brown	GRAVEL, poorly graded, dry	GP	Dry	
3	3.4 9.2									
4	14.6 7.2	1'8"/ 3'.0"	S-2 1159							
5						Brown	Gravelly, SAND	SW	Moist	
6	18.1									
7	8.6 4.3	4.6/10	S-3 1320			Brown	Med. SAND, with stones	SW	Brown, moist / wet	
8	22.7									
9	4.6									
10	68.2					Red Brown	Coarse SAND with Gravel	SW	Moist / wet Reddish Brown	
11	70.7									
12	48									
13	87									
14	48					Red Brown	Medium SAND	SP	Moist / wet Rdddish Brown	
15	33									
16	132									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" and 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate and spin		
METHOD OF ROCK CORING:	4" vibrate and spin and wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-212	PAGE: 1 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-212
PROJECT NO.:				START DATE:	09/25/97
LOGGED BY:	Jeff MacManus	TRANSCRIBED BY:	MES	COMPLETION: DATE:	09/26/97
DRILLED BY (Company/Driller):	Alliance/ Ron Ball			MON. WELL NO.:	MW-212 B+S
GRD. SURFACE ELEVATION:	12.04	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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										
	12		S-4			Red				(JHS/PID)
17	11.4		1345	17'		Brown	Med SAND	SP	Wet	
	11.8									
18						Brown	Coarse sandy, GRAVEL	GW	Wet	
	5.6									
19	22.9									
	20.9									
20		8'/10'								
	23.9									
21	28.6									
	8.8									
22	17.0									
	17.0									
23	28.0									
24	25.9									
	40.2									
25	6.5									
	8.5									
26	26.5									
	1.9		S-5							
27	2.2		1420				Coarse SAND	SW		
	5.0									
28	9.0									
	9.1									
29	10.8									
	6.8									
30	11.0						Coarse sandy, GRAVEL	GW		0.8 (30' to 31.5)
	12.6									
31	12.9									
	10.1									
32	13.5					Tan Lt. brown	SILT, medium plastic	ML		

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-212	PAGE: 2 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-212
PROJECT NO.:				START DATE:	09/25/97
LOGGED BY:	Jeff MacManus	TRANSCRIBED BY:	MES	COMPLETION: DATE:	09/26/97
DRILLED BY (Company/Driller):	Alliance/ Ron Ball			MON. WELL NO.:	MW-212 B+S
GRD. SURFACE ELEVATION:	12.04	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 32	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)]
	11.6		S5 (cont.)			Light				
SILT,	14.0					Brown	SILT, medium plasticity	ML	Wet	10.7(31.5to34)
	12.7									
34	21.0									
	31.3									
35	38.7			34'6"			Fine-medium SAND			
	25.0									
36	38.5					Brown		SW	Wet	
			S6							4.8(34.5'to36')
										9.7(36-38.5)
	20.2									
37	12.8					Brown	Medium SAND			
	34.9									
38	81.0							SP		
	48.0									
39	63.8									
	81.6									
40	70.8			40.5						12.7(38.5-41)
	82.3									
41	70.7					Brown	Coarse SAND	SP		
	83.5									
42	56.8			42.5						10.4(41-43.5)
	43.0									
43	54.7									
	132									
44	104					Brown	Fine SAND	SP		
	94.6			46						
45	28.0									
	26.0									43.7(43.5-46)
46	90.9									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-212	PAGE: 3 OF 6

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater	BORING NO.:	SB-212
PROJECT NO.:		START DATE:	09/25/97
LOGGED BY:	Jeff MacManus	TRANSCRIBED BY: MES	COMPLETION: DATE: 09/26/97
DRILLED BY (Company/Driller):	Alliance/ Ron Ball	MON. WELL NO.:	MW-212 B+S
GRD. SURFACE ELEVATION:	12.04	ELEVATION FROM: NGVD 1929	CHECKED BY:

DEPTH (FEET) 46	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)]
47	7.8 22.2	9.5/10	S-7			Brown	Fine SAND	SP		38.4(46'-48.5')
48	36.3 118/									
49	111 74.8									27.8 (48.5'-51')
50	151 80.8									
51	111 66.6			50.5'		Brown	Fine SAND, trace gravel	SP		17.1(51'-53.5'-56')
52	32.8			51.5'		Brown	Fine SAND	SP		
53	58.7 41.2									
54	84.8 23.0			53.5		Brown	Fine SAND	SP		
55	77.2 123								Brown with iron stain (red)	28.3 (53.5'-56')
56	146 77									
57	21.9 36	5'/5'	S-8			Red/ brown	Fine SAND			11.1 (56'-59')
58	28.4 51.3									
59	62.7 24.0									
60	19.7 24.6			Top of Bedrock		Red/ gray	Fine sand and calcite (mottled). Friable compressed Calcite with crystals of calcite consolidated rock frag.		Possibly calcite	
61	4.1 2.0			60.0'						3.5 (60'-61')

TYPE OF DRILLING RIG:	Sonic
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash
METHOD OF SOIL SAMPLING:	4" vibrate + spin
METHOD OF ROCK CORING:	4" vibrate + spin + wash
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-212
PROJECT NO.:				START DATE:	09/25/97
LOGGED BY:	Jeff MacManus	TRANSCRIBED BY:	MES	COMPLETION: DATE:	09/26/97
DRILLED BY (Company/Driller):	Alliance/ Ron Ball			MON. WELL NO.:	MW-212 B+S
GRD. SURFACE ELEVATION:	12.04	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 61	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)]
62		1.5'/5'	S-9			Grey	SCHIST gray	Broken Rock		
63										
64										
65										
66										
67		3'/10'	S-10				Lost 1' of recovery weathered			
68										
69							SCHIST w/quartite intrusions-conglomerate with quartz, Quartz, pyrite			
70										
71										
72										
73										
74										
75										
76										

TYPE OF DRILLING RIG:	Sonic
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash
METHOD OF SOIL SAMPLING:	4" vibrate + spin
METHOD OF ROCK CORING:	4" vibrate + spin + wash
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

BORING NO.: SB-212

Tetra Tech NUS, Inc.

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-212
PROJECT NO.:				START DATE:	09/25/97
LOGGED BY:	Jeff MacManus	TRANSCRIBED BY:	MES	COMPLETION: DATE:	09/26/97
DRILLED BY (Company/Driller):	Alliance/ Ron Ball			MON. WELL NO.:	MW-212 B+S
GRD. SURFACE ELEVATION:	12.04	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
76										
77							Greenish broken schist, w/ quartzite intrusions	Broken Rock		
78										
79										
80										
81										
82										
83										
84										
85										
86										
									Water @ 33.1' 1828 hrs Depth to bottom of hole 85.5' 525 gallons of water used	

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-212	PAGE: 6 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-212M,D
PROJECT NO.:	N0003			START DATE:	9-27-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	9-27-97
DRILLED BY (Company/Driller):	ALLIANCE/BEN GRIM			MON. WELL NO.:	MW-212M,D
GRD. SURFACE ELEVATION:	12.04'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No samples taken (soils or core)			
							Refer to Boring Log SB-212B,S For Description.			
55.8'										

TYPE OF DRILLING RIG:	VIBRA-SONIC		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" +8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-212M,D	PAGE: 1 OF 1

BORING LOG FOR:	Raymark/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-213
PROJECT NO.:				START DATE:	10-21-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-21-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-213B,S
GRD. SURFACE ELEVATION:	23.1'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
0							Asphalt surface 4"			
			S-1			DK	(f-c) SAND <30% some gravel (subrounded <3"			
	0.7	4/5	0835			BN	diam) <15% little fines	SM		
	0.0						< 15% little fines			
2	0.8									
	0.5					Yellowish				
	0.8					orange	(f) SAND <15% little silt <3% trace clay	SP	Dry	
	0.8									
4	6.6									
			S-2						Asphalt in top of sample,	
6	0.3	6/10	0850				(f-m) SAND little <15% silt		obviously slough from	
	0.0								surface -2.5 feet of slough	
	2.4								slough	
	13.9									
8	4.0									
	7.1									
	5.8									
	4.4									
10	11.2									
	6.6									
12										
14										
									a piece of 1" gravel	
									rounded	
			S-3						a piece of 1 " gravel	
16	0.3	6/10	0900				(f-m) SAND little <15% silt	SP	subrounded	

TYPE OF DRILLING RIG:	Sonic			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash			
METHOD OF SOIL SAMPLING:	4" vibrate + spin			
METHOD OF ROCK CORING:	4" vibrate + spin + wash			
GROUNDWATER LEVELS:	GW @ 20 fbgs during direct push profile program in August			
OTHER OBSERVATIONS:	2-wells installed w/in SB-213 : MW-213B + MW 213S	BORING NO.:	SB-213	PAGE: 1 OF 3

BORING LOG FOR:	Raymark/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-213
PROJECT NO.:				START DATE:	10-21-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-21-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-213B,S
GRD. SURFACE ELEVATION:	23.1'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
	0.0					Orange				
	2.2		(cont.) S-3			yellow	(f-m) SAND, <3% trace silt	SP		
	5.3						(f-c) SAND, <15% little gravel (rounded <3/4" diam)			
18	3.7						<3% trace silt	SW		
	1.2									
	11.9									
	19.3									
20	31.9						(f) Sand, <3% trace silt, <3% trace (m) sand	SP	Moist	
	20.6									
	4.4									
	4.9									
22							(f) SAND <30% some silt	SM		
							(f-c) SAND, 15% little (f) gravel, trace silt	SW		
24			Grain size				(f-c) GRAVEL and (f-c) SAND <15% little silt	GW		
			S-4							26-27=
26	0.8	4/4					(f-c) SAND trace (f) gravel, trace silt	SW		8.8 ppm
	8.8									
	22.9						(f) SAND trace silt	SP		
	27.9									28-29
28	6.5						(f-c) GRAVEL and (f-c) SAND <15% little silt	GW		1.1 ppm
	4.2		Grain size							
							(m) SAND, trace (f) gravel trace silt	SP		
			C-1	Top of						
30		5.5/6		Bedrock	50% RQD	Gray	Schist (mica+ qtz rich)	BR	Broken-up	
				~29.0'						
							-vertical foliation		Competent	
32										

TYPE OF DRILLING RIG:	Sonic			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash			
METHOD OF SOIL SAMPLING:	4" vibrate + spin			
METHOD OF ROCK CORING:	4" vibrate + spin + wash			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	2 wells installed w/in SB-213; MW-213B and MW-213S.	BORING NO.:	SB-213	PAGE: 2 OF 3

BORING LOG FOR:	Raymark/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-213
PROJECT NO.:				START DATE:	10-21-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-21-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-213B,S
GRD. SURFACE ELEVATION:	23.1'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 32	PID PER 6" (ppm)	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* = [PID, Jar HS]
34			C-1 (cont.)			Gray green	Schist - (mica + Qtz Rich)			
36		2	C-2 1135 C2: 34.0'-40.0'		0% RQD		- vertical foliation			
38									2/5 sample rec/length	
40										
42		8/10	C-3 1210 C3: 40.0'-49.0'		20% RQD				Broken-up	
44										
46										
48									competent	
50		2/3	1310 C-4 C4: 49.0'-53.0'		16% RQD				competent	
52									Broken-up	
54			53 EOB							
56										
58										
60										
62										
64										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	2 wells installed w/in SB-213; MW-213B and MW-213S.	BORING NO.: SB-213	PAGE: 3 OF 3

BORING LOG FOR:	Raymark			BORING NO.:	SB-213DB
PROJECT NO.:	N4236-0320			START DATE:	10/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/23/02
DRILLED BY (Company/Driller):	ADT/Derek Walker			MON. WELL NO.:	MW-213DB
GRD. SURFACE ELEVATION:	23.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For detailed soil description refer to SB-213B log.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
				Asphalt		Light Brown	Fine-coarse SAND, trace gravel	SW	No samples taken, logged cuttings.	
5										
									8 ¼" augers used to 26'	
10							Fine-coarse SAND	SP		PID = 0.0 FID = 0.0
15										
20	1 ft./3 min Roller bit									
25										PID = 0.0 FID = 0.0
				26' Bedrock		Dark Gray	Schist, trace silt (gray wash water)		6 in. socket drilled with tri-core roller-bit to 31 ft. bgs	
30										PID = 0.0 FID = 0.0
				31' Socket Bottom					Set 6 in. steel casing with Portland cement grout 6 in. air hammer advanced to EOB.	
35										
40	50 sec/ft.									

TYPE OF DRILLING RIG:	Air rotary		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	0'-26' = auger, 26'-31'- roller bit, 31'-131' = air hammer		
METHOD OF SOIL SAMPLING:	Inspection of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL in MW-213DB = 19.55		
OTHER OBSERVATIONS:	10/17 – roller bit 5 ft. into bedrock (31 ft) + set socket; 6 in. casing Portland cement grout; Readings for the breathing zone.	BORING NO.: SB-213DB	PAGE 1 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-213DB
PROJECT NO.:	N4236-0320			START DATE:	10/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/23/02
DRILLED BY (Company/Driller):	ADT/Derek Walker			MON. WELL NO.:	MW-213DB
GRD. SURFACE ELEVATION:	23.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
40						Dark Gray	Schist, micaceous schist, some quartz			
45										
	50 sec/ft									
50										
									Material very soft, almost no pieces large enough to identify rock type	PID = 0.0 FID = 0.0
55										
60							(no particles large enough to identify)			
	50 sec/ft									
65										
							Schist, mostly biotite, trace quartz			
70										
	55 sec/ft									
75										PID = 0.0 FID = 0.0
									Rod dropped – 6" at 79' fracture producing 10-15 gpm	
80										

TYPE OF DRILLING RIG:	Air rotary
METHOD OF ADVANCING BORING:	0'-26' = auger, 26'-31'- roller bit, 31'-131' = air hammer
METHOD OF SOIL SAMPLING:	Inspection of cuttings only
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	WL in MW-213DB = 19.55
OTHER OBSERVATIONS:	10/17 – roller bit 5 ft. into bedrock (31 ft) + set socket; 10/22 – drill to 94'; 10/23 – drill to 131'; 6 in. casing Portland cement grout; Readings for the breathing zone.

Tetra Tech NUS, Inc.

BORING NO.: SB-213DB

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-213DB
PROJECT NO.:	N4236-0320			START DATE:	10/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/23/02
DRILLED BY (Company/Driller):	ADT/Derek Walker			MON. WELL NO.:	MW-213DB
GRD. SURFACE ELEVATION:	23.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
	45 sec/ft					Dark Gray	Micaceous schist, trace quartz		Sample feels grittier, more > sand sized pieces	
85							Dark brown wash water			
90										
95				10/22 10/23	94'					
							Micaceous schist, trace quartz Brown wash water with slight sheen			
100	40 sec/ft									
105										
										PID = 2.0 FID = 1.8
110	45 sec/ft									
	45 sec/ft								114' softer core	
115	35 sec/ft									
									At borehole entrance, PID = 2.0 FID = 17	PID = 0.0 FID = 0.0
120										

TYPE OF DRILLING RIG:	Air rotary
METHOD OF ADVANCING BORING:	0'-26' = auger, 26'-31'- roller bit, 31'-131' = air hammer
METHOD OF SOIL SAMPLING:	Inspection of cuttings only
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	WL in MW-213DB = 19.55
OTHER OBSERVATIONS:	10/17 – roller bit 5 ft. into bedrock (31 ft) + set socket; 6 in. casing Portland cement grout; Readings for the breathing zone.

Tetra Tech NUS, Inc.

BORING NO.: SB-213DB

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-213DB
PROJECT NO.:	N4236-0320			START DATE:	10/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/23/02
DRILLED BY (Company/Driller):	ADT/Derek Walker			MON. WELL NO.:	MW-213DB
GRD. SURFACE ELEVATION:	23.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
120										
	45 sec/ft					Dark Gray	Micaeous schist, trace quartz Brown/gray wash water			
125										
										PID = 0.0 FID = 0.0
130										
				EOB @ 131' bgs						

TYPE OF DRILLING RIG:	Air rotary		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	0'-26' = auger, 26'-31'- roller bit, 31'-131' = air hammer		
METHOD OF SOIL SAMPLING:	Inspection of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL in MW-213DB = 19.55		
OTHER OBSERVATIONS:	10/17 – roller bit 5 ft. into bedrock (31 ft) + set socket; 6 in. casing Portland cement grout; Readings for the breathing zone.	BORING NO.: SB-213DB	PAGE: 4 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-213SG
PROJECT NO.:	N4236-0320			START DATE:	11/5/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/5/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-213SG
GRD. SURFACE ELEVATION:	23.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil details see boring log for MW-213B	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light brown	Fine-coarse SAND, some gravel,	SW		
2										
									Dark brown wash water	
4										
6										PID = 0.0 FID = 0.0
8										
				EOB @ 8.0' bgs						

TYPE OF DRILLING RIG:	CME75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" Drive + wash			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL = 19.8' at MW213S			
OTHER OBSERVATIONS:		BORING NO.:	SB-213SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark/OU2/PHASE I GROUNDWATER			BORING NO.:	SB-214
PROJECT NO.:				START DATE:	10-7-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/07/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-214D, S,M
GRD. SURFACE ELEVATION:	20.05'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0	PID PER 6" (ppm)	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* = [PID, Jar HS]
	5	8/6	0840 S-1	0.25		Black	Asphalt surface			
2				1.5		Black to olive	Organic (f-c) SAND some fines (<30%), little gravel (<15%) subrounded <1" diam)	SM	Wet to moist	
						Olive gray	(f-c) SAND and GRAVEL (rounded to subrounded, <4" diam) trace fines <3%	SW	Damp	
4										
6										
	10	10/9	0900 S-2							
8	5									
10										
12	10									
	5									
14										
				0=15						
16	15 / 2	10/10	0930 S-3			Yellowish orange	(f-c) SAND <15% little gravel (rounded, <1" diam) trace fines <3%	SW	Damp to moist	

TYPE OF DRILLING RIG:	Sonic
METHOD OF ADVANCING BORING:	6" to 55 fbgs+ 8"to 30 fbgs vibrate, spin, and wash
METHOD OF SOIL SAMPLING:	4" vibrate + spin (Rock only) to 56 fbgs
METHOD OF ROCK CORING:	4" vibrate + spin + wash
GROUNDWATER LEVELS:	DTW 18.1 fbgs @ 1000 10-7-97, open hole
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	Raymark/OU2/PHASE I GROUNDWATER			BORING NO.:	SB-214
PROJECT NO.:				START DATE:	10-7-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/07/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-214D, S,M
GRD. SURFACE ELEVATION:	20.05'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
	2		S-3 (cont.)							
	5									
	3									
18	8								More fines	
	9									
	9								Wet	
	9									
20	20			0=20						
						Yellowish	(m) SAND, <3% trace (f) sand, <3% trace fines, No gravel			
	13					orange		SP	Wet	
22	40									
	30									
24										
	21									
	18	8/10	1010 S-4							
26	10.1									
	6.7						(f-c) SAND, <15% fine gravel (rounded to subrounded			
	20						<0.75" diam)	SW		
	22									
28										
	38									
							(m) SAND, no fines	SP	w/gravel	
	46.4									
30										
	62									
	75							SP	No gravel	
	52									
32										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" to 55 fbgs+ 8"to 30 fbgs vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin (Rock only) to 56 fbgs		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:	DTW 18.1 fbgs @ 1000 10-7-97, open hole		
OTHER OBSERVATIONS:		BORING NO.: SB-214	PAGE: 2 OF 4

BORING LOG FOR:	Raymark/OU2/PHASE I GROUNDWATER			BORING NO.:	SB-214
PROJECT NO.:				START DATE:	10-7-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/07/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-214D, S,M
GRD. SURFACE ELEVATION:	20.05'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
32										
	62					reddish				
	78					orange	(m) SAND, no fines	SP	w/gravel	
	75									
34	74							SP	no gravel	
	64									
	70							SP	w/gravel	
	0	10/10	1030 S-5							
36	8							SP	no gravel	
	24		37.5-39				(f-c) SAND and GRAVEL (rounded to subrounded,			
	63						<1" diam), no fines	SW	fine gravel	24.1
	63									
38	63.1									
	68.8									
	80.6		SB214 - 3941				(m) SAND, no fines, no gravel	SP	no gravel	15.7
	23.2		grain size							
40	23									
	37									
	43									
42										2.7
	51									
	64									
44										
	56									
	6.2	8/7	1045 S-6			Reddish				
46						orange		SP	no gravel	-33.7-
	33.3					Light	(f) SAND some silt (<30%), some			
						gray	gravel (subangular <4" diam)	SM	w/o clay	
	38.7									
48	54.1									56.1/47

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" to 55 fbgs+ 8"to 30 fbgs vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin (Rock only) to 56 fbgs		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:	DTW 18.1 fbgs @ 1000 10-7-97, open hole		
OTHER OBSERVATIONS:		BORING NO.: SB-214	PAGE: 3 OF 4

BORING LOG FOR:	Raymark/OU2/PHASE I GROUNDWATER			BORING NO.:	SB-214
PROJECT NO.:				START DATE:	10-7-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/07/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-214D, S,M
GRD. SURFACE ELEVATION:	20.05'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 48	PID PER 6" (ppm)	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* = [PID, Jar HS]
	22.6					Light	(f-m) SAND and SILT, some gravel <30%			
	23		S-6 (cont.)			gray	(angular to rounded (bottom), <3%" diam), little clay <15%	SM-SC	w/clay	
	47									
50	91.0					↓				8.2/4.8
	69.8									
	36.7									
	20.1						SCHIST – mica + qtz rich			
52	32.4			Top of		Gray	-vertical foliation	BR		
	28.6		C-1	Bedrock						
	15.0	3.5/4	C:1-52.0'-56.0'	@ 51.0'						
	37									
54	33									
	13								Fracture zone	
									1ft thick @ 55.0 fbgs	
56							EOB 56.0'			

TYPE OF DRILLING RIG:	Sonic			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" to 55 fbgs+ 8"to 30 fbgs vibrate, spin, and wash			
METHOD OF SOIL SAMPLING:	4" vibrate + spin (Rock only) to 56 fbgs			
METHOD OF ROCK CORING:	4" vibrate + spin + wash			
GROUNDWATER LEVELS:	DTW 18.1 fbgs @ 1000 10-7-97, open hole			
OTHER OBSERVATIONS:		BORING NO.:	SB-214	PAGE: 4 OF 4

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-214B
PROJECT NO.:	N4236-0320			START DATE:	9/11/02 @ 1345
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/12/02 @ 1725
DRILLED BY (Company/Driller):	ADT/ Eric R.			MON. WELL NO.:	MW-214B
GRD. SURFACE ELEVATION:	20.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 Refer to MW-214D boring log for soil classification	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0		NA	NA			Brown	Wash water discharge Brown in color, 0-16 ft. Fine-coarse SAND and GRAVEL, mostly medium-coarse sand with some Fine gravel, quartz, gneiss, feldspars	SP		
2										
4										
6										
8										
10										
12										
14										
16										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon starting @ 51 ft. bgs. Refer to log for MW-214D for material description.		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (E)	BORING NO.: SB-214B	PAGE: 1 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-214B
PROJECT NO.:	N4236-0320			START DATE:	9/11/02 @ 1345
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/12/02 @ 1725
DRILLED BY (Company/Driller):	ADT/ Eric R.			MON. WELL NO.:	MW-214B
GRD. SURFACE ELEVATION:	20.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
		NA	NA			Brown	Wash water discharge brown in color, Fine-coarse SAND, some fine gravel, quartz, feldspar, gneiss noted.	SP		
18										
20										
22										
24										
26										
28										
30										
32										

TYPE OF DRILLING RIG:	CME 75		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" casing, drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon starting @ 51 ft. bgs. Refer to log for MW-214D for material description.		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (E)	BORING NO.: SB-214B	PAGE: 2 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-214B
PROJECT NO.:	N4236-0320			START DATE:	9/11/02 @ 1345
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/12/02 @ 1725
DRILLED BY (Company/Driller):	ADT/ Eric R.			MON. WELL NO.:	MW-214B
GRD. SURFACE ELEVATION:	20.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
		NA	NA			Brown	Wash water discharge brown in color, fine-coarse SAND, some fine gravel, quartz, gneiss, micas noted.	SP		
34										
36										
38										
40										
42										
44										
46										
48										

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, drive and wash			
METHOD OF SOIL SAMPLING:	2" split spoon starting @ 51 ft. bgs. Refer to log for MW-214D for material description.			
METHOD OF ROCK CORING:	NX or NQ			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID (F) PID (E)	BORING NO.:	SB-214B	PAGE: 3 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-214B
PROJECT NO.:	N4236-0320			START DATE:	9/11/02 @ 1345
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/12/02 @ 1725
DRILLED BY (Company/Driller):	ADT/ Eric R.			MON. WELL NO.:	MW-214B
GRD. SURFACE ELEVATION:	20.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
							Refer to MW-214D boring log sheets for material Classification		Possible bedrock encountered @ 50'	
50										
	9	1.0 / 2.0	OU2-SO-214B-5052	Sand & Gravel	Dense	Brown	0-0.3' Fine-coarse SAND with trace fine-medium gravel, quartz and gneiss fragments	SP	No PACM or MMM Moist – wet No odor	
	17		FID – 0.0							
	23		PID – 4.0				0.3-1.0' – Fine-medium SAND, with some fine gravel and trace coarse sand, trace silt			
52	22		9/12/02 0930							
							Discharge brown/gray in color, fine rock fragments.		4 in. casing seated to 53.2' bgs 3 7/8" roller bit socket to 56' bgs	
54				Weathered Rock			Weathered rock 53-54' soft rock material. 54' solid harder.			
				Rock Socket 54-56'						
56										
			R-1 56'-61' Rec/Pen: 41"/60" = 68% RQD: 23"/60" = 38%		56.5' Soft	Green Gray	56-57' green Mica Schist, weathered and rotted, mica, quartz, feldspar, brittle high angle natural breaks	Very Broken	Discharge H2O gray 60-61' encountered void approx. 0.4', lost H2O, no return Estimated ± 150 –300 gals lost 56-57' lost H2O 58-59' lost H2O	
	6:00									
58	3:45				57.5'		57-58' same rock class, no breaks 58-59.4' high and low angle breaks	Broken		
					58.5' Medium soft		Fine sand filled boring to ±55' up in socket. Reseated 4" casing @ 53.7', 3" rollerbit to flush out			
	5:00									
60	6:38				59.5'		Fine sand to 59', using old diamond, tried to remove 59-61' rock core unsuccessful 3" roller bit to 61'			
					60.5'		and resumed coring			
	5:43									
62	6:23		R-2: 61'-65.5'		61.5'		Green gray mica, quartz, schist, feldspar, pyrite, garnet		No return discharge estimated ± 1,000 gals	
			Rec/Pen: 45"/54" = 83% RQD: 35"/54" = 65%		62.5'		61.5-62' – low angle break, edges rounded, Fragmented pieces ± 2-3"		Lost to 9.5 ft. core 61-62.5- ± 300 gals lost. drill head limited travel allowed for 4.' core	
	7:58									
64	8:20				63.5'		65' -Low angle natural breaks, rounded fragments ± 2-3"			

TYPE OF DRILLING RIG:	CME 75		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" casing, drive and wash	PACM = Potentially Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	2" split spoon starting @ 51 ft. bgs. Refer to log for MW-214D for material description.	MMM = Man Made Material	
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (E)	BORING NO.: SB-214B	PAGE: 4 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-214B
PROJECT NO.:	N4236-0320			START DATE:	9/11/02 @ 1345
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/12/02 @ 1725
DRILLED BY (Company/Driller):	ADT/ Eric R.			MON. WELL NO.:	MW-214B
GRD. SURFACE ELEVATION:	20.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
64										
					64.5' Medium soft	Green/ Gray		Broken		
66			R-3: 65.5 – 69'		65.5'		Mica, Quartz, Garnet, Schist 66' large low angle natural break			
			REC/Pen: 36"/42" = 86% RQD: 29"/42" = 69%		66.5' Soft		Weathered and discolored. 66.5-67.5' – high angle natural breaks, weathered, slight discoloration. Large concentration of garnet & quartz			
68					67.5'		67.5' – 68.5' – high angle breaks along quartz vein			
					68.5'					
70				EOB @ 69' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, drive and wash			
METHOD OF SOIL SAMPLING:	2" split spoon starting @ 51 ft. bgs. Refer to log for MW-214D for material description.			
METHOD OF ROCK CORING:	NX or NQ			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID (F) PID (E)	BORING NO.:	SB-214B	PAGE: 5 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-214SG
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/3/02
DRILLED BY (Company/Driller):	ADT/ Marques Larabie			MON. WELL NO.:	MW-214SG
GRD. SURFACE ELEVATION:	20.6 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see SB-214B.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
							No soil logged for this borehole.			
2							5" open casing driven to 5', then removed with soil inside			
							3" open casing driven to 8.1', then removed with soil inside 3" open casing driven again, hole is still open to 8.1 ft, will			
4							construct well here.			
										PID = 0.0 FID = 0.0
6										
8										
				EOB @ 8.1' bgs						

TYPE OF DRILLING RIG:	Truck-mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL = 17' at MW214S			
OTHER OBSERVATIONS:	Field screening for breathing zone only	BORING NO.:	SB-214SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-215
PROJECT NO.:				START DATE:	10-6-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/6/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-215 S+B
GRD. SURFACE ELEVATION:	20.66	ELEVATION FROM:	NVGD 1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
0										
	2		S-1	0.5						
	3.1	4/5	1000			Black	Asphalt Cover		Dry, FILL	
	4				Med.	Yellowish	(f-c) SAND. little <15% gravel (rounded to			
2	4				Dense	orange	subrounded, <3 diam), no fines	SW		
	5									
	6									
	5									
4	4									
	3		S-2							
6	4	5/10	1040							
	4									
	2									
	3									
8	3									
	3						(f) SAND little (m)<15% sand, <3% trace silt (in/a		Some bedding	
	3			=9			one piece of gravel rounded 1" diam @ 11 fbgs	SP	lineaments	
	3									
10	3									
12										
									Fining downwards	
14										
				=15					Dry	
	3		S-3							
16	3	3/4	1050				(f-c)SAND, little gravel <15% (subrounded to	SW	Wet	

TYPE OF DRILLING RIG:	Sonic			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash			
METHOD OF SOIL SAMPLING:	4" vibrate + spin			
METHOD OF ROCK CORING:	4" vibrate + spin + wash			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:		BORING NO.:	SB-215	PAGE: 1 OF 3

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-215
PROJECT NO.:				START DATE:	10-6-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/6/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-215 S+B
GRD. SURFACE ELEVATION:	20.66	ELEVATION FROM:	NVGD 1929	CHECKED BY:	

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
	3									
	3		S-3 (cont.)	=17			subrounded, <1" diam), no fines	SW	Wet	
	4					Gray			Some bedding.	
18						Brown	(f) SAND, little fines <15%	SP		
			Top of bedrock							
			19.0'	=19						
			C-1				SCHIST (mica + Qtz rich)			
20		3/3	1115		0% RQD	Gray	vertical foliation	BR		
			C1:19.0'-22.0'						0.5 ft fracture	
									zone @ 18.5 fbgs	
22										
			C-2							
		1/3	1150		20% RQD					
24			C2: 22.0'-25.0'							
			C-3							
26		8/7.5	1220		25% RQD					
			C3: 25.0'-32.5'							
28										
30										
									2ft fracture zone	
									@ 30.5 fbgs	
32										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-215	PAGE: 2 OF 3

BORING LOG FOR:	Raymark/OU2/Phase I Groundwater			BORING NO.:	SB-215
PROJECT NO.:				START DATE:	10-6-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10/6/97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-215 S+B
GRD. SURFACE ELEVATION:	20.66	ELEVATION FROM:	NVGD 1929	CHECKED BY:	

DEPTH (FEET) 32	PID PER 6" (ppm) 7	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* = [PID, Jar HS]
			C-3 (cont.)							
			C-4							
34			C4: 32.5'-39.0'		25% RQD	Gray	SCHIST - Mica + qtz rich - vertical foliation	BR		
36										
38										
40			EOB				EOB @ 39'			
42										
44										
46										
48										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-215	PAGE: 3 OF 3

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-215DB
PROJECT NO.:	N4236-0320			START DATE:	10/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/24/02
DRILLED BY (Company/Driller):	ADT/ Derek Walker			MON. WELL NO.:	MW-215DB
GRD. SURFACE ELEVATION:	20.6 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 Refer to SB-215B for detailed description	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD * SCREENING DATA *METHOD* = [FID, (PPM)]
			No samples taken				0'-0.5' - Asphalt		Dry	
				Asphalt		Brown	0.5'-6' - Fine – coarse SAND, some fine gravel	SW	No samples taken Logged cuttings only.	
5										PID = 0.0 FID = 0.0
						Light	6'-20' - Fine – medium SAND	SP	Dry	
10						Brown				
15										PID = 0.0 FID = 0.0
20										
				Bedrock		Dark	Micaeous Schist with trace pyrite			PID = 0.0 FID = 0.0
25						Gray				
	35 sec/ft			Bottom of Socket						
30							Schist		Producing very little water, material appearing has	
									consistency of thick paste	
35										
							Slight drop of rods, now getting water at a good rate (25 gpm)		Wash waters gray/brown	
40	40 sec/ft									

TYPE OF DRILLING RIG:	Schramm TF-45D, Air rotary			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	8.25" auger- overburden; 6 in diam. roller bit for socket; 6 in diam. air hammer = bedrock below socket			
METHOD OF SOIL SAMPLING:	Visual inspection of cuttings only			
METHOD OF ROCK CORING:	6 in Diameter Air Hammer			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	* Breathing Zone readings only	BORING NO.:	SB-215DB	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-215DB
PROJECT NO.:	N4236-0320			START DATE:	10/17/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/24/02
DRILLED BY (Company/Driller):	ADT/ Derek Walker			MON. WELL NO.:	MW-215DB
GRD. SURFACE ELEVATION:	20.6 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
40										
	45 sec/ft					Dark	Schist – trace quartz			
45						Gray				PID = 0.0 FID = 0.0
	35 sec/ft						Hit another soft spot, slight break in hammer, did not			
50							see another drop			
							Another soft spot with 3 combined fractures now at 40 gpm			
55							Schist			
	35 sec/ft									
60										
				EOB @ 61' bgs						
65										
70										
75										

TYPE OF DRILLING RIG:	Schramm TF-45D, Air rotary		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	8.25" auger- overburden; 6 in diam. roller bit for socket; 6 in diam. air hammer = bedrock below socket		
METHOD OF SOIL SAMPLING:	Visual inspection of cuttings only		
METHOD OF ROCK CORING:	6 in Diameter Air Hammer		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	* Breathing Zone readings only	BORING NO.: SB-215DB	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-215SG
PROJECT NO.:	N4236-0320			START DATE:	11/7/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/7/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-215SG
GRD. SURFACE ELEVATION:	20.6 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
					Slightly Loose	Brown	Fine-coarse SAND, some gravel or soil profile details, see boring log for SB-215S	SW	Light brown wash water No need to go to 300 lb. hammer.	
2										
4										
										PID = 0.0 FID = 0.0
6										
8										
				EOB @ 8.0' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL = 17.42' at MW-215S			
OTHER OBSERVATIONS:		BORING NO.:	SB-215SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2 / Groundwater Phase I	BORING NO.:	SB-216B
PROJECT NO.:		START DATE:	9-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY: FMD	COMPLETION: DATE: 9-23-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball	MON. WELL NO.:	MW-216B
GRD. SURFACE ELEVATION:	31.21	ELEVATION FROM: NGVD 1929	CHECKED BY:

DEPTH (FEET) 0	PID PER 6" (ppm) Screening	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* = [PID, Jar HS]
1	5.1 NA	3'/3'	S-1 1100	9"		Dark brown	Organics, (f) SAND & SILT	Topsoil OL-SM	Moist Topsoil	0.0
2	4.5 6.1					Red brown	Silty, (f) SAND, trace gravel (subrounded)	SM	Dry fill?	
3	5.6 4.0			2'6"		Light gray	(f-c) SAND, (f-c) GRAVEL(<3"O.D.) (sub-rounded/subangular)	SP-GM	Dry	
4	0.0	3'/3'	S-2 1130 - 0305 TOC			Yellow-orange		SP	Dry	
5										0.0
6										
7	5.3	8.5'/8.5'	S-3 1200 - 0709 TOC (w/Dup)							
8	0.0 3.6									0.0
9	0.0 1.8									
10	0.0		-1012 TOC							
11										0.0
12										
13	NA			12'6"		Light gray	SILT, trace gravel (?3 O.D., subrounded), trace Fine sand	ML	Dry, weathered rock/ rock flour	0.0
14				13'6" Top of Rock		Dark gray	SCHIST (vert. foliations, mica rich)	Rock		0.0
15			C1 14.5'-20.5'	13.5'						
16										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Advance and wash 6" I.D – 10' long outer casing		
METHOD OF SOIL SAMPLING:	4.75" O.D - 10' long sample casing w/rotating bit		
METHOD OF ROCK CORING:	Same as soil sampling except water is added		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-216	PAGE: 1 OF 4

BORING LOG FOR:	Raymark OU2 / Groundwater Phase I			BORING NO.:	SB-216B
PROJECT NO.:				START DATE:	9-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	9-23-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-216B
GRD. SURFACE ELEVATION:	31.21	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	PID PER 6" (ppm)	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* = [PID, Jar HS]
16										
17	NA		C1 (cont.)		0% RQD	Dark gray	Schist (vert. foliations, mica rich)	Rock		
18		5'/5'	C1:14.5'-20.5'							
19										
20										
21			C2							
22		5'/5'	C2:20.5'-25.5'						Iron-oxide staining, trace white crystalline quartz	
23										
24										
25										
26			C3							
27		7.5'/10'	C3:25.5'-36.0'							
28										
29										
30									Rapid rock coring	
31										
32										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-216	PAGE 2 OF 4

BORING LOG FOR:	Raymark OU2 / Groundwater Phase I			BORING NO.:	SB-216B
PROJECT NO.:				START DATE:	9-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	9-23-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-216B
GRD. SURFACE ELEVATION:	31.21	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 32	PID PER 6" (ppm)	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* = [PID, Jar HS]
33			C-3 (cont.)		0% RQD	DK gray	Schist (vert. folliations, mica rich)	Bedrock		
34										
35										
36										
37			C-4							
38		7'/10'	C:4:36.0'-46.0'							
39										
40										
41										
42										
43										
44										
45										
46										
47			C-5 C:5:46.0'-56.0'							
48										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-216	PAGE: 3 OF 4

BORING LOG FOR:	Raymark OU2 / Groundwater Phase I			BORING NO.:	SB-216B
PROJECT NO.:				START DATE:	9-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	9-23-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-216B
GRD. SURFACE ELEVATION:	31.21	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 48	PID PER 6" (ppm)	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* = [PID, Jar HS]
49		6'/10'	C-5 (cont.)			Dark gray	Schist (vert. folliations, mica rich)	BR		
50										
51										
52									Quartz Vein 1" thick	
53										
54										
55										
56										
57		8"/10"	C-6							
58			C6:56.0'-66.0'							
59										
60										
61									trace pyrite crystals	
62										
66			EOB=66 fbgs							

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-216	PAGE: 4 OF 4

BORING LOG FOR:	RAYMARK /OU2/PHASE I GROUNDWATER			BORING NO.:	SB-216DB
PROJECT NO.:				START DATE:	02/10/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/11/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M.Harrington			MON. WELL NO.:	MW-216DB
GRD. SURFACE ELEVATION:	31.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass surface			
5									D & W 4 in.	
10									Casing to 16'	
15										
20							Top of bedrock at ~ 15 ft.		No water loss	
25							Core to 68. Core from 68 to 98.8 ft.			
30										
35							Roller bit 3 7/8" to 68 ft.			
40							Roller bit 2 7/8" to clean out bore hole to 100 ft. bgs Bedrock = chlorite, quartz, mica, SCHIST with minor pyrite			
45										
50										
55										
60							1 set slickensides noted @ ~ 56-60' minor calcite		Lost ~ 100 gal. @ 57 ft. Continue loosing water ~ 250 gal. Lost 57-60'	
							Deposition along slick's.		steady water loss.	
62										
64										

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Refer to back of page of orig. log for additional core run times	BORING NO.: SB-216DB	PAGE: 1 OF 4

BORING LOG FOR:	RAYMARK /OU2/PHASE I GROUNDWATER	BORING NO.:	SB-216DB
PROJECT NO.:		START DATE:	02/10/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY: MES	COMPLETION: DATE: 02/11/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M.Harrington	MON. WELL NO.:	MW-216DB
GRD. SURFACE ELEVATION:	31.2 ft.	ELEVATION FROM: NGVD 1929	CHECKED BY:

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)]
64										
		←	CORE TIME						Steady water loss	
66										
68									Lost 600 gal. From 57'-68'	
		2:50	C-1=68'-71.3' PEN=3.3 REC=3.0 RQD length=18in RQD=45%			Dark Grey	Garnet, quartz, biotite, SCHIST. Aphanitic with ~ 65° Angle foliation (to core direction)			
70		3:07					Mult. Frac. Parallel to foliation @ 68.5'		Lost 150 gal. During C-1	
		3:34					Mult. Tight fractures paralled to foliation 69.8-71'			
72		2:45	C-2=71.3'-79' PEN=7.7 ft. REC=7.6' RQD length=72" RQD=77%							
		3:00								
74		3:30				Grey & Gold	73-76.5'=QUARTZ (smokey) intrusion ? includes Significant qty. of well formed crystals, vuggy			
		2:47					SCHIST similar to above.			
76		4:10								
		5:02				Dark Grey	Numerous high angle frac. Parallel to foliation From 76.5'-78'			
78		4:08								
		4:15								
80		3:02	C-3=79'-88.9'				Horiz. Frac. With oxidation @ 79.5'			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-216DB	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK /OU2/PHASE I GROUNDWATER			BORING NO.:	SB-216DB
PROJECT NO.:				START DATE:	02/10/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/11/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M.Harrington			MON. WELL NO.:	MW-216DB
GRD. SURFACE ELEVATION:	31.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 80	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)]
		3:48	C-3=79'-88.9' PEN=9.9' REC=10.0' RQD length=101.5" RQD=85% Water loss ~300 gal				High angle frac. @ 80.5'			
82		4:12					Solid core to 85.2'			
		3:47								
84		3:13								
		3:05								
86		3:58					Horiz. and high angle frac. – 85.2'-86'			
		4:08							Gouge composed of mica.	
88		5:09					Mult. High angle and horiz. Frac. 87.5' to 90.5' with White gouge on faces	VBR		
		6:39								
90		5:43	C-4=88.9'-98.9							
		4:30	PEN=10.0'				High angle frac. @ 91'			
92		4:48	REC=10.2'							
		4:19	RQD length=106"				Smokey QUARTZ. From 92-93'			
94		5:07	RQD=88%				High angle frac. @ 93'			
							Mult. Frac. @ 94-95'			
96							Smokey QUARTZ. And feldspar. From 95-96'			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-216DB	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK /OU2/PHASE I GROUNDWATER			BORING NO.:	SB-216DB
PROJECT NO.:				START DATE:	02/10/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/11/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M.Harrington			MON. WELL NO.:	MW-216DB
GRD. SURFACE ELEVATION:	31.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 96	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)]
									Gouge on frac. faces	
98							Mult. High angle frac. @ 97.5'-98.25'			
100							EOB @ 98.9' bgs.			
							Noted = during coring, after pump stopped, water Return up casing would continue for 3-5 min. Sometimes returning 80-100 gallons back into washtub			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-216DB	PAGE: 4 OF 4

BORING LOG FOR:	Raymark/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-217
PROJECT NO.:				START DATE:	10-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-24-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-217B,D
GRD. SURFACE ELEVATION:	16.23'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	PID PER 6" (ppm)	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 Asphalt surface 3" thick	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [PID, Jar HS]
	1.8	5/5	1145 S-1			Dark brown	(f) SAND, <15% little silt, <3% trace gravel	SP		
2	4.0 5.7					Light brown	(f) SAND, <15% little gravel (f-c, rounded, <2" diam), <3% trace silt		Dry	
	2.2 0.0									
4	0.0 0.0					Yellowishs orange	(f-c) SAND <30% some gravel (f-c rounded <2" diam), <3% trace silt	SW		
	0.0 0.0									
6	0.0	8/10	1200 S-2				(f-c) SAND, and <50% GRAVEL (f-c), rounded, <2.5" diam)	SW/GW		
8										
10										
	7.7						(f-m) SAND <15% little silt , <15% little gravel (angular- rounded, <0.5" diam)	SP		
12	5.9 6.1									
	0.0 1.9									
14										
16	0.0	7/10	1210 S-3				(f-c) SAND <15% little gravel (rounded to angular, see page 2 for continuation of description	SW		

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-217	PAGE: 1 OF 4

BORING LOG FOR:	Raymark/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-217
PROJECT NO.:				START DATE:	10-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-24-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-217B,D
GRD. SURFACE ELEVATION:	16.23'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 16	PID PER 6" (ppm)	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* = [PID, Jar HS]
	0.0									
			S-3 (cont.)				<2.5" diam) <3% trace silt	SW		
18					1 ft.	Black			1 foot thick black residue - probably sewerage	
			15-19 Grain size			Yellowish orange			(see notebook) No odor	17-18=0.0
20	2.1						(f) SAND trace silt <3% trace clay	SP	Wet	
	0.0									
	0.0									
22										
24										
26	0.0	10/10	1300 S-4				to 26 fbgs			
	2.0					Gray green				25-27.5=0.0
	0.6						(f-m) SAND, <3% trace silt, no gravel)	SP		
28	13.4		26-35 grain size				starts @ 26 fbgs			
	1.6									27.5-30.0=0.0
	0.0									
30	0.0									
	0.0									30.0-32.5=0.0
	0.0									
32	0.0									

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-217	PAGE: 2 OF 4

BORING LOG FOR:	Raymark/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-217
PROJECT NO.:				START DATE:	10-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-24-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-217B,D
GRD. SURFACE ELEVATION:	16.23'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 32	PID PER 6" (ppm)	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* = [PID, Jar HS]
	0.0		S-4 (cont.)			Gray				
	0.0					green	(f-m) SAND, trace silt, no gravel	SP	Wet	32.5-35 = 0.0
	0.0									
34	0.0									
	0.0									35-36 = 0.0
	0.0	1/1	1340 S-5			Light				
36	0.0					gray				
			1400 C-1	Top of		Gray	Schist (mica + qtz rich)			
		3.2/5		Bedrock	40% RQD	green		BR	Competent	
				36.0'			- near vertical foliation			
38										
									Broken - up	
40										
							Qtz vein @ 41 fbgs 2" long		Competent	
			1425 C-2							
42		3.2/5			60% RQD				Broken - up	
44									Competent	
46										
		1/1	C-3		0% RQD					
48			C-4				Qtz vein @ 47 fbgs 1.5" long		Broken - up	
		8/10			25% RQD					
50							Qtz vein @ 48 fbgs 1.5" long			
52									Competent	
56									Broken - up	

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Change in depth @ 41 fbgs to 2 feet per horizontal line	BORING NO.: SB-217	PAGE: 3 OF 4

BORING LOG FOR:	Raymark/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-217
PROJECT NO.:				START DATE:	10-23-97
LOGGED BY:	Joe Mello	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	10-24-97
DRILLED BY (Company/Driller):	Alliance / Ron Ball			MON. WELL NO.:	MW-217B,D
GRD. SURFACE ELEVATION:	16.23'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 56	PID PER 6" (ppm)	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* = [PID, Jar HS]
58		5.5	1000 C-5 10-24-97		60% RQD	Gray green	Schist (mica + qtz rich) -55° foliation	BR	0.0 ft /5 misn discharge rate (41-61 fbgs)	
60										
62									0.1 ft / 6min recharge rate	
64		6/10	1130 C-6							
66					20% RQD					
68										
70										
72										
74			EOB 71' bgs							
76										
78										
80										
82										
84										
86										
88										

TYPE OF DRILLING RIG:	Sonic		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	6" + 8" vibrate, spin, and wash		
METHOD OF SOIL SAMPLING:	4" vibrate + spin		
METHOD OF ROCK CORING:	4" vibrate + spin + wash		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-217	PAGE: 4 OF 4

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-217S
PROJECT NO.:	N4236-0320			START DATE:	10/23/02 @ 1245
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/23/02 @ 1700
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-217S
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	28	1.0 / 2.0	OU2-SO-217S-0002	Sand	Medium Dense	Brown	Poorly graded fine-medium SAND, trace fine gravel trace silt	SP	2" spoon No PACM or odor 4" casing, 140 lb. Hammer dry, asphalt fragments	
	12									
	9									PID = 0.0
2	6		10/23/02 1255							FID = 0.0
	6	0.9 / 2.0	OU2-SO-217S-0204				Well graded fine-coarse SAND, trace fine gravel	SW	2" spoon 4" casing, 140 lb. hammer No PACM, MMM. or odor Moist-dry	
	6									
	7									PID = 0.0
4	9		10/23/02 1305							FID = 0.0
	9	1.1 / 2.0	OU2-SO-217S-0406		Dense		Well graded fine-coarse SAND, trace fine gravel	SW	2" spoon 4" casing, 140 lb. hammer No PACM, MMM. or odor Moist-dry	
	23									
	20									PID = 0.0
6	20		10/23/02 1325							FID = 0.0
	15	1.4 / 2.0	OU2-SO-217S-0608				Well graded fine-coarse SAND, some fine-coarse gravel	SW-GW	2" spoon 4" casing, 140 lb. hammer No PACM, MMM. or odor Moist-dry	
	17			Sand & Gravel						
	16									PID = 0.0
8	11		10/23/02 1330							FID = 0.0
	4	0.85 / 2.0	OU2-SO-217S-0810		Medium Dense	Light Brown/ Yellowish	Well graded fine-coarse SAND, trace fine gravel, trace silt	SW	2" spoon 4" casing, 140 lb. hammer No PACM, MMM. or odor Moist-wet	
	10			Sand						
	12									PID = 4.7
10	13		10/23/02 1350							FID = 64
	14	0.5 / 2.0	OU2-SO-217S-1012		Dense	Light Brown/ Grayish	Well graded fine-coarse SAND, trace fine gravel, rock fragments, (angular) cobble pegmatite, quartz,	SW	2" spoon 4" casing, 140 lb. hammer No PACM, MMM. or odor Moist-wet	
	20			Sand & Gravel						
	27						weathered rock, schists			PID = 0.0
12	60		10/23/02 1405							FID = 0.0
	24	1.6 / 2.0	OU2-SO-217S-1214		Very Dense	Light Brown	Well graded fine-coarse SAND, some fine gravel, rock fragments (rounded), muscovite, biotite, quartz,	SW	2" spoon 4" casing, 140 lb. hammer No PACM, MMM. or odor Moist-wet	
	60									
	43						pegmatite fragments.			PID = 0.0
14	17		10/23/02 1415							FID = 0.0
	6	0.6 / 2.0	OU2-SO-217S-1416		Loose	Orange Brown	Well graded fine-coarse SAND, trace fine gravel (subrounded to round), trace silt	SW	2" spoon 4" casing, 140 lb. hammer No PACM, MMM. Odor Wet	
	5									
	4									PID = 0.0
16	5		10/23/02 1435							FID = 0.0

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing Drive & Wash		
METHOD OF SOIL SAMPLING:	2" or 3" Split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	WL – measured in MW-217D @ 12.75' below PVC riser @ 1250; FID 9 (B) PID (B) ; MMM= man made material; PACM – potential asbestos containing material.	BORING NO.: SB-217S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-217S
PROJECT NO.:	N4236-0320			START DATE:	10/23/02 @ 1245
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/23/02 @ 1700
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-217S
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	5	1.1 / 2.0	OU2-SO-217S-1618	Sand & Gravel	Medium Dense	Brown	Well graded fine-coarse SAND, trace fine-gravel (rounded), trace silt	SW	Wet-saturated blackened soil in end of 2" spoon shoe ± 0.1' from 17.9 – 18.0 bgs	
	9									
	14									PID = 0.0
18	19		10/23/02 1440							FID = 0.0
	9	0.75 / 2.0	OU2-SO-217S-1820		Medium dense	Light Brown	Well graded fine-coarse SAND, some fine-gravel (sub-angular to sub-rounded, round)	SW	Wet-saturated	
	7									
	15									PID = 0.0
20	8		10/23/02 1505							FID = 0.0
		1.2 / 2.0	OU2-SO-217S-2022	Silty Sand		brown	Poorly graded fine-medium SAND, some silt	SM	Wet-saturated 20.4' oxidation 20.6' oxidation	
										PID = 0.0
22			10/23/02 1510							FID = 0.0
				EOB @ 22' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing Drive & Wash			
METHOD OF SOIL SAMPLING:	2" or 3" Split spoon			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID 9B) PID (B)	BORING NO.:	SB-217S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-217SG
PROJECT NO.:	N4236-0320			START DATE:	11/4/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/4/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-217SG
GRD. SURFACE ELEVATION:	15.7 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see boring log MW-217S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light	Fine-coarse SAND.	SW		PID/FID
2						Brown				
							Push 4" casing to 8 ft. then remove and clear out. Push 4" casing again to 8 ft. Material lodged at 6' bgs. Roller bit			PID = 0.0 FID = 0.0
4							From 6'-8'			
6										
8										
				EOB @ 8.0' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	See note under "material classification"			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-217S = 12.85'			
OTHER OBSERVATIONS:	No elevated readings in the breathing zone	BORING NO.:	SB-217SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-301B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	11-21-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC./M. HARRINGTON			MON. WELL NO.:	MW-301B
GRD. SURFACE ELEVATION:	13.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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* = [PID,(PPM)]
0							Asphalt surface			
			No sample				~0.15' asphalt. No samples from 0-2' bgs.			
2										
	6 3	0.4	OU2-SB-301-0204			lt. brown	Gravelly, F-C well graded SAND.	SW	Saturated (due to wash?)	0.0
4	2 5	2.0	1025 S - 1						Gravels are rounded	
	8 9	1.0	OU2-SB-301-0406						F-C. Saturated	0.0
6	10 14	2.0	1027 S - 2							
	15 17	1.1	OU2-SB-301-0608				- Slight decrease in gravels.		Saturated	0.0
8	28 39	2.0	1110 S - 3							
	18 26	1.0	OU2-SB-301-0810						During wash-out to 10', Lt. sheen (gray) on wash tub water	0.0
10	30 29	2.0	1126 S - 4							
	17 17	0.8	OU2-SB-301-1012						Sheen inc. slightly.	0.0
12	17 22	2.0	1154 S - 6							
	27 13	1.1	OU2-SB-301-1214	fine sand		tan	S-6A=0.3'-similar to above. S-6B=0.8' SAND. Poorly Poorly graded fine sand. Trace silt.	SP	Sharp contact.	0.0
14	13 14	2.0	1210 S - 7							
	7 8	1.0	OU2-SB-301-1416							0.0
16	14 11	2.0	S-7				See p. 2			

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID casing. Drive & wash.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel driven with a 300 lb. hammer & 30" drop.		
METHOD OF ROCK CORING:	Wire-line NQ dual-wall core		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Total water loss for entire boring=approx. 200 gal.	BORING NO.: SB-301	PAGE: 1 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-301B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	11-21-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC./M. HARRINGTON			MON. WELL NO.:	MW-301B
GRD. SURFACE ELEVATION:	13.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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										
	11 8	0.6	OU2-SB-301-1618			lt. brown	Similar to above. Fine poorly graded SAND. Trace silt.	SP	Slight layering/bedding noted.	0.0
18	12 12	2.0	1345 S - 8						Sands inc. silica & biotite & moscouite.	
	5 6	1.1	OU2-SB-301-1820				- Trace, fine subang. gravel @ 18.25'			0.0
20	6 11	2.0	1356 S - 9			?	?	?		
							No sample take to 24'		begin sampling @ 5' int. beginning @ 24'.	
22									D & W to 24'.	Swap to FID "B"
24										
	17 14	0.9	OU2-SB-301-2426			lt. brn. Trace red Oxidation @ ~25'	SAND. Mostly fine-coarse well graded sand. Trace fine gravel.	SW	Saturated.	1.5 ppm=FID
26	14 16	2.0	1419 S - 10						Minor oxidation layer @ ~25'. Only 1/8" thick.	0.0 ppm=PID
							No sample taken to 29'		D & W to 29', F-C sands in wash.	0.0 ppm in B.Z. w/ FID
28										
30	8 14	0.9	OU2-SB-301-2931			lt. brown & lt. gray	SAND. Mostly F-C well graded sand, few fine subangular gravel.	SW	Saturated	0.1 ppm
	14 19	2.0	1445 S-11							
32									D & W to 34' bgs	

TYPE OF DRILLING RIG:	Mobile Drill B-59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID casing. Drive & wash.			
METHOD OF SOIL SAMPLING:	2 in. split-barrel driven with a 300 lb. hammer & 30" drop.			
METHOD OF ROCK CORING:	Wire-line NQ dual-wall core			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	Total water loss for entire boring=approx. 200 gal.	BORING NO.:	SB-301	PAGE: 2 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-301B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	11-21-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC./M. HARRINGTON			MON. WELL NO.:	MW-301B
GRD. SURFACE ELEVATION:	13.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
32										
34										
	14	1.2	OU2-SB-301-3436			dk. brn. & dk. gray mix	Gravelly, F-C well graded SAND. Trace silt.	SW	Dense & compact mixture. Saturated. Minor oxidation stains.	0.0
	15									
	18									
36	32	2.0	1512 S - 12							
									Casing is driving harder, ringing @ 36.5'. Loosened back up slightly @ 37'.	
38										
	37	1.25				gray	Similar to S-12 above	SW	Dense & compact saturated.	FID=6.1 ppm PID=0.2 ppm
40	28		OU2-SB-301-3941			dk. gray				
	40					red-brn.	Gravels composed of quartz, gneiss & schist.			
	30	2.0	1547 S-13			brown				
42										
44										
	29	1.3	OU2-SB-301-4446			brown w/ reddish oxidation stains	Similar to S-12 above.	SW	Saturated	FID=2.2 ppm PID=0.0 ppm
	28									
	24									
46	34	2.0	0820 S - 14							
48										

Stop boring on 11-18-98 w/ casomg @ 44', last sample from 39-41'. 1645 Rig/IDW secure. Return to M.F. Prop. Re-start boring on 11-19-98 @ ~0735

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID casing. Drive & wash.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel driven with a 300 lb. hammer & 30" drop.		
METHOD OF ROCK CORING:	Wire-line NQ dual-wall core		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Total water loss for entire boring=approx. 200 gal.	BORING NO.: SB-301	PAGE: 3 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-301B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	11-21-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC./M. HARRINGTON			MON. WELL NO.:	MW-301B
GRD. SURFACE ELEVATION:	13.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
48										
	23	1.0	OU2-SB-301-4951			brown w/ reddish oxidation stains.	SAND. Mostly F-C well graded sand. Trace fine rounded-subang. gravel. Trace	SW	Minor woody stems & debris inside soils.	FID=2.8 ppm PID=0.0
50	23		0855				organic debris (wood fragments)		Saturated.	
	26		S - 15							
	21	2.0								
52				casing @ 52.1 ft. poss. top of bedrock @ ~51.5'					D & W to 52'. No penetration. Roller-bit to 54' ahead of casing. Fresh rock chips, uniform size. Drive casing to 52.1' change wash water & set up for wire-line NX core. Broke swivel. Stop coring @ 55.5'.	
54		2.35								
			C-1=54-56.35' RQD=83%	52.0'	5 min. 55 sec.	dark gray & green	Chlorite, quartz, mica, garnet, Aphanitic SCHIST. High ang. foliations. (wavy) between 60-70° from horiz. – Fracture 45° ang. @ 55' 3-near horizontal fracture @56'			
56		2.35			5 min. 40 sec. 9 min.					0.0 in B.Z.
			56.35.-57.4=4 min 40 sec.		For 0.35'					& @ borehole.
					48 sec.					
58		4.53'	57.4-58.4 RQD=89.5%		4:38					
			58.4-59.4		8:09		Horiz. fracture @ 59.5'		58.4-59'=rods slapping casing. Mult. stops.	
60			59.4-60.4		7:08		Horiz. & 45° ang. frac. from 60-61'.		Little-no water loss.	
		4.6'	60.4-61.0		4:44		Minor oxidation halo @ 61' in fracture.		Rods cont. to slap. Mult. starts & stops w/ rig position adjust.	
62		1.01" or	C-2=56.35-69.5'		3:40		Foliation grades to near vertical & wavy. High ang. fract. w/ oxidation @ 62'			
		8.38'	RQD=66%		3:20		Horiz. frac. @ 63' w/ oxidation			
64					3:15		High ang. From 63.25'-65.5' along nearly vertical wavy schistostacy		~20 gal. lost from 52-64'.	

0900 – 11-19-98 – shut down to get water & repair leaking swivel. 11-20-98 – down for repairs. 11-21-98 – 0800 re-start coring @ 1020 replace sushing.

TYPE OF DRILLING RIG:	Mobile Drill B-59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID casing. Drive & wash.			
METHOD OF SOIL SAMPLING:	2 in. split-barrel driven with a 300 lb. hammer & 30" drop.			
METHOD OF ROCK CORING:	Wire-line NQ dual-wall core			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	Total water loss for entire boring=approx. 200 gal.	BORING NO.:	SB-301	PAGE: 4 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-301B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	11-21-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC./M. HARRINGTON			MON. WELL NO.:	MW-301B
GRD. SURFACE ELEVATION:	13.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 64	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)]
							Near vert. foliation continues. High ang, nearly vertical fractures from 63.25-65.5'.		Inc. water loss from 65'-70'	
66							Horiz. fracture @ 65.5'. Gouge composed of mica in fracture trace.			
							Horiz. fractures @ 66.2 & 66.75.			
68							Horiz. fracture joining vertical fracture @ 68-68.75'.			
		8.50' (102")								
70			C-4 – 69.5->79'		½'=1:28		Horiz. frac. @ 69.5, 69.75 & 70.0' w/ oxidation stains.		Oxidation along frac.	
		9.5 (114")	RQD = 96%		4:00					
72					4:20		Solid stick from 70'			
					4:42					
74					3:30		74' Horiz. fracture @ 74.0' & 74.6'			
					6:50					
76							Horiz. frac. @ 75.5' & 76.20'			
78										
		9.5 (114")					Horiz. frac. @ 78.9'			
80					3:45		High ang. frac. @ 79.5-80.0'			

TYPE OF DRILLING RIG:	Mobile Drill B-59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID casing. Drive & wash.			
METHOD OF SOIL SAMPLING:	2 in. split-barrel driven with a 300 lb. hammer & 30" drop.			
METHOD OF ROCK CORING:	Wire-line NQ dual-wall core			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	Total water loss for entire boring=approx. 200 gal.	BORING NO.:	SB-301	PAGE: 5 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-301B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	11-21-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC./M. HARRINGTON			MON. WELL NO.:	MW-301B
GRD. SURFACE ELEVATION:	13.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 80	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	USCSor ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
			C-5:79'-84.5' RQD=94%				Similar material to above.			
82							Horiz. fracture connected to high ang. fracture from 82.5-83.5'		Oxidation, stains @ 82.5' frac.	
84										
							EOB at 84.5' bgs.			
							Cored bedrock from 54-84.5'.			
							D & W casing from 0-52.1' 3 7/8" roller bit from 52-54'.			

TYPE OF DRILLING RIG:	Mobile Drill B-59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID casing. Drive & wash.			
METHOD OF SOIL SAMPLING:	2 in. split-barrel driven with a 300 lb. hammer & 30" drop.			
METHOD OF ROCK CORING:	Wire-line NQ dual-wall core			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	Total water loss for entire boring=approx. 200 gal.	BORING NO.:	SB-301	PAGE: 6 OF 6

BORING LOG FOR:	RAYMARK/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-301D
PROJECT NO.:				START DATE:	01/05/99
LOGGED BY:	A.PUTNAM	TRANSCRIBED BY	MES	COMPLETION: DATE:	01/11/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./ K. KUTARNIA			MON. WELL NO.:	MW-301D
GRD. SURFACE ELEVATION:	13.8'	ELEVATION FROM	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken, refer to boring log for 301B for description			
46'										

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-301D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-301S
PROJECT NO.:	N0003			START DATE:	1-5-99
LOGGED BY:	A. Putnam	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-8-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/K. KUTARNIA			MON. WELL NO.:	MW-301S
GRD. SURFACE ELEVATION:	14.1'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken Refer to Boring Log SB-301B For Description.			
260'										

TYPE OF DRILLING RIG:	Mobile Drill-B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-301S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK OU2/GROUNDWATER			BORING NO.:	MW-302B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	JOHN R. TROTTIER	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	11-24-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/SCOTT BRAY			MON. WELL NO.:	MW 302B
GRD. SURFACE ELEVATION:	22.71	ELEVATION FROM:	NGVD - 1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
2										
	7 13	3"	OU2-SO-302B-0204		med.	lt. brown	Clean SAND, little gravel	SP	Fill road base	0
4	14 10	24"	14:20 hrs		dense					
	9 11	11"	OU2-SO-302B-0406		med. dense	yellowish orange		SP		0
6	18 18	24"	15:00 hrs	6.0						
	13 32	12"	OU2-SO-302B-0608		v. dense		Poorly graded GRAVEL w/ med. coarse sand	GP	Fill – re-worked material, Not waste.	
8	42 55	24"	15:15 hrs							0
	100/6" 100/1"	4"	OU2-SO-302B-0810		v. dense	lt. brown	Poorly graded GRAVEL w/ med. coarse sand	GP		0
10		7"	15:45 hrs	10.0'						
	11 12	8"	OU2-SO-302B-1012		med. dense	lt. gray	Poorly graded SAND Little gravel	SP		0
12	10 11	24"	16:00 hrs							
	20 18	10"	OU2-SO-302B-1214		dense			SP		0
14	17 21	24"	16:25 hrs							
	21 16	1"	OU2-SO-302B-1416		dense		Poorly graded GRAVEL Last sample (Little Rec?)	GP		0
16	23 24	24"	16:40 hrs							

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Wash & drive 4" casing		
METHOD OF SOIL SAMPLING:	S.S. 2" – o.d. 1 7/8" –I.D.		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-302B	PAGE: 1 OF 6

BORING LOG FOR:	RAYMARK OU2/GROUNDWATER			BORING NO.:	MW-302B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	JOHN R. TROTTIER	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	11-24-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/SCOTT BRAY			MON. WELL NO.:	MW 302B
GRD. SURFACE ELEVATION:	22.71	ELEVATION FROM:	NGVD - 1929	CHECKED BY:	

DEPTH (FEET) 16	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)]
	13	8"	OU2-SO-302B-1618		dense	lt. gray	Clean SAND, medium to coarse sand, some fine gravel, trace silt	SP		0
	17									
	18									
18	13	24"	0815 hrs							
	95	8"	OU2-SO-302B-1820			yellow orange	Clean SAND, little gravel	SP		
	100/2"									
20		8"	0845 hrs							
22										
24										
				25.0'						
26	16	8"	OU2-SO-302B-2527		med. dense	yellow orange	Fine SAND, trace silt	SP		0
	12									
	14									
	15	24"	0930 hrs							
28										
30										
	6	24"	OU2-SO-302B-3032		loose					
	6									
	5						F. SAND, trace silt	SP		0
32	3	24"	1000 hrs							

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Wash & drive 4" casing		
METHOD OF SOIL SAMPLING:	S.S. 2" – o.d. 1 7/8" –I.D.		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-302B	PAGE: 2 OF 6

BORING LOG FOR:	RAYMARK OU2/GROUNDWATER			BORING NO.:	MW-302B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	JOHN R. TROTTIER	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	11-24-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/SCOTT BRAY			MON. WELL NO.:	MW 302B
GRD. SURFACE ELEVATION:	22.71	ELEVATION FROM:	NGVD - 1929	CHECKED BY:	

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)]
32										
34										
36	7 8	18"	OU2-SO-302B-3537		med. dense	yellow orange	F.SAND, trace silt Color change @ 36' to lt brown, same classification of mat'l. mottles noted @ 36.5'	SP		0
	12 13	24"	1015 hrs							
38										
40										
	11 16	18"	OU2-SO-302B-4042		dense		F. SAND, trace silt			0
42	16 13	24"	1030 hrs							
44										
46	11 23	18"	OU2-SO-302B-4648						Driving of casing from 45-50'. Very difficult	0
	17 22	24"	1120 hrs							
48										

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Wash & drive 4" casing		
METHOD OF SOIL SAMPLING:	S.S. 2" – o.d. 1 7/8" –I.D.		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-302B	PAGE: 3 OF 6

BORING LOG FOR:	RAYMARK OU2/GROUNDWATER			BORING NO.:	MW-302B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	JOHN R. TROTTIER	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	11-24-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/SCOTT BRAY			MON. WELL NO.:	MW 302B
GRD. SURFACE ELEVATION:	22.71	ELEVATION FROM:	NGVD - 1929	CHECKED BY:	

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)]
50						yellow orange	F.SAND, trace silt	SP		0
	11	12"	OU2-SO-302B-5052	50.5'						
	27									
52	23						6" weathered rock w/ light gray w/ fine sand			
	56	24"	1155 hrs							
54										
56		6"	OU2-SO-302B-5557				Silty SAND, fine to coarse sand with some silt and fine gravel	SM		0
		6"								
58				Weathered rock						
60									Roller Bit to 60'	
				bedrock 60.0' Top of Competent bedrock		gray	7 min/ft. Schist near vert. fractures			
62							7 min/ft.			
							8 min/ft.		Machine break @ 63'	
64							6 min/ft.		significant H_2O loss 63-64'	

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Wash & drive 4" casing		
METHOD OF SOIL SAMPLING:	S.S. 2" – o.d. 1 7/8" –I.D.		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-302B	PAGE: 4 OF 6

BORING LOG FOR:	RAYMARK OU2/GROUNDWATER			BORING NO.:	MW-302B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	JOHN R. TROTTIER	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	11-24-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/SCOTT BRAY			MON. WELL NO.:	MW 302B
GRD. SURFACE ELEVATION:	22.71	ELEVATION FROM:	NGVD - 1929	CHECKED BY:	

DEPTH (FEET) 64	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)]
					M/ft 6	gray	Schist w/ near vert. fractures Rubble w/ some plasticity @ 65'			
66					6 m/ft					
					7 m/ft					
68					8 m/ft		Core plugged @ 68' fracture orientation horiz.		Significant H_2O loss 68-71'	
					7 m/ft					
70					8 m/ft					
					8 m/ft					
72					14 m/ft					
					19 m/ft					
74					30 m/ft				Machine break @ 74.2'	
					21 m/ft		Core plugged @ 75'			
76					10 m/ft					
					7 m/ft					
78					8 m/ft		Removed core @ 78' vertical fracture noted.			
					10 m/ft		Near vert. frac. @ 79' w/ horiz. fracture @ 79.1' & 79.7'.			
80					9 m/ft		Horiz. frac/ @ 80.9'			

TYPE OF DRILLING RIG:	Mobile B-59
METHOD OF ADVANCING BORING:	Wash & drive 4" casing
METHOD OF SOIL SAMPLING:	S.S. 2" – o.d. 1 7/8" –I.D
METHOD OF ROCK CORING:	NQ wireline
GROUNDWATER LEVELS:	Lost ≈ 450 gal. H_2O coring 60'-75'
OTHER OBSERVATIONS:	

BORING NO.: MW-302B

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK OU2/GROUNDWATER			BORING NO.:	MW-302B
PROJECT NO.:				START DATE:	11-18-98
LOGGED BY:	JOHN R. TROTTIER	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	11-24-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/SCOTT BRAY			MON. WELL NO.:	MW 302B
GRD. SURFACE ELEVATION:	22.71	ELEVATION FROM:	NGVD - 1929	CHECKED BY:	

DEPTH (FEET) 80	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)]
					9 mpf	gray				
82					7 mpf					
					7 mpf					
84					8 mpf					
					9 mpf					
86					10 mpf					
					8 mpf					
88					13 mpf		Break @ 88' appears to be at fracture.			
					16 mpf					
90					14 mpf					
							Continued rock coring to 92' Roller bit to 92			
92										

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Wash & drive 4" casing		
METHOD OF SOIL SAMPLING:	S.S. 2" – o.d. 1 7/8" –I.D		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-302B	PAGE: 6 OF 6

BORING LOG FOR:	RAYMARK/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-302D
PROJECT NO.:				START DATE:	01/04/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/05/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./ K. KUTARNIA			MON. WELL NO.:	MW 302D
GRD. SURFACE ELEVATION:	22.6'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken – refer to boring log 302B for description			
46										

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" inner diameter casing, wash and drive method		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-302D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-302S
PROJECT NO.:	N0003			START DATE:	11-17-98
LOGGED BY:	A. Putnam	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	11-18-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/K. KUTARNIA			MON. WELL NO.:	MW-302S
GRD. SURFACE ELEVATION:	22.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken Refer to Boring Log SB-302B For Description.			
25'										

TYPE OF DRILLING RIG:	Mobile Drill-B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Wash & Drive 4" casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-302S	PAGE: 1 OF 1

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-302SG
PROJECT NO.:	N4236-0320			START DATE:	11/5/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/5/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-302SG
GRD. SURFACE ELEVATION:	22.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see boring log SB-302B	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light	Fine-coarse SAND, some gravel	SW		
2						Brown	Drive casing to 8 ft. then wash out with roller bit.			
										PID = 0.0 FID = 0.0
4										
6										
8										
				EOB @ 8.0' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	See note under "material classification"			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL at MW-302S = 19.05'			
OTHER OBSERVATIONS:		BORING NO.:	SB-302SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-303B
PROJECT NO.:				START DATE:	01/18/99
LOGGED BY:	T.DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/19/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./M. HARRINGTON			MON. WELL NO.:	MW-303B
GRD. SURFACE ELEVATION:	30.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" CORE TIME	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							Asphalt Surface			
							1.5" – Asphalt			
2							Sand and gravel in wash			
							Inc. silt in wash @ 2' bgs			
4	9 7	1.4	OU2-SO-303B-0305			Dk gr, olive Mottled yellow brown & dk. brown	Silty, f-m poorly graded SAND, trace fine gravel, trace Fine root fibers and woody debris in nose of spoon	SM	Mottled and mixed Fill? Road base	0.0 ppm
	9 7	2.0	1400 S - 1							
6	5 7	0.0	OU2-SO-303B-0507				No Recovery		No recovery Dark brown color change in wash water	
	5 8	2.0	1415 S - 2							0.0ppm
8	100/4"	0.2 0.35	OU2-SO-303B-0708 1435 S - 3	~7.5' Top Of Bedrock		Yellow orange	Sand and subangular fine GRAVEL, trace silt			
			OU2-SO-303B-0910				Augen, garnet, mica, schist		Roller bit to 9' schist until 8.5' then silt balls	0.0 ppm
10	100/0.05		1500 S - 4						S-4-no penetration	
	4 min		4 min C-1=10'-13' PEN = 3.0 REC = 3.0			Gray Green pinstripe	C-1 = Augen, garnet, mica, schist. Minor vugs Throughout		wash water is light gray yellow oxidation noted throughout core and fractures	
12	3:40						4 high angle fractures w/gouge and oxidation stains 10-11.25'			
	4:00		RQD =44% RQD length = 16" C-2 = 13'-23'				Low angle fracture @ 12.75'			
14	2:40									
	2:30		PEN = 10' REC=9.5',RQD=70% RQD length =85"				High angle fracture @ 14.25 w/ oxidation and gouge			
16	2:30						Low angle horiz. Fracture (no oxid. or gouge @ 15.5')			

TYPE OF DRILLING RIG:	Mobile Drill – B59
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb hammer with a 30 in drop
METHOD OF ROCK CORING:	NQ wireline
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-303B
PROJECT NO.:				START DATE:	01/18/99
LOGGED BY:	T.DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/19/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./M. HARRINGTON			MON. WELL NO.:	MW-303B
GRD. SURFACE ELEVATION:	30.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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										
	2:00					Gray Green Pinstripe Darker w/ Oxidation Stains	Similar rock to above, augen, garnet, mica schist. Variable qty. of chlorite Garnet ranges up to 0.02' in diam. Slight crinkle folding noted			
18	2:10									
	1:30						Heavily oxidized and fractured (horiz, to High angle) zone From 16.75-19.5'		driller noted color change in wash @ 17' from lt. Gray to brown and back to gray in top 8 ft.	
20	2:00						Rock is saprolitic and soft, very easily And degraded			
	2:10									
22	2:05									
	2:30		C-3=23'-25.5' PEN=2.5, REC=2.5 RQD length = 24" RQD=80%							
24	2:10						Compound high angle fracture @ 23.5' w/oxidation stains.		Core blocked up @ 25-25.5' approx. 200 gal. H_2O lost, C-1 – C03	
	2:00		C-4=25.5-33							
26	2:10		2:00				Solid core to 30.75			
	3:30		PEN=7, REC=7.65' RQD length=84.5" RQD=93%							
28	3:15									
	3:40									
30	3:10									
	2:50						Near horiz. Fracture w/ ½" wide vuggy zone @ 30.75'			
32	2:50						2 low angle fractures @ 31.5-32'			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-303B	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-303B
PROJECT NO.:				START DATE:	01/18/99
LOGGED BY:	T.DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/19/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./M. HARRINGTON			MON. WELL NO.:	MW-303B
GRD. SURFACE ELEVATION:	30.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 32	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)]
	2:45		C-5=33-39.4				2 horiz. Fractures from 32-33'			
34	3:00						Rock type is similar to above			
	2:45		PEN=6.4, REC=5.5 RQD length=56" RQD=73%				Minor calcite veins noted from ~30' to EOB			
36	3:00						High angle fractured @ 35'			
	2:45						High angle fractured @ 36'			
38	2:40						Compound mult. High angle oxidized fractured @ 37.5'			
	3:30		C-6=39.4'-43'				Highly fractured and soft deleaded saprolitic schist @		Note driller lifting rods to clean jam @ 39'. Pull C-5 due to jam and water return loss	
40							38'-end, C-5 Highly fractured 39.4-40'			
	1:40		PEN=3.6, REC=3.3 RQD length=35" RQD=81%				Solid core from ~40'-45.5'			
42	1:50									
	2:15		C-7=43'-53'							
44	2:10									
	1:50		PEN=10', REC =9.7 RQD length = 115" RQD=96%							
46	2:00						High angle fracture @ 45.5'			
	2:05									
48	1:30									

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-303B	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-303B
PROJECT NO.:				START DATE:	01/18/99
LOGGED BY:	T.DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/19/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./M. HARRINGTON			MON. WELL NO.:	MW-303B
GRD. SURFACE ELEVATION:	30.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 48	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)]
	1:50		1:50				~45° angle @ 48.25'			
50	2:10						Solid core to EOB			
	1:35									
52	2:05									
	2:10									
54							EOB @ 53' bgs			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4in. ID drive and was casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-303B	PAGE: 4 OF 4

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	MW-304B
PROJECT NO.:				START DATE:	11/30/98
LOGGED BY:	E. THIBADEAU	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/04/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	MW-304B
GRD. SURFACE ELEVATION:	10.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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 750m (0.3)	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
1						Black	fill; coarse to medium SAND, some gravel	SP	Moist	Headspace PID: 0.0 FID: 0.0
2										
3	66	12"/24"	13:59; S-1			Brown to gray	fill; medium to fine SAND, little to trace silt, trace seashells.			
	66									
4	13		FID: 0.0 PPM							
	12		PID: 0.0 PPM							
5	11	1"/24"	14:13; S-2	Mixed	Medium dense		two pieces of gravel and seashell lodged in tip of spoon; minimal recovery			
	8									
6	7		FID: 0.0 PPM							
	7		PID: 0.0 PPM	Fill						
7	8	1"/24"	14:25; S-3		Medium dense		piece of gravel and seashell lodged in tip of spoon: minimum recovery gravel and seashell fragments logged from cuttings			
	1									
8	6		FID:							
	6		PID:							
9	8	6"/24"	14:47; S-4		Loose	Brown to black	FILL, silty medium to fine SAND, trace silt, trace gravel,trace asphalt shingles and ceramic tile.	SM	Moist to wet	Headspace PID: 0.0 FID: 941.4
	4									
10	4		FID: 0.0 PPM							
	3		PID: 0.0 PPM							
11	1	16"/24"	14:51; S-5		Very loose		10.0 – 11.5': medium to fine SAND, trace coarse sand and gravel, little silt, trace seashells.	SP	Wet	Headspace PID: 0.0, FID: 12.4
	1									
12	1		FID: 0.0 PPM				11.5 – 12.0': medium to fine SAND trace gravel orange to red color, oxidation noted.			Headspace PID: 0.0, FID: 0.7
	20		PID: 0.0 PPM							
13	5	12"/24"	16:29; S-6		Dense	Brown	silty medium to fine SAND, little gravel, trace silt.	SM	Wet	Headspace FID: 39.4 PID: 0.0
	18									
14	20		FID: 0.0 PPM							
	30		PID: 0.0 PPM							
15	12	16"/24"	07:54; S-7		Very dense	Brown	medium to fine SAND, trace coarse sand and gravel, trace silt.	SP	Wet	Headspace FID: 55.9 PID: 0.0
	26									
16	36		FID:							
	36		PID: 0.0 PPM							

TYPE OF DRILLING RIG:	Mobile B-59 Truck			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, wash and drive			
METHOD OF SOIL SAMPLING:	2" split - spoon			
METHOD OF ROCK CORING:	NQ			
GROUNDWATER LEVELS:	12/4/98 – H_20 @ 7.9' in 4" casing,			
OTHER OBSERVATIONS:	FID & PID readings noted in sample time & no. column are from screening the open split-spoon	BORING NO.:	MW-304B	PAGE: 1 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	MW-304B
PROJECT NO.:				START DATE:	11/30/98
LOGGED BY:	E. THIBADEAU	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/04/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	MW-304B
GRD. SURFACE ELEVATION:	10.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
17	30 28	15" / 24"	8:40: S-8 FID: 0.2PPM PID: 0.0 PPM		Very Dense	Brown	SAND, medium to coarse sand with some fine sand and some gravel (becomes little coarse sand, some gravel)	SP	Wet	Headspace: PID: 0.0 FID: 58.3
18	39 40									
19	21 26	18 / 24	9:32: S-9 FID: 0.0 PPM PID: 0.0 PPM		Very Dense	Brown	similar to above	SP	Wet	Headspace: PID: 0.0 FID: 77.8
20	25 30									
21							spin and wash from 18' to 24' noticeable loss of water = 400 gals switch to wash and drive @ 24'			
22										
23										
24										
25										
26	7 9	0" / 24"	12:20: S-10 FID: -- PID: --		Medium Dense		piece of gravel lodged in top of spoon; no recovery			
27	12 15									
28	8 10	12" / 24"	12:49: S-11 PID: 0.0 PPM FID: 0.0 PPM		Medium Dense	Brown	becomes mostly medium SAND, trade coarse sand and gravel	SP	Wet	Headspace PID: 0.0 FID: 13.5
29	12 12									
30										
31	2 5	4" / 24"	13:00: S-12 PID: 0.0 PPM FID: 0.0 PPM		Loose	Brown	Similar to above; poor recovery	SP	Wet	Headspace PID: 0.0 FID: 0.4
32	4 6									

TYPE OF DRILLING RIG:	Mobile B-59 Truck mount		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, wash and drive		
METHOD OF SOIL SAMPLING:	2" split - spoon		
METHOD OF ROCK CORING:	NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-304B	PAGE: 2 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	MW-304B
PROJECT NO.:				START DATE:	11/30/98
LOGGED BY:	E. THIBADEAU	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/04/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	MW-304B
GRD. SURFACE ELEVATION:	10.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
33										
34										
35										
36	6 7	15" / 24"	13:29, S-13 PID: 0.0 PPM FID: 0.0 PPM		Medium Dense	Brown	Becomes little coarse SAND and GRAVEL	SP/GP	Wet	Headspace PID: 0.0 FID: 56.0
37	11 11									
38										
39										
40										
41	10 10	6" / 24"	14:16; S-14 PID: 0.0 PPM FID: 0.0 PPM		Medium Dense	Brown	Becomes mostly medium to fine SAND, little to trace gravel	SP	Wet	Headspace PID: 0.0 FID: 75.1
42	11 11									
43										
44										
45										
46	18 10	6" / 24"	15:01; S-15 PID: 0.0 PPM FID: 0.0 PPM		Medium Dense	Brown	Becomes mostly coarse to medium SAND, trace gravel	SP	Wet	Headspace PID: 0.7 FID: 16.4
47	10 11									
48										

TYPE OF DRILLING RIG:	Mobile B-59 Truck		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, wash and drive		
METHOD OF SOIL SAMPLING:	2" split - spoon		
METHOD OF ROCK CORING:	NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-304B	PAGE: 3 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	MW-304B
PROJECT NO.:				START DATE:	11/30/98
LOGGED BY:	E. THIBADEAU	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/04/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	MW-304B
GRD. SURFACE ELEVATION:	10.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
49										
50										
51	10 16	18" / 24"	15:41; S-16 PID: 0.0 PPM FID: 0.0 PPM		Dense	Brown	Becomes mostly medium to fine SAND, trace gravel	SP	Wet	Headspace PID: 0.7 FID: 3.7
52	18 11									
53										
54										
55										
56	45 100/5"	18" / 24"	07:52: S-17 PID: 0.0 PPM FID: 0.0 PPM		Very Dense	Brown	Becomes medium to fine SAND, trace coarse sand. trace silt	SP	Wet	Headspace PID: 1.9 FID: 35.1
57	36* 52*									
58	18* 26*	24" / 24"	08:28: S-18 PID: 0.0 PPM FID: 0.0 PPM		Very Dense	Brown	Similar to above	SP	Wet	Headspace PID: 4.1 FID: 75.6
59	18* 23*									
60										
61	10* 14*	16" / 24"	08:48; S-19 PID: 0.0 PPM FID: 0.0 PPM		Very Dense	Brown	Similar to above	SP	Wet	Headspace PID: 2.6 FID: 45.1
62	14* 12*									
63				Top of Bedrock 62.5'			Casing refusal @ 62.5; advanced roller bit to 64.5"; attempted to re-drive casing to achieve seal			
64										

TYPE OF DRILLING RIG:	Mobile B-59 Truck Mount		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, wash and drive		
METHOD OF SOIL SAMPLING:	2" split - spoon		
METHOD OF ROCK CORING:	NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	* - Note: switched to 300lb hammer, 30" drop	BORING NO.: MW-304B	PAGE: 4 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	MW-304B
PROJECT NO.:				START DATE:	11/30/98
LOGGED BY:	E. THIBADEAU	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/04/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	MW-304B
GRD. SURFACE ELEVATION:	10.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
65		Start R-1	REC = 104"/108" = 96% RQD = 81"/108" = 75%			Gray	Start NQ rockcore @ 64.5 R-1: Fresh, hard, gray, aphanitic to fine grained SCHIST with high angle to vertical, widely spaced, smooth, planer, tight joints, some calcite intrusions. R-1: 64.5'-73.5'		Core barrel 13.5' R-1: minor loss of water during coring operations. approx. 100-150 gals.	
66	13 mins									
67	8.5 mins									
68	8.0 mins									
69	9.5 mins									
70	5.5 mins									
71	7.5 mins									
72	7.0 mins									
73	6.5 mins									
74	8.0 mins	End R-1 Start R-2	REC = 116"/120" = 97% RQD = 72"/120" = 60%			Gray	R-2: Same as R-1, except joints are moderately spaced, secondary joints noted and are horizontal to low angle, close to widely spaced and are mostly healed. One slightly weathered fractured zone noted from 79.5' to 80.5'. R-2: 73.5'-83.0'		R-2: No noticeable amount of water loss.	
75	7.0 mins									
76	13.0 mins									
77	7.5 mins									
78	7.5 mins									
79	16.0 mins									
80	8.5 mins									

TYPE OF DRILLING RIG:	Mobile B-59 Truck Mount		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, wash and drive		
METHOD OF SOIL SAMPLING:	2" split - spoon		
METHOD OF ROCK CORING:	NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-304B	PAGE: 5 OF 6

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	MW-304B
PROJECT NO.:				START DATE:	11/30/98
LOGGED BY:	E. THIBADEAU	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/04/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	MW-304B
GRD. SURFACE ELEVATION:	10.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
81	9.5 mins	R-2 (Cont.)								
82	9.5 mins									
83	8.0 mins									
84	7.5 mins	End R-2 Start R-3	REC = 120" = 100% RQD = 61"/120" = 51%				R-3: Same as R-2 except joints are horizontal to low angle, close to moderately spaced, smooth to rough and stepped. No secondary jointing observed. R-3: 83.0'-94.0'		R-3: minor lose of water during coring operations approx. 20 gallons	
85	7.0 mins									
86	10.5 mins									
87	8 mins									
88	8.5 mins									
89	9.5 mins									
90	11.0 mins									
91	9.5 mins									
92	6.5 mins									
93	8.5 mins									
94	7.0 mins	End R-3								
95		Start R-4 End R-4	REC = 12"/12" = 100% RQD = 5"/12" = 42%				R-4: Same as R-3. Bottom of exploration @ 94.5'; boring termination in bedrock R-4: 94.0'-94.5'		R-4: no noticeable loss of water during coring operations.	
96										

TYPE OF DRILLING RIG:	Mobile B-59 Truck Mount		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, wash and drive		
METHOD OF SOIL SAMPLING:	2" split - spoon		
METHOD OF ROCK CORING:	NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: MW-304B	PAGE: 6 OF 6

BORING LOG FOR:	RAYMARK/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-304D
PROJECT NO.:				START DATE:	01/12/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/13/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./K. KUTARINA			MON. WELL NO.:	MW-304D
GRD. SURFACE ELEVATION:	10.4’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken, refer to boring log 304B			
							For details			
61										

TYPE OF DRILLING RIG:	CME		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	There was a film on the wash water as we washed out to 60’bgs	BORING NO.: SB-304D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-304S
PROJECT NO.:				START DATE:	01/13/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/13/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./K. KUTARINA			MON. WELL NO.:	MW-304S
GRD. SURFACE ELEVATION:	10.4	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken – refer to boring log 304B			
							For description			
20										

TYPE OF DRILLING RIG:	CME			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N.A			
GROUNDWATER LEVELS:	noticed an odor while washing out. There was a 0.0 ppm reading using the			
OTHER OBSERVATIONS:	FID, the odor disappeared quickly, there was a film on the wash tub water	BORING NO.:	SB-304S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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 Grass surface	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID,(PPM)]
							No samples 0-2'.			
2										
	23 / 22	1.5	OU2-SB-305B-0204			black	Asphalt shingles	Fill	Fill. Saturated (from wash)	0.0 FID
4	37 / 39	2.0	0900 S-1			white	Floor-tile w/adhesive grooves.			0.0 in B.Z.
	17 / 19	1.4	OU2-SB-305B-0406			alternating layers black + white	Layers of asphalt shingles & floor-tile with trace copper + wire debris & fine sand-silt in void spaces			FID=5.9 PID=6.3 >HS
6	17 / 14	2.0	0917 S-2	fill						
	10 / 12	0.9	OU2-SB-305B-0608				- Inc. white-gray paste-like material w/lg. qty. of asbestos fiber.		Fill inc. asbestos	FID=64 PID=3.9 >HS
8	11 / 10	2.0	0940 S-3							0.0 in B.Z.
	8 / 11	0.8	OU2-SB-305B-0810			dark gray	Crushed floor tile fragments in silt & fine sand. No shingles.			FID=1,187 PID=7.9 >HS
10	13 / 4	2.0	0955 S-4	sharp contact						0.0 in B.Z.
	1 / 1	1.8	OU2-SB-305B-1012			dark brown	S-5A=0.2' similar to above. S-5B=1.6' – SILT. Trace fine sand, trace clay,	Fill / OL		FID=2,050 PID=2.5 >HS
12	2 / 2	2.0	1015 S-5				abundant root & plant fibers.		Organics inc. woody debris, stems & roots.	0.0 in B.Z.
	3 / 1	1.8	OU2-SB-305B-1214							FID=2,280 PID=5.0 >HS
14	3 / 3	2.0	1030 S-6							
	1 / 2	1.6	OU2-SB-305B-1416 Toc/GS collected				S-7A=0.75' similar to above.			FID=800 PID=1.0 >HS
16	2 / 3	2.0	1215 S-7			brown olive grn.	S-7B=0.85' Silty, fine-med. SAND. Trace. Fine gravel	ML / SM		

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.		
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.		
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond		
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)		
OTHER OBSERVATIONS:		BORING NO.: SB-305B	PAGE: 1 OF 9

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 16	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)]
	26	1.0	OU2-SB-305B-1618			olive	Well graded F-C SAND. Trace fine gravel (rounded)	SW	Saturated.	FID=40.0 >HS
	50					gray				PID=0.0
	41									
18	30	2.0	1245 S-8							
	18	1.0	OU2-SB-305B-1820			lt. gray	- Gravels are subang.-subround			FID=35 >HS
	13					& olive				PID=0
	10					gray				
20	7	2.0	1300 S-9							
									Begin standard int. sampling	
22										
	13	0.0	OU2-SB-305B-2325	no sample recov.			No recovery, nothing traveled into s.s.		Poss. pushing a cobble.	
24	13									
	13		1400 S-10							
	16	2.0								
26										
28										
	4	1.1	OU2-SB-305B-2830			lt.	Fine poorly graded SAND. 1 piece subrnd. Fine		Saturated. Slight	FID=376 PPM
	4					brown	gneiss gravel @ top of sample.	SP	odor.	PID=7.1 PPM
	6									
30	6	2.0	1415 S-11							
32										

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.		
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.		
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond		
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)		
OTHER OBSERVATIONS:		BORING NO.: SB-305B	PAGE: 2 OF 9

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 32	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)]
34	6 6	1.2	OU2-SB-305B-3335			lt. brown	Fine poorly graded SAND. Tr. silt.	SP	Saturated.	FID=0.0 >HS PID=0.0
	8 11	2.0	1440 S-12							
36										0.0 in B.Z.
38										
	9 13	1.3	OU2-SB-305B-3840			lt. brown to yellow orange	Similar to S-12 above.	SP	Saturated.	FID=12.6 >HS PID=2.3
40	13 18	2.0	1528 S-13			red-orange layering	Color changes in bottom 8 in.			
									Numerous color changes in wash from 40-43'.	
42										
44	5 7	1.2	OU2-SB-305B-4345			yellow-brn. & red layers	Similar to S-12 & 13 above. Color changes, same material type.	SP	Saturated.	FID=14.8 >HS PID=10.3
	9 11	2.0	1550 S-14			gray				
46									Multi-color changes in wash. (Yellow-brown to gray & black)	
48										

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.		
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.		
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond		
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)		
OTHER OBSERVATIONS:		BORING NO.: SB-305B	PAGE 3 OF 9

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 48	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)]
	4	1.1	OU2-SB-305B-4850			lt. gray	Fine. Poorly graded SAND. Trace med. Sand @ 49.5-50'.	SP		FID=12.1 >HS PID=9.5
	3									
	3									
50	4	2.0	1614 S-15							
									D & W to 53' on 12-8-98	
52										
54	3	1.4	OU2-SB-305B-5355			lt. gray fine w/ lt. brown layers	Similar to S-15 above.	SP		FID=5.2 >HS PID=4.5
	5									
	5		0900 S-16							
	6	2.0								
56										
58										
	8	1.4	OU2-SB-305B-5860			lt. gray	Similar to S-15 & 16 above.	SP	Slight odor noted.	FID=222 >HS PID=9.8
	6									
	7									
60	5	2.0	0925 S-17							
									Fining downward	
									seq.	
62										
64	5	1.5	OU2-SB-305B-6365			lt. gray	Silty. Fine poorly graded SAND.	SM		
	9		0945 S-18							

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 64	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)]
	10 10	1.5 / 2.0	OU2-SB-305B-6365			lt. gray	Silty, fine poorly graded SAND.	SM		FID=5.8 PID=5.6 >HS
66			0945 S-18							
68										
	5 7	1.7	OU2-SB-305B-6870			lt. gray	SILT & fine-very fine SAND. Trace clay throughout. 1 silty clay layer @ 68.25'.	ML / SM	Very fine bedding noted. (rythmites?) Casing harder driving from 71.5-73.	FID=0.8 PID=0.0 >HS
70	9 14	2.0	1015 S-19							
72										
74	3 4	1.5*	OU2-SB-305B-7375 (toc/g.s.)			lt. gray	SILT. Trace clay or rock flour.	ML	*No recov. in 1st attempt overdrive (push) 2nd attempt. Dilatency test ind. silt.	FID=0.0 PID=0.0 >HS
	4 5	2.0	1110 S-20							
76									No change in wash.	
									↓	
78									↓	
	3 5	1.8	OU2-SB-305B-7880			Lt. gray	SILT. Similar to above. Tr. clay 0.1' thick clay layer @ 78.25'	ML CL,		FID=0.0 PID=0.0 >HS
80	7 15	2.0	1220 S-21					ML ↓		

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.		
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.		
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond		
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)		
OTHER OBSERVATIONS:		BORING NO.: SB-305B	PAGE: 5 OF 9

BORING LOG FOR:	RAYMARK /OU2/ GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
80										
82										
84	5	1.7	OU2-SB-305B-8385			lt. & dk. gray	SILT, trace clay	ML	Rythmites or varves, fine bedding.	FID + PID=0.0
	7									
	14		1415 S-22				CLAY & SILT~ ½' from 84.5-85'	CL		
	14	2.0								
86										
88										
	7	1.5	OU2-SB-305B-8890			lt. & dk. gray	SILT, trace – some clay.	ML	Fine bedding (rythmites)	FID=0.2 PID=0.0 >HS
	7									
90	15		1520 S-23				- decreasing clay, inc. trace fine sand – in bottom 4 in.			
	34	2.0								
92									Wash = ang. C-sand size fragments.	
94	55	0.5	OU2-SB-305B-9395			gray	Gravelly, silty, F-C SAND.	SW	Till	FID=5.8 PID=0.5 >HS
	49									
	89		1615 S-24						Wash ahead of casing, loose ~40-50 gal to FM. Hole collapse w/out casing advance.	
	64	2.0								
96										

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.		
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.		
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond		
GROUNDWATER LEVELS:	Water Level~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)		
OTHER OBSERVATIONS:		BORING NO.: SB-305B	PAGE: 6 OF 9

BORING LOG FOR:	RAYMARK /OU2/ GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
96									D & W after wash to 98'. Wash=mix of sand & ang. gravel.	
					Core time (min:sec)					
98										
	12	0.7'	OU2-SB-305-98100			lt. gray	Silty, sandy, angular GRAVEL. Gravel composed of F-C smoky quartz & pyrite, qtz, hornblende gneiss. In a silty, sand matrix.	GM	Till – Dense	FID=4.6 PID=0.1 >HS
	25									
100	20	22" or 1.85'	0940 S-25			dark gray				
	100/4"									
				Top of Bedrock					Wash ahead of casing to 103'. Poss. top of rock @ 101.5' =fresh schist only in cuttings. D & W to 100.5' =casing refusal. Lost - 50 gal. to FM. Roller-bit to 104'.	
102				101.5'						
104										
			C-1=104-106 Pen.=2.0' Rec.=1.75' ">4"=20.5" RQD=87.5%		6 min	dark gray & green	Garnet, muscouite, chlorite, quartz, SCHIST w/ trace quantity of pyrite.		Little – no water lost	
106					7:45		High ang. near vert. Foliation wavy w/ crinkle-folds. Horiz. frac. @ 106.5'			
			C-2=106-116.1 Pen.=10.1' 91 ">4" Rec.=10.0 RQD=75%		6:15		C-2=similar rock to above inc. minor plagioclase feldspar @ 110'		No $CaCO_3$ noted	
108					9:15		45° frac. @ 107.25' & horiz. frac.			
					9:45		6" quartz vein @ 109'. Numerous driller breaks.			
110					9"00		Numerous high ang. Frac. Parallel to foliation. Dark staining on faces.			
					10:00					
112					9:30					

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK /OU2/ GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 112	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)]
					7:30		Similar to above. SCHIST			
114					8:45					
					9:15					
116					8:04					
			C-3=116.1-126 Pen=9.9 Rec.=9.7 ">4"=110.5 RQD=93%		5:25				Approx. 30 gal. water lost in C-3 run.	
118					7:30		Vertical & horiz. fractures along qtz. vein & schist			
					5:12		@ 118'.			
120					6:10					
					7:00					
122					5:20					
					5:00					
124					6:10					
					7:05					
126					6:30		Minor plagioclase feldspar & $CaCO_3$ noted.			
			C-4=126-135 Pen.=9.0 Rec.=8.9 ">4"=105" RQD=97%		7:30					
128					6:40					

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK /OU2/ GROUNDWATER			BORING NO.:	SB-305B
PROJECT NO.:				START DATE:	12-04-98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12-10-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING, INC.			MON. WELL NO.:	MW-305B
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 128	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)]
			C-4 (cont.)		6:40		Similar rock to above.			
130					7:30					
					8:35					
132					7:00					
					7:10					
134					8:00					
					8:40					
136							EOB @ 135' bgs.			

TYPE OF DRILLING RIG:	Mobile Drill B-59 (Truck mounted)
METHOD OF ADVANCING BORING:	5 in. & 4 in. I.D. flush-joint casing. Drive & wash w/ 300 lb. hammer & carbide button roller-bit.
METHOD OF SOIL SAMPLING:	2 in. split barrel driven w/ 140 lb. safety-driver hammer.
METHOD OF ROCK CORING:	NQ wire-line core w/ series 6 bit/diamond
GROUNDWATER LEVELS:	Water Level ~ @ ground surf. Inside casing @ 1200 on 12-7-98 (after weekend off)
OTHER OBSERVATIONS:	

BORING NO.: SB-305B

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-305S
PROJECT NO.:				START DATE:	01/19/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/19/99
DRILLED BY (Company/Driller):	AQUIFER & TESTING INC./K. KUTRANIA			MON. WELL NO.:	MW-305S
GRD. SURFACE ELEVATION:	10.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							No soil samples taken, refer to boring log 305B For description			
19										

TYPE OF DRILLING RIG:	CME			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in .ID drive and wash casing			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	There were shingles right below the ground surface, we had a hard time getting the road box in	BORING NO.:	SB-305S	PAGE: 1 OF 1

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305BR
PROJECT NO.:	N4236-0320			START DATE:	12/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	12/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305BR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 Note – see SB-305B boring log for soil profile details	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
2										
4									Dark brown wash water; trace tile fragments	
6						Light Brown	Fine-coarse SAND, some gravel	SW		PID=0.0 NS FID=0.0
8										PID=0.0 BZ FID=0.0
10										
12										
14									End 5" casing telescope 4" casing	PID=0.0 BZ FID=0.0
16										PID=0.0 NS FID=0.1

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash – 5" casing from 0-12', telescope 4" casing to bedrock		
METHOD OF SOIL SAMPLING:	Visual inspection of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-305BR	PAGE: 1 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305BR
PROJECT NO.:	N4236-0320			START DATE:	12/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	12/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305BR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
						Light Brown	Fine-coarse SAND, some gravel	SW		
18										
20										
22										
24										
26										
28										
30									Dark gray wash water (30')	
32							Silty fine-medium SAND	SP	Changes to dark brown wash water	PID=0.0 BZ FID=0.0 PID=0.0 NS FID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash – 5" casing from 0-12', telescope 4" casing to bedrock		
METHOD OF SOIL SAMPLING:	Visual inspection of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-305BR	PAGE: 2 OF 7

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BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305BR
PROJECT NO.:	N4236-0320			START DATE:	12/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	12/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305BR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32						Light Brown	Silty fine-medium SAND	SP		
33										
34										
36										
38										
40										
42										
44										
46										

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash – 5" casing from 0-12', telescope 4" casing to bedrock		
METHOD OF SOIL SAMPLING:	Visual inspection of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-305BR	PAGE: 3 OF 7

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BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305BR
PROJECT NO.:	N4236-0320			START DATE:	12/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	12/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305BR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
46										
						Light Brown	Silty fine-medium SAND	SP		
48										
50										
							SILT; some fine-medium sand	ML	Light brown wash water	PID=0.0 BZ FID=0.0
52										PID=0.0 NS FID=0.0
54										
56										
58										
60										
62										

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash – 5" casing from 0-12', telescope 4" casing to bedrock		
METHOD OF SOIL SAMPLING:	Visual inspection of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-305BR	PAGE: 4 OF 7

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BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305BR
PROJECT NO.:	N4236-0320			START DATE:	12/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	12/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305BR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
62										
						Light Brown	SILT; some fine-medium sand			
64										
66										
68										
									Driving harder even after washing out casing FID=0.0	PID=0.0 NS FID=0.0
70						Gray	CLAY; some silt	ML/CL		PID=0.0 BZ FID=0.0
72										
74										
76										
78										

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash – 5" casing from 0-12', telescope 4" casing to bedrock		
METHOD OF SOIL SAMPLING:	Visual inspection of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-305BR	PAGE: 5 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305BR
PROJECT NO.:	N4236-0320			START DATE:	12/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	12/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305BR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 78	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)]
						Gray	CLAY; some silt	ML/CL		
80										
82										
84										
						Gray	Fine-coarse GRAVEL, some coarse sand	GW	Very light gray wash water	
86							86' – 0.4' COBBLE	Cobble		
88										
				89.5' Bedrock						
90										
							90.5' material now hard			
92	3.5 min/ft		Run 1 – 92.5'-96.5'							
	5 min/ft		Recovery=4.2'/5' RQD=2.6/5'=0.52%			Green		Very	Lost 30 gal in 1st foot of drilling	PID=0.0 NS FID=0.0
94						Gray	MICACEOUS SCHIST; some quartz; trace calcite	Broken		PID=0.0 BZ FID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash – 5" casing from 0-12', telescope 4" casing to bedrock		
METHOD OF SOIL SAMPLING:	Visual inspection of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-305BR	PAGE: 6 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305BR
PROJECT NO.:	N4236-0320			START DATE:	12/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	12/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305BR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
94										
	5 min/ft				Medium Hard	Gray				
96	8.5 min/ft									
	8 min/ft		Run 2 – 96.5-98.5			Green Gray		Blocky	Snag at 95' during coring	
98	10 min/ft		Recovery=1.6/2 RQD=0 %						Borehead taking approximately 1.5 gpm	
	9.5 min/ft		Run 3 – 98.5-104					Very Broken		
100	9.5 min/ft		Recovery=4.2'/5'=84 RQD=2.2'/3.0'=44 %				Note – foliations at ~45' from vertical; fractures are along	Broken		
	6.5 min/ft						Foliations			
102	5.0 min/ft						102' – Several drilling breaks		Still taking water at same rate (1.5 gpm)	PID=0.0 NS FID=0.0
	6.5 min/ft									PID=0.0 BZ FID=0.0
104	5.0 min/ft				Medium	Gray	MICACEOUS SCHIST – some quartz, trace calcite			
	3.25		Run 4 has material Stuck from previous Core		Hard	Green	Breaks have rounded surfaces; some sediment	Blocky	Note – borehole has taken approimately 800 gallons in one morning	
106	13 min/ft		Recovery=1.7'/1'							
	10.5		RQD=1.1'/1.0'=110 Run 5 – 106'-109'							PID=0.0 NS FID=0.0
108	7 min/ft		Recovery=3.7/4 RQD=2.2/4=55%							PID=0.0 BZ FID=0.0
110				EOB @ 109' bgs						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash – 0-12'=5"; 12-bedrock=4"	Notes: BZ = breathing zone NS = near source	
METHOD OF SOIL SAMPLING:	Visual inspection of cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-305BR	PAGE: 7 OF 7

TtNUS Form 0018

BORING LOG FOR:	RAYMARK/OU2/PHASE 1 GROUNDWATER			BORING NO.:	SB-305D
PROJECT NO.:				START DATE:	01/14/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/19/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./ K. KUTARINA			MON. WELL NO.:	MW-305D
GRD. SURFACE ELEVATION:	10.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken – refer to boring log 305B for description			
59										

TYPE OF DRILLING RIG:	CME	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in .ID drive and wash casing	
METHOD OF SOIL SAMPLING:	N/A	
METHOD OF ROCK CORING:	N/A	
GROUNDWATER LEVELS:		
OTHER OBSERVATIONS:	The driller broke through the surface using a bullet bit, when he removed it from the hole there was a piece of waste fill (a shingle possibly) stuck onto it. The FID read 0.0 in BZ while washing out.	BORING NO.: SB-305D

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305DR
PROJECT NO.:	N4236-0320			START DATE:	1/6/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	1/7/03
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305DR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See boring log for SB-305B for details	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light Brown	0'-2' - Fine-coarse SAND, some gravel	SW	Dark brown wash water	
5						Gray (various)	2'-11' - Tile fragments – FILL material	Fill	Light brown wash water	
10										PID=0.0 BZ FID=0.0
						Black	11'-14' - ORGANIC SILT, trace fine sand	OL	Dark brown wash water	PID=0.4 NS FID=0.3
15						Light Brown	Fine-medium SAND, some coarse sand, some gravel	SW	Light brown wash water	
20										
25										PID=0.0 BZ FID=0.0
30										PID=0.2 NS FID=17.0
35										
40							Fine-medium SAND, some silt	SP		

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Visual check of cuttings only – see boring log for SB-305B for details		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	5.25' at MW-510M		
OTHER OBSERVATIONS:		BORING NO.: SB-305DR	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305DR
PROJECT NO.:	N4236-0320			START DATE:	1/6/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	1/7/03
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305DR
GRD. SURFACE ELEVATION:	9.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
40										
						Light Brown	Fine-medium SAND, some silt	SP	Light brown wash water	
45							Grading to fine-medium SAND and SILT	SP/ML		
										PID=0.0 BZ FID=0.0
50										PID=0.0 NS FID=0.0
55										
60										
				EOB @ 60' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone NS = near source	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Visual check of cuttings only – see boring log for SB-305B for details		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	5.25' at MW-510M		
OTHER OBSERVATIONS:		BORING NO.: SB-305DR	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-305SR
PROJECT NO.:	N4236-0320			START DATE:	1/7/03
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	1/7/03
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-305SR
GRD. SURFACE ELEVATION:	9.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See boring log for SB-510M for soil profile details	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light	Fill material – tile (anthropogenic)	Fill	Light brown wash water	PID=0.0 NS FID=0.0
2						Gray				PID=0.0 BZ FID=0.0
4										
6										
8										
10										
12										
				EOB @ 12' bgs						
14										

TYPE OF DRILLING RIG:	CME 75	Notes: NS = near source BZ = breathing zone	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Check of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL=5.25' in MW-510M		
OTHER OBSERVATIONS:		BORING NO.: SB-305SR	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-306B
PROJECT NO.:				START DATE:	01/04/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/06/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-306B
GRD. SURFACE ELEVATION:	18.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							Asphalt surface			
2										
	5	0.2	OU2-S0-306-0204			Yellow			Saturated (from wash)	
	2					Brown	Well graded f-c SAND, trace silt, trace fine gravel	SW	Poor recov. Poss. Cobble?	0.0=FID
	3	2.0								
4	4		1505 S-1							
	4	0.3	OU2-S0-306-0406							
	3						Similar to above.			0.0=FID
	10	2.0								
6	11		1518 S-2							
	5	0.4	OU2-S0-306-0608			Black &	Gravelly, f-c SAND, coarser material (c.sand-gravel),		Fill, inc. asphalt and glass	
	7					Gray	Composed of asphalt, also glass fragments	Fill		0.0=FID
	9	2.0								
8	9		1533 S-3							
	5	1.0	OU2-S0-306-0810			lt. med.	Gravelly, f-c well graded SAND, 2 zones of ash or		Lost all water in casing @ 8', v.	
	6					gray w/	Slag-like material noted	SW	heavy oxidation (dark red). 2 1"	0.0=FID
	21	2.0		FILL		heavy			zones with slag-like material dk.	
10	48		1540 S-4			oxidation			gray to yellow-white color.	
	22	0.6	OU2-S0-306-1012			stains				
	35					yel.brwn	f-c SAND and f-c GRAVEL, trace silt	GM	saturated	0.0=FID
	50/2"	1.2								
12			0912 S-5							
			OU2-SO-306-1314	COBBLE					Drill through cobble	
							COBBLE	cobble		
	34	0.6				Light	Mostly f-c well graded SAND, trace fine gravel in		Saturated, densely packed	
14	100/5"	0.9	0950 S-6			Brown	nose, and at top of sample	SW		5.6 ppm
			OU2-SO-306-1516						D+W to 15'	
									Gravel @ top of sample (slough)	
	70	0.7				Light				
16	100/5"	0.9	S-7			Brown	Similar to S-6 above	SW		5.8 ppm

TYPE OF DRILLING RIG:	Mobile Drill – B59
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop
METHOD OF ROCK CORING:	NQ wireline
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-306B
PROJECT NO.:				START DATE:	01/04/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/06/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-306B
GRD. SURFACE ELEVATION:	18.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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										
		1.0 /							Saturated, gravel. Composed of granite, gneiss and quartz	
	76		OU2-S0-306-1719			Gray	Sandy gravel, mostly f-c sub-rounded gravel, few f-c sand	GW		
18	36	2.0								1.9 ppm
	45								begin standard int. samp. @ 19'	
	63		1045 S-8							
20										
									Drive & wash through gravel & cobble to 22'	
				Top of Bedrock @ 22.0'						
22										
	100/2"	0.1 /	OU2-S0-306-2223			Dark Gray to	Angular gravel composed of schist		Poss. Top of rock, roller—bit to 23', casing @ 22', change to NQ core. Poss. Slickensides With fault Gouge in frac @ 23.5	0.0
		0.2								
24			C-1=23-24' REC= 0.7' (8 in) 0% RQD			Dk. Green Schist	Heavily fractured (horiz. to high angle) granofels & Schist, from 23-25.75'			
	> 6:30		C-2=24'-34' PEN=10.0' REC=9.8 RQD length=89 in. RQD=74%			Granofels = Lt. gray w/white porphryblasts	White CaCO3 veins noted, esp. in granofels Granofels from 25.5'-27'			
26	> 6:00						Inc. feldspar porphryblasts and minor biotite (granitic comp.)?		slickensides? on frac. face. Poss. fault @ 25'	
	> 5:00					Light gray & white				
28	> 5:30					Dark gray - gray	Horiz. Frac. @ 27.5' chlorite, pyrite, mica,qtz., SCHIST, grading into granofels and back to schist			
	> 5:30						Numerous fract. From 28.5-29.5'		Lost approx. 40 gal. In C-1 and C-2	
30	> 8:30					Dk. Gray w/gold streaks	PYRITE and MAFIC- rich schist w/high angle foliation 29-30.5'			
	> 7:50					Lt. gray And white	Numerous open and closed (weeping) fract. From 30.25-31.5 granofels from 30.5 to 52'			
32	> 6:00									

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-306B	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-306B
PROJECT NO.:				START DATE:	01/04/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/06/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-306B
GRD. SURFACE ELEVATION:	18.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
32										
	> 5:00					gray w/ light gray & white porphryblasts	Horiz. Frac. 32.2+33', granofels, similar to above			
34	> 4:30						Solid core 33'-36.2'			
	> 5:15		C-3=34-44.0' PEN=10.0' REC=9.9' RQD length= 102.5" RQD=85%							
36	> 6:00								Loosing H_2O ~ 30 – 40 gallons @ ~ 36'-38'	
	> 3:30						2 horiz. Frac. @ 36.2+36.5 solid core from ~ 36.5' to 39.5'			
38	> 2:00									
	> 2:30									
40	> 3:35						Near horiz. Frac. With minor oxidation @ 39.75'		Lost ~ 100 gal. to 39-41'	
	> 3:40									
42	> 3:37		1005 hours 9.9'				Low angle fracture @ ~ 41.5' and 42.2'			
43	> 3:34									
44	> 3:19						Heavily frac. (horiz. To vert.) 43-44'			
	> 3:00		C-4=44-54' PEN=10.0' REC=9.5' RQD length=61" RQD=50%				Mult. Horiz. Frac. Open and closed 45.7-46.1			
46	> 3:15									
	> 3:28									
48	> 3:50						Horiz. Frac. @ 47.5'			

TYPE OF DRILLING RIG:	Mobile Drill – B59
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop
METHOD OF ROCK CORING:	NQ wireline
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-306B
PROJECT NO.:				START DATE:	01/04/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/06/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-306B
GRD. SURFACE ELEVATION:	18.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
48										
	> 4:24					Gray w/ White	Granofels with white feldspar porphryblasts numerous Fractures both horiz. and near vertical. Rock is		Lost ~ 200 gal. H_2O in bottom 20' of core	
50	> 6:11					Gray green W/pink	Vuggy along subtle fabric with minor oxidation noted			
	> 6:20									
52	> 9:35									
	> 7:45					Dk. Gr. gray	Chlorite, biotite SCHIST w/ heavy quartz – quartzite Veins and minor CaCO3 veins.			
54	> 8:15						Heavily fractured from horiz. To vert. W/ gouge. From 52-54 ft.			
							EOB @ 54 ft.			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-306B	PAGE: 4 OF 4

BORING LOG FOR:	RAYMARK /OU2/OU4/PHASE I GROUNDWATER			BORING NO.:	SB-306DB
PROJECT NO.:				START DATE:	01/07/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/12/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-306DB
GRD. SURFACE ELEVATION:	18.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
5							No soil samples taken, refer to boring log for SB-306B for Detail from 0-54' bgs.			
10										
15										
20										
25				Top of Bedrock @21' bgs			Top of bedrock at 21'		Set 5 in. casing to 21.25' after 4" was set and then removed	
30										
35									Refer to observation notes for detail on problems w/ drilling.	
40										
45										
50										
52										
54										
	> 7:11	9.8	C-1=54-64 PEN=10.0, REC=9.8 RQD length=92.5" RQD=77%			Gray w/ White Porphry--blasts	Granofels, quartz rich w/calcite veins, feldspar Porphyblasts - horiz. Frac @ 54.8'		K-feldspar Porphryblasts throughout	
56	> 6:00	10.0					- low angle frac. W/oxidation halo @ 55.9'			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing & 5 in. casing (see observations below for details)		
METHOD OF SOIL SAMPLING:	2 in. split barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline D&W w/ 4 in. to 21' roller-bit w/ 4 in. to 54 ft. bgs., 3 in. core barrel stuck @ 40' pull out		
GROUNDWATER LEVELS:	4 in. casing, Advance 5 in. casing to 21.2 ft. rollerbit 5 in. to 41' and attempt to place 4 in. casing to 41'		
OTHER OBSERVATIONS:	Casing stuck/jammed @ 25' bgs, pull out and roller bit w/ 5 in. to 54 ft.	BORING NO.: SB-306DB	PAGE: 1 OF 3

BORING LOG FOR:	RAYMARK /OU2/OU4/PHASE I GROUNDWATER			BORING NO.:	SB-306DB
PROJECT NO.:				START DATE:	01/07/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/12/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-306DB
GRD. SURFACE ELEVATION:	18.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 56	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)]
	> 4:30	9.8	C-1 (cont.)				Near horiz. Frac. @ 56.4' and 57.5'			
58	> 4:30						Granofels with calcite veins similar to above			
	> 4:30									
60	> 4:10						Mult. Horiz. and low angle frac. 59.5-60.5'			
	> 4:20	10.0								
62	> 4:30						Heavily frac. (horiz to high angle) from 62.5-64			
	> 4:40						Machine/driller break at 63'		Approx. 30 gal H_2O lost in C-1	
64	> 4:55						Granofels. Quartz rich intrusive w/abundant feldspar. Contact metamorphism noted w/schist. With intermittent			
	> 4:40	5.5	C-2=64-69.3 PEN=5.3 REL=5.5 (pick up 0.2' From C-1) RQD length=20" RQD=31%				Sharp contract wavy & near vertical to vertical w/chlorite, Pyrite, mica, schist from 62.5'-74.5'			
66	> 5:15									
	> 5:00									
68	> 3:15	5.3					High angle frac. Zone 66.5'-67.5' and 68'-69'		Approx. 200 gal. H_2O lost in C-2 core run.	
	> 4:30						Poss. Slickensides along high angle frac. Parallel to foliation @ 68.5'-69'		Poss. slickensides	
70	> 6:10	9.7	C-3=69.3-79 PEN=9.7' REC=9.7' RQD length=111.5' RQD=95%							
	> 3:00						Horiz. Frac. @ 70.5'			
72	> 3:40	9.7								

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-306DB	PAGE: 2 OF 3

BORING LOG FOR:	RAYMARK /OU2/OU4/PHASE I GROUNDWATER			BORING NO.:	SB-306DB
PROJECT NO.:				START DATE:	01/07/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/12/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-306DB
GRD. SURFACE ELEVATION:	18.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 72	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)]
	> 4:30	9.7	C-3 (cont.)			Dark gray & green	Similar rock to above.			
74	> 5:40					W/ lt. Gray quartz	Driller break @ 74'			
	> 4:15						Mafic (horneblende), biotite, chlorite, schist with			
76	> 5:20						Trace garnet and minor pyrite, minor quartz veins			
	> 5:30	9.7							Lost approx. 300-350 gal.	
78	> 5:14									
	> 5:15									
80	> 4:00	7.0	C-4=79-86' PEN=7.0' REC= 7.0' RQD length=74.5 in RQD=88%							
	> 3:20					Dark Gray Qtz matrix W/ white Porphryb--lasts	Sharp high angle contact and fracture @ 79.5-80.25, Change from schist to porphyritic granofels w/calcite			
82	> 3:45						Veins.			
	> 3:45									
84	> 3:30									
	> 3:15	7.0				Dk. Gray, blk & dk. green	Sharp high angle contact and fract. W/poss Slickensides @ 82-83'=to schist from granofels		Poss. Slickensides = fault	
86	> 3:00						Inc. Garnet contact		Total water loss in drilling 32' of core=~ 2000 gal. (significant loss may occur in upper 30' of bedrock)	
							EOB @ 86' bgs.			

TYPE OF DRILLING RIG:			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Mobile Drill – B59		
METHOD OF SOIL SAMPLING:	4 in. ID drive and wash casing and 5 in. d&w casing – set 5" @ TOR		
METHOD OF ROCK CORING:	2 in. split barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
GROUNDWATER LEVELS:	NQ wireline		
OTHER OBSERVATIONS:		BORING NO.: SB-306DB	PAGE: 3 OF 3

BORING LOG FOR:	RAYMARK /OU2/OU4/PHASE I GROUNDWATER			BORING NO.:	SB-307B
PROJECT NO.:				START DATE:	02/01/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/01/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-307B
GRD. SURFACE ELEVATION:	34.8’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							Asphalt Road Surface			
							~ ½ foot of asphalt and road – base Dark gray – black w/ asphalt odor		dedicated roller bit through asphalt possible fill for road work	
2							f-med. sand			
4										
6	31 41	0.8’	OU2-SO-307-0507			Light Brown Gray	SAND & GRAVEL, sand is fine – coarse well graded Gravel is f-c subang. weathered schist in nose.	SW / GW	casing refusal @ 6.4bgs	FID = 0.0
	50/2	1.2’	1300 S-1	Top of bedrock					Roller bit to 7.5’ and Wash out Lost ~ 5 gal. In c-1	
8		>2:40	C-1=7.5-9 PEN=1.5’ REC=1.2 RQD=0% RQD length=0” RQD = 0%	~6.0’		Dark gray with variable green	SCHIST composed of a large quantity of biotite and Muscovite. Variable quantities of chlorite and mafic Minerals noted. High angle foliation with sm. Folds and wavy fabric throughout			
		1:00							Numerous oxidized Fractures in top 2.5’	
10		2:15	C-2 = 9.0-19’ PEN= 10.0’ REC = 10.3’ RQD length 94” RQD = 78% Water loss ~50 gal.							
		2:25								
12		2:25								
		2:15					High fractures w/ oxidation ~ 11-12’ Numerous low angle to horiz. Fracture 12-14’			
14		2:20					Low angle oxidation fracture @ 14’		DB @ 14’	
		2:15								
16		3:00					vuggy low angle fracture 15.5’-16.5’			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split –barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	No wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-307B	PAGE: 1 OF 3

BORING LOG FOR:	RAYMARK /OU2/OU4/PHASE I GROUNDWATER	BORING NO.:	SB-307B
PROJECT NO.:		START DATE:	02/01/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY: MES	COMPLETION: DATE: 02/01/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./M. Harrington	MON. WELL NO.:	MW-307B
GRD. SURFACE ELEVATION:	34.8'	ELEVATION FROM: NGVD-1929	CHECKED BY:

DEPTH (FEET) 16	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)]
		2:30				Dark gray	SCHIST high and low angle fracture 17-17.4'		Lost 50 gal. In C-2	
18		3:15								
		3:30					vuggy from 18.5-26' with minor quartz x-tal inside noted			
20		3:00	C-3 = 19-29' PEN = 10.0' REC=10.0 RQD length = 99 RQD=83% Water loss = ~250 Gal.				Numerous high and low angle fractures 18-21 vuggy			
		2:50				Light Gray/pink	21.5-26' schist in contact with a gray quartz rich with Granofels with intermittent feldspar			
22		3:00								
		3:45					Numerous low angle horiz. Fractures 22-24'			
24		3:15								
		3:30					High angle vuggy fractures @ 25'		Inc. water loss. loss ~150 gal in 8' from 18-27	
26		4:20								
		4:00				Dark gray	Mica, chlorite, SCHIST, high angle foliation (wavy)			
28		2:30							Total water loss in C-3 ~ 250 gal.	
		2:30					High angle horiz. Fracture 28'-28.5'		Average = ~40 gal/foot water loss in C-4	
30		2:50	C-4 = 29'-39' PEN=10', REC=9.9' RQD =110", RQD = 92%							
		3:05					High angle fractures @ 29'			
32		2:45								

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-307B	PAGE: 2 OF 3

BORING LOG FOR:	RAYMARK /OU2/OU4/PHASE I GROUNDWATER			BORING NO.:	SB-307B
PROJECT NO.:				START DATE:	02/01/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/01/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-307B
GRD. SURFACE ELEVATION:	34.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
32							Asphalt Road Surface			
		2:00	C-4 (cont.)				High angle fracture @ 32.25'			
34		2:45								
		2:20					High angle fracture @ 35'			
36		2:05								
		2:05							Total C-4 water loss = 200 gal.	
38		2:15					2 high angle jagged fractures @ 38 and 38.5'			
		2:00					EOB at 39' bgs			
40										
							Total water loss = 600-700 gal.			
42										
44										
46										
48										

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-307B	PAGE: 3 OF 3

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB-307DB
PROJECT NO.:				START DATE:	2-2-99
LOGGED BY:	T. Dorgan	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-4-99
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing/ M. HARRINGTON			MON. WELL NO.:	MW-307DB
GRD. SURFACE ELEVATION:	35.0’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							Asphalt Surface			
2							D & W 5 in. casing to 41 ft. bgs.			
4										
6				Top of bedrock 6.0’			Seat into top of bedrock to 6.5 ft. bgs.			
8										
10							Refer to log for SB-307B for detail from 0 - 39			
12										
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										

TYPE OF DRILLING RIG:	Mobile Drill – B –59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. ID Drive & Wash Casing. & 5 in. roller – bit reach hole		
METHOD OF SOIL SAMPLING:	2 in. split barrel sampler driven with a 140 lb. hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Water measures inside 307 DB on morning of packer-test (2/4/99) = 7’ bgs.	BORING NO.: SB-307DB	PAGE: 1 OF 4

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB-307DB
PROJECT NO.:				START DATE:	2-2-99
LOGGED BY:	T. Dorgan	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-4-99
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing/ M. HARRINGTON			MON. WELL NO.:	MW-307DB
GRD. SURFACE ELEVATION:	35.0’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
32										
							Refer to SB-307B log for details on 0 – 39’ bgs.			
34										
36										
38										
40										
									High angle Frac @ 41.25’, 42’, 43.5’, 45’, 46’bgs.	
42		5:40	C-1 = 41 – 48’ Pen = 7.0’ Rec = 6.9’ RQD length = 74 RQD = 88%			pinstripe dk.gray	chlorite quartz, mica schist. (biotite & muscovite). High angle planar			
		6:00				& white w/minor	Foliation. minor trace pyrite. noted throughout			
44		3:15				green				
		3:30								
46		4:20								
		4:05								
48		3:45								

TYPE OF DRILLING RIG:	Mobile Drill – B 59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-307DB	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB-307DB
PROJECT NO.:				START DATE:	2-2-99
LOGGED BY:	T. Dorgan	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-4-99
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing/ M. HARRINGTON			MON. WELL NO.:	MW-307DB
GRD. SURFACE ELEVATION:	35.0’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 48	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)]
		3:17	C – 2 = 48 – 52.8 PEN = 4.8’ REC = 4.8’ RQD Length = 53 RQD = 92% Water Loss = 5 – 10 gal.				Chlorite, Quartz, Mica, Schist.			
50		3:21					Mult. high angle Frac @ 49’, 50’, 51-52’.			
		4:01								
52		4:35								
		6:00	~~Rock jammed~~			Pinstripe Dk. gray & white w/minor green			Rock jam @ 52.8	
54		5:00	C – 3 = 52.8 – 56’ PEN = 3.2’ REC = 3.3’ RQD Length = 33” RQD = 86% Water Loss = 0							
		4:12					Numerous High angle and low angle Frac. from 54 -- 61’			
56		4:50								
		4:50	C – 4 = 56 – 62.3 PEN = 6.3’ REC = 6.3’							
58		78:15								
		7:50	RQD Length = 60.5” Water Loss = 10–15 gal. RQD = 80%			Gray	Gradational contact with quartzite approx. 57.5 – 61.5			
60		6:00								
		7:10								
62		8:00					Vertical foliation 62 – 66’.			
		4:30	C – 5 = 62.3 –71.2’				Vertical fractures along foliation 63-66’.			
64		6:15								

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casting		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-307DB	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB-307DB
PROJECT NO.:				START DATE:	2-2-99
LOGGED BY:	T. Dorgan	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-4-99
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing/ M. HARRINGTON			MON. WELL NO.:	MW-307DB
GRD. SURFACE ELEVATION:	35.0'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 64	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)]
		3:00	C – 5 =62.3 – 71.2' PEN = 8.9 REC = 8.9 RQD Length =100.5 RQD = 94% Water Loss =~ 25 gal.			Dark gray & white pinstripe w/trace green	vertical fractures along foliation to 66 ft.			
66		8:30								
		8:10					Horizontal Fracture @ 67			
68		6:00								
		5:40								
70		6:10								
		5:50	C – 6 = 71.2' PEN =1.8 REC=1 .8 RQD Length =20.25 RQD = 93% Water Loss =30 gal.			nearly black	High angle fracture @ 70.' Rock below frac. To 71-71.5' is Is soft and easily broken. Highly degraded. Holding			
72							Water flong after surrounding core has dried out.			
74										
							End of Boring at 73 ft. bgs			

TYPE OF DRILLING RIG:	Mobile drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-307DB	PAGE: 4 OF 4

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-308B
PROJECT NO.:				START DATE:	02/03/99
LOGGED BY:	D.WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/04/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S.BRAY			MON. WELL NO.:	MW-308B
GRD. SURFACE ELEVATION:	38.4 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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 Black	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0.0							Asphalt pavement			
			No sample taken 0-2'							
2.0										
	12	16"	OU4-SO-308-0204			Light Brown	Well graded GRAVEL and SAND, tr. silt	GW	Damp	
	46									
	38	20"		Top of bedrock		Green-gray			Spoon refusal at 3.7'	FID: 0 ppm
4.0	50		0824 S-1				Weathered chlorite, mica, SCHIST			
				3.7'						
6.0										
					5:17	Gray	(chlorite), mica, SCHIST, weathered, high angle foliation	VBR BR	Most rock surfaces have brown/rust – colored alteration	FID: 0 ppm Bz for entire boring
8.0					4:15					
		36"	C-1-6.0'-11.0' RQD=15%		3:03					
10.0		60"			3:40					
					7:30			VBR		
12.0					5:10	Gray	Mica, SCHIST, some quartz and feldspar, high angle Foliation.	BR		
		36"	C-2-11.0'-14.5' RQD=14%		4:12			VBR BR	Soft rock at 12.3'	
14.0		42"			6:53					
			C-3-14.5'-17.5' RQD=54%		3:46					
16.0					4:29					

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Split spoon refusal at 3.7'; 4" roller bit to 6'; core from 6' to 38'	BORING NO.: SB-308B	PAGE: 1 OF 3

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-308B
PROJECT NO.:				START DATE:	02/03/99
LOGGED BY:	D.WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/04/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S.BRAY			MON. WELL NO.:	MW-308B
GRD. SURFACE ELEVATION:	38.4 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" RQD	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)]
					4:10	Gray	Mica SCHIST, some quartz and feldspar, high angle foliation			
18.0		12" / 12"	C-4-17.5'-18.5' RQD=0%		6:14			BR		
			C-5=18.5'-22' RQD=17%		8:39				Very broken from 19.2-22'	
20.0		34" / 42"			6:37			VBR		
					5:28				Lose water 19'-20' no return.	
22.0					12:19					
		16" / 18"	C-6=22'-23.5' RQD=22%		9:36			BR		
24.0					13:25					
		18" / 18"	C-7=23.5'-25' RQD=33%		7:37			VBR	Very broken from 24.5-25.5 Rust staining at 26' high angle fractures	
26.0			C-8=25'-28' RQD=0%		6:14	Gray	Mica SCHIST, some quartz and feldspar, high angle foliation	BR		
		24" / 36"			6:17			VBR		
28.0					8:47					
			C-9=28'-31.5' RQD=24%		11:00	Gray to Yellow		BR		
30.0		33" / 42"			14:32	gray				
					15:33		Quartz vein at 30'	VBR		
32.0					18:07			BR	Rust staining 31.5	

TYPE OF DRILLING RIG:	Mobile Drill – B 59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-308B	PAGE: 2 OF 3

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-308B
PROJECT NO.:				START DATE:	02/03/99
LOGGED BY:	D.WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/04/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S.BRAY			MON. WELL NO.:	MW-308B
GRD. SURFACE ELEVATION:	38.4 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" RQD	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)]
		60" / 60"	C-10=31.5'-36.5' RQD=90%		8:56	Gray	Mica SCHIST, some quartz and feldspar high angle foliation	BR BL	32.7 high angle frac., rusty vugs at 32 and 32.5'	
34.0					9:03					
					9:10				Some rust stains 35.5' and 36.5'	
36.0					8:54			VBR		
		19" / 18"	C-11=36.5-38' RQD=100%		3:24			BL	High angle frac. 36.5 rust stained	
38.0					3:18					
							EOB @ 38.0' BGS			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-308B	PAGE: 3 OF 3

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-308DB
PROJECT NO.:				START DATE:	02/08/99
LOGGED BY:	D. WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/10/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING - S.BRAY			MON. WELL NO.:	MW-308DB
GRD. SURFACE ELEVATION:	38.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0.0	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)]
10.0							No soil samples or rock cores taken 0' to 40' (5" Roller bit)			
20.0							SEE LOG FOR SB-308B			
30.0										
40.0								BR		
		16" / 16"	C-1-40'-41.3' RQD=81%		6:39	Gray	Mica SCHIST, some quartz and small garnets; high angle Foliation.			FID=0 ppm BZ For entire boring
42.0		24" / 24"	C-2-41.3'-43.3' RQD=33%		5:22				Rust stained frac. 42'	
					6:23			VBR	Rust stained frac. 43'	
44.0			C-3-43.3'-51' RQD=87%		9:52			VBR/BR BR		
					7:02				45' high angle break	
46.0					8:26				45.7 low angle break	
		87" / 92"			6:37					
48.0					12:49				Some rust staining 48'	
					11:29					
50.0					9:08				Rust stained frac. 49.2'	
					8:31					
52.0		12" / 12"	C-4=51'-52' RQD=42%		8:17			VBR/BR	Rust stained frac. 51.5'	

TYPE OF DRILLING RIG:	Mobile Drill – B59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. ID drive and wash casing			
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop			
METHOD OF ROCK CORING:	NQ wireline			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	5" roller bit 0' - 40'; core 40' – 72'	BORING NO.:	SB-308DB	PAGE: 1 OF 3

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-308DB
PROJECT NO.:				START DATE:	02/08/99
LOGGED BY:	D. WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/10/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING - S.BRAY			MON. WELL NO.:	MW-308DB
GRD. SURFACE ELEVATION:	38.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 52.0	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)]
		110" / 108"	C-5=52'-61' RQD=97%		8:30	Gray-Dk. Grn.	Chlorite, mica SCHIST, high angle foliation w/ quartz and Small garnets		Rust stained frac 52.3'	
54.0					8:45		Mica schist less foliation	BL		
					5:54					
56.0					6:42		Chlorite-mica SCHIST w/quartz and small garnets High angle foliation			
					6:30			BR		
58.0					6:23		less foliation	BL		
					6:46				Rust stained frac. 59.5'	
60.0					6:37		Chlorite- Mica SCHIST w/quartz and small garnets	BR		
					6:25		High angle foliation			
62.0		119" / 117"	C-6=61'-70.8' RQD=88%		6:45				61.3' high angle frac. – some rust	
					8:31			BR		
64.0					8:11			BL		
					7:38					
66.0					6:58			VBR/ BR		
					6:02				66.5 high angle break	
68.0					7:36			BL		

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-308DB	PAGE: 2 OF 3

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-308DB
PROJECT NO.:				START DATE:	02/08/99
LOGGED BY:	D. WHALEN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/10/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING - S.BRAY			MON. WELL NO.:	MW-308DB
GRD. SURFACE ELEVATION:	38.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 68.0	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)]
					8:50	Gray	Chlorite, Mica, SCHIST	BL		
70.0					8:36			BR		
			C-7=70.8'-72'		8:05		SCHIST/GNEISS	BL		
72.0		15 / 15	RQD=100%		8:48		Mica, quartz, black mineral (pyroxene?) some small garnets.			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-308DB	PAGE: 3 OF 3

BORING LOG FOR:	RAYMARK	BORING NO.:	SB-309B
PROJECT NO.:		START DATE:	02/16/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY: MES	COMPLETION: DATE: 02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington	MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM: NGVD 1929	CHECKED BY:

DEPTH (FEET) 0	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)]
2										
4	5 9 5 2	0.6' / 2.0'	OU2-S0-309-0204 1245 S-1			Dark Brown	SAND. Mostly f-c sand, little rounded gravel	SW	**Strong natural-gas odor**	FID=4,292 PID=0.5
6	2 2 3 5	1.4' / 2.0'	OU2-S0-309-0406 1255 S-2			Light Olive – br.			Saturated	FID=4,290 PID=0.4
8	5 5 7 9	1.0' / 2.0'	OU2-S0-309-0608 1308 S-3				SAND. Mostly f-med. Sand, fining into a poorly graded Fine sand.	SP		FID=4,200 PID=0.4
10	11 13 10 14	1.2' / 2.0'	OU2-S0-309-0810 1320 S-4			Oxidation Orange	Fine poorly graded SAND. Trace silt. Inc. ½" thick fine sandy SILT. With minor bedding Noted.	SP	Fine bedding layers & oxidation	FID=35 PID=0.3
12	8 9 11 13	1.8' / 2.0'	OU2-S0-309-1012 1335 S-5			Lt. Olive Brown	SAND, mostly fine poorly graded sand, trace silt, trace med. Sand.	SP		FID=100 PID=0.5
14	22 23 25 23	1.1' / 2.0'	OU2-S0-309-1214 1410 S-6			Brown w/ Minor Red-Orange (inc. blk)	S-6A=0.4' similar to above S-6B=0.7' gravely, f-coarse SAND	SW / GW	Minor oxidation in S-6B	FID=23 PID=0.2
16	21 12 14 18	1.3' / 2.0'	OU2-S0-309-1416 1425 S-7				Gravelly, med.-coarse SAND	GW / SP		FID=15.4 PID=0.2

TYPE OF DRILLING RIG:	Mobile Drill – B 59	**1315 radio K.O. to notify gas co. of poss. Leak & request PID. 1400 scg onsite to check for gas leaks FID=4,000 ppm., SCG meter=0.5%, title-probe holes nearby=6%-50% beside frog pond bar.**	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:	Water Level measure @ 10' bgs on 02/17/99 in A.M. W.L. meas. 6.5' BGS on 02/18/99		
OTHER OBSERVATIONS:		BORING NO.: SB-309B	PAGE: 1 OF 9

BORING LOG FOR:	RAYMARK	BORING NO.:	SB-309B
PROJECT NO.:		START DATE:	02/16/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY: MES	COMPLETION: DATE: 02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington	MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM: NGVD 1929	CHECKED BY:

DEPTH (FEET) 16	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		OU2-SO-309-1618			Brown -	GRAVEL and SAND, sand is med-coarse gravel is			Lost ~ 30-
	16	1.4'				Black w/	f-c subrounded.	GW	Saturated	50 gal. H_2O
	16	2.0'				Minor				@ 16'
18	16		1440 S-8			Oxidation		SP		FID=12
	8		OU2-SO-309-1820							PID=0.2
	12	1.0'				Brown	Similar to above			
	14	2.0'								FID=6.3
20	16		1450 S-9							PID=0.2
									Begin standard int. Sampling D&W to 24'	
22										
24										
	21		OU2-SO-309-2426							
	14	0.8'				Brown	Similar to S-9 above	GW	Saturated	FID=9.8
	15	2.0'								PID=0.1
26	14		1515 S-10					SP		
28										
	18		OU2-SO-309-2931							
30	9	0.7'				Brown -	Gravelly, f-c well graded SAND, some f-c rounded gravel	SW	Saturated – no odor	FID=72
	10	2.0'	1535 S-11			Light				PID-0.4
	12					Gray				
32										

TYPE OF DRILLING RIG:	Mobile Drill – B 59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309B	PAGE: 2 OF 9

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309B
PROJECT NO.:				START DATE:	02/16/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
32										
34										
	8	0.9'	OU2-SO-309-3436							
	7	2.0'				Brown -	Gravelly, med-coarse SAND	SW	Losing water 32-36' ~ 30 gallons	FID=32
	5					Light	Gravel are f-c well rounded			
36	9		1555 S-12			Gray				PID=0.2
38										
	8	0.6'	OU2-SO-309-3941							
40	10	2.0'				Brown	Similar to S-12 above	SW	Saturated	FID=28
	11									
	12		1615 S-13							PID=0.2
42										
44										
	13	0.4'	OU2-SO-309-4446							
	15	2.0'				Brown-	Gravelly, f-c SAND	SW		FID=8.0
	16					Light				
46	16		1640 S-14			Gray				PID=1.2
48										

TYPE OF DRILLING RIG:	Mobile Drill – B 59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Stop 2/16 w/ casing @ 44 and last sample = 4446	BORING NO.: SB-309B	PAGE: 3 OF 9

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309B
PROJECT NO.:				START DATE:	02/16/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
48										
	16	0.7' / 2.0'	OU2-S0-309-4951			Light				
50	16					Brown	SAND and GRAVEL—well graded f-c sand and well	SW / GW		FID=9.5
	15		0820 S-15				Graded f-c gravel rounded			
	14									PID=0.0
52										
54										
	7	1.2' / 2.0'	OU2-SO-309-5456							
	9					Light	SAND, mostly fine poorly graded sand, trace silt	SP	Bedding layers noted	FID=18.1
	13					Brown				
56	21		0844 S-16							PID=1.6
58										
	9	1.0' / 2.0'	OU2-SO-309-5961							
60	12					Light	Similar to S-16 above. Sands are mica rich	SP	Fine bedding noted (x-bedding?)	FID=24.1
	15		0920 S-17			Brown				
	18									PID=4.0
62										
64										

TYPE OF DRILLING RIG:	Mobile Drill – B 59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309B	PAGE: 4 OF 9

BORING LOG FOR:	RAYMARK	BORING NO.:	SB-309B
PROJECT NO.:		START DATE:	02/16/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY: MES	COMPLETION: DATE: 02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington	MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM: NGVD 1929	CHECKED BY:

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)]
64										
	4	1.0' / 2.0'	OU2-SO-309-6466			Light	SAND, mostly f-c well graded sand, trace fine gravel		No structure	FID=10.0
	10					Brown		SW		PID=4.8
	15									
66	14		1045 S-18							
68										
									Harder driving @ 68.5	
	34	0.8' / 2.0'	OU2-SO-309-6971			Light	Gravelly, SAND = S-19A – 0.4' f-c well graded			FID=4.0
70	50					Brown to	SAND w/little fine subang. Gravel	SW		PID=2.5
	29		1105 S-19			Light	S-19B=SAND and GRAVEL, trace silt, comact grvl. Is	GW / SW	S-19B=till?	
	30					gray	Angular phyllite		Wash H_2O color change from brown to olive-green	
72										
74										
	16	0.1' / 2.0'	OU2-SO-309-7476							
	18						Poor recovery only f-c gravel fragments		Poss. coarse gravel or cobbles?	FID & PID =
	30									Not done
76	24		1150 S-20							Poor
										recovery
78										
	15	0.7' / 2.0'	OU2-SO-309-7981			Olive	Gravelly f-c SAND, gravel is f-c subrounded			FID=14.8
80	17		S-21			Brown		SW		PID=5.0

TYPE OF DRILLING RIG:	Mobile Drill – B 59
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop
METHOD OF ROCK CORING:	NQ wireline
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309B
PROJECT NO.:				START DATE:	02/16/99
LOGGED BY:	T.DORGAN	TRANSCRIBED BY	MES	COMPLETION: DATE:	02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM	NGVD 1929	CHECKED BY:	

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)]
80										
	28	0.7'	OU2-SO-309-7981			Olive				FID=14.8
	21	2.0'	1320 S-21			Brown	Gravelly f-c SAND, gravel is f-c subrounded	SW	Mixed gravel rock types	PID=5.0
82										
84										
	100/.1	0.0'	OU2-SO-309-8486	Boulder	No Recovery Spoon Refusal		**No Recovery**		Spoon refusal drill (roller bit & D&W) through boulder 83.5-86'	
86		0.1'	1340 S-22							
88									D&W to 89'	
90	23	1.0'	OU2-SO-309-8991			Gray	SAND and GRAVEL, mixture of f-c sand, and f-c subang - angular gravel	GW/SW		FID=6.0
	12	2.0'	1435 S-23							PID=2.4
92										
94										
	23	1.0'	OU2-SO-309-9496				Sandy, GRAVEL. Mostly f-c subang.	GW		FID=10.8
	18	2.0'	Grain-size collected							
96	17		1540 S-24				Subrounded gravel. little f-c sand, trace silt			PID=2.5
	72									

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309B	PAGE: 6 OF 9

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309B
PROJECT NO.:				START DATE:	02/16/99
LOGGED BY:	T.DORGAN	TRANSCRIBED BY	MES	COMPLETION: DATE:	02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 96	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)]
									Roller bit to 99', fresh uniform rock cuttings from 97-99' Seat casing @ 96' in top 0.2-0.5' of bedrock = casing refusal	
98										
100			C-1=99'-99.5' PEN=0.5' REL=0.3' Water loss= ~ 50 gal. RQD = 0%			Dark Gray & white	Quartz, biotite, SCHIST& GNEISS with variable quantities of chlorite, minor garnet and Pyrite. High angle to vert. Foliation and folded, minor calcite veining. Abundant quartz veins.		C-1 water loss ~50 gallons slight bend or angle change in boring @ 101FT	
					4:15					
102			C-2=99.5-109' PEN=9.5' REC=9.5' RQD length=88" RQD=77% Water loss 500 gallons		3:50					
					3:05				C-2 water loss = ~500 gallons	
104					3:20		- High angle fracture's @ 103-104'			
					2:00		- Multiple high and low angle frac. 104-105.5'			
106					2:30					
					3:05		- high angle fractures along foliation 106-107'			
108					3:40					
					3:00		- high angle frac. @ 109'			
110			C-3=109'-119'		2:40				C-3 water loss	
			PEN=10.0 REC=9.5 RQD=88% Water loss=300		2:00		- numerous low angle horiz. Frac. From 110.2-112.2'		= 300 gallons	
112					2:20					

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309B	PAGE: 7 OF 9

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309B
PROJECT NO.:				START DATE:	02/16/99
LOGGED BY:	T.DORGAN	TRANSCRIBED	MES	COMPLETION: DATE:	02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 112	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)]
					2:20	Dk. Gry & white	Similar rock type as above			
114					2:35		- High angle fracture @ 113.2'			
					2:20		- horiz. Jagged frac. @ 114.25'			
116					2:40					
					2:30		- High angle frac. @ 116.1' and 117'			
118					2:35					
					2:25		- High fractured high angle and low angle			
120			C-4=119'-124' PEN=6.0 REC=6.2 RQD length=28.5" RQD=47%		2:45		From 118.25 – 121.5'		C-4 water loss ~ 300-400 gal.	
					3:30					
122					3:45		- Mult. Low angle to 45° frac. 121'			
					3:45					
124					3:40		- Mult. High angle frac. 123'-124.5'			
			C-5=124-130 PEN=6.0 REC=6.0' RQD length=53" RQD=85%		3:35		- Numerous horiz. Jagged frac's 125-126.7'		C-5 water loss = 250 gal	
126					4:00					
					4:15	Lt. Gry w/ Pnk&white	- Quartz vein with potassium feldspar, pink And white 126.2'-127.			
128					4:05	Dk. Gray & white	High angle frac. @ 127'			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309B	PAGE: 8 OF 9

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309B
PROJECT NO.:				START DATE:	02/16/99
LOGGED BY:	T.DORGAN	TRANSCRIBED BY	MES	COMPLETION: DATE:	02/18/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-309B
GRD. SURFACE ELEVATION:	11.2 ft.	ELEVATION FROM	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 128	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)]
					3:50	Dark gray & white	Similar rock type as above.			
130					4:00				Total water loss = approx. 1,500 gal.	
							End of Boring at 130 ft.			
							Construct bedrock well screened from 99'-129'			

TYPE OF DRILLING RIG:			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:			
METHOD OF SOIL SAMPLING:	Refer to page 1 of 9		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309B	PAGE: 9 OF 9

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309D
PROJECT NO.:				START DATE:	02/24/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/25/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	MW-309D
GRD. SURFACE ELEVATION:	11.6 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0	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 Grass surface	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
10							No samples collected.		Advanced 4" casing to 94 ft. bgs.	
20							Refer to log for 309B for details.			
30										
40										
50										
60										
70										
80										
90										
100										
							EOB @ 94. Ft. bgs. Construct well from			
							84 to 94 ft. BGS.			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing.		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-309D (1st attempt)
PROJECT NO.:				START DATE:	02/23/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	02/23/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/M. Harrington			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		ELEVATION FROM:		CHECKED BY:	

DEPTH (FEET) 0	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 Grass Surfaces	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
							No samples taken, refer to SB-309B log for details		D&W to 4.5	
2										
4										
5							Hit and cracked an 8 in. I.D. steel water line			
							Feeding fire suppression sys. For Dresser Ind.			
							Water release displaces ~ 6-8 cubic yards of soil/			
							Gravel/cobbles. Refer to FOL/site/rig logs for details.			
							Broken pipe repaired along w/ gas-line leak weathered			
							By leak. Backfilled location and move to approved loc.			
							Loc. (by J.Garvin of Dresser Ind.) and cleared by			
							Hand-auger to 7' bgs.			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-309D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 310
PROJECT NO.:				START DATE:	12/07/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/11/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ M. HARRINGTON			MON. WELL NO.:	MW-310B
GRD. SURFACE ELEVATION:	16.9 ft.	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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 Grass Surface	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	3 / 6		OU2-SO-0002		Loose	DK Brown	Silty, (F-M) SAND - grass roots	SM	Moist topsoil , Fill	FID=0.0
2	6 / 6	2 / 24	1310 S-1						Fill	PID=0.0
	6 / 6		-0204		Loose					FID=0.4
4	6 / 6	2 / 24	1315 S-2				- Trace rounded gravel			PID=0.0
	6 / 5		-0406	4.5	Loose	Brown	fine – medium SAND	SP	Moist natural	FID=0.0
6	8 / 7	8 / 24	1415 S-3				- trace rounded 1" gravel		(P- stone size gravel in washed mat'l)	PID=0.0
	11 / 10		-0608		Medium		silty very fine SAND trace gravel (red sandstone)	SM		FID=0.0
8	12 / 18	7 / 24	1420 S-4							PID=0.0
	11 / 10		-0810		Medium	Brown Gray				FID=0.0
10	11 / 13	6 / 24	1500 S-5				- No gravel, <5% Clay		Bedding planes visible	PID=0.0
	8 / 11		-1012		Medium	Gray	(VF) Sandy, SILT	ML	Moist homogeneous	FID=0.0
12	11 / 14	8 / 24	1510 S-6				- trace clay		non-plastic	PID=0.0
	16 / 18		-1214	13.5						FID=0.0
14	50/1" /	7 / 19	1520 S-7		V. Dense		- weathered rock in spoon shoe		mica crystals vis.	PID=0.0
	20 / 18		-1416		Medium	DK Brown	fine – course SAND and GRAVEL (>1.5")	SW	sub-rounded grains	FID=3.9
16	17 / 17	7 / 24	1550 S-8				- little silt			PID=0.0

TYPE OF DRILLING RIG:	MOBIL B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH 5" DIAM CASING TO 9.5 FBGS – 300 LB WEIGHT		
METHOD OF SOIL SAMPLING:	2" I.D. SPLIT BARRELL SAMPLER – 24" LONG – 140 LB WEIGHT		
METHOD OF ROCK CORING:	NQ CORE-WIRE LINE		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-310	PAGE: 1 OF 7

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 310
PROJECT NO.:				START DATE:	12/07/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/11/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ M. HARRINGTON			MON. WELL NO.:	MW-310B
GRD. SURFACE ELEVATION:	16.9 ft.	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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										
	18		-1618			DK				
	8				Med	Brown	(F-C) SAND and GRAVEL (>1.5" DIAM.)	SW	sub-rounded grains	FID=3.5
	8	9								
18	25	/ 24	1600 S-9				-little silt			PID=0.0
	11		-1820							
	10		VOC		Med		-gravel size <0.5" DIAM.			FID=0.0
	10	10	TOC/grain size							
20	13	/ 24	1616 S-10							PID=0.0
									switch to 5' sample intervals	
22										
24										
(scale change)			12/8/98							
25										
	25		-2527			Brown	- trace clay	SW		
	15									(#A)FID,(0.3)
	15	10								
27	17	/ 24	0920 S-11							
29										
(scale change)										
30										

TYPE OF DRILLING RIG:	MOBIL B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH 5" DIAM CASING TO 9.5 FBGS – 300 LB WEIGHT		
METHOD OF SOIL SAMPLING:	2" I.D. SPLIT BARRELL SAMPLER – 24" LONG – 140 LB WEIGHT		
METHOD OF ROCK CORING:	NQ CORE-WIRE LINE		
GROUNDWATER LEVELS:	0900 12/18/98 DTW 17.5 fbgs		
OTHER OBSERVATIONS:		BORING NO.: SB-310	PAGE: 2 OF 7

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 310
PROJECT NO.:				START DATE:	12/07/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/11/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ M. HARRINGTON			MON. WELL NO.:	MW-310B
GRD. SURFACE ELEVATION:	16.9 ft.	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) Scale	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)]
30										
	25		-3032		Med			SW	(F-C) Subrounded gravel wash in spoon	
	16									
	15	0								
32	12	24	0950 S-12							
									Casing is difficult to drive; Boulders?	
35										
	14		-3537		Med	Orange brown	(F-C) SAND, <10% course Sand	SW / SP	Bedding visible	FID, (1.7)
	11									
	21	13					-No Gravel, <5% fines		Fining downwards with in barrel	
37	28	24	1200 S-13							
40										
	20		-4042		Med Dense	Orange brown	(F-M) SAND, <10% (m) Sand	SP	Bedding Visible	FID, (1.3)
	28									
	32	15	VOC				-<10% fines			
42	35	24	1230 S-14							
				43.						
				Color Change						
						Dark Brown			Wash water - from	
45										
	20		-4547			Black & Brown beds				FID, (4.2)
	25		VOC							
	39	13								
47	39	24	1300 S-15				-0			
50										

TYPE OF DRILLING RIG:	MOBIL B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH 5" DIAM CASING TO 9.5 FBGS – 300 LB WEIGHT		
METHOD OF SOIL SAMPLING:	2" I.D. SPLIT BARRELL SAMPLER – 24" LONG – 140 LB WEIGHT		
METHOD OF ROCK CORING:	NQ CORE-WIRE LINE		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-310	PAGE: 3 OF 7

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 310
PROJECT NO.:				START DATE:	12/07/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/11/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ M. HARRINGTON			MON. WELL NO.:	MW-310B
GRD. SURFACE ELEVATION:	16.9 ft.	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" Core Time per Foot	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)]
50										
	20		-5052		Med	Yellowish orange	(F-M) SAND	SP	Bedding visible	FID, (5.6)
	25				↓					
	40	14	VOC				-<5% Fines			
52	45	24	1346 S-16		Dense					
55										
	25		-5557		Dense	LT gray	(F-C) SAND and (F-C) GRAVEL	SW	Grains sub-rounded to subangular 2 – schist rocks w/ mica crystals visible	FID, (33.1)
	28									
	34						-<10% Fines			
57	36		1420 S-17							
				57.5						
				↑						
							1' Boulder/@ 57.5 Fbgs		Driving the casing is difficult	
60	0/20			Top of weathered bedrock			Top of bedrock			
	w/300#		12-9-98				- Piece of quart size in bottom of split barrell		Wash H20 color change to greenish gray	
62				↓			- 4" casing seated @ 61.1			
				62.5			- Rollerbit to 64.5 fbgs			
64										
			C-1 1043 start				Schist – near vertical bedding with fractures @ 1.1' (near horizontal) high angle fracture @ 2.7;		200 PSI Push 300 PSI	
	8:15									
66			Run = 9'(108 in)							
	5:30		Rec. = 107'							
			RQD = 100%							
	5:50									
68										

TYPE OF DRILLING RIG:	MOBIL B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH 5" DIAM CASING TO 9.5 FBGS – 300 LB WEIGHT		
METHOD OF SOIL SAMPLING:	2" I.D. SPLIT BARRELL SAMPLER – 24" LONG – 140 LB WEIGHT		
METHOD OF ROCK CORING:	NQ CORE-WIRE LINE		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-310	PAGE: 4 OF 7

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 310
PROJECT NO.:				START DATE:	12/07/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/11/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ M. HARRINGTON			MON. WELL NO.:	MW-310B
GRD. SURFACE ELEVATION:	16.9 ft.	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" Core time per foot	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)]
68										
	5:50		C-1 11:00 stop							
			cont. - 11:22 start				Fraction @ 4'		Water lost down hole	
	6:00						New vertical fracture @ 7.0'			
70							all fractures clean		Less H_20 loss rate	
	6:00									
									Adding 6 gpm H_20 to tub	
	6.15									
72										
	6:50								No or little H_20 loss	
	7:00		11:55 stop							
74										
	7:00		C-2 Pen. 10'				Schist similar to above			
	6:40						Fracture @ 1.0" (horizontal)			
76										
	5:20									
	5:10						Nearly horizontal fracture @ 5.0'			
78										
							Nearly vertical fracture @ 5.5'			
	5:10									
							Nearly vertical fracture @ 6.0'			
80	4:31									
	4:11						Nearly vertical fracture @ 7.0'			
							9 parallel fracture appear fresh			
82	5:04									
	4:35									
84										

TYPE OF DRILLING RIG:	MOBIL B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH 5" DIAM CASING TO 9.5 FBGS – 300 LB WEIGHT		
METHOD OF SOIL SAMPLING:	2" I.D. SPLIT BARRELL SAMPLER – 24" LONG – 140 LB WEIGHT		
METHOD OF ROCK CORING:	NQ CORE-WIRE LINE		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-310	PAGE: 5 OF 7

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 310
PROJECT NO.:				START DATE:	12/07/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/11/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ M. HARRINGTON			MON. WELL NO.:	MW-310B
GRD. SURFACE ELEVATION:	16.9 ft.	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
	6:17	C-3	C-3 Pen. 120" Rec. 120" RQD 91%				Schist similar to above @ 1.2' near vertical fracture with some possible fault gouge 0.1" thick, @ 2.7' near vertical (fresh) fracture 3 - 4.7' near vertical fracture with orange staining (possible water bearing zone.) Rest of core has near vertical fracture.		Straddle pack @ 86-90" 91'	
86	6:20									
	6:00									
88	5:33									
	5:46									
90	5:40									
	4:27									
92	5:04									
	5:41									
94	4:36									
	5:15		C-4 Rec. 11" Pen. 12" RQD. 0				Schist with quartz vein + possible fault gouge.			
96	5:00		C-5 11:21 Start Pen 60" Rec. 60" RQD 50% 1154 stop				Schist – similar to above Slight fracture/weathering below quartz vein to 98 fbgs		Quartz vein 16" long @ 95.3 fbgs	
	9:30									
98	7:00									
	6:00		1207 stop				H_20 return/problem w/coring; pull back			
100	8:00		C-6 99.2 – 104.5							

TYPE OF DRILLING RIG:	MOBIL B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH 5" DIAM CASING TO 9.5 FBGS – 300 LB WEIGHT		
METHOD OF SOIL SAMPLING:	2" I.D. SPLIT BARRELL SAMPLER – 24" LONG – 140 LB WEIGHT		
METHOD OF ROCK CORING:	NQ CORE-WIRE LINE		
GROUNDWATER LEVELS:	15' bgs @ 0800 12-10-98 in Bedrock		
OTHER OBSERVATIONS:		BORING NO.: SB-310	PAGE: 6 OF 7

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 310
PROJECT NO.:				START DATE:	12/07/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	FMD	COMPLETION: DATE:	12/11/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ M. HARRINGTON			MON. WELL NO.:	MW-310B
GRD. SURFACE ELEVATION:	16.9 ft.	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
100	5:00									
	7:50		Pen 58" Rec 58" RQD 85%				Schist – similar to above			
102										
	8:00									
104	7:50									
	7:44									
			C-7 Pen. 120" Rec. 117" RQD 90%				Schist – Similar to above @ 106 fbgs and 108.5 fbgs FC – staining present		H_20 loss in tub 3" tub depth/5 min	
106	5:48									
	6:10									
108	6:06									
	6:50									
110	4:36									
	5:32									
112	5:30									
	4:47									
114	4:10									
	7:09									
							EOB @ 114.25' BGS			

TYPE OF DRILLING RIG:	MOBIL B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH 5" DIAM CASING TO 9.5 FBGS – 300 LB WEIGHT		
METHOD OF SOIL SAMPLING:	2" I.D. SPLIT BARRELL SAMPLER – 24" LONG – 140 LB WEIGHT		
METHOD OF ROCK CORING:	NQ CORE-WIRE LINE		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-310	PAGE: 7 OF 7

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB-310D
PROJECT NO.:				START DATE:	01/20/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/21/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./K. KUTARINA			MON. WELL NO.:	MW-310D
GRD. SURFACE ELEVATION:	16.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken, refer to boring log 310B			
							For description			
59										

TYPE OF DRILLING RIG:	CME		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-310D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB-310S
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/21/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING Inc./K. KUTARINA			MON. WELL NO.:	MW-310S
GRD. SURFACE ELEVATION:	16.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							No soil samples taken, refer to boring log 310B			
							For description			
28										

TYPE OF DRILLING RIG:	CME			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID readings of 0.0 in BZ	BORING NO.:	SB-310S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-311B
PROJECT NO.:				START DATE:	01/20/99
LOGGED BY:	J. Trottier	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	01/26/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray			MON. WELL NO.:	MW-311B
GRD. SURFACE ELEVATION:	17.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							6" asphalt			
	15	5" / 24"	OU4-SO-311-0.52.5		Dense	Drk Gray	Well graded GRAVEL. Little to no fine. Rock @ tip of	GW		FID 0.0
2	10 / 20		0.5-2.5 1315				spoon.			
	37 / 18	20" / 24"	OU4-SO-311-2.54.5		V. Dense	Drk Gray to Lt. Brown	Well graded GRAVEL. Little to no fines.	GW		FID 0.0
4	40 / 42		2.5-4.5 1320							
	26 54 / 45	13" / 24"	OU4-SO-311-0406		V. Dense	Yellow Orange	Well graded SANDS, gravelly sands/ Little to no fines.	SW		FID 0.0
6	47 / 40		1353							
	32 / 60	17" / 24"	OU4-SO-311-0608		V. Dense	Yellow Orange	Well graded GRAVEL, med. To coarse sand.	GW		FID 0.0
8	55 / 46		1400							
	21 / 30	10" / 24"	OU4-SO-311-0810		V. Dense	Yellow Orange		GW		FID 0.0
10	25 / 49		1437							
	35 / 21	12" / 24"	OU4-SO-311-1012		V. Dense	Yellow Orange	Well graded SANDS, med. To coarse sand. Little gravel, Little to no fines.	SP		FID 0.0
12	31 / 46		1443							
	18 / 31	7" / 24"	OU4-SO-311-1214		V. Dense	Yellow Orange	Well graded SANDS, fine to coarse. Little gravel,little to No fines.	SW		FID 0.0
14	29 / 19		1503						Change @ 14' to fine sand	
	7 / 8	16" / 24"	OU4-SO-311-1416 1515		Med. Dense	Yellow Orange	Fine SAND, and SILT.	SM/ML		FID 0.0

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-311	PAGE: 1 OF 7

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-311B
PROJECT NO.:				START DATE:	01/20/99
LOGGED BY:	J. Trottier	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	01/26/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray			MON. WELL NO.:	MW-311B
GRD. SURFACE ELEVATION:	17.5’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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	13 16	16” 24”								
	15 21	17” 24”	OU4-SO-311-1618		Dense	Yellow Orange	Fine SAND. Little silt.	SP		FID 0.0
18	26 28		15:25							
	9 6	17” 24”	OU4-SO-311-1820		Med. Dense	Yellow Orange	SILT with trace fine sand.	ML		FID 0.0
20	6 7		15:35							
22										
24										
26	8 15	10” 24”	OU4-SO-311-2527		Med. Dense	Yellow Orange	SILT with trace of fine sand.	ML		FID 0.0
	13 13		15:55							
28										
30										

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-311	PAGE: 2 OF 7

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-311B
PROJECT NO.:				START DATE:	01/20/99
LOGGED BY:	J. Trottier	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	01/26/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray			MON. WELL NO.:	MW-311B
GRD. SURFACE ELEVATION:	17.5’	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
	6		OU4-SO-311-3032		Med.	Yellow	SILT, with trace fine sand.	ML		FID 0.0
	7	22” / 24”			Dense	Orange				
	10									
32	10		16:17							
34										
	8		OU4-SO-311-3537		Med.	Yellow	SILT, with trace fine sand.	ML		FID 0.0
36	8	19” / 24”			Dense	Orange				
	10									
	19		16:34							
38										
40										
	7		OU4-SO-311-4042		Med.	Yellow	SILT, with trace fine sand.	ML		FID 0.0
	10	19” / 24”			Dense	Orange				
	13									
42	17		16:50							
44										
	15	22” / 24”	OU4-SO-311-4547		Very	Lt.	SILT and CLAY w/ fine sand.	ML/CL		FID 0.0
46	12		0900 Oil		Stiff	Gray				

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-311	PAGE: 3 OF 7

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER			BORING NO.:	SB-311B
PROJECT NO.:				START DATE:	01/20/99
LOGGED BY:	J. Trottier	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	01/26/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray			MON. WELL NO.:	MW-311B
GRD. SURFACE ELEVATION:	17.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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	22"					See page 3			
	17	24"								
48										
50										
	12		OU4-SO-311-5052		Med.	Lt.	SILT, with trace fine sand.	ML		FID 0.0
	14	15"			Dense	Gray				
	15	24"								
52	17		10:00							
54										
	9		OU4-SO-311-5557		Dense	Yellow	Poorly graded SAND, fine to med. Sand, no fines. Little	SP		FID 0.0
56	14	8"				Orange	Gravel.			
	26	24"								
	25		10:45							
58										
60										
	13		OU4-SO-311-6062		Dense	Yellow	Poorly graded SAND, fine sand no fines, no gravel w/	SP		FID 0.0
	16	10"				Orange	streak of red oxidation.			
	17	24"								
62	18		12:40							

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-311	PAGE: 4 OF 7

BORING LOG FOR:	RAYMARK /OU2/GROUNDWATER	BORING NO.:	SB-311B
PROJECT NO.:		START DATE:	01/20/99
LOGGED BY:	J. Trottier	TRANSCRIBED BY: LAC	COMPLETION: DATE: 01/26/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray	MON. WELL NO.:	MW-311B
GRD. SURFACE ELEVATION:	17.5’	ELEVATION FROM: NGVD-1929	CHECKED BY:

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)]
64										
66	14 9	5” / 24”	OU4-SO-311-6567			Lt. Gray	Well graded GRAVEL w/ fine to coarse sand, some fines, sub-rounded gravel.	GM		
	6 5		13:10							
68										
				Top of Bedrock 68.2’		Pinstripe Green-White	Bedrock composed of biotite, muscovite, chlorite, quartz		68.2’ casing refusal.	
70							SCHIST. Low to high angle foliation. Quartz viens up to 1” wide.		Advanced roller bit to 70.35’.	
			C-1-70.35-80.35 PEN=10’ REC=118” RQD(IN)=90” RQD(%)=76%		12 MPF		High angle frac. @ 71 & 71.3’.		Advanced casing to 68.4’.	
72					7 MPF				No hammer breaks on Core taken from 70.35’ to 100.35’.	
					4 MPF		72.2’ horiz. frac. Soft rock. 72.5’ horiz.frac.			
74					3 MPF		73.0’ horiz. angle frac. 73.5’ high angle frac.			
					4 MPF		74.6’ horiz. Frac. 75.3’ horiz. frac.			
76					5 MPF		75.8’ horiz. frac.			
					5 MPF		76.7’ horiz. frac.			
78					2 MPF		77.55’ horiz. frac. 77.8’ horiz. frac.			

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-311	PAGE: 5 OF 7

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-311B
PROJECT NO.:				START DATE:	01/20/99
LOGGED BY:	T. Dorgan/J. Trottier	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	01/26/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray			MON. WELL NO.:	MW-311B
GRD. SURFACE ELEVATION:	17.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
					4 MPF		79.5' horiz. frac. SCHIST. Similar to above.			
80					3 MPF		80.1' horiz. frac.			
			C-2-80.35-90.35 PEN=10' REC-118" RQD=(in)=59" RQD(%)=50%		5 MPF		80.35' 80.85' horiz. frac.			
82					3 MPF		81.6' 45° frac,			
					4 MPF		82.9' horiz. frac.		Minor crinkle folds noted beginning @ 83' bgs.	
84					4 MPF		83.9' 45° frac.			
					3 MPF		84.4' 30° frac. open/porous 84.8' horiz. frac. open/porous			
86					4 MPF		85.35' 30° frac. 85.9' 30° frac.			
					6 MPF		85.0'-90' Rock very porous		Vuggy, poss. washed out calcite veins. Rock is soft & Degraded.	
88					3 MPF		Broke easily			
					4 MPF		89.7'--89.9'			
90			C-3=90.35-100.35 PEN=10' REC=120" RQD(in)=67" RQD(%)=56%		5 MPF		High angle frac.		90.35' to 92.35 Loss ≈ 10 gal H_2O	
					5 MPF		90.35' horiz. frac. 90.70 high angle frac.			
92					5 MPF		91.25 high angle fracture 91.7 horiz. frac. (odd break piece Missing?)			
					5 MPF		92.7' High angle frac.			
94					3 MPF		93.7' horiz. frac.			

TYPE OF DRILLING RIG:	Mobile Crill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-311	PAGE: 6 OF 7

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-311B
PROJECT NO.:				START DATE:	01/20/99
LOGGED BY:	T. Dorgan/J. Trottier	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	01/26/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray			MON. WELL NO.:	MW-311B
GRD. SURFACE ELEVATION:	17.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
					6 MPF		94.85 30° frac. SCHIST composed of both muscouite & biotite quartz, chlorite with minor		Loss ≈ 10 gal. H_2O 92.35' to 95.35'.	
96					5 MPF		95.35' 30° frac. garnet, calcite veins & pyrite. High angle foliation. Grades in/out of			
					5 MPF		96.3' 30° frac. PARA-GNEISS 96.9' 30° frac.			
98					4 MPF		97.65'--98.0' high angel frac. wedge.			
					5 MPF		98.5'—98.7' high angle frac. soft rock. 99.1', 99.5', & 99.9' high angle frac.			
100					5 MPF					
102										

TYPE OF DRILLING RIG:	Mobile Crill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-311	PAGE: 7 OF 7

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNGWATER			BORING NO.:	SB-311D
PROJECT NO.:				START DATE:	01/28/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/29/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./K. KUTARINA			MON. WELL NO.:	MW-311D
GRD. SURFACE ELEVATION:	17.8'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken, refer to boring log 311B			
10							For description			
20										
30										
									FID = 0.0 on soil cuttings while washing out at 40' bgs	
40										
50										
60										
65										

TYPE OF DRILLING RIG:	CME			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID = 0.0 ppm in BZ	BORING NO.:	SB-311D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB-311S
PROJECT NO.:				START DATE:	01/28/99
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/28/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING INC./K. KUTARINA			MON. WELL NO.:	MW-311S
GRD. SURFACE ELEVATION:	17.7'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken refer to boring log 311B			
10							For details			
20										
24										

TYPE OF DRILLING RIG:	Moblie Drill – B59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID = 0.3 ppm on the soil cuttings from washing out, FID = 0.1 ppm in BZ	BORING NO.:	SB-311S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							Soil Surface			
							No samples 0-2'			
2										
	10	0.5	OU2-SO-312-0204			Orange	S-1A = 0.3' fine-medium poorly graded SAND	SP	Saturated	FID = 84 (methane?)
	5					Brown		SM/ML		PID = 0.0
	3	2.0				Dark	S-1B = 0.2' fine SAND & SILT abundant root fibers			
4	7		1100 S-1			Brown				
	5	0.2	OU3-SO-312-0406		Soft	Dark brown	SILT – trace-few clay abundant roots and organic debris, not quite peat	OL / PT	Poor recovery	FID = 68 PID = 0.0
	3									
	7	2.0								
6	2		1115 S-2							
	1	0.0	1.2/2.0 OU3-SO-		Very Soft		Clayey, SILT, abundant roots and plant fiber. Trace fine Sand, borderline peat.		No recovery w/2 in. Re-sample w/3" spoon w/baggy in nose, = 1.2' recovery	FID = 111.6 PID = 13.1
	WOH		3" spoon 312-0608							
	1	2.0	S-3							
8	1		1135 S-4							
	1	1.2	OU3-SO-312-0810				S-5A = 1.0' similar to above		PEAT=	FID-2092 PID-35.4
	1		-1302 + S-5B 0910'							
	2	2.0	-1300 = S-5A 0809'			Lt. gray	S-5B = 0.2' – SAND, mostly poorly graded Med. sand	SP	Saturated SAND=	FID = 1050 PID = 26.1
10	3		0910 S-5							
	7	0.0	OU3-SO-312-1012		No recovery	No Recovery	No Recovery	No Recov.	No recovery	
	2									
	4	2.0								
12	5		1320 S-6							
	15	0.8	OU3-SO-312-1214			Light Gray	SAND, mostly fine-coarse well graded sand. Trace silt, trace fine-coarse subrounded gravel.	SW	Saturated	FID = 80 PID = 0.0
	10									
	11	2.0								
14	6		1345 S-7							
	5	1.3	OU3-SO-312-1416			Olive-	Mostly fine-med. Poorly graded SAND	SP	No structure noted.	FID = 20.7 PID = 0.0
	9		1410=DUP-01			Gray				
	11	2.0					Trace silt, trace subangular, fine gravel			
16	13		1400 S-8							

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in.ID D&W casing to 14ft.bgs. Wash out & change water,telescope to 4 in.ID drive & wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven w/a 140lb.hammer w/a 30in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-312B	PAGE: 1 OF 8

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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										
18										
20	22 28	1.0	OU2-SO-312-1921			yellow-orange, red orange in bottom 4"	Gravely, fine-coarse SAND, well graded	SW	Heavy oxidation in Bottom 4 in.	FID = 0.0 PID = 0.0
	19 30	2.0	1505 S-9							
22										
24										
	15 12	0.5	OU2-S0-312-2426			Yellow - orange	Similar to S-9 above	SW	Oxidation staining throughout	FID = 0.0 PID = 0.0
26	18 22	2.0	1525 S-10							
28										
30	8 7	1.0	OU2-S0-312-2931			Tan-Light	SAND, mostly fine poorly graded sand, trace-few silt	SP	minor oxidation & bedding noted	FID = 0.0 PID = 0.0
	15 18	2.0	1545 S-11			brown				
32										

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. ID D&W casing to 14 ft. bgs. Wash out & change water, telescope to 4 in. ID drive & wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140lb hammer with a 30 in drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-312B	PAGE: 2 OF 8

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
32										
34										
	11	1.2	OU2-SO-312-3436			Tan	SAND fine – med. Poorly graded sand, trace few silt	SP	Minor bedding	FID = 0.0
	19		Raining			Light				PID = 0.0
	21	2.0				Brown				
36	22		1610 S-12			orange				
38										
40	18	1.3	OU2-SO-312-3941				Silty, fine poorly graded SAND	SM		FID = 0.0
	26									PID = 0.0
	33	2.0	1625 S-13							
	31									
42										
44										
	5	1.5	OU2-SO-312-4446				f-c well graded SAND, trace silt	SW		FID = 0.0
	8									PID = 0.0
	11	2.0								
46	13		1635 S-14							
48										

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in ID D&W casing to 14 ft. bgs. Wash out & change water, telescope to 4 in. ID drive & wash casing.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in drop		
METHOD OF ROCK CORING:	No wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	1-2' 99 d&w to 44', sample 44-46', secure borehole.	BORING NO.: SB-312B	PAGE: 3 OF 8

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 48	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)]
50	4 8	1.5	OU2-SO-312-4951			light brown with orange streaks	Fine – med. Poorly graded SAND, trace silt	SP	Minor bedding	FID = 0.0 PID = 0.0
	15 12	2.0	0845 S-15							
52										
54										
	6 5	1.8	-5456			Light brown	FGR SAND, poorly graded	SP		FID = 0.0 PID = 0.0
56	7 8	2.0	1140 S-16							
58										
60	4 8	1.8	-5961			Light brown	FGR SAND, poorly graded	SP	Minor bedding	FID = 0.0 PID = 0.0
	11 13	2.0	1202 S-17							
62										
64										

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in. ID D&W casing to 14 ft. bgs. Wash out & change water, telescope to 4 in ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split barrel sampler driven with a 140lb hammer with a 30 in drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	D. Waylon logged S-16 through S-21	BORING NO.: SB-312B	PAGE: 4 OF 8

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 64	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)]
	7	2.0	OU2-SO-312-6466			Light Brown	FGR SAND, poorly graded	SP		FID = 0.0 PID = 0.0
	6									
	11	2.0								
66	10		1234 S-18							
68										
	7	1.2	-6971			Light brown	FGR SAND and silty, FGR sand at bottom	SP	Minor Bedding	FID = 0.0 PID = 0.0
70	19									
	31	2.0	1305 S-19							
	47									
72										
74										
	4	2.0	-7476			Light brown	FGR SAND, poorly graded	SP	Minor bedding	FID = 0.0 PID = 0.0
	12		S-20:74'-76'							
	14	2.0								
76	29		1333 S-20							
78										
	7	1.8	OU2-SO-312-7981			Light brown	FGR sand, poorly graded	SP		FID = 0.0 PID = 0.0
80	19	2.0	1425 S-21							

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in ID D&W casing to 14 ft. bgs. Wash out & change water, telescope to 4 in ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split barrel sampler driven with a 140 lb. Hammer with a 30 lb drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	D. Waylon logged S-16 through S-21.	BORING NO.: SB-312B	PAGE: 5 OF 8

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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)]
80										
	61	1.8	OU2-SO-312-7981			Light brown	Fine, poorly graded SAND	SP		FID&PID =0.0
	80	2.0								
82										
84										
	6	2.0	OU2-SO-312-8486			Light red brown	Fine – med. Poorly graded SAND	SP	No structure noted	FID = 0.0
	8									
	13	2.0								
86	34		1020 S-22							
88										
90	8	1.5	OU2-SO-312-8991			Red-brn Olive – brn gray	Similar to S-22 above for ~6" grades into a silty, fine Poorly graded SAND approximately 1 ft. sharp contact with Saprolitic schist in bottom 4 in.	SP SM Bedrock	Fine bedding noted above rock contact. Roller bit (4 in) to 93', change water and clean out tub.	FID = 0.0
	13									
	41	1.7	1130 S-23	Top of Bedrock 90.5'						
	50/2									
92										
							GNEISS. Biotite, muscoite, quartz mafic gneiss with Near vertical foliation. Numerous horiz. To high			
94		~2:00	C-1 = 93-99			dark gray w/	angle fractures from 93-96.5'. Heavy oxidation staining and halo's, trace gouge.		Many fractures 45 & 90°	
		2:15	PEN = 6.0 REC = 5.8			light gray			to foliation plane in axis.	
96		2:10	RQD length = 28 in RQD 39%			white bands			~10 gal. lost	

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5 in ID D&W casing to 14 ft bgs. Wash out & change water, telescope to 4 in ID drive & wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID-B.	BORING NO.: SB-312B	PAGE: 6 OF 8

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 96	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)]
		2:30				Similar to above	Rock-type similar to above, GNEISS-PARAGNEISS? 45° angle fractures noted @ 98.25, 98.8 & 99.25 w/ white			
98		2:00					calcite x-tals & light green calcite deposition. Two horiz. Frac. W/oxidation stains at 100'			
		2:30								
100			C-2 = 99'-106.2' Pen = 7.2' REC = 7.3' (picked up C-1 remnant) RQD length= 69.25" RQD = 65%							
		2:20								
102		2:00					Bedrock grading into a mica (biotite & muscovite) rich SCHIST from gneiss. High angle fractures parallel to		Jagged Fracture along Crinkle folds, 100gallons	
		2:00					Foliation w/oxidation & gouge @ 101-101.5. Connected To horiz. Fracture. Also hgh angle fracture w/mica			
104		2:15					Gouge @ 102.5 rock is soft, numerous jagged Oxidized fracture @ 103& 104.			
		2:15							Approx. 100 gall. lost in C-2. Lost H_2O return.	
106		2:30					Degraded and saphrolitic with multi. Fracture 105-106.5		Core/rock jammed ~106	
		2:45	C3 = 106.2' – 109' Pen = 2.8' Rec = 2.45' RQD length = 21" RQD = 62%							
108		3:30								
		3:15					Jagged, oxidized fracture @ 108 & 108.8 - inc. chlorite and trace garnet noted with depth		Crinkle folding noted	
110		3:00	C-4 = 109'-118.7' Pen = 9.7' Rec = 10.3' RQD length = 103"				Quartz vein (vuggy) with chlorite, pyrite noted ~0.5' wide @ 110.			
		3:00								
112		3:15					Low angle fracture w/oxidation @ 111.5'			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-312B	PAGE: 7 OF 8

BORING LOG FOR:	RAYMARK OU2			BORING NO.:	SB-312B
PROJECT NO.:				START DATE:	01/21/99
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	MES	COMPLETION: DATE:	01/27/99
DRILLED BY (Company/Driller):	Aquifier Drilling & Testing Inc./M. Harrington			MON. WELL NO.:	MW-312B
GRD. SURFACE ELEVATION:	7.3'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 112	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)]
		3:30	RQD by Pen length = 88% RQD by Rez. Length == 83%			Similar To above	High angle fracture along foliation w/calcite deposition @ 112'-113'. Numerous oxidized high angle fractures to 113.5'			
114		3:15								
		3:45				dark gray green w/ white bands	Horiz. Fracture @ 115.5. High angle and 45° fracture @ 116'			
116		3:20								
		3:15								
118		3:25					High angle wavy fracture @ 118'.			
		3:50	C-5 = 118.7' – 122' Pen = 3.3' Rec = 3.3' RQD length = 33" RQD = 83%				High angle jagged fracture @ 119' and clean fracture @ 119.5			
120		3:00					High angle fracture with trace calcite deposit ~ 121-122'			
		3:25								
122		2:50								
		2:10	C-6 = 122'-124' Pen = 2' Rec = 1.4' RQD leng. 16.8" RQD by pen = 70% RQD by Recov.=100%				C-6 = solid core, similar rock type to above			
124		2:30					Left 0.6' stub @ EOB			
							EOB = cored to 124' open to 123.4'			

TYPE OF DRILLING RIG:	Mobile Drill – B59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID drive and wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-312B	PAGE: 8 OF 8

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	MW-312D
PROJECT NO.:				START DATE:	2/1/99
LOGGED BY:	D. MacDougall/W. Irwin/A. Putnam	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	2/2/99
DRILLED BY (Company/Driller):	Aquifer Drillng & Testing Inc./K. Kutarnia			MON. WELL NO.:	MW-312D
GRD. SURFACE ELEVATION:	7.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

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							No soil samples collected, refer to boring log for MW-312B for description of soil.		5 in. casing driven to 14 ft. 4 in. casing used for remainder of boring	
10										
20										
30										
40										
50										
60										
70										
80										
90									90.5' top of rock?	

TYPE OF DRILLING RIG:	CME			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in, ID Drive & Wash Casing & 5 in. ID Drive & Wash Casing.			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	Wash water was very green while washing out at 85' bgs.	BORING NO.:	MW-312D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1GROUNDWATER			BORING NO.:	SB-312S
PROJECT NO.:				START DATE:	2/3/99
LOGGED BY:	A. Putnam	TRANSCRIBED BY:	MES	COMPLETION: DATE:	2/3/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./K. Kutarnia			MON. WELL NO.:	MW-312S
GRD. SURFACE ELEVATION:	7.5'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken, refer to boring log 312B for description.			
4									5" casing to 8.5' to get a good sand (filter) pack around the screen.	FID=2.6 to 15.1 PPM while washing out to 9' bgs.
8										
8.8										

TYPE OF DRILLING RIG:	CME
METHOD OF ADVANCING BORING:	5" ID Drive & Wash Casing
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	N/A
OTHER OBSERVATIONS	Strong odor while washing out @ 8' bgs—the FID reading ranged from 2.6 to 15.1 PPM. Odor cleared after it was washed out

BORING NO.: SB-312S

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB – 313B
PROJECT NO.:				START DATE:	2-16-99
LOGGED BY:	D. WHALEN	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-17-99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc. / S. Bray			MON. WELL NO.:	MW-313B
GRD. SURFACE ELEVATION:	9.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (CORE TIME)	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										
	10	12/24				Dark Brown	Sandy SILT topsoil, some plant roots	ML	DAMP	FID = 0 ppm
	10									PID = 0
2	7		1033 S-1			Light brown	Well graded SAND, tr. Silt, tr. Pebbles	SW		FID = 0
	8									PID = 0
	4	15/24					FGR to MGR			
	5									
4	4		1034 S-2		loose					FID= 0
	6									PID = 0
	4	6/24								
	2									
6	6		1131 S-3							FID = 0
	3									PID = 0
	4	14/24			Medium dense					
	4									
8	7		1137 S-4			Dark brown	Organic micaceous clayey silt, w/decaying plant matter	OL		FID = 4045
	9									PID = 0
	17	0/24					(?)			
	7									
10	7		1152 S-5				(?)			
	10									
	4	8/24						OL	DAMP	
	4									
12	7		1200 S-6				Silty SAND, well graded sand w/organic silt	SM	WET	FID = 651
	10									PID = 0
	1	19/24				Dak. Brn Gray	Organic rich clayey, micaceous SILT, some plant matter	OL/MC	DAMP	FID = 0
	2									PID = 0
14	5		1212 S-7			Rust-Brown	Well graded SAND, f-tr. silt	SW	WET	
	12									
	13	2/24							WET	
	20									
16	13		1219 S-8			Dark brown	Silt, sand, GRAVEL, mix	GM		FID = 0
	14									PID = 0

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-313B	PAGE: 1 OF 4

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB – 313B
PROJECT NO.:				START DATE:	2-16-99
LOGGED BY:	D. WHALEN	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-17-99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc. / S. Bray			MON. WELL NO.:	MW-313B
GRD. SURFACE ELEVATION:	9.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (CORE TIME)	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)]
	6	15/24				DK. BRN GRAY	FGR SAND, tr. silt	SP		
	15									
	18					↓	Well graded GRAVEL / FGR sand	GW	WET	FID = 0
18	19		1308 S-9							PID = 0
	7	0/24					(?)			
	8									
	9						(?)			
20	11		1325 S-10							
							(.)			
22										
24										
26	10	2/24								
	6									
	6		1443 S-11			Dark brown	GRAVEL, sand, silt mix	GM	WET	FID = 0
	5									PID = 0
28										
30										
	50	4/4					Coarse sand to fine gravel – quartz and schist; weathered		REFUSAL AT 30'4"	FID = 0
				~30' 4"						PID = 0
				Top of						
32			1505 S-12	bedrock						

TYPE OF DRILLING RIG:	Mobile Drill B-59			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing			
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop			
METHOD OF ROCK CORING:	NQ wireline			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	Spoon refusal at 30'4"; 4" rollerbit to 32'; core 32 to 62.8'	BORING NO.:	SB-313B	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB – 313B
PROJECT NO.:				START DATE:	2-16-99
LOGGED BY:	D. WHALEN	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-17-99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc. / S. Bray			MON. WELL NO.:	MW-313B
GRD. SURFACE ELEVATION:	9.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" RQD	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (CORE TIME)	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)]
			5:40			Lt. greenish gray	Medium to coarse grained crystalline & rock Consisting predominantly of quartz, with mica And chlorite feldspar no foliation	BR	ALTERATION AT 32.3' SOFT	
34			5:00						33.4' ALTERATION, SOFT ROCK	
			5:40					VBR BR	34.2 ALTERATION	
36			7:01					VBR BR	35' ALTERATION	
	48%	96" / 96"	C-1 32'-40.0' 6:29						36.3 ALTERATION 36.8 ALTERATION 37.5 ALTERATION	
38			6:34							
			6:59						38.9 ALTERATION	
40			9:10					VBR	40' ALTERATION	
			5:20					BR		
42			7:40					BL		
		110" / 116"	C-2 40'-49.75' 10:40							
44	92%		13:53					BR		
			12:00					M	THIN CALCITE VEIN AT 44.7'	
46			12:10							
			14:17							
48			18:57							

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-313B	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK/OU2/OU4/PHASE 1 GROUNDWATER			BORING NO.:	SB – 313B
PROJECT NO.:				START DATE:	2-16-99
LOGGED BY:	D. WHALEN	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-17-99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc. / S. Bray			MON. WELL NO.:	MW-313B
GRD. SURFACE ELEVATION:	9.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (CORE TIME)	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)]
			21:31			LIGHT GRAY	MEDIUM TO COARSE GRAINED CRYSTALLINE ROCK; MOSTLY QUARTZ, WITH MICA AND FELDSPAR	M + BR		
50			26:40							
			19:38						Alteration at 50.3	
52			6:10					M	50.9' alteration	
	90%	60/64	C-3 49.75'-55.0' 6:46							
54			8:20							
			10:24					BR		
56			10:41					M		
			9:15							
58			13:05							
			C-4 55.0'-62.8' 12:48							
60	96%		17:20							
			19:10					BR	60' alteration 60.5' alteration. Calcium deposits	
62			22:08							
62.8			44:27						61.5' alteration	
64										

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	CHANGE DRILL BIT AT 50.5'	BORING NO.: SB-313B	PAGE: 4 OF 4

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-313D
PROJECT NO.:	N0003			START DATE:	2-18-99
LOGGED BY:	D. Whalen	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-19-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S. BRAY			MON. WELL NO.:	MW-313D
GRD. SURFACE ELEVATION:	9.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No samples taken Refer to Boring Log SB-313B For Description.			
29.5'										

TYPE OF DRILLING RIG:	Mobile Drill-B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-313S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK/OU2/GROUNDWATER			BORING NO.:	SB-313S
PROJECT NO.:	N0003			START DATE:	2-19-99
LOGGED BY:	D. Whalen	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	2-19-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S. BRAY			MON. WELL NO.:	MW-313S
GRD. SURFACE ELEVATION:	9.9'	ELEVATION FROM:	NGVD-1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No samples taken Refer to Boring Log SB-313B For Description.			
13'										

TYPE OF DRILLING RIG:	Mobile Drill-B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-313S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-401B
PROJECT NO.:				START DATE:	12-18-98
LOGGED BY:	Tracy Dorgan / Amy Putnam	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	12-19-98
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing			MON. WELL NO.:	MW-401B
GRD. SURFACE ELEVATION:	23.4 FT.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass Surface			
	3 / 8	1.6 / 2.0	OU4-S0-401-0002		Med. Dense	Red Brown / Light Brown	S-1A =0.5' – silty, F-Med. Poorly graded SAND. Abundant roots	SM	S-1A = Damp, Compact S-1B = Damp, Loose	FID = 0.2
2	9 / 9		0820 S-1			Brown	S-1b = 1.1' – SAND. Mostly F-C well graded sand. Trace fine gravel	SW		PID = 0.0
	4 / 6	.8 / 2.0	OU4-S0-401-0204			Brown	S-2A = 0.5' SAND, fine gravel, trace silt, well graded	SW	½" Root in nose of spoon S-2A = Saturated dry, possible old ground surface	0.0 IN BZ
4	7 / 8		0845 S-2			Dark Brown	S-2B = 0.3' Pieces of plastic, organic, peat(?) , leaves and root layer. Silty, F.-MED SAND.	PT? / SM		FID = 0.0 PID = 0.0
	3 / 5	1.0 / 2.0	OU4-S0-401-0406			Brown	Poorly graded. Med-coarse SAND, trace root fibers	SP	Loose	0.0 IN BZ FID = 0.0
6	7 / 9		0900 S-3							PID = 7.2 (H_2O vapor?)
	7 / 11	.9 / 2.0	OU4-S0-401-0608			Light Brown	Well-graded fine to coarse SAND trace fine gravel	SW	5" Casing to 9' Telescope w/4" Casing	FID = 0.0
8	13 / 14		0915 S-4							PID = 7.1 (H_2O vapor?)
	6 / 8	.75 / 2.0	OU4-S0-401-0810			Brown	Silty Fine-Medium SAND, trace root fibers	SM	Gravel slough,moist/damp	FID = 0.0
10	11 / 11		0933 S-5							PID = 22.0 (H_2O vapor?)
	9 / 14	1.1 / 2.0	OU4-S0-401-1012		Med. Dense	Brown Brown	S-6A=.4' fine medium SAND-similar to above. S-6B=0.25'root fibers, silt, fine SAND, org. debris	SM SM	Sharp contact between S-6A & S-6B @ 30° angle, compact, sharp contact betw. S-6B & S-6C @ 30° angle S-6C is bone dry	FID = 0.0
12	16 / 16		0950 S-6		loose	White	S-6C=.6' Poorly graded fine SAND, trace organic debris	SP		Pid = 7.6 (H_2O vapor?)
	5 / 11	.8 / 2.0	OU4-S0-401-1214			Light Brown	Fine-Medium SAND, trace silt, horizontal bedding evidence	SP	Damp, Loose	FID = 0.0
14	12 / 15		1014 S-7							PID = 0.0
	9 / 11	.55 / 2.0	OU4-S0-401-1416			Brown	Coarse SAND & poorly graded fine-med. angular GRAVEL	SP/G	Loose, Moist	FID = (Not Meas.)
16	14 / 8		1026 S-8							PID = ↓

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" inside diameter Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	S1-S9 3" split-barrel sampler drive w/300 lb hammer w/18" drop.. S-10 – S-12 2" split barrel sampler w/140 lb. Hammer, 30" drop		
METHOD OF ROCK CORING:	NQ-WIRELINE		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Drove 5" Casing down to 9.5'. FID-B, PID-D	BORING NO.: SB-401B	PAGE 1 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-401B
PROJECT NO.:				START DATE:	12-18-98
LOGGED BY:	Tracy Dorgan / Amy Putnam	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	12-19-98
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing			MON. WELL NO.:	MW-401B
GRD. SURFACE ELEVATION:	23.4 FT.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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										
	14 / 14	0.0 / 2.0	NO RECOVERY				Poss. Pushing cobble, no recovery		Gravel slough, possibly pushing a cobble	
18	14 / 17									
	6 / 8	.75 / 2.0	OU4-S0-401-1820			Brown	Med-Coarse SAND, w/trace fine gravel 1" band of fine-medium sand.	SW	Moist	FID = 0.0
20	10 / 10		1107 S-9							PID = 0.0
							No sampler from 20 to 24'		D+ W to 24' begin standard int. samp.	
22										
24										
	4 / 10	1.1 / 2.0	OU4-S0-401-2426			Light Brown	Fine, medium poorly graded SAND w/ silt	SM	Damp.	FID = 0.0
26	15 / 18		1140 S-10						D & W to 29'.	PID = 0.0
28										
30	7 / 15	1.0 / 2.0	OU4-SO-401-2931			Light Brown	S-11A = .4' fine, poorly graded SAND w/silt, similar to above	SM	Saturated Casing harder to drive @ 30'	FID = 0.4
	31 / 38		1149 S-11			Orange Brown	S-11B = 0.6' fine to coarse well graded SAND w/ trace fine gravel	SW		PID = 0.0
32									Harder driving @ 32'	

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" inside diameter Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	S1-S9 3" split-barrel sampler drive w/300 lb hammer w/18" drop.. S-10 – S-12 2" split barrel sampler w/140 lb. Hammer, 30" drop		
METHOD OF ROCK CORING:	NQ-WIRELINE		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Drove 5" Casing down to 9.5'. FID-B, PID-D	BORING NO.: SB-401B	PAGE 2 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-401B
PROJECT NO.:				START DATE:	12-18-98
LOGGED BY:	Tracy Dorgan / Amy Putnam	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	12-19-98
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing			MON. WELL NO.:	MW-401B
GRD. SURFACE ELEVATION:	23.4 FT.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET)	BLOWS PER 6" Core Run Times	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)]
32									Casing refusal @ 33.7 roller bit to 35'. Poss. cobbles or boulder to 34.5'. Wash ind. Gravel.	
34										
		0.3 / 0.6	OU4-SO-401-3536						Pop-out @ 34.5'/ wash ind. gravel Lost 50 gal. Water @ 33.5 – 34.5.	
36	30 / 50/1"		1354 S-12			Brown Dk. gray	Gravelly, SAND (sand is med – coarse) weathered STET in bottom 0.1'			PID = 0.0 FID = 0.1
				Top of Bedrock					Seat casing @ 37'	
38	6:23		C – 1 = 37.0-41.5 Pen = 4.5' Rec = 4.2' total # in > 4"=40" RQD = 74%				C-1 = SEMI-SCHIST?/ GNEISS. Mafic, with calcite veins & pea size garnet crystals.		Little – no water loss in C – 1 or C – 2 until 47'	
	4:32									
40	4:40									
	5:02									
42	2:41 / 5:25		C – 2 = 41.5 – 47' Pen = 5.5 ft. Rec = 5.8 ft. (picked up C-1 remnant) Total # in > 4in. =64.5 RQD= 97% inc. pen = 92.5% inc rec				C – 2 = Calcite, chlorite, garnet, quartz, mica, SCHIST			
	4:50						High Angle foliation. Quartz & Calcite veins throughout. Crinkle folding in small zones.			
44	6:20						4" milky quartz vein @ 44'.			
	6:04									
46	6:05									
	3:38		C–3 = 47.0 – 50.5 Pen=3.5', Rec=3.4' RQD length = 37" RQD=88%						Lost all water in casing @ 47' (200 gal?) inc tank. Driller noted drop in casing @ same time ~0.1'	
48	2:40 / 3:10						Poss. Void or large open fracture @ 47'. Oxidation halo & rounded edges.			

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" inside DIA Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	S-10 – S-12, 2"split barrel sampler w/140 lb. hammer, 30" drop		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-401B	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-401B
PROJECT NO.:				START DATE:	12-18-98
LOGGED BY:	Tracy Dorgan / Amy Putnam	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	12-19-98
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing			MON. WELL NO.:	MW-401B
GRD. SURFACE ELEVATION:	23.4 FT.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
48										
	2:50		Stop and lift to check water @ 48.5'				Horiz. Frac. W/oxidation, rounded edges & soft rock @ 48.25' C-3 similar to C-2 rock, foliation is high angle to vertical 2 high angle fractures with abundant oxidation stains and calcite @ 50 & 50.5'.		Note a sheen on wash-tub, But we are drilling w/out wash return. Find leak in gear-box. No use of wash-tub, direct feed H_2O from rig-tank & support truck. Stop C-3 @ 50; out of water. Used ~500 gal. For 3' pen. w/no return up casing.	
50	3:00									
	5:10		C – 4 = 50.5-51.5 Pen=1.0 Rec.=.8 RQD = 100%				C – 4 similar to C – 3			
52	4:50		C–5=51.5-57.5' Pen =6.0 Rec. = 5.9' Total RQD in = 64" RQD = 88%						C–4 used ~250 gal. w/out return. core blocked, 1' run.	
	4:10						Highly weathered – unsound core @ 52.5 – 53.5'.			
54	4:30									
	4:25						Mult. Horiz. Frac. w/ heavy oxidation & rounded edges @ 55.8 – 55.9'			
56	4:20									
	4:00						Open fracture @ 56.7 VUG's in calcite vein connected to frac. running nearly vertical.		Total water loss from 46.5' – EOB = approx. 1,600 gal with no return up casing	
58	2:05						EOB @ 57.4' bgs Cored 20.5' NQ wireline core. Top of bedrock @~ 36'.			

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" inside DIA Drive & Wash Casing		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-401B	PAGE: 4 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-401S
PROJECT NO.:				START DATE:	1/27/99
LOGGED BY:	A. Putnam	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	1/27/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./K. Kutarnia			MON. WELL NO.:	MW-401S
GRD. SURFACE ELEVATION:	23.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken, refer to boring log 401B for description.			
10										
									FID=0.0 in B.Z.	
20										
25										

TYPE OF DRILLING RIG:	CME			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.			
METHOD OF SOIL SAMPLING:				
METHOD OF ROCK CORING:				
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID=0.0 PPM in B.Z.	BORING NO.:	SB-401S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK			BORING NO.:	SB – 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0’	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Asphalt surface			
	42		OU4-SO-402-0002	Fill			SILT and GRAVEL, 3” diameter, angluar GRAVEL.		Dry	FID = 0.0
	57	17” / 24”		natural						
	19						SILT	ML	Dry	PID = 0.0
2	7		0935			Brown				
	5		OU4-SO-402-0204				SILT, some clay, organic or asbestos fibers		Fibers look like hairs	FID = 0.0
	6	24” / 24”								
	8					yellowish	(M) to (F) SAND, trace silt	SP	Fining downwards bedding visible	PID = 0.0
4	10		1000			orange				
	8		OU4-SO-402-0406				(F) SAND, trace (M) sand, trace silt	SP	Bedding 3” thick	FID = 0.0
	10	15” / 24”								
	10		DUP				SILT, trace clay	ML		PID = 0.0
6	11		1100				(M) SAND, trace (F) sand, trace silt	SP		
	8		OU4-SO-402-0608				(F) SAND, some (M) sand	SP	10 mm brown beds every 1”	
	10	12” / 24”								
	11									
8	13		1110							
	6		OU4-SO-402-0810							
	9	15” / 24”								
	9						Trace silt 1” layer		Bottom 10 mm staining	
10	13		1130							
	7		OU4-SO-402-1012				(F) SAND		1” red staining	
	9	12” / 24”								
	11						(M) SAND on bottom			
12	12		1135							
	6		OU4-SO-402-1214			Greenish	(F) SAND, trace silt	SP	10 mm black bedding 3”	
	7	13” / 24”				Gray				
	7									
14	8		1150							
	5		OU4-SO-402-1416						2 – 10mm beds w/60% mica grains	
	6	15” / 24”								
	7					Yellowish				
16	8		1200			orange				

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	3 in. split-barrel sampler driven with a 300 lb. Hammer with a 18 in. drop to 16 fbgs; switch to 5’ int. w/2”/140lb. & 30 in drop		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402B	PAGE: 1 OF 8

BORING LOG FOR:	RAYMARK			BORING NO.:	SB – 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0’	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 16	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)]
18										
20										
	10	22” / 24	OU4-SO-402-2022			Yellow/ Orange	Med. Dense fine SAND, trace silt	SP	wet	
22	12 / 14		1130							PID = 0.0
24										
26	11 / 9	20” / 24”	OU4-SO-402-2527			Yellow/ Orange	Med. Dense fine SAND, trace silt	SP	wet	PID = 1.7
	11 / 10		1245							
28										
30										
	11 / 14	13” / 24”	OU4-SO-402-3032							
32	17 / 17		1330			Yellow/ orange	Dense fine SAND, trace silt	SP	wet	FID = 0.0

TYPE OF DRILLING RIG:	Mobile Drill B-59
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing
METHOD OF SOIL SAMPLING:	3 in. split-barrel sampler driven with a 300 lb. Hammer with a 18 in. drop to 16 fbgs; switch to 5’ intervals w/2”/140lb. & 30 in. drop.
METHOD OF ROCK CORING:	NQ Wireline
GROUNDWATER LEVELS:	H2O LEVEL @ 10.4 FT. INSIDE CASING FOLLOWING SITTING OVER WK. END
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB – 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0’	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
32										
34										
36	20 40	16”	OU4-SO-402-3537		v.dense	Yellow orange	Fine SAND, trace silt Trace fine to coarse sand	SM/ SP	Wet	FID = 18.3
	35 35	24”	1400							
38										
40										
	30 20	9”	OU4-SO-402-4042		dense	Yellow orange	Sandy, GRAVEL, trace silt ½ weathered rock in sample	GM	Wet	FID = 3.4
42	13 28	24”	1430							
44										
46	13 17	18”	OU4-SO-402-4547		dense	Yellow orange	Sandy GRAVEL, trace silt, some coarse sand & fine gravel Well rounded	GM	Wet	FID = 9.0
	15 13	24”	1505							
48										

0TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop .		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402B	PAGE: 3 OF 8

BORING LOG FOR:	RAYMARK			BORING NO.:	SB – 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 48	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)]
50										
	41	19" / 24"	OU4-SO-402-5052		Dense	Yellow/ orange	Well graded SANDS Little to no fine	SW		FID = 3.1
52	14 26		1540							
54										
56	20 20	9" / 24"	OU4-SO-402-5557		Dense	Light Brown	Med. SAND w/gravel, rounded gravel	SP		FID = 0.0
	16 12		0755							
58										
60									Casing to 60.5 FT.	
	100/2"	2" / 2"	OU4-SO-402-6062	Top Of Bedrock @ 60		Gray	weathered rock @ tip of spoon		Roller-bit to 61.2 FT. Top of Bedrock @ 60'.	FID = 0.0
62			0850		11 mpf	Dark green-Gray	chlorite, mica, SCHIST, no oxidation noted in fractures. W/some quartz veins, pea-sized garnets		62-62.5 high angle fracture	
					7 mpf		↓		63.6 horizontal fracture	
64					8 mpf					

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2" split-barrel sampler driven with a 140 lb. Hammer with a 30 in. drop .		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402B	PAGE: 4 OF 8

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 64	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)]
			C-1 61.2-71.2' Pen. = 120" Recovery = 120" RQD (in) 117" RQD (%) 97.5%		6 mpf	Dk. Gray& Dk. green	65.0 jagged frac? SCHIST, chlorite/biotite		High angle wavy schistocity	
66					5 mpf		65.7 horizontal frac w/pea-sized garnets 65.9 hammer break			
					6 mpf		66.8 jagged frac.			
68					7 mpf		68.0 30° frac.			
					7 mpf		68.6 30° frac.			
70					6 mpf		69.5 & 70.1 45° frac			
					6 mpf	Dk. Gray- Lt. gray	SCHIST inter layered w/quartz 70.6 30° frac. veins		More feldspar/quartz at 70'	
72			C-2 71.2-81.2 Pen 120" Recovery 120" RQD(in) 76" RQD(%) 71%		6 mpf		71.4 30° frac. 72.2 horizontal frac.			
					7 mpf		72.5 & 72.6 45° frac. GNESSIS/SCHIST,chlorite Biotite		Less foliation	
74					7 mpf		73.6 horizontal frac. trace quartz, calcite, garnets up to 1 cm.			
					5 mpf		74 & 74.4 45° frac. 74.9 jagged 45° frac.			
76					7 mpf		75.6 near vert. frac.			
					6 mpf					
78					6 mpf		77.1 30° frac			
					3 mpf	Dk. gray Dark grn.	78.2 – 78.9 core in layers/ broken. SCHIST-chlorite/biotite		More foliation, wavy	
80					5 mpf	To gray	79.5 30° frac.			

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402B	PAGE: 5 OF 8

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
80										
					4 mpf		81.2 jagged 30° break Chlorite/biotite, SCHIST, trace garnets			
82			C-3 81.2-91.2 Pen 120" Recovery 120" RQD (in)80" RQD(%) 67%		6 mpf		81.9 to 82.4 45° frac			
					7 mpf					
84					5 mpf					
					6 mpf		84.7 45° frac.			
86					6 mpf		86.1 hammer break		Near vertical foliation	
					5 mpf		86.75 & 87.4 jagged breaks			
88					6 mpf		88.3 horiz. frac			
					7 mpf		89 to 89.7 45° frac			
90			C-4 91.2 – 101.2 Pen. – 120" Recovery – 120" RQD (in) – 91" RQD % - 76"		5 mpf		90.7 to 91.2 core broke			
					8 mpf					
92					10 mpf		92.7 30° frac			
					12 mpf		93.2 30° frac			
94					5 mpf		93.5 30° frac			
					6 mpf		95.8 10° frac			
96					7 mpf		96.2 horiz. frac			

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402B	PAGE: 6 OF 8

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 96	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)]
					7 mpf		96.6 30° frac.			
98					10 mpf					
					11 mpf		99.6 high angle frac			
100					8 mpf		100.3 jagged frac. 30°			
			C-5 101.1 – 111.2		8 mpf		100.6 30° frac. Chlorite, mica, SCHIST, w/peasized And smaller garnets, some quartz veins.		Near verticle foliation	
102			Pen 120" Recovery 115" RQD(in) 101" RQD (%) 88%		12 mpf		100.75 & 101 45° Frac.			
					9 mpf		102.8 horiz. Frac.		Foliation not well defined	
104					11 mpf					
					8 mpf		105.45 hammer break			
106					8 mpf		106 10° frac			
					14 mpf		106.85 horiz. Break			
108					9 mpf					
					10 mpf		108.6 10° jagged frac			
110					7 mpf		110.2 30° frac		Near vertical foliation	
					8 mpf		110.8 30° frac 111.7 10° frac.			
112			C-6 111.2-121.2		11 mpf		112.5 high angle frac			

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402B	PAGE: 7 OF 8

BORING LOG FOR:	RAYMARK			BORING NO.:	SB 402B
PROJECT NO.:				START DATE:	1-8-99
LOGGED BY:	J. TROTTIER/ J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-14-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. Bray			MON. WELL NO.:	MW-402B
GRD. SURFACE ELEVATION:	13.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 112	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)]
			C-6 (cont.) Pen. 120" Rec. – 120" RQD (in) 80" RQD % - 67%		11 mpf		Chlorite, mica, SCHIST w/pea-sized and smaller garnets		High angle foliation	
114					12 mpf					
					11 mpf		115.1 10° frac.			
116					11 mpf		116.5 45° frac.			
					18 mpf		117.2 to 118.1 high angle frac.			
118					18 mpf					
					13 mpf		119.5 to 120 high angle frac.			
120					11 mpf					
					12 mpf					
122				EOB 121.95			End Of Boring @ 121.95' BGS			

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4in. ID Drive and Wash Casing		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402B	PAGE: 8 OF 8

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-402S
PROJECT NO.:				START DATE:	1/22/99
LOGGED BY:	A. Putnam	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	1/22/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./K. Kutarnia			MON. WELL NO.:	MW-402S
GRD. SURFACE ELEVATION:	13.0'	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0	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)]
							No soil samples taken refer to boring log 402B for description.			
21										

TYPE OF DRILLING RIG:	Mobile Drill – B 59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-402S	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-421
PROJECT NO.:				START DATE:	12/20/98
LOGGED BY:	Tracy Dorgan/A. Putnam	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/20/98
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing, Inc.			MON. WELL NO.:	None
GRD. SURFACE ELEVATION:	23.4 FT.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 0	BLOWS PER 6" & Core Times	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 Grass Surface	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	4 9	1.5 / 2.0	OU4-SO-421-0002			Brown-Dark Brown	S-1A=1.1'—Silty, f-c SAND. Trace f-c gravel. Abundant roots in top 8 in.	SM	S-1A=dense & compact, damp.	FID=0.0
2	12 12		1115 S-1			Light Brown	S-1B=SAND. Well graded f-c SAND. 1/8" oxidation layer @ contact of S-1A & B.	SW	S-1B=Dry & loose.	PID=0.5
	8 23	0.5 / 2.0	OU4-SO-421-0204	Waste/ Fill		Dark gray & yellow Red-orange	Sand & gravel with broken brade pad fragments & asbestos containing material.	Fill/ Waste	Waste fill.	FID=0.0
4	24 12		1130 S-2							PID=0.1
	9 9	.75 / 2.0	OU4-SO-421-0406 OU4-SO-DUP-04@			Dark green-	S-3A=0.25'. Similar to above.		Poss. sludge waste?	FID=0.0
6	6 5		1155 1145 S-3			gray & black	S-3B=0.5'—silt & f. SAND size material with gasket & asbestos material & brade pad frag.			PID=0.4
	6 5	0.0 / 2.0	OU4-SO-421-0608	No recovery			No recovery		No sample recovery	
8	18 20		1200 S-4						~7.8'-8.0'—driller drove casing through abstruction. Noted strong solvent odor Checked B.Z. w/FID=0.0 ~1 min. later. Abundant asbestos material.	
	30 20	0.2 / 2.0	OU4-SO-421-0810			Dark gray to black	1 lg. piece of steel in spoon. Brade pad, gasket material, felt-like material with silt			FID=0.0
10	16 10		1220 S-5				& fine SAND.			PID=0.8
	22 56	1.0 / 1.25	OU4-SO-421-1012	Poss. top of weathered bedrock			S-6A=0.1'—similar to above. S-6B=saprolitic SCHIST.			
12	50/3"		1245 S-6							
	4:03		C-1 12.0'-15.0' PEN=3'				SCHIST with vertical foliation highly weathered, fragments.			
14	3:19		REC=3' RQD=0%				High mica content. Highly fractured (high angle to horiz.)		RAPID water loss at 14' (~200 gallons)	
	3:03						SCHIST with near vertical foliation, iron oxides and weathering core is pitted & vuggy in places.			
16	1:46		C-2 15-17, RQD=29% PEN=2', REC=2'							

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	5" and 4" inner diameter casing, Drive and Wash		
METHOD OF SOIL SAMPLING:	3" split-barrel spoon driven w/ 300 lb. hammer, 18" drop;		
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-421	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-421
PROJECT NO.:				START DATE:	12/20/98
LOGGED BY:	Tracy Dorgan/A. Putnam	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/20/98
DRILLED BY (Company/Driller):	Aquifer Drilling and Testing, Inc.			MON. WELL NO.:	None
GRD. SURFACE ELEVATION:	23.4 FT.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 16	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)]
	2:02									
18										
							End Of Boring at 17.0' BGS			

TYPE OF DRILLING RIG:	Mobile B-59
METHOD OF ADVANCING BORING:	5" and 4" inner diameter casing. Drive and wash
METHOD OF SOIL SAMPLING:	3" split-barrel spoon driven w/300 lb. Hammer, 18" drop;
METHOD OF ROCK CORING:	NQ Wireline
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-422
PROJECT NO.:				START DATE:	12/16/98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/17/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	NONE
GRD. SURFACE ELEVATION:	13.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass surface			
	1	1.6 / 2.0	OU4-SO-422-0002				S-1A=1.0'—silty, fine poorly graded SAND.		Loam = S-1A. Dry-damp.	
	2		OU4-SO-DUP-02	LOAM		Brown	Abundant grass roots.	SM		FID=0.0
	3		1445			Light	S-1B=0.6'—fine SAND, poorly graded, trace silt.		Dry & loose.	
2	6		1435 S-1			brown/tan		SP		PID=0.0
	4	0.9 / 2.0	OU4-SO-422-0204				GRAVEL AND SAND. Sand is f-c well graded, gravel is rounded and coarse, trace silt.			
	6			SAND & GRAVEL		Brown		GM/SW	Saturated (from wash water)	FID=0.0
	7									
4	10		1505 S-2							PID=0.0
	14	1.1 / 1.75	OU4-SO-422-0406				Silty, sandy, GRAVEL. Gravel is f-c rounded.			
	21							GM	Saturated	FID=0.0
	23									
6	50/3"		1520 S-3			Dk. Gray	Schist in nose.			PID=0.0
			C-1-6'→8.5'		2:05		Cored through 3 cobbles (1 each, schist, gneiss, & granite.)		~6.5' popped through @ 6.7'=cobble	
			PEN=2.5'							
					2:10		D&W casing to 17' & sample.		Poor seal, poor water return, trace sand in wash.	
8					1:22/1/2'					
				COBBLES & BOULDER					Lost ~100 gal. To overburden.	
							Cobbles & boulders.			
									Cobbles &/or boulders from ~6'→11.5'. Roller bit to	
10										
									12' & sample. Lost 200 gal. total.	
12										
	13	0.5 / 2.0	OU4-SO-422-1214			Lt.			Saturated	FID=0.0
	8			GRAVEL & SAND		brown	Sandy, coarse GRAVEL. Gravels are well	GP		
	8									PID=0.0
14	10		1635 S-4							
	4	1.0 / 2.0	OU4-SO-422-1416						Significant oxidation stains on/in gravels & sand.	FID=0.0
	6					Brown/ Red-orange	Gravelly, SAND. Mostly f-c well graded sand. Some coarse rounded gravel.	SW		
	12									
16	23		1650 S-5							PID=0.0

TYPE OF DRILLING RIG:	Mobile drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" diameter drive & wash casing.		
METHOD OF SOIL SAMPLING:	3 in. split-barrel driven with a 300 lb. hammer & 18" drop—S-1→S-5. S-6 & S-7=2" sampler driven w/ 140 lb. hammer & 30 in. drop.		
METHOD OF ROCK CORING:	NQ wireline.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID – B; PID - E	BORING NO.: SB-422	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-422
PROJECT NO.:				START DATE:	12/16/98
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/17/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	NONE
GRD. SURFACE ELEVATION:	13.0 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 16	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)]
	21		OU4-SO-422-1618			Dk.	Crushed gravel fragments over fine-coarse well graded sand w/ minor bedding layers noted.		Saturated. Minor bedding noted.	
	26	0.75 / 2.0		SAND				SW		FID=2.3
	36					Lt. brown				
18	37		0745 S-6							PID=0.4
	12		OU4-SO-422-1820				Similar to S-6 above.		Spoon refusal @ 19.25'. Begin standard int. sampling. D & W to 22.5'= casing refusal. Roller-bit ahead & D & W to 23.5'. Poss. top of bedrock.	Fid=0.2
	51	0.8 / 1.15								
	100/3"									PID=inop. Due to rain
20			0810 S-7							
			No sample 20-23.5'.	Top of weathered bedrock ~ 22-23' bgs						
22										
			C-1=23.5-26.5' PEN=3.0' REC.=3.0' TOTAL # IN.>4" =25" % RQD=69%				Quartzite? Granofels. Fine grained with inc. Feldspar crystals with depth.		Smooth coring until 26.0' bgs, popped in & out of Void or fracture zone. Lost ~60 gal. & cored last ½' in 5 sec.	
24	3:50									
						Gray – lt. Green w/ white feldspar	2 horiz. fractures w/ staining @ 24.3' & 24.8'.			
	3:20									
26	1:20						Heavily fractured (horiz. & vert.) zone from approx.			
			C-2=26.5-29.5 PEN=3.0' REC=3.0' TOTAL # IN. >4" =13.25" RQD=36.8%				26'-27' w/ staining & halo's along fracture face.		Wash return turned white from lt. brown @ ~27.75' bgs.	
	3:10									
28	3:30						Horiz. frac. @ 27.5& 28'.			
	3:28						Vert. $CaCO_3$ vein from 28.5 to EOB inside core.			
30							Becomes open frac. (high angle) @ 29.3-EOB. Tranistion into a chlorite, quartz mafic (horneblende)			
							Gneiss? EOB @ 29.5' bgs.			

TYPE OF DRILLING RIG:	Mobile Drill D-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" diameter drive and wash casing		
METHOD OF SOIL SAMPLING:	3 in. split-barrel driven with a 300 lb Hammer and 18" drop-S-1→S-5,S-6,&S-7=2" sampler driven w/140 lb.		
METHOD OF ROCK CORING:	NQ wireline. Hammer & 30 in. drop		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID – C; PID - D	BORING NO.: SB-422	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-423
PROJECT NO.:				START DATE:	1-5-99
LOGGED BY:	J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-7-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	12.9 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Asphalt surface			
	7	21.5"	OU4-SO-423-0002			Yellow	(F) SAND trace silt	SP	Dry, homogenous	FID = 0.0
	7	24"				brown				#B
	9									PID = 0.0
2	12		1520							(1,700*)
	5		OU4-SO-423-0204							FID = 0.0
	5	6"								
	30/3"	15"								PID = 0.0
4			1530							(1,100*)
	4		OU4-SO-423-0406							FID = 0.0
	5	12"								
	6	24"				Brown	(F) sandy, SILT, trace clay	ML	Moist	PID = 0.0
6	6		1540							
	7		OU4-SO-423-0608			Yellow-	Silty, (F) SAND	SM	Dry	FID = 0.0
	7	12"				Brown				
	7	24"							Moist	PID = 0.0
8	7		1600							
	5		OU4-SO-423-0810							FID = 0.0
	5	11"	01/06/99 DUP							#A
	6	24"								PID = 0.0
10	5		0840							#D
	5		OU4-SO-423-1012							FID = 0.0
	4	6"								
	6	24"								PID = 0.0
12	5		0920							
	4		OU4-SO-423-1214				Trace clay			FID = 0.0
	5	16"								
	7	24"								PID = 0.0
14	8		0950 MS/MSD						Thin, bedding visible	
	6		OU4-SO-423-1416				No clay		Collecting VOC Screening, samples only,	FID = 0.0
	10	8"								
	13	24"							Switch to 2" diam. spoon	PID =0.0
16	13		1010							

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	3" split-barrel sampler driven with a 300 lb. Hammer with a 30 in. drop.(0-16') 2" split-barrel driven w/a 140 lb. Hammer and 30 in. drop 16'-61'.		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:	5.7 fbgs. 1020 hrs. H_2O level @ well located in the center of ball field 14fbgs. 7.4fbgs 1045		
OTHER OBSERVATIONS:	*Retaken w/PID #E Note: no washing fluids were lost from 0-16	BORING NO.: SB-423	PAGE: 1 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-423
PROJECT NO.:				START DATE:	1-5-99
LOGGED BY:	J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-7-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	12.9 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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										
	15	14" / 24"	OU4-SO-423-1618			Yellow-brown	Silty, (F) SAND, trace clay, 1-piece of 1" diam. Subrounded gravel.	SM		FID = 0.0
	10									
18	12		1105							PID = 0.0
	13									
	10	11" / 24"	OU4-SO-423-1820							FID = 0.0
	9									
20	18		1115				No gravel			PID = 0.0
	20									
22										
									NOTE: Break in depth from 22-25'.	
25										
	30	10" / 24"	OU4-SO-423-2527				2" interbedded (M) SAND & (F)SAND, both with gravel (subrounded 1" diam. max), trace silt	SP		FID = 2.1
	38									
27	42		1250							PID = 0.0
	25									
29										
	24	17" / 24"	OU4-SO-423-2931						Low-med, plasticity	FID = 0.0
	20									
31	14		1315				Silty SAND (F)	SM		PID = 0.0
	15						(F) sandy SILT, trace clay	ML		

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	3" split-barrel sampler driven with a 300 lb. Hammer with a 30 in. drop. (0-16') 2" split-barrel driven w/a 140 lb. Hammer and 30 in. drop 16'-61'.		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-423	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-423
PROJECT NO.:				START DATE:	1-5-99
LOGGED BY:	J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-7-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	12.9 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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)]
34										
	15	17" / 24"	OU4-SO-423-3436			Yellowish Brown to Lt. Gray	SILT, some clay	ML	Bedding visible Med. Plasticity	FID = 0.0
	18									
	42						(F – C) SAND, trace fines, trace (F) gravel	SW		PID = 0.0
36	35		1340							
									NOTE: break in depth.	
39										
	24	9" / 24"	OU4-SO-423-3941			Lt. Brown	(F – C) SAND and (F) GRAVEL, trace silt Gravel (subrounded, 1" diameter max)	SW		FID = 2.8 PID = 0.0
	14									
	16									
41	16		1440							
									NOTE: break in depth.	
44										
	25	12" / 24"	OU4-SO-423-4446							FID = 1.5
	24									
	23						-more silt			PID = 0.0
46	22		1522							
			1-7-99						NOTE: break in depth.	
49										
	20	0" / 24"	OU4-SO-423-4951				A piece of rounded, 1.5" diam., white quartzite Stuck in spoon tip. A matrix of SAND & gravel			FID = (N/A)
	22									
	32						Surrounded the quartzite rock			PID = (N/A)
51	29		0750							
						Reddish Brown			(f) gravel in wash H_2O	

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	(0-16') 2" split barrel driven w/ a 140 lb. Hammer and 30 in. drpo 16'-61'.		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-423	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-423
PROJECT NO.:				START DATE:	1-5-99
LOGGED BY:	J. MELLO	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1-7-99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/ S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	12.9 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 54	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)]
	25		OU4-SO-423-5456			Yellowish	(F-C) sand and (F) gravel, little fines	SW/	Some weathering of gravel	FID = 0.0
	18	10" / 24"				Gray	Pieces of 1"diam. subangular schist rocks	GP	pieces	#C
	19									PID = 0.0
56	17		0830							#D
									NOTE: break in depth.	
59										
	25		OU4-SO-423-5961			Yellow-orng	(F-C) sand & gravel (<1.5" diam. subangular) little fines	SW/GP	COBBLES?	FID = 0.4
	18	12" / 24"				Lt. Brown	Fines (M-C) sand, trace ½" diam. subrounded gravel	SP		
	22					Reddish	Silty (F) sand, a piece of 1.5" diam. subrounded	SM	COBBLES?	PID = 0.0
61	59		1020			Brown	gravel			
62		60"								
			12:39 Start C-1 (62-67)		7:30		Pyrite, Mica, Hornblende, SCHIST<0.5" quartz veins	BR	75º FOLIATION	
64					6:45				20 GAL OF WASH H_2O LOST IN 2FT CORING	
					7:30		% RQD = 90			
66		60"			5:45					
67			PAUSE → 13:14 STOP		5:50		<0.25" Quartz veins		50º FOLIATION	
							EOB @ 67' BGS.			

TYPE OF DRILLING RIG:	Mobile Drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing		
METHOD OF SOIL SAMPLING:	3" split-barrel sampler driven with a 300 lb. Hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NQ Wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	BOREHOLE COMPLETED W/ Bentonite slurry	BORING NO.: SB-423	PAGE: 4 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-424
PROJECT NO.:				START DATE:	12/15/98
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/16/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	NONE
GRD. SURFACE ELEVATION:	15.3 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass surface			
	3	1.6 / 2.0	OU4-SO-424-0002	COVER		Brown	S-1A=0.5'—silty, fine poorly graded SAND. Organic rich.	SM	Moist. Abundant roots. SW=loose & dry fill?, More dense	FID=0.0
	9			FILL		Lt. gray	S-1B=0.8'—gravelly, f-c well graded SAND.	SW		PID=12.0
2	9 / 12		0830 S-1			Dark brown	S-1C=0.3'—silty, gravelly, f-c SAND. Trace wood.	SM		0.0 in B.Z.
	12	1.0 / 1.35	OU4-SO-424-0204	FILL			Similar to S-1C above.		Fill inc. plastic, rounded gravel & trace metal wire.	FID=23.3
4	41 / 50/4"		0855 S-2			Dk. gray	- Inc. metal wire & plastic debris.			PID=19.1
	19	1.2 / 2.0	OU4-SO-424-0406			Dark gray to black	SAND & GRAVEL, trace silt. Gravel is f-c subang.-subrounded. Trace woody debris.	GM/ SW	Damp-dry. Compact fill. Inc. woody stems & black sludge? small qty. of asbestos fibers, damp.	FID=2,640
6	21 / 21 / 3		0912 S-3							PID=12.1
	12	0.75 / 2.0	OU4-SO-424-0608			Red & gray blotches	Silty, SAND. Trace gravel. Abundant asbestos matting, poss. gasket material.	SM	Fill. Asbestos easily seen w/ eye.	FID=1,669 PID=138
8	13 / 14 / 14		0945 S-4	WASTE / FILL						FID in B.Z. peak of 1.8
	5	0.6 / 2.0	OU4-SO-424-0810				Mostly gasket material & asbestos fiber matting. Trace brake shoe & metal debris (steel plate & wire). In silty, sand matrix.		Fill. Wet.	FID=1,427
10	11 / 14 / 12		0957 S-5							PID=38
	3	1.5 / 2.0	OU4-SO-424-1012			Olive-gray	Silty, fine –coarse SAND. Abundant root fibers.	SM	Native? Out of man-made fill.	FID=1,773
12	3 / 3 / 4		OU4-SO-DUP-01 (TOC/G.S.) 1020 1015 S-6							PID=249
	6	0.5 / 2.0	OU4-SO-424-1214	SAND			Silty, f-med. SAND. Trace root fibers.		Saturated	FID=364
14	6 / 8 / 9		1034 S-7							PID=118
	18	1.2 / 2.0	OU4-SO-424-1416				Fine poorly graded SAND, trace silt, trace fine gravel.	SP	Saturated	FID=1,032
16	19 / 6 / 21		1200 S-8							PID=201

TYPE OF DRILLING RIG:	Mobile Drill B-59 truck mounted
METHOD OF ADVANCING BORING:	5" & 4" diameter threaded flush—joint casing (Drive & Wash)
METHOD OF SOIL SAMPLING:	3" split-barrel driven w/ 300 lb. hammer & 18" drop for S-1→S-10. S-11—S-14=2" split barrel driven w/300 lb. hammer & 18" fall (driller missing sub for 140 lb. hammer until S-15.
METHOD OF ROCK CORING:	NQ wire line core
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-424
PROJECT NO.:				START DATE:	12/15/98
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/16/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	NONE
GRD. SURFACE ELEVATION:	15.3 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 16	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)]
	18	0.9 / 2.0	OU4-SO-424-1618			Olive-gray	Similar to S-8 above. Fine poorly graded SAND, trace silt.	SP	Saturated	
	15									FID=706
18	15		1215 S-9							PID=40
	5	1.0 / 2.0	OU4-SO-424-1820							
	5									FID=560
20	5		1230 S-10							
	6									
22										
24										
	5 *	0.6 / 2.0	OU4-SO-424-2426			Olive-gray	Similar to S-10 above.	SP	Saturated. No structure noted.	
	8									FID=376
26	8		1350 S-11							PID=8.5
	6									
28										
30	11 *	1.1 / 2.0	OU4-SO-424-2931							
	10									
	7					Olive-gray	SAND. Mostly f-c well graded sand, trace silt.	SW	Coarsing downward.	
	8		1405 S-12							FID=492
32										PID=15

TYPE OF DRILLING RIG:	SEE P. 1		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:			
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	Cal check PID & FID @ 1330 (after samp. 0-20') FID—96.8 w/ 98.6 PPM span gas & PID=86 w/100 PPM span gas.		
OTHER OBSERVATIONS:	* SEE NOTES ON P. 1	BORING NO.: SB-424	PAGE: 2 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-424
PROJECT NO.:				START DATE:	12/15/98
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/16/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	NONE
GRD. SURFACE ELEVATION:	15.3 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 32	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)]
34										
	5 *	1.0 / 2.0	OU4-SO-424-3436			Olive-gray	S-13A=0.5'—fine interbedded silts & fine SANDS.	SM	Fine bedding layers noted.	FID=0.0
36	8 / 8 / 11		1420 S-13				S-13B=0.5'—well graded f-c SAND w/ trace fine subrounded gravel.	SW		PID=17.0
38										
40	6 * / 8	0.65 / 2.0	OU4-SO-424-3941			Olive-Gray	Similar to S-13B above.	SW	Loose, saturated.	FID=10.0
	8 / 7		1440 S-14							PID=26.5
42										
44										
	12 / 19	0.7 / 2.0	OU4-SO-424-4446			Olive-gray to lt. brown	Similar to S-13B & S-14 above.	SW	Saturated. No structure.	FID=17.2
46	13 / 10		1510 S-15				Slight inc. in gravel.			PID=16.5
48										

TYPE OF DRILLING RIG:	SEE P. 1		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:			
METHOD OF SOIL SAMPLING:	2 in. split-barrel driven w/ 40 lb. hammer & 30" fall from S-15→S-17.		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	* SEE NOTES ON P.1	BORING NO.: SB-424	PAGE: 3 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-424
PROJECT NO.:				START DATE:	12/15/98
LOGGED BY:	T. DORGAN	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/16/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING			MON. WELL NO.:	NONE
GRD. SURFACE ELEVATION:	15.3 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 48	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)]
50	15 17	1.0 / 2.0	OU4-SO-424-4951			Light brown Olive gray	Gravelly, f-c SAND. Gravels are subrounded f-c.	SW		FID=7.0
	26 30		1536 S-16							PID=19.0
52									Hard driving casing @ ~52-52.5'. Easier 52.5-53.5. Hard driving 53.5-54.0'.	
54										
	64 50/1"	0.3 / 7	OU4-SO-424-5455			Light Brown & dk. gray	Angular fine-c GRAVEL. In silty, fine sand matrix.	GM		FID=0.0
56			1610 S-17						Roller bit ahead of casing to 57.0'. cuttings in wash indicate weathered rock to ~54-55', fresh rock to 57'. Picking up a sheen in washing @ 58.5'. PID=22.0	PID=22.0

			C-1=57.0 →62.0
			PEN=5.0'
			REC=4.7'
			Total # in. > 4" = 41.5'
			RQD=69%
			% REC = 94%
							57'→57.5' smokey QUARTZ w/ pyrite deposits. Phaneritic, quartz, hornblende (?)			

58					6:12		58'→59' numerous high angle fractures (45° or >) calcite & pyrite deposits, oxidation weathering chlorite, gneiss or hornblende (?)			FID=0.3
					6:02					
60					5:45		60' horizontal fracture. Oxidation 60.25' high angle fracture. Calcite deposits, high amount of weathering/oxidation.		~~Approximately 100 gal lost~~ in 3' of coring.	
					6:33					FID=0.2
62		4.7 / 5.0			7:30		61' horizontal fracture. Pyrite, calcite, oxidation present 61'-61.5' high angle fracture.			
		pen					61.2-61.4 smoky quartz w/ pyrite deposits.			
							EOB @ 62' bgs.			

TYPE OF DRILLING RIG:	SEE P. 1 & 3		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:			
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	NQ - wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	12/16/98 0840 started confirmatory core run—possible sand layer above rock @ 57'. 12/16/98 0915 head space on washtub w/FID=1.8	BORING NO.: SB-424	PAGE 4 OF 4

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-425
PROJECT NO.:				START DATE:	12/15/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/16/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	16.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass surface			
	4	13” / 18”	OU4-SO-425-0002	Cov. fill	Med.	Dk. brown	0-6” topsoil, fines and organic matter.	topsoil	OL wet fill (c&d) damp	FID=0.6
	18			0.5’			6-18” silty SAND some gravel.	SM		
	50/4”				V. Dense					
2			0845 S-1			Brown	- asphalt in bottom of barrel shoe.			PID=0.0
	7	13” / 24”	OU4-SO-425-0204		Med.	Dark				
	14						- piece of concrete			FID=64
	15			Fill						
4	18		0900 S-2							PID=0
	28	6” / 24”	OU4-SO-425-0406		Med.					
	73				Dense					FID=65.3
	48									
6	36		0950 S-3				- trace brick			PID=0
	7	10” / 24”	OU4-SO-425-0608			Dk. gray/ Black		ML	Waste fill	
	2						f) sandy, SILT and			FID=1,329
	13						- asbestos materials (50%) multi-colored board Shaped, felt & brake pads.		Wash H_2O color change dk. brown-dk. gray.	
8	15		1000 S-4							PIF=15.5
	8	10” / 24”	OU4-SO-425-0810		Loose/ Med.		- Trace glass		Wet/moist	
	9									FID=1,250
	8			Waste Fill			- trace steel nut, steel tool			
10	11		1030 S-5							PID=23.2
	3	1” / 24”	OU4-SO-425-1012							
	4		No samples collected				All waste:			FID=440
	4									
12	5		1040 S-6				* 60%-80% suspect asbestos materials.			PID=29.1
	3	3” / 24”	OU4-SO-425-1214						**Composited sample from 12-16’.**	FID=2,140
	4									
	5								Wet	
14	6		1140 S-7				- trace metal, glass			
	9	5” / 24”	OU4-SO-425-1416							PID=26.0
	5						- suspect asbestos cloth			
	3									
16	3		1150 S-8	Peat		Brown/red	PEAT and fines.	PT	Moist natural	

TYPE OF DRILLING RIG:	Mobile B-59
METHOD OF ADVANCING BORING:	Drive & Wash 5” diameter and 4” diameter casing
METHOD OF SOIL SAMPLING:	3” and 2” diameter split barrel samplers
METHOD OF ROCK CORING:	NQ rock coring
GROUNDWATER LEVELS:	PID – E:FID - B
OTHER OBSERVATIONS:	**All “waste” fill samples were homogenized, all large pieces of suspect ACM were removed from the sample**

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-425
PROJECT NO.:				START DATE:	12/15/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/16/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	16.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 16	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)]
	4	9" / 24"	OU4-SO-425-1618	Peat/silt	Soft	Reddish brown	Fibrous organic matter/silt.	PT/OL	Natural	FID=1,952
	4		Toc/grain size							
18	3		1215 S-9				- trace metal			
	3						- trace (f-m) sand in tip of barrel			PID=1.2
	4	8" / 24"	OU4-SO-425-1820	SANDS	V. Loose	Greenish gray	(f-m) SAND	SP/SM		FID=506
	3									
20	2		1330 S-10				- trace silt, 1-3" long semi-rounded vertical granite rock.			PID=0
	1									
22										
24										
	22	14" / 24"	OU4-SO-425-2426		Med.		Silty/clayey (f-c) SAND and (f) gravel	SM/SC	Change to 2" diameter barrel	FID=82
	21									
26	21		1440 S-11				- subangular gravel			PID=0
	26									
28										
30										
	29	10" / 24"	OU4-SO-425-3032		Med.	Reddish brown	Silty (f-c) SAND and (f) gravel	SM	Wash H_2O color change to red-brown	FID=38
	58									
32	76		1530 S-12		V. Dense		- subangular gravel			PID=0
	90									

TYPE OF DRILLING RIG:	Mobile B-59
METHOD OF ADVANCING BORING:	Wash & Drive 5" diameter to 18 fbgs. 4" diameter to 18 fbgs→bedrock
METHOD OF SOIL SAMPLING:	3" diameter split-barrel w/18" drop 300 lb. hammer to 20 fbgs, 2" diameter split barrel 24 fbgs→bedrock
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK	BORING NO.:	SB-425
PROJECT NO.:		START DATE:	12/15/98
LOGGED BY:	JOE MELLO	TRANSCRIBED BY: LAC	COMPLETION: DATE: 12/16/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S. BRAY	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	16.2 ft.	ELEVATION FROM: NGVD 1929	CHECKED BY:

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)]
32										
34										
35										
	35	13" / 24"	OU4-SO-425-3537		Dense	Lt. brown	(vf) sandy SILT, some gravel, some clay	ML	Fining upwards/ downwards sequences	
	32					yellowish-orange	(f) SAND, some silt	SP		FID = 47
	39									
37	35		1600 S-13			lt. brown	(f-c) SAND some silt	SW		PID = 0
40										
	78	15" / 24"	OU4-SO-425-4042		V. Dense		Similar to above		Fining upwards/ downwards sequences	
	89									
	83								Man-made debris inc. 1 bolt noted	
42	100/4		0750 S-14			Black	Bolt - 3" weathered SCHIST vert. foliation			
				Weathered bedrock						
							Pyrite, garnet, quartz, chlorite (dk. Mineral)			
44			C-1 1052	Competent bedrock			SCHIST, 0-70° foliation		43.5 fbgs	
	6:30								Competent bedrock according to drilling pressure	
	8:30						Iron oxide staining @ fracture @ 45 and 45.5 fbgs			
46										
	8:30						EOB 47.5			
	8:00									
48										

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash to 43.2 fbgs w/ 4" diameter casing		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	Roller bit to 44.5 fbgs into bedrock		
GROUNDWATER LEVELS:	Approx. 12 fbgs 12/16/98 0700		
OTHER OBSERVATIONS:	Day 2 starts @ 40 fbgs. FID # "C", PID # "D"	BORING NO.: SB-425	PAGE: 3 OF 3

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-426
PROJECT NO.:				START DATE:	12/16/98
LOGGED BY:	AMY PUTNAM/JOE MELLO	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/18/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S.BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	16.5 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass layer			
	7	1.33' / 2'	OU4-SO-426-0002		Med.	Light	Top .8' organic layers, top soil , fines, SAND with trace	SM/	Wet, natural	
	10				Dense	Brown	silt and trace gravel, well graded.	SP		FID=0 PPM
	12									
2	15		0750 S-1							PID=0 PPM
	5	2' / 2'	OU4-SO-426-0204	2.5'	Med.	Light	2'-2.5' poorly graded SAND with trace silt.	SM	Moist	
	10				dense	Brown				FID=77.8 PPM
	12						2.5'-4.0' asbestos fill, brake pad material, fine fibers,		Waste fill	
4	14		0825 S-2				some rust clr.			PID=0.1 PPM
	8	.5' / 2'	OU4-SO-426-0406			Dk. Gray	Asbestos fill, SAND w/ fine angular gravel, well graded		Wet	
	9					Black				FID=90.6
	5									
6	6		0900 S-3							PID=1.6
	12	.5' / 2'	OU4-SO-426-0608				Piece of metal, asbestos fill, w/ sand & gravel, similar to			
	16						above.			FID=184.5
	9									
8	6		0915 S-4							PID=2.6
	13	1' / 2'	OU4-SO-426-0810			Dk. Gray	Asbestos fibers, fine gravel. Similar to above. Silty	SM		
	9						sand.			FID=220.6
	6						Piece of hard cloth w/ metal inside. Piece of wood.			
10	4		0950 S-5							PID=14.6
	5	1.2' / 2'	OU4-SO-426-1012				Fibers, fill as above.			PID=10.3
	3			11.5						FID=130.2
	3					Light gray	Silty fine SAND, trace subrounded gravel. Piece of	SM		PID=6.3
12	5		1005 S-6				Plant root			FID=126.2
	14	1.1' / 2'	OU4-SO-426-1214				Silty fine SAND. Trace fine gravel.		Natural	
	22									PID=5.6
	25						Similar to above.			
14	30		1025 S-7				Coarse SAND w/ gravel.			FID=251.3
	29	.8' / 2'	OU4-SO-426-1416			Olive gray	Coarse, well graded SAND w/ fine-medium subrounded	SW	Fill	
	40						gravel.			FID=31.6
	35									
16	30		1345 S-8				Piece of metal, fill.			PID=72.8

TYPE OF DRILLING RIG:	Mobile B-59
METHOD OF ADVANCING BORING:	Drive & Wash 5" diameter casing to 18 fbgs, 4" diameter casing to 28 fbgs, roller bit to 30 fbgs
METHOD OF SOIL SAMPLING:	3" and 2" split barrel samples
METHOD OF ROCK CORING:	NQ wireline
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

BORING NO.: SB-426

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-426
PROJECT NO.:				START DATE:	12/16/98
LOGGED BY:	AMY PUTNAM/JOE MELLO	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/18/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S.BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	16.5 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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										
	25	1.1 / 2	OU4-SO-426-1618		Med. dense/	Brown	Coarse SAND w/ fine to medium angular gravel, well graded.	SW	Wet	
	23									PID=1.8
	24				loose					
18	25		1505 S-9							FID=4.8
20										
	27	.6 / 2	OU4-SO-426-2022		Low dense/ loose		Coarse SAND w/ gravel, similar to above.	SW/ GW	Wet	
	37									PID=0.2
	21									
22	25		1610 S-10							FID=0.3
24										
26	75	10" / 24"	OU4-SO-426-2527		V. dense		(f-c) SAND and GRAVEL, similar to above.	SW/ GW	Brown wash H_2O	
	71									FID=14
	40						- broken-up granite cobble			
	17		0810 S-11							PID=0
28							- trace silt		Greenish gray wash H_2O	
29				Weathered bedrock		Gray				
30				Competent bedrock						
			C-1						Gray wash H_2O	
	6:30	5' / 5'	(5')				SCHIST 70-80° foliation, some ribbon folds, 85% mica, trace garnet, trace pyrite, 14% quartz.			
32	9:00	RQD=83%								

TYPE OF DRILLING RIG:	See page 1 roller bit 28-30 fbgs		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:			
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	NQ wireline		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Change from 3" diameter split barrels to 2" diameter @ 20 fbgs. 12/17/98—start @ 25 fbgs.	BORING NO.: SB-426	PAGE: 2 OF 3

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-426
PROJECT NO.:				START DATE:	12/16/98
LOGGED BY:	AMY PUTNAM/JOE MELLO	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/18/98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S.BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	16.5 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

DEPTH (FEET) 32	BLOWS PER 6"/ Time per foot	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)]
			C-1 (cont.)	bedrock					No H_2O loss	
	8:50					Gray	2" quartz vein @ 31.5 fbgs			FID=0
34	8:00									PID=0
	7:00						Bottom 1' broken into 4 pieces			
36							- slight iron oxide staining			
							No H_2O bearing zones identified			
							EOB @ 35 FBGS			

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	SEE P. 1		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-426	PAGE: 3 OF 3

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-427
PROJECT NO.:				START DATE:	12-19-98
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	12-20-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	28.9 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass surface			
	3 / 5	21" / 24"	OU4-S0-427-0002	Cov. fill / f-c sand		Dk. brown / Lt. Brown	S-1A 7" organic material, root fibers / S-1B 10" fine to coarse well graded SAND w/fine	SW	S-1A moist / S-1B loose	PID = 6.6 (H_2O vapor?)
2	9 / 11		0845 S - 1		S-1C dense	Brown-Reddish	angular gravel / S-1C 4" organic rich, silt-sand, root fibers present			FID = 0.0
	6 / 12	6" / 24"	OU4-S0-427-0204			Reddish-Brown	Poorly graded fine SAND, with trace coarse sand to Fine gravel, silt, and fine sand	SM/ ML	Dry, loose	FID = 0.0
4	9 / 5		0900 S - 2	Fine sand						PID = 5.4 (H_2O vapor?)
	15 / 28	3" / 24"	OU4-S0-427-0406			Dk. Gray	Organic fibers, fines, SILT		Moist, low recovery	FID = 11.8
6	22 / 13		0950 S - 3				Cobbles in spoon – low recovery			PID = 10.2 (H_2O vapor?)
	8 / 7	8" / 24"	OU4-S0-427-0608				Waste material, fibers, pad material with silty sand		Waste fill, wet	FID = 78.3
8	7 / 5		1015 S - 4	Waste/ fill						PID = 26.4
	5 / 16	5" / 24"	OU4-S0-427-0810			Dk. Gray	Waste material w/silt, SAND, trace fine gravel			FID = 17.9
10	5 / 6		1046 S - 5			Dk. Gray	Piece of cloth			PID = 7.3
	4 / 7	12" / 24"	OU4-S0-427-1012 OU4-S0-DUP				Waste material – similar to above piece of wood, piece of metal			FID = 60.2
12	5 / 5		1119 S - 6							PID = 35.7
	3 / 4	3" / 24"	OU4-S0-427-1214				Waste material. Similar to above		Small recovery	FID = 16.1
14	3 / 3		1245 S - 7				Piece of metal			PID = 11.7
	12 / 4	4.5" / 24"	OU4-S0-427-1214				Waste material, wood chunks and splinters, small amount silty sand.			FID = 4.3
16	4 / 5		1309 S – 8				Pieces of metal wire			PID = 8.3 (H_2O vapor?)

TYPE OF DRILLING RIG:	Mobile B-59
METHOD OF ADVANCING BORING:	4" and 5" inner Dia. Casing, Drive and Wash
METHOD OF SOIL SAMPLING:	3" split-barrel sampling spoon driven by 300lb. Weight w/18" drop & 2" split-barrel sampling spoon driven by 140lb. Weight w/30" drop
METHOD OF ROCK CORING:	
GROUNDWATER LEVELS:	NQ wireline
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-427
PROJECT NO.:				START DATE:	12-19-98
LOGGED BY:	A. PUTNAM	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	12-20-98
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING/S. BRAY			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	28.9 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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										
	12	11" / 24"	OU4-S0-427-1618			Dk. Gray	Waste material as described above with small pieces of glass, metal		Wash water very dark	FID = 42.6
	17									
	20					Lt. Gray	2" of spoon = coarse sand to fine gravel w/fines	Bed Rock		PID = 9.8
18	27		1335 S - 9	Top of bedrock			17.5-18' weathered rock			
			C – 1				SCHIST 19.1-20.6' many horizontal fractures, horizontal			
20			INTERVAL : 19.1" – 24.1' Pen: 60" Rec: 60" RQD = 56%				Foliation, significant iron oxide staining, weathering 20.6'-24.1' angular (~80°) foliation 21.6' – visible			
	10:15						Fractures, iron oxide staining, 0.5" thick			
22	9:26						23.1' fractures, iron oxide staining, high angle fract.		No water loss	
	9:08						22.6' – very small quartz veins, high mica content (~80%)			
24	7:30									
	5:38						EOB at 24.1' bgs.			

TYPE OF DRILLING RIG:	Mobile B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" inner Dia. Casing, Drive and Wash		
METHOD OF SOIL SAMPLING:	3" split-barrel sampling spoon driven by 300lb. Weight w/18" drop & 2" split-barrel sampling spoon driven by 140lb. Weight w/30" drop		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	NQ - WIRELINE		
OTHER OBSERVATIONS:		BORING NO.: SB-427	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-428
PROJECT NO.:				START DATE:	1/4/99
LOGGED BY:	A. Putnam/J. Mello	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	1/4/99
DRILLED BY (Company/Driller):	AQUIFER DRILLING & TESTING ADT-2/ S. Bray			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	13.2 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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										
	5	17" / 24"	OU4-SO-428-0002	Fill	MED DENSE	Dk. BRN Reddish	S-1A = 4" rich organic, root fibers		Dry = S-1C	FID = 0.0
	7						S-1B = 9" poorly graded medium SANDw/ trace coarse sand			
	14					BRN				PID = 0.0
2	14					Lt. BRN	S-1C = 4" poorly graded Fine - Med SAND			
	11	16" / 24"	OU4-SO-428-0204			Lt. Brown	Poorly graded fine to medium SAND w/trace silts	SP		FID = 0.0
	21									
	21									PID = 0.0
4	23									
	12	10" / 24"	OU4-SO-428-0406	Natural Soils		Lt. BRN	Poorly graded (F) SAND, trace (M) sand, trace silt	SP	Dry, 0.5" beds	FID = 0.0
	11									
	11									PID = 0.0
6	9		1400							
	10	16" / 24"	OU4-SO-428-0608			Yellow Orange	Silty (F) SAND	SM	wet	FID = 0.0
	12						(F) SAND, trace silt, trace (M) sand, silt, tr. clay,	SP		
	20							ML/SM		PID = 0.0
8	23		1410							
	9	19" / 24"	OU4-SO-428-0810						**Composite sample from 8-12'**	FID = 0.0
	10									
	11									PID = 0.0
10	16		1425							
	15	14" / 24"	OU4-SO-428-1012				Fine SAND and SILT	SM/ML	1. med. Dry strength 2. soft weak thread 3.fast RXN to shake	FID = 0.0
	21									
	38									PID = 0.0
12	45		1440							
	6	14" / 24"	OU4-SO-428-1214				(F-M) SAND, trace silt	SP		FID = 0.0
	8									
	14									PID = 0.0
14	12		1505							
	7	18" / 24"	OU4-SO-428-1416				(F) SAND, little fines	SP	2mm layers of Fines every 1"; bedding visible	FID = 0.0
	13									
	23									PID = 0.0
16	28		1520							

TYPE OF DRILLING RIG:	MOBLIE B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH, 5" AND 4" INNER DIAMETER CASING		
METHOD OF SOIL SAMPLING:	2" SPLIT BARREL SAMPLING SPOON DRIVEN BY 140LB. HAMMER W/30" DROP		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	DTW 6.4 fbgs @ 1530 1/4/99		
OTHER OBSERVATIONS:	EOB 14 fbgs w/4" casing, boring completed/ filled w/ bentonite slurry	BORING NO.: SB-428	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-429
PROJECT NO.:				START DATE:	12/20/98
LOGGED BY:	Tracy Dorgan	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	12/20/98
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing			MON. WELL NO.:	None
GRD. SURFACE ELEVATION:	13.8 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass Surface			
	1 / 7	0.5' / 2.0'	OU4-SO-429-0002 1450 S-1			Brown	S-1A=0.25'—silty, fine SAND. Abundant grass roots.	SM		PID=0.0
2	35 / 50					Gray-brown	S-1B=0.25'—gravelly, SAND. Sand is f-c, gravels are coarse.	SW	Poss. cobbles due to poor recov. & broken gneiss in nose	
	40 / 50/3"	0.4' / 0.75'	OU4-SO-429-0203 1520 S-2			Reddis gray	Poss. weathered rock in nose.		Drive casing to 3.5' Roller-bit to 4.0'	PID=0.0
4			C-1=4.0→9.8 PEN=5.9 REC=5.78 Total in.>4"=59" RQD=83%	Top of Bedrock						
	>5:45					Dark gray	Chlorite, mica, SCHIST. - horiz. frac. at 4.9', high angle frac. w/ oxidation		Lost approx. 30 gal. In top 2' of C-1.	
6	>5:50						& alteration product from 5.0-5.7'			
	>4:30						Solid core from 5.7'-10'.		Continue loosing H_2O	
8	>4:40								Total water loss=50-60 gal.	
9	>2:50									
10	>3:20									
							End of boring at 10' bgs			

TYPE OF DRILLING RIG:	Mobile drill B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. diameter drive & wash casing		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer & 30" drop.		
METHOD OF ROCK CORING:	NQ wireline core.		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Water level inside casing in a.m. on 12/21/98 prior to grouting hole=4.0' bgs. PID - E	BORING NO.: SB-429	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK			BORING NO.:	SB-430
PROJECT NO.:				START DATE:	1/5/99
LOGGED BY:	J. Mello	TRANSCRIBED BY:	LAC	COMPLETION: DATE:	1/5/99
DRILLED BY (Company/Driller):	Aquifer Drilling & Testing Inc./S. Bray			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	14.1 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	

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							Grass surface			
	3		OU4-SO-430-0002	Top soil			Organic SILT, little organic debris.	OL	Topsoil, dry	
	5	17" / 24"		Fill	Loose	Dk. Brn				FID (CNS) #B
	7								Fill, dry	
2	9		0912		Medium		Silty (f) SAND, trace <0.5" coarse gravel	SM		PID (0.0) #D
	21		OU4-SO-430-0204							
	35	12" / 24"		waste fill	V. Dense	Brown				FID (CNS)
	35					Dark				
4	37		0920		↓	reddish	Asbestos (assumed) materials w/ 20% silt matrix		Dry	PID (0.0)
	9		OU4-SO-430-0406		Medium	Brown				
	10	6" / 24"					- Flat, 2mm to 1 cm, flexible to rigid material		Wet (due to drill method?)	FID (CNS)
	12									
6	9		1010							PID (0.0)
	9		OU4-SO-430-0608			Dk brown				*
	6	2" / 24"				to black				FID (4.8)
	9									
8	12		1015							PID (0.0)
	9		OU4-SO-430-0810			Black to			2mm black beds every	
	10	13" / 24"		Natural soils		dk gray	Silty fine, SAND, trace <0.75" subrounded gravel, low	SP	2".	FID (16.8)
	11						plasticity			
10	8		1035							PID (0.0)
	8		OU4-SO-430-1012			Black	Organic fibers, hard, thin, rectangular material}		Wash?/Pushed cobble?	
	18	1" / 24"								FID (17.6)
	36									
12	38		1040		V. Dense					PID (2.8)
	13		OU4-SO-430-1214			Dk gray	Silty (f) SAND, subrounded 2" x 1.5" gneiss gravel	SP		
	9	9" / 24"			Medium	Black				FID (100.6)
	13						Organic sitly, (f-c) SAND and (f) GRAVEL	SW	No sheen,	
14	10		1110							PID (0.0)
	12		OU4-SO-430-1416			Gray	Silty (f-m) SAND, trace (c) sand	SM	from spoon tip	
	12	0" / 24"								FID (12)
	13									
16	14		1130							PID (0.0)

TYPE OF DRILLING RIG:	Mobile Drill – B-59		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4 in. ID Drive & Wash Casing.		
METHOD OF SOIL SAMPLING:	2 in. split-barrel sampler driven with a 140 lb. hammer with a 30 in. drop.		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	9 fbgs @1200 1/5/99, 10.5 fbgs @ 1245 1/5/99 EOB—14 fbgs w/4" casing, completed w/ bentonite pellets		
OTHER OBSERVATIONS:	CNS—Could not start (too cold?) *checked PID w/ sharpie—reaction ok	BORING NO.: SB-430	PAGE: 1 OF 1

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501B
PROJECT NO.:	N4236-0320			START DATE:	8/13/02 @ 1025
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/14/02 @ 0840
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	2		OU2-SO-501-0002	Top soil	Very		0.2' grass and roots		No PACM or MMM was present in the split spoon the soil was dry	FID=0.0
	2	0.9	FID=0.0	Fine to Medium sand	Loose	Brown	Fine SAND to silt with trace gravel	SM		PID=0.0
	2	2.0	PID=0.0 headspace							FID=0.0
2	2		8/13/02							PID=0.0
	2		OU2-SO-501-0204							FID=0.0
	2	0.9	FID=0.0				Fine to medium grained SAND	SP		PID=0.0
	1	2.0	PID=1.5 headspace				trace silt and rock			FID=0.0
4	2		8/13/02							PID=0.0
	6		OU2-SO-501-0406		Loose Medium		Fine to medium grained SAND with rock fragments*		*rock fragment is crushed quartzite. No PACM or MMM was present in the split spoon. The soil was wet due to washing.	FID=0.0
	16	0.5	FID=22.2					SP		PID=0.0
	19	2.0	PID=0.0 headspace		Dense Loose					FID=0.0
6	7		8/13/02							PID=0.0
	6		OU2-SO-501-0608	Coarse sand		Light	0.3' coarse grained and with rocks, fine sand. Fine grained SAND, some silt, no rock fragments or gravel	SP		FID=0.0
	8	1.4	FID=5.0			Brown		SM		PID=0.0
	9	2.0	PID=0.0 headspace	Fine grained sand						FID=0.0
8	8		8/13/02							PID=0.0
	3		OU2-SO-501-0810		Very		Fine grained SAND to silt, no rocks or gravel present			FID=0.0
	6	1.3	FID=0.0		Loose			SM		PID=0.0
	7	2.0	PID=0.0 headspace							FID=0.0
10	8		8/13/02		Loose					PID=0.0
	7		OU2-SO-501-1012				Fine grained SAND to silt, no rocks or gravel present			FID=0.0
	9	0.9	FID=0.0					SM		PID=0.0
	14	2.0	PID=0.0 headspace							FID=0.0
12	8		8/13/02							PID=0.0
	7		OU2-SO-501-1214				Fine grained sandy SILT with trace clay no rocks or gravel			FID=0.0
	7	1.7	FID=0.0					SM/ML		PID=0.0
	8	2.0	PID=0.0 headspace							FID=0.0
14	9		8/13/02							PID=0.0
							Changed to standard interval sampling five feet			
							Fine sand with trace rocks no gravel			
16								SM		

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	Notes: PACM = Potentially Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop	MMM = Man Made Material	
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument group C	BORING NO.: SB-501B	PAGE: 1 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501B
PROJECT NO.:	N4236-0320			START DATE:	8/13/02 @ 1025
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/14/02 @ 0840
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
18										
20	3 5	1.5	OU2-SO-501-1920 FID=0.0	Silty fine sand	Very Loose	Gray Brown	Silty fine SAND. No rocks or gravel mixed in. Trace clay.	SM	No PACM or MMM was observed in the split spoon or discharge water.	FID=0.0 PID=0.0
	3 2	2.0	PID=0.0 headspace 8/13/02 1250							FID=0.0 PID=0.0
22				Coarse to medium grained sand			Driving casing to 24' washing casing out. Coarse grained to medium grained sand with rock fragments*.	SP		
									Rock fragments are quartz or quartzite broken by the split spoon	
24										
	16 36	1.0	OU2-SO-501-2426 FID=0.0		Dense		Coarse to medium grained SAND, rock fragments* and gravel.	SP	Rock fragments are quartz or quartzite gravel broken by the split spoon	FID=0.0 PID=0.0
26	26 20	2.0	PID=0.0 headspace 8/13/02 1435							FID=0.0 PID=0.0
							Driving casing to 29' washing casing out. Discharge has coarse sands and gravel with rock fragments.			
28										
30	35 23	0.8	OU2-SO-501-2931 FID=0.0				Coarse grained SAND with rock fragments and gravel, trace fine sand.	SP		FID=0.0 PID=0.0
	18 23	2.0	PID=0.0 headspace 8/13/02 1515				Fine SAND to silt with some small rocks and gravel.	SM		FID=0.0 PID=0.0
32										

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument group C	BORING NO.: SB-501B	PAGE: 2 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501B
PROJECT NO.:	N4236-0320			START DATE:	8/13/02 @ 1025
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/14/02 @ 0840
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
							Driving casing to 34' washing casing out. Discharge has Fine sands and gravel with some mica schist fragments			
34										
	9		OU2-SO-501-3436			Light	Well graded SAND with rock fragments* and gravel, trace		No PACM or MMM was	FID=0.0
	11	0.9	FID=0.0		Medium	brown	silt, some mica schist mixed in.	SW	present in the split spoon.	PID=0.0
	14	2.0	PID=0.0 headspace		Dense				Rock fragments were of	FID=0.0
36	9		8/13/02 1600						mica broken off by the split spoon.	PID=0.0
38							Driving casing to 39' washing casing out. Discharge has medium to coarse grained sand with rock and gravel			
							fragments.			
	13		OU2-SO-501-3941		Medium					FID=0.0
40	18	1.1	FID=0.0		Dense		Coarse to medium grained sand with rocks and gravel, saprolitic, mica schist and trace silt.	GM		PID=0.0
	23	2.0	PID=0.0 headspace							FID=0.0
	17		8/13/02 1645							PID=0.0
42										
							Driving casing to 44' washing casing out. Discharge has large amount of mica and quartz some rock fragments*.		*Rock fragments are quartz and mica pieces broken off by the split spoon. End of day WL 4.7.	
44										
	13		OU2-SO-501-4445	Top			Med-coarse grained SAND, rock fragments, saprolite and			FID=0.0
	14	1.2	FID=1.7	Of			Bedrock in the shoe. Trace silt, fine sand.	GM		PID=0.0
	100/0.4'	1.4	PID=0.0 headspace	Bedrock						FID=0.0
46			8/14/02 0840						Beginning of day WL 10.8'	PID=0.0
			Rock socket boring				Wash water turned a gray brown, material seived out of the			
			begun	4"			Discharge was a gray to black.			
48										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	Notes: PACM = Potentially Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop	MMM = Man Made Material	
METHOD OF ROCK CORING:	NX or NG		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument group C	BORING NO.: SB-501B	PAGE: 3 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501B
PROJECT NO.:	N4236-0320			START DATE:	8/13/02 @ 1025
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/14/02 @ 0840
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 48	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)]
			R1-rec. 54/60 RQD=52%	4"						
50		3:45			Medium Hard	Gray	Schist with high angle fractures and pyrite	Broken	1005 started coring material. The water was a gray color.	
		3:00					Schist with high angle fractures with pyrite. Fractures have 15° angle.			
52		3:05					Fractured weathered schist with mica beds parallel and Perpendicular.	Very Broken		
		3:10					Fractured schist with fracture angles of 15°	Broken	(slickensides along fractures)	
54		3:17	4.3 core barrel is full water won't pump				Fractured schist with quartz veins.		1025 coring of first was completed 52.3'	
53.3		4:20	R2-rec. 60/60" RQD=100%				Schist with quartz veins and fracture angles at 20°.		1142 coring was begun again, The water was gray from the discharge.	
54.3		4:20					Schist with quartz veins, pyrite and fracture angles of 16°.			
55.3		3:15								
56.3		3:20					Schist with bedding planes and fracture angles of 21°.		1205 coring was completed with a full core barrel.	
57.3		3:45					Schist with garnet, pyrite and quartz present in fracture.	Blocky		
58.3		4:15	R3-rec.40/90" RQD=100%				Schist with low angle fractures. Fractures are slightly rounded.		1245 coring was begun again. The discharge was a light to medium gray.	
59.3		4:40					Schist with low angle fractures, rounded edges, some soil Staining and pyrite.			
60.3		3:45					Schist with high fracture angles, garnet, quartz and pyrite. Fracture angles of 7°.		1305 coring was completed and washing of the fines was begun.	
61		2:30		3"	Medium Hard	Gray	Schist with high fracture angles, quartz, garnet and pyrite Observed.			
				EOB @ 61' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material; MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop		
METHOD OF ROCK CORING:	NX or NG		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument group C	BORING NO.: SB-501B	PAGE: 4 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501D
PROJECT NO.:	N4236-0320			START DATE:	9/3/02 @ 1245
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/4/02 @ 1235
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501D
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 ***see boring log SB501B for additional soils and material classification.**	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Brown	* 0'-7' - Material noted from the discharge to the wash tub was a silty sandy GRAVEL.	GW		
2										
4										
6										
							7'-16' - The discharge material was a brown silty SAND, some gravel	SM		
8							and crushed rocks present.			
10										
12										
14										
16										

TYPE OF DRILLING RIG:	CME 75	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash	* see boring log SB501B for additional soils and material classification.	
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-501D	PAGE: 1 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501D
PROJECT NO.:	N4236-0320			START DATE:	9/3/02 @ 1245
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/4/02 @ 1235
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501D
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 16	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)]
						Brown	17'-24' - The discharge material was silty SAND and GRAVEL, some crushed rock from the roller bit.	SW		
18										
20										
22										
24										
							24'-27' - Was silty SAND, some gravel and some clay.	SM		
26										
28										
							28'-45' - Was a well sorted poorly graded SAND and GRAVEL.	SW		
30							29'-29.5' - A quartz cobble was encountered			
32										

TYPE OF DRILLING RIG:	CME 75	Note: * see boring log SB501B for additional soils and material classification.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-501D	PAGE: 2 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501D
PROJECT NO.:	N4236-0320			START DATE:	9/3/02 @ 1245
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/4/02 @ 1235
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501D
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32						Brown	* Poorly graded SAND and GRAVEL, some rock fragments from the roller bit.	SW		
34										
36										
38										
40										
42										
44										
				EOB @ 45' bgs						

TYPE OF DRILLING RIG:	CME 75	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash	* see boring log SB501B for additional soils and material classification.	
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-501D	PAGE: 3 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-501S
PROJECT NO.:	N4236-0320			START DATE:	8/15/02
LOGGED BY:	J. Lambert for C. Meyer	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/15/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-501S
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
							Refer to boring log SB-501B for soil classification details			
5										
10										
15										
20				EOB @ 19' bgs						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash casing		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-501S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-502B
PROJECT NO.:	N4236-0320			START DATE:	8/13/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/20/02
DRILLED BY (Company/Driller):	ADT/ Lloyd Adams			MON. WELL NO.:	MW-502B
GRD. SURFACE ELEVATION:	13.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	11		S-1 @ 1350		Medium				Angular grains	FID=0.0
	10	1.5'		Fill	Dense	Black	Top .5' coarse SAND and GRAVEL	GW	Dry	PID=0.0
	13	2.0'	FID/PID			Light				FID=0.0
2	14	2" spoon	headspace 0.0/0.0			Brown	Bottom 1' SILT with fine sand and trace clay	ML		PID=0.0
	9		S-2 @ 1444			Light	Top .8' very fine SAND and SILT trace gravel		Subrounded gravel	FID=0.0
	16	1'				Brown				PID=0.0
	16	2.0'				Black and	Bottom .2' very fine SAND and trace silt very micaceous			FID=0.0
4	17	3" spoon	headspace 7.0/0.0			Gray				PID=0.0
	21		S-3 @ 1500				Top .7' very fine SAND and SILT with some cobbles		Fragments > 2"	FID=0.0
	32	1.5'						GM	Dry	PID=0.0
	33	2.0'			Very		Bottom .8' fine-coarse SAND with some gravel, red brick			FID=2.4
6	36	3" spoon	headspace 17.9/0.0		Dense	Brown		GW	Asphalt chunk @ 6'	PID=0.0
	24		S-4 @ 0950			Olive	Fine-coarse SAND with trace silt, trace subrounded		Dry	FID=0.0
	20	1.2'			Dense	Gray	gravel and red brick fragments	SW		PID=0.0
	21	2.0'								FID=0.0
8	17	3" spoon	headspace 42.5/0.0							PID=0.0
	13		S-5 @ 0953			Olive	SILT, trace fine-coarse SAND		Moist	FID=4.5
	7	.8'			Stiff	Gray and		ML		PID=0.0
	8	2.0'				Green				FID=4.0
10	9	3" spoon	headspace 91/15.2						5" casing to 10'	PID=0.0
	12		S-6 @ 1043						Moist	FID=2.1
	6	1.1'			Stiff	Green and			Telescope 4" casing	PID=0.0
	8	2.0'				Black				FID=2.0
12	7	2" spoon	headspace 12.4/0.0						Wet	PID=0.0
	8		S-7 @ 1052			Olive				FID=1.2
	13	1.3'			Dense	Green			Wet, water table at 12'	PID=0.0
	17	2.0'				and black				FID=1.1
14	16	2" spoon	headspace 26.1/0.0							PID=0.0
	4		S-8 @ 1147			Olive				FID=0.0
	3	1.5'				Green				PID=0.0
	4	2.0'				and brown				FID=0.0
16	7	2" spoon	headspace 6.3/0.0							PID=0.0

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 10' 4" casing to 32'		
METHOD OF SOIL SAMPLING:	3" & 2" split spoons, 2' samples lengths, 140lb hammer		
METHOD OF ROCK CORING:	3" diamond bit core barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-502B	PAGE: 1 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-502B
PROJECT NO.:	N4236-0320			START DATE:	8/13/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/20/02
DRILLED BY (Company/Driller):	ADT/ Lloyd Adams			MON. WELL NO.:	MW-502B
GRD. SURFACE ELEVATION:	13.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
				Drive and Wash						
18										
20	6		S-9 @ 1252							
	5	0					0 recovery			
	4	2	headspace							
	4	2" spoon								
22										
				Drive and wash						
24									*Needed to drive 3" spoon	
	10		S-10 @ 1340						from 24-26' first attempt with 2" spoon had 0 recovery.	FID=0.0
	15	1.8	OU2-SO-502-2426		Medium	Brown	Fine-coarse SAND; subrounded coarse sand	SW		PID=0.0
	12	2	headspace 3.5/0.0		Dense	↓		↓		FID=0.0
26	11	3" spoon							Wet	PID=0.0
				Drive and Wash						
28										
30	4		S-11 @ 1415							FID=0.0
	5	1.5	OU2-SO-502-2931		Medium	Brown	Fine-coarse SAND, subrounded coarse sand	SW		PID=0.0
	8	2	headspace 11.6/0.0		Dense	↓		↓	Unable to push past 32'	FID=0.0
	8								Wet	PID=0.0
32							4" refusal @ 32'			

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	3" & 2" split spoons, 2' sample lengths, 140lb hammer		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Sent S-10 & S-11 to lab for confirmatory analysis	BORING NO.: SB-502B	PAGE: 2 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-502B
PROJECT NO.:	N4236-0320			START DATE:	8/13/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/20/02
DRILLED BY (Company/Driller):	ADT/ Lloyd Adams			MON. WELL NO.:	MW-502B
GRD. SURFACE ELEVATION:	13.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET)	BLOWS PER 6" / core time	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)]
32										
	100	.1 / .1			Hard	Green	Bedrock @ 32' Schist fragments in spoon			FID=0.0 PID=0.0
34							4" rock socket 32-34'			FID=0.0 PID=0.0
	9:15		C-1 @ 1225 34'-39'				34-36.8'- Schist bedrock with pyrite, micas, and quartz. Horizontal fractures	Very Broken	Moderate weathering	FID=0.0 PID=0.0
36	10:15	5	RQD=80%							FID=0.0 PID=0.0
	10:31	5					36.8-39'- Schist. High angle quartz veins. High angle fractures			FID=0.0 PID=0.0
38	9:14								Slight Weathering	FID=0.0 PID=0.0
	8:14									FID=0.0 PID=0.0
40	4:21					Green and Pink	39-41' mica, quartz, rich Schist with pink feldspar. High Angle fractures	Broken		FID=0.0 PID=0.0
	4:10		C-2 @ 1136 39'-44'						@ 41' oxidized	FID=0.0 PID=0.0
42	4:38		RQD=80%			Green	41-44' few high angle fractures, slight weathering			FID=0.0 PID=0.0
	6:21								Losing water @ 43'	FID=0.0 PID=0.0
44	5:45									FID=0.0 PID=0.0
	11:21		C-3 @ 1405 44'-47'				44-47' mica and quartz rich Schist	Massive	Solid	FID=0.0 PID=0.0
46	11:42		RQD=100%				No natural fractures			FID=0.0 PID=0.0
	10:29						Wavy lamination			
48				EOB @ 47' bgs			Total depth 47' bgs			

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:	3" diamond bit core barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Set 2" well @ 44.6' bottom of screen	BORING NO.: SB-502B	PAGE: 3 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-502D
PROJECT NO.:	N4236-0320			START DATE:	9/12/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/12/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-502D
GRD. SURFACE ELEVATION:	13.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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				0.5' Asphalt		Light Brown	Sandy; fine-coarse SAND, some gravel	SW		
2										
			1350 (3ft)							FID=45.5 PID=0.0
4							Brick at 4'			
6										
			1405 (7ft)				Sandy; medium-coarse SAND, some gravel. Organic, thick scum on wash water, some organics			
8										FID=2.5 PID=2.9
10							Sandy; medium-coarse SAND, some gravel, no organics			
12										
			1415 (12 ft)							FID=6.9 PID=1.7
14										
			1425 (15 ft)				Sandy; fine-coarse SAND			
16										FID=0.0 PID=1.9

TYPE OF DRILLING RIG:	2" well rig (rig #2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	* N/A (jar headspace grab from wash water only)		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Refer to boring log for MW-502B for details; Note – anthropogenic material to at least 4'	BORING NO.: SB-502D	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-502D
PROJECT NO.:	N4236-0320			START DATE:	9/12/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/12/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-502D
GRD. SURFACE ELEVATION:	13.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
						Light Brown	Sandy; fine-coarse SAND	SW		
18										
							Sandy; coarse SAND, trace gravel			
20								SP		
			1515 (21 ft)							
22										FID=1.2 PID=0.0
							Sandy; coarse SAND, some gravel			
24										
26										
			1535 (27 ft)							
28							Sandy; medium-coarse SAND, trace gravel			FID=0.0 PID=0.0
								SW		
30							GRAVEL, some coarse sand			
								GP		
32				EOB @ 32' bgs						

TYPE OF DRILLING RIG:	2" well rig (rig #2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	N/A (jar headspace grab from wash water only)		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Refer to boring log form MW-502B for details	BORING NO.: SB-502D	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-502S
PROJECT NO.:	N4236-0320			START DATE:	9/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/16/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-502S
GRD. SURFACE ELEVATION:	13.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
						Light	Sandy; fine-coarse SAND, some gravel. Also some wood,	SW	Light brown wash water	
2						Brown	Brick pieces			
			1200*							
4			3'							FID=0.0 PID=0.0
6							Sandy; fine-coarse SAND, some gravel, some wood pieces			
									Wash water has thick green-brown organic "skin" with bubbles	
8							GRAVEL, some coarse sand, trace brick			
			1225*						Green-brown wash water	
10			9'							FID=0.0 PID=0.0
12									Slight Sheen on water	
14										
16										

TYPE OF DRILLING RIG:	2" well rig (rig #2) CME 45			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash			
METHOD OF SOIL SAMPLING:	Check from wash cuttings only	*Samples for jar headspace only		
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	10.3' from MW-502D			
OTHER OBSERVATIONS:	Replaced water in tub 2 times due to loss of water into formation.	BORING NO.:	SB-502S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-502S
PROJECT NO.:	N4236-0320			START DATE:	9/16/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/16/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-502S
GRD. SURFACE ELEVATION:	13.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
			1240*			Light	GRAVEL, some coarse sand	GP	Green-brown wash water	
			17'			Brown				FID=0.0
18							Medium-coarse SAND, trace gravel	SW	Slight sheen on water	PID=0.0
20				EOB @ 19.5' bgs						

TYPE OF DRILLING RIG:	2" well rig (rig #2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Check from wash cuttings only	*Samples for jar headspace only	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	10.3' from MW-502D		
OTHER OBSERVATIONS:		BORING NO.: SB-502S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503B
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1030
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/20/02 @ 1350
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-503B
GRD. SURFACE ELEVATION:	6.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	5	1.3' / 2.0'	*OU2-SO-503B-0002	Sand	Medium	Gray	Fine to medium grained SAND, trace silt and rock fragments	SP	No MMM or PACM present. The soil was very dry	FID=0.0
	11		FID=0.0		Dense					PID=0.0
	11		PID=0.0 headspace			Light	Fine to medium grained SAND, trace silt, rock fragments, & gravel			FID=0.0
2	28		8/16/02 1040			brown				PID=0.0
	19	1.2' / 2.0'	OU2-SO-503B-0204**						No MMM or PACM present. Phragmites, roots, mica, schist in sample shoe, very dry	FID=78.2
	10		FID=5.4 8/16/03							PID=0.0
	12		PID=0.0 headspace	Organic		Brown to	Organic SILT; roots, trace gravel and clay			FID=0.0
4	25		DUP-01 1140 1130	Silt		Black		OL		PID=0.0
	6	0.6' / 2.0'	OU2-SO-503B-0406				Coarse grained SAND and gravel		No MMM or PACM present. Sand and gravel appears to be sluff, wet due to washing	FID=0.0
	9		FID=53.5	Sand &	Loose	Dark Gray		GM		PID=0.0
	5		PID=0.0 headspace	Gravel		to black	Fine sandy SILT, some organics			FID=0.0
6	3		8/19/02 1055					OL		PID=0.0
	1	0.6' / 2.0'	OU2-SO-503B-0608		Very loose		Coarse grained SAND to gravel, sluff		No MMM or PACM present. 5" casing driven to 8'2".	FID=0.0
	1		FID=0.0					GM		PID=0.0
	1		PID=0.0 headspace				Organic SILT, some fine sand, some roots			FID=0.0
8	1		8/19/02 1115	Organic				OL		PID=0.0
	1	1.2' / 2.0'	OU2-SO-503B-0810	Silt					No MMM or PACM present. 4" casing driven to 10', sulfur odor present	FID=144
			FID=131							PID=0.0
	1/12"		PID=0.0 headspace							FID=144
10	1		8/19/02 1140							PID=0.0
	4	1.6' / 2.0'	OU2-SO-503B-1012				Organic SILT, trace fine sand, rocks, gravel and roots		No MMM or PACM present, sulfur odor observed	FID=130
	2		FID=297							PID=0.0
	2		PID=0.0 headspace							FID=182
12	2		8/19/02 1245							PID=0.0
							Began setting up for interval sampling. Material in wash water was gray with a few small rocks			
14										
	3	2.0' / 2.0'	OU2-SO-503B-1410				Organic SILT with peat, trace sand and trace gravel		No MMM or PACM present, sulfur odor very	FID=145
	2		FID=248							PID=0.0
	4		PID=1.5 headspace							FID=245
16	2		8/19/02 1310							PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes: PACM= Potentially Asbestos Containing Material MMM= Man Made Material * sample used for MS/MSD ** sample was used for Dup-01 assigned time 1140	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash 4" casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID F PID A	BORING NO.: SB-503B	PAGE: 1 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503B
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1030
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/20/02 @ 1350
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-503B
GRD. SURFACE ELEVATION:	6.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
				Organic silt		Gray to Black	Material from the discharge line to the mud pan was a gray to black. Some small rocks.			FID=0.0 PID=0.0
18										FID=0.0 PID=0.0
20	7 10	1.3'	OU2-SO-503B-1921 FID=233	Sand	Loose	Gray	Well graded SAND, trace gravel and rock fragments.	SW	No PACM or MMM present. No sulfur odor was present. Wet.	FID=143 PID=0.0
	8 6	2.0'	PID=0.0 headspace 8/19/02 1335							FID=87 PID=0.0
22										
24										
	2 3	1.0'	OU2-SO-503B-2426 FID=145		Very Loose	Light Gray to brown	Well graded SAND, some gravel and rock fragments.		No PACM or MMM present. No odor was present, wet.	FID=0.0 PID=0.0
26	4 4	2.0'	PID=0.0 headspace 8/19/02 1345							FID=0.0 PID=0.0
28										
30	8 10	0.8'	OU2-SO-503B-2931 FID=76.2		Medium Dense	Orange	Well graded SAND, some gravel. The gravel was rounded and trace rock fragments were observed.		No PACM or MMM present. No odors present, wet.	FID=0.0 PID=0.0
	14 12	2.0'	PID=0.0 headspace 8/19/02			to light Brown				FID=0.0 PID=0.0
32										

TYPE OF DRILLING RIG:	CME 75	Notes: PACM= Potentially Asbestos Containing Material MMM= Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. Hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID F PID A	BORING NO.: SB-503B	PAGE: 2 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503B
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1030
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/20/02 @ 1350
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-503B
GRD. SURFACE ELEVATION:	6.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
				Sand			Coarse grained sand and gravel. Discharge water was a light brown.			
34										
	3	0.5' / 2.0'	OU2-SO-503B-3436		Very loose	Brown to	Well graded SAND, some gravel, trace silt and angular rock	SW	No PACM or MMM	FID=0.0
	7		FID=1.4		loose	gray	fragments.		present. No odor was	PID=0.0
	8		PID=0.0 headspace						noted, wet.	FID=0.0
36	8		8/19/02 1430							PID=0.0
							Coarse grained sand and gravel from discharge line of the well. The water was a gray to light brown.			
38										
	2	0.4' / 2.0'	OU2-SO-503B-3941		Very		Well graded SAND, some gravel and rock fragments, trace		No PACM or MMM	FID=0.0
40	2		FID=378		Loose		silt.		present. No odor was noted, wet.	PID=0.0
	3		PID=0.5 headspace							FID=0.0
	4		8/19/02 1455							PID=0.0
42							The material was a brown coarse to medium grained sand with rounded gravel.			
44										
	7	0.0' / 2.0'	OU2-SO-503B-4446				A quartz cobble was found in the drive shoe GRAVEL and		No PACM or MMM	
	5		FID=N/A	Gravel	Loose		SAND were observed.		present. No odor was	
	4		PID=N/A headspace						noted, wet.	
46	4		8/19/02							
	3	0.0' / 2.0'	OU2-SO-503B-4648				Rounded GRAVEL and some sands were noted in the shoe.		2" split spoon was driven	
	4		FID=N/A						by 300 lb. hammer.	
	5		PID=N/A headspace							
48	6		8/19/02							

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	Notes:	
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop	PACM= Potentially Asbestos Containing Material	
METHOD OF ROCK CORING:	NX or NQ	MMM= Man Made Material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID=F PID=A	BORING NO.: SB-503B	PAGE: 3 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503B
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1030
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/20/02 @ 1350
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-503B
GRD. SURFACE ELEVATION:	6.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
				gravel						
50	3 5	0.8' / 2.0'	OU2-SO-503B-4951 FID=0.0		Loose		Medium to coarse grained sandy GRAVEL, poorly graded rounded gravel, some fine sand and trace silt.	GP	3" spoon was used for recovery. NO PACM or MMM was noted, wet.	FID=0.0 PID=0.0
	5 6		PID=0.0 headspace 8/19/02 1620							FID=0.0 PID=0.0
52										
54										
	3 3	1.1' / 2.0'	OU2-SO-503B-5456 FID=19.4		Very Loose	Light Gray	Medium to coarse grained SAND, some gravel, trace silt to 0.9'	SP	No PACM or MMM was observed in the split spoon.	FID=0.0 PID=0.0
56	4 6		PID=0.0 headspace 8/20/02 0840	Silty Sand		Light Brown	0.9 to 1.1' - fine grained silty SAND.	SM		FID=0.0 PID=0.0
58							Discharge water turned gray, no fines were left in the strainer.			
										FID=0.0 PID=0.0
60	2 4	1.3' / 2.0'	OU2-SO-503B-5961 FID=37.9		Very Loose	Gray	Fine SAND and SILT with no rocks or gravel fragments.	SM		FID=0.0 PID=0.0
	6 8		PID=0.0 headspace 8/20/02 0920		Loose					FID=0.0 PID=0.0
62							Discharge water was a gray color, nothing was found in the strainer, drilling went very easy.			
64										

TYPE OF DRILLING RIG:	CME 75	Notes: PACM= Potentially Asbestos Containing Material MMM= Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID=F PID=A	BORING NO.: SB-503B	PAGE: 4 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503B
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1030
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/20/02 @ 1350
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-503B
GRD. SURFACE ELEVATION:	6.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
64										
	2		OU2-SO-503B-6466	Silty	Very		Clayey SILT, trace sand, no rocks or gravel 0.6'		No MMM or PACM was	FID=0.0
	4	1.3'	FID=19.4	clay	Loose	Gray		SC	observed in the split	PID=0.0
	6	2.0'	PID=12.8 headspace			Light	Sandy, Clayey SILT, trace medium sand in bands and rock		spoon.	FID=0.0
66	8		8/20/02 1000		Loose	Brown	fragments.	SM		PID=0.0
							The discharge water was a light brown in color with gravel and rock fragments from the water.			
68										
70	3	1.1'	OU2-SO-503B-6971	Sand	Very		Well graded SAND, some rounded gravel, trace silt.			FID=0.0
	5		FID=50.7		Loose			SW		PID=0.0
	6	2.0'	PID=11.3 headspace							FID=0.0
	10		8/20/02 1045		Loose					PID=0.0
72										
74										
	3		OU2-SO-503B-7476	Sandy		Light	Sandy SILT, trace clay 0.5'			FID=0.0
	6	1.2'	FID=77.2	Silt	Loose	Brown		ML		PID=0.0
	7	2.0'	PID=19.3 headspace			Light	Fine to medium grained SAND, no rock fragments or gravel.			FID=0.0
76	10		8/20/02 1130	Sand	Loose	Brown		SP		PID=0.0
78										
80	2	1.3'	OU2-503B-7980		Very		Fine grained SAND, some silt, no gravel or rock			FID=0.0
	2	2.0'	FID=137		Loose		fragments. One clay lamination.	SM		PID=0.0

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	Notes: PACM= Potentially Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop	MMM= Man Made Material	
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID=F PID=A	BORING NO.: SB-503B	PAGE: 5 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503B
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1030
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/20/02 @ 1350
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-503B
GRD. SURFACE ELEVATION:	6.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
	4	1.3'	PID=31.7 headspace			Light	Was noted at 0.1 foot above the bottom of the shoe.		No PACM or MMM was observed in the split spoon.	FID=0.0
	7	2.0'	8/20/02 1245		Loose	Brown				PID=0.0
82										
84										
	21		OU2-SO-503B-8485.5				Sandy SILT, some rocks and gravel 0.5'.			FID=0.0
	35	1.3'	FID=51.7		Hard		Sandy SILT, no rocks or gravel 0.5'-0.9'.	ML		PID=0.0
	100 0.5	1.5'	PID=15.9 headspace				Potential saprolite mica schist with silty clay and gravel.			FID=0.0
86			8/20/02 1350							PID=0.0
				Refusal Add Sample for Complete Rock.						
88										
90				Rock Socket						
		Core Times	run 1							
92		6:18	RQD=39"/60" = 65%		Medium Soft	Gray	Highly weathered rock 0-0.5', high angle fractures in mica schist pyrite on fracture plains slightly rounded fractures,	Very Broken	0840 coring run 1 was begun, the water was a gray color.	
		4:30			Medium Hard		Some, silt on bedding. Low to high angle fractures with rounded edges, some pyrite fractures are along the bedding	Broken		
94		4:00					plains. Low angle fractures along bedding plains. Weathered, rounded fracture with pyrite and silt mica schist.	Broken		
		3:50					Low angle fractures with quartz in fractures, some pyrite, some garnets present in mica schist.			
96		3:40					High angle fractures with quartz veins in fracture zone slightly weathered with pyrite and silt present in mica schist.	Blocky	0905 coring run 1 was completed to 96'.	

TYPE OF DRILLING RIG:	CME 75	Notes: PACM= Potentially Asbestos Containing Material; MMM= Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID=F PID=A	BORING NO.: SB-503B	PAGE: 6 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503B
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1030
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/20/02 @ 1350
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-503B
GRD. SURFACE ELEVATION:	6.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 96	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)]
		3:30	run 2 RQD=39"/60" =65%	Schist	Medium Hard	Gray	Low angle fractures, weathered fractures with silt and some rounding.	Blocky	Coring run started 0915	
98		3:30					Fractures with quartz intrusions, highly fractured weathered zone 0.6-0.8' rounding had occurred.			
		3:20					High angle fracture with fractures having silt deposits, some rounding.			
100		3:15					0.3-0.7' was highly fractured. High angle fractures and rounding and silt present.	Broken		
		3:50	run 3 RQD=33"/36" = 92%				High angled fractures with silt and slightly rounded edges.		Coring run completed 0935	
102		5:00		Quartz		White	Quartz layer begins at 102.5' and went to 103.8' with parallel fractures in the quartz.		Coring run started 0950	
		5:35				White				
104		4:00		Schist		Gray	Low angle fracture in the schist. The quartz to schist zone was highly fractured and rounded.		Coring run completed 1005	
				EOB @ 104' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: PACM= Potentially Asbestos Containing Material; MMM= Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID=F PID=A	BORING NO.: SB-503B	PAGE: 7 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503D
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1115
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/17/02 @ 1530
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503D
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 *Refer to boring log SB-503B for material classifications*	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
			***no sample collecting**	(1)	(1)		0'-10' - Mostly fine-coarse SAND, some silt, trace fine gravel	(1)	5" casing drive to 10' bgs, into organic layer sealing fill zone.	
2										FID=0.0 PID=0.0
4										
6										
							Ambient air readings within breathing zone recorded. Readings of 0.0 ppm were recorded @ 1200 and 1300.			
8										
				Bottom of 5" @ 10'		Brown/ Dark	Wash water discharge brown to dark brown @ approx. ± 8-10' bgs.		5" casing and tub flushed out, cuttings removed and fresh water for 4" casing drive and wash to refusal.	
10						Brown				FID=0.0 PID=0.0
							10'-16' – wash water = fine-coarse SAND, some silt. No odor from 10'-20' bgs		Telescope 4" casing starting @ 10' bgs.	
12				4" Casing						
14										
16										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Note: (1) refer to boring log sheet SB-503B for material descriptions	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	Nx or Nq		
GROUNDWATER LEVELS:	3.9' bgs @ 9-17-03		
OTHER OBSERVATIONS:	FID (B) PID (B); Ambient air readings within breathing zone	BORING NO.: SB-503D	PAGE: 1 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503D
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1115
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/17/02 @ 1530
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503D
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
			*no sample collecting	(1)	(1)		10'-20' bgs wash water discharge = Fine-coarse SAND, some silt. No odor from 10-20' bgs.	(1)	4" casing drive and washed to 30' bgs	
18				4" Casing						
20										
22						Brown - Grayish	20'-30' bgs wash water discharge = same type of material as noted in discharge through 10'-20' zone.			
24										
26										
28										
30										
32							30'-40' bgs wash water = fine-coarse SAND, some silt, trace fine gravel, no odor.		4" casing driven and washed to 45' bgs	

TYPE OF DRILLING RIG:	CME 75	Note: (1) refer to boring log sheet SB-503B for material descriptions	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	Nx or Nq		
GROUNDWATER LEVELS:	3.9' bgs @ 9-17-03		
OTHER OBSERVATIONS:	FID (B) PID (B); Ambient air readings within breathing zone	BORING NO.: SB-503D	PAGE: 2 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503D
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1115
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/17/02 @ 1530
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503D
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
			*no sample collecting	(1) 4" Casing	(1)	Brown	30-40' bgs wash water discharge = fine-coarse SAND, some silt, trace fine gravel, no odor.	(1)	4" casing driven and washed to 45' bgs.	
34										
36										
38										
40										
42										
44										
									Breathing zone reading @ 1540	FID=0.0 PID=0.0
46							45-55' bgs wash water discharge = fine-coarse SAND, some silt, trace fine gravel. Feldspar, quartz, biotite, muscovite, gneiss			
							noted; No odor.		4" Casing driven to 55'	
48										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Note: (1) refer to boring log sheet SB-503B for material descriptions	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	Nx or Nq		
GROUNDWATER LEVELS:	3.9' bgs @ 9-17-03		
OTHER OBSERVATIONS:	FID (B) PID (B); Ambient air readings within breathing zone	BORING NO.: SB-503D	PAGE: 3 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503D
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1115
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/17/02 @ 1530
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503D
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
			*no sample collecting	(1) 4" Casing	(1)	Brown	48'-55' bgs wash water discharge = fine-coarse SAND, some silt, trace fine gravel, feldspar, quartz, biotite, muscorite,	(1)		
50							and gneiss noted.			
52										
54										
56						Brown - Orange	55-60' bgs wash water discharge = fine-coarse SAND, some silt, trace fine gravel.			
58										
60										
62							60-65' bgs advanced 4" casing with 300 lb. hammer			
64										

TYPE OF DRILLING RIG:	CME 75	Note: (1) refer to boring log sheet SB-503B for material descriptions	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	Nx or Nq		
GROUNDWATER LEVELS:	3.9' bgs @ 9-17-03		
OTHER OBSERVATIONS:	FID (B) PID (B); Ambient air readings within breathing zone	BORING NO.: SB-503D	PAGE: 4 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503D
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1115
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/17/02 @ 1530
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503D
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
64										
			*no sample collecting	(1) 4" Casing	(1)	Gray/ Green	64-66' bgs wash water discharge = fine SAND, some silt, trace clay.			
66										
						Brown	66.5' SAND and GRAVEL, wash water = fine-coarse sand, some silt, trace fine gravel.			
68										
			Monday 9/16/02 end of day 4" casing @ 70'bgs						Change out 300 lb. hammer rope for new rope.	
70										
							70-80' wash water discharge = fine-coarse SAND, trace silt, no odor.		70-75' drive 4" casing with 300 lb. hammer.	
72									Breathing zone reading @ 0900	FID=0.0 PID=0.0
74										
76										
78									Breathing zone	FID = 0.0 PID = 0.0
80										

TYPE OF DRILLING RIG:	CME 75		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Note: (1) refer to boring log sheet SB-503B for material descriptions	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	Nx or Nq		
GROUNDWATER LEVELS:	3.9' bgs @ 9-17-03		
OTHER OBSERVATIONS:	FID (F) PID (E); Ambient air readings within breathing zone	BORING NO.: SB-503D	PAGE: 5 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503D
PROJECT NO.:	N4236-0320			START DATE:	9/16/02 @ 1115
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/17/02 @ 1530
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503D
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
			*no sample collecting	4" Casing	(1)	Brown		(1)		
82							81-85' wash water discharge = fine sand, some silt.			
84										
									Possible weathered bedrock encountered approx. 86.5'.	
86							Bedrock encountered @ 87.2' bgs, discharge water has fine flake of fragment rock material, brown and oxidized in color,			
							micas, quartz, gneiss.			
88				EOB @ 87.2' bgs			*Well construction – details refer to well construction log sheet for MW-503D*			

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Note:		
METHOD OF SOIL SAMPLING:	2" or 3" split spoon	(1) refer to boring log sheet SB-503B for material descriptions		
METHOD OF ROCK CORING:	Nx or Nq			
GROUNDWATER LEVELS:	3.9' bgs @ 9-17-03			
OTHER OBSERVATIONS:	FID (F) PID (E); Ambient air readings within breathing zone	BORING NO.:	SB-503D	PAGE: 6 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503M
PROJECT NO.:	N4236-0320			START DATE:	9/17/02 @ 1545
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/18/02 @ 1200
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503M
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 *Refer to Sb-503 boring log for material classification*	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0										
			*no sample collecting	(1) 5" Casing	(1)	Brown	0-10' wash water discharge = fine-coarse SAND trace silt, trace fine gravel, no odor, approaching 7-10' organic layer	(1)	5" casing advanced to 9.5' bgs with in the organic layer from 7-10'.	
2							(refer to SB-503B logs), dark brown, slight organics odor, fine-coarse SAND, some silts, trace fine gravel.			
4										
6										
8										
10				9.5'						
				4" Casing		Dark Brown - Black	10-20' wash water discharge = fine-medium SAND, some silt, trace fine gravel, organic odor.			
12										
14										
16										

TYPE OF DRILLING RIG:	CME 75	Note: (1) refer to SB-503B boring log sheet.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-503M	PAGE: 1 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503M
PROJECT NO.:	N4236-0320			START DATE:	9/17/02 @ 1545
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/18/02 @ 1200
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503M
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
			*no sample collecting	(1)	(1)	Dark Brown -	10'-20' wash water = fine-medium SAND, some silt, trace fine gravel, organic odor.	(1)		
18				4" Casing		Black				
20										
						Dark Brown	20'-30' wash water discharge = fine-coarse SAND, trace silt, trace fine gravel, no noticeable odors.			
22										
									Breathing zone recorded @ 0930	FID=0.0 PID=0.0
24										
26										
28										
30							30-43'- wash water discharge = fine-coarse SAND, trace silt, trace fine gravel, no noticeable odors.			
32										

TYPE OF DRILLING RIG:	CME 75	Note: (1) refer to SB-503B boring log sheet.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-503M	PAGE: 2 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503M
PROJECT NO.:	N4236-0320			START DATE:	9/17/02 @ 1545
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/18/02 @ 1200
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503M
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
			*no sample collecting	(1) 4" Casing	(1)	Dark Brown	30'-43' – wash water discharge = fine-coarse SAND, trace silt, trace fine gravel, no noticeable odor.	(1)		
34										
36										
38			5' screen screened interval							
40			37-42' bgs							
42										
44			Sump approx. 1.2' in length 42-43.2' bgs	EOB @ 43.2' bgs			43.2' bottom of 4" casing			

TYPE OF DRILLING RIG:	CME 75	Note: (1) refer to SB-503B boring log sheet.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-503M	PAGE: 3 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-503S
PROJECT NO.:	N4236-0320			START DATE:	9/18/02 @ 1230
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/18/02 @ 1430
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-503S
GRD. SURFACE ELEVATION:	6.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 *Refer to SB-503B log sheets for material classifications*	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
			*no sample collecting	(1) 4" Casing	(1)	Dark Brown / Black	0-7' wash water discharge = fine-coarse SAND, trace silt and fine gravel; no noticeable odor.	(1)		
2										
4										
6										
8				EOB @ 7' bgs						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash	Note: (1) refer to SB-503B log sheets	
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-503S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504B
PROJECT NO.:	N4236-0320			START DATE:	8/21/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/Lloyd Adams			MON. WELL NO.:	MW-504B
GRD. SURFACE ELEVATION:	9.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	13		S-1 @ 1047		Very		Schist GRAVEL >2" and SAND		Drillers switch to 300 lb.	FID=0.0
	30	1' / 1.5'			Hard	Brown		GW	Hammer to get to 4'.	PID=0.0
	100/.5									FID=0.0
2		3" spoon				Green			Dry	PID=0.0
	9		S-2 @ 1111		Medium	Brown &	Top .5' schist GRAVEL and SAND.		Tile waste 2.5'-3.5'	FID=40
	9	2' / 2'	OU2-SO-504B-0204	Tile	Dense	Green	Bottom 1.5' TILE (fibrous) sand and gravel		Dry	PID=0.0
	13		Hs = FID=1.4 PID=0.0	Fill		White &	medium-coarse SAND with trace gravel.			FID=13
4	10	3" spoon	1115			Brown			Staining @ 4'	PID=0.0
	6		S-3 @ 1125		Medium				Moist	FID=0.0
	10	1.4' / 2'	OU2-SO-504B-0406	Fill	Dense	Brown		SW		PID=0.0
	9		Hs = FID=0.0 PID=0.0							FID=0.0
6	12	3" spoon	1210							PID=0.0
	10		S-4 @ 1142		Medium					FID=0.0
	9	2' / 2'	OU2-SO-504B-0608		Dense		fine-medium SAND, trace silt		Saturated	PID=0.0
	9		Hs = FID=34 PID=3.9							FID=0.0
8	10	3" spoon							Staining @ 8'	PID=0.0
	7		S-5 @ 1310		Medium				Going to sample standard	FID=0.0
	8	.7' / 2'	OU2-SO-504B-0810		Dense		Silty fine SAND	SM	intervals.	PID=0.0
	7		Hs = FID=0.0 PID=0.0	Natural					drove 5" to 9'	FID=0.0
10	9	2" spoon							wet	PID=0.0
				Drive &			- Set 5" casing to 9' Telescope 4" casing			
				Wash						
12										
14										
	6		S-6 @ 1630		Medium	Light			Wet	FID=0.0
	7	1.2' / 2'			Dense	Brown	Silty fine SAND, some clay	SM		PID=0.0
	9		Hs = FID=0.0 PID=0.0							FID=0.0
16	9	2" spoon								PID=0.0

TYPE OF DRILLING RIG:	CME 75
METHOD OF ADVANCING BORING:	Drive and wash w/ 5" and 4" casing
METHOD OF SOIL SAMPLING:	3" and 2" split spoons 2' sample lengths 140 lb. Hammer
METHOD OF ROCK CORING:	3" Diamond Bit Core Barrel
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	Collect 3 additional spoons to 6' for sampling purposes. Collect OU2-SO-Dup-02 @ 4-6' Collected full suite analysis on 2-4' & 4-6' (samples 2 &3)

Tetra Tech NUS,

BORING NO.: SB-504B

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504B
PROJECT NO.:	N4236-0320			START DATE:	8/21/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/Lloyd Adams			MON. WELL NO.:	MW-504B
GRD. SURFACE ELEVATION:	9.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
				Drive & Wash			- Silty and sandy cuttings			
18									EOB @ 19' bgs on 8-21-02	
			OU2-SO-504-1921 @ 0925 S-7 @ 0921							
20	6 / 8	1.5' / 2" spoon			Medium Dense	Dark Brown	Silty fine SAND, trace clay	SM	Wet	FID=0.0 PID=0.0
	12 / 12	2'	FID=1.5 PID=0.0 Headspace			↓	↓			FID=0.0 PID=0.0
22				Drive & Wash			- Sand cuttings			
24										
	3 / 4	1.4' / 2" spoon	S-8 @ 0956 OU2-SO-504-2426 @ 1000 FID=86 PID=0.0 headspace		Loose	Brown	Fine-coarse SAND (rounded)	SW	Wet	FID=1.5 PID=0.0
26	4 / 6	2'				↓	↓	↓		FID=3.1 PID=0.0
				Drive & Wash			- Sand cuttings			
28										
									Wet	
30	3 / 3	1.2' / 2" spoon	S-9 @ 1037 OU2-SO-504-2931 @ 1040 FID=162 PID=0.0 headspace		Loose	Brown/ Gray	Coarse SAND, some fine-medium grains & fine gravel.	SW	Rounded grains	FID=16.1 PID=0.0
	4 / 6	2'				↓		↓		FID=7.1 PID=0.0
32										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash		
METHOD OF SOIL SAMPLING:	2" & 3" split spoon 2' sample lengths 140 lb. hammer		
METHOD OF ROCK CORING:	3" Diamond Bit Core Barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Sent S-8, S-9, & S-10 to lab for confirmatory analysis	BORING NO.: SB-504B	PAGE: 2 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504B
PROJECT NO.:	N4236-0320			START DATE:	8/21/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/Lloyd Adams			MON. WELL NO.:	MW-504B
GRD. SURFACE ELEVATION:	9.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
			Drive & wash to 34'							
									Wet	
34	21	.5' / 2'	S-10 @ 1148		Very		Clayey SILT & angular GRAVEL of schist, quartz & micas			FID=0.0
	20		OU2-SO-504-3436		Dense	Brown		GM		OID=0.0
	17	2" spoon	@ 1200 FID=31.2		And hard	Green/				FID=0.0
	16		PID=0.0 headspace			Black				PID=0.0
36				Drive & Wash			- Sandy cuttings			
38										
		0' / 2'	S-11 @ 1236	No Sample			0 recovery			
40	11	2" spoon					Coarse sand on spoon walls			
	10									
	9			Drive & Wash			- Sandy cuttings			
42	8									
44		1.4' / 2'	S-12 @ 1344		Wet &	Greenish	Rounded coarse SAND, some silt	SP		FID=0.7
			OU2-SO-504-4445							PID=0.0
	5	2" spoon	@ 1350 FID=17.1		Loose	brown				FID=0.5
	4		PID=4.6 headspace							PID=0.0
46	4			Drive & Wash			- Sandy cuttings			
	6									
48										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash		
METHOD OF SOIL SAMPLING:	2" & 3" split spoon 2' sample lengths 140 lb. Hammer		
METHOD OF ROCK CORING:	3" Diamond Bit Core Barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-504B	PAGE: 3 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504B
PROJECT NO.:	N4236-0320			START DATE:	8/21/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/Lloyd Adams			MON. WELL NO.:	MW-504B
GRD. SURFACE ELEVATION:	9.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
	7		S-12 @ 1427						Wet	FID=1.8
	8	.9' / 2'	FID=17.1		Medium	Greenish	Medium-coarse SAND, trace fine gravel	SW		PID=0.0
	11		PID=16.8 headspace		Dense					FID=0.0
50	11	2" spoon				Brown	Rounded grains			PID=0.0
				Drive & Wash			- Sandy cuttings			
52										
54	12		S-13 @ 1513		Medium	Brown/	Quartz, schist, & feldspar COBBLE, Subrounded, some fine-coarse sand		Micaceous schist	FID=0.0
	8	0.6' / 2.0	FID=17.5		Dense	White		GW		PID=0.0
	10		PID=10.3 headspace			Pink &			Hard driving casing	FID=0.0
	10	2" spoon				Green			Wet	PID=0.0
56				Drive & Wash			- Sandy (coarse) cuttlings			
									Drive 4" to 59' 8/22/02 Sampled to 61'	
58										
	16		S-14 @ 1605				Angular schist fragments, some silt, with angular subrounded medium-coarse sand		Not losing water	FID=4.2
	18	.6' / 2'	FID=1.1		Hard	Brown &		GM		PID=0.0
	20		PID=0.0 headspace						Wet	FID=1.4
60	40	2" spoon				Green				PID=0.0
				Drive & Wash			- Schist fragments with sand in cuttings			
62										
									4" to 64' unable to push deeper	
	1	1' / 1.8'	S-15 @ 1317				Top 0.8' angular & subrounded coarse SAND, some fine gravel.		wet	FID=0.0
64	4				Loose			SW		PID=0..0

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash 4: casing to 9' to 64.8'		
METHOD OF SOIL SAMPLING:	2" & 3" split spoon 2' sample lengths 140 lb. hammer		
METHOD OF ROCK CORING:	3" Diamond Bit Core Barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-504B	PAGE: 4 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504B
PROJECT NO.:	N4236-0320			START DATE:	8/21/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/Lloyd Adams			MON. WELL NO.:	MW-504B
GRD. SURFACE ELEVATION:	9.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
64										
	20		OU2-SO-504-6466	O o O o O	Hard	Green &			Spoon refusal @ 65.8'	FID=0.0
	50/.2		@ 1320 FID=17.6			Brown	Bottom 0.2' weathered SCHIST, micas, and quartz	b. rx		PID=0.0
			PID=17.2							FID=0.0
66			headspace				Roller bit to 67.8'		4" casing to 64'	PID=0.0
										FID=0.0
										PID=0.0
										FID=0.0
68	11:41				Hard	Green	68-73' schist bedrock	MS		PID=0.0
			C-1 @ 1100						C-1 took 1 hour to drill	FID=0.0
	12:09	5	68'-73'				Quartz, micas, & pyrite			PID=0.0
		5								FID=0.0
70	11:47		RQD=100%				Vertical micro lamination			PID=0.0
										FID=0.0
	11:00						0 natural fractures			PID=0.0
										FID=0.0
72	13:14									PID=0.0
									73'-78' vertical to high	FID=0.0
	13:25						73'-75' schist bedrock	MS	angle micro lamination	PID=0.0
										FID=0.0
74	15:11	5	C-2 @ 1240						C-2 took 75 min. to drill	PID=0.0
		5	73'-78'			Green &				FID=0.0
	17:24					Pink	75'-76' high angle fractures (parallel)	BR	Oxidation @ 75.5'	PID=0.0
										FID=0.0
76	18:01		RQD=95%			Green	Schist with micas, quartz & pyrite			PID=0.0
									Only 2 fractures @ 75.5'-76'	FID=0.0
	10:12						76'-78' schist	MS		PID=0.0
										FID=0.0
78	14:17								Losing water	PID=0.0
		3	C-3 @ 1405							FID=0.0
	15:21	3	78'-81'							PID=0.0
										FID=0.0
80	14:31		RQD=100%							PID=0.0

EOB @ 81' bgs

TYPE OF DRILLING RIG:	CME 75 to 59' CME 45 to 81'		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash 4" casing to 64'		
METHOD OF SOIL SAMPLING:	2" & 3" split spoons 2' sample lengths		
METHOD OF ROCK CORING:	3" diamond bit core barrel		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Sent S-15 64-66' to lab for confirmatory analysis. *Installed 79.2' well screened 68'-78'	BORING NO.: SB-504B	PAGE: 5 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504D
PROJECT NO.:	N4236-0320			START DATE:	9/30/02 @ 1430
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/1/02 @ 1400
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-504D
GRD. SURFACE ELEVATION:	10.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 refer to boring log No. SB-504B for detailed description for 0-34' logs	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0										
		N/A	No sample collecting until 44-46' and 49-51' interval	(1)	(1)		Logged Cuttings 0-9'-dense material encountered @ 4' bgs. Used 300 lb.	(1)	5" casing advanced with automatic hammer to 4', 4-9' 5" casing advanced with 300 lb. hammer 30" drop.	
2							hammer to advance 5" casing. Flushed out 5" casing, drummed discharge			*FID=0.0 PID=0.0
										@ 1500
4							Wash water discharge brown in color 0-4'.			*FID=0.0 PID=0.0
							Fine-coarse SAND, trace fine gravel,some silt ±4-5.5' discharge water black in color then changed back to brown.			@ 1530
6										
							9-34'- wash water discharge brown in color, fine-coarse SAND trace fine gravel and silt. ±30-34' increased fine SAND & SILT			
8										
									4" casing advanced with 300 lb. hammer 30" drop.	*FID=0.0 PID=0.0
10										@ 1600
12										
14										
16										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" and 5" casing drive and wash	(1) Refer to boring log No. SB-504B for detailed material description	
METHOD OF SOIL SAMPLING:	2" and 3" split spoon	MMM = man made material	
METHOD OF ROCK CORING:	NX or NQ	PACM = potential asbestos containing material	
GROUNDWATER LEVELS:		* Field screening of breathing zone ambient air readings	
OTHER OBSERVATIONS:	FID (C) PID (B)	BORING NO.: SB-504D	PAGE: 1 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504D
PROJECT NO.:	N4236-0320			START DATE:	9/30/02 @ 1430
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/1/02 @ 1400
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-504D
GRD. SURFACE ELEVATION:	10.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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		N/A	No sample collecting until 44-46' and 49-51' interval	(1)	(1)		9-34'- wash water discharge brown in color, fine-coarse SAND trace fine gravel and silt. ±30-34' increased fine SAND & SILT			
18										
20										
22										
24										
26										
28										
30										
32										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" and 5" casing drive and wash	(2) Refer to boring log No. SB-504B for detailed material description	
METHOD OF SOIL SAMPLING:	2" split spoon	MMM = man made material	
METHOD OF ROCK CORING:	NX or NQ	PACM = potential asbestos containing material	
GROUNDWATER LEVELS:		* Field screening of breathing zone ambient air readings	
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-504D	PAGE: 2 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504D
PROJECT NO.:	N4236-0320			START DATE:	9/30/02 @ 1430
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/1/02 @ 1400
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-504D
GRD. SURFACE ELEVATION:	10.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
34							34-44'- wash water discharge brown in color, fine-coarse SAND, trace fine gravel and silt, quartz, gneiss, schists, feldspar, micas.		4" casing advanced with automatic hammer 30" drop.	
36										*FID=0.0 PID=0.0 @ 0845
38										
40										
42										
44	6 8	1.2 / 2.0	OU2-SO-504D-4446 FID=0.2 PID=0.0 10/1/02 0930	Sand	Loose	Gray	Poorly graded fine-coarse SAND, mostly coarse SAND, trace fine gravel and trace fine-medium SAND.	SP	2" spoon 0.0' recovery used 3" spoon. Wet, no PACM, MMM or odor.	FID=0.0 PID = 0.0
46	9 9									
48							46-49' wash water discharge light brown in color Fine-coarse SAND, trace fine gravel, no odor PACM or MMM.			*FID=0.0 PID=0.0 @ 0945

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" casing drive and wash	(3) Refer to boring log No. SB-504B for detailed material description	
METHOD OF SOIL SAMPLING:	2" split spoon	MMM = man made material	
METHOD OF ROCK CORING:	NX or NQ	PACM = potential asbestos containing material	
GROUNDWATER LEVELS:		* Field screening of breathing zone ambient air readings	
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-504D	PAGE: 3 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504D
PROJECT NO.:	N4236-0320			START DATE:	9/30/02 @ 1430
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/1/02 @ 1400
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-504D
GRD. SURFACE ELEVATION:	10.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
		N/A	No sample collecting	(1)	(1)					
50										
	9	1.1 / 2.0	OU2-SO-504D-4951	Sand	Medium	Brown	51-63' wash water discharge brown in color f-c SAND, quartz, micas, feldspar, schists, gneiss. No PACM, MMM or odor noted.	SP	Wet, no PACM, MMM or odor. 2" spoon no recovery, advanced 3: spoon.	FID=2.3 PID=11.2
	17		FID=10.6							
	17		PID=16.8		Dense					
52	18		10/1/02 1005							
		N/A	No sample collecting	(1)	(1)					
54										
56										
58										
60										
									4" casing advanced with automatic hammer to 60', then 4" casing advanced with 300 lb. hammer to 63'. Flushed out casing Until discharge water ran clear.	FID=0.0 PID=0.0 @ 1100
62							Solid obstruction @ 63" possible bedrock, flush out casing to 63" and ream into possible bedrock to confirm. Reamed to 63.3' discharge flakes white/grayish schists, confirmed to be bedrock, weathered rock noted.			
			Bedrock encountered @ 63' bgs							
64				EOB @ 63.3' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" and 5" casing drive and wash	(4) Refer to boring log No. SB-504B for detailed material description	
METHOD OF SOIL SAMPLING:	2" split spoon	MMM = man made material	
METHOD OF ROCK CORING:	NX or NQ	PACM = potential asbestos containing material	
GROUNDWATER LEVELS:		* Field screening of breathing zone ambient air readings	
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-504D	PAGE: 4 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-504S
PROJECT NO.:	N4236-0320			START DATE:	10/1/02 @ 1600
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/2/02 @ 1030
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-504S
GRD. SURFACE ELEVATION:	10.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 Refer to boring log SB-504B for detailed material description	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		N/A	No sample collecting	(1)	(1)			(1)		
2							0-16' wash water discharged brown in color 0-8' bgs, fine-medium SAND, trace silt, PACM observed, tile material in discharge water 8-10' discharge water black in color, tile fragments observed		4" casing advanced with automatic hammer 30" drop – 4" casing advanced through ± 0.5' asphalt to depth of 16' bgs.	FID=0.0 PID=0.0 @ 1645
4							Flushed 4" casing 0-16' until the discharge ran clear, drummed discharge water.			
6										
8										
10										
12										
14										
16										

EOB @ 16' bgs

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potential asbestos containing material; (1) = Refer to boring log No. SB-504B for details; * = Reading for breathing zone (ambient air) using monitoring instruments	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB504S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505B
PROJECT NO.:	N4236-0320			START DATE:	8/22/02 @ 1125
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/27/02 @ 1240
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505B
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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' Top soil, roots, grass			
	2		OU2-SO-505-0002	Sand	Very		Silty SAND, some gravel, some coarse sand	SM	PACM was present in top	PID =0.0
	5	1.0' / 2.0'	FID = 1.0		Loose	Brown			of material Siding was	FID=0.0
	8		PID = 0.0 headspace		Loose				found.	PID =0.0
2	6		8/22/02 1125	Fill						FID=0.0
	5		OU2-SO-505-0002			Light	Fine to coarse grained SAND, some gravel	SW	No PACM or MMM was	PID =0.0
	5	0.9' / 2.0'	FID = 2.0			Brown			observed in the split spoon	FID=0.0
	4		PID = 0.0 headspace							PID =0.0
4	4		8/22/02 1135							FID=0.0
	2		OU2-SO-505-0406		Very	Gray-	Fine to coarse grained SAND, trace silt, trace rounded			PID =0.0
	2	0.7' / 2.0'	FID = 7.8		Loose	Brown	gravel.			FID=0.0
	2		PID = 0.0 headspace			Brown				PID =0.0
6	4		8/22/02 1205							FID=0.0
	3		OU2-SO-505-0608			Brown to	Well graded SAND, trace gravel and silt.			PID =0.0
	2	0.5' / 2.0'	FID = 155			Dark				FID=0.0
	2		PID = 0.0 headspace			Gray				PID =0.0
8	2		8/22/02 1210							FID=0.0
	3		OU2-SO-505-0810	Gravel			GRAVEL angular to semirounded, some coarse sand,	GM		PID =0.0
	2	0.3' / 2.0'	FID =				trace fine sand.			FID=0.0
	2		PID =							PID =0.8
10	3		8/22/02 1220							FID=50.0
	7		OU2-SO-505-1012	Sand	Loose		Coarse grained SAND, trace silt and fine sand, some	SP		PID =0.0
	5	0.5' / 2.0'	FID = 205			Gray to	gravel, roots and organic material.			FID=0.0
	2		PID = 5.2 headspace	Silt	Very	Black				PID =0.0
12	3		8/22/02 1410		Loose					FID=57.2
			OU2-SO-505-1214						Changed to standard	
							Material coming from the discharge pipe was a silty,	GW	interval sampling.	
							sandy GRAVEL, some wood.			
14										
	5	0.6'	OU2-SO-505-1517	Sand &	Loose	Gray to	Well graded SAND and rounded GRAVEL, trace silt.			PID =0.0
16	6	/ 2.0'	FID = 141.7	Gravel		Brown				FID=6.5

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" Split spoon 4" drive and wash casing	Notes: PACM = Potential Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ	MMM = Man Made Material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID=F PID=A.	BORING NO.: SB-505B	PAGE: 1 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505B
PROJECT NO.:	N4236-0320			START DATE:	8/22/02 @ 1125
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/27/02 @ 1240
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505B
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	7	0.6'	PID = 4.4 headspace		Loose				No PACM or MMM was observed in the split spoon.	PID =0.0
	10	2.0'	8/22/02 1435							FID=0.0
18						Light Brown	Discharge water with rocks, sand, and gravel mixed.			
20										
	5	0.7'	OU2-SO-505-2022				Well graded SAND, some rounded gravel and silt.	SW		PID =0.0
	7	2.0'	FID = 57.2							FID=0.0
22	8		PID = 8.0 headspace							PID =0.0
	8		8/22/02 1455							FID=0.0
24							Light brown discharge water with rock fragments and gravel mixed.			
										PID =0.0
										FID=0.0
26	2	0.85'	OU2-SO-505-2527		Very loose	Gray	Well graded SAND, trace gravel and silt. A quartzite rock fragment was wedged in the shoe.			PID =0.0
	4	2.0'	FID = 48.7							FID=0.0
	4		PID = 1.8 headspace							
	6		8/22/02 1520							
28										
30										
	4	0.8'	OU2-SO-505-3032				Well graded SAND, some gravel, trace silt, rounded gravel, trace rock fragments.			PID = 0.0
	3	2.0'	FID = 44.3							FID = 0.0
32	3		PID = 9.3 headspace							PID =0.0
	5		8/22/02 1555							FID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potential Asbestos Containing Material; MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" Split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" deep		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID=F PID=A.	BORING NO.: SB-505B	PAGE: 2 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505B
PROJECT NO.:	N4236-0320			START DATE:	8/22/02 @ 1125
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/27/02 @ 1240
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505B
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32									No PACM or MMM was observed in the split spoon.	
34										
36	6 6	0.8' / 2.0'	OU2-SO-505-3537 FID = 43.7 PID = 11.1 headspace 8/22/02 1610		Loose	Gray	Well graded SAND and rounded GRAVEL, trace silt	GW/ SW		PID =0.0 FID=0.0
	4 7									PID =0.0 FID=0.0
38						Light Brown	Water from the discharge was light brown with sand, rocks, and gravel.			
40				Sand						
	3 3	1.0' / 2.0'	OU2-SO-505-4042 FID = 77.3 PID = 12.4 headspace 8/23/02 0855	Coarse Fine to medium	Very Loose	Light Brown	0'-0.2' medium to coarse grained SAND 0.2'-0.7' fine to medium grained SAND	SP SP		PID =0.0 FID=57.2
42	5 4			Well Graded Sand			0.7'-1.0' well graded SAND, trace gravel.	SW		PID =0.0 FID=75.9
44							Water from the discharge was light brown with sand rock fragments and gravel.			
46	3 3	1.0' / 2.0'	OU2-SO-505-4547 FID = 24.7 PID = 2.2 headspace 8/23/02 0930	Fine Sand	Very Loose	Brown-Gray	0'-0.6' Fine grained SAND, trace silt	SP		PID = 0.0 FID = 0.0
	15 17			Sand & Gravel	Medium Dense	Brown	0.6'-1.0' weathered mica schist SAND and GRAVEL.	SW		PID = 0.0 FID = 0.0
48										

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potential Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" Split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" deep		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:	PM water level = 6.5 Ft. AM water level = 6.4 Ft.		
OTHER OBSERVATIONS:	Instrument FID=B PID=A.	BORING NO.: SB-505B	PAGE: 3 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505B
PROJECT NO.:	N4236-0320			START DATE:	8/22/02 @ 1125
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/27/02 @ 1240
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505B
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48									No PACM or mmm was observed in the split spoon.	
50										
	9	0.4' / 2.0'	OU2-SO-505-5052			Gray	Sandy GRAVEL, some silt, trace clay	GM		PID =0.7
	10		FID = 55.3		Loose					FID=0.0
	12		PID = 1.3 headspace		Medium					PID =0.0
52	20		8/23/02 1000		Dense					FID=0.0
							Material from the discharge line was a gray sandy GRAVEL.			
54										
	6	0.5' / 0.2'	OU2-SO-505-5557		Loose		Well graded SAND and GRAVEL with a fragment of quartzite in the shoe of the split spoon, trace silt.	GW/ SW		PID =0.0
56	8		FID = 32.5							FID=0.0
	12		PID = 0.0 headspace		Medium					PID =0.0
	12		8/23/02 1035		Dense					FID=5.4
58										PID =0.0 FID=5.0
60										
	15	0.7' / 2.0'	OU2-SO-505-6062		Medium		SAND and GRAVEL, trace silt	GP		PID = 0.0
	10		FID = 7.0		Dense					FID = 0.0
	5		PID = 0.0 headspace							PID = 0.0
62	10		8/23/02 1105							FID = 0.0
64										

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potential Asbestos Containing Material; MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" Split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" deep		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:	End of day water level = 6.8'		
OTHER OBSERVATIONS:	Instrument FID=B PID=A.	BORING NO.: SB-505B	PAGE: 4 OF 6

TtNUS Form 0018

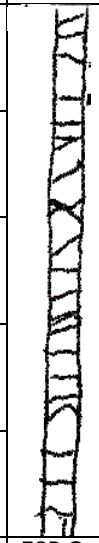
BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505B
PROJECT NO.:	N4236-0320			START DATE:	8/22/02 @ 1125
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/27/02 @ 1240
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505B
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
64									No PACM or mmm was observed in the split spoon.	
66	3 5	1.2' / 2.0'	OU2-SO-505-6567 FID = 760.2 PID = 16.4 8/23/02 1140	Fine Sand	Loose	Brown	Fine SAND, trace silt with rock fragments, fine SAND and GRAVEL, rounded gravel.	GP		PID =0.0 FID=0.0
	9 10			Fine Sand to gravel						PID =0.0 FID=0.0
68										
70										
	16 11	0.8' / 2.0'	OU2-SO-505-7072 FID = 27.3 PID = 38.2 headspace 8/23/02 1230	Sand & Gravel	Medium Dense	Brown	Poorly graded SAND and GRAVEL, trace silt, upper portion Had rock fragments, quartz. (SW GH)			PID =0.0 FID=0.0
72	15 11									PID =0.0 FID=0.0
		0.0' / 0.1'	OU2-SO-505-7272.1 No recovery 8/26/02 1145				Drove 4" casing to refusal @ 74.5' bgs (Top of bedrock)		WL @ 1100 6.5 ft bgs. Drove 4" casing to 74.5'	
74				Top of Bedrock @ 74.5'			Attempted drive 2" split spoon, advanced 1/10 ft. No recovery, pulled up 5' section of 4" casing, replaced with (1) 2' (1) 1' sections drove to 74.5' Roller bit 74.5 – 77.0 ft bgs, begin coring @ 77.0 ft.		Bedrock socket 74.5 – 77 Ft.	
76										
78	4:38				Medium - Soft	Green/ Gray	Schist natural fracture @ 77.3' Low angle fractures	Broken		
	5:20						Quartz-mica schists, feldspars, low angle fractures Discoloration, weathering			
80	3:00				77.90		Fracture zone @ 78.5 – 79.0 Quartz feldspar @ 81.6 – 81.9			

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potential Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" Split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" deep		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:	End of day water level = 6.8'		
OTHER OBSERVATIONS:	Instrument FID=F PID=A.	BORING NO.: SB-505B	PAGE: 5 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505B
PROJECT NO.:	N4236-0320			START DATE:	8/22/02 @ 1125
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LJD	COMPLETION DATE:	8/27/02 @ 1240
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505B
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
	2:38	60" / 60"	R1 – 77'-82' Rec/Pen 60"/60" = 100% RQD – 45"/60" = 75% ±50 gal H_2O 77-82'		77-90 Med. soft			Broken		
82	3:15									
	3:30					Greenish	Mica, schist, weathering, low angle fractures 82-82.5' Pegmatite feldspar, micas, low angle fracture @ 83.0 ft.			
84	3:40						83-83.5 ft – high angle fracture, feldspar, calcite Fracture @ 83.8', 84.2' medium angle, 84.1' low angle fractures @ 85.1', 85.10' and @ 86.0'			
	3:38									
86	3:20	60" / 60"	R2 82'-87' Rec/Pen 60"/60" = 100% RQD – 41"/60" = 68%							
	3:40						87.11' fracture			
88	4:00					Greenish Gray	87.5' Mica schist, natural fracture, weathering, discoloration, low angle rounding of edges. Fracture zone 88.9' – 89' brittle, fragmented rounding of edges.			
	3:30	36" / 36"	R3 87' – 90' Rec/Pen 36"/36" = 100% RQD = 22"/36" = 61%							
90	5:00						89'-90' Feldspar, quartz, mica, fractured zone; weathering and healing fracture			
				EOB @ 90' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potential Asbestos Containing Material; MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" Split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb. hammer 30" deep		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:	End of day water level = 6.8'		
OTHER OBSERVATIONS:	Instrument FID=B PID=B.	BORING NO.: SB-505B	PAGE: 6 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505D
PROJECT NO.:	N4236-0320			START DATE:	10/9/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/9/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505D
GRD. SURFACE ELEVATION:	9.4	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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 Refer to boring log no: SB-505B for detailed material description (1)	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0										
		NA	No sample collecting	(1)	(1)	Dark Brown	Fine-medium SAND, some silt and organics (grass/roots), topsoil, no PACM, piece of concrete	(1)	0-2' casing advanced & removed soil plug in drum. Attempt to drive casing to 4', no recovery	
2										
							Fine-coarse SAND, trace fine gravel, no PACM, black		Drive and wash 5" casing to 9.5', drummed IDW, water and soil, decon tub.	FID=0.0* PID=0.0*
4							Material unidentified, possible asphalt, coal or cinders. Organics noted in wash tub (wood fragments)			@ 1100
6				5" casing						
8										
			Bottom of 5" casing @ 15.0'							
10										
						Dark Brown to	Continued to drive 5" casing to 15' bgs, fill material encountered, same black unidentified material, fragments of		5" casing advanced to 15' with 300 lb hammer. Washed until water discharged, clear, IDW water & soil drummed	FID=0.0* PID=0.0*
12						Gray	tile. Wash water discharge = fine-coarse sand, trace fine gravel, trace organics, wood fragments. bottom of fill @ 14.5-15'			@ 1200
									Attempt to roller bit ahead of 5" casing, concrete or rock obstruction @ 11.5-12.0'.	
14										
16										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash	Notes: * = breathing zone ambient air screening	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon	PACM = Potentially Asbestos Containing Material	
METHOD OF ROCK CORING:	N/A	MMM = Man Made Material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (B)	BORING NO.: SB-505D	PAGE: 1 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505D
PROJECT NO.:	N4236-0320			START DATE:	10/9/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/9/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505D
GRD. SURFACE ELEVATION:	9.4	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	4	0.8 / 2.0	FID- 0.0 2" spoon			Brown to	Poorly graded fine-coarse SAND, trace fine gravel, some	SM	No PACM, MMM or odor	FID=0.0*
	8		PID-0.0			Orange/	silt, mostly fine-medium SAND.			PID=0.0*
	6		12/9/02 @ 1200			Brown			Wet – saturated	@ 1230
18	17									
				Sand & Gravel		Brown	Wash water discharge = fine-coarse sand, trace fine gravel, no PACM, MMM or odor. Quartz, feldspar, micas, gneiss,		15-44' – 4" casing advanced in 140 lb & 300 lb hammer. Little resistance	FID=0.0* PID=0.0*
20							schists			@ 1320
22										
24										
26										
28										
30										
32										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4"/5" casing drive and wash	* = breathing zone ambient air screening	
METHOD OF SOIL SAMPLING:	3" split spoon	PACM = Potentially Asbestos Containing Material	
METHOD OF ROCK CORING:	N/A	MMM = Man Made Material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (B)	BORING NO.: SB-505D	PAGE: 2 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505D
PROJECT NO.:	N4236-0320			START DATE:	10/9/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/9/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505D
GRD. SURFACE ELEVATION:	9.4	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
32										
				Sand & Gravel			Wash water discharge = fine-coarse SAND, trace fine gravel, Quartz, feldspar, mica, schists.		No PACM, MMM, or odor	
34										
36										
38										
40										
42										
44										
46	7 6 9 12	0.9 / 2.0	OU2-SO-505D-4446 FID-0.2 PID-0.0 10/9/02 @ 1405		Medium Dense	Grayish-Brown	Poorly graded fine-coarse SAND, trace fine gravel, trace silt	SP-SM	3" split spoon wet-saturated No PACM, MMM or odor	FID=0.0* PID=0.0* @ 1415
48						Brown	Wash water discharge = fine-coarse SAND, trace fine gravel, quartz micas, feldspar, schists, gneiss		4" casing advanced to 49' bgs with 140 lb hammer	FID=0.0* PID=0.0* @ 1425

TYPE OF DRILLING RIG:	CME 75	Notes: * = breathing zone ambient air screening PACM = Potentially Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4"/5" casing drive & wash		
METHOD OF SOIL SAMPLING:	2"/3" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (B)	BORING NO.: SB-505D	PAGE: 3 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505D
PROJECT NO.:	N4236-0320			START DATE:	10/9/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/9/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505D
GRD. SURFACE ELEVATION:	9.4	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 48	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)]
50	20 30	0.9	OU2-SO-505D-4951 FID-0.0	Silty	Dense	Light Brown	Poorly graded fine-medium SAND, some fine-coarse	SM	3" split spoon-grain size sample, saturated	FID=0.0* PID=0.0
	20 18	2.0	PID-0.0 10/9/02 @ 1435	Sand			Gravel and some silt		±50' piece of lead noted No PACM or odor	@ 1455
52										
54						Grayish-Brown	Wash water discharge = fine-coarse SAND, some fine gravel, quartz, micas, feldspar, schists	SP-		
56	17 19 18 16	1.2 2.0	OU2-SO-505D-5456 FID-0.0 PID-0.0 10/9/02 @ 1500	Sand & Gravel	Dense	Greenish-Gray	Poorly graded fine-coarse SAND, trace fine-coarse gravel, some silt	SM	3" spoon – grain size sample, saturated No PACM, MMM or odor	
58						Light Brown/ Gray	Wash water discharge = fine-coarse SAND, trace fine gravel No PACM, MMM or odor		4" casing advanced to 59' with 300 lb hammer	FID=0.0* PID=0.0* @ 1535
60	10 16 16 28	1.0 2.0	OU2-SO-505D-5961 FID-0.0 PID-0.0 10/9/02 @ 1535		Dense	Greenish-Gray	Poorly graded fine-coarse SAND, some fine-coarse gravel and trace silt. Piece of red color basket in 3" spoon noted in soil.	SP- SM	3" split spoon – grain size sample. No PACM, MMM or odor, wet	FID=0.0* PID=0.0*
62						Greenish-Gray	Wash water discharge = fine-coarse SAND, trace fine gravel		4" casing advanced with 300 lb hammer to 64' bgs. little resistance	@ 1545
64		0.65 2.0	OU2-SO-505D-6365 FID-0.0		Dense	Light Brown	Poorly graded fine-coarse SAND, some fine-coarse gravel and trace silt. Quartz, gneiss, feldspar fragments.	SP	3" split spoon. grain size sample. No PACM, MMM or odor	FID=0.0* PID=0.0* @ 1605

TYPE OF DRILLING RIG:	CME 75	Notes: * = breathing zone ambient air screening PACM = Potentially Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4"/5" casing drive & wash		
METHOD OF SOIL SAMPLING:	2"/3" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (B)	BORING NO.: SB-505D	PAGE: 4 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505D
PROJECT NO.:	N4236-0320			START DATE:	10/9/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/9/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505D
GRD. SURFACE ELEVATION:	9.4	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
64										
	17		PID-1.1	Sand &						
	19		10/9/02 @ 1600	Gravel						
	12									
66	10									
						Light	Wash water discharge = medium-coarse SAND, some fine		4" casing advanced with 300 lb hammer to 69' bgs	
68						Brown-Yellowish	SAND and fine gravel No PACM, MMM or odor			FID=0.0* PID=0.0*
										@ 1620
70	14	0.5	OU2-SO-505D-6971		Medium	Light Brown	Well graded fine-coarse GRAVEL, trace fine-coarse sand.	GW	3" split spoon – grain size sample	
	9	2.0	FID-0.0							
	11		PID-0.0	Gravel	Dense	Gray Mix			Wet No PACM, MMM or odor	
	15		10/9/02 @ 1630							
72										
						Light Brown-	Wash water discharge = similar material to above		4" casing advanced with 300 lb hammer to 74' bgs. little resistance.	FID=0.0* PID=0.0*
74						Yellowish				@ 1640
		0.3	OU2-SO-505D-7476	Sand &	Very	Light			3" split spoon – grain size sample saturated no PACM, MMM or odor	
			FID-0.0	Gravel	Dense	Brown	Poorly graded fine-coarse SAND, trace fine gravel and trace			
	100/0.45	2.0	PID-0.0				silt			
76			10/9/02 @ 1710							
				BOE @ 76.0' bgs						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4"/5" casing drive & wash	Notes: * = breathing zone ambient air screening PACM = Potentially Asbestos Containing Material MMM = Man Made Material	
METHOD OF SOIL SAMPLING:	2"/3" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (B)	BORING NO.: SB-505D	PAGE: 5 OF 5

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505M
PROJECT NO.:	N4236-0320			START DATE:	10/10/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/10/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505M
GRD. SURFACE ELEVATION:	9.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 Refer to boring log No: SB-505B for detailed material descriptions.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0										
		N/A	No sample collecting	(1)	(1)			(1)		
2										
4										
6										
8										
						Brown to Black	9'-10' - Wash water discharge color change. Brown to black to gray. Cuttings include rubber like substance,		5" casing advanced to 15' bgs with 300 lb. hammer with little resistance.	
10							siding fragments PACM fibers, tile, wood, also petroleum odor (heavy oil) & moderate sheen on wash tub.			
12										
14										
									No PACM, MMM or odor.	FID = 0.0 PID = 0.0
16	5 10	0.5' 2.0'	No sample collected	Sand & Gravel	Medium	Brown to Dark gray	Well graded fine-coarse GRAVEL is rounded, fine-coarse SAND, trace silt.	SW/ GW		open spoon screening

TYPE OF DRILLING RIG:	CME 75	Notes: * = Breathing zone ambient screening; PACM = Potential asbestos containing material; MMM = Man made material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split-spoon & logged cuttings		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-505M	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505M
PROJECT NO.:	N4236-0320			START DATE:	10/10/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/10/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505M
GRD. SURFACE ELEVATION:	9.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	6					Dark	Broken quartzite & fragments		Saturated.	
	16					Gray				
18										
						Light	Wash water discharge light brown in color, SAND & GRAVEL.		4" casing advanced from 15-23' bgs with 300 lb. hammer. PID = 0.0	
20						Brown				FID = 0.0
							Well screen 17'-22' bgs with 1.2' sumps and pack from bottom boring to 15' bgs, bentonite chip seal.			
22							Refer to well construction log for details.			
24				EOB @ 23' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: * = Breathing zone ambient screening; PACM = Potential asbestos containing material; MMM = Man made material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" and 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split-spoon & logged cuttings		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-505M	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-505S
PROJECT NO.:	N4236-0320			START DATE:	10/11/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-505S
GRD. SURFACE ELEVATION:	9.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 Refer to boring log No. SB-505B for detailed material descriptions.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0										
		N/A	No sample collecting	(1)	(1)	Brown to Dark	0'-6 '- Wash water discharge brown to dark brown	(1)	4" casing advanced to 16' bgs with 140 lb. hammer.	
2						Brown				
4										
6							6'-16' - SAND and GRAVEL, PACM noted, rubber material, tile fragments. No noticeable odor.			
8										
10										
12										
14										
							Well set @ 16' bgs with 1.2' sump, 16-15' screened 10 slot			
16							15-5' sand pack bottom of boring @ 16' – 4' bgs. Bentonite chips (seal) 4-3' bgs.			

EOB @ 16' bgs

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potential asbestos containing material * = Breathing zone ambient air screening	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	Logged cuttings		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-505S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

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' grass roots			
	3		OU2-SO-506-0002	Silty	Medium	Light	Poorly graded fine-medium SAND, some silt, trace fine		No PACM or MMM	
	6	0.9	FID-0.0	Sand	Dense	Brown	Gravel, trace organics.	SM	Dry, no odor	FID=0.0
	12	2.0	PID-0.0						Organics - grass	
2	15		8/27/02 1515							PID=0.0
	12		OU2-SO-506-0204			Dark				Air monitoring
	14	0.9	FID-0.0			Brown	Fine-medium SAND, some silt, rock frags, quartz			FID/PID=0.0
	16	2.0	PID-0.0				Wash water brown to black @ 3-3.5'			Breathing zone
4	20		8/27/02 1520							FID/PID=0.0
	4		OU2-SO-506-0406	Sand						
	9	1.0	FID-1.3			Brown	Fine-medium SAND, trace silt, trace fine gravel.			
	14	2.0	PID=0.0			Dark	Dark brown coarse sand increased 5.5-6.0'			
6	11		8/27/02 1540			Brown				
	9		OU2-SO-506-0608						No PACM or MMM	
	8	1.2	FID-0.0			Brown	Fine-medium SAND, trace silt, trace fine gravel.		Moist – wet, no odor	Breathing zone
	8	2.0	PID-0.0						Wash water dark	FID=0.0
8	7		8/27/02 1545						brown/black	PID=0.0
	2		OU2-SO-506-0810		Very				No PACM or MMM	FID=0.0
	1	0.5	FID-5.1		Loose		Poorly graded fine-coarse SAND, trace silt	SP	Moist – wet, no odor	PID=0.0
	3	2.0	PID-0.0				Trace fine gravel			Breathing zone
10	3		8/27/02 1610							FID/PID=0.0
	3		OU2-SO-506-1012							
	2	0.4	FID-2.3							
	2	2.0	PID-0.0						Dark wash water	
12	2		8/27/02 1615						Cleared – dark again	
	1		OU2-SO-506-1214						No PACM or MMM	Breathing zone
	2	0.2	FID-24.3				Fine-coarse SAND, some fine-medium gravel		Moist – wet	FID/PID=0.0
	1	2.0	PID-0.0							FID=80.1
14	1		8/27/02 1630							PID=29.0
	2		OU2-SO-506-1416	Silty					No PACM or MMM	
	2	0.6	FID-1.5	Sand			Poorly graded fine-coarse SAND, some silt,	SM	Moist - wet	
	2	2.0	PIF-0.0				Trace fine gravel			FID=0.0
16	2		8/27/02 1640							PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	* - bentonite plug discovered in well after development – this boring abandoned – see other boring log.	
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop	PACM= Potential Asbestos Containing Materials	
METHOD OF ROCK CORING:	NX or NQ	MMM= Man Made Material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID – B PID – E	BORING NO.: SB-506B*	PAGE: 1 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

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										
						Dark Brown	Wash water discharge = fine-medium SAND,			
18							Trace fine gravel			
20	3 3	0.7	OU2-SO-506-1921 FID-1.7	Silty Sand	Loose	Brown	Poorly graded fine-medium SAND, some silt, trace	SM	No PACM or MMM No odor, moist-wet	FID=0.0 PID=0.0
	3 6	2.0	PID-0.0 8/27/02 1745				Fine gravel			Breathing zone FID/PID=0.0
22										
24										
	7 9	0.5	OU2-SO-506-2426 FID-2.8		Medium Dense		Fine-coarse SAND, some silt, trace fine gravel	SW		
26	9 7	2.0	PID-0.0 8/27/02 1805							
										FID=0.0 PID=0.0
28										
						Black/ Brown	Wash water turned black then cleared to brown @ 28-29'			
30	3 4	1.0	OU2-SO-506-2931 FID-1.8		Loose	Gray Greenish	Fine-medium SAND, some silt, trace fine gravel	SM	½ overdrive No PACM or MMM	
	4 6	2.0	PID-0.0 8/27/02 1825						Moist – wet No odor	
32										

TYPE OF DRILLING RIG:	CME 75
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop
METHOD OF ROCK CORING:	NX or NQ
GROUNDWATER LEVELS:	WL – 10.65'
OTHER OBSERVATIONS:	Instrument FID – B PID – E

Notes:
* - bentonite plug discovered in well after development – this boring abandoned – see other boring log.
PACM= Potential Asbestos Containing Materials
MMM= Man Made Material

Tetra Tech NUS, Inc.

BORING NO.: SB-506B*

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

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)]
32										
34										
	5	0.75 / 2.0	OU2-SO-506-3436	Silty Sand	Loose	Gray	Fine-coarse SAND, some silt, mostly fine-medium sand,	SM	0.6' overdrive 2" spoon moist – wet No PACM or MMM No odor	Breathing zone FID/PID=0.0
	4		FID-11.6							
36	6		PID-10.9				Trace coarse sand			
	6		8/28/02							
						Light brown	Wash water discharge = fine-medium SAND			
38										
										Breathing zone FID/PID=0.0
40	5	1.4	OU2-SO-506-3941		Medium Dense		Fine-medium SAND and silt, mostly medium sand		Moist – wet No PACM or MMM	
	7		FID-694.3							
	9	2.0	PID-7.5				Some fine sand and silt		No odor 0.4' sluff gray f-m sand same as 34-36'	FID=27.5 PID=0.0
	8		8/28/02							
42							Wash water discharge = Fine-medium SAND and silty material			
44										
	15	1.9 / 2.0	OU@-SO-506-4486		Loose		Fine-medium SAND and SILT, mostly fine sand, some medium sand, trace coarse sand and silt		0.6' overdrive 2" spoon No PACM or MMM No odor	Breathing zone FID/PID=0.0
	4		FID-1756							
46	4		PID-19.1							FID=119 PID=0.0
	5		8/28/02 0915							
						Light Brown to Grayish	Wash water discharge = SAND			
48										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	* - bentonite plug discovered in well after development – this boring abandoned – see other boring log.	
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop	PACM= Potential Asbestos Containing Materials	
METHOD OF ROCK CORING:	NX or NQ	MMM= Man Made Material	
GROUNDWATER LEVELS:	WL – 25.8' @ 0755		
OTHER OBSERVATIONS:	Instrument FID – C PID – E	BORING NO.: SB-506B*	PAGE: 3 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

DEPTH (FEET) 48	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)]
50	4 5	1.9	OU2-SO-506-4951 FID-560	Silty Sand	Loose	Gray/ Green/	Fine-medium SAND, mostly fine sand, some medium sand	SM	Wet No PACM or MMM	Breathing zone FID/PID=0.0
	4 5	2.0	PID-50.3 8/28/02 0935			Olive	and silt		No odor	FID=23.9 PID=0.0
52						Gray/ Brown	Wash water discharge = fine-medium SAND			
54										
	5 7	1.3	OU2-SO-506-5456 FID-101.1		Medium Dense	Green/ Olive	Fine-medium SAND, some silt, mostly fine sand, trace medium sand and silt		Wet No PACM or MMM No odor	Breathing zone FID/PID=0.0
56	7 12	2.0	PID-0.0 8/28/02 1005							FID=13.7 PID=0.0
						Gray	Wash water discharge = fine-coarse SAND			
58										
60	3 4	0.5	OU2-SO-506-5961 FID-238		Loose	Brown	Fine SAND, some silt, mostly fine sand		Wet No PACM or MMM	Breathing zone FID/PID=0.0
	5 8	2.0	PID-2.9 8/28/02 1015						No odor	FID=1.9 PID=0.0
62						Light	Wash water discharge = fine SAND and silt, possible clay			
						Brown	Material		Wash water = pieces of brown clay or silt	Breathing zone FID/PID=0.0
64										FID = 0.0 PID = 0.0

TYPE OF DRILLING RIG:	CME 75	Notes: * - bentonite plug discovered in well after development – this boring abandoned – see other boring log. PACM= Potential Asbestos Containing Materials MMM= Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing		
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:	WL – 25.8' @ 0755		
OTHER OBSERVATIONS:	Instrument FID – C PID – E	BORING NO.: SB-506B*	PAGE: 4 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

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)]
64										
	2		OU2-SO-506-6466	Silty	Medium	Light			Wet	
	5	0.2	FID-12.7	SAND	Dense	Brown	Fine SAND, some silt	SM	No PACM or MMM	
	7	2.0	PID-0.0						No odor	FID=0.0
66	8		8/28/02 1105							PID=0.0
							Wash water discharge = silty fine SAND			
68										FID = 0.0 PID = 0.0
										Breathing zone
	3		OU2-SO-506-6971		Medium					FID=0.0
70	5	1.6	FID-255.8		Loose	Gray/	Fine SAND, some silt,		Wet	PID=0.0
	5	2.0	PID-1.8			Light			No PACM or MMM	FID=2.0
	7		8/28/02 1150			Brown	70.6'-71.0', fine SAND, some silt		No odor	PID=0.0
72										
						Brown/ Light	Wash water discharge = fine SAND and SILT, no odor			
74						Gray	FID-0.0 PID-0.0			Breathing zone
	4		OU2-SO-506-7476		Medium	Greenish			Wet	FID=0.0
	5	1.6	FID-511		Dense	Gray	Fine SAND and SILT, horizontal bedding observed in		No PACM or MMM	PID=0.0
	7	2.0	PID-2.3				spoon sample		No odor	FID=1.3
76	8		8/28/03 1245							PID=0.0
							Wash water discharge = fine SAND, some silt			FID = 0.0 PID = 0.0
78										Breathing zone
				Sand	Dense					FID=0.0 PID=0.0
	6	0.7	OU2-SO-506-7981			Greenish	Poorly graded fine-coarse SAND, mostly fine-medium		Wet	FID=14.3
80	11	2.0	FID-383 PID-6.6			Gray	sand, some coarse sand, trace silt, trace medium gravel	SW	No PACM or MMM	PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	* - bentonite plug discovered in well after development – this boring abandoned – see other boring log.	
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop	PACM= Potential Asbestos Containing Materials	
METHOD OF ROCK CORING:	NX or NQ	MMM= Man Made Material	
GROUNDWATER LEVELS:	WL-		
OTHER OBSERVATIONS:	Instrument FID – C PID – E - 300 lb hammer used to advance 4" casing	BORING NO.: SB-506B*	PAGE: 5 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

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)]
80										
	20			Sand &		Greenish	See page 6		Weathering, oxidation	
	100/0.2		8/28/02 1310	Gravel	Dense	Gray		SP	observed in soil	
82							Roller bit from 80.5' to 83.0'; possible cobbles or boulder Encountered. Advance 2" spoon from 83-85'			Breathing zone
										FID=0.0 PID=0.0
84	9 5	0.6	OU2-SO-506-8385 FID-16.2		Loose	Brown	Fine-coarse SAND, some fine gravel, mostly medium-	SW	0.6' overdrive spoon oxidation weathering flakes noted	FID=0.0 PID=0.0
	4 7	2.0	PID-0.0 8/28/02 1445				coarse sand and fine gravel, trace silt, trace fine sand	SM	Wet, no PACM or MMM, no odor	
86						Greenish	Wash water discharge = fine-coarse SAND and GRAVEL			
						Gray				FID = 0.0 PID = 0.0
88										Breathing zone
	NR NR	0.2	OU2-SO-506-8890 FID-6.8		Medium	Brown	Fine-coarse SAND and GRAVEL, mostly medium-coarse sand and fine gravel, trace silt, trace fine sand	SW	Wet No PACM or MMM No odor Rock fragments	FID=0.0 PID=0.0
90	NR NR	2.0	PID-0.0 8/28/02 1555		Dense			SM		FID=0.0 PID=0.0
						Greenish Gray	Wash water discharge = medium-coarse SAND		*300 lb hammer 4" casing 91-94'	
92										FID = 0.0 PID = 0.0
										Breathing zone
94	5 7	0.7	OU2-SO-506-9395 FID-		Medium	Brown	Fine-coarse SAND and GRAVEL, mostly medium-coarse	SW	Wet	FID=0.0 PID=0.0
	9 11	2.0	PID- 8/28/02		Dense		sand and medium gravel		No PACM or MMM No odor Rock fragments	FID=0.0 PID=0.0
96										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	2" split spoon 4" drive and wash casing	* - bentonite plug discovered in well after development – this boring abandoned – see other boring log.	
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop	PACM= Potential Asbestos Containing Materials	
METHOD OF ROCK CORING:	NX or NQ	MMM= Man Made Material	
GROUNDWATER LEVELS:		NR = Not Recorded	
OTHER OBSERVATIONS:	Instrument FID – C PID – E	BORING NO.: SB-506B*	PAGE: 6 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

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)]
96										
				Sand		Light Brown	Wash water discharge medium-coarse SAND and fine gravel		4" casing 95-98' 300 lb hammer	
98										FID=0.0 PID=0.0
100	5 12	1.4	OU2-SO-506-99101 FID-0.0	Silty Sand	Medium Dense	Brown To	0.7' fine SAND, some silt, trace clay (brown) laminated @ 99.7'	ML	3" spoon wet. no PACM or MMM	
	20 25	2.0	PID-14.8 8/28/02 1735			Gray	0.7-1.4' fine sand some silt, trace clay (gray)		Strong contact between brown/gray 4" casing seated @ 102' 2" spoon	FID=0.0 PID=0.0
102			Bottom 4' casing @ 102'		Dense		Bedrock encountered @ 102' roller bit to 102.5'			
	100/0.2			Bedrock			102.5-102.7' gray rock frags. mica schists, bedrock material First ±1.0' soft brittle - took rock socket to 105'		Wash water Bedrock fragments gray, schist	
104							4" casing @ 102'			
							Top of socket @ 102' Bottom of socket @ 105'			
106	05:40		R1: 105-110' Rec/Pen-57/60 - 95%	Bottom Of socket		Green/	Quartz mica schist, highly fractured – low-medium angle	Very Broken		
	04:20		RQD-18/60 – 30%		105-110 Soft	Gray	fractures along foliation bedding plane			
108	05:20									
	04:40									
110	06:45									
	07:00		R2: 110-115' Rec/Pen-60/60 – 100%		110-115 Medium	Green Gray	Quartz – mica – garnet schist Highly fractured low-high angle fractures	Broken		
112	07:38		RQD-45/60 – 75%		Soft		High angle zone @ 113-115' Bedding nearly vertical			

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	3" or 2" split spoon 4" drive and wash casing	* - bentonite plug discovered in well after development – this boring abandoned – see other boring log.	
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop	PACM= Potential Asbestos Containing Materials	
METHOD OF ROCK CORING:	NX or NQ	MMM= Man Made Material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Instrument FID – B PID – B	BORING NO.: SB-506B*	PAGE: 7 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B*
PROJECT NO.:	N4236-0320			START DATE:	8/27/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	8/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD/JL

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)]
112										
			R2: 110-115'		Medium	Green/				
			Rec/Pen-60/60 – 100%		Soft	Gray	Quartz – mica – garnet schist	Broken		
			RQD-45/60 – 75%							
114										
116			R3: 115-118'			Green/ Gray	Quartz – mica – schist Highly fractured medium to high angle fractures 115-118'			
			Rec/Pen-36/36 – 100%				Fractures along bedding planes nearly vertical			
			RQD-24/36 – 66%							
118										
				EOB @ 118' bgs						

TYPE OF DRILLING RIG:	CME 75	Note: * – bentonite plug discovered in well after development – this boring abandoned – see other boring log		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	3" or 2" spoon 4" drive and wash casing			
METHOD OF SOIL SAMPLING:	140 lb hammer 30" drop			
METHOD OF ROCK CORING:	NX or NQ			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	Instrument FID – B PID – B	BORING NO.: SB-506B*	PAGE: 8 OF 8	

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B replacement
PROJECT NO.:	N4236-0320			START DATE:	11/20/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/21/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 * Replacement Well* Drilled with 4" casing; see boring log for original SB-506B for soil profile details.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light	Fine-coarse SAND and GRAVEL	SW	Light brown wash water	PID – 0.0 BZ FID – 0.0 BZ
5						Brown	Cobble at 3 ft.		4' – black wash water	PID – 0.0 NS FID – 0.0 NS
10							Fine-coarse SAND, trace fine gravel, trace silt		Light brown wash water	
15										
							Fine-coarse SAND, some gravel		18' – thick, Light Colored scum with bubbles on wash water	
20										
25										
										PID – 0.0 BZ FID – 0.0 BZ
30							Fine-coarse SAND, some gravel		Material dissipating	PID – 0.4 NS FID – 0.0 NS
35										
							Fine-medium SAND, trace coarse sand			PID = 0.0 FID = 0.0
40							Fine-medium SAND, trace silt	SP		PID = 0.1 BZ FID = 0.0 NS

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone. NS = near source = within 2" from wash water or rock core.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Visual Check of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	17.40 ft bgs. In open borehole (11/21)		
OTHER OBSERVATIONS:	*Replacement Well for SB-506B. See boring log for SB-506B (original) for soil profile details.	BORING NO.: SB-506B	PAGE: 1 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B replacement
PROJECT NO.:	N4236-0320			START DATE:	11/20/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/21/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
40										
						Light brown		SP		
45										
50										
55							Fine-medium SAND, some silt			
60										
										PID = 0.0 BZ FID = 0.0 BZ
65										PID = 0.1 NS FID = 0.0 NS
70							Fine-medium SAND; some silt			
75							Silty SAND (fine-medium sand)	SM		
										PID = 2.4 NS FID = 384 NS
80										PID = 0.0 BZ FID = 0.0 BZ

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone. NS = near source = within 2" from wash water or rock core.		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash			
METHOD OF SOIL SAMPLING:	Check of drill cuttings only			
METHOD OF ROCK CORING:	NX			
GROUNDWATER LEVELS:	17.40 ft bgs. In open borehole (11/21)			
OTHER OBSERVATIONS:	*Replacement Well for SB-506B. See boring log for SB-506B (original) for soil profile details.	BORING NO.: SB-506B		PAGE: 2 OF 4

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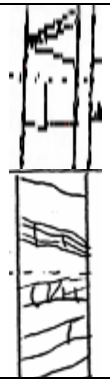
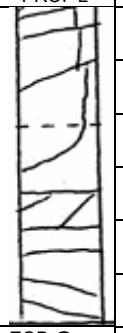
BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B replacement
PROJECT NO.:	N4236-0320			START DATE:	11/20/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/21/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
								SM		
85										
90										
										PID = 0.0 BZ FID = 0.0 BZ
95										PID = 0.0 NS FID = 3.9 NS
96				96' Bedrock						
97						Gray-	Angular pieces (schist)		Gray wash water	
98				98' bottom Of socket		Green			Slight brown wash water. 98-99 ft.	
99	14 min/ft.	RUN 1	Recovery = 1.5'/1.5' =100% RQD = 8'/18' = 44%		Soft Medium	Gray-	SCHIST – micaceous with calcite vein at 99'.	Very Broken		PID = 0.0 NS FID = 0.0 NS
100	7 min/6in				Hard	Green	Has very fractured zones about 45° from horizontal.		Dark Gray wash water Started losing water-core snagged.	
101	5 min/6in 8 min/ft	RUN 2	Recovery = 2.5'/3.5' RQD = 1.9'/3.5' = 54%				Need to core slowly due to softness of rock			
102	5.5 min/ft				Medium Hard	Gray -	SCHIST – micaceous; reddish k-feldspar?	Broken		
103	5.5 min/ft					Green	Veins 101-102' – veins and foliations	Very		
104	7 min/ft	RUN 3	Recovery = 5'/5' = 100% RQD = 3.1'/5' = 62%				Slightly deformed - no sediment, obvious weathering seen on fractures			
105	5.5 min/ft									

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone. NS = near source = within 2" from wash water or rock core.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Check of drill cuttings only		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	17.40 ft bgs. In open borehole (11/21)		
OTHER OBSERVATIONS:	*Replacement Well for SB-506B. See boring log for SB-506B (original) for soil profile details.	BORING NO.: SB-506B	PAGE: 3 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506B replacement
PROJECT NO.:	N4236-0320			START DATE:	11/20/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/21/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506B
GRD. SURFACE ELEVATION:	30.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
105										
106	5.5 min/ft							Broken	105 – 107' highly deformed, foliations & fractures near vertical	
107	7 min/ft						107' –losing water, foliations & fractures			
108	5.5 min/ft	RUN 4	Recovery = 3.3'/4' = 82% RQD = 2.0'/4' = 50%		Core filled with material		vertical, with vertical fractures terminating against horizontal fractures	Very broken		
109	6 min/ft				From previous Run (run 2)			Broken		PID = 0.0 NS FID = 0.0 NS
110	5 min/ft									
111	6 min/ft						2" chunk of quartz at EOB	Very broken		
				EOB @ 111' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: BZ = breathing zone. NS = near source = within 2" from wash water or rock core.		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash			
METHOD OF SOIL SAMPLING:	Check of drill cuttings only			
METHOD OF ROCK CORING:	NX			
GROUNDWATER LEVELS:	17.40 ft bgs. In open borehole (11/21)			
OTHER OBSERVATIONS:	*Replacement Well for SB-506B. See boring log for SB-506B (original) for soil profile details.	BORING NO.: SB-506B		PAGE: 4 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506D
PROJECT NO.:	N4236-0320			START DATE:	9/26/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/27/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506D
GRD. SURFACE ELEVATION:	30.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 Refer to boring log no: SB-506B for detailed description	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		N/A	No sample collecting	(1)	(1)	Dark Brown/ Brown	0-5' ash/cinders, fine-coarse SAND, trace fine gravel.		4" casing advanced w/automatic hammer 30" drop	
10				Sand & Gravel			5-10' no ash or cinders observed, same material sand and gravel, no PACM observed, no odor.			@ 0930
						Brown	10-40' wash water discharge = fine-coarse SAND, trace fine gravel, no PACM, MMM or odor, slight sheen observed in discharge tub, used absorbent pad. Quartz, feldspar, gneiss, schist, mica.			FID=0.0 PID=0.0
20										
										@ 1020
30										FID=0.0 PID=0.0
40										
							40-60' wash water discharge = fine-medium sand, trace coarse SAND, some silt, no PACM, MMM or odor. No sheen noted ±60-65' fine SAND and SILT gray in color.			@ 1120
50										FID=0.0 PID=0.0
60							60-75' wash water discharge = fine-medium SAND, some silt, trace coarse sand, no PACM, MMM or odor. No sheen noted.			@ 1300
										FID=0.0 PID=0.0
70										
							75-99' wash water discharge = fine-medium SAND, some silt, trace fine gravel			
80						Gray	±79' bgs fine SAND and SILT. Gray material.			

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potentially asbestos containing material; MMM = man made material; * = breathing zone monitoring results; (1) = Refer to boring log no: SB506B for detailed description	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	Logged cuttings		
METHOD OF ROCK CORING:	Roller-Bit confirmation		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (A)	BORING NO.: SB-506D	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506D
PROJECT NO.:	N4236-0320			START DATE:	9/26/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/27/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506D
GRD. SURFACE ELEVATION:	30.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
			Bedrock @ 98.4' reamed to 99' to confirm bedrock			Brown	Wash water discharge = fine-medium SAND, some silt, trace fine gravel.			@ 1510
100				EOB @ 99' bgs		White/ Gray	Bedrock encountered @ 98.4' reamed to 99' discharge white/gray flakes.		4" casing advanced with 300 lb. hammer	FID=0.0 PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" casing drive and wash	PACM = potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	Logged cuttings	MMM = man made material	
METHOD OF ROCK CORING:	Roller-Bit confirmation	* = breathing zone monitoring results	
GROUNDWATER LEVELS:		(1) = Refer to boring log no: SB506B for detailed description	
OTHER OBSERVATIONS:	FID (F) PID (A);	BORING NO.: SB-506D	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506M
PROJECT NO.:	N4236-0320			START DATE:	10/14/02 @ 1125
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/14/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506M
GRD. SURFACE ELEVATION:	30 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 (of wash water)	MATERIAL CLASSIFICATION (1) Refer to boring log no: SB-506B for detailed material description	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0		N/A	No sample collecting	(1)	(1)	Brown	Wash out 4" casing to 25' bgs.	(1)	4" casing advanced with 300 lb. hammer 30" drop, little resistance 0-25' bgs.	*FID=0.0 *PID=0.0 @ 1220
10				Sand & Gravel			SAND and GRAVEL, brown discharge color black material in cuttings, possible ash/cinder materials. 0.0 ppm on FID and PID. No PACM or odor noted.			
20										
30							Wash out 4" casing to 52' bgs. SAND and GRAVEL cuttings, brown color discharge. 0.0 ppm on FID and PID. No PACM, MMM or odor noted.		4" casing advanced with 300 lb. hammer 30" drop, little Resistance 25-52' bgs.	FID=0.0 PID=0.0 @ 1330
40				Sand			40-52' bgs wash water discharge brown in color, sand cuttings, more fine-medium sands noted than noted from 0-40' bgs.		Washed 4" casing until clear water Bentonite	
50							Increased fines.			
60				EOB @ 52' bgs						
							Refer to well construction log no. MW-506M for details			
							10' (10 slot screen) screened interval 41-51', 1' sump, 2' sand above screen, 2' Bentonite chip (seal)			

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash	PACM = potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	Logged Cuttings	MMM = man made material	
METHOD OF ROCK CORING:		* = breathing zone ambient air screening	
GROUNDWATER LEVELS:	N/A	(1) = Refer to boring log no: SB506B for detailed description	
OTHER OBSERVATIONS:	FID (B) PID (B) weather: 56°F, windy, sunny and clear	BORING NO.: SB-506M	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-506S
PROJECT NO.:	N4236-0320			START DATE:	10/14/02 @ 1640
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/15/02 @ 1130
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-506S
GRD. SURFACE ELEVATION:	29.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 (of wash water)	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		N/A	No sample collecting	(1)	(1)		Refer to boring log no: SB-506B for detailed material description.	(1)		
0										
				Sand and Gravel		Dark Brown	Wash out 4" casing to 25' bgs. SAND and GRAVEL cuttings, dark brown color discharge water, black material, possible ash/cinders, 0.0 ppm recorded on FID and PID.		4" casing advanced with 300 lb. hammer with 30" drop. Little resistance 0-33' bgs.	*FID=0.0 *PID=0.0 @ 0930
10										
									No PACM, MMM, or odor noted from 0-33' bgs. Except possible ash/cinder	
20										
									Wash out 4" casing to 33' bgs.	*FID=0.0 *PID=0.0 @ 0950
30						Brown	SAND and GRAVEL cuttings, discharge water = Increased fine sands. 0.0 ppm recorded on the FID and PID			
				BOE @ 33' bgs						
40										
							Refer to well construction log no: MW506S for details.			
							10' (10 slot screen) screened interval 22-32', 1' sump, ±2' sand above screen, minimum 2' chips (seal)			

TYPE OF DRILLING RIG:	CME 78	Notes: (1) Refer to boring log no: SB506B * Breathing zone ambient air screening.	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	Logged Cuttings		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	WL – 24.28'		
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-506S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507B
PROJECT NO.:	N4236-0320			START DATE:	9/4/02 @ 1455
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/5/02 @ 1715
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-507B
GRD. SURFACE ELEVATION:	15.7 Feet	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	10	1.0' / 1.5'	OU2-SO-507-0002 FID=1.0 PID=0.0 9/4/02 1505		Medium Dense	Light Brown	Top 0.5' was asphalt roadway	SW	No PACM or MMM was observed in the shoe or split spoon.	FID=0.0 PID=0.0
2	16 17			Sand & Gravel			Well graded SAND with gravel and gneiss fragments from the cutting shoe.			FID=0.0 PID=0.0
	12 19	0.9' / 2'	OU2-SO-507-0204 FID=1.8 PID=0.0 9/4/02 1510		Dense	Brown	Silty fine SAND with gravel.	SM		FID=0.0 PID=0.0
4	16 17					Light Brown	Medium to coarse grained SAND some gravel, crushed quartz and gneiss	SP		FID=0.0 PID=0.0
	4 14	1.05' / 2'	OU2-SO-507-0406 FID=5.0 PID=0.0 9/4/02 1530			Light Brown	Well graded SAND, some fine gravel with broken quartz from the cutting shoe.	SW		FID=0.0 PID=0.0
6	16 13					to Gray				FID=0.0 PID=0.0
	12 12	1.5' / 2'	OU2-SO-507-0608 FID=19.8 PID=3.5 9/4/02 1535		Medium Dense		Well graded SANDS and GRAVEL, broken pieces of quartz and mica schist were lodged in the cutting shoe.	SW / GW		FID=3.8 PID=0.0
8	13 22									FID=5.7 PID=0.0
	12 19	1.0' / 2'	OU2-SO-507-0810 FID= PID= 9/4/02 1600		Dense	Gray	Well graded SANDS and GRAVEL with trace silt.			FID=0.0 PID=0.0
10	21 24									FID=2.8 PID=0.0
	12 23	1.1' / 2'	OU2-SO-507-1012 FID=39.8 PID=7.5 9/4/02 1615			Light Brown	Well graded SAND and GRAVEL with trace silt, broken pieces of quartz and gneiss from the cutting shoe			FID=2.8 PID=0.0
12	23 24									FID=7.8 PID=0.0
							Switched to standard interval sampling going to 15'. The discharge water was a gray to brown color with quartz and gneiss pieces and well graded sand.			
14										
				Fine Grained Sand	Loose	Gray	Fine grained SAND, trace silt and coarse grained sand.	SM		
16	4 4	0.5' / 2'	OU2-SO-507-1517 FID=							FID=0.0 PID=0.0

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	Notes: PACM = Potentially Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	2" split spoon	MMM = Man Made Material	
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-507B	PAGE: 1 OF 4

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BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507B
PROJECT NO.:	N4236-0320			START DATE:	9/4/02 @ 1455
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/5/02 @ 1715
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-507B
GRD. SURFACE ELEVATION:	15.7 Feet	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	7 / 8	0.5' / 2'	PID=0.5 9/4/02 1630		Loose	Gray	Same as above	SM	No PACM or MMM was observed in the shoe or split spoon.	FID=0.0 PID=0.0
18							Discharge water was light gray to brown, fine sand with quartz, mica and gneiss present.			
20										
	3 / 5	1.1' / 2'	OU2-SO-507-2022 FID=4.9 PID=0.0 9/4/02 1650		Medium Dense	Light Brown	Fine grained SAND, trace silt, no gravel or coarse sand.	SP		FID=4.7 PID=0.0
22	7 / 9									FID=1.3 PID=0.0
							The discharge water was light brown fine grained sand with gneiss and mica mixed in.			
24										
26	4 / 6	0.55' / 2'	OU2-SO-507-2587 FID=2.7 PID=0.0 9/4/02 1705			Light Brown	Fine grained SAND, trace silt, no coarse sand or gravel.	SP		FID=0.0 PID=0.0
	5 / 7									FID=0.0 PID=0.0
28							The discharge water was light brown with fine grained sand with gneiss and mica mixed in, some coarse sand.			
30										
	3 / 13	1.1' / 2'	OU2-SO-507-3032 FID= PID= 9/4/02 1730	Sand Fine Gravel			0.5' - fine SAND, no gravel trace silt 0.5 to 1.1'- was a well graded SAND to fine gravel and quartz cobble fractured by the split spoon.	SP		FID=0.0 PID=0.0
32	15 / 18							SW		FID=1.7 PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-507B	PAGE: 2 OF 4

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BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507B
PROJECT NO.:	N4236-0320			START DATE:	9/4/02 @ 1455
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/5/02 @ 1715
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-507B
GRD. SURFACE ELEVATION:	15.7 Feet	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
							Material from the discharge line was light brown to gray sand with ground up mica schist from the roller bit.		No PACM or MMM was observed in the shoe or Sput-barrel	
34										
36	6 11	0.35' / 2'	OU2-SO-507-3537 FID=0.8 PID=0.0 9/4/02 1750	More Gravel	Medium Dense	Light Brown	Very limited volume of well graded SAND and GRAVEL semi rounded and angular.	SW / GW		FID=0.0 PID=0.0
	14 15					to Gray				FID=0.0 PID=0.0
38							Discharge water was brown with a sand gneiss and quartz chips from the roller bit, some mica schist.		casing 0825 9/5/02 water level 12.9	
40										
	9 16	1.2' / 2'	OU2-SO-507-4042 FID=20.8 PID=6.3 9/5/02 0855	Sand to Gravel	Dense	Gray Red Brown	Well graded SAND, some fine gravel, trace silt, gravel was rounded.	SW		FID=0.0 PID=0.0
42	16 19					Light Brown				FID=0.0 PID=0.0
							Discharge water was a light brown in color with gray sand quartz and schist mixed in.			
44										
46	6 11	0.9' / 1.3'	OU2-SO-507-4547 FID=20.9 PID=16.4 9/5/02 0935				0.55' well graded SAND. 0.55 to 0.9' fine grained SAND, trace silt. The shoe had quartz and some potential saprolite mica schist. Reamed out to 47' appeared to be bedrock.	SW SP		FID=0.0 PID=0.0
	100/ 0.3			Refusal						FID=1.7 PID=0.0
48				Rock Socket					1000 Rock Socket coring began	

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material	
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:	12.9 9/5/02		
OTHER OBSERVATIONS:		BORING NO.: SB-507B	PAGE: 3 OF 4

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BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507B
PROJECT NO.:	N4236-0320			START DATE:	9/4/02 @ 1455
LOGGED BY:	Chuck Meyer	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/5/02 @ 1715
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-507B
GRD. SURFACE ELEVATION:	15.7 Feet	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 48	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)]
		Core Time		4" rock Socket					Note weathered fractures hardness is soft	
50		7:58 min	Run 1 began @ 1100 2.9'		Medium Hard	Light Gray	MICA SCHIST with quartz intrusions & low angle fractures with rounded edges and some silting in fractures.	Broken		
		5:27 min	RQD= 13/36=36%				Mica schist with high angle fractures parallel to foliation Fractures are stained and somewhat rounded.		Mud tub began loosing water approximately 25 gallons	
52		4:08 min	Run 1 end 1120, 3.0'				Mica schist with quartz intrusions & Highly weathered and Fractured, high angled fractures rounded biotite, and silt in frac.	Very Broken		
		3:35 min	Run 2 began @ 1130 2.4'				MICA SCHIST highly weathered, well rounded fractures. Low and high angle fractures, staining and pyrite noted.	Broken		
54		3:32 min	RQD=0%				Highly fractured and weathered on upper section, well rounded high angle fractures with some pyrite & staining present		Mud tub lost approximately 30 gallons	
		5:09 min	Run 2 end 1145, 2.5'				Low and high angle fractures with quartz, biotite, garnet intrusions Silt, pyrite and staining was observed in fractures.			
		2:50 min	Run 2 Began @ 1155							
56		4:42 min	RQD = 33%				High angle fractures with rounded edges, Silt, pyrite and biotite present on fractures, quartz intrusions.			
		5:11 min	Run 3 end 1210. 2.5' Run 4 began @ 1250 3.3				Highly weathered mica schist with staining, pyrite, and biotite in fractures.			
58		4:49 min	RQD = 28"/48"				MICA SCHIST with quartz intrusions, highly fractured zone lower end rounded, weathered edges, staining was noted.		Lost approximately 25 gallons	
		5:25 min	=58%				MICA SCHIST with quartz intrusions. Highly fractured zone meeting 58'. High angle fracture along lower end along the fracture zone		Mud tub lost approximately 100 gallons	
60		7:06 min					Staining, biotite, and garnets. Mica schist with quartz intrusion, weathered, highly fractured lower portion with quartz, mica, biotite, and chlorite.			
		3:10 min	Run 4 end @ 1320, 4.0'					Very Broken	Mud tub lost approximately 50 gallons	
62		3:00 min					No recovery after two tries			
				EOB @ 62' bgs						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash	Notes:	
METHOD OF SOIL SAMPLING:	2" split spoon	PACM = Potentially Asbestos Containing Material	
METHOD OF ROCK CORING:	NX or NQ	MMM = Man Made Material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-507B	PAGE: 4 OF 4

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507D
PROJECT NO.:	N4236-0320			START DATE:	9/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/19/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-507D
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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							See boring log MW-507B for detailed description			
				asphalt					Brown wash water.	
						Light	Medium-coarse SAND, some gravel, trace fine sand.	SW		
2						Brown				
			1355							
4			3'							FID=5.0 PID=0.0
6										
8						Light	Fine-coarse SAND some gravel.			
			1400			Brown			Brown wash water.	FID=0.0 PID=0.0
10			8'							
12										
			1410							
14			13'							FID=0.0 PID=0.0
							Boulder at 14-15'		Light brown wash water.	
16				Boulder			rock fragments			

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Grab from wash water for jar headspace only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	see boring log for MW-507B for details	BORING NO.: SB-507D	PAGE: 1 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507D
PROJECT NO.:	N4236-0320			START DATE:	9/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/19/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-507D
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
						Light	Medium-coarse SAND, some gravel.	SW	Brown wash water	
18						Brown				
			1515							FID=1.0 PID=0.0
20			18'							
22										
24										
			1530							FID=0.0 PID=0.0
26			24'							
28										
						Light	Fine-coarse SAND, some gravel.		Brown wash water.	
30						Brown				
			1555							
32			31'							FID=0.0 PID=0.0

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash			
METHOD OF SOIL SAMPLING:	Grab from wash water for jar headspace only			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	see boring log for MW-507B for details	BORING NO.:	SB-507D	PAGE: 2 OF 3

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BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507D
PROJECT NO.:	N4236-0320			START DATE:	9/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/19/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-507D
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
						Light	Fine-coarse SAND, some gravel.	SW	Brown wash water.	
33						Brown				
						Light	Medium-coarse SAND, some gravel.		Brown wash water.	
34						Brown				
			1620							
36			37'							FID=1.0 PID=0.0
38										
40										
42										
			1635							FID=0.0 PID=0.0
44			44'				Bedrock – schist			
				EOB @ 45' bgs						

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash			
METHOD OF SOIL SAMPLING:	Grab from wash water jar headspace only			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	see boring log for MW-507B for details	BORING NO.:	SB-507D	PAGE: 3 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507S
PROJECT NO.:	N4236-0320			START DATE:	9/23/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/23/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-507S
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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							0.5' – Asphalt; See boring log for MW507B for details			
						Gray Brown	Medium-coarse sand, some gravel – darkbrown wash water	SW	Logged soil cuttings - No samples taken	
2										
						Light	Medium-coarse SAND, some gravel – light brown wash water.	SP		
4						Brown	Color change only.			
			1215							
6			4'							*FID=0.0 *PID=713
						Light	Fine-coarse SAND, some gravel. Light brown wash water.	SP		
8						Brown				
10										
			1235							
12			10'			Light	Medium-coarse SAND, some gravel. Light brown wash water.	SP		
			1250			Brown				FID=0.0 PID=251
14			14'	Boulder			BOULDER at 13-14'			
						Light Brown	Medium-coarse SAND, some gravel. Light brown wash water.	SP		FID=0.0 PID=133
16										

TYPE OF DRILLING RIG:	2" well rig (rig #2) CME 45	Notes: see boring log for MW507B for details *no readings in the breathing zone. Instruments checked out ok	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Jar headspace from wash water only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	GW at MW507D=12.5'		
OTHER OBSERVATIONS:		BORING NO.: SB-507S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507S
PROJECT NO.:	N4236-0320			START DATE:	9/23/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/23/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-507S
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
						Light	Medium-coarse SAND, some gravel. Light brown wash water.	SP		
18						Brown				
20										
22										
				EOB @ 22' bgs						

TYPE OF DRILLING RIG:	2" well rig (rig #2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	Notes:	
METHOD OF SOIL SAMPLING:	Jar headspace from wash water only	see boring log for MW507B for details	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	GW at MW507D=12.5'		
OTHER OBSERVATIONS:		BORING NO.: SB-507S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-507SG
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/3/02
DRILLED BY (Company/Driller):	ADT/Marques Larabie			MON. WELL NO.:	MW-507SG
GRD. SURFACE ELEVATION:	15.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See SB-507B boring log for soil profile details.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD* SCREENING DATA *METHOD* = [FID, (PPM)]
2										
4							5" open casing drilled to 5'			FID=0.0 PID=0.0
6							3" open casing drilled to 7.6'			
8							Refusal at 7.6', soil removed.			
							Drilled again to 7.6' with 3" open casing. Add point and drill again.			
				EOB @ 7.4' bgs			Refusal at 7.4' with the point – will set the well here.			FID=0.0 PID=0.0

TYPE OF DRILLING RIG:	Truck-mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL=12.65' at MW507S			
OTHER OBSERVATIONS:	*Field screening for breathing zone only.	BORING NO.:	SB-507SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508B
PROJECT NO.:	N4236-0320			START DATE:	9/6/02 @ 0930
LOGGED BY:	C. Meyer/C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508B
GRD. SURFACE ELEVATION:	25.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
1	1 1	0.8' / 2.0'	OU2-SO-SB508-0002 FID=0.8 PID=0.0 9/6/02 0945	Fine to Medium Sand	Very Loose	Brown	Fine sandy silty loam, some fine gravel.	SM	No PACM or MMM was present in the shoe. The soil was moist.	FID=0.0 PID=0.0
2	3 7									FID=0.0 PID=0.0
3	2 10	1' / 2.0'	OU2-SO-SB508-0204 FID=0.8 PID=0.0 9/6/02 0955		Medium Dense	Brown	Fine to medium grained SAND, some silt.	SP		FID=0.0 PID=0.0
4	9 10			Medium To Coarse Sand and Crushed Rock		Lt. Brown to Gray	Quartz crushed by the cutting shoe, fine angular GRAVEL used in road bed.	FILL		FID=0.0 PID=0.0
5	49 32	1' / 2.0'	OU2-SO-SB508-0406 FID=5.8 PID=0.0 9/6/02 1020		Very Dense	Gray	Gneiss crushed by the cutting shoe, fine SAND and GRAVEL.	GM		
6	29 28					Red Brown	Fine GRAVEL and coarse SAND gneiss in the cutting shoe.			FID=1.3 PID=0.0
7	12	0.8' / 1.5'	OU2-SO-SB508-0608 FID=12.1 PID=0.0 9/6/02 1040	Coarse sand To fine gravel	Dense	Brown	Top 0.5' ran the roller bit to cut cobbles, coarse SAND and fine GRAVEL, some silt, and some fine sand in the cutting shoe.	SP		FID=0.0 PID=0.0
8	19 19									FID=5.4 PID=0.0
9	7 33	0.9' / 2.0'	OU2-SO-SB508-0810 FID=39.8 PID=20.3 9/6/02 1120	Well Graded Sands	Very Dense		Well graded SAND with broken pieces of gneiss and quartz	SW		FID=0.0 PID=0.0
10	28 27						trace silt, some fine gravel.			FID=7.2 PID=0.0
11	30 36	1.2' / 2.0'	OU2-SO-SB508-1012 FID=7.2 PID=0.0 9/6/02 1130				Well graded SAND, some fine gravel, rounded to subangular	SW		FID=1.4 PID=0.0
12	25 26						quartz and gneiss broken by the cutting shoe.			FID=8.6 PID=0.0
13							Switched to standard interval, material from the discharge			
14							was brown in color with sand, gneiss and quartz mixed in.			
15										
16	7 10	0.9' / 2.0'	OU2-SO-SB508-1517 FID = 8.7	Fine Sand	Medium Dense	Red Brown	0'-0.4' fine to medium SAND some fine gravel, trace gravel 0.4'-0.9' well graded SAND, some rounded fine-coarse	SW		FID=4.6 PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-508B	PAGE: 1 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508B
PROJECT NO.:	N4236-0320			START DATE:	9/6/02 @ 0930
LOGGED BY:	C. Meyer/C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508B
GRD. SURFACE ELEVATION:	25.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
17	7 10	0.9' / 2.0'	PID=0.0 9/6/02 1210			Brown	Gravel, trace silt	GW		FID=9.6 PID=0.0
18			9/9/02 Monday Begin day at 17'				Discharge water brown in color coarse SAND and fine GRAVEL, quartz and gneiss fragments.			
19										
20										
21	18 31	0.9' / 2.0'	OU2-SO-SB508-2022 FID=35.2 PID=0.0 9/9/02 1240	Sand & Gravel	Very Dense	Red Brown	0.0-0.4' poorly graded medium-coarse SAND, some fine-coarse gravel	SP GW	No PACM or MMM, soil moist, rock fragments oxidized.	FID=20.0 PID=0.8
22	40 28						0.4-0.9' gneiss and quartz rock fragments.			
23							Wash water brown in color, coarse SAND and fine GRAVEL, quartz, gneiss.			
24										
25										
26	10 15	0.7' / 2.0'	OU2-SO-SB508-2527 FID=32.0 PID=0.3 9/9/02		Medium Dense	Red/Orange Brown	0.0-0.5' mostly medium-coarse SAND, some fine gravel 0.5-0.7' increasing coarse SAND, quartz fragments.	SP		FID=2.3 PID=0.0
27	10 10									
28							Wash water brown in color SAND and GRAVEL, mostly medium-coarse sand, fine gravel.			
29										
30										
31	4 7	0.4' / 2.0'	OU2-SO-SB508-3032 FID=110 PID=6.2 9/9/02 1325	Fine to Medium Sand	Medium Dense	Brown	0-0.4' poorly graded fine-medium SAND, some fine gravel, trace silt. Mostly fine-medium sand, trace quartz fragments.	SP		FID=0.0 PID=0.0
32	8 11									

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:	WL – N/A dry @ 1200 9/9/02		
OTHER OBSERVATIONS:		BORING NO.: SB-508B	PAGE: 2 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508B
PROJECT NO.:	N4236-0320			START DATE:	9/6/02 @ 0930
LOGGED BY:	C. Meyer/C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508B
GRD. SURFACE ELEVATION:	25.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
33							Wash water brown in color, fine-medium SAND, some fine gravel, increased fine sand than previously observed, quartz, gneiss fragments.			
34										
35										
36	NR	1.0' / 2.0'	OU2-SO-SB508-3537 FID=76.0 PID=7.3 9/9/02 1345	Fine sand with silt		Brown	Poorly graded fine-medium SAND, some silt. Mostly medium sand, some fine sand, trace fine gravel, rock fragments, gneiss.	SM	No PACM or MMM, soil moist.	FID=0.0 PID=0.0
37									No odor.	
38							Wash water brown in color, fine-medium SAND, some fine gravel.			
39										
40										
41	6 8	0.65' / 2.0'	OU2-SO-SB508-4042 FID=18.0 PID=0.4 9/9/02 1405	Sand & Gravel	Medium Dense	Brown	Poorly graded fine-coarse SAND, fine gravel, trace silt. Mostly medium-coarse sand.		No PACM or MMM, soil moist, no odor.	FID=0.0 PID=0.0
42	5 5						Wash water brown fine-coarse SAND, some fine gravel, quartz, gneiss fragments rounded.	SP		
43										
44										
45										
46	5 10	0.8' / 2.0'	OU2-SO-SB508-4547 FID=40.0 PID=1.8 9/9/02 1430			Brown	0-0.4' poorly graded fine-coarse SAND, some fine gravel, trace silt	SP	No PACM or MMM, soil moist – wet.	FID=2.3 PID=0.0
47	10 14						0.4-0.45' discoloration of soil, rust oxidation color noted, 0.45-0.8' same material as noted from 0-0.4'.		No odor. Discoloration rust color 0.4-0.45'.	
48										

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material; MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-508B	PAGE: 3 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508B
PROJECT NO.:	N4236-0320			START DATE:	9/6/02 @ 0930
LOGGED BY:	C. Meyer/C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508B
GRD. SURFACE ELEVATION:	25.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
49							Wash water brown in color, fine-coarse SAND, fine gravel, quartz, gneiss, feldspar, no noticeable odor.			
50										
51	4 10	1.1'	OU2-SO-SB508-5052 FID=110.3	Sand with Silt	Medium Dense	Lt./Orange Brown	Poorly graded fine-medium SAND, some silt, trace fine gravel. Mostly fine-medium sands and silt, rock fragments, possible gneiss.	SM	No PACM or MMM, soil moist – wet. No odor.	FID=1.3 PID=0.2
52	10 15	2.0'	PID=11.5 9/9/02 1500							
53							Wash water brown in color, fine-coarse SAND, fine gravel. No odor			
54										
55										
56	3 6	0.6'	OU2-SO-SB508-5557 FID=19.0	Sand	Medium Dense	Light Brown	Well graded fine-coarse SAND, trace silt.	SW	No PACM or MMM, soil moist.	FID=0.0 PID=0.0
57	11 10	2.0'	PID=4.9 9/9/02 1530						No odor.	
58							Wash water brown to light brown fine-coarse SAND, quartz, gneiss, feldspar, micas, no odor.			
59										
60										
61	4 9	1.0'	OU2-SO-SB508-6062 FID=20.0		Medium Dense	Brown	Well graded fine-coarse SAND, some fine gravel and trace silt, quartz rock fragments.	SW	No PACM or MMM, soil moist. No odor.	FID=0.0 PID=0.0
62	9 8	2.0'	PID=5.1 9/9/02 1600							
63							Wash water brown fine-coarse SAND, some fine gravel, no odor, quartz, gneiss, feldspar, garnet			
64										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material	
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-508B	PAGE: 4 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508B
PROJECT NO.:	N4236-0320			START DATE:	9/6/02 @ 0930
LOGGED BY:	C. Meyer/C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508B
GRD. SURFACE ELEVATION:	25.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
65										
66	3 5	0.7' 2.0'	OU2-SO-SB508-6567 FID=14.3	Silty Sand	Medium Dense	Brown	Poorly graded fine-medium SAND, some silt. Mostly fine-medium sand, some silt, trace rock fragments, gneiss.	SP	No PACM or MMM, soil moist.	FID=0.0 PID=3.2
67	15 100/0.4		PID=20.9 9/9/02 1630						No odor.	
68							Discharge brown to green in color @ approx. 67-69'. Trouble advancing roller bit (possible cobble) fine-coarse sand, trace fine gravel in discharge, 69-70' softer material fine-medium sand. 4" casing advanced to refusal @ 70', 2" split spoon advanced 100/0.1'.		Lose ±50 gals water, cobble 67-69'.	
69									69-70' f-m sand.	
70										
	100/0.1	0.1'	OU2-SO-SB508-7070.1 FID=4.0			Gray/ Green	Poorly graded SAND, silt, mostly fine-medium sand, some silt, trace weathered rock (gneiss) fragments.	SP	No PACM or MMM soil wet no odor Bedrock encountered	FID=0.0 PID=0.0
70.1		0.1'	PID=0.0 9/10/02 1030							
71				Rock Socket 70-72.5'			Rock socket 70-72.5 (2.5' socket) 4" casing seated @ 70' (good seal, no water loss). Discharge water light brown, slightly green in color, rock fragments / cuttings green and white (gneiss, micas). Bedrock determined to be @ 70' (cobble 67-69').			
72										
73			Start of core run #1							
74	09:00		R1: 72.5' to 77.5'		73.5'	Gray/ Green	Micaceous SCHISTS, garnet, pyrite, biotite, muscovite, quartz, feldspar noted 72.5-74.5'. High angle fracture along	BR	Core barrel bouncing around, not very smooth	
75	05:20		Rec/Reg=60"/60"=100% RQD: 53"/60"=80%		74.5'		Foliation, nearly vertical. Natural discoloration observed, 75.5'-76.5' low angle natural fracture, slight rounding of edges, slight discoloration.		72.5-74.5' natural and machine breaks, water lose from 75.5 to 77.5' ±50 gals.	
76	04:40				75.5'					
77	04:30				76.5'		Machine break @ 76.5' high angle sharp along foliation.		5' core wavy, grooved texture, marking from core barrel movement.	
78	05:44				77.5'					

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material See Diagram for following: //or\\ - natural break /or\ - machine break	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-508B	PAGE: 5 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508B
PROJECT NO.:	N4236-0320			START DATE:	9/6/02 @ 0930
LOGGED BY:	C. Meyer/C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508B
GRD. SURFACE ELEVATION:	25.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
79	08:20		R2: 77.5'-82.5' Rec/Pen: 60"/60"=100% RQD: 49.5"/60"=82%		Medium - Soft	Gray/ Green	Mica, garnet, SCHISTS, garnet, pyrite, calcite, biotite, muscovite, feldspar, quartz, hornblend amphibole? noted.	BR	77.5-79.5' lost ±350 gallons water, run stopped @ 79.5' to get more water. Significant water lost from 75.5' to 85.5' estimated ±850-900 gals lost to core 13'.	
80	05:50				79.5'		77.5-78.5' high angle natural breaks, no discoloration, Fine sand noted.			
81	07:40				80.5'		79-80.5' machine high angle break, 80-80.5' natural low angle breaks, slightly discolored, large quartz or calcite intrusion.			
82	05:40				81.5'		80.5-82' natural low angle break @ 81', high angle natural breaks.			
83	05:20				82.5'					
84	05:28		R2: 82.5'-85.5' Rec/Pen: 30"/36"=83%		83.5'	Gray/ Green	Mica, garnet, green SCHISTS, garnet, pyrite, feldspar, quartz, calcite, biotite, muscovite noted.			
85	04:08		RQD: 28"/36"=78%		84.5'		82.5'-83.5' natural low angle breaks			
86	04:10				85.5'		84.5 machine break rigid, sharp. Bottom of boring @ 85.5'.			
				EOB @ 86' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material; MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NX or NQ	See Diagram for following: //or\\ - natural break; /or\ - machine break	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-508B	PAGE: 6 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508D
PROJECT NO.:	N4236-0320			START DATE:	9/24/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/24/02 @ 1730
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508D
GRD. SURFACE ELEVATION:	25.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 *Refer to boring log no: SB-508B for detailed description of material*	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		N/A	No sample collecting	(1)	(1)	Brown	0-0.5' asphalt 0.5-15' wash water discharge = fine-coarse SAND, fine gravel, quartz, feldspar, micas, gneiss fragments, no PACM, MMM or odor.	SW	4" casing advanced with automatic hammer 30" drop.	FID=0.0 PID=0.0
10										
							15-21' wash water discharge = fine-coarse SAND, trace fine gravel, no PACM, MMM or odor.		4" casing advanced with 300 lb. hammer 30" drop, refusal 2 21' bgs.	FID=0.0 PID=0.0
20							21' bgs boulder encountered white flakes in discharge, roller bit through ± 6-8" boulder.			
				Boulder			21-50' wash water discharge = fine-coarse SAND, trace silt, fine gravel, no PACM, MMM or odor.		4" casing advanced with automatic hammer 30" drop.	FID=0.0 PID=0.0
30										
40										
50										
							50-67.5' wash water discharge = fine-coarse SAND, trace silt, no PACM, MMM or odor.		4" casing advanced with automatic hammer 30" drop.	FID=0.0 PID=0.0
60										
							Obstruction @ 67.5' possible bedrock, advance casing to refusal and wash casing.		4" casing advanced with automatic hammer to bedrock @ 67.5'.	
70						White/ Gray	67.5-68' wash water discharge brown in color, bedrock encountered @ 67.5' bgs, roller bit for 0.5' to 68' bgs, confirmed bedrock white/gray flakes in discharge.			

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potentially asbestos containing material MMM = man made material (1) = Refer to boring log no: SB-508D for detailed description * = breathing zone screening	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:			
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (C) PID (A)	BORING NO.: SB-508D	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508S
PROJECT NO.:	N4236-0320			START DATE:	9/25/02 @ 0945
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/25/02 @ 1330
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508S
GRD. SURFACE ELEVATION:	25.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 (1) Refer to boring log no: SB-508B for detailed material description. Logged cuttings only	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		N/A	No sample collecting	(1)	(1)	Brown	0-0.5' asphalt. 0-10' wash water discharge = fine-coarse SAND, some fine gravel, trace silt. No PACM, MMM or odor. Quartz, feldspar, micas, roller bit ahead of casing ±1'	SW	4" casing advanced with automatic hammer 30" drop	
5										
10										
							10-15' wash water discharge brown in color, fine-coarse sand, trace fine gravel, quartz, feldspar, micas, gneiss, schist fragments		refusal @ ±10', boulder or cobble, flushed casing, continue drive and wash.	
15										FID=0.0 PID=0.0
							15-30' wash water discharge = fine-coarse SAND, trace fine gravel, trace silt, no PACM, MMM or odor.		4" casing advanced with automatic hammer 30" drop.	
20							Flushed 4" casing until discharged clear water. Drummed IDW soil and water.			
									4" casing advanced with automatic hammer 30" drop.	
25										
30										
				EOB @ 30' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially asbestos containing material; MMM = man made material; (1) Refer to boring log no: SB-508B for detailed description; * breathing zone screening	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	Logged soil cuttings		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	MW-508D WL-21.93'		
OTHER OBSERVATIONS:	FID (B) PID (A)	BORING NO.: SB-508S	PAGE 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-508SG
PROJECT NO.:	N4236-0320			START DATE:	11/6/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/6/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-508SG
GRD. SURFACE ELEVATION:	25.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
						Brown	Fine-coarse sand; some gravel.	SW		
2							For soil profile details see boring log SB-508B			
4										
										FID=0.0 PID=0.0
6										
8										
				EOB @ 8' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL at MW-508S=21.86'			
OTHER OBSERVATIONS:		BORING NO.:	SB-508SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-509M
PROJECT NO.:	N4236-0320			START DATE:	9/4/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/5/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-509M
GRD. SURFACE ELEVATION:	9.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	11		S-1 @ 1526		Medium	Brown/				FID=0.0
	11	1.3'		Fill	Dense	Black	0-1.0' coarse SAND and GRAVEL, some asphalt	GW		PID=0.0
	15	2.0'	9/4/03			Gray &				FID=0.0
2	22		headspace		Moist	White	1.0-1.3' GRAVEL and SAND, some tiles and shells		Moist	PID=0.0
	17		S-2 @ 1541		Very					FID=0.0
	31	1.2'			Dense	White	Fill - Tile fragments and fibers			PID=0.0
	34	2.0'						FILL		FID=0.0
4	22		9/4/03							PID=0.0
	3		S-3 @ 1609							FID=0.0
	4	0.5'			Loose					PID=0.0
	2	2.0'								FID=0.0
6	4		9/4/03							PID=0.0
	2		S-4 @ 1623							FID=0.0
	1	0.4'								PID=0.0
	hammer	2.0'								FID=0.0
8	hammer		9/4/03							PID=0.0
	2		S-5 @ 1704 9/4/03	Organic					5" casing to 10'	FID=7.2
	5	2.0'	OU2-SO-FCP04-7809	Silt	Soft	Black	0-0.8' organic SILT, trace clay, leaves, and roots	OL		PID=0.0
	10	2.0'	@ 1705	Silty sand	Medium					FID=4.1
10	18	3" spoon	OU2-SO-FCP04-0910		Dense	Brown	0.8-2.0' silty fine-coarse SAND, trace roots.	SM		PID=0.0
	1		@ 1715		Very					FID=0.0
	hammer	0.4'	S-6 @ 1718	Sand &	Loose	White	Coarse SAND and GRAVEL	GW		PID=0.0
	19	2.0'		Gravel						FID=0.0
12	33		9/4/03			Brown			Wet	PID=0.0
	25		S-7 @ 0853		Very	White &				FID=0.0
	28	1.0'			Dense	Gray	0-0.7' coarse SAND and GRAVEL			PID=0.0
	26	2.0'				Light				FID=0.0
14	25		9/5/03	Sand		Brown	0.7-1.0' fine-medium SAND	SP		PID=0.0
	15		S-8 @ 0917			Dark				FID=0.0
	17	1.1'		Sand &	Dense	Brown	Medium-coarse SAND, some gravel	SW		PID=0.0
	23	2.0'		Gravel		&				FID=0.0
16	26		9/5/03			Black				PID=0.0

TYPE OF DRILLING RIG:	CME 45	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 10' & 4" to 20'	Sent OU2-SO-FCP04-0809 at 1709 & OU2-SO-FCP04-0910 at 1715 for TOC & grainsize analysis; fill to 9.8'	
METHOD OF SOIL SAMPLING:	2" and 3" split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-509M	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-509M
PROJECT NO.:	N4236-0320			START DATE:	9/4/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/5/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-509M
GRD. SURFACE ELEVATION:	9.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	50 / 13	0.2' / 0.3'	S-9 @ 0934	Gravelly Sand	Very Dense	Brown	Gravelly SAND	GW	Wet	FID=0.0 PID=0.0
18			9/5/03							
	6	1.2' / 2.0'	S-10 @ 0948	Sand		Dark Brown to	Fine SAND	SP		FID=0.0 PID=0.0
	16									
	30									FID=0.0
20	22		9/5/03			Black				PID=0.0
				EOB @ 20' bgs						

TYPE OF DRILLING RIG:	CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 10' & 4" to 20'		
METHOD OF SOIL SAMPLING:	2" and 3" split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Set 2" well @ 18.2' screened from 12-17'	BORING NO.: SB-509M	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-510M
PROJECT NO.:	N4236-0320			START DATE:	9/5/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/6/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-510M
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	1		S-1 @ 1324		Medium					FID=0.0
	6	1.5		Topsoil	Dense	Brown	0-0.5' top soil	ML		PID=0.0
	9	2								FID=0.0
2	9		9/5/02	Fill			0.5-1.0' silty SAND, some tile and gravel	Fill		PID=0.0
	7		S-2 @ 1329							FID=0.0
	9	1.2					0-0.2' similar to above		Tar paper coming up in the cuttings.	PID=0.0
	7	2				White &				FID=0.0
4	9		9/5/02			Black	0.2-1.2' FILL, tile fragments and fibers, plastic	Fill		PID=0.0
	3		S-3 @ 1403							FID=14.2
	5	1.2	OU2-SO-FCP05-0406	Organic	Loose	Black	Organic SILT, some leaves and roots	OL		PID=0.0
	2	2	@ 1405	Silt						FID=2.7
6	5	3" spoon	9/5/02							PID=0.0
	5		S-4 @ 1420		Medium					FID=0.0
	9	.8		Fill	Dense	Black	FILL - tar paper/roofing shingles and tile chunks	Fill		PID=0.0
	8	2				&				FID=0.0
8	5		9/5/02	Organic		Gray				PID=0.0
	1		S-5 @ 1436	Silt	Very					FID=0.0
	2	.1			Loose	Black	Organic SILT in nose of spoon	OL		PID=0.0
	hammer	2								FID=0.0
10	hammer		9/5/02							PID=0.0
	1		S-6 @ 1450							FID=0.0
	2	.1					organic SILT in nose of spoon			PID=0.0
	1	2								FID=0.0
12	1	3" spoon	9/5/02							PID=0.0
	hammer		S-7 @ 1528							FID=0.0
	1	1.2				Black	0-1.0' organic SILT			PID=0.0
	1	2								FID=0.0
14	2		9/5/02	Sand		Gray	1.0-1.2' fine-medium SAND	SP		PID=0.0
	1		S-8 @ 1648						5" casing to 15'	FID=0.0
	3	1.6		Organic	Loose		0-1.0' organic SILT	OL		PID=0.0
	5	2		Silt						FID=0.0
16	7		9/5/02	Sand			1.0-1.6' fine-medium SAND	SP		PID=0.0

TYPE OF DRILLING RIG:	CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash 5" casing to 15'; 4" casing to 26'		
METHOD OF SOIL SAMPLING:	2" & 3" split spoons – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Sent OU2-SO-FCP05-0406 to lab for TOC & grainsize analysis.	BORING NO.: SB-510M	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-510M
PROJECT NO.:	N4236-0320			START DATE:	9/5/02
LOGGED BY:	Bob Balkovec	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/6/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-510M
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	25		S-9 @ 1707	Sand &					Wet	FID=0.0
	16	1.3		Gravel	Dense	Greenish	Medium-coarse SAND and GRAVEL	GW		PID=0.0
	18	2								FID=0.0
18	19		9/5/02			Gray				PID=0.0
	12		S-10 @ 1719		Medium					FID=0.0
	13	1.4			Dense					PID=0.0
	9	2								FID=0.0
20	12		9/5/02							PID=0.0
	5		S-11 @ 0858	Sand						FID=0.0
	6	.4					Fine-medium SAND	SP		PID=0.0
	5	2								FID=0.0
22	6		9/6/02							PID=0.0
	9		S-12 @ 0913			Greenish				FID=0.0
	6	1				Gray				PID=0.0
	7	2				Light				FID=0.0
24	9		9/6/02	Sand		Brown			Color change @ 23'	PID=0.0
	3		S-13 @ 0917	Silty		Light				FID=0.0
	3	1.5		Sand	Loose	Brown	Fine silty SAND	SM		PID=0.0
	6	2				Yellow				FID=0.0
26	6		9/6/02		Wet	Orange				PID=0.0
				EOB @ 26' bgs						

TYPE OF DRILLING RIG:	CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash 5" casing to 15' & 4" casing to 26'		
METHOD OF SOIL SAMPLING:	2" & 3" split spoons – 2' sample lengths		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	Installed MW 25.5' deep screened from 19.3-24.3' – see construction log for details.	BORING NO.: SB-510M	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-511M
PROJECT NO.:	N4236-0320			START DATE:	9/9/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/10/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin (9/9) Les Darrow (9/10)			MON. WELL NO.:	MW-511M
GRD. SURFACE ELEVATION:	9.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	-----	1.8' / 2.0'	1335	0.5'	Medium	Light	Sandy; fine-coarse SAND, some fill – light yellow		2" spoon	
	13			asphalt	Dense	Brown	anthropogenic pieces.	SW		PID=3.8
	6									
2	12									FID=15.0
	13	0.8' / 2.0'	1340						2" spoon	
	6						FILL – fine-coarse SAND; chunks of roofing tile and white			PID=2.1
	10						fiberous material.			
4	12									FID=3.6
	14	1.0' / 2.0'	1350			Dark			2" spoon	
	6					Brown	4'-5' - FILL – medium-coarse SAND, some roofing tile.	SP		PID=3.7
	12							Anth.		
6	22					Black	5'-6' - FILL –solid rubber.	Fill		FID=190.5
	30	0.8' / 2.0'	1425					Anth.	2" spoom	
	12						FILL – solid rubber.	Fill		PID=0.0
	10									
8	12									FID=138
	17	0.0' / 2.0'	**No Recovery**				**No Recovery** – only 0.2' of wash materials		3" spoon	
	3									PID=0.0
	1									
10	1									FID=0.2
	2	1.2' / 2.0'	1610*						3" spoon	
	2				Loose	Black	Organic silty SAND.	SM		PID=0.0
	3									
12	3		OU2-SO-511-1012						odor	FID=0.0
	1	0.7' / 2.0'	1620		Very				2" spoon	
	3				Loose		Silty SAND – fine sand, some silt, organics.			PID=0.0
	1									
14	1									FID=3.8
	8	0.9' / 2.0'	1630						3" spoon	
	25				Loose		14'-15' - Silty SAND – trace organics.			PID=0.0
	28					Light				
16	25				Loose	Brown	15'-16' - Sandy – fine-coarse SAND, some iron staining.	SW		FID=0.0

TYPE OF DRILLING RIG:	2" well rig – rig #2	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	Anth = anthropogenic material only	
METHOD OF SOIL SAMPLING:	split spoons	* organic soil sample – TOC, grain size collected	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-511M	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-511M
PROJECT NO.:	N4236-0320			START DATE:	9/9/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/10/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin (9/9) Les Darrow (9/10)			MON. WELL NO.:	MW-511M
GRD. SURFACE ELEVATION:	9.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	12	1.0' / 2.0'	1635		Dense	Light	Sandy; fine-medium SAND, some iron staining	SW	2" spoon	
	22					Brown				PID=6.6
	19									
18	17									FID=1.3
	9	0.8' / 2.0'	1650		Medium Dense				2" spoon	
	12						Sandy; fine-coarse SAND			PID=9.8
	11									
20	17									FID=2.8
	5	0.7' / 2.0'	0845						2" spoon	
	6									PID=3.7
	8									
22	6									FID=16.3
	7	1.2' / 2.0'	0850						2" spoon	
	6						22'-23' - Sandy; fine-coarse SAND			PID=0.0
	7									
24	8						23'-24' - Sandy; fine SAND	SP		FID=0.7
	9	0.8' / 2.0'	0900						2" spoon	
	10						Sandy; fine-coarse SAND, some iron staining.	SW		PID=0.0
	8									
26	7			EOB @ 25' bgs						FID=0.5

TYPE OF DRILLING RIG:	2" well – rig 2			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash			
METHOD OF SOIL SAMPLING:	split spoon			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:		BORING NO.:	SB-511M	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-512M
PROJECT NO.:	N4236-0320			START DATE:	9/11/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-512M
GRD. SURFACE ELEVATION:	11 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	-------		0940	0.5					2" spoon	
	4	1.2' / 2.0'		asphalt	Loose	Light	Sandy; fine-medium SAND; trace gravel and brick.	SP		FID=304
	6					Brown				
2	9		OU2-SO-512-0002							PID=12.3
	60		0950						hit something hard – spoon refusal (2" spoon)	
	100	0.5' / 2.0'			Very	Light	Sandy; fine-medium SAND, trace gravel.	SP		FID=54.0
	100+				Dense	Brown				
4	100+		OU2-SO-512-0204							PID=20.6
	5		1100*						2" spoon	
	4	1.0' / 2.0'			Loose	Gray	FILL – asbestos fibers, tiles, some sand.	Fill .		FID=13.0
	3									
6	8		OU2-SO-512-0406							PID=0.0
	12		1115*						2" spoon	
	12	1.0' / 2.0'				Gray	6'-7.5' - Fine-medium SAND, some loose asbestos fibers			FID=2.0
	12				Medium					
8	10		OU2-SO-512-0608		Dense	Black	7.5'-8' – Fill - solid tar paper material			PID=0.0
	4		1150*						3" spoon	
	9	1.1' / 2.0'			Dense	Gray &	FILL-mix of painted tiles and roofing tile material.			FID=10.0
	32					Black				
10	42		OU2-SO-512-0810							PID=0.0
	15		1230*						3" spoon	
	24	1.3' / 2.0'	1235 –dup02			Black	FILL-roofing tile material.			FID=381
	19									
12	21		OU2-SO-512-1012							PID=4.1
	3		**NO RECOVERY**				- **no recovery**		3" spoon	
	2									FID=N/A
	3									
14	3		OU2-SO-512-1214				Wash water at 13-14 has bubbles, looks organic.			PID=N/A
	2		1400**						3" spoon	
	1	0.7' / 2.0'			Loose	Dark	ORGANIC SILT – clayey silt with plant material.	OL		FID=1108
	1					Brown				
16	2		OU2-SO-512-1416							PID=0.0

TYPE OF DRILLING RIG:	2" well – rig 2
METHOD OF ADVANCING BORING:	Drive & wash
METHOD OF SOIL SAMPLING:	split spoon
METHOD OF ROCK CORING:	N/A
GROUNDWATER LEVELS:	+ 5'
OTHER OBSERVATIONS:	

Notes:
* full suite samples – VOC, SVOC, metals, percent solids, dioxins, pest/PCBs

** organic samples – TOC, grain size

Tetra Tech NUS, Inc.

BORING NO.: SB-512M

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-512M
PROJECT NO.:	N4236-0320			START DATE:	9/11/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/11/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-512M
GRD. SURFACE ELEVATION:	11 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 16	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)]
	4	1.8' / 2.0'	1445		Loose	Dark	ORGANIC SILT – clayey silt with some fine sand.	OL	2" split spoon sulfur odor	FID=1150
	2									
18	3		OU2-SO-512-1618			Brown Dark Gray	Fine-coarse SAND, trace gravel.	SW		PID=0.0
	2									
	6	0.9' / 2.0'	1625		Medium Dense	Dark Gray	Sandy – fine-coarse SAND.	SW	2" split spoon	FID=1386
	6									
20	5		OU2-SO-512-1820							PID=0.0
	9									
	5	1.1' / 2.0'	1640				Sandy; medium-coarse SAND.	SP	2" split spoon	FID=269.7
	5									
22	7		OU2-SO-512-2022							PID=0.0
	8									
	7	1.2' / 2.0'	1650				Sandy; medium-coarse SAND, trace gravel.		2" split spoon	FID=24.5
	9									
24	9		OU2-SO-512-2224							PID=0.0
	8									
	4	1.0' / 2.0'	1705		Loose	Gray-Brown	Sandy; fine-medium SAND.		2" split spoon	FID=0.0
	4									
26	4		OU2-SO-512-2426							PID=0.0
	6									
	5	1.1' / 2.0'	1715			Gray Brown	Sandy; fine-medium SAND, band of iron staining at ~27'.	SW	2" split spoon	FID=0.0
	5									
28	5		OU2-SO-512-2628							PID=0.0
	6									
				EOB @ 28' bgs						

TYPE OF DRILLING RIG:	2" well – rig 2	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	* full suite sample– VOC, SVOC, metals, percent solids, dioxins, pest/PCBs	
METHOD OF SOIL SAMPLING:	split spoon		
METHOD OF ROCK CORING:	N/A	** organic sample – TOC, grain size	
GROUNDWATER LEVELS:	~5'		
OTHER OBSERVATIONS:		BORING NO.: SB-512M	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-513S
PROJECT NO.:	N4236-0320			START DATE:	9/18/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/18/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-513S
GRD. SURFACE ELEVATION:	13 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	4	1.4' / 2.0'	0820		Medium	Brown	0'-0.5' - Fine-coarse SAND, trace silt, trace gravel. (some organics– roots)	SW	2" spoon	PID=727
	13									
	14				Dense		- band of medium-coarse SAND at 0.5'	SP	cobble at 1.2-1.5'	
2	12		OU2-SO-513-0002				0.5'-2' -Medium-coarse SAND, trace fine sand, trace gravel.	SW		FID=0.0
	7	1.1' / 2.0'	0835			Light Brown	Fine-coarse SAND, some gravel.		2" spoon	PID=633
	8									
	8									
4	10		OU2-SO-513-0204				(gravel with rounded grains)			FID=0.0
	5	0.8' / 2.0'	0840	Fill			Fine-coarse SAND, some gravel.		2" spoon	PID=75.2
	7									
	8								cobble at 4'	
6	11		OU2-SO-513-0406							FID=2.8
	6	1.1' / 2.0'	0855				Fine-coarse SAND, some gravel.		2" spoon	PID=71.4
	12									
	15								cobble at 7.5'	
8	9		OU2-SO-513-0608							FID=1.3
	10	0.9' / 2.0'	0910				Fine-coarse SAND, some gravel.		2" spoon	PID=20.3
	12									
	11								cobble at 9.5' iron staining around it	
10	13		OU2-SO-513-0810				Charcoal piece at 9.8'			FID=0.5
	8	0.6' / 2.0'	0915				Medium-coarse SAND, some gravel		2" spoon	PID=32.5
	9									
	9									
12	12		OU2-SO-513-1012				Trace fine SAND, ½" band of iron staining at 11.8'.			FID=1.9
	7	0.9' / 2.0'	0930				Fine-coarse SAND, some gravel.		2" spoon	PID=0.0
	14									
	17								iron stained spot at 12.5'	
14	11		OU2-SO-513-1214				Piece of brick at 12.5'.			FID=2.0
	8	0.8' / 2.0'	1010				Fine-coarse SAND, some gravel.		2" spoon	PID=108
	8									
	10								cobble at 16'	
16	7		OU2-SO-513-1416							FID=0.3

TYPE OF DRILLING RIG:	CME 45 (rig 2)			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash			
METHOD OF SOIL SAMPLING:	split spoon – 2' sample length			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	*no breathing zone readings; instruments cal. Properly - fill to at least 12.5' (brick at 12.5')	BORING NO.:	SB-513S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-513S
PROJECT NO.:	N4236-0320			START DATE:	9/18/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/18/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-513S
GRD. SURFACE ELEVATION:	13 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	2	0.6' / 2.0'	1015						2" spoon	
	1				Loose	Light	Fine-coarse SAND, some gravel.	SW		PID=83.4
	4					Brown				
18	10		OU2-SO-513-1618							FID=0.0
				EOB @ 18.5' bgs						

TYPE OF DRILLING RIG:	CME 45 (rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-513S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-513SG
PROJECT NO.:	N4236-0320			START DATE:	10/1/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/1/02
DRILLED BY (Company/Driller):	ADT/Marques Larabie			MON. WELL NO.:	MW-513SG
GRD. SURFACE ELEVATION:	13.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See boring log for SB-513S for soil profile details.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
							5" (open) casing driven to 4 ' then removed (with soil volume)			
2							3" open casing driven to 8', then removed with soil inside.			
							Casing cleaned out, then point is added and 3" casing is			
4							re-driven to refusal at 7.9'.			PID=0.0 FID=0.0
6										
										PID=0.0 FID=0.0
8										
				EOB @ 7.9' bgs						

TYPE OF DRILLING RIG:	Truck-mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL=9.9' at MW-513S			
OTHER OBSERVATIONS:	*field screening for breathing zone only	BORING NO.:	SB-513SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514B
PROJECT NO.:	N4236-0320			START DATE:	9/19/02 @ 0820
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD/LAH	COMPLETION DATE:	9/23/02 @ 1245
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514B
GRD. SURFACE ELEVATION:	15.9	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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 * refer to boring SB-514S for detailed description of 0-18 ft. interval.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0					Loose	Light Brown	Wash water discharge brown in color. Fine-coarse SAND, Some fine gravel quartz rock fragments.		0-20 ft. advanced 4" casing using 300 lb. hammer 30" drop	
2										
4										
6										
8										
10										
12										
14										
16										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" casing, Drive & Wash	PACM = potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	2" split spoon	MMM = Man made material	
METHOD OF ROCK CORING:	Nx or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-514B	PAGE: 1 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514B
PROJECT NO.:	N4236-0320			START DATE:	9/19/02 @ 0820
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD/LAH	COMPLETION DATE:	9/23/02 @ 1245
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514B
GRD. SURFACE ELEVATION:	15.9	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
						Light Brown	Wash water discharge = fine-coarse SAND, some fine gravel, quartz, rock fragments			
18										
									Cobble ±18-20 ft. Resume standard interval sampling @ 20 ft. bgs	
20				Sand & Gravel			Possible cobble 18-20 ft.			
	4	0.6 / 2.0	OU2-SO-514-2022		Dense	Light Brown/ Rust	Poorly graded fine-coarse SAND, trace fine-coarse Gravel, mostly fine-medium sand, some coarse sand,	SP	No PACM or MMM moist, no odor Oxidized soil 21-22'	FID = 0.0 PID = 6.3
	11		FID - 8.5							
	24		PID - 6.7				Trace coarse gravel			
22	26		9/19/02 1005							
						Light Brown/ Orange	Wash water discharge = Fine-coarse SAND, trace fine-gravel		20-27' advanced 4" casing with automatic hammer, 30" drop	
24										
26	5	1.1 / 2.0	OU2-SO-514-2527			Brown	0-0.4'-Poorly graded fine-coarse SAND, some fine-medium gravel, trace silt, mostly fine-medium sand	SP	No PACM or MMM	FID = 2.3 PID = 0.0
	17		FID - 4.1							
	23		PID - 0.8			Black	0.4-1.1' – color change only; no odor		Moist, no odor	
	21		9/19/02 1030							
28						Orange	Wash water discharge = fine-coarse SAND, trace fine-gravel		27-30' advanced 4"	
						Brown			Casing with automatic hammer 30" drop	
30										
	20	0.9 / 2.0	OU2-SO-514-3032			Light Brown	0-0.2'- fine-coarse gravel	SP-SM	No PACM or MMM Moist, no odor	FID = 1.2 PID = 0.0
	30		FID - 5.0		Medium		0.2-0.9'- poorly graded fine-coarse SAND, mostly			
	13		PID - 0.0		Dense	Gray	fine-medium sand, some coarse sand, trace silt			
32	10		9/19/02 1110							

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potentially asbestos containing material; MMM = Man made material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, Drive & Wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	Nx or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-514B	PAGE: 2 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514B
PROJECT NO.:	N4236-0320			START DATE:	9/19/02 @ 0820
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD/LAH	COMPLETION DATE:	9/23/02 @ 1245
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514B
GRD. SURFACE ELEVATION:	15.9	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
32										
				Sand & Gravel	Medium Dense	Brown	Wash water discharge = fine-coarse SAND trace fine-medium gravel		Advanced 4" casing with automatic hammer 30" drop	
34							Cobbles encountered @ approx. 33.5' – 35' ft. bgs			
			Breathing zone FID – 0.0 PID – 0.0 1200						Cobble zone approximately 33.5 – 35 ft. Breathing zone FID – 0.0, PID – 0.0	
36										
	9	0.7 / 2.0	OU2-SO-514-3537 FID – 3.4 PID – 0.0 9/19/02 1215				0.3' fine-medium SAND, some silt	SP-SM	No PACM or MMM, moist, quartz, gneiss fragments.	FID = 10.8 PID = 0.0
	15						0.4' fine-coarse SAND, some medium-coarse gravel,			
	12						Trace silt			
38	7									
			Breathing zone FID – 0.0 PID – 0.0 1230				Wash water discharge = fine-coarse SAND		Advance 4" casing with automatic hammer 30" drop	
40							Trace fine gravel, quartz, mica, feldspar, gneiss			
	5	1.1 / 2.0	OU2-SO-514-4042 FID – 8.4 PID – 0.6 9/19/02 1240			Gray-Brown	0-0.4' gray, poorly graded fine-coarse SAND, some Fine-medium gravel, mostly coarse sand	SP-SM	No PACM or MMM moist - wet, large quartz, gneiss Fragments	FID = 0.0 PID = 0.0
42	10									
	13						0.4-1.1' brown, poorly graded fine-coarse SAND, trace Fine gravel, trace silt			
	14									
44										
			Breathing zone FID – 0.0 PID – 0.0 1300			Brown-Orange/	Wash water discharge = fine-coarse SAND, trace fine gravel		Advanced 4" casing with automatic hammer 30" drop	
46						Brown	44.5 – 45 ft. bgs encountered a cobble.			
	12	1.0 / 2.0	OU2-SO-514-4547 9/19/02 1315	Sand	Dense	Brown	0.8' poorly graded fine-medium SAND some silt, Trace fine-gravel	SP-SM	No PACM or MMM, Moist-wet weathered rock, quartz, gneiss, oxidized soil.	FID = 0.0 PID = 0.0
	27									
	20						0.8-1.0' some material also includes weathered rock.			
48	20									

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potentially asbestos containing material; MMM = Man made material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, Drive & Wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	Nx or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-514B	PAGE: 3 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514B
PROJECT NO.:	N4236-0320			START DATE:	9/19/02 @ 0820
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD/LAH	COMPLETION DATE:	9/23/02 @ 1245
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514B
GRD. SURFACE ELEVATION:	15.9	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
48										
			Breathing zone	Sand					45-50' advanced 4" casing	
			FID – 0.0			Orange/	Wash water discharge fine-coarse SAND, mostly		with automatic hammer	
			PID – 0.0			Brown	Fine-medium sand, trace silt and trace fine gravel		30" drop	
50			1345							
52	1	1.1 / 2.0	OU2-SO-514-5052		Loose	Brown	0-0.6' well graded fine-coarse SAND, some silt, increasing	SW	No PACM or MMM	FID = 0.0
	3		FID – 0.0				Fine-medium sand		Moist – wet	PID = 0.0
	5						0.6-1.1' well graded fine-medium SAND, some silt		No odor	
	6		9/19/02 1355							
54									50-55' advanced 4" casing with Automatic hammer	
			Breathing zone						30" drop	
			FID – 0.0				Wash water discharge = medium-coarse SAND, quartz,			
			PID – 0.0				Feldspar, gneiss, calcite			
56			1415							
	14	1.0 / 2.0	OU2-SO-514-5557 *		Medium Dense				No PACM or MMM	FID = 0.0
	9		FID – 10.8				Poorly graded fine-medium SAND, some silt and trace	SP-	Moist – wet, no odor	PID = 0.0
	9		PID – 8.7				Coarse gravel, weathered micaous, schists fragments		Weathered rock fragments of gneiss	
58	12		9/19/02 1420					SM		
			Breathing zone						55-60' advanced 4" casing	
			FID – 0.0				Wash water discharge fine-coarse SAND, quartz, garnet,		with automatic hammer	
			PID – 0.0				Feldspar, biotite, muscovite, schist fragments		30" drop	
60			1450							
62	5	1.1 / 2.0	OU2-SO-514-6062*	Sand & Gravel					Overdrove spoon ±0.5'	FID = 0.0
	6		FID – 24.5			Brown/	Poorly graded fine-coarse SAND, some fine-medium	SP	No PACM or MMM	PID = 0.0
	7		PID – 20.2			Orange	GRAVEL, gravel and rock fragments have oxidized color		No odor, rock fragments have oxidized color	
	8		9/19/02 1455							
64										

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, Drive & Wash	* = potential sample for lab analysis	
METHOD OF SOIL SAMPLING:	2" split spoon	PACM = potentially asbestos containing material	
METHOD OF ROCK CORING:	Nx or NQ	MMM = Man made material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-514B	PAGE: 4 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514B
PROJECT NO.:	N4236-0320			START DATE:	9/19/02 @ 0820
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD/LAH	COMPLETION DATE:	9/23/02 @ 1245
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514B
GRD. SURFACE ELEVATION:	15.9	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
64										
			Breathing zone FID – 0.0 PID – 0.0 1515	Sand & Gravel		Orange/ Brown	Wash water discharge = SAND and GRAVEL, fine-coarse sand, some fine gravel, no odor		60-65' advanced 4" casing with automatic hammer 30" drop	
66										
	3 6	0.8 / 2.0	OU2-SO-514-6567 FID – 21.7 PID – 3.6 9/19/02 1525		Loose		Poorly graded fine-coarse SAND, some fine-medium gravel, Mostly medium-coarse sand, some fine sand, trace silt	SP	Rock fragments stuck in shoe, quartz. No PACM or MMM	FID = 0.0 PID = 0.0
68	4 5									
			Breathing zone FID – 0.0 PID – 0.0 1550			Brown/ Gray	Wash water discharge = mostly fine-coarse SAND, some fine gravel fragments		65-70' advanced 4" casing with automatic hammer and 300 lb hammer	
70										
72	28 65	1.35 / 2.0	OU2-SO-514-7072 FID – 18.8 PID – 27.0 9/19/02 1615	Probable Till	Very Dense	Gray	Poorly graded fine-medium SAND, some fine-medium gravel, decomposed rock mica schists, severely Weathered, trace silt	SM	No PACM or MMM No odor Moist – wet Decomposed/weathered	FID = 0.0 PID = 0.0
74										
			Breathing zone FID – 0.0 PID – 0.0 1620			Brown/ Gray	Wash water discharge = weathered rock, gray schists, rock fragments		70-75' advanced 4" casing with automatic hammer 30" drop	
76										
	17 32	1.3 / 2.0	OU2-SO-514-7577 FID – 32.7 PID – 29.4 9/19/02 1630			Gray	Sandy silt, fine-coarse SAND, w/ silt, some fine gravel, dry	ML	No PACM or MMM Dry – moist, hard No odor, weathered gray schists	FID = 6.7 PID = 10.0
78	33 55						Hard, weathered/decomposed gray schist			
			Breathing zone FID – 0.0 PID – 0.0 1635		4" casing	Gray	Bedrock encountered @ 78' discharge flakes of mica		75-78' advanced 4" casing with automatic hammer 30" drop	
80							Schists material			

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potentially asbestos containing material MMM = Man made material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, Drive & Wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	Nx or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-514B	PAGE: 5 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514B
PROJECT NO.:	N4236-0320			START DATE:	9/19/02 @ 0820
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD/LAH	COMPLETION DATE:	9/23/02 @ 1245
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514B
GRD. SURFACE ELEVATION:	15.9	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
80										
				78-80' socket		Gray	Rock socket discharge water & cuttings, Flakes of schists	BROKEN	Flushed tub & casing until clear water discharged	
82	12:53		R1: 80-85'	80.5'	Medium		80-85' mica, garnet, calcite schists, pyrite, garnet, feldspar, Quartz, biotite, muscovite, low and high angle natural			
	06:00		Rec/Pen: 52/60=86% RQD: 27.5/60=46%	81.5'	Soft		Fractures, nearly vertical foliation 80-81' natural break along near vertical foliation		82-83' water lost ±25 gal Estimated ±55 gal lost from 80-85'	
84	05:27			82.5'			81.5-82' natural low angle break, rounded edges 82-83' natural low/high angle breaks @ 82.5'			
	05:40			83.5'			83-84.5' low angle natural break 84-84.5' calcite vein, nearly vertical			
86	05:30			84.5'				BLOCKY		
	04:05		R2: 85-90' Rec/Pen: 60/60=100% RQD: 59/60=98%	85.5'	Medium		85-93' mica, garnet, calcite, schists, w/ biotite, muscovite, Feldspar, garnet, chlorite, and pyrite, quartz. Nearly vertical		Discharge water gray No noticeable water lost	
88	04:36			86.5'	Hard		Foliation 85-90' calcite veins nearly vertical			
	04:50			87.5'			86-87' natural high angle break slight oxidation observed			
90	04:40			88.5'						
	04:30			89.5'			90-91' same material classification as noted in R2 (85-90') Nearly vertical foliation, calcite veins nearly vertical 90-91',		Discharge water gray No noticeable water lost	
92	04:40		R3: 90-93'	90.5'			91.2' natural low angle open fracture,			
	04:45		Rec/Pen: 33/36=92% RQD: 30/36=83%	91.5'			92-93' high angle machine break along foliation, quartz, pyrite, garnet, calcite, Chlorite, feldspar, muscovite and			
94	10:05						biotite			
				BOE @ 93' bgs						
96										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing, Drive & Wash	Notes: PACM = potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	Nx or NQ	MMM = Man made material	
GROUNDWATER LEVELS:	WL – 13' bgs @ 0815/9-20-02		
OTHER OBSERVATIONS:	FID (B) PID (E)	BORING NO.: SB-514B	PAGE: 6 OF 6

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514D
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/4/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514D
GRD. SURFACE ELEVATION:	16.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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)]
	NA	NA	No sample collection	(1)	(1)	Brown	Wash water discharge, fine-coarse SAND, trace fine gravel No PACM, MMM or odor.	(1)	4" casing advanced with 140 lb. automatic hammer 30" drop	
5										
										FID=0.0 PID=0.0
10							Wash water discharge, fine-coarse SAND, trace fine gravel			@ 1330
							quartz, micas, gneiss, feldspar			FID=0.0 PID=0.0
15										@ 1440
20										
										FID=0.0 PID=0.0
25										@ 1555
						Yellowish Orange	Obstruction @ ±26' bgs, cobbles, coarse gravel encountered, advanced ahead of 4" casing		Advanced roller bit ahead of casing (26-30') advanced through cobble ±0.5 from (25.5-30')	FID=0.0 PID=0.0
30							Wash water discharge SAND and GRAVEL, fine-coarse SAND, some fine gravel			@ 1620
						Brown	Wash water discharge SAND and GRAVEL, mostly fine-coarse sand, fine gravel, quartz, feldspar, schists, gneiss,		4" casing advanced with 300 lb hammer	FID=0.0 PID=0.0
35							micas. No PACM, MMM or odor.			@ 1700
							Wash water discharge fine-coarse SAND, trace fine-gravel, mostly fine-coarse sand, trace silt		4" casing advanced with 300 lb hammer 35-50' bgs	
40									30-39' refusal, encountered cobble @ 39'	

TYPE OF DRILLING RIG:	CME75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" casing drive and wash	PACM = potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	2" split spoon	MMM = man made material	
METHOD OF ROCK CORING:	NA	(1) = refer to boring log no. SB-514B for detailed descriptions	
GROUNDWATER LEVELS:		* = breathing zone ambient air screenings	
OTHER OBSERVATIONS:	FID (F) PID (A)	BORING NO.: SB-514D	PAGE: 1 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514D
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/4/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514D
GRD. SURFACE ELEVATION:	16.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
40										
	NA	NA	No sample collection	(1)	(1)			(1)		
45							Drilling rod unable to advance past 40' bgs, possible bend in			
				EOB @ 45' bgs			the 4" casing. Possible 4" casing was advancing @ an angle which is preventing rods from advancing to the bottom			
							of the casing. After conversation with Tracy D & ADT decided best option is to pull 4" casing. Concerned that if			
							continued with boring, set well and pulled casing there's a chance of not recovering all 4" casing and potential for 4"			
							casing to break in the well screened zone.			
							Removed 4" casing and casing broke between 40-45' sections. 40' of casing recovered, 20' casing unable to be			
							recovered. Measured depth of open boring @ 14' bgs. Cobbles and boulders sluffed into boring. Abandoned			
							boring 14' to ground surface with bentonite chips. Bentonite chips from 14-1' bgs brought to grade with filter sand.			
2nd attempt 0							Relocated ±5' ahead of previous boring. New drive shoe 6" length.			
		NA			Dense	Brown	Wash water discharge medium-coarse SAND & fine-coarse GRAVEL. Quartz flakes noted in discharge, feldspar,		4" casing advanced with automatic 140 lb hammer. New shoe 6" length	*FID=0.0
10							gneiss, schists, micas. Cobbles ±5-10' bgs			*PID=0.0
							Wash water discharge = medium-coarse SAND and fine-coarse GRAVEL, cobble @ 24'		4" casing advanced with automatic hammer.	@1000
20										
									Bouncing @ 24' possible cobble	
30							24-25.4' - Discharge water black 24.5' Increased fine-medium SANDS, back to brown in color			

TYPE OF DRILLING RIG:	CME75	Notes: (1) refer to boring log no. SB-514B for detailed descriptions * breathing zone ambient air screenings	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	WL-12.65' bgs @ 0815, 10/4/02		
OTHER OBSERVATIONS:	FID (C) PID (A)	BORING NO.: SB-514D	PAGE: 2 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514D
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/4/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514D
GRD. SURFACE ELEVATION:	16.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
30										
		NA	No sample collecting	(1)	Dense	Brown	Fine-coarse SAND and GRAVEL	(1)	4" casing advanced with 140 lb hammer to 60' bgs	
40										
50							Wash water discharge, fine-coarse SAND trace fine gravel			
							Increased fine SAND 55-60'		4" casing advanced with 140 lb hammer	FID=0.0 PID=0.0
60										@ 1150
							60-67' wash water discharge fine-coarse SAND, trace fine gravel. Quartz boulder @ 67', roller bit through boulder to 68.8'		4" advanced with 300 lb hammer	
70							Drive shoe on 4" casing deformed while driving through boulder. Advanced roller bit through deformed drive shoe to 77' bgs.		water lost, no water return	
							69-76' SAND and GRAVEL			FID=0.0 PID=0.0
80				EOB @ 77' bgs					4" advanced with 140 lb & 300 lb hammers to refusal @ ±76' bgs	@ 1300
							2nd attempt abandoned well construction. During removal of 4: casing MW-514D was pulled up ±2.5' from its proposed			
							Depth. Tracy D. was contacted to discuss options. TD Conversed with Mike of TtNUS regarding options. During			
							Discussion making, ADT tried stuffing MW-514D well Construction back down to proposed depth, unsuccessful,			
							ADT tried to remove MW construction fracturing PVC in the Process. All ADT's actions were conducted without the			
							Direction of TD or Nobis employee on the rig. Consequence MW construction had to be abandoned for a new location			
							And 3rd attempt. SB-514D was abandoned using excess Slurry mix and bentonite chips to existing grade.			

TYPE OF DRILLING RIG:	CME 75	Notes: (1) refer to boring log no. SB-514B for detailed descriptions * breathing zone ambient air screenings	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID(B)	BORING NO.: SB-514D	PAGE: 3 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514D (3rd attempt)
PROJECT NO.:	N4236-0320			START DATE:	10/8/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/8/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514D
GRD. SURFACE ELEVATION:	16.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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 (1)	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		NA	-no sample collecting-	(1)	(1)	Brown	Wash water discharge = fine-coarse grained SAND, trace		4" casing advanced with 300 lb hammer. Casing advanced smoothly without significant resistance	
5							Fine gravel, quartz, feldspar, micas, schists, gneiss.			
										*FID=0.0 *PID=0.0
10										@ 0915
15						Orange-Brown	14-15' bgs wash water discharge = same type of materials,			
						Brown	fine-coarse SAND, roller bit jumped around in casing			
20										
25										
							25-25.5' possible cobbles in casing			
30							Wash water discharge = fine-coarse SAND, increased Medium-coarse sand, trace gravel			
										FID=0.0 PID=0.0
35										@ 1000
40							39-40' COBBLES, some coarse-gravel, rounded, noted in discharge water			

TYPE OF DRILLING RIG:	CME 75	Notes: *breathing zone ambient air screenings (1) - Refer to boring log for SB-514B for detailed description of material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-514D (3rd attempt)	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514D (3rd attempt)
PROJECT NO.:	N4236-0320			START DATE:	10/8/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/8/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-514D
GRD. SURFACE ELEVATION:	16.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
40										
		NA	-no sample collecting-	(1)	(1)	Brown	(1) Wash water discharge = fine-coarse SAND, trace gravel	(1)		
45									44' bgs - losing water approximately ±1.0' ahead of 4" casing	
							±44.5' bgs boulder encountered, dense, roller bit grinding on Obstruction (44.5-50')		4" casing advanced with 300 lb hammer ±12 min to drive 5', significant resistance 44-48'	FID=0.0 PID=0.0
50							Wash water discharge = fine-coarse SAND trace fine gravel, Quartz, micas, feldspar, schists, gneiss			@ 1120
							Wash water discharge = fine-coarse SAND trace fine gravel Quartz, micas, feldspar, schists, gneiss, same material as		4" casing advanced with 300 lb hammer. Advanced smoothly with slight resistance	
55							observed throughout sand and gravel. Advanced the roller bit ahead of casing to 70' bgs, lost water			
60										
									4" casing advanced with 300lb hammer to 72' with significant resistance, casing bounced. wash casing and roller bit ahead of casing.	
65							Wash water = fine-coarse SAND, schist fragments, micas			FID=0.0
										PID=0.0 @ 1210
70										FID=0.0
							72' possible bedrock encountered, roller bit into obstruction		4" casing advanced with 300 lb hammer to 74' seated in weathered bedrock, wash casing to 74.2'	PID=0.0 @ 1300
75				EOB @ 74.2' bgs			To confirm bedrock or boulder. Roller bit advanced to 74.2' Schist fragments noted in discharge water. Weathered bedrock.			

TYPE OF DRILLING RIG:	CME 75	Notes: *breathing zone ambient air screenings (1) - Refer to boring log for SB-514B for detailed description of material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-514D (3rd attempt)	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514S
PROJECT NO.:	N4236-0320			START DATE:	9/18/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/18/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-514S
GRD. SURFACE ELEVATION:	15.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	3	1.5' / 2.0'	1315		Dense	Dark Brown	Fine-medium SAND, trace gravel, trace silt, trace organics (roots) – color change only	SP	2" spoon	
	8									
2	19		OU2-SO-514-0002			Brown			cobble at 2'	PID=13.5 FID=0.0
	16									
	12	0.7' / 2.0'	1330		Medium		Fine-medium SAND, trace gravel, trace silt – cobble at 3'.	SP	2" spoon	PID=0.0 FID=0.0
	10									
4	12		OU2-SO-514-0204		Dense					
	14									
	5	0.9' / 2.0'	1335				Fine-medium SAND, trace coarse sand, some gravel	SW	2" spoon	PID=0.0 FID=2.3
	7									
6	7		OU2-SO-514-0406				cobble at 6'.			
	7									
	4	0.8' / 2.0'	1340		Loose		Fine-medium SAND, some silt, trace coarse sand, trace gravel.		2" spoon	PID=0.0 FID=0.0
	4									
8	3		OU2-SO-514-0608							
	4									
	8	1.1' / 2.0'	1400	Coarsen Down	Medium	Light	8'-9' - Fine-coarse SAND		3" spoon	PID=0.0 FID=0.0
	14									
10	15		OU2-SO-514-0810		Dense	Brown	9'-10' – Fine-coarse SAND, trace gravel		cobble at 9.5'	
	15									
	10	0.8' / 2.0'	1410				Fine-coarse SAND, some gravel.		2" spoon	PID=0.0 FID=0.3
	10									
12	10		OU2-SO-514-1012				cobble at 11.3'.			
	10									
	10	0.7' / 2.0'	1420		Dense		Fine-medium SAND, trace gravel, trace coarse sand-cobble	SP	2" spoon	PID=0.0 FID=3.9
	14									
14	17		OU2-SO-514-1214				at 13.5'.		iron staining from 13-14'	
	16									
	3	1.0' / 2.0'	1440		Medium		Fine-coarse SAND, trace gravel, cobble at 14-14.6'.	SW	2" spoon	PID=0.0 FID=15.4
	8									
16	7		OU2-SO-514-1416		Dense				iron staining from 15.5-16'	
	7									

TYPE OF DRILLING RIG:	CME 45 (rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-514S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514S
PROJECT NO.:	N4236-0320			START DATE:	9/18/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/18/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-514S
GRD. SURFACE ELEVATION:	15.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	2		1450						2" spoon	
	1	0.7'			Very	Light	Fine-coarse SAND, trace gravel.	SW		PID=0.0
	3	2.0'			Loose	Brown				
18	8		OU2-SO-514-1618							FID=3.0
				EOB @ 18' bgs						

TYPE OF DRILLING RIG:	CME 45 (rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-514S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-514SG
PROJECT NO.:	N4236-0320			START DATE:	10/2/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/2/02
DRILLED BY (Company/Driller):	ADT/Marques Larabie			MON. WELL NO.:	MW-514SG
GRD. SURFACE ELEVATION:	15.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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							Soil not logged – see boring log for SB-514S for soil profile details.			
							5" open casing driven to 2.5', then removed with soil inside.		Large cobble at 2.5' – broken up then pushed through with 3" open casing.	
2				Cobble			3" (open) casing driven to 8' then removed with material inside.			PID=0.0 FID = 0.0
4							3" casing with point driven down same borehole, then well built inside.			
6										
8										
				EOB @ 8' bgs						

TYPE OF DRILLING RIG:	Truck-mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL at MW-514S=11.95'			
OTHER OBSERVATIONS:	*field screening for breathing zone only	BORING NO.:	SB-514SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-515S
PROJECT NO.:	N4236-0320			START DATE:	9/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/19/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-515S
GRD. SURFACE ELEVATION:	14.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	5	1.2 / 2.0	OU2-SO-515-0001		Loose	Light Brown	Sandy, fine-coarse SAND, trace gravel	SW	2" spoon very sharp break between 0-1 and 1-2 layers	
	4									
2	4		9/19/02 0850			Brown	Fine-medium SAND, some silt, trace coarse sand	SW		PID = 0.0 FID = 0.0
	6	0.6 / 2.0	OU2-SO-515-0204		Medium	Brown	Fine-medium SAND, some silt, some coarse sand	SW	2" spoon	PID = 0.8 FID = 0.0
	6									
4	8		9/19/02 0855		Dense					
	6	1.1 / 2.0	OU2-SO-515-0406		Medium	Brown	Fine-medium SAND, some silt, trace coarse sand	SW	2" spoon	PID = 0.0 FID = 0.0
	8									
6	4		9/19/02 0915		Dense					
	2									
	14									
	11	1.0 / 2.0	OU2-SO-515-0608		Dense	Light Brown	Fine-coarse SAND, some gravel, gravel has rounded- Subrounded grains	SW	2" spoon	PID = 0.0 FID = 0.0
	15									
8	16		9/19/02 0925							
	27									
	19	1.0 / 2.0	OU2-SO-515-0810		Medium	Light Brown	Fine-coarse SAND, some gravel, cobble at 9.8'	SW	2" spoon	PID = 2.5 FID = 0.0
	16									
10	14		9/19/02 0940		Dense					
	12									
	8	0.7 / 2.0	OU2-SO-515-1012		Medium	Light Brown	Fine-coarse SAND, some gravel, cobble at 10.5 ft.	SW	2" spoon	PID = 0.5 FID = 0.0
	18									
12	10		9/19/02 0950		Dense					
	5									
	14	0.8 / 2.0	OU2-SO-515-1214		Dense	Light Brown	Fine-coarse SAND, some gravel	SW	2" spoon	PID = 0.0 FID = 0.0
	13									
14	16		9/19/02 0955							
	20									
	7	0.7 / 2.0	OU2-SO-515-1416		Medium	Light Brown	Fine-coarse SAND, some gravel	SW	2" spoon	PID = 0.0 FID = 0.0
	12									
16	13		9/19/02 1020		Dense					
	14									

TYPE OF DRILLING RIG:	CME 45 (rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	8.9' in MW-514S		
OTHER OBSERVATIONS:		BORING NO.: SB-515S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-515S
PROJECT NO.:	N4236-0320			START DATE:	9/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/19/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-515S
GRD. SURFACE ELEVATION:	14.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	8		OU2-SO-515-1618					SW	2" spoon	PID = 0.0
	17	0.9 / 2.0			Dense	Light	Fine-coarse SAND, trace gravel, cobble at 17 ft.			FID = 0.0
	17					Brown	Spot of iron staining at 16.6 ft.			
18	15		9/19/02 1025							
				EOB @ 18.5' bgs						

TYPE OF DRILLING RIG:	CME 45 (rig 2)		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoon – 2' sample length		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	8.9' in MW-514S		
OTHER OBSERVATIONS:		BORING NO.: SB-515S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-515SG
PROJECT NO.:	N4236-0320			START DATE:	10/1/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/1/02
DRILLED BY (Company/Driller):	ADT/ Marques Larabie			MON. WELL NO.:	MW-515SG
GRD. SURFACE ELEVATION:	14.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See boring log MW-515S for details on soil profile	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD * SCREENING DATA *METHOD* = [FID, (PPM)]
							Soil not logged. Drilled using direct push methods.			
2							5" casing pushed to 5ft, then removed			
4										
										PID = 0.0 FID = 0.0
6							3" open casing pushed to 8ft., soil inside is removed, then Point is added to casing and driven to 8 ft.			
										PID = 0.0 FID = 0.0
8										
				EOB @ 8' bgs						

TYPE OF DRILLING RIG:	Truck mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-515S = 11.9'			
OTHER OBSERVATIONS:	* Field screening for breathing zone only.	BORING NO.:	SB-515SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-516M
PROJECT NO.:	N4236-0320			START DATE:	9/24/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/24/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-516M
GRD. SURFACE ELEVATION:	9.8 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
	9		OU2-SO-516-0002		Medium	Black	0'-0.5' Asphalt (removed)		Dry	
0	18	0.7' / 2.0'			Dense	Light	0.5-0.7' Sandy; fine-coarse SAND, some gravel, cobbles at	SW	2" spoon	FID=0.0
	10					Brown	0.5', 2'			
	7		0905	Fill						PID=0.0
	9		OU2-SO-516-0204						Damp at 2.5-3.0';	
2	12	1.0' / 2.0'			Dense		Sandy; fine-coarse SAND, some gravel, cobble at 3.5'	SW	otherwise dry	FID=4.3
	20								2" spoon	
	15		0915							PID=9.0
	8		OU2-SO-516-0406						Slight Iron staining near	
4	17	1.0' / 2.0'					Sand; fine-medium SAND, trace gravel	SW	cobble, cobble orange in color	FID=43.0
	25								2" spoon	
	28		0945				Trace coarse sand, k-feldspar cobble at 5.5'			PID=20.1
	4		OU2-SO-516-0608						Piece of wood at 7.8'	
6	7	1.1' / 2.0'			Medium	Gray	TILES with some fine-medium sand	Anth.	2" spoon	FID=268.1
	11				Dense			Fill		
	5		1000				Bank of iron staining at 7'			PID=11.3
	3		OU2-SO-516-0810						2" spoon	
8	16	0.6' / 2.0'					TILES, some fine-medium sand	Anth.		FID=948*
	10							Fill		
	7		1030				Copper piece at 9.5'			PID=8.0
	10		OU2-SO-516-1012	Wood					3" spoon	
10	20	1.2' / 2.0'				Black	WOOD (solid) 10-10.3'	Anth.		FID=2020
	21			Tile				Fill		
	30		1120		Dense		ROOFING TILE			PID=4.2
	3		OU2-SO-516-1214						Odor	
12	3	0.7' / 2.0'		Silty	Loose	Dark	Silty SAND; fine sand, some silt, some organics (leaves and	SM	2" spoon	FID=384
	2			Sand		Brown	roots)			
	2		1130							PID=3.6
	1		OU2-SO-516-1416		Very				Odor	
14	1	1.5' / 2.0'	1155		Loose	Dark	Silty SAND; fine sand, some silt, trace organics (fewer after	SM	2" spoon	FID=1596
	3		OU2-SO-DP02			Brown	15')			
	4		1205							PID=0.0

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash	Anth. = anthropogenic – fill material from 0.0 -12'	
METHOD OF SOIL SAMPLING:	Split spoons	* = no readings in the breathing zone	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-516M	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-516M
PROJECT NO.:	N4236-0320			START DATE:	9/24/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/24/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-516M
GRD. SURFACE ELEVATION:	9.8 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	1 5	1.4' / 2.0'	OU2-SO-516-1618		Medium	Dark Brown	Silty SAND – sand, some silt, some organics	SM	2" spoon	FID=103.0
18	11 17		1300		Dense	Dark Gray	SAND – fine-coarse sand, trace gravel	SW		PID=40.8
	15 17	0.9' / 2.0'	OU2-SO-516-1820				SAND – fine-coarse sand, some gravel		2" spoon	FID=173.1
20	11 8		1310							PID=37.8
	13 15	0.5' / 2.0'	OU2-SO-516-2022			Gray	SAND – fine-coarse sand, trace gravel		2" spoon	FID=122.5
22	18 20		1320		Dense					PID=68
	5 5	1.0' / 2.0'	OU2-SO-516-2224		Medium Dense	Light Brown	SAND – fine-medium sand	SP	2" spoon	FID=38.6
24	13 15		1330			Gray	SAND – fine sand			PID=40.8
	7 6	0.8' / 2.0'	OU2-SO-516-2426			Gray	SAND – fine sand, trace medium sand		2" spoon	FID=28.0
26	7 7		1345							PID=40.9
				EOB @ 26' bgs						

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45	Notes: Anth. = anthropogenic – fill material from 0.0 -12' * = no readings in the breathing zone	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-516M	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-517S
PROJECT NO.:	N4236-0320			START DATE:	9/25/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	9/25/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-517S
GRD. SURFACE ELEVATION:	21.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
	3		0950			Dark	0'-0.4'= dark brown, some organics (rock), fine SAND,			
	4	1.5 / 2			Medium	Brown	Trace silt, trace medium sand			FID = 0.0
	7		OU2-SO-517S-0002		Dense	Light	0.4'-1.0' = fine-coarse SAND, some gravel			
2	7					Brown	1'-2 '= fine-medium SAND, trace coarse sand, trace gravel			PID = 0.5
	10		1000			Light			Spoon refusal at 3 ft.	
	31	0.5 / 2				Brown	Similar to above, fine-coarse sand, some gravel, cobble			FID = 0.5
							Or larger at 3 ft.			
4										PID = 0.3
				EOB @ 4' bgs			Refusal at 3 ft. we hit a pipe for a storm drain. Will move over 5 ft. and collect spoons from 4 ft.			

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-517S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-517S replacement
PROJECT NO.:	N4236-0320			START DATE:	10/17/02 @ 0800
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/17/02 @ 1630
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-517S
GRD. SURFACE ELEVATION:	21.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	2		OU2-SO-517S-0002	Topsoil		Dark	0-0.5' -Topsoil, Fine-Medium SAND, some silt,		No PACM, MMM, or odor	
	4	1.1 / 2.0	10/17/02 @ 0830		Medium	Brown to	Trace organics	SM	2" spoon, Advanced 5"	
	7			Sand	Dense	Brown	0.55-2.0' - Fine-Coarse SAND, trace fine gravel		casing to create larger hole	FID = 0.0
2	7							SP	0-4', Then advanced 4" casing	PID = 0.0
	6		OU2-SO-517S-0204						No PACM, MMM, or odor	
	6	0.2 / 1.5	10/17/02 @ 0900			Brown	Fine-Coarse SAND, some fine gravel;		2" spoon	
	9						Rock fragments, reddish/pink in color, possible sandstone			FID = 0.0
4	50/2.1								cobble 3.5 – 4.0' bgs, dry	PID = 0.0
	17		OU2-SO-517S-0406						Dry-moist, 2" spoon	
	38	1.3 / 2.0	10/17/02 @ 0945		Very		Poorly graded fine-coarse SAND, some fine gravel, trace silt	SP-	No PACM, MMM, or odor	
	30				Dense			SM	4" casing/300 lb. hammer	FID = 0.0
6	23								concrete fragments	PID = 0.0
	17		OU2-SO-517S-0608						Dry-moist, 2" spoon	
	18	1.6 / 2.0	10/17/02 @ 1000		Dense	Light	Well graded fine-coarse SAND, trace fine-gravel, trace silt.	SW	No PACM, MMM, or odor	
	18					Brown			4" casing/ 300 lb. hammer	FID = 0.0
8	19									PID = 0.0
	10		OU2-SO-517S-0810						Moist-wet, 2" spoon	
	11	1.0 / 2.0	10/17/02 @ 1100		Medium		Well graded fine-coarse SAND, trace fine gravel, trace silt	SW	No PACM, MMM, or odor	
	11				Dense				4" casing/140 lb. hammer	FID = 0.0
10	12									PID = 0.0
	6		OU2-SO-517S-1012							
	10	0.7 / 2.0	10/17/02 @ 1120							
	8									FID = 0.0
12	15									PID = 0.0
	16		OU2-SO-517S-1214				0' -0.8' – similar to above			
	20	1.3 / 2.0	10/17/02 @ 1125		Very		0.8' – 1.3' - quartz fragments, moist-dry			
	26				Dense					FID = 0.0
14	25									PID = 0.0
	10		OU2-SO-517S-1416						Moist, 2" spoon	
	12	1.0 / 2.0	10/17/02 @ 1145		Medium	Brown	Poorly graded fine-coarse SAND, trace fine gravel, trace silt.	SP	No PACM, MMM, or odor	
	13				Dense				4" casing/140 lb. hammer	FID = 0.0
16	16									PID = 0.0

TYPE OF DRILLING RIG:	CME75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" Casing Drive and Wash	PACM – Potential Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	2" or 3" Split Spoon		
METHOD OF ROCK CORING:	N/A	MMM – Man made material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (B)	BORING NO.: SB-517S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-517S replacement
PROJECT NO.:	N4236-0320			START DATE:	10/17/02 @ 0800
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/17/02 @ 1630
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-517S
GRD. SURFACE ELEVATION:	21.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	16		OU2-SO-517S-1618	Sand &					Moist, 2" spoon	
	11	1.3 / 2.0	10/17/02 @ 1200	Gravel	Medium	Brown	Poorly graded fine-coarse SAND, some fine gravel, trace silt	SP	No PACM, MMM, or odor	
	13				Dense		Slight oxidation (rust color)		4" casing/140 lb. hammer	FID = 0.0
18	13								WL-dry (measured)	PID = 0.0
	9		OU2-SO-517S-1820						Moist-wet, 2" spoon	
	9	0.8 / 2.0	10/17/02 @ 1300				Poorly graded fine-coarse SAND, some fine gravel		No PACM, MMM, or odor	
	9								4" casing/ 140 lb. hammer	FID = 0.0
20	15									PID = 0.0
	22		OU2-SO-517S-2022						Moist-wet, 2" spoon	
	25	1.0 / 2.0	10/17/02 @ 1330		Dense	Dark brown	Poorly graded fine-coarse SAND, some fine gravel, trace silt		No PACM, MMM, or odor	
	15					To black			4" casing/ 140 lb. hammer	FID = 0.0
22	12									PID = 0.0
	6		OU2-SO-517S-2224						Moist-wet, 2" spoon	
	9	1.6 / 2.0	10/17/02 @ 1335	Sand	Medium	Brown	Well graded fine-medium SAND, trace fine-gravel, trace silt	SW	No PACM, MMM, or odor	
	8				Dense				4" casing/ 140 lb. hammer	FID = 0.7
24	10									PID = 0.0
	4		OU2-SO-517S-2426						Wet-saturated, 2" spoon	
	5	1.2 / 2.0	10/17/02 @ 1355	Silty		Light	Well graded fine-medium SAND, some silt, trace Fine gravel	SM	No PACM, MMM, or odor	
	9			Sand		Brown			4" casing/ 140 lb. hammer	FID = 0.0
26	11									PID = 0.0
	33		OU2-SO-517S-2628						Wet-saturated, 2" spoon	
	18	1.2 / 2.0	10/17/02 @ 1400	Sand &	Dense	Brown	Poorly graded fine-coarse SAND, some fine gravel, trace silt	SP	No PACM, MMM, or odor	
	16			Gravel					4" casing/ 140 lb. hammer	FID = 26.0
28	17									PID = 0.0
				EOB @						
				28' bgs						

TYPE OF DRILLING RIG:	CME75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" Casing Drive and Wash	PACM – Potential Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	2" or 3" Split Spoon	MMM – Man made material	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (F) PID (B)	BORING NO.: SB-517S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-517SG
PROJECT NO.:	N4236-0320			START DATE:	10/18/02
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/18/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-517SG
GRD. SURFACE ELEVATION:	20.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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 Refer to boring log no. SB-517S for detailed description of material.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		NA	No sample collecting		Dense	Brown	SAND and GRAVEL material, asphalt fragments, some concrete fragments.		4" casing advanced with 300 lb. Hammer to 8.0' bgs	
2										
									Dry, misc. construction debris, metal fragments, concrete asphalt.	
4							± 3-4' bgs - Asphalt fragments (± 1-2" thick)			
6										
8										
				EOB @ 8' bgs			Soil gas well set @ 8.0 bgs, refer to well construction log No. MW-517SG for details.			

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive & wash		
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-517SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-518S
PROJECT NO.:	N4236-0320			START DATE:	9/25/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/25/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-518S
GRD. SURFACE ELEVATION:	20.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
	2		OU2-SO-518S-0002			Dark	0'-0.5' SAND; fine-medium sand, trace silt, some organics	SP	2" spoon	
	10	1.4' / 2.0'			Medium	Brown				FID=10.3
	17				Dense	Light	Fine-coarse SAND, some gravel, cobble at 2'	SW		
2	20		1220			Brown	Color change – band of yellowish material at 1.5-1.7'			PID=4.6
	13		OU2-SO-518S-						2" spoon	
	20	1.1' / 2.0'			Dense		Medium-coarse SAND, trace gravel			FID=0.5
	19									
4	11		1230				Cobble at 3.5'			PID=0.7
	1		OU2-SO-518S-0406						2" spoon	
	10	1.4' / 2.0'			Medium		Fine-coarse SAND, some gravel			FID=29.6
	20				Dense		COBBLES at 5.8' – iron staining in the 0.1' between them			
6	31		1240				COBBLES at 6, 6.5'			PID=9.7
	15		OU2-SO-518S-0608						2" spoon	
	24	0.7' / 2.0'			Dense		Fine-coarse SAND, some gravel			FID=32.1
	21									
8	21		1255				Cobbles=rounded, gravel=rounded-subrounded			PID=8.9
	20		OU2-SO-518S-0810						2" spoon	
	18	0.9' / 2.0'					Medium-coarse SAND, some gravel, trace fines			FID=1.4
	17									
10	15		1315				SAND, cobbles at 8.2', 9.6'			PID=2.8
	10		OU2-SO-518S-1012						2" spoon	
	11	0.9' / 2.0'			Medium		10'-11' -Medium-coarse SAND, some gravel, trace fine sand			FID=2.1
	11				Dense		11'-12' - Fines down throughout spoon to fine-coarse sand, some gravel			
12	7		1325							PID=1.2
	10		OU2-SO-518S-1214						2" spoon	
	11	1.0' / 2.0'					12'-13' Fine-coarse SAND, some gravel			FID=1.4
	13					Red brown	13'-13.2' Fine-medium SAND – iron stained	SP		
14	15		1340			Light brown	13.2'-14' Fine-coarse SAND, some gravel	SW		PID=0.4
	9		OU2-SO-518S-1416						2"/3" (not enough recovery for a 2" spoon)	
	11	1.3' / 2.0'				Light	Fine-coarse SAND, some gravel	SW		FID=2.0
	13					Brown				
16	13		1400							PID=0.0

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL = 8.2 Ft. in MW-202S		
OTHER OBSERVATIONS:	*will discard 0204—not enough vol. collected	BORING NO.: SB-518S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-518S
PROJECT NO.:	N4236-0320			START DATE:	9/25/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/25/02
DRILLED BY (Company/Driller):	ADT/ Jim Philbin			MON. WELL NO.:	MW-518S
GRD. SURFACE ELEVATION:	20.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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		OU2-SO-518S-1618						2" spoon	
	7	0.8' / 2.0'			Medium	Light	Fine-coarse SAND, some gravel	SW		FID=1.6
	13				Dense	Brown				
18	15		1415				0.05' spot of iron staining at 16.5'			PID=0.0
				EOB @ 18' bgs						

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash			
METHOD OF SOIL SAMPLING:	Split spoons			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	WL = 8.2 Ft. in MW-202S			
OTHER OBSERVATIONS:	*will discard 0204—not enough vol. collected	BORING NO.:	SB-518S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-518SG
PROJECT NO.:	N4236-0320			START DATE:	10/2/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/2/02
DRILLED BY (Company/Driller):	ADT/ Marques Larabie			MON. WELL NO.:	MW-518SG
GRD. SURFACE ELEVATION:	20.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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							Soil not logged, see boring log MW-518S for soil profile details.			
							5" casing (open) driven to 4 ft, then removed with material. 3" open casing driven to 8 ft., then removed with material.			
2							3" casing with point driven to refusal at 5 ft.			Borehole#1
							Move over 5 ft, then drive 5" open casing to 4 ft. After material is removed, drive 3" open casing to 8 ft., then			PID = 0.0 FID = 0.0
4							remove with material. Hole caves in to 7.5 ft., drive 3" open casing again to 8 ft. and remove with material inside.			Borehole #2 PID = 0.0
							point is added and casing driven to 7.5 ft. (refusal), will set the well at 7.5 ft.			FID = 0.0
6										
										Borehole #2
8				BOE @ 7.5' bgs						PID = 0.0 FID = 0.0

TYPE OF DRILLING RIG:	Truck mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-518S = 16.5'			
OTHER OBSERVATIONS:	* Field screening for breathing zone only.	BORING NO.:	SB-518SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-519S
PROJECT NO.:	N4236-0320			START DATE:	9/26/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/26/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-519S
GRD. SURFACE ELEVATION:	16.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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	3 6	1.4' / 2.0'	OU2-SO-519S-0002 0910		Medium Dense	Dark brown Red brown Brown Light brown	0'-0.4' Silty SAND, fine-medium sand, some silt 0.4'-1.0' SAND, fine-medium sand, trace silt 1.0'-1.6' Fine-coarse SAND, trace silt 1.6'-2.0' Fine-medium SAND, trace coarse sand	SM SM SW	Dry 2" spoon Some organics (roots) Cobble at 1'	PID=3.1
2	10 12									FID=0.0
2	13 16	0.9' / 2.0'	OU2-SO-519S-0204 0920		Dense		Fine-medium SAND, some gravel, trace silt		2" spoon	PID=4.7
4	17 21						Coarsens down to fine-coarse SAND, some gravel		Cobbles at 3.5, 3.8'	FID=0.0
4	17 21	1.3' / 2.0'	OU2-SO-519S-0406 0935				Fine-coarse SAND, some gravel, cobbles throughout		2" spoon	PID=9.3
6	24 28									FID=6.6
6	7 18	0.8' / 2.0'	OU2-SO-519S-0608 0945				Fine-coarse SAND, some gravel		Cobbles at 7, 7.2' 2" spoon	PID=4.9
8	21 24									FID=9.0
8	12 18	1.0' / 2.0'	OU2-SO-519S-0810 1000				Fine-coarse SAND and GRAVEL	SW/GW	Subrounded grains 2" spoon	PID=3.6
10	22 28						COBBLE at 9' with iron staining around it			FID=5.1
10	10 15	0.8' / 2.0'	OU2-SO-519S-1012 1015				Medium-coarse SAND, some gravel, trace find sand	SW	2" spoon	PID=0.0
12	18 27									FID=1.3
12	11 17	0.8' / 2.0'	OU2-SO-519S-1214 1040				0-0.5' Fine-coarse SAND, some gravel	SW	2" spoon	PID=0.0
14	22 28					Brown Light brown	0.05' layer fine SAND, trace med sand 0.5'-0.8' Fine-coarse SAND, some gravel	SP SW		FID=0.0
14	5 6	0.7' / 2.0'	OU2-SO-519S-1416 1110		Medium Dense	Light Brown	Fine-coarse SAND	SP	2" spoon	PID=0.0
16	9 12									FID=0.8

TYPE OF DRILLING RIG:	2" well rig (rig #3) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL=16' at MW-518S, 8' at MW-202S		
OTHER OBSERVATIONS:		BORING NO.: SB-519S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-519S
PROJECT NO.:	N4236-0320			START DATE:	9/26/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/26/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-519S
GRD. SURFACE ELEVATION:	16.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
	15		OU2-SO-519S-1618			Light brown	Fine-medium SAND, some fine-coarse gravel, sand		3" spoon	
16	17	1.5' / 2.0'			Dense	Green brown	Color change only	SW	color change, but gradual fining down	PID=0.0
	20									
18	21		1120			Red brown	COBBLES, some fine-medium sand	Cobble		FID=0.0
	7		OU2-SO-519S-1820						2" spoon	
18	8	0.6' / 2.0'			Medium	Reddish	Fine-coarse SAND, some gravel	SW		PID=0.0
	8				Dense	Brown				
20	10		1135				COBBLES at 18.5, 19'	Cobble		FID=8.1
	8		OU2-SO-519S-2022						2" spoon	
20	7	0.8' / 2.0'			Medium	Reddish	Fine-coarse SAND, some gravel	SW		PID=0.0
	7				Dense	Brown				
22	5		1145							FID=7.4
				EOB @ 22' bgs						

TYPE OF DRILLING RIG:	2" well rig (rig #3) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-519S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-519SG
PROJECT NO.:	N4236-0320			START DATE:	10/15/02 @ 1600
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/15/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-519SG
GRD. SURFACE ELEVATION:	16.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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 Refer to boring log No. SB-519S for details	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
		NA	No Sample collecting				Soil removed : fine-medium SAND, trace fine gravel, trace silt		4" casing advanced with a 300 lb hammer to 8.0' bgs.	
2										FID = 0.0 PID = 0.0
									In the top ±1.0' bgs a piece of rebar, concrete, and glass was observed. No PACM or odor noted	@ 1625
4										
6										FID = 0.0 PID = 0.0
8										
				EOB @ 8.0' bgs			MW-519SG set @ 8.0' bgs, filter pack 8.0' – 6.5' Screened 8.0' – 7.0' bentonite chips to 3.0'.			
							Refer to well construction log No. MW-519SG for details			

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing Drive and wash	Note:		
METHOD OF SOIL SAMPLING:	2" or 3" spilt spoon	PACM – Potential Asbestos Containing Material		
METHOD OF ROCK CORING:	NX or NQ			
GROUNDWATER LEVELS:	WL recorded at MW519S = 12.0' bgs			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.:	SB-519SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-520S
PROJECT NO.:	N4236-0320			START DATE:	9/27/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/27/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-520S
GRD. SURFACE ELEVATION:	13.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	2		OU2-SO-520S-0002			Dark			2" spoon	
	6	1.5' / 2.0'			Medium	Brown	Fine-medium SAND, some silt, some organics	SP	0.4' grade between layers	PID=0.2
	8				Dense	Light				
2	9		0850			Brown	Fine-medium SAND, some coarse sand	SW		FID=0.0
	2		OU2-SO-520S-0204						2" spoon	
	3	1.0' / 2.0'				Medium	Fine-medium SAND, trace coarse sand, trace gravel	SW		PID=0.0
	17					Brown				
4	10		0900							FID=0.0
	5		OU2-SO-520S-0406						2" spoon	
	2	0' / 2.0'					**- NO RECOVERY -**			
	2		**NO RECOVERY**							
6	2		0910				Cement piece in top of next spoon – blocked 2" spoon			
	3		OU2-SO-520S-0608						3" spoon	
	7	0.8' / 2.0'				Light	Fine-coarse SAND, some gravel; piece of concrete at 6'	SW		PID=0.6
	9					Brown				
8	12		0915							FID=0.0
	5		OU2-SO-520S-0810						2" spoon	
	7	0.4' / 2.0'			Loose	Red	Fine-medium SAND, trace coarse sand, cobble at 8'	SW		PID=0.8
	4					Brown				
10	4		0925							FID=0.0
	2		OU2-SO-520S-1012						2" spoon	
	3	0.5' / 2.0'			Very	Dark	Silty SAND – fine sand, some silt, trace gravel	SM		PID=1.3
	1				Loose	Brown				
12	1		0935							FID=96.7
	5		OU2-SO-520S-1214						3" spoon	
	3	1.0' / 2.0'			Loose	Light	Fine-medium SAND, some silt, trace gravel, trace organics	SW		PID=3.8
	3					Brown			slight organic odor	
14	7		0945				(roots)			FID=168.6
	5		OU2-SO-520S-1416						2" spoon	
	7	0.6' / 2.0'			Medium	Light	Fine-coarse SAND, some gravel, trace silt	SW		PID=24.1
	7				Dense	brown				
16	9		0955							FID=9.9

TYPE OF DRILLING RIG:	2" well rig (rig 2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	*fill to 12'	BORING NO.: SB-520S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-520S
PROJECT NO.:	N4236-0320			START DATE:	9/27/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	9/27/02
DRILLED BY (Company/Driller):	ADT/Jim Philbin			MON. WELL NO.:	MW-520S
GRD. SURFACE ELEVATION:	13.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	6	1.0' / 2.0'	OU2-SO-520S-1618		Medium	Light	Fine-coarse SAND, trace gravel	SW	2" spoon	PID=2.5
	8									
	11				Dense	Brown				
18	11		1005							FID=5.4
	6	0.8' / 2.0'	OU2-SO-520S-1820				Fine-medium SAND	SP	2" spoon	PID=34.7
	7									
	11									
20	6		1015							FID=20.7
	3	0.7' / 2.0'	OU2-SO-520S-2022				Fine-medium SAND	SP	2" spoon	PID=6.0
	7									
	8									
22	12		1025							FID=2.4
				EOB @ 22.5' bgs						

TYPE OF DRILLING RIG:	2" wellrig (rig 2) CME 45		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-520S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-520SG
PROJECT NO.:	N4236-0320			START DATE:	10/2/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/2/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-520SG
GRD. SURFACE ELEVATION:	13.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See boring log for SB-520S for soil profile details.	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD * SCREENING DATA *METHOD* = [FID, (PPM)]
							Soil not logged			
2							5" open casing driven to 5 ft, then removed (with material inside).			PID = 0.0 FID = 0.0
							3" casing driven to 8 ft, then removed with material inside, casing cleaned out, then point added and re-driven to 8 ft.			
4										
6										PID = 0.0 FID = 0.0
8										
				EOB@ 8' bgs						

TYPE OF DRILLING RIG:	Truck-mounted geoprobe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Direct push			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-520S = 10.6 ft.			
OTHER OBSERVATIONS:	* Field screening for breathing zone only.	BORING NO.:	SB-520SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-521S
PROJECT NO.:	N4236-0320			START DATE:	10/2/002 @ 1230
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/2/02 @ 1630
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-521S
GRD. SURFACE ELEVATION:	12.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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)]
				Sand			Visual observation made 10/2/02 – well graded fine-coarse sand from 0-8' bgs			
2										
4										
6										
8										
	1 2	1.2 / 2.0	FID 0.0 PID 0.0 10/2/02 @ 1230	Silty sand	Loose	Brown	Poorly graded fine-coarse SAND, trace fine gravel	SP-SM	Moist-wet No PACM, MMM, or odor	
10	1 1						Trace silt, mostly Fine-medium SAND, trace coarse sand			
	1 1	1.2 / 2.0	FID 0.0 PID 0.0 10/2/02 @ 1235			Light Brown	Well graded fine-medium SAND, some silt	SM	Wet-saturated No PACM, MMM, or odor	FID = 0.0 PID = 0.0
12	2 1									
	1 1	1.0 / 2.0	FID 0.0 PID 7.9 10/2/02 @ 1300				Well graded fine-medium SAND, w/some silt, trace		Saturated No PACM, MMM, or odor	FID = 0.0 PID = 0.0
14	3 4						Fine gravel (one piece)			
	2 2	1.25 / 2.0	FID 0.0 PID 3.3 10/2/02 @ 1310				Well graded fine-medium SAND, some silt		Saturated No PACM, MMM, or odor	FID = 0.0 PID = 0.0
16	4 5									

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash	Notes:	
METHOD OF SOIL SAMPLING:	2" split spoon	PACM – potentially asbestos containing material.	
METHOD OF ROCK CORING:	NA	MMM – man made material	
GROUNDWATER LEVELS:	WL @ 8.7 bgs		
OTHER OBSERVATIONS:	FID (F) PID (A)	BORING NO.: SB-521S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-521S
PROJECT NO.:	N4236-0320			START DATE:	10/2/002 @ 1230
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/2/02 @ 1630
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-521S
GRD. SURFACE ELEVATION:	12.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	4	1.6/2.0	FID 0.0				Well graded fine-medium SAND, some silt	SM	Saturated	FID = 0.0
	6		PID 0.0						No PACM, MMM, or odor	PID = 0.0
	12		10/2/02 @ 1320			Light				
18	15				Dense	Brown				
				EOB @ 18' bgs			Flushed 4" casing until discharge ran clear, 4" casing Set @ 17.2' and washed to 17.2', 2" spoon collected			
							From 16'-18' interval			

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing drive and wash	Notes: PACM – potentially asbestos containing material. MMM – man made material	
METHOD OF SOIL SAMPLING:	2" split spoon		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	WL @ 8.7 bgs		
OTHER OBSERVATIONS:	FID (F) PID (A)	BORING NO.: SB-521S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-522S
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/3/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-522S
GRD. SURFACE ELEVATION:	12.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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							Vactron used to advance 0-8' bgs to avoid damage to sewer line.			
							Visual observations made 10/2/02, poorly graded fine-coarse SAND, fine gravel and cobbles, angular, bricks, asphalt, concrete			
2										
4										
6										
8										
	4	0.3 / 2.0	OU2-SO-522-0810	Silty Sand	Loose	Brown	Well graded SAND some silt, fine-medium sand with silt	SW-SM	Wet 8-10' (2) attempts no recover 0.3' No PACM, MMM or odor	PID = 0.0
	3		FID = 49.2							FID = 0.0
	7		PID = 0.0							
10	10		10/3/02 0820							
	1	0.8 / 2.0	OU2-SO-522-1012		Loose	Brown	0'-0.5'- well graded SAND, some silt fine-coarse sand	SM	Wet 10-12' (saturated) No PACM, MMM, or odor	PID = 42.3
	3		FID = 146.7							FID = 0.0
	4		PID = 0.0			Gray	0.5'-0.8'- well graded fine-medium SAND, some silt			
12	4		10/3/02 0830							
	3	1.5 / 2.0	OU2-SO-522-1214		Loose	Gray/ Brown	0'-0.2'- silty SAND	SM	Wet 12-14' (saturated) No PACM, MMM, or odor	PID = 106.4
	5		FID = 280							FID = 0.0
	6		PID = 7.8			Gray	0.2'-1.5'- well graded fine-medium SAND, some silt			
14	6		10/3/02 0835							
	3	0.9 / 2.0	OU2-SO-522-1416	Sand & Gravel	Loose	Gray	Poorly graded fine-coarse SAND, trace fine gravel, trace silt	SP	Wet-saturated 14-16' No PACM, MMM, or odor	PID = 0.0
	4		FID = 0.0							FID = 0.0
	4		PID = 0.0						headspace	PID = 57.2
16	5		10/3/02							FID = 0.4

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = potentially asbestos containing material; MMM = man-made material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing Drive & Wash		
METHOD OF SOIL SAMPLING:	2" Split spoon sample collection		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL = 8.9' bgs @ 0910		
OTHER OBSERVATIONS:	FID (F) PID (A)	BORING NO.: SB-522S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-522S
PROJECT NO.:	N4236-0320			START DATE:	10/3/02
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/3/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-522S
GRD. SURFACE ELEVATION:	12.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	4		OU2-SO-522-1618		Loose	Gray to	0'-0.8' - same sand & gravel noted @ 14-16'	SP-	Wet-saturated 16-18'	PID = 162.4
	6	1.5 / 2.0	FID = 0.0			Brown	0.8'-1.5' - well graded silty SAND, fine-medium sand with silt	SM	No PACM, MMM, or odor	FID = 0.0
	7		PID = 0.0						headspace	PID = 291
18	10		10/3/02 0855							FID = 3.9
				EOB @ 18' bgs			Water level @ 8.9 ft. bgs, set well @ 17.2' sump 17.2-16.0', Screen 16-6' riser 6 – 0.5' bgs.			

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing Drive & Wash	Notes: PACM = potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	2" Split spoon sample collection	MMM = man-made material	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL = 8.9' bgs @ 0910		
OTHER OBSERVATIONS:	FID (F) PID (A)	BORING NO.: SB-522S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-523S
PROJECT NO.:	N4236-0320			START DATE:	10/21/02 @ 1145
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/21/02 @ 1500
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-523S
GRD. SURFACE ELEVATION:	16.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	50	1.1 / 2.0	OU2-SO-523S-0002 10/21/02 @ 1150	SAND	Medium Dense	Brown	0-0.5' – Asphalt 0.5-2.0' – Well graded fine-coarse SAND, trace Fine gravel, trace silt.	SW-SM	Dry-moist, 2" spoon Asphalt frags 4" casing/140 lb. hammer	
	8									
	6									FID = 0.0
2	2									PID = 0.0
	2	1.5 / 2.0	OU2-SO-523S-0204 10/21/02 @ 1155	SILTY SAND	Very Loose	Light Brown	Poorly graded fine-coarse SAND, some silts, trace fragments of asphalt	SP	Dry-moist, 2" spoon 4" casing/140 lb. hammer No PACM, mmm, or odor	
	1									
	1									FID = 305
4	4									PID = 0.0
	7	0.5 / 2.0	OU2-SO-523S-0406 10/21/02 @ 1210	SAND & GRAVEL	Very Dense	Brown	Well graded fine-coarse SAND, some fine gravel, trace silt	SW	Moist, 2" spoon 4" casing/140 lb. hammer No PACM, mmm, or odor	
	25									
	34									FID = 83
6	35									PID = 0.0
	37	1.05 / 2.0	OU2-SO-523S-0608 10/21/02 @ 1215			Brown to Gray				
	37									
	43						1.8-2.0' rock fragments, quartz, mica, feldspar			FID = 7.9
8	45									PID = 0.0
	22	1.0 / 2.0	OU2-SO-523S-0810 10/21/02 @ 1245			Light Brown	Well graded fine-coarse SAND, some fine gravel, trace silt, quartz fragments	SW		
	25									
	28									FID = 103
10	24									PID = 0.0
	10	0.85 / 2.0	OU2-SO-523S-1012 10/21/02 @ 1300		Dense	Light brown/ Gray	Well graded fine-coarse SAND, some fine gravel, trace silt, Quartz fragments, mica, grass, schists, feldspar, slight oxidation in soil			
	19									
	16									FID = 262
12	14								Moist-Wet	PID = 0.0
	14	1.2 / 2.0	OU2-SO-523S-1214 10/21/02 @ 1310		Medium Dense	Gray	Well graded fine-coarse SAND, some fine gravel, trace silt			
	12									
	13									FID = 93
14	15									PID = 0.0
	5	0.8 / 2.0	OU2-SO-523S-1416 10/21/02 @ 1400	SAND		Brown	Well graded fine-coarse SAND, trace fine gravel			
	7									
	9									FID = 7.3
16	10								Wet	PID = 0.0

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" Casing Drive and Wash	Notes:	
METHOD OF SOIL SAMPLING:	2" or 3" Split Spoon	PACM – Potential Asbestos Containing Material	
METHOD OF ROCK CORING:	N/A	MMM – Man made material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-523S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-523S
PROJECT NO.:	N4236-0320			START DATE:	10/21/02 @ 1145
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/21/02 @ 1500
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-523S
GRD. SURFACE ELEVATION:	16.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	7		OU2-SO-523S-1618	SAND					Wet, 2" spoon	
	11	1.4 / 2.0	10/21/02 @ 1410		Medium	Brown	Well graded fine-coarse SAND, trace fine gravel	SW	4" casing/140 lb. hammer	
	11				Dense				No PACM, MMM, or odor	FID = 0.0
18	14									PID = 0.0
	7		OU2-SO-523S-1820	SILTY			0-0.35' – Well graded fine-coarse SAND, trace fine gravel			
	6	0.85 / 2.0	10/21/02 @ 1425	SAND		Light		SW-		
	6					Brown	0.35-2.0' – Poorly graded fine-medium SAND, some silt	SM		FID = 0.0
20	7									PID = 0.0
				EOB @						
22				21.0' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" Casing Drive and Wash	PACM – Potential Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	2" or 3" Split Spoon		
METHOD OF ROCK CORING:	N/A	MMM – Man made material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-523S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-523SGD
PROJECT NO.:	N4236-0320			START DATE:	11/6/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/6/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-523SGD
GRD. SURFACE ELEVATION:	16.3 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 For soil profile details see boring log SB-525S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0										
						Brown	Fine-coarse SAND, some gravel	SW		
2										
										PID = 0.0 FID = 92.5 *
4										
6										
8										PID = 0.0 FID = 9.6
10										
12				EOB @ 11.5' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive + wash			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-523S = 13.23'			
OTHER OBSERVATIONS:	* No readings in the breathing zone	BORING NO.:	SB-523SGD	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-523SGM
PROJECT NO.:	N4236-0320			START DATE:	11/6/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/6/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-523SGM
GRD. SURFACE ELEVATION:	16.4 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see boring log SB-523S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Brown	Fine-coarse SAND, some gravel	SW		
2										
										PID =0.0 FID = 168*
4										
6										
8										
				EOB @ 8.0' bgs						

TYPE OF DRILLING RIG:	CME75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive + wash			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-523S = 13.23'			
OTHER OBSERVATIONS:	* No readings in the Breathing Zone	BORING NO.:	SB-523SGM	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-523SGS
PROJECT NO.:	N4236-0320			START DATE:	11/6/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/6/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-523SGS
GRD. SURFACE ELEVATION:	16.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see boring log SB-523S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Brown	Fine-coarse SAND, some gravel	SW		
1										
2										PID = 0.0 FID = 0.0
3										
				EOB @ 3.0' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-523S = 13.23'			
OTHER OBSERVATIONS:		BORING NO.:	SB-523SGS	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-524B
PROJECT NO.:	N4236-0320			START DATE:	10/15/02
LOGGED BY:	T. Dorgan/J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/21/02
DRILLED BY (Company/Driller):	ADT/Derek Walker			MON. WELL NO.:	MW-524B
GRD. SURFACE ELEVATION:	15.7 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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							Refer to SB-210 (old) log for detail			
				Asphalt			0-0.3' - asphalt surface;		Cut asphalt with chop saw.	
5				Sand & Gravel					10" roller bit air to 5' bgs	
							SAND. cuttings composed primarily of fine-medium poorly	SP	Hole collapsing, switch to 8.25" ID HSA to top of bedrock	0.0 PID
10							graded sand, trace gravel, trace silt			0.0 FID
15										
				15.5' bedrock					Advance 8" roller bit to 20.5' and tremie portland cement/bentonite grout into boring. then set and drive 6" ID black – steel casing into grout	0.0 PID 0.0 FID
20										
	1 ft/40 sec			EOB @ 20.5' on 10/15/02			Dark gray schist – mostly biotite, some quartz			
25										
	1 ft/45 sec								15.5' EOB	
30									air hammer after cement for socket has cured	
35										
40	3 ft/2.3 min									

TYPE OF DRILLING RIG:	Schramm TF – 45D air-rotary		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	See page 1 remarks		
METHOD OF SOIL SAMPLING:	NA		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	~15' based on saturated soils		
OTHER OBSERVATIONS:	Grout=4.50 lb. bags portland cement & 50 lbs bentonite in ~ 30 gal of water	BORING NO.: SB-524B	PAGE: 1 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-524B
PROJECT NO.:	N4236-0320			START DATE:	10/15/02
LOGGED BY:	T. Dorgan/J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/21/02
DRILLED BY (Company/Driller):	ADT/Derek Walker			MON. WELL NO.:	MW-524B
GRD. SURFACE ELEVATION:	15.7 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
40										
						Dark	Schist – mostly biotite, trace garnet			
45	2'/ 1.5 min					Gray				
50	1'/50 sec									
55	1'/45 sec									0.0 PID 0.0 FID
60										
65	3'/2.5 min									
70										
						Dark	Schist – biotite			
75	1'/45 sec					Gray				
80										

TYPE OF DRILLING RIG:	Schramm TF-45D air-rotary		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	See page 1 remarks		
METHOD OF SOIL SAMPLING:	NA		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	~15'		
OTHER OBSERVATIONS:		BORING NO.: SB-524B	PAGE: 2 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-524B
PROJECT NO.:	N4236-0320			START DATE:	10/15/02
LOGGED BY:	T. Dorgan/J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/21/02
DRILLED BY (Company/Driller):	ADT/Derek Walker			MON. WELL NO.:	MW-524B
GRD. SURFACE ELEVATION:	15.7 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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)]
80										
						Dark	Schist – biotite			
85	1'/50 sec					Gray				
							Schist – biotite with some quartz; possible quartz vein			
90							@ 85'			
95	1'/55 sec									
							Schist – biotite, trace quartz			
100										
										0.0 PID
105	1'/50 sec									0.0 FID
							Schist - biotite			
110										
115	1'/50 sec									
120										

EOB @ 120.5 bgs

TYPE OF DRILLING RIG:	Schramm TF – 45D air-rotary		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	See page 1 remarks		
METHOD OF SOIL SAMPLING:	NA		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	~15'		
OTHER OBSERVATIONS:		BORING NO.: SB-524B	PAGE: 3 OF 3

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-525S
PROJECT NO.:	N4236-0320			START DATE:	10/22/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/22/03 @ 1200
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-525S
GRD. SURFACE ELEVATION:	22.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	20	1.0' / 2.0'	OU2-SO-525S-0002	Silty Sand	Medium Dense	Light Brown/ Orange	0-0.3' asphalt fragments 0.3-1.0' poorly graded fine-medium SAND, fine gravel, some silt	SP-	Dry, 2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	9									FID=0.0
2	9		10/22/02 @ 0845					SM		PID=0.0
	7	1.2' / 2.0'	OU2-SO-525S-0204	Sand & Gravel		Light Brown	Well graded fine-coarse SAND, some fine gravel	SW		
	10									
	15									FID=0.0
4	15		10/22/02 @ 0850							PID=0.0
	8	1.2' / 2.0'	OU2-SO-525S-0406							
	11									
	14									FID=0.0
6	21		10/22/02 @ 0900							PID=0.0
	28	1.8' / 2.0'	OU2-SO-525S-0608		Very Dense					
	21									
	39									FID=0.0
8	50		10/22/02 @ 0915							PID=0.0
	20	1.1' / 2.0'	OU2-SO-525S-0810				Well graded fine-coarse SAND, some fine gravel, some rock	SW	Moist, 2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	30									
	41						Fragments; gneiss, quartz			FID=0.0
10	25		10/22/02 @ 0930							PID=0.0
	15	1.0' / 2.0'	OU2-SO-525S-1012		Dense					
	17									
	20									FID=0.0
12	28		10/22/02 @ 0950							PID=0.0
	28	1.25' / 2.0'	OU2-SO-525S-1214		Very Dense		Well graded fine-coarse SAND, some fine gravel	SW	Moist-wet 4" casing/140 lb hammer No PACM, MMM or odor	
	28									
	28						Rock fragments; quartz, feldspar			FID=0.0
14	23		10/22/02 @ 1000							PID=0.0
	10	0.8' / 2.0'	OU2-SO-525S-1416							
	12									
	12									FID=0.0
16	11		10/22/02 @ 1030							PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	PACM – Potential Asbestos Containing Material	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon	MMM – Man made material	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-525S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-525S
PROJECT NO.:	N4236-0320			START DATE:	10/22/02 @ 0830
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/22/03 @ 1200
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-525S
GRD. SURFACE ELEVATION:	22.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	14	1.3' / 2.0'	OU2-SO-525S-1618 10/22/02 @ 1045	Sand & Gravel	Medium	Light	Well graded fine-coarse SAND, some fine gravel	SW	Moist- wet, 2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	14									
	16				Dense	Brown	Quartz rock fragments			FID=0.0
18	15									PID=0.0
	3	0.6' / 2.0'	OU2-SO-525S-1820 10/22/02 @ 1100		Loose	Brown	Well graded fine-coarse SAND, trace fine gravel		Wet – saturated 4" casing/140 lb hammer No PACM, MMM or odor	
	4									
	4									FID=0.0
20	4									PID=0.0
	4	0.5' / 2.0'	OU2-SO-525S-2022 10/22/02 @ 1110		Medium		Well graded fine-coarse SAND, trace fine gravel		2" spoon 4" casing/140 lb hammer wet – saturated	
	6									
	14									FID=1.6
22	12				Dense					PID=0.0
	10	1.2 / 2.0	OU2-SO-525S-2224 10/22/02 @ 1115				0-0.8' well graded fine-coarse SAND, trace fine gravel	SW	2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	10									
	11						0.8-2.0' poorly graded fine-medium SAND, trace fine gravel, trace silt			FID=0.0
24	14							SP		PID=0.0
				EOB @ 24' bgs						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Notes:	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon	PACM – Potential Asbestos Containing Material	
METHOD OF ROCK CORING:	N/A	MMM – Man made material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-525S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-525SG
PROJECT NO.:	N4236-0320			START DATE:	11/5/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/5/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-525SG
GRD. SURFACE ELEVATION:	22.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see boring log SB-525S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Light Brown	Fine-coarse SAND, trace gravel	SW		
2										
										PID = 0.0 FID = 0.0
4										
6										
8										
				EOB @ 8' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-525S = 19.66'			
OTHER OBSERVATIONS:		BORING NO.:	SB-525SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-526S
PROJECT NO.:	N4236-0320			START DATE:	10/22/02 @ 1520
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/22/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-526S
GRD. SURFACE ELEVATION:	15.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	19	1.1' / 2.0'	OU2-SO-526S-0002	Silty Sand	Medium Dense	Light Brown/ Orange	0-0.3' asphalt fragments 0.3' - 1.1' poorly graded fine-medium SAND, some silt, trace fine gravel	SP-SM	Dry, 2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	12									
	8									FID=0.0
2	6		10/22/02 1520							PID=0.0
	4	1.3' / 2.0'	OU2-SO-526S-0204							
	6									
	6									FID=0.0
4	9		10/22/02 1525							PID=0.0
	5	1.0' / 2.0'	OU2-SO-526S-0406	Sand and Gravel	Dense	Brown	Well graded fine-coarse SAND, some fine gravel	SW	Dry-moist, 2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	8									
	15									FID=NA
6	18		10/22/02 @ 1545							PID=0.0
	21	1.6' / 2.0'	OU2-SO-526S-0608 10/22/02 @ 1555						Dry-moist, 2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	24									
	22									FID=4.6
8	25									PID=0.0
	20	0.85' / 2.0'	OU2-SO-526S-0810	Sand			Well graded fine-coarse SAND, trace fine gravel		Moist, 2" spoon 4" casing/140 lb hammer No PACM, MMM or odor	
	14									
	16									FID=0.0
10	18		10/22/02 @ 1610							PID=0.0
	9	0.9' / 2.0'	OU2-SO-526S-1012		Medium				2" spoon, moist 4" casing/140 lb hammer	
	12									
	16				Dense					FID=3.1
12	16		10/22/02 @ 1625							PID=0.0
	10	1.1' / 2.0'	OU2-SO-526S-1214			Light Brown/ Orange			Moist-wet Oxidation (rust color) 4" casing/140 lb hammer	
	11									
	14									FID=1.2
14	14		10/22/02 @ 1630							PID=0.0
	10	0.6' / 2.0'	OU2-SO-526S-1416	Sand and Gravel		Brown	Well graded fine-coarse SAND, some gravel		2" spoon, wet 4" casing/140 lb hammer	
	7									
	8									FID=0.0
16	6		10/22/02 @ 1645							PID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-526S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-526S
PROJECT NO.:	N4236-0320			START DATE:	10/22/02 @ 1520
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/22/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-526S
GRD. SURFACE ELEVATION:	15.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	7		OU2-SO-526S-1618	Sand &		Brown to			Wet-saturated, 2" spoon	
	8	1.6'		Gravel	Medium	Orange	0-1.0' well graded fine-coarse SAND, trace fine gravel	SW-	4" casing/140 lb hammer	
	9	2.0'		Silty	Dense	Light			No PACM, MMM or odor	FID=0.0
18	7		10/22/02 @ 1650	Sand		Brown	1.0-1.6' poorly graded fine-medium SAND, some silt	SM		PID=0.0
	3		OU2-SO-526S-1820							
	6	1.0'				Light Brown/ Orange	Poorly graded fine-medium SAND, some silt	SM		
	7	2.0'								FID=0.0
20	8		10/22/02 @ 1710							PID=0.0
				EOB @ 21.0' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes: PACM = Potentially Asbestos Containing Material; MMM = Man Made Material	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-526S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-526SGD
PROJECT NO.:	N4236-0320			START DATE:	11/7/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/7/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-526SGD
GRD. SURFACE ELEVATION:	14.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see boring log SB-526S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Brown	Fine-coarse SAND, some gravel	SW	Light brown wash water	
2										
										PID = 0.0 FID = 0.0
4										
6										
8										
10										
										PID = 0.0 FID = 0.0
12				EOB @ 11.0' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-526S = 11.44'			
OTHER OBSERVATIONS:		BORING NO.:	SB-526SGD	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-526SGM
PROJECT NO.:	N4236-0320			START DATE:	11/7/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/7/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-526SGM
GRD. SURFACE ELEVATION:	14.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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 For soil profile details see boring log SB-526S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
0										
						Brown	Fine-coarse SAND, some gravel	SW	Light brown wash water	
2										
										PID = 0.0 FID = 0.0
4										
6										
8										
				EOB @ 8' bgs						

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive + wash		
METHOD OF SOIL SAMPLING:	NA		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	WL at MW526S = 11.44'		
OTHER OBSERVATIONS:		BORING NO.: SB-526SGM	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-526SGS
PROJECT NO.:	N4236-0320			START DATE:	11/7/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/7/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-526SGS
GRD. SURFACE ELEVATION:	14.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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							For soil profile details see boring log SB-526S			
						Light	Fine-coarse SAND, some gravel	SW	Light brown wash water	
2						Brown				PID = 0.0 FID = 0.0
4				EOB @ 3.3' bgs						

TYPE OF DRILLING RIG:	CME75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive casing, then pull out with soils inside to remove soil			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-526 = 11.44'			
OTHER OBSERVATIONS:		BORING NO.:	SB-526SGS	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-527S
PROJECT NO.:	N4236-0320			START DATE:	10/29/02 @ 0845
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-527S
GRD. SURFACE ELEVATION:	17.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
	NR	NR / 2.0'	OU2-SO-527S-0002	Sand	NA	Brown	Well graded fine-coarse SAND, some fine gravel	SW	4" casing – 2" spoon No PACM, MMM, or odor Dry-moist	
2			10/29/02							FID = 0.0 PID = 0.0
		NR / 2.0'	OU2-SO-527S-0204				Well graded fine-coarse SAND, some fine gravel		4" casing – 2" spoon No PACM, MMM, or odor moist	
4			10/29/02							FID = 0.0 PID = 0.0
	8 12	1.9' / 2.0'	OU2-SO-527S-0406	Sand and Gravel	Very Dense		well graded fine-coarse SAND, some fine-coarse gravel	SW-SM	4" casing – 2" spoon No PACM, MMM, or odor dry-moist	
6	38 40		10/29/02 0900				(sub-rounded, rounded), w/trace silt.			FID = 0.0 PID = 0.0
	55 28	0.4' / 2.0'	OU2-SO-527S-0608				Well graded fine-coarse SAND, some fine-coarse gravel		4" casing – 2" spoon Moist - wet	
8	31 32		10/29/02 0905				(angular), rock fragments, trace silt, mostly fine-medium Grained sand			FID = 0.0 PID = 0.0
	10 11	1.9' / 2.0'	OU2-SO-527S-0810	Sand	Medium Dense	Light Brown	Well graded fine-coarse SAND, trace silt	SW	4" casing – 2" spoon No PACM, MMM, or odor Moist - wet	
10	12 21		10/29/02 0925							FID = 56.4 PID = 0.0
	8 14	0.7' / 2.0'	OU2-SO-527S-1012		Dense		Well graded fine-coarse SAND, trace fine gravel, mostly fine-medium grained sand		4" casing – 2" spoon No PACM, MMM, or odor Moist	
12	18 25		10/29/02 0945							FID = 30.6 PID = 0.0
	32 75/0.4	0.7' / 0.9'	OU2-SO-527S-1214		Very Dense		Well graded fine-coarse SAND, trace fine-coarse gravel, mostly fine-medium grained SAND, rock fragments in bottom of shoe (spoon)		4" casing – 2" spoon moist, refusal @ 12.9' cobble or boulder No PACM, MMM, or odor	
14			10/29/02 0955							FID = 0.0 PID = 0.0
	84 32	0.8' / 2.0'	OU2-SO-527S-1416	Sand and Gravel		Brown	Well graded fine-coarse SAND, some fine-coarse gravel (angular), mostly rock fragments gneiss, trace silt.		4" casing – 2" spoon No PACM, MMM, or odor wet	
16	18 22		10/29/02 1025							FID = 0.0 PID = 0.0

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4: or 5" Casing Drive and Wash	Notes: PACM = potentially asbestos containing material MMM = Man made material	
METHOD OF SOIL SAMPLING:	2" or 3" Split Spoon		
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (C) PID (E)	BORING NO.: SB-527S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-527S
PROJECT NO.:	N4236-0320			START DATE:	10/29/02 @ 0845
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/29/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-527S
GRD. SURFACE ELEVATION:	17.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	25	1.1'/2.0'	OU2-SO-527S-1618	Gravelly Sand	Medium Dense	Brown	Well graded GRAVEL some fine-coarse gravel, fine-coarse sand, trace silt	GW-GM	4" casing – 2" spoon No PACM, MMM, or odor Wet – saturated	
	15									
	15									FID = 1.7
18	50		10/29/02 1035							PID = 0.0
	14	0.8'/2.0'	OU2-SO-527S-1820	Sand and Gravel	Dense		Well graded fine-coarse SAND, some fine-gravel and Trace silt.	SW	4" casing – 2" spoon No PACM, MMM, or odor Wet – saturated	
	18									
	21									FID = 0.0
20	18		10/29/02 1100							PID = 0.0
22				EOB @ 21' bgs			Bottom of exploration @ 21.0' bgs. See well construction log sheet for well details			

TYPE OF DRILLING RIG:	CME75	Notes: PACM = potentially asbestos containing material MMM = Man made material		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4: or 5" Casing Drive and Wash			
METHOD OF SOIL SAMPLING:	2" or 3" Split Spoon			
METHOD OF ROCK CORING:	NX or NQ			
GROUNDWATER LEVELS:				
OTHER OBSERVATIONS:	FID (C) PID (E)	BORING NO.: SB-527S		PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-527SG
PROJECT NO.:	N4236-0320			START DATE:	10/30/02 @ 1230
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/30/02 @ 1400
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-527SG
GRD. SURFACE ELEVATION:	17.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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 Refer to boring log no. SB-527S for detailed description of material	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	NA	NA	No sample collection (1)	(1)		Brown	Wash water discharge brown in color, fine-coarse SAND, trace fine gravel	(1)	4" casing – 300 lb. Hammer to 8 ft. No MMM, PACM, or odor	
2										FID = 0.0 PID = 0.0
4										FID = 0.0 PID = 0.0
6										
8										
				EOB @ 8.0' bgs			See well construction log No. MW-527SG for details			

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing Drive & Wash	(1) See boring log No. SB-527S for details	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon	PACM = potentially asbestos containing material	
METHOD OF ROCK CORING:	N/A	MMM = Man made material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-527SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-528S
PROJECT NO.:	N4236-0320			START DATE:	10/28/02 @ 1130
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/28/03 @ 1600
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-528S
GRD. SURFACE ELEVATION:	9.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	1		OU2-SO-528S-0002	Organic		Brown to			Dry-moist, 2" spoon	
	4	1.4' / 2.0'		Silty	Loose	Dark brown	0.3' organics, grass, roots, leaf litter material.	SM	4" casing – 140lb hammer	FID=0.7
	5			Sand			0.3-1.4' poorly graded fine-medium SAND, some silt, trace		PACM – tile fragments	
2	3		10/28/02 1155			Black	coarse-gravel (sub-rounded to rounded)			PID=0.0
	3		OU2-SO-528S-0204						Dry-moist, 2" spoon	
	4	1.3' / 2.0'				Dark	Poorly graded fine-medium SAND, some silt		No PACM, MMM or odor	FID=5.9
	4					Brown	Trace coarse gravel (sub-rounded to rounded)		4" casing	
4	5		10/28/02 1200							PID=0.0
	4		OU2-SO-528S-0406	Sand					Moist, 2" spoon	
	5	0.5' / 2.0'				Brown	Well graded fine-coarse SAND, some fine & coarse gravel	SW	PACM – tile fragments	FID=4.5
	5						(rounded) Trace silt		4" casing - 140lb hammer	
6	2		10/28/02 1210							PID=0.0
	2		OU2-SO-528S-0608						Moist-wet 2" spoon	
	2	1.3' / 2.0'				Light	Poorly graded fine-medium SAND, trace silt, trace fine	SP-	No PACM, MMM or odor	FID=26.1
	7					Brown	gravel (rounded)		4" casing – 140lb hammer	
8	8		10/28/02 1215					SM		PID=0.0
	11		OU2-SO-528S-0810		Medium				Moist-wet, 2" spoon	
	12	0.65' / 2.0'		Sand &	Dense	Brown	Well graded fine-coarse SAND, some fine-gravel (sub-	SW	No PACM, MMM or odor	FID=0.0
	15			Gravel			angular-rounded) trace silt, slightly oxidized soil		4" casing – 140lb hammer	
10	14		10/28/02 1235							PID=0.0
	12		OU2-SO-528S-1012						Wet-saturated, 2" spoon	
	10	0.7' / 2.0'					Well graded fine-coarse SAND, some fine-gravel, trace silt		No PACM, MMM or odor	FID=0.0
	10								4" casing – 140lb hammer	
12	8		10/28/02 1250							PID=0.0
	8		OU2-SO-528S-1214							
	9	1.1' / 2.0'					Well graded fine-coarse SAND, some fine-gravel, trace silt,			FID=0.0
	9						quartz fragment in shoe (±2.0")			
14	10		10/28/02 1255							PID=0.0
	3		OU2-SO-528S-1416							
	6	0.5' / 2.0'					Well graded fine-coarse SAND, some fine-coarse gravel			FID=0.2
	8						(sub-angular-rounded) trace silt			
16	8		10/28/02 1420				±14.05' flakes of rust material >0.5" thick			PID=0.0

EOB @ 16' bgs

TYPE OF DRILLING RIG:	CME75	Notes:		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	PACM =	potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon			
METHOD OF ROCK CORING:	NX or NQ	MMM =	Man made material.	
GROUNDWATER LEVELS:	6.2' bgs in open boring			
OTHER OBSERVATIONS:	FID (C) PID (A)	BORING NO.:	SB-528S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-528SG
PROJECT NO.:	N4236-0320			START DATE:	11/4/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/4/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-528SG
GRD. SURFACE ELEVATION:	9.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 See boring log for MW-528S for soil profile details	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Brown	Fine-coarse SAND, trace organics.	SW		
2										
										PID = 0.0 FID = 0.0
4										
				EOB @ 5' bgs						
6										

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Push casing down, then knock soil out, push casing down again, make sure boring is at 5'			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL = 6.4' bgs (8.8 from to PVC), will set well at 5ft			
OTHER OBSERVATIONS:	No readings in the breathing zone	BORING NO.:	SB-528SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-529S
PROJECT NO.:	N4236-0320			START DATE:	10/29/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/30/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-529S
GRD. SURFACE ELEVATION:	17.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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		OU2-SO-529S-0002	Silty	Medium		0-0.3' roots, grass		4" casing – 2" spoon	
	5	0.7 / 2.0		Sand	Dense	Dark	0.3-0.7' S-1 poorly graded fine-medium SAND, some silt	SM	dry	FID=0.0
	12					Brown	and some organics – roots, grass ±0.3'		no PACM, MMM or odor	
2	8		10/29/02 1450							PID=0.0
	5		OU2-SO-529S-0204	Sand					4" casing – 2" spoon	
	3	0.5 / 2.0			Loose	Brown	S-2 poorly graded fine-medium SAND, trace fine gravel	SP-	dry	FID=0.0
	2						and trace silt, trace organics	SM	no PACM, MMM or odor	
4	1		10/29/02 1455							PID=0.0
	2		OU2-SO-529S-0406	Sand &	Very				4" casing – 2" spoon	
	2	0.6 / 1.5		Gravel	Loose	Reddish/	S-3a fine-coarse SAND, some fine gravel (rounded)	SP	moist	FID=0.0
	1/1.0'					Brown			no PACM, MMM or odor	
6			10/29/02 1510				S-3b fine-medium SAND, some silt	SM		PID=0.0
	1		OU2-SO-529S-0608						4" casing – 2" spoon	
	1	1.2 / 2.0				Brown	S-4a (0-0.7') fine-coarse SAND, some fine gravel (rounded)	SP	probable anthracite (coal fragment), moist	FID=0.0
	3								No PACM, MMM or odor	
8	7		10/29/02 1515				S-4b (0.7-1.2') fine-medium SAND, some silt	SM		PID=0.0
	6		OU2-SO-529S-0810		Medium				4" casing – 2" spoon	
	10	0.9 / 2.0			Dense	Orange/	S-5 poorly graded fine-medium SAND, some silt, trace		moist	FID=0.0
	11					Brown	fine gravel		no PACM, MMM or odor	
10	12		10/29/02 1530							PID=0.0
	4		OU2-SO-529S-1012	Sand		Light			4" casing – 2" spoon	
	9	0.9 / 2.0				Brown	S-6 well graded fine-coarse SAND, mostly fine-medium	SW	moist	FID=0.0
	11						sand, and trace silt		no PACM, MMM or odor	
12	15		10/29/02 1545							PID=0.0
	20		OU2-SO-529S-1214	Sand &	Very				4" casing – 2" spoon	
	32	1.4 / 2.0		Gravel	Dense	Brown/	S-7 well graded fine-coarse SAND, some fine gravel		moist-wet	FID=0.0
	33					Orange	(angular), rock fragments		no PACM, MMM or odor	
14	34		10/29/02 1550							PID=0.0
	12		OU2-SO-529S-1416						4" casing – 2" spoon	
	22	0.7 / 2.0			Dense	Brown	S-8 well graded fine-coarse SAND, some fine gravel		moist-wet	FID=0.0
	18						(sub-rounded) trace silt		No PACM, MMM or odor	
16	22		10/29/02 1605							PID=0.0

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Notes:	
METHOD OF SOIL SAMPLING:	2" or 3" split spoon	PACM = potentially asbestos containing material	
METHOD OF ROCK CORING:	NX or NQ	MMM = man made material	
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (C) PID (A)	BORING NO.: SB-529S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-529S
PROJECT NO.:	N4236-0320			START DATE:	10/29/02
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/30/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-529S
GRD. SURFACE ELEVATION:	17.7 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	25		OU2-SO-529S-1618	Sand &					Wet, 4" casing – 2"	
	22	1.4 / 2.0		gravel	Dense	Brown	S-9 well graded fine-coarse SAND, some fine-coarse	SW	spoon	FID=0.0
	25					Grayish	gravel (angular), trace silt		No PACM, MMM or odor	
18	23		10/29/02 1615							PID=0.0
	18		OU2-SO-529S-1820						4" casing – 2" spoon	
	15	0.55 / 2.0				Grayish	S-10 same material as S-9		Wet	FID=0.0
	19								No PACM, MMM or odor	
20	12		10/29/02 1630							PID=.0.
	NR						Wash water discharge		4" casing	
		NA	NA			Brown	Same material as observed in S-9		No PACM, MMM or odor	FID=0.0
						Grayish				
22										PID=0.0
				EOB @ 22' bgs			MW-529S will be set @ 22', with a 1' sump, screened 21-11' bgs See well construction log sheets for details			

TYPE OF DRILLING RIG:	CME75		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash	Notes:	
METHOD OF SOIL SAMPLING:	2" or 3' split spoon	PACM = potentially asbestos containing material	
METHOD OF ROCK CORING:	NX or NQ	MMM = man made material	
GROUNDWATER LEVELS:	WL - ±14.0' bgs @ 0815		
OTHER OBSERVATIONS:	FID (C) PID (A)	BORING NO.: SB-529S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark			BORING NO.:	SB-529SG
PROJECT NO.:	N4236-0320			START DATE:	10/30/02
LOGGED BY:	C. Rosseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/30/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-529SG
GRD. SURFACE ELEVATION:	17.8 ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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 See boring log no. SB-529S for material descriptions (1)	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	NA	NA	No sample collecting	(1)	(1)		± 0-2' - Fine-medium SAND, some silt, some organics	(1)		PID/FID
2									4" casing drove to 8' bgs Soil removed.	FID = 0.0 PID = 0.0
							2-8' - Fine-coarse SAND, some fine gravel			
4						Brown				
6										
8				EOB @ 7.5' bgs						

TYPE OF DRILLING RIG:	CME 75	Note: (1) see boring long No. SB-529S for details	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" casing Drive & Wash		
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-529SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-530S
PROJECT NO.:	N4236-0320			START DATE:	10/30/02 @ 1510
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LJD	COMPLETION DATE:	10/31/02 @ 1145
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-530S
GRD. SURFACE ELEVATION:	8.1 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
	69		OU2-SO-530S-0002						3" spoon – 4" casing –	
	12	1.0 / 2.0		Sand & Gravel	Medium	Black-	S-1a (0.5') asphalt fragments	SW-	140 lb. hammer	
	12				Dense	Brown	S-1b (0.5') well graded Fine-Coarse SAND, some	SM	Dry, No PACM, MMM, or odor	PID = 0.0
2	18		10/30/02 1515				Fine-coarse gravel (subrounded), trace silt			FID = 0.0
	23		OU2-SO-530S-0204						3" spoon – 4" casing –	
	23	1.4 / 2.0		Fill	Dense	Brown-Gray	Soil appears to have been solidified Soil stabilization or concrete possible, Material consists of well	SW	300 lb.	
	23						graded fine-coarse SAND with some fine-gravel		Dry-moist, anthropogenic material	PID = 4.1
4	25		10/30/02 1525							FID = 0.0
	100/0.4		OU2-SO-530S-0406							
		0.0 / 0.4	Refusal		Very		3" spoon refusal @ 4.4 ft. bgs, advanced 4" casing with 300 lb. hammer to 6 ft. bgs. Resume continuous 3" split spoon sampling		**NO RECOVERY**	
			No Recovery		Dense					
6			10/30/02							
	63		OU2-SO-530S-0608	Sand & Gravel					3" spoon – 4" casing –	
	26	1.1 / 2.0			Very	Dark	S-3a- well graded Fine-coarse GRAVEL (angular), some	GW	300 lb. hammer	
	86				Dense	Brown	Fine-coarse sand, trace silt. Rock fragments. Schists		Moist-wet, No PACM or odor	PID = 4.5
8	46		10/30/02 1615				±3" fragments (rip-rap material)		Rip-RAP material	FID = 0.0
	18		OU2-SO-530S-0810			Dark Brown			3" spoon – 4" casing –	
	12	1.4 / 2.0		Organic Soils (@ 8.6' bgs)	Medium		S-4a- (0.6') Same material as S-3a.		140 lb. hammer	
	3				Dense	Black	S-4b- poorly graded Fine SAND, some silts, strong organic		Wet-saturated Organics, reed materials decomposing	PID = 458
10	3		10/30/02 1645				Odor, decomposition	SM		FID = 4.1
	2		OU2-SO-530S-1012						2" spoon – 4" casing –	
	1	1.2 / 2.0			Very	Dark	S-5a- (1.0') same material as S-4b		140 lb. hammer	
	1			Silty Sand	Loose	Brown	S-5b- (0.2') Fine SAND, some silt		Wet-saturate Organics – reed, strong organic smell	PID = 320
12	1		10/31/02 0900					SM		FID = 36.1
				EOB @ 12' bgs			See well construction log No. MW-530S for details			

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing Drive & Wash		
METHOD OF SOIL SAMPLING:	2" or 3" Split spoon		
METHOD OF ROCK CORING:	Nx or N2		
GROUNDWATER LEVELS:	Surface water 12.9', ground surface 5.3', high H_2O mark 9.0'		
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-530S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-531S
PROJECT NO.:	N4236-0320			START DATE:	10/31/02 @ 1400
LOGGED BY:	C. Rousseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	10/31/02 @ 1700
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-531S
GRD. SURFACE ELEVATION:	8.2 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
	1		OU2-SO-531S-0002	Topsoil					3" spoon – 4" casing, dry	
	2	1.3' / 2.0'	10/31/02 1425	Fill	Loose	Brown	0-0.3' S-1a organics – roots, grass, fine SAND, some silt	SM	0.3' rip-rap fragment, piece of plastic, solidified soil fragment ±3"	
	8						0.3-1.3' S-1b poorly graded fine-medium SAND, some silt,			FID=0.0
2	21						trace fine and coarse gravel. Soil stabilization	SM		PID=0.0
	9		OU2-SO-531S-0204		Medium				3" spoon – 4" casing	
	7	1.2' / 2.0'	10/31/02 1430		Dense		S-2 well graded fine-coarse SAND, some coarse gravel	SW	grub, brick fragment or clay fragment ±3" rip-rap dry	
	14						(angular &rounded); trace silt			FID=0.0
4	17			Gravel (rip-rap)						PID=0.0
	22		OU2-SO-531S-0406		Very				3" spoon – 4" casing	
	32	1.3' / 2.0'	10/31/02 1500		Dense	Gray	S-3 fine and coarse GRAVEL, some fine-coarse SAND	GW	rip-rap material ±3-4" moist-wet	
	28						Rip-rap material ±3-4" fragments			FID=0.0
6	33									PID=0.0
	33		OU2-SO-531S-0608		Medium	Gray-	0-0.55' S-4a rip-rap same as S-3		3" spoon – 4" casing	
	15	0.8' / 2.0'	10/31/02 1520		Dense	Dark	0.55-0.8' S-4b organic soils, fine SAND, some silt, reed		wet-saturated organic, decomposed material, sulfur odor	
	4			Organic		Brown/	material, strong organic decomposition odor			FID=48.2
8	2			Soils		Black		OH		PID=0.0
	1		OU2-SO-531S-0810		Very				3" spoon – 4" casing	
	1	1.0' / 2.0'	10/31/02 1530		Loose	Black			wet-saturated	
	1									FID=732
10	1									PID=4.8
	1/1.0'		OU2-SO-531S-1012						3" spoon – 4" casing	
	WOH	1.4' / 2.0'	10/31/02 1545						wet-saturated ±0.5' overdrive	
										FID=99.0
12										PID=27.3
				BOE @ 12.0'			See well construction log no: MW-531S			

TYPE OF DRILLING RIG:	CME 75	WOH – Weight of Hammer 140lb	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4" or 5" casing drive and wash		
METHOD OF SOIL SAMPLING:	2" or 3" split spoon		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	Water surface 10.3' pipe 7.2' ground surface 3.9'		
OTHER OBSERVATIONS:	FID (B) PID (B)	BORING NO.: SB-531S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-532S
PROJECT NO.:	N4236-0320			START DATE:	11/1/02
LOGGED BY:	C. Rouseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/1/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-532S
GRD. SURFACE ELEVATION:	16.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	117		OU2-SO-532S-0002	Sand &	Very	Dark	S-1a (0.6') asphalt fragment		3" spoon – 4" casing	
	26	1.7 / 2.0		Gravel	Dense	Brown-	S-1b (1.1') fine-coarse SAND, some fine-coarse gravel,	SW	possible coal or coal ash	FID=21.6
	32					Black	trace silt		dry	
2	22		0920							PID=0.0
	20		OU2-SO-532S-0204	Fill					3" spoon – 4" casing	
	22	2.0 / 2.0			Dense	Brown	S-2 poorly graded fine-medium SAND, some fine gravel	SP	dry, unidentified odor,	FID=782
	18						trace silt, organics-reed, plastic ±3.0" piece		piece of plastic, organics-	
4	17		0930						reed, roots	PID=9.2
	26		OU2-SO-532S-0406	Sand		Brown	S-3a (0.4') same as S-2		PACM fiberous material	
	28	2.0 / 2.0			Dense	Yellowish	S-3B (1.0') fine-coarse SAND, some fine gravel	SW-	Red spots	FID=26.1
	20			Fill		Black	S-3c (0.6') fine-medium SAND, trace silt, some fine gravel,		Dry-moist	
6	12		0940				fiberous material (black)	SM		PID=0.7
	23		OU2-SO-532S-0608				S-4a (0.5') same material as S-3c		2" spoon – 4" casing	
	23	1.7 / 2.0			Dense	Black			shell fragments	FID=1825
	21			Sand		Light	S-4b (1.2') fine-medium SAND, trace fine gravel		No PACM, MMM or odor	
8	16		0945			Brown	No PACM, MMM, shell fragments	SM	(S-4a) for (S-4b) dry-moist	PID=0.0
	7		OU2-SO-532S-0810		Medium	Light			2" spoon 4" casing	
	8	1.0 / 2.0			Dense	Brown	S-5 fine-coarse SAND, trace fine gravel, trace silt.	SW	Wet-saturated	FID=5.0
	9								No PACM, MMM or odor	
10	14		1015							PID=0.0
	13		OU2-SO-532S-1012	Cobble	Medium	Light	S-6a (0.4') COBBLES fine gravel, rock fragments		2" spoon – 4" casing	
	10	0.8 / 2.0		Sand	Dense	Brown	S-6b (0.4') fine SAND, some silt	SM	Wet-saturated	FID=0.0
	8								No PACM, MMM or odor	
12	8		1025							PID=0.0
	5		OU2-SO-532S-1214	Silty	Medium	Light			2" spoon – 4" casing	
	6	1.5 / 2.0		Sand	Dense	Brown	S-7 same material as S-6b		Wet-saturated	FID=0.0
	5								No PACM, MMM or odor	
14	8		1030							PID=0.0
	6		OU2-SO-532S-1416		Medium				2" spoon – 4" casing	
	12	1.15 / 2.0			Dense		S-8 similar to S-6b and S-7, except horizontal bedding noted		Wet-saturated	FID=0.0
	11						at 0.3', 0.7' and 0.8' of the spoon		No PACM, MMM or odor	
16	9		1045							PID=0.0

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4"/5" casing drive and wash	Notes: MMM = Man Made Material	
METHOD OF SOIL SAMPLING:	2"/3" split spoon	PACM = Potentially Asbestos Containing Material	
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (E); 0.5 v. loose, 5-10 loose, 10-30 m. dense, 30-50 dense, >50 v. dense	BORING NO.: SB-532S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-532S
PROJECT NO.:	N4236-0320			START DATE:	11/1/02
LOGGED BY:	C. Rouseau	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/1/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-532S
GRD. SURFACE ELEVATION:	16.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
18				EOB @ 17' bgs			See well construction log No: MW-532S			

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4"/5" casing drive and wash	Notes: MMM = Man Made Material	
METHOD OF SOIL SAMPLING:	2"/3" split spoon	PACM = Potentially Asbestos Containing Material	
METHOD OF ROCK CORING:	NX or NQ		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	FID (B) PID (E)	BORING NO.: SB-532S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
							0.0'-0.5' – asphalt (removed)		dry	
	5	1.2' / 2.0'	0850			Black	0.5'-1.0' - Charcoal/asphalt pieces, fine-coarse sand size.	Anth		
	9					Light				PID=0.0
2	12				Loose	Brown	1.0'-2.0' - Fine-medium SAND, cobble at 2'.	SP		FID=1.6
	7		0855		Medium				dry	PID=0.0
	13	1.2' / 2.0'			Dense	Tan	Fine-coarse SAND, trace gravel.	SW		FID=0.0
	12									
4	9						Cobble at 3'.			
	5		0910						moist	PID=0.0
	12	0.3' / 2.0'					Fine-coarse SAND, trace gravel.			FID=0.0
	9									
6	15						Cobble at 4.2' – blocked spoon.			
	7		0915						top layer coarsens down	PID=0.0
	9	1.5' / 2.0					Fine-coarse SAND, some gravel.			FID=0.6
	8									
8	10						Fine-medium SAND, trace coarse sand.		moist	
	3		0925							PID=0.0
	3	0.2' / 2.0'			Loose		Fine-coarse SAND.			FID=0.0
	4									
10	5								wet	
	3		0940							PID=0.0
	6	0.8' / 2.0'					Fine-coarse SAND, trace gravel.			FID=0.0
	6									
12	6									
	5		0945							PID=1.2
	10	0.8' / 2.0'					Fine-coarse sand, trace gravel.			FID=0.0
	15									
14	12									
	14		0955							PID=0.0
	14	0.8' / 2.0					Fine-coarse SAND, trace gravel.			FID=0.0
	14									
16	12									

TYPE OF DRILLING RIG:	CME 75	Note: Anth=anthropogenic	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	split spoons – 2"		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 1 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	7	1.4' / 2.0'	1000		Medium	Tan	Fine-medium SAND, trace coarse sand.	SW	wet	
	7									
18	6				Dense					PID=6.8
	7									FID=3.9
	6	0.5' / 2.0'	1015		Loose		Fine-medium SAND, trace coarse sand.			PID=0.8
	5									FID=0.0
20	5									
	5									
				Begin standard interval sampling			coarsens down			
22										
24										
	6	0.9' / 2.0'	1040		Medium		Fine-coarse SAND; trace gravel.			PID=15.8
	6									FID=28.3
26	8				Dense					
	8									
							coarsens down			
28										
30	8	0.8' / 2.0'	1105		Medium Dense		29'-30.5' - Fine-coarse SAND; some gravel.			PID=6.7
	8									FID=15.9
	8			30.5'		Gray-Brown	30.5'-31' - Fine-medium SAND.	SP		
	7									
32										

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	split spoons – 2" spoon		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 2 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
						Gray-	Fine-medium SAND.	SP	Light brown wash water.	
34						Brown				PID=0.0 FID=0.0*
	11 7	0.5' / 2.0'	1115		Medium Dense	Gray-	Fine-coarse SAND, some gravel.	SW		PID=21.2 FID=97.0
36	6 7		OU2-SO-533B-3436			Brown	1" band of iron staining at 35'.		Wet	
38									Sheen on wash water at 38'	
									no hits from PID or FID	
40	12 12		1145		Medium	Gray	Fine-coarse SAND, some gravel.			PID=16.1 FID=79.1
	11 14		OU2-SO-533B-3941		Dense		Note – gravel fragments angular – different from other			
42							samples.			
									Sheen on wash water.	
44										PID=0.0 FID=0.0*
	2 3		1205		Loose	Light	Fine-medium SAND.	SP		PID=24.2 FID=345.1
46	5 5		OU2-SO-533B-4446			Brown	Slight iron staining at 45.5'.			
48										

TYPE OF DRILLING RIG:	CME 75	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	* Readings at breathing zone. All other readings from jar headspace.	
METHOD OF SOIL SAMPLING:	split spoons		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 3 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
							Fine-medium SAND.			
	3				Medium	Light				PID=61.1
50	4	1.1'	1220	49.5'	Dense	Brown	Fine-medium SABD.	SP		FID=43.4
	7	2.0	OU2-SO-533B-4951				1" band of fine-coarse SAND at 49.5'.	SW		
	8						Fine-medium SAND.	SP		
52										
										PID=0.0
										FID=0.0*
54										
	3		1250		Medium		Fine-medium SAND, very thin lines of iron staining ~ every 0.2' from 55-56'.			PID=1.5
	5	1.1'			Dense			SP		FID=10.4
	6	2.0'								
56	8		OU2-SO-533B-5456							
										PID=0.0
58										FID=0.0*
	12									PID=5.3
60	12	0.8'	1315		Medium		Fine-coarse SAND, some gravel.	SW		FID=6.0
	8	2.0'	OU2-SO-533B-5961		Dense					
	6									
62										
										PID=0.0
64										FID=0.0*

TYPE OF DRILLING RIG:	CME75	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	* Readings at breathing zone. All other readings from jar headspace.	
METHOD OF SOIL SAMPLING:	split spoons – 2"		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 4 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
64										
	5		1340							
	6	1.0'			Medium	Light	Fine-medium SAND	SP		
	8	2.0'			Dense	Brown				PID=2.2
66	8		OU2-SO-533B-6466							FID=46.0
									Light brown wash water – has a sheen.	
68										
	3		1405						2 spoons taken.	PID=0.0
70	7	0.5'			Medium		Fine-medium SAND – poor recovery – will send 2nd spoon			FID=0.4
	9	2.0'	OU2-SO-533B-6971		Dense		for more volume.			
	17									
72										
							72' – casing beginning to drive hard.			
74										
	35		1445							PID=0.0
	48	1.1'			Very		Fine-coarse SAND and GRAVEL.	SW/GW		FID=0.0
	40	2.0'			Dense					
76	45		OU2-SO-533B-7476				Some iron staining from 74-75'.			
				76.5'		Gray-	Angular fragments.		Gray-brown wash water.	
78				Boulder		Brown				
				87'						
	23	1.2'	1605		Very	Light				PID=0.4
80	32	2.0'	OU2-SO-533B-7981		Dense	Brown	Fine-coarse SAND, some gravel – iron staining from 79-80'.	SW		PID=0.0

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	split spoons		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 5 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
	28		see pg. 5			Light				
	26					Brown	Fine-coarse SAND, some gravel. (see pg. 5)	SW		
82										
									Light brown wash water – sheen on water.	PID=0.0
										FID=0.0*
84										
	16	0.5'	0935							PID=1.6
	13				Medium		Fine-medium SAND – slight iron staining (staining not well	SP		FID=0.6
	11	2.0'			Dense		defined throughout)			
86	11		OU2-SO-533B-8486							
88									Light brown wash water.	
	18	1.2'								PID=0.8
90	11	2.0'	1010		Medium		89'-89.5' - Fine-coarse SAND, trace gravel.	SW		FID=3.0
	9		OU2-SO-533B-8991		Dense				Thin bands of iron staining at 90.5-91'.	
	11						89.5'-91' - Fine-medium SAND.	SP		
92										
										PID=0.0
										FID=0.0*
94										
	8		1105							
	25	1.1'			Very		Fine-medium SAND, trace gravel, trace coarse sand.	SW		
	43	2.0'			Dense					PID=0.7
96	43		OU2-SO-533B-9496							FID=6.0

TYPE OF DRILLING RIG:	CME 75	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	* Readings at breathing zone. All other readings from jar headspace.	
METHOD OF SOIL SAMPLING:	split spoons		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 6 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
96										
	7		1345						2 spoons – 1st try no	
	8	0.8' / 2.0'			Medium	Light	Fine-coarse SAND.	SW	recovery – replace basket and try again. 2nd try ok.	
	9				Dense	Brown				PID=0.5
98	11		OU2-SO-533B-9698				Iron staining at 97.5-98'			FID=0.0
100	1									PID=0.5
	4	1.1' / 2.0'	1000		Medium		Fine-coarse SAND.			FID=0.0
	11		OU2-SO-533B-99101		Dense					
	8									
102										
104										
	10		1040							PID=0.3
	14	0.7' / 2.0'			Medium		104'-105' - Fine-coarse SAND.			FID=0.0
	14				Dense					
106	20		OU2-SO-533B-104106				105'-106' - Fine-medium SAND, trace silt.	SP		
				Bedrock @ 107'						PID=0.0 FID=0.0
108						Gray-	SCHIST fragments; some quartz, trace iron staining.		Gray wash water.	
				Top of Socket		Green				
110	8 min/ft		Run 1			Gray-	SCHIST with quartz vein at 111.8'	Broken		
	5.5 min/ft		RQD=27"/60" =45%		Medium Hard	Green	See well profile for details;		Low (10-20°) angle fractures along foliations.	
112	3.5 min/ft		(100% recovery)				Core broken along bedding planes.			

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	Split spoons		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 7 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533B
PROJECT NO.:	N4236-0320			START DATE:	11/8/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/13/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533B
GRD. SURFACE ELEVATION:	16.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
112										
	3.25 min/ft				Medium	Gray-	SCHIST – micaceous with thin quartz veins – fractures	Blocky		
	3.0 min/ft				Hard	Green	fresh with no oxidation/weathering.			PID=0.0
114								Broken		FID=0.0
	4.75 min/ft		Run 2						Some quartz fragments at 115'	
			% recovery=4.7"/5"							
	3.75 min/ft		=94%							
116										
	3.5 min/ft		RQD=36"/60"							
	3.25 min/ft		=60%							
118										
	4.25 min/ft						Similar to above			
							Quartz vein 118.7-119'			
	6.5 min/ft		Run 3							
120								Blocky	120.5' core barrel running rough – slowed down speed & let it free spin.	
	4.0 min/ft		% recovery=2.4'/3'							
			=80%				Similar to above – fractures at approximately 120' have	Broken		
	4.5 min/ft		RQD=28"/36"				small amount of brown sediment.			
122			=77%					Blocky		
				EOB @ 122' bgs						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash		
METHOD OF SOIL SAMPLING:	split spoons		
METHOD OF ROCK CORING:	NX		
GROUNDWATER LEVELS:	~9' by visual observation		
OTHER OBSERVATIONS:		BORING NO.: SB-533B	PAGE: 8 OF 8

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533D
PROJECT NO.:	N4236-0320			START DATE:	11/14/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/15/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-533D
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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	-------		OU2-SO-533-0002	0.5'	Asphalt		CHARCOAL/ASPHALT pieces, fine-coarse sand & gravel sized		3" spoon (2)	
	9	1.7'	1150			Black		Anth		
	15	2.0'								PID=8.8
2	17		1155 - DUP			Light brown	Fine-medium SAND, trace gravel	SW		FID=0.0
	11		OU2-SO-533-0204						3" spoon (2)	PID=1.6
	17	1.6'				Light	Fine-coarse SAND, some gravel	SW		DID=11.7
	19	2.0'				Brown				
4	17		1210				(fine and coarse rounded grains)			
									Note – no split spoons taken after 5'. See boring log SB-533B for soil details. Light brown wash water	PID=0.0 BZ
										FID=0.0
							Fine-coarse SAND and fine GRAVEL	SW/GP		PID=0.8
6										FID=0.0 NS
8										
									Sheen of tiny bubbles (organic?) in wash water	PID=0.0 BZ
										FID=0.0
10										PID=0.0 NS
										FID=0.0
12										
14										
16										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Drive & wash	* = jar headspace	
METHOD OF SOIL SAMPLING:	3" split spoon 0-2', otherwise sample from drill cuttings only	BZ = breathing zone	
METHOD OF ROCK CORING:	N/A	NS = near source	
GROUNDWATER LEVELS:		ANTH = anthropogenic	
OTHER OBSERVATIONS:		BORING NO.: SB-533D	PAGE: 1 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533D
PROJECT NO.:	N4236-0320			START DATE:	11/14/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/15/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-533D
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
18										
20										
22										
24										
26										
28										
30										
32										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Drive & wash	* = jar headspace	
METHOD OF SOIL SAMPLING:	Check from drill cuttings	BZ = breathing zone	
METHOD OF ROCK CORING:	N/A	NS = near source	
GROUNDWATER LEVELS:		ANTH = anthropogenic	
OTHER OBSERVATIONS:		BORING NO.: SB-533D	PAGE: 2 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533D
PROJECT NO.:	N4236-0320			START DATE:	11/14/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/15/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-533D
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
32										
34										
							Cobble at 35'		Light brown wash water FID=0.0	PID=3.5 NS FID=0.0
36						Light Brown	Fine-coarse SAND and fine gravel	SW/GP		PID= 0.0 BZ FID = 0.0
38										
40										
42										
44										
						Light Brown	Fine-coarse SAND and fine-medium gravel	SW/GP		
46										
48										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Drive & wash	* = jar headspace	
METHOD OF SOIL SAMPLING:	Check of drill cuttings only	BZ = breathing zone	
METHOD OF ROCK CORING:	N/A	NS = near source	
GROUNDWATER LEVELS:		ANTH = anthropogenic	
OTHER OBSERVATIONS:		BORING NO.: SB-533D	PAGE: 3 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533D
PROJECT NO.:	N4236-0320			START DATE:	11/14/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/15/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-533D
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
48										
50										
52										PID=18.4 NS FID=0.0
54							COBBLE or zone of large gravel at 54'			PID=0.0 BZ FID=0.0
56										
58										
60										
62										PID=84.0 NS FID=0.0
64										PID=0.0 BZ FID=0.0

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	* = jar headspace	
METHOD OF SOIL SAMPLING:	Check of drill cuttings only	BZ = breathing zone	
METHOD OF ROCK CORING:	N/A	NS = near source	
GROUNDWATER LEVELS:		ANTH = anthropogenic	
OTHER OBSERVATIONS:		BORING NO.: SB-533D	PAGE: 4 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533D
PROJECT NO.:	N4236-0320			START DATE:	11/14/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/15/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-533D
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
64										
						Tan	Fine-coarse SAND, some fine gravel	SW		
66										
68										
70						Light Brown	Fine-coarse SAND, some gravel (fine-medium)	SW		
72										
74										
76									Brown wash water	PID=5.8 NS FID=0.0
78										PID=0.0 BZ FID=0.0
80										

TYPE OF DRILLING RIG:	CME 75	Notes:	Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	Drive & wash	* = jar headspace	
METHOD OF SOIL SAMPLING:	Check of drill cuttings only	BZ = breathing zone	
METHOD OF ROCK CORING:	N/A	NS = near source	
GROUNDWATER LEVELS:		ANTH = anthropogenic	
OTHER OBSERVATIONS:		BORING NO.: SB-533D	PAGE: 5 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533D
PROJECT NO.:	N4236-0320			START DATE:	11/14/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/15/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-533D
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
80										
82										
84										
						Light brown	Fine-coarse SAND, some gravel (fine)	SW		PID=0.0 NS FID=0.0
86										PID=0.0 BZ FID=0.0
88										
										PID=0.0 NS FID=0.0
90						Light Brown	Fine-coarse SAND, trace gravel	SW		PID=0.0 BZ FID=0.0
92										
94										
96										

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	* = jar headspace	
METHOD OF SOIL SAMPLING:	Check of drill cuttings only	BZ = breathing zone	
METHOD OF ROCK CORING:	N/A	NS = near source	
GROUNDWATER LEVELS:		ANTH = anthropogenic	
OTHER OBSERVATIONS:		BORING NO.: SB-533D	PAGE: 6 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533D
PROJECT NO.:	N4236-0320			START DATE:	11/14/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/15/02
DRILLED BY (Company/Driller):	ADT/Les Darrow			MON. WELL NO.:	MW-533D
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
96										
98										
100										
102										
104										
106				EOB @ 105' bgs						

TYPE OF DRILLING RIG:	CME 75	Notes:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	* = jar headspace	
METHOD OF SOIL SAMPLING:	Check of drill cuttings only	BZ = breathing zone	
METHOD OF ROCK CORING:	N/A	NS = near source	
GROUNDWATER LEVELS:		ANTH = anthropogenic	
OTHER OBSERVATIONS:		BORING NO.: SB-533D	PAGE: 7 OF 7

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533S
PROJECT NO.:	N4236-0320			START DATE:	11/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/19/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533S
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
					Fairly soft	Light Brown	See boring log SB-533B for soil profile details Fine-coarse SAND, some gravel		Wash water black Not having much difficulty Pushing casing to 20'	PID FID
2										0.6 0.4 In casing
								SW	Wash water light brown	
4										0.0 0.0 B.Z.
6										
8										
10										
										0.0 0.0 In casing
12							Fine-coarse SAND, trace gravel			0.0 0.0 B.Z.
14										
16										

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash	Note: BZ = Breathing Zone	
METHOD OF SOIL SAMPLING:	Visual check of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	11.4' at MW-533D		
OTHER OBSERVATIONS:		BORING NO.: SB-533S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-533S
PROJECT NO.:	N4236-0320			START DATE:	11/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/19/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-533S
GRD. SURFACE ELEVATION:	15.9 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
						Light brown	Fine-coarse SAND, trace gravel	SW	Light brown wash water	PID FID
18										0.0 0.0 In casing
										0.0 0.0 B.Z.
20										
				EOB @ 20' bgs						

TYPE OF DRILLING RIG:	CME75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & Wash	Note: BZ = Breathing Zone	
METHOD OF SOIL SAMPLING:	Visual check of cuttings only		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	11.4' at MW-533D		
OTHER OBSERVATIONS:		BORING NO.: SB-533S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-534S
PROJECT NO.:	N4236-0320			START DATE:	11/11/02
LOGGED BY:	T. Dorgan	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/12/02
DRILLED BY (Company/Driller):	ADT/M. Larabie			MON. WELL NO.:	MW-534S
GRD. SURFACE ELEVATION:	19.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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	N/A						Open soil/leaf litter			
		1.4 / 2.0	OU2-SO-534S-0002 S-1 11/11/02 1310			Brown	Silty SAND, Mostly fine-medium poorly graded sand, some silt, trace root fibers, trace fine gravel	SP	Damp (rain)	FID=0.0
2						Red-Brown				PID=0.0
		1.8 / 2.0	OU2-SO-534S-0204 S-2 11/11/02 1350			Light Brown	S-2a=0-0.3' – similar to above S-2b=0.3-1.8' – SAND and GRAVEL Gravel is fine-coarse & banded	SW/GW		1.4
4										
		0.3 / 2.0	OU2-SO-534S-0406 S-3 11/11/02 1355				Crushed cobble		Poor recovery, crushed cobble	0.0
6										
		2.0 / 2.0	OU2-SO-534S-0608 S-4 11/11/02 1400				Silmilar to S-2b above		Dry & loose	1.6
8							- gravel is subangular-rounded			
		2.0 / 2.0	OU2-SO-534S-0810 S-5 11/11/02 1410						Possible remnant 2-propanol from decon	FID=346
10										PID=28.6
		2.0 / 2.0	OU2-SO-534S-1012 S-6 11/11/02 1415							FID=30
12									Damp	PID=30
		1.8 / 2.0	OU2-SO-534S-1214 S-7 11/11/02 1420						Dry, loose @ 13-14'	PID=1.4
14										FID=0.0
		2.0 / 2.0	OU2-SO-534S-1416 S-8 11/11/02 1430						Dry – damp	FID=0.0
16									Oxidation @ 15.75'bgs	PID=0.0

TYPE OF DRILLING RIG:	Geoprobe 6610DT
METHOD OF ADVANCING BORING:	DPT 4" macrocore driven 2', then 4.25" HSA
METHOD OF SOIL SAMPLING:	DPT 4" macrocore
METHOD OF ROCK CORING:	NA
GROUNDWATER LEVELS:	~18'
OTHER OBSERVATIONS:	

BORING NO.: SB-534S

Tetra Tech NUS, Inc.

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-534S
PROJECT NO.:	N4236-0320			START DATE:	11/11/02
LOGGED BY:	T. Dorgan	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/12/02
DRILLED BY (Company/Driller):	ADT/M. Larabie			MON. WELL NO.:	MW-534S
GRD. SURFACE ELEVATION:	19.0 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

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										
		0.5 / 2.0	OU2-SO-534S-1618 S-9 11/11/02 1505			Light Brown	Similar to above. SAND and GRAVEL, sand is fine-coarse well graded, gravel is fine-coarse rounded-subrounded	SW/GW	Start using discrete interval sampler	FID=0.0
18									Wet	PID=0.0
		0.6 / 2.0	OU2-SO-534S-1820 TOC/9.5 S-10 11/11/02 1525			Brown to Red-brown			saturated	PID=0.0
20										FID=0.0
		0.4 / 2.0	OU2-SO-534S-2022 S-11 11/11/02 1535							PID=0.0
22										FID=0.0
		0.6 / 2.0	OU2-SO-534S-2224 S-12 11/11/02 1600							PID=0.0
24										FID=0.0
				EOB @ 24' bgs					End macro-core sampling. will spin 4.25" ID HSA to EOB to construct well across water table estimated @ 17' bgs	

TYPE OF DRILLING RIG:	Geoprobe 6610DT		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DPT 4" macrocore driven 2', then 4.25" HSA		
METHOD OF SOIL SAMPLING:	DPT 4" macrocore		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	~18'		
OTHER OBSERVATIONS:		BORING NO.: SB-534S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-534SG
PROJECT NO.:	N4236-0320			START DATE:	11/12/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/12/02
DRILLED BY (Company/Driller):	ADT/M. Larabie			MON. WELL NO.:	MW-534SG
GRD. SURFACE ELEVATION:	19 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
							See boring log for SB-534S for soil profile details			
2										
4										
6										
8										
				EOB @ 8' bgs						

TYPE OF DRILLING RIG:	Geoprobe 6610DT			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	3" casing with expendable drive point			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	~18' at MW-534S			
OTHER OBSERVATIONS:		BORING NO.:	SB-534SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-535S
PROJECT NO.:	N4236-0320			START DATE:	11/12/02
LOGGED BY:	T. Dorgan	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/12/02
DRILLED BY (Company/Driller):	ADT/M. Larabie			MON. WELL NO.:	MW-535S
GRD. SURFACE ELEVATION:	8.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	JL

DEPTH (FEET) 0	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)]
		1.2 / 2.0	OU2-SO-535S-0002			Dark Brown	0-0.4' - Organic rich topsoil (grass) Fine-medium SAND, some silt, trace organics	SP	Fill material Trace root fibers	Not
2			S-1 1300			Mottled Light and	0.4-1.2' - Fine-medium SAND, trace fine gravel			performed due to heavy
		0.6 / 2.0	OU2-SO-535S-0204			Dark brown	0-0.2' - Similar to above		No odors Fill-burnt material, possible burn layer	driving rain
4			S-2 1305				0.2-0.6' - SAND, trace silt, trace gravel			
		1.0 / 2.0	OU2-SO-535S-0406				0-0.3' - Similar to above		Potential PACM No odor	
6			S-3 1310			White-Off/white	0.3-1.0' - Clayey flaky material, possible shell or manmade material – fine-coarse sand sized			
		1.2 / 2.0	OU2-SO-535S-0608			Light gray	Silty fine SAND, trace coarse sand, trace fine gravel, trace fill	SM	Wet	
8			S-4 1330				Including brick fragments, possible asbestos			
		1.0 / 2.0	OU2-SO-535S-0810				Similar to above – including white plastic material, trace organic material (root fibers)			
10			S-5 1340				0-0.2' - Similar to above			
		2.0 / 2.0	OU2-SO-535S-1012			Dark gray Dark gray	0.2-1.5' - Organic silt and fine SAND, possible asbestos fibers, root fragments; PACM			
12			1345				Fine-coarse SAND and fine-coarse GRAVEL (rounded)	SW		
		1.8 / 2.0	OU2-SO-535S-1214			Orange (Oxidized)				
14			1350							
		2.0 / 2.0	OU2-SO-535S-1416				Similar to above – increasingly dense and getting darker		No odors wet	
16			1355							

EOB @ 16' bgs

TYPE OF DRILLING RIG:	Geoprobe 6610DT		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25" ID HSA	Note: PACM = potentially asbestos containing material	
METHOD OF SOIL SAMPLING:	Macrocore		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL=~6'		
OTHER OBSERVATIONS:	Top of fill=top of organic layer (~11') or top of orange layer (11.5')	BORING NO.: SB-535S	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-535SG
PROJECT NO.:	N4236-0320			START DATE:	11/12/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/12/02
DRILLED BY (Company/Driller):	ADT/M. Larabie			MON. WELL NO.:	MW-535SG
GRD. SURFACE ELEVATION:	8.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
							See boring log for SB-535S for soil profile details			
2										
4										
				EOB @ 4' bgs						

TYPE OF DRILLING RIG:	Geoprobe 6610DT			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	3" casing with expendable drive point			
METHOD OF SOIL SAMPLING:	N/A			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	~6' at MW-535S			
OTHER OBSERVATIONS:		BORING NO.:	SB-535SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-536S
PROJECT NO.:	N4236-0320			START DATE:	11/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/19/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-536S
GRD. SURFACE ELEVATION:	18.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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)]
	2		OU2-SO-536S-0002			Dark brown	0 – 0.5' - Topsoil; fine-coarse SAND, some gravel, some organics (roots)		Slightly moist	
	4	0.7' / 2.0'			Loose			SW		
	8		1235			Light brown	0.5' – 0.7' - Fine-coarse SAND, some gravel		2" spoon	PID=0.0
2	9									FID=0.0
	12		OU2-SO-536S-0204		Very				Poor recovery – cobble	PID=0.0
	50/0.2	0.5' / 2.0'			Dense		Fine-coarse SAND, trace gravel		lodged in nose of spoon	FID=0.0

4	------		1240				COBBLE at 3.2' – piece of quartz in nose		2" spoon	
	7		OU2-SO-536S-0406						Slightly moist 2" spoon	PID=0.0
	5	0.8' / 2.0'			Loose	Light brown	Fine-coarse SAND, trace gravel	SW		FID=0.0
	5						Fine-medium SAND; thin bands of iron staining at 2 mm-2 cm spacing			
6	7		1320			Light brown		SP		
	7		OU2-SO-536S-0608		Medium				Slightly moist 2" spoon	PID=1.5
	8	1.0' / 2.0'			Dense	Light brown	Fine-medium SAND, thin bands of iron staining	SP		FID=3.5
	12									PID=0.0
8	10		1325			Light brown/ Orange	fine-coarse SAND, some gravel, heavily iron stained	SW		FID=0.0*
	8		OU2-SO-536S-0810						Moist 2" spoon	PID=0.0
	5	0.6' / 2.0'				Light brown	Fine-coarse SAND, trace gravel			FID=1.8
	6									
10	6		1350				Band of iron staining at 8.2'			
	9		OU2-SO-536S-1012						Wet 3" spoon	PID=0.0
	12	0.8' / 2.0'				Light brown	Fine-coarse SAND, some gravel			FID=0.0
	13									
12	9		1405				COBBLE at 11'			
	4		OU2-SO-536S-1214						Wet 2" spoon	PID=0.0
	3	1.0' / 2.0'			Loose	Light brown	Medium-coarse SAND, trace fine sand, trace gravel	SW		FID=0.5
	3									
14	7		1410							
	4		OU2-SO-536S-1416		Medium				Wet 2" spoon	PID=0.0
	5	0.6' / 2.0'			Dense	Light brown	Fine-medium SAND	SP		FID=2.6
	6									PID=0.0
16	7		1420							FID=0.0*

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash	Note:	
METHOD OF SOIL SAMPLING:	Split spoons	* readings taken in the breathing zone	
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WL=11.45' at MW-515S		
OTHER OBSERVATIONS:		BORING NO.: SB-536S	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-536S
PROJECT NO.:	N4236-0320			START DATE:	11/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LAH	COMPLETION DATE:	11/19/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-536S
GRD. SURFACE ELEVATION:	18.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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										
	5	1.1' / 2.0'	OU2-SO-536-1618		Medium Dense	Light brown	Fine-medium SAND, trace coarse sand, band of fine gravel at 16.5' about 1" wide	SW	2" spoon wet	
	7									
	9									PID=0.0
18	11		1430							FID=2.1
	4	0.7' / 2.0'	OU2-SO-536-1820		Loose		Fine-coarse SAND, trace iron staining at lip of spoon (20')			PID=0.0
	6									FID=1.1
	12									
20	18		1445							
				EOB @ 20' bgs						

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive & wash			
METHOD OF SOIL SAMPLING:	Split spoons			
METHOD OF ROCK CORING:	N/A			
GROUNDWATER LEVELS:	11.45' at MW-515S			
OTHER OBSERVATIONS:		BORING NO.:	SB-536S	PAGE: 2 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-536SG
PROJECT NO.:	N4236-0320			START DATE:	11/19/02
LOGGED BY:	J. Lambert	TRANSCRIBED BY:	LJD	COMPLETION DATE:	11/19/02
DRILLED BY (Company/Driller):	ADT/ Les Darrow			MON. WELL NO.:	MW-536SG
GRD. SURFACE ELEVATION:	18.6 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 For soil profile details see boring log SB-536S	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
						Brown	Fine-coarse SAND, trace gravel	SW		
2										
4										
										PID = 0.0 FID = 0.0
6										
8										
				EOB @ 8.6' bgs						
10										

TYPE OF DRILLING RIG:	CME 75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Drive and wash			
METHOD OF SOIL SAMPLING:	NA			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	WL at MW-515S = 11.45'			
OTHER OBSERVATIONS:		BORING NO.:	SB-536SG	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-TW01
PROJECT NO.:	N4236-0320			START DATE:	5/6/03
LOGGED BY:	G. Sturgeon	TRANSCRIBED BY:	LAH	COMPLETION DATE:	5/6/03
DRILLED BY (Company/Driller):	ADT/Derek W.			MON. WELL NO.:	TW-01
GRD. SURFACE ELEVATION:	9.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

DEPTH (FEET) 0	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 Refer to SB-505 logs for details	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
							No samples collected.			PID=0.0 FID=0.0-0.3
5										
10										
15										
20										
							18-22' – gravelly, cobbly zone		Tower and drill rods shook vigorously from 20-24' bgs	PID=0.0 FID=0.0-0.3
25										
30							28-38' – gravelly, cobbly zone		Pronounced shaking of tower and drill	PID = 0.0 FID= 0.0-0.3
									Rods from 30-40' bgs Gravel and cobble fragments in cuttings	
35										
40										

TYPE OF DRILLING RIG:			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	Mud-rotary drilling with biologic drilling mud and 14" bit		
METHOD OF SOIL SAMPLING:	N/A		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-TW01	PAGE: 1 OF 2

TtNUS Form 0018

BORING LOG FOR:	Raymark OU2			BORING NO.:	SB-TW01
PROJECT NO.:	N4236-0320			START DATE:	5/6/03
LOGGED BY:	G. Sturgeon	TRANSCRIBED BY:	LAH	COMPLETION DATE:	5/6/03
DRILLED BY (Company/Driller):	ADT/Derek W.			MON. WELL NO.:	TW-01
GRD. SURFACE ELEVATION:	9.5 Ft.	ELEVATION FROM:	NGVD 1929	CHECKED BY:	TD

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)]
40										
45							43'-45' – cobbly zone			
50							49' - Alternating 1-4' thick layers of sandy and gravelly, cobbly soils		Drill rods and tower shook hard from 45-47' bgs	PID=0.0 FID=0.0-0.3
55									Frequent, but not continuous, shaking of tower and rod from 51-60' bgs	PID=0.0 FID=0.0-0.3
60										PID = 0.0 FID=0.0-0.3
65										
70				EOB @ 69' bgs			Top of Bedrock @ 68' bgs		Rod advance stalled and rig stopped shaking at 68' bgs	PID=0.0 FID=0.0-0.3

TYPE OF DRILLING RIG:	
METHOD OF ADVANCING BORING:	Mud-rotary drilling with biologic drilling mud and 14" bit
METHOD OF SOIL SAMPLING:	N/A
METHOD OF ROCK CORING:	
GROUNDWATER LEVELS:	
OTHER OBSERVATIONS:	

BORING NO.: SB-TW01

Tetra Tech NUS, Inc.

TtNUS Form 0018

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		*Tetra Tech NUS, Inc.*
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:		BORING NO.: A1-SB01	PAGE: 1 OF 1

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)	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, (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)		*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:	14.5' W/AUGERS @ 14		
OTHER OBSERVATIONS:		BORING NO.: A1-SB02	PAGE: 1 OF 1

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. 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			

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	1.0 / 2.0	OU3-A1-SB04-0002			BRN	S-1A=6” Loam, topsoil soil, silty, SAND, with decomposing organic debris		Dry and loose	0
	7 9		0950 S-1				S-1B=6” - gravelly, SAND, FILL, asphalt + brick.		Trace brick asphalt	
2	3 3	1.2 / 2.0	-0204			BRN	Gravelly, silty, SAND. Mostly F, poorly	SP	Trace, asphalt	0
	4 5		1000 S-2			LT BRN	Graded Sand, some - little silt, little f-c gravel		Fragments dry	
4	7 13	2.0 / 2.0	-0406				S-3A=3”- old topsoil brown loam w/roots. S-3B=21”- gravelly, SAND TR. few silt		Dry. Concrete + vit. pipe Frag.	0
	19 25		1010 S-3				FILL. Gravel is mostly course and subangular		TR. Brick broken cobble + gravel wire	
6	26 26	1.8 / 2.0	-0608				SAND. Mostly f-c well graded SAND.		No man-made debris	8
	27 23		1020 S-4				Some little fine well rounded gravel	SW	Saturated @ 7’	
8	7 11	1.35 / 2.0	-0810							0
	18 19		1030 S-5							
10	14 18	1.6 / 2.0	-1012							0
	19 20		1040 S-6							
12	12 27	1.8 / 2.0	-1214							0
	21 23		1055 S-7							
14	17 17	1.3 / 2.0	-1416							0
16	16 16		1100 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:	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-			Brown	4" – Asphalt Fill SAND mostly f-m poorly graded	SP	Dry	0
	16 10		1035 S-1				SAND trace. Few fine gravel, TR silt debris inc. wire, Wire & grass		Wire, wood and glass	
2	5 4	1.8 / 2.0	-0204				2-3.5 – silty, SAND few f-c rounded gravel trace Roots and twigs	SM	No Man-made debris noted	0
	5 5		1044 S-2	3.5			3.5-4 SILT – little fine sand. Little-some roots & Plant fibers	ML/SM	Dry-moist	
4	3 4	1.6 / 2.0	-0406			Brown Gray	SILT, few clay, trace F. sand slightly plastic	ML	Moist	4
	3 3		1055 S-3							
6	3 3	1.7 / 2.0	-0608			Brown	few – little organics (plant fibers & roots)			32
	3 2		1105 S-4							
8	WOH WOH	2.0 / 2.0	-0810							76
	1 2		1115 S-5							
10	WOH WOH	2.0 / 2.0	-1012				Trace sand lens or seams ½" thick			0
	WOH WOH		1130 S-6							
12	WOH WOH	2.0 / 2.0	-1214							71
	2 1		1135 S-7							
14	WOH 2	2.0 / 2.0	-1416				Trace – few sand (med sand) lens or seams ¼" thick			12
16	2 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									
16	6			EOB @ 16"						
	5		1440 S-8							

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 9	1.4 / 2.0	OU3-A1-SBO7-0002			Light brown	S-1A = Gravelly, SAND TR silt trace grass & weeds		Dry	0
	5 4		1540 S-1			Dark gray	S-1B = sandy, SILT TR fine gravel		Moist. compact	
2	4 4	1.0 / 2.0	-0204			Dark gray black	Silt TR fine sand trace shell fragments			0
	4 5		1550 S-2							
4	2 3	2.0 / 2.0	-0406				3" layer of gray fine sand w/poss. asbestos @ bottom of sample			0
	2 2		1555 S-3							
6	2 3	2.0 / 2.0	-0608				TR fine sand len's			11.6
	3 3		1600 S-4							
8	4 5	1.1 / 2.0	-0810			Gray	SAND mostly f-c well graded sand	SW	Saturated	4.0
	5 4		1605 S-5			Light Gray	TR few silt TR fine gravel			
10	3 3	1.1 / 2.0	-1012			Brown			start here on 7-22-97	25
	6 9		0830 S-6							
12	8 10	2.0 / 2.0	-1214			Yellow Brown				0
	11 13		0840 S-7							
14	21 28	2.0 / 2.0	-1416						possible pet. odor very light odor	25
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	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-23-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~12.0	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	16	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
	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							
	1					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
	2							SW	shell fragments		
	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)		*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:			
GROUNDWATER LEVELS:	11.1" @ 1030 MEAS. INSIDE AUGERS WITH AUGER @ 14' BGS.		
OTHER OBSERVATIONS:		BORING NO.: A1-SB09	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A1-SB10
PROJECT NO.:	N7491-0320			START DATE:	7-23-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-23-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~12.0’	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]
			OU3-A1-SB10-0002				3” - Asphalt.				
0	7	1.2				Brown	S-1A = 3” gravelly, SAND, TR. silt.		Dry, clean, fill	0	0
	7	1.5				Yellowish	S-1B = SAND, mostly f-m poorly graded sand,				
	7		1150 S-1			brown	few fine gravel, TR. silt.	SP			
	4		-0204								
2	3	1.4								1.0	2.0
	3	2.0									
	3		1155 S-2								
	2		-0406								
4	2	1.2								0	0.4
	2	2.0									
	2		1200 S-3								
	3		-0608								
6	3	0.2								0	0
	3	2.0									
	3		1205 S-4								
	3		-0810								
8	3	1.2									
	5	2.0		9.5’						0	0
	9		1210 S-5			Brn - gray	FILL - sandy, gravel TR. silt. brick + ceramic				
	11		-1012	10.25’			S-6A v = .25’ – similar to above		Moist wet	9.8	6.8
10	14	1.1				Lt. brown	S-6B = .85’ - sand, some gravel. mostly f-c		Dry	0	0
	12	2.0									
	13		1220 S-6				Well graded SAND. Some f-c rounded gravel.	SW			
	16		-1214								
12	14	1.7							Dry	4	3.2
	14	2.0									
	18		1235 S-7								
	10		-1416								
14	11	1.15							Saturated	8	6
	11	2.0									
16	9		1240 S-8								

EOB @ 16’

TYPE OF DRILLING RIG:	CME-75		*Tetra Tech NUS, Inc.*
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	PAGE: 1 OF 1

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	OU3-A1-SB11-0002			Brown	S-1A = 0.7' - Silty, gravelly, sand. Organic Debris (roots + twigs).		Dry + Loose	0	0.5
	4 4	2.0	1440 S-1			Red + brown	S-1B = 0.9 ' - Asbestos FILL fine gravelly (sand) + silt. lg. Qty. of asbestos fibers also possible.		Large QTY of asbestos fibers.		
2	5 15	2.0	-0204				Gasket material. Felt-like consist		Dry	5.6	3.5
	26 10	2.0	1450 S-2				more fine gravel than s-1b. few - little gravel .				
4	5 7	1.8	-0406			Black	SAND. Mostly f-m poorly graded sand few little fine @ gravel, TR. silt.		Dry – Moist	5.4	3.0
	6 6	2.0	1505 S-3				less asbestos than S-1 or S-2.				
6	3 4	0.7	-0608			Dark gray	SAND. Some course. round. gravel.		Saturated	104	8.8
	4 5	2.0	1515 S-4			black	Poss. oily stain surrounding gravel. No vis. asbestos.		oily in places Esp. surrounding gravel		
8	5 9	2.0	-0810			Brown	Color change from black to brown in bottom 4"		oily staining		
	12 10	2.0	1525 S-5								
10	10 8	1.8	-1012				S-6 = similar to S-5				
	3 2	2.0	1535 S-6								
12	2 2	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	2.0	1545 S-7			Brown	Orange seams (vert.) S-7c = SAND. f-c well graded SAND,				
14	10 14	1.7	-1416				TR - few fine gravel (rounded.) TR. Silt.			0	0
16	19 23	2.0	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			BORING NO.:	A1-SD01
PROJECT NO.:	N7491-0320			START DATE:	8-1-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-1-97
DRILLED BY (Company/Driller):	ATL / Mike Childs			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]
0	WOH 11	0.25	OU3-A1-SD-0002		Med Dense	Brown	Grayish brown fine SAND, little silt	SP	Sulfate odor	10 ppm
2	8 7	2.0	0730 S-1							
2	17 7	0.4	-0204		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	2.0	0800 S-2							
4	10 5	0.8	-0406		Loose	Brown	Grayish brown fine to med. SAND, little silt, trace fine subrounded gravel, trace organic material.	SP		2.0 ppm
6	3 12	2.0	0825 S-3							
6	24 17	1.0	-0608		Dense	Brown	Grayish brown, fine to course SAND. Some fine subrounded gravel	SW		0 ppm
8	17 11	2.0	0840 S-4				trace (piece of) course gravel, trace silt.			
8	4 12	1.2	-0810		Dense	Brown	Grayish brown, fine to coarse SAND, trace silt, trace subrounded gravel	SW		2.0 ppm
10	20 18	2.0	0910 S-5							
10	15 19	0.7	-1012		Dense	Brown	Brown fine to coarse SAND. Trace f subrounded gravel, trace silt.	SW		2.0 ppm
12	19 28	2.0	0935 S-6							
12	1 2	1.2	-1214		Loose	Brown	Same as above.	SW		1.0 ppm
14	2 13	2.0	1000 S-7							

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-SD01
PROJECT NO.:	N7491-0320			START DATE:	8-1-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-1-97
DRILLED BY (Company/Driller):	ATL / Mike Childs			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)]
14	7 24	1.0 / 2.0	OU3-A1-SD01-1416 1025 S-8		dense	Brown	Grayish brown fine to coarse SAND, trace silt	SW		5 ppm
16	18 10									
16	8 7	1.05 / 2.0	-1618 1050 S-9		med. dense	brown	Brown fine to coarse SAND trace silt	SW		3 ppm
18	9 10									
18	9 19	1.85 / 2.0	-1820 1115 S-10		dense	brown	Same as above	SW		0.5 ppm
20	19 13									

TYPE OF DRILLING RIG:	CME-45 SKID RIG ON PLATFORM		*Tetra Tech NUS, Inc.*
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:		BORING NO.: A1-SD01	PAGE: 2 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)]
0	WOH WOH	.95 / 2.0	OU3-A1-SD02-0002 1140 S-1		very loose	gray	dark gray f SAND and SILT trace f rounded gravel	SM	sulfide odor present	4 ppm
2	2 3									
2	3 3	0.9 / 2.0	-0204 1205 S-2		loose	gray	dark gray f/m SAND, some silt	SM		6 ppm
4	2 1									
4	2 1	0.2 / 2.0	-0406 1225 S-3		very loose	brown	gray, brown f/m SAND and SILT	SM		4 ppm
6	1 2									
6	1 WOH	2.0 / 2.0	-0608 1255 S-4		very loose	brown	grayish brown SILT some f sand, little organic material trace f. rounded gravel	SM		0 ppm
8	1 WOH									
8	1 1	1.4 / 2.0	-0810 1310 S-5		very loose	brown	grayish brown SILT, some f sand trace f rounded gravel gravel	SM		0 ppm
10	1 3									
10	6 8	0.5 / 2.0	-1012 1335 S-6		med. dense	brown	fine to coarse SAND, trace silt, trace f subrounded Gravel	SW		0 ppm
12	10 5									
12	5 6	.85 / 2.0	-1214 1440 S-7		loose	gray	fine to med. SAND, little silt	SP		0 ppm
14	2 2									
							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	OU3-A1-SD02-1416		Med. Dense	brown	Fine to coarse SAND, trace f subrounded gravel trace silt.	SW		0 ppm
16	11 9	2.0	1515 S-8							
16	10 7	2.0	-1618		Med. Dense	brown	same as above	SW		0 ppm
18	8 7	2.0	1540 S-9							
18	15 25	1.3	-1819.5		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"	1.7	1605 S-10							

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	OU3-A1-SD03-0002		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	2.0	(7/17) 1755 S-1							
2	7 7	.55	-0204		Med Dense	Grayish brown	Fine to coarse SAND, and fine subrounded to subangular gravel some silt.	SW		0 ppm
4	14 18	2.0	(7/18) 0700 S-2							
4	23 27	.5	-0406		Dense	Brown	Fine to coarse SAND, little fine subrounded gravel, trace silt, piece of fine gravel in spoon.	SW		0 ppm
6	19 19	2.0	0740 S-3							
6	22 18	1.3	-0608		Dense	Reddish Brown	Same as above			0 ppm
8	15 12	2.0	0810 S-4				↓			
8	10 10	0.8	-0810		Med. Dense	Reddish brown	Trace fine gravel rounded to subrounded	SW		0
10	10 12	2.0	0900 S-5							
10	31 37	1.1	-1012		Very Dense	Brown	↓ Fine trace	SW		0
12	20 22	2.0	0945 S-6				Gravel (rounded) - mainly located in bottom 3+ of spoon.			
12	16 16	0.9	-1214		Dense	Brown	Same as above	SW		0
14	16 18	2.0	1030 S-7				↓			
14	13 16	0.7	-1416		Dense	Brown	↓ Little fine subrounded gravel	SW		0
16	16 20	2.0	1120 S-8							

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			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, (PPM)]
16	3 10	1.2 / 2.0	OU3-A1-SD03-1618		dense	brown	fine to coarse SAND	SW		0
18	22 30		1200 S-9							
18	4 14	1.8 / 2.0	-1820		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		1230 S-10							

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: 2 OF 2

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	2.0	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	2.0	0805 S-5							
10	2 6	0.8	-1012		Med. Dense	Brown	Fine to coarse SAND, trace silt	SW		0 ppm
12	15 19	2.0	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		*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: 1 OF 2

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 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	*Tetra Tech NUS, Inc.*
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-7	
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	SOIL DENSITY WAS DECIDED BY ADDING 6" – 12" + 12" - 18" BLOW COUNTS AND USING SPT CLASSIFICATION	BORING NO.: A1-SD06	PAGE: 1 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* = [ppm]
14	4 4	1..3	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	2.0	1020 S-8			Brown	Bottom 0.6' - brown f-c SAND, little rounded, f gravel trace silt.	SW		
16	5 7	0.7	-1618		Med. Dense	Brown	F-m SAND, trace silt.	SP	No recovery 1st attempt placed w/S-8	
18	12 14	2.0	1050 S-9							
18	30 50	.8	-1820		Very dense	Brown	F-c SAND, little rounded fine gravel, trace silt.	SW	After hammering 12", casing started moving with spoon.	
20		1.0	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-7	
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		
OTHER OBSERVATIONS:	CLASSIFICATION	PLACED S-10 W/9+ BOTTOM OF S8	BORING NO.: A1-SD06

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A2-SB01
PROJECT NO.:	N7491-0320			START DATE:	7-17-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-17-97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~9.5’	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]
			OU3-A2-SB01-0002				0-3” = Asphalt			
0	12	1.3			Loose	Brown	3”-2” = gravelly SAND. TR. Silt, gravel is	SW	Loose, Fill.	8
	15	2.0			Med.		Fine subrounded to 1.” diam. SAND is f-c well graded.			
	19		1115 S-1		Dense				Dry	
	12		-0204							
2	14	1.2							Trace Vit. clay	12
	10	2.0							Pipe or brick	
	8		1125 S-2						Dry, fill	
	2		-0406							
4	3	0.9			Very					0
	3	2.0			Loose				Black woven material @	
	3		1135 S-3						top of spoon abestos	
	4	1.55	-0608		Loose	Dark	FILL . SAND. Mostly f-m poorly graded. SAND few silt. TR	SP	Material below.	
6	5					Gray-br	Fine gravel largy quality of poss. Asbestos fibers.		Moist	35
	10	2.0								
	14		1145 S-4							
	1		-0810		Very Loose				Moist slightly less Asbestos	18
8	1	2.0							material	
	3	2.0								
	2		1230 S-5							
	1		-1012		Loose				In addition to loose	
10	5	1.0							asbestos one brake pad	35
	6	2.0							and gasket material	
	7		1240 S-6				brake pad + gasket material noted		noted saturated	
	1		-1214	12.3’			brake pad + gasket material noted			
12	7	0.8			Loose		peat brown fibrous vegiation debris + silt			
	4	2.0					1 piece brake pad		1 piece brake pad	85
	4		1250 S-7							
	1	1.5	-1416				asbestos material, red plastic			
14	5				Loose					
	5	2.0								
16	4		1300 S-8							

EOB @ 16’

TYPE OF DRILLING RIG:	CME-75		*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:	12’		
OTHER OBSERVATIONS:		BORING NO.: A2-SB01	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A2-SB02
PROJECT NO.:	N7491-0320			START DATE:	7-17-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-17-97
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	7	1.3	OU3-A2-SB02-0002		Loose	Gray	0 - 5 = asphalt. .5-2’ = SAND. mostly f-m poorly graded.	SP	Fuel oil odor @ 1’ bgs cuttings	55
	12 19	1.5	0830 S-1			Dark gray	SAND. few-some fine gravel. tr. silt fill		Dry	
2	11 16	1.15	-0204		Loose	Light gray	SAND. mostly f-c well graded sand few fine gravel, tr. silt, trace white-grayish flat mineral or shell fragments fill.	SW	Whit-gray flat (planer) fragments maybe shell or P.A.C.M. Dry.	1000
	5 2	2.0	0840 S-2		Med. Dense					
4	1 2	2.0	-0406		Very Loose	Gray	.5’ = similar to S-2. .5 - 1.25’= fine SAND, poorly graded, tr. silt.		Debris inc. poss. brake pads or clutch material	450
	3 5	2.0	0850 S-3			Dark gray	1.25 -1.5’ = PEAT. brown, organic rich. 1.5 - 2.0 = brake pads ? similar to ceramic or asphalt shine.		moist damp	
6	3 5	1.8	-0608		Med. Dense		similar to S-3. mix of small zones (2-3” thick brown. peat w/fill debris). + fill. mostly sand + debris		Debris incl. cloth, metal copper wire, tile, poss. brake or clutch material and gas saturated.	7
	26 24	2.0	0910 S-4							
8	7 14	1.0	-0810		Loose		similar to S-3+4. soupy due to water content. lower 1/3 incl. nose of spoon contains solid wood w/nails.		Fill. (wood/nails)	35
	7 8	2.0	0930 S-5		Med. Dense					
10	3 1	1.4	-1012	PEAT	Very Loose		.2’ - similar to S-3+4.		Peat from 10.2	200
	1 2	2.0	0940 S-6			brown	.2 - 2.0 - PEAT. brown silt, with very high organic fiber content. no fill debris in peat noted.	PT	To 12 1-piece woven cloth/sute?)	
12	2 1	2.0	-1214		Very Loose					0
	1 1	2.0	1000 S-7							
14	1 1	2.0	-1416						2 pieces metal wire in peat	56
16	1 1	2.0	1005 S-8							

EOB 16’

TYPE OF DRILLING RIG:	CME-75			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25’ I D HSA			
METHOD OF SOIL SAMPLING:	3.0” SPLIT BARREL DRIVEN WITH 300 LB. HAMMER			
METHOD OF ROCK CORING:				
GROUNDWATER LEVELS:	WATER @ 12’ BGS MEAS. IN HSA @ 14’			
OTHER OBSERVATIONS:	P.A.C.M. = POTENTIALLY ASBESTOS CONTAINING MATERIAL	BORING NO.:	A2-SB02	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A2-SB03
PROJECT NO.:	N7491-0320			START DATE:	7-18-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7-18-97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	~10.0'	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* = [PID ppm]
			OU3-A2-SB03-0002				3" - Asphalt.			
0	12	1.5				Brown	3" - 2' = SAND. mostly f-c well graded sand	SW	Fill. Dry + loose	0
	14	1.5					1brake pad. Asbestos fibers noted from 1' bgs to 2'.			
	16		0740 S-1				Some fine gravel. TR. silt.			
	6		-0204							
2	9	1.7					SAND. mostly f-m poorly graded SAND.	SP	DAMD. Less asbestos	23
	9	2.0							One piece of wood.	
	6		0800 S-2				TR. fine gravel, TR. few silt. Less Asbestos than S-1.			
	3		-0406							
4	2	0.6				Brown	SAND. Mostly F-c well graded SAND.	SW	Dry-Damp.	18
	2	2.0								
	2		0810 S-3				Few little. Fine gravel TR. Asbestos.			
	4		-0608							
6	5	1.3					SAND. Similar to S-2. incld. f-coarse gravel	SP	SATURATED.	14
	19	2.0								
	10		0815 S-4							
	4		-0810							
8	7	2.0				Tan	SAND. Similar to S-3. No visable Asbestos.	SW		0
	5	2.0								
	5		0825 S-5							
	6		-1012							
10	6	1.8								
	3	2.0								
	1		0830 S-6							8 ppm
	1		-1214							
12	2	2.0		13.0'						
	1	2.0		PEAT			PEAT @ 13' brown fabric no man-made debris noted. 1 piece fine rounded gravel			
	2		0840 S-7			Brown			PEAT. No fill noted	14
	WOH		-1416							
14	WOH	2.0								
	WOH	2.0				Red				
16	1		0850 S-8			brown				36

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 A 300 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:	1 HR LEVEL C	BORING NO.: A2-SB03	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A2-SB04
PROJECT NO.:	N7491-0320			START DATE:	8-11-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-11-97
DRILLED BY (Company/Driller):	ATL / PAUL MacAlloon			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~6.50’	Elevation From:	Estimated form 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]
0.5	4 4 7 5	13” / 18”	OU3-A2-SB04-0002 1350 S-1			black lt.brn black ½ layer	S-1A= 2”-3” - Asphalt @ surface. S-1B = 8” - SAND, trace silt, trace fine rounded gravel. sand is f-m poorly graded. Fill incl. Asbestos. S-1C= SAND. mostly f-c well graded sand little – some f-c rounded gravel. black brown ½” thick organic rich layer @ contact w/S-1B. trace silt in nose	SP	moist. damp in lower 1/2. Trace asbestos in middle of sample. 1 piece white w/dark coating	56
2.5	15 19	20” / 24”	-0204			brown black	S-2A=3” similar to S-1C. S-2 B=4” sandy, SILT.	SW	MOIST, not saturated poss. single material or gasket material.	8.5
	18 17		1410 S-2			black black	S-2C = 4” crushed cobble. S-2D = 9” - Poss. Asphalt shingle material or gasket.			
4.5	13 15	6” / 24”	-0406			black	S-3 = SAND. Mostly f-m poorly graded SAND. tr. silt. Crushed smokey quartz in nose.	SP	saturated @ 4.5’	0
	7 5		1425 S-3							
6.5	5 7	14” / 24”	-0608			black	S-4 = FILL. silty, SAND & FILL. trace fine subang. gravel, trace shell fragments.		saturated. wire on auger flights blk Tar-like substance 1.5” x1” across, tile frag. fill incl.	0
	5 5		1430 S-4							
8.5	10 4	2” / 24	-0810			gray	Silty, SAND. mostly fine sand & silt. poor recovery.		Poor recovery	0
	2 4		1450 S-5							
10.5	1 2	1.5” / 24	-1012			gray brown	poor recovery		poor recovery	0
	3 2		1500 S-6							0
12.5	5 4	15 / 24	-1214			black redish brown	S-7A = 5” - silty SAND & FILL debris. S-7B = 10” - SILT borderline PEAT. close to 50% org. debris (root fibers). 1 piece of rubber belt or wire in silt/PEAT, hanging out of nose.		Fill incl. Tile and metal	10.5
	4 5		1514 S-7							
14.5							REFER TO NOTES			

EOB @ 14’

TYPE OF DRILLING RIG:	CME 45 SKID RIG	Note:	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25’ I D HSA	**Attempt @ 14’ finds 2.5 - 3’ of slough. It seems the driller does not have a center bit or plug for the HSA. Abandon boring @ 14! backfill w/bentonite slurry.**	
METHOD OF SOIL SAMPLING:	3” OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	UPGRADE TO LEVEL C RESP. @ ~1355. FROM 0204 SPOON & 0” W/AUGERS		
OTHER OBSERVATIONS:		BORING NO.: A2-SB04	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A2-SB04A
PROJECT NO.:	N7491-0320			START DATE:	8-12-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-12-97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~6.5'	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							No samples from 0-8'.		Auger to 8' before sampling refer to log for A2-SB04 for 0-8' details.	105 @ 2' above
2									grinding & chattering from ~2' – 3.5"	ground near augers & cuttings 0 in B.Z.
4										0 from cuttings
6										
8	2 2	9" / 24"	OU3-A2-SB04A-0810 1230 S-1		Very loose	Dark brown	FILL. silty, SAND trace fine gravel. fill debris. trace plant fibers.	SM	Saturated fill includes Asbestos tile.	56
	2 5						Approx. 1" of reddish-brown peat or organic rich silt In nose.			
10	2 4	17" / 24"	-1012		Loose	Red brown	S-2A = 5" Similar to S-1 S-2B = 12" - PEAT. Reddish brown Peat. Plant fibers are easily discernable. One piece green plastic found in peat.	PT	Fill similar to S-1 in S-2A Plastic noted in Peat.	405
	2 2		1245 S-2							
12	2 3	20" / 24"	-1214				S-3A= 5" – SILT. High QTY. of plant fiber but more silt than plant debris.	ML	Rubber & asbestos tile noted inside peat.	4.2
	3 3		1300 S-3				S-3B = 15" PEAT. Similar to S-2B. Asbestos tile found in PEAT. Rubber as well.	PT		
14	3 3	1" / 24"	-1416				Poor recovery, SILT similar to S-3A	ML	Asphalt shingle noted.	0.0
16	3 2		1350 S-4				1 piece asphalt shingle noted in nose.			

TYPE OF DRILLING RIG:	CME-45 SKID RIG		*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 18" DROP		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WATER MEAS. @ 13.2' BGS INSIDE AUGERS @ 14 BGS		
OTHER OBSERVATIONS:	LEVEL C	BORING NO.: A2-SB04A	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SB01
PROJECT NO.:	N7491-0320			START DATE:	8-5-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-5-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	RAC
GRD. SURFACE ELEVATION:	~9.50’	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 Root mat?	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID PID]	
	2		OU3-A3-SB01-0002				S-1a (0-6) SILT and PEAT topsoil (fibrous(org.)) nature	SM/			
	3	15				brown	w/some silt, trace fine sand, grass, roots, pot. asb. tiles.	PT	dry loose fill	0	0
	3	24					S-1b (6-15) silty SAND w/visible waste. pot. asb. tiles.				
2’	4		1403 S-1			brown	asphalt shingle material tar paper, glass, roots.	SM	dry loose fill	0	0
	3		-0204						pushed a rock. Lodged in spoon		
	3	5				brown	silty SAND. similar to above w/red brown fine SAND.	SM	Tip. Potential asbestos waste	0	0
	6	24							dry loose.		
4’	4		1415 S-2								
	1		-0406			red	S-3 SAND- mostly fine red-brown sand no bedding no		silty sand at top of barrel		
	2	20				brown	visible waste some med. sand.	SP	(2 in) dry loose.	44.2	23.8
	2	24									
6’	2		1420 S-3							12.2	0.3
	2		-0608			red	S-4 SAND - similar to above - mostly fine some med.				
	2	18				brown	sand red brown.	SP	saturated @ 14-18 inc.	0	0
	1	24									
8’	1		1430 S-4								
	1		-0810			red	S-5a (0-10) SAND - mostly fine sand fine med. sand				
	5	20				brown	no bedding.	SP	saturated	0	0
	8	24				red					
10’	15		1435 S-5			brown	S-5b (10-20) SAND f/c sand,well graded trace coarse gravel	SW	saturated	0	1.8
	15		-1012			red	S--6a (0-8) gravelly, SAND some coarse gravel	SW	saturated	0	0
	15	20				brown					
	12	24				brown	S-6b (8-14) SAND, trace silt, trace coarse gravel tr. med sand poorly graded	SW		0	0
12’	9		1440 S-6			brown	S-6c (14-20) gravel SAND similar to S-6a	SW	piece of gneiss or schist	0	0
	4		-1214				S-7 sandy GRAVEL – f/c sand, wg f/c gravel and rock frags.		pushing a cobble at end of barrel		
	12	10				brown	Broken, no bedding.	GW	gravel in spoon grinding	0	1.1
	26	24									
14	18		1550 S-7								
	12		-1416				S-8 sandy GRAVEL similar to above coarse pieces of gravel				
	15	23				brown	up to 3 in. and rock frag. quartzite no bedding SR gravel	GW	saturated	0	0
	18	24									
16’	16		1510 S-8								

EOB 16’ – 12’ w/augers

TYPE OF DRILLING RIG:	CME-850 ATV TRUCK MOUNT		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25’ I D HSA 8” OD HSA		
METHOD OF SOIL SAMPLING:	3” BARREL DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	WATER IN AUGERS @ 7.70 BGS – 1540 HRS		
OTHER OBSERVATIONS:		BORING NO.: A3-SB01	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SB02
PROJECT NO.:	N7491-0320			START DATE:	8-5-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-5-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~8.10’	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]	
	2		OU3-A3-SB02-0002			brown	S-1A (0-5) Silty SAND w/glass, roots, pot. asb. tiles	SM	loose dry fill	0	0
	3	19				black	S-1B - Asphalt chunks (5-11)	FILL	fill		1.7
	4	24					S-1C (11-19) Silty SAND w/pot. asb. tiles/pos. asphalt		pot. asb. tiles		
2’	4		1142 S-1			brown	shingles, fine coarse gravel (trace)	SM			0
	3		- 0204				S-2A (0-8) Silty SAND w/pot. asb. brake pads, tiles,		pot asb. tiles loose dry fill		
	3	24				brown	Twigs, glass, shingles. like material, green tiles	SM		0	74.3
	3	24				brown	S-2B (8-24) silty SAND w/ pot. asb. fill, gravel asphalt		loose dry fill	0	50.2
4’	3		1200 S-2			black	chunks.	SM			
	1		-0406				S-3 SILT trace fine sand -lots of fibrous waste (man-made)		resembles soil-waste	0	272.3
	1	24				brown	pads, glass, tiles, black shiny material, degraded plastic or poly.	ML	(dry) (manufactured)		
	1	24							material.		
6’	1		1210 S-3			black					
	1		-0608				SILT, trace fine sand, numerous fibers (man-made fibrous			54.8	30.2
	1	21				black	pads black shiny material, white spaces (flaky)	ML	pot. asb. waste		
	1	24							damp only		
8’	1		1220 S-4								
			-0810			brown	S-5A -SILT trace sand, no visible waste, phragmite reeds		no waste visible	5.3	0
	1	21				black	org. fibers.	ML	damp		
	24in	24							no waste seen	6.1	0
10’			1230 S-5			brown	S-5B – PEAT, trace silt, lot org. fibers, tissue stems.	PT	damp		
	1		-1012						saturated - no	64.2	0
	1	24				black	S-6A – SILT, trace fine sand, org. fibers, stems, white specs.	ML	waste seen. org. odor		
	1	24							no waste seen	2.3	0
12’	1		1240 S-6			brown	S-6B - silty SAND w/org. fibers, f-m sand, reg. tissue.	SM	saturated		
	1		-1014						no waste seen	0	0
	1	20				brown	SAND - mostly fine sand tr. coarse sand, tr. org. fibers, twigs tr.	SP	saturated		
	1	24									
14’	1		1250 S-7								
	1		-1416						saturated	78.2	40.8
	1	24				brown	S-8A (0-16) SAND, mostly fine trace silt	SP	no waste		
	4	24								50.7	25.3
16’	5		1255 S-8			brown	S-8B (16-24) SAND f-c sand, wg, tr. silt	SW	saturated		

EOB 16’ w/spoons

TYPE OF DRILLING RIG:	CME-850	**BACK FILL BENT SLURRY TO 0’ ON 1210 – OFF C DRILL CREW- 1230 – ON 1245**	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25’ I D HSA 8 in OD HSA		
METHOD OF SOIL SAMPLING:	3” OD SPLIT BARREL DRIVEN WITH 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WATER IN AUGERS @ 8.70 BGS 1245 HRS.		
OTHER OBSERVATIONS:	UPGRADED TO C @ 4’ W/SPOONS @ 1150	BORING NO.: A3-SB02	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SB03
PROJECT NO.:	N7491-0320			START DATE:	8-5-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-5-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:	~3.5’	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	PID]
	WOH		OU3-A3-SB03-0002				S-1A - (0-8in.) PEAT. decaying veg. tissue, fibrous				
		9 / 24				Brown	twigs.	PT	saturated	0	20
2’	WOH		0925 S-1			Brown	S-1B (8-9) PEAT, tr. silt, twigs, organic fibers	PT	saturated	0	0
	WOH		-0204								
		3 / 24				Brown	PEAT, some silt, twigs, organic fibers, tissue	PT	saturated	0	11.6
4’	WOH		0930 S-2								
	WOH		-0406								
		13 / 24				Brown	S-3A (0-6) PEAT some silt, twigs, fibers	PT	saturated	0	8.6
6’	WOH		0940 S-3			Brown	S-3B (6-13) SILT, organic fibers reeds, twigs, TR fine sand	ML	saturated	0	10.2
	WOH		-0608				S-4A- org. SILT - Soupy w/fibers (0-4in)	OL	saturated	0	8.2
	WOH	24 / 24				Black	S-4B (4-12 in.) Sandy SILT w/org. fibers.	SM	saturated	0	7.1
	1/12”					Brown		SP			
8’			0945 S-4			Brown	S-4C (12-24) Silty f-m SAND w/few organic fibers.	SM	saturated	0	9.6
	1		-0810								
	2	13 / 24									
	2					Gray	SAND, TR. silt, TR org. fibers, mostly f-m sand TR.				
10’	1		0950 S-5			Brown	coarse sand, no structure.	SP	saturated, loose	0	7.4
	2		-1012			Gray	SAND, mostly f-m tr. coarse tr. SR. gravel up to 3 in.		1x3 in. interial fine sand		
	3	24 / 24				Brown	(2 pieces.)	SP	at base	0	6.2
	4										
12’	2		1000 S-6								
							EOB @ 12’ w/augers & barresl running sands backfill w/bent slurry.				

TYPE OF DRILLING RIG:	CME-850 ATV RIG W/TRUCK		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25’ I D HSA 8 IN OD HSA		
METHOD OF SOIL SAMPLING:	300 LB HYDRAULIC HAMMER 3 IN BARREL 18 IN DROP		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	WATER IN AUGERS – 0.75’ BGS RUNNING SAND @ 12’ ATTEMPTED 0062 2X “2-NO RECOVERIES”		
OTHER OBSERVATIONS:	0204 2X 1 NO	BORING NO.: A3-SB03	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD01
PROJECT NO.:	N7491-0320			START DATE:	8-7-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-7-97
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 R 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]
0	WOR	0 / 2.0'	OU3-A3-SD01-0002				NO RECOVERY		too wet & too soft.	
2			1400 S-1							
2	1 / 1	0.3 / 2.0'	-0204	SAND some silt	very loose	black	fine to coarse SAND. some silt. trace f subangular gravel, trace organic material - piece of small metal.	SP	very wet	2.0 ppm
4	1 / 1		1420 S-2							
4	1 / 1	0.7 / 2.0'	-0406		very loose	black	0.3 - top - black fine to coarse SAND.	SP	sulfide odor	9.0 ppm
6	1 / 4		1430 S-3	PEAT		brown	0.4 (bottom) – PEAT	PT	drier than above	
6	WOH	2.0 / 2.0'	-0608		very loose	brown	PEAT	PT	sulfide odor present	39 ppm
8			1440 S-4							
8	WOH / WOH	1.7 / 2.0'	-0810		very loose	brown	0.7 - PEAT (top)	PT	placed w/ above sample	9.0 ppm
10	WOH / 1		1500 S-5	Silt And Sand		gray	brownish gray SILT and fine SAND trace organic material	OL	same	
10	8 / 8	2.0 / 2.0'	-1012		med dense	gray	0.8 (top) same as above	OL	same	9.0 ppm
12	12 / 19		1520 S-6	f/c SAND		brown	2' fine to coarse SAND, some fine to coarse gravel	SW	gravelly sand	
12	11 / 17	.75 / 2.0	-1214		dense	brown	Grayish brown fine coarse SAND, some (10-20%) fine subrounded gravel , trace organic material.	SW		0.5 ppm
14	17 / 13		1550 S-7							
							Continued on second page.			

TYPE OF DRILLING RIG:	CME-45B SKID RIG ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2 IN SPLIT SPOON / 140 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD01	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD01
PROJECT NO.:	N7491-0320			START DATE:	8-7-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-7-97
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]
14	20 8	1.0	OU3-A3-SD01-1416		med. dense	brown	same as above	SW		15 ppm
16	10 13	2.0	1600 S-8							
16	18 12	1.0	-1618		med. dense	grayish brown	same as above, w/ trace silt, no organic material.	SW		7.0 ppm
18	12 11	2.0	1625 S-9							
18	10 8	1.1	-1820		med. dense	gray	brownish gray fine to medium SAND, trace silt, trace fine rounded gravel.	SW		0.5 ppm
20	8 14	2.0	1650 S-10							

TYPE OF DRILLING RIG:	CME-45B SKID RIG ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2 IN SPLIT SPOON / 140 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD01	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD02
PROJECT NO.:	N7491-0320			START DATE:	8-7-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-7-97
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	WOR	0.35	OU3-A3-SD02-0002		very loose	black grayish	fine to medium SAND, some (10-20%) silt some (10-20%) organic material, possible piece of gasket	SM	Sulfide odor	20 ppm
2		2.0	0845 S-1				or shingle material.			
2	1 2	1.6	-0204	SILT	loose	black	top .8 f/m sand some silt, possible asbestos fibers	SM		270 ppm
4	2 2	2.0	0855 S-2			gray	bottom .8 gray SILT some (10-20%) organic material trace fine sand, trace fine rounded gravel.	OL		.5 ppm
4	2 1	1.1	-0406		very loose	black grayish	black fine to medium SAND, and SILT,	SM	Sand and silt are sand on top silt on	160 ppm
6	1 2	2.0	0910 S-3				possible asbestos fiber, trace organic material			
6	1 2	0.9	-0608		loose	black	black silty SAND, (fine to med.) trace organic material (top half of spoon mostly sand bottom - silt.	SM	Condition same not Slough on top.	180 ppm
8	2 1	2.0	0920 S-4				not slough, however			
8	5 6	1.2	-0810		med dense	brown	fine to coarse SAND, some silt, some fine subrounded gravel.	SW		5 ppm
10	5 5	2.0	0940 S-5							
10	10 13	0.15	-1012		med dense	brown	grayish brown silty SAND (fine to coarse).	SW		0 ppm
12	14 13	2.0	1005 S-6							
12	6 10	1.2	-1014		med dense	gray	brownish gray fine to coarse SAND, trace silt.	SP	Very small amount of coarse particles	0 ppm
14	12 9	2.0	1035 S-7							

TYPE OF DRILLING RIG:	CME-45B, SKID RIG ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON WITH 140 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD02	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD02
PROJECT NO.:	N7491-0320			START DATE:	8-7-97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-7-97
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]
14	4 7	1.35	OU3-A3-SD02-1416		Med. Dense	gray	Same As Above (as 1214)	SP	Very small amount of coarse particles	0 ppm
16	7 10	2.0	1100 S-8							
16	7 4	1.7	-1618		Loose	gray	Same As Above with trace fine rounded gravel	SP		0 ppm
18	4 6	2.0	1130 S-9							
18	5 5	1.8	-1820		Med. Dense	brown	Same As Above grayish brown	SP		0 ppm
20	6 6	2.0	1200 S-10							

TYPE OF DRILLING RIG:	CME-45B, SKID RIG ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON WITH 140 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD02	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD03
PROJECT NO.:	N7491-0320			START DATE:	8/6/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8/6/97
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	W.O.R.	0.4	OU3-A3-SD03-0002		Very Loose	BL	Black fine SAND and SILT (silty sand)	SM	Slight sulfide odor	2.5 ppm
2		2.0	1330 S-1						Sample is wet	
2	W.O.R.	0	-0204				**No Recovery**		Soil appears to be to loose and wet to collect sample	
4		2.0	1340 S-2							
4	W.O.R.	0.10	-0406		Very Loose		Same as (S-1) - 0002	SM	Slight sulfide odor; sample is wet and soft	7.5 ppm
6		2.0	1355 S-3							
6	W.O.R.	0	-0608				**No Recovery**			
8		2.0	1430 S-4							
8	W.O.R.	.35	-0810		Very Loose	GR	Brownish gray, sandy SILT, some organic material	OL	Slight sulfide odor and wet	7.9 ppm
10		2.0	1445 S-5							
10	3 / 1	0.9	-1012		Loose	BR	Grayish brown. Fine to medium SAND, some (10-20%) silt, trace organic material	SP	Moist	15 ppm
12	3 / 3	2.0	1455 S-6							
12	4 / 3	0.85	-1214		Loose	GR	Brownish, gray Fine to medium SAND, trace silt, trace fine rounded gravel	SP		2.0
14	2 / 3	2.0	1515 S-7							
							Continued on second page			

TYPE OF DRILLING RIG:	CME-45B ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2 IN SPLIT SPOON / 140 OB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD03	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD03
PROJECT NO.:	N7491-0320			START DATE:	8/6/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8/6/97
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]
14	3 4	1.05	OU3-A3-SD03-1416		Loose	GR	Brownish gray or fine to coarse SAND, trace fine rounded gravel, trace silt	SP		0 ppm
16	4 4	2.0	1535 S-8							
16	3 4	0.8	-1618		Loose	GR	Same As Above	SP	Slight sulfide odor	2.5 ppm
18	4 4	2.0	1600 S-9							
18	6 4	0.9	-1820		Loose	GR	Gray fine to coarse SAND, some silt (10-20%), trace fine rounded gravel	SP		1.5 ppm
20	2 4	2.0	1625 S-10							

TYPE OF DRILLING RIG:	CME-45B ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2 IN SPLIT SPOON / 140 OB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD03	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD04
PROJECT NO.:	N7491-0320			START DATE:	8/5/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/6/97
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	W.O.R.	0	OU3-A3-SD04-0002				**No Recovery**		To soft and wet to collect	
2		2.0	1545 S-1							
2	W.O.R.	1.15	-0204		Very Loose	BR	PEAT	PT	WOR - weight of rod sulfide odor, sample is	7.5 ppm
4		2.0	1555 S-2						wet	
4	W.O.R.	.5	-0406		Very Loose	BR	PEAT	PT	Sample is wet, sulfide odor	0 ppm
6		2.0	1610 S-3							
6	W.O.R.	.25	-0608		Very Loose	BR	PEAT	PT	Sample is very wet	0 ppm
8		2.0	1620 S-4							
8	W.O.R.	1.3	-0810		Very Loose	BR	PEAT	PT	Sample is wet	1.5 ppm
10		2.0	1630 S-5							
10	1 / 1	1.5	-1012		Very Loose	BR	Top (.9') of spoon PEAT, trace fine subrounded gravel throughout spoon	PT	Added top portion of spoon spoon to 0810 sample bowl	3.5 ppm
12	1 / 5	2.0	1635 S-6				bottom (.6' of spoon) - grayish brown SILT, trace fine sand, trace organic	OL		
12	8 / 12	0.9	-1214		Med. Dense	BR	Grayish brown fine to coarse SAND, some fine subrounded gravel, trace silt	SW		7.0 ppm
14	12 / 16	2.0	1655 S-7							

TYPE OF DRILLING RIG:	CME-45 ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON		
METHOD OF ROCK CORING:	140 LB HAMMER		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD04	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD04
PROJECT NO.:	N7491-0320			START DATE:	8/5/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/6/97
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]
14	8 10	1.2	OU3-A3-SDO4-1416 1715		Med. Dense	BR	Same As Above	SW	Sulfide odor	12.5
16	12 22	2.0	1715 S-8							
16	28 18	0.8	-1618 8/6/97		Med. Dense	BR	Grayish brown, fine to coarse SAND, some fine rounded gravel, trace silt	SW		5.0 ppm
18	10 5	2.0	0950 S-9							
18	10 12	1.05	-1820		Med. Dense	BR	Grayish brown, fine to coarse SAND, some fine rounded gravel (10-20%), some silt (10-20%)			
20	12 15	2.0	1015 S-10							

TYPE OF DRILLING RIG:	CME-45 ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD04	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD05
PROJECT NO.:	N7491-0320			START DATE:	8/5/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/5/97
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	1 1	0.1	OU3-A3-SD05-0002		Very Loose	gray	Dark gray SILT, some organic materials		Slight sulfide odor	0 ppm
2	1 1	2.0	1130 S-1							
2	W.O.H.	0.0	-0204		Very Loose		No Recovery			
4		2.0	1140 S-2							
4	W.O.H. 1	1.45	-0406		Very Loose	BR	PEAT	PT	Strong sulfide odor	32 ppm
6	2 2	2.0	1152 S-3							
6	W.O.R. 1	0.5	-0608		Very Loose	BR	Grayish brown SILT, some organic material, trace fine subrounded gravel	OL		10 ppm
8	1 1	2.0	1210 S-4							
8	1 1	.95	-0810		Very Loose	BR	PEAT, small piece of plastic wrapper	PT		10 ppm
10	W.O.H. 1	2.0	1225 S-5							
10	W.O.H. W.O.H.	1.4	-1012		Very Loose	BR	PEAT, piece of plastic wrapper	PT		0 ppm
12	W.O.H. W.O.H.	2.0	1235 S-6							
12	W.O.H. 1	2.0	-1214		Very Loose	BR	Grayish brown SILT and fine SAND, trace organic material	SM	Slight organic odor	0 ppm
14	2 2	2.0	1250 S-7							

TYPE OF DRILLING RIG:	CME 45 B ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD05	PAGE 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD05
PROJECT NO.:	N7491-0320			START DATE:	8/5/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/5/97
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]
14	2 / 2	1.2	OU3-A3-SD05-1416 1315		Loose	BR	Grayish brown fine to medium SAND, some (10-20%) silt, trace fine subrounded gravel	SP		0 ppm
16	2 / 2	2.0	1315 S-8							
16	11 / 5	1.1	-1618		Loose	BR	Grayish brown fine to medium SAND, trace fine rounded gravel, trace silt	SP		0 ppm
18	3 / 3	2.0	1345 S-9							
18	7 / 4	1.5	-1820		Loose	GR	Brownish gray fine to medium SAND, some silt, trace clay, trace fine subrounded gravel	SM		0 ppm
20	3 / 8	2.0	1410 S-10							

TYPE OF DRILLING RIG:	CME 45 B ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD05	PAGE 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD06
PROJECT NO.:	N7491-0320			START DATE:	8/13/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/13/97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~4.0'	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	W.O.H. 1	2"	OU3-A3-SD06-0002		Very Loose	brown	sandy, SILT. sands are fine, phragmites, fiber and roots	SM	Poor recovery due to phrag. roots damp, wet	0.3
	1 1	24"	0835 S-1							
2	2 1	4"	-0204			brown	SAND, some -little. silt. sand is fine to medium. poorly graded. pet. odor and sheen.	SP	Saturated	25.0
	1 1	24"	0840 S-2			dark gray	trace roots		Petroleum odor and sheen	
4	1 1	8"	-0406	4'3"		dark gray brown	S-3A=3" similar to S-2	SP	Saturated	
	1 1	24"	0848 S-3				S-3B=5" SILT, tr. fine. sand, some plant fibers and roots (very fine)	ML	Pet. odor	7.5
6	W.O.H. ↓	24	-0608				PEAT	PT	Fiber peat. No visible asbestos or debris noted	10.2
	W.O.H. ↓	24"	0900 S-4							
8	W.O.H. W.O.H.	22"	-0810							12.0
	1 ↓	24"	0910 S-5							
10	W.O.H. W.O.H.	20"	-1012							28.0
	W.O.H. 1	24"	0920 S-6							
12	W.O.H. W.O.H.	24"	-1214			dark brown	SILT. mostly silt, some organic debris, grading from peat to silt (from top to bottom)	ML	Grading out of peat to silt	0.0
	1 1	24"	0930 S-7							
14	W.O.H. W.O.H.	24"	-1416			gray	decreasing organic debris			1.2
	1 1	24"	0945 S-8				very fine vegetation, debris at bottom one piece fine, gravel in silt			

TYPE OF DRILLING RIG:	45C SKID RIG		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	D&W 4 in. casing		
METHOD OF SOIL SAMPLING:	2 in. split barrel / 140 lb. hammer		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD06	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD06
PROJECT NO.:	N7491-0320			START DATE:	8/13/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/13/97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~4.0'	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]
	W.O.H.	24"	OU3-A3-SD06-1618				SILT, tr. fine sand similar to S-8		Trace wood debris	
16	1					gray			no structure noted	7.0
	1									
	1	24"	1003 S-9							
	W.O.H.	24"	-1820				Sand seam at 18' 10' ½" thick			
18	1									3.0
	1									
	1	24	1015 S-10							
20							EOB @ 20' bgs			

EOB at 20ft. BGS.

TYPE OF DRILLING RIG:	45C SKID RIG		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	D&W 4 in. casing		
METHOD OF SOIL SAMPLING:	2 in. split barrel / 140 lb. Hammer		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD06	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD07
PROJECT NO.:	N7491-0320			START DATE:	7/31/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/31/97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~0.5’	ELEVATION FROM:	Estimated form 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	W.O.H.	1.5	OU3-A3-SD07-0002		Very Loose	GR	Brownish gray SILT, little organic material, trace fine subrounded gravel, trace fine sand.	OL	Sulfide odor	1.5 ppm
2		2.0	1015 S-1							
2	W.O.H.	2.0	-0204		Very Loose	GR	Same As Above	OL		5.5 ppm
4		2.0	1030 S-2							
4	W.O.H. 1	2.0	-0406		Very Loose	GR	- No fine gravel	OL		5.0 ppm
6	2 2	2.0	1045 S-3							
6	W.O.H. W.O.H.	1.75	-0608		Very Loose	GR	Same As Above - no fine gravel	OL		0 ppm
8	1 3	2.0	1100 S-4							
8	3 5	0.85	-0810		Loose	GR	Brownish gray f/m SAND and SILT, trace rounded fine gravel	SM	Sulfide odor	0 ppm
10	4 3	2.0	1120 S-5							
10	3 3	0.55	-1012		Loose	BR	Grayish brown f/c SAND, some silt, little fine rounded gravel	SM		0 ppm
12	6 5	2.0	1140 S-6							
12	20 10	0.9	-1214		Med. Dense	BR	Fine SAND, little silt (trace amount med to coarse sand) Coarse size (1”-1.25”)	SP		0 ppm
14	6 4	2.0	1205 S-7				Piece of quartz gravel			

TYPE OF DRILLING RIG:	CME 45B SKID RIG ON FLOATING BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2” SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD07	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD07
PROJECT NO.:	N7491-0320			START DATE:	7/31/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/31/97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~0.5'	ELEVATION FROM:	Estimated form 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]
14	15 23	1.05	OU3-A3-SD07-1416		Very Dense	BR	Fine to coarse SAND, little fine subrounded gravel, trace silt	SW	Possible piece of gravel was ahead of spoon for last portion of hammering	0 ppm
16	28 30	2.0	1230 S-8							
16	15 12	0.95	-1618		Dense	BR	Same As Above	SW		0 ppm
18	20 24	2.0	1305 S-9							
18	30 18	1.2	-1820		Med. Dense	BR	Fine to coarse SAND, some fine subrounded gravel, trace silt	SW		0 ppm
20	20 18	2.0	1335 S-10							

TYPE OF DRILLING RIG:	CME 45B SKID RIG ON FLOATING BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD07	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD08
PROJECT NO.:	N7491-0320			START DATE:	7/21/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/21/97
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	Weight	1.3	OU3-A3-SD08-0002		Very Loose	GR	Brownish gray SILT, little organic material, trace fine sand, wet cigarette filter in sample	OL	Sulfide smell light limit (50%?)	0 ppm
2	of hammer	2.0	1745 S-1							
2	1 1	0.3	-0204		Very Loose	GR	Brownish gray SILT, trace organic material	ML	Sulfide smell	12 ppm
4	1 1	2.0	0750 S-2							
4	W.O.H. W.O.H.	1.4	-0406		Very Loose	GR	SILT, trace organic material, trace fine sand	ML	Slight sulfide smell	6 ppm
6	1 1	2.0	0810 S-3							
6	W.O.H. W.O.H.	1.0	-0608		Very Loose	GR	Same as above, with one piece of fine subrounded gravel, Trace organic material (wood)	ML		1.2 ppm
8	1 2	2.0	0835 S-4							
8	1 1	1.8	-0810		Very Loose	GR	Same as above, to 9.0 ft. (9'-10') fine to medium SAND and SILT, reddish organic material (wood, bark) at	ML		0 ppm
10	2 2	2.0	0900 S-5				9.4' (more sand than silt at 9.8-10.0)			
10	3 2	1.8	-1012		Loose	GR	Brownish fine to medium SAND, some silt, 11.5 to 12.0' fine sand and silt gradiation	ML		0 ppm
12	4 6	2.0	0945 S-6							
12	5 8	1.3	-1214		Med. Dense	GR	Light gray clayey SILT f/m sand dense from 13.5-13.8	ML		0 ppm
14	9 14	2.0	1035 S-7							

TYPE OF DRILLING RIG:	CME 45B ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH CASING		
METHOD OF SOIL SAMPLING:	2" S.S. / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	DRILLING BELOW WATER TABLE OF FERRY CREEK WHICH IS INFLUENCED BY TIDE		
OTHER OBSERVATIONS:		BORING NO.: AS-SD08	PAGE 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD08
PROJECT NO.:	N7491-0320			START DATE:	7/21/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/21/97
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]
14	3 4	1.1	OU3-A3-SD08-1416		Loose	GR	Light gray, fine to med. SAND, little silt bottom 2" contained clayey silt	SM		0
16	5 7	2.0	1340 S-8				trace (piece of) fine rounded gravel	SC		
16	8 11	1.1	-1618		Med. Dense	Light GR	0.8' of recovered sample (med) stiff -top SILT and CLAY	ML		0
18	15 32	2.0	1425				bottom - 0.3' of spoon f/c SAND, trace silt, trace from subrounded gravel	SM		
18	15 24	2.0	-1820		Very Dense	GR	Brownish gray f/m SAND, trace silt	SP	No recovery on first attempt	0
20	32 74	2.0	1520							

TYPE OF DRILLING RIG:	CME 45B ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH CASING		
METHOD OF SOIL SAMPLING:	2" S.S. / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	DRILLING BELOW WATER TABLE OF FERRY CREEK WHICH IS INFLUENCED BY TIDE		
OTHER OBSERVATIONS:		BORING NO.: AS-SD08	PAGE 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD09
PROJECT NO.:	N7491-0320			START DATE:	7/29/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/29/97
DRILLED BY (Company/Driller):	ATL / MARK 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	W.O.H.	1.5	OU3-A3-SD09-0002		Very Loose	GR	Dark gray SILT, little organic material, (piece of wood, piece of shell)	OL	Sulfide odor preesent	2.5 PPM
2		2.0	0715 S-1							
2	W.O.H.	0.2	-0204		Very Loose	GR	Same As Above	OL		1.8 PPM
4		2.0	0740 S-2							
4	W.O.H. W.O.H.	0.3	-0406		Very Loose	GR	Plus trace fine sand	OL		4.5 PPM
6	2 3	2.0	0755 S-3				Fine SAND			
6	W.O.H. 1	1.9	-0608		Very Loose	GR	Brownish gray SILT, trace organic material, trace fine sand	OL	Less moisture in S-4 than S-1 or S-3	10.0 PPM
8	1 2	2.0	0810 S-4							
8	W.O.H. 1	1.2	-0810		Very Loose	GR	Same as Above	OL		13.0 PPM
10	1 1	2.0	0830 S-5							
10	W.O.H. 1	1.25	-1012		Very Loose	GR		OL		30 PPM
12	2 2	2.0	0915 S-6							
12	1 2	2.0	-1214		Loose	GR		OL		25 PPM
14	2 1	2.0	0940 S-7							

TYPE OF DRILLING RIG:	CME 45B BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" S.S. / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD09	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD09
PROJECT NO.:	N7491-0320			START DATE:	7/29/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/29/97
DRILLED BY (Company/Driller):	ATL / MARK 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]
14	1 1	1.3	OU3-A3-SD09-1416		Loose	GR	Same As Above	OL	Sulfide odor present	15 ppm
16	2 1	2.0	1000 S-8							
16	3 3	1.6	-1618		Loose	GR		OL		20 ppm
18	2 3	2.0	1035 S-9							
18	2 3	1.2	-1820		Loose	GR	Brownish gray SILT, trace fine sand, trace organic material. Very end of spoon (on tip) contained silt and fine sand	OL		10 ppm
20	3 2	2.0	1115							

TYPE OF DRILLING RIG:	CME 45B BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" S.S. / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD09	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD10
PROJECT NO.:	N7491-0320			START DATE:	8/4/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/4/97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~0.5’	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	W.O.R.	0.5	OU3-A3-SD10-0002		Very Loose	GR	Gray SILT, some organic material , trace f sand	OL	Weight of Rod for 2’ sulfide	20 ppm
2		2.0	1110 S-1							
2	W.O.H.	1.3	-0204		Very Loose	GR	Brownish gray SILT, some organic material, trace fine sand (black decomp. leaves)	OL	Weight of hammer (WOH)	5 ppm
4		2.0	1130 S-2						sulfide odor	
4	W.O.H. W.O.H.	2.0	-0406		Very Loose	GR	Same As Above	OL		10 ppm
6	1 1	2.0	1140 S-3							
6	W.O.H. 1	0.5	-0608		Very Loose	GR	Gray SILT, trace fine rounded gravel, trace fine sand trace organic material	OL		4 ppm
8	1 1	2.0	1155 S-4							
8	W.O.H. W.O.H.	1.5	-0810		Very Loose	GR	Same As Above	OL	Sl. sulfide odor	3 ppm
10	W.O.H. 1	2.0	1210 S-5							
10	W.O.R. W.O.R.	1.75	-1012		Very Loose	GR	Brownish gray SILT, trace fine sand, some organic material	OL		20 ppm
12	W.O.H. 1	2.0	1230 S-6							
12	W.O.H. W.O.H.	0.0	-1214		Very Loose		No Recovery no evidence of reason			20 ppm
14	1 1	2.0	1245 S-7							

TYPE OF DRILLING RIG:	CME 45B		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2” SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD10	PAGE: 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD10
PROJECT NO.:	N7491-0320			START DATE:	8/4/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/4/97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	~0.5'	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]
14	W.O.H. / 1	1.8	OU3-A3-SD10 -1416		Very Loose	GR	Same As 1012 sample	OL	Sulfide odor present	30 ppm
16	W.O.H. / 1	2.0	1300 S-8						↓	
16	W.O.H. / W.O.H.	.85	-1618		Very Loose	GR	Gray SILT, trace organic material, trace fine gravel sand, Subrounded fine gravel	OL	More moisture present in this sample than in the	15 ppm
18	W.O.H. / W.O.H.	2.0	1325 S-9						previous one	
18	1 / 1	1.7	-1820		Very Loose	GR	Brownish gray SILT, trace organic material, trace fine sand, trace rounded fine gravel	OL	Slight sulfide odor	18 ppm
20	1 / 1	2.0	1340 S-10							

TYPE OF DRILLING RIG:	CME 45B		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD10	PAGE: 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD11
PROJECT NO.:	N7491-0320			START DATE:	7/23/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/24/97
DRILLED BY (Company/Driller):	ATL / MARK 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	1 1	.2	OU3-A3-SD11-0002		Very Loose	GR	Dark brownish gray SILT, trace fine sand	OL	Sulfide odor present	0.3 ppm
2	1 1	2.0	1510 S-1							
2	1 W.O.H.	1.1	-0204		Very Loose	GR	Brownish gray SILT, little organic material, trace fine sand Small piece of red plastic	OL		11.5 ppm
4	1 1	2.0	1525 S-2							(after mixing)
4	W.O.H. W.O.H.	1.7	-0406		Very Loose	GR	Same As Above, plus trace of fine subrounded gravel, piece of sea-shell	OL		40.0 ppm
6	1 1	2.0	1545 S-3							(after mixing sand)
6	1 1	1.4	-0608		Very Loose	GR	Brownish gray SILT, trace organic material, trace fine sand	OL		12.0 ppm
8	1 1	2.0	1630 S-4							
8	W.O.H. W.O.H.	2.0	-0810		Very Loose	GR	Same As Above	OL	Composited S-S-4 and S-5	30.0 ppm
10	W.O.H. 2	2.0	1700 S-5							
10	W.O.H. W.O.H.	1.35	-1012		Very Loose	GR		OL		90.0 ppm
12	2 2	2.0	1725 S-6							
12	W.O.H. W.O.H.	1.8	-1214		Very Loose	GR		OL		
14	2 4	2.0	1800 S-7							

TYPE OF DRILLING RIG:	CME-45 ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH		
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD11	PAGE 1 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	A3-SD11
PROJECT NO.:	N7491-0320			START DATE:	7/23/97
LOGGED BY:	SCOTT HARDING	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/24/97
DRILLED BY (Company/Driller):	ATL / MARK 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]
14	2 4	2.0	OU3-A3-SD11-1416		Loose	GR	Brownish gray SILT, trace organic material, trace fine sand	OL	Wet, sulfide odor	35 ppm
16	2 2	2.0	0840 S-8							(after mixing)
16	2 1	0.8	-1618		Very Loose	GR	Same As Above	OL		37 ppm
18	2 2	2.0	0905 S-9							
18	3 3	1.45	-1820		Loose	GR	Brownish gray SILT, trace organic material, trace (to little) fine sand, trace fine rounded gravel	OL	Less moisture	60 ppm
20	3 3	2.0	0920 S-10							

TYPE OF DRILLING RIG:	CME-45 ON BARGE		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DRIVE AND WASH	**COLLECTED S-9 AND S-10 FOR ANALYSIS**	
METHOD OF SOIL SAMPLING:	2" SPLIT SPOON / 140 LB. HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: A3-SD11	PAGE 2 OF 2

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB01
PROJECT NO.:	N7491-0320			START DATE:	8-4-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8-4-97
DRILLED BY (Company/Driller):	ATL / Mike Hawkins			MON. WELL NO.:	NA
GRD. SURFACE ELEVATION:	8.0 Ft.	ELEVATION FROM:	Est. from topo. map	CHECKED BY:	TD

DEPTH (FEET) 0	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	PID]
	1/12	15 / 24	OU3-B2-SB1-0002 1200 S-1			Brown Black	SILT -mostly silt, trace fine sand, large stems (organic), pot. asbestos tiles/boards, roots	ML	Damp, pot. asbestos gray fiber boards/pads (fill)	0	2.4
2'	1/12										
	1/12	16 / 24	OU3-B2-SB1-0204 1210 S-2			Brown Black	Similar to above w/more twigs, roots, pot. asbestos pads	ML	Damp, pot. asb. (fill)	0	3.1
4'	1/12										
	1/12	16 / 24	OU3-B2-SB1-0406 1220 S-3			Brown	Similar to above w/pot. asbestos pad, organics, fewer twigs, more roots	ML	Damp, pot. asb. - finer org. veg tissue, sea shells	0	3.4
6'	1/12										
	1 / 24	24 / 24	OU3-B2-SB1-0608 1225 S-4			Black	S-4A SILT w/org. fibers, trace fine sand, pot. asbestos boards	ML	Damp fill	37.4	10
8'	24					Brown	S-4B PEAT-fibrous org. tissue, roots	PT	Saturated-water squeezed out of peat soil holding H_2O	157	13.6
	WOH	23 / 24	OU3-B2-SB1-0810 1230 S-5			Brown	SILT/PEAT - mostly silt w/peat like fibrous tissue, roots, stems and pot asb. fiber board (gray)	ML/PT	Damp holding onto H_2O	16.0	8.7
10'	WOH										
	WOH	24 / 24	OU3-B2-SB1-1012 1235 S-6			Brown	SILT - mostly silt, trace fine sand, pot. asb. pads, roots, twigs fibers (plant)	ML	Damp, pot. asbestos, soft	56.2	30.3
12'	WOH										
	WOH	24 / 24	OU3-B2-SB1-1214 1245 S-7			brown	SILT - similar to above - no visible asbestos, fewer org. fibers than above, trace fine sand	ML	Damp	122	62
14'	WOH										
	WOH / WOH	24 / 24	OU3-B2-SB1-1416 1250 S-8			brown	SILT - similar to above, few org. fibers, tr. fine sand	ML	Damp - no visual asbestos soft	59.1	26.2
16'	1/12						EOB @ 16"				

TYPE OF DRILLING RIG:	CME-850 ATV TRACK MOUNT		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25' I D HSA, 8" O.D. HSA		
METHOD OF SOIL SAMPLING:	3" BARRELS DROPPED W/300 LB HYDRAULIC HAMMER IN 18IN		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	NO WATER IN AUGERS @ 1305, BACKFILL W/BENT. SLURRY		
OTHER OBSERVATIONS:	LEVEL C-S-2 TO S-8 DRILLING 0-16' BACKFILL POT. ASB. IN THE MORE SILTY LAYERS VERSUS THE PEAT LIKE LAYERS	BORING NO.: B2-SB01	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB02
PROJECT NO.:	N7491-0320			START DATE:	8/1/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8/1/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	10.5 ft.	ELEVATION FROM:	Est. from. topo. map	CHECKED BY:	TD

DEPTH (FEET) 0	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	PID]
	1	18 / 24	OU3-B2-SB02-0002			brown	Silty SAND-mostly fine sand, some silt, trace. twigs,	SM	Dry, Crumbly, Loose	0	0.3
	1						roots, plant fibers				
	1										
2'	1		1115 S-1								
	2	12 / 24	OU3-B2-SB02-0204			brown	silty SAND, fine sand, silt, trace organic fibers, trace asphalt	SM	Oxidized-like staining	0	0.4
	4						shingles, pot. Asbestos fibers (?)		Fill, Dry		
	5										
4'	5		1120 S-2								
	2	19 / 24	OU3-B2-SB02-0406			brown-	Silty SAND, fine sand, silt, asphalt shingles, black	SM	Dry, Upgrade 1130-	0	0
	1					black	crumbly waste material, pot asbestos tiles twigs,		Fill		
	1						Roots				
6'	2		1130 S-3								
	2	21 / 24	OU3-B2-SB02-0608			brown-	Silty SAND-similar to above w/pot asbestos tiles, asphalt	SM	Damp	0	0
	3					black	shingles, vitrified clay pipe, twigs, roots		Fill		
	3										
8'	2		1140 S-4								
	1	10 / 24	OU3-B2-SB02-0810			black	SILT w/tr. fine sand, plastic sheets (flexible) non-flexible	SM	Saturated	0	0
	1						plastic sheets, asphalt shingles, asbestos like hairs, organic		Fill		
	1						hairs, twigs		Jet black		
10'	1		1150 S-5						waste coloration		
	1	24 / 24	OU3-B2-SB02-1012			brown-	S-6A (O-17") - SILT w/org. fibers, pot-black man-made waste	SM/	Damp	60	8
	2					black	material, shingles	OL?	Fill		
	4						S-6B (17-24") asphalt shingles w/silt	SM/		120	10
12'	9		1200 S-6					FILL			
	4	8 / 24	OU3-B2-SB02-1214			black	FILL - asphalt-like shingles, tr.-silt pot. cardboard fibers	SM/	Damp	0	0
	2						in shingles	FILL			
	1										
14'	1		1210 S-7								
	1	24 / 24	OU3-B2-SB02-1416			brown-	S-8A (4in) org SILT w/large fibers (plant) stems, trace	OL/	Saturated	0	0
	1					black	Shingles	FILL			
	2						S-8B (4-24) - SILT w/tr. fine thin plant fibers tr. fine sand	SM	Saturated	0	0
16'	2		1218 S-8								

TYPE OF DRILLING RIG:	CME 850 ATV TRACK MOUNT		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25' I D HAS, 8 in. O.D. HSA		
METHOD OF SOIL SAMPLING:	3 IN BARREL 300 LB HYDRAULIC HAMMER 18 INCH DROP		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	WATER @ 12.10 IN AUGERS AGS		
OTHER OBSERVATIONS:	UPGRACE TO C @ 1130 HRS, DRILL CREW DOWNGRADES 1120 FOR BREAK RESUME C @ 1230 - 1300	BORING NO.: B2-SB02	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB03
PROJECT NO.:	N7491-0320			START DATE:	7/31/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7/31/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	8.5 FT.	ELEVATION FROM:	EST. FROM TOPO. MAP	CHECKED BY:	TD

DEPTH (FEET) 0	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 PID]	
	1		OU3-B2-SB03-0002			brown	SILT, trace fine sand, roots, grasses, organic fibers	SM	Loose, dry, crumbly		
	1	17								0	*
	1										
2'	1	24	1500 S-1								
	1		OU3-B2-SB03-0204			brown	SILT, trace fine sand, some organic fibers, roots, trace	SM	Dense Dry Fill		
	1	16					Brick-like material, twigs			0	*
	2										
4'	2	24	1510 S-2								
	1		OU3-B2-SB03-0406			black	SILT, trace fine sand, some organics, grass, roots, twigs,	SM	Sheen on most shingles		
	2	9					Stems, asphalt-like shingles		moist soil fill	16.2	*
	2										
6'	1	24	1515 S-3								
	2		OU3-B2-SB03-0608			black	S-4A (0-7") SILT, w/organics, white specs-sea shells?	SM or	Moist soil holding water		
	2	24			v-soft		Roots	OL?	white specs may be from	125	*
	1				dense or	Brown-	S-4B (7-24") PEAT, fibrous laden root system	PT	shingles, strong organic		
8'	2	24	1522 S-4		stiff	black			odor		
	WOH		OU3-B2-SB03-0810			brown	PEAT, some silt, fibrous root system	PT	moist soil holding water		
		24					Trace white specs (?)		strong methane like org.	32	*
	↓										
10'	WOH	24	1530 S-5						odor		
	WOH		OU3-B2-SB03-1012			black	S-6A (0-15") PEAT and SILT w/organics	OL/	moist soil holding H_2O		
		24			Soft-			PT	strong organic odor	220	*
	↓				v-soft	Brown-	S-6B (15-24") SILT, trace organics trace fine sand	SM	Moist	0	*
12'	WOH	24	1537 S-6			black					
	WOH		OU3-B2-SB03-1214		soft	brown-	S-7 = SILT, trace organics, tr. fine sand	SM	holding water moist in		
		24				black			Soil	133	*
	↓										
14'	WOH	24	1545 S-7								
	WOH		OU3-B2-SB03-1416			black	S-8 = SILT, trace organics, tr. fine sand	SM	Very soft in one 4-in		
	WOH	24							interval-saturated-rest	42	*
	WOH								is damp-strong organic		
16'	1	24	1553 S-8						Odor		

TYPE OF DRILLING RIG:	CME 850 ATV TRACK MOUNTED		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25 in. I.D./8 in. O.D. HSA		
METHOD OF SOIL SAMPLING:	3 IN BARREL 300 LB HYDRAULIC HAMMER 18 INCH DROP		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	WATER @ 12.8 IN AUGERS AGS		
OTHER OBSERVATIONS:	AUGERS TO 14' * BATTERY CRITICALLY LOW	BORING NO.: B2-SB03	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB04
PROJECT NO.:	N7491-0320			START DATE:	7/31/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7/31/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	7.0 Ft.	ELEVATION FROM:	Est. from topo. map	CHECKED BY:	TD

DEPTH (FEET) 0	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 PID]	
	1		OU3-B2-SB04-0002			brown	SAND - fine sand, tr. silt, roots, glass pieces, concrete,	SP	Loose, dry, fill		
	2	19					debris, asphalt, twigs, tr. coarse gravel, poorly graded			0	0
	4										
2'	4	24	1258 S-1								
	3		OU3-B2-SB04-0204			brown	- similar to above w/glass shards, chunks wood	SP	Loose dry, fill		
	3	18					red cloth			0	0
	4										
4'	2	24	1309 S-2								
	1		OU3-B2-SB04-0406			Brown-	SILT w/organics, tr. fine sand, tr. gravel, peat-like	OL/	Moist/Damp		
	1	21				Black	fibers, roots, twigs	PT		60	0
	1										
6'	↓	24	1315 S-3								
	WOH		OU3-B2-SB04-0608			Brown	S-4A (0-9in) SILT-similar to above, less org., glass	OL	Damp		
	1	24					Chunks		Fill	23	0
	2					Gray-	S-4B (9-24in) SILT w/fine to med. sand and tr. organics	SM	Damp		
8'	1	24	1320 S-4			Brown	fibers, roots			0	0
	1		OU3-B2-SB04-0810			Black	S-5A (0-4") SILT w/tr. fine sand, some org fibers, stems,	SM	Damp		
	3	18					twigs, roots			10	0
	3					Gray-	S-5B (4-18") SAND, some gravel – mostly f/m sand, coarse	SP	Loose, wet		
10'	3	24	1330 S-5			brown	subrounded gravel, poorly graded tr. coarse sand, tr. silt			26	0
	2		OU3-B2-SB04-1012			brown	SAND- mostly f/m, tr. coarse sand, tr. fine subrounded gravel,	SP	saturated loose no fill		
	2	24					tr. silt, no bedding or structures			0	0
	2										
12'	2	24	1340 S-6								
	1		OU3-B2-SB04-1214			brown	SAND - similar to above, no gravel	SP	saturated loose no fill		
	2	23								0	0
	2										
14'	2	24	1350 S-7								
	1		OU3-B2-SB04-1416			brown	SAND - similar to above w/coarse sand and tr. coarse	SP	saturated loose no fill		
	3	24					gravel at base of spoon			0	0
	3										
16'	4	24	1400 S-8				EOB @ 16' AUGERS TO 14'				

TYPE OF DRILLING RIG:	CME 850 ATV TRACK-MOUNTED.		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25' I.D. HSA 8 IN. O.D. HSA		
METHOD OF SOIL SAMPLING:	3 IN BARREL 300 LB HAMMER 18 INCH DROP		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	WATER IN AUGERS @ 6.20 FT BGS		
OTHER OBSERVATIONS:		BORING NO.: B2-SB04	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB05
PROJECT NO.:	N7491-0320			START DATE:	7/30/98
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7/30/98
DRILLED BY (Company/Driller):	ATL MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	2.5 FT.	ELEVATION FROM:	Est. from topo. map	CHECKED BY:	TD

DEPTH (FEET) 0	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	PID]
	1/12 in	18 / 24	OU3-B2-SB5-0002			brown	S-1 (0-8in) organic SILT w/ fine sand (trace) - large phragmite stems, grass, roots, twigs, org. (some)	OL/PT	3 in. recov. initial - relocated 2nd spoon w/recov., v. soft	0	2.9
2'	1/12 in		1320 S-1						(2 spoons), damp		
	WOH	3 / 24	OU3-B2-SB5-0204			brown	S-2 (0-3) organic SILT - similar to above	OL	Empty initially – retried barrel + spoon not much v. soft damp	0	2.6
4'	WOH		1330 S-2								
	WOH	0 / 24	OU3-B2-SB5-0406				S-3 No Recovery		No recovery		
6'	WOH		1340 S-3								
	WOH	9 / 24	OU3-B2-SB5-0608			Black	S-4 (0-9in) similar to S-2 w/ manufactured waste (sludge-like paste) and organics	OL/ FILL	Potential fill w/ glass like fibers - pot. asbestos, v. soft (wet)	0	2.8
8'	WOH		1345 S-4								
	WOH	6 / 24	OU3-B2-SB5-0810			Black	S-5 (0-6) similar to S-4	OL/ FILL	More fill, very soft wet	0	3.2
10'	WOH		1350 S-5								
	WOH	10 / 24	OU3-B2-SB5-1012			Black	S-6 (0-10) similar to above w/ more fine sand and pot. asbestos waste - hair like material	OL/ FILL	No basket used to try and get more recovery, wet	0	13.3
12'	WOH		1400 S-6				black pot. manufactured waste				
	WOH	12 / 24	OU3-B2-SB5-1214			Black	S-7 (0-12) SILT, some fine sand trace fine organic fibers	SM	No waste observed	0	0.2
14'	WOH		1420 S-7								
	WOH	24 / 24	OU3-B2-SB5-1416			black	S-8 (24 in) organic SILT, trace fine sand, organic fibers, twigs	OL? SM?	No visible waste, soft to v. soft wet	0	0.3
16'	WOH		1430 S-8				EOB @ 16'				

TYPE OF DRILLING RIG:	CME-850 TRACK MOUNTED ATV RIG		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25' I D HSA 8 in OD Has		
METHOD OF SOIL SAMPLING:	3 IN. SPLIT-SPOON DRIVEN WITH A 300 LB. HAMMER W/18 IN. DROP		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	NO WATER IN BORING @ 1435 HRS		
OTHER OBSERVATIONS:		BORING NO.: B2-SB05	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB06
PROJECT NO.:	N7491-0320			START DATE:	7/31/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7/31/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	3.0 FT.	ELEVATION FROM:	Est. from topo. map	CHECKED BY:	TD

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]
	1/12 IN.	6	OU3-B2-SB6-0002			brown	Fibrous, organic, root mat, twigs		Difficult to recover - twigs, vegetation in way of	0	0
2	W.O.H. / W.O.H.	24	0850 S-1						sample capture. Damp.		
	W.O.H.	8	OU3-B2-SB6-0204		Very Soft	brown	Org. SILT – mostly silt, organic fibers,	OL	Saturated	2.2	0
4	W.O.H.	24	0856 S-2				TR fine sand				
	1 / 2	15	OU3-B2-SB6-0406			Gray-brown	S-3A (0-9") gravelly SAND - f/c sand, coarse gravel, Well graded, loose	SW	Saturated, seashells Loose	9.2	15.4
6	2 / 1	24	0900 S-3		Soft	brown	S-3B (9-24") SILT, tr. fine sand, tr. organic fibers	SM ML (?)	Damp	1.1	10.1
	1 / 2	9	OU3-B2-SB6-0608			Gray-brown	S-4 gravelly SAND - similar to S-3A	SW	Saturated, loose	0	8.1
8	1/12 IN.	24	0910 S-4								
	1 / 1	19	OU3-B2-SB6-0810			brown	S-5 gravelly, silty, SAND w/ organic fibers - f/c sand, trace coarse gravel, some silt	SM	Saturated, loose	0	10
10	1 / 1	24	0916 S-5								
	1 / 2	13	OU3-B2-SB6-1012			brown	S-6 sandy SILT, tr. gravel, f/m sand, tr. coarse gravel, tr. clay	SM	More silt than sand Saturated, loose	0	12.4
12	2 / 2	24	0925 S-6								
	3 / 6	24	OU3-B2-SB6-1214			brown	S-7A (0-12 in) sandy SILT, some gravel & f/m sand	SM	More gravel than in S-6 Saturated	0	6.4
14	5 / 4	24	0935 S-7			Gray-brown	S-7B (12-24 in) gravelly SAND, tr. silt, f/c sand & coarse gravel	SW	Fighting running sand. Sand up to 20 in. in flights		
										0	7.8
							EOB @ 14' W/SPOON @ 12' W/AUGER				

TYPE OF DRILLING RIG:	CME-850 TRACK-MOUNTED ATV RIG.		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25' I D HSA 8" OD		
METHOD OF SOIL SAMPLING:	3 IN. BARREL 300 LB HAMMER (HYDRAULIC) DROP 18 IN		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	NO WASTE OBSERVED. WATER 2.70 FT BGS W/INDICATOR IN AUGER		
OTHER OBSERVATIONS:	BACKFILL W/ BENTONITE SLURRY	BORING NO.: B2-SB06	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB07
PROJECT NO.:	N7491-0320			START DATE:	7/30/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	7/30/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS (ATL)			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	6.0 ft.	ELEVATION FROM:	Est. from topo. map	CHECKED BY:	TD

DEPTH (FEET) 0	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]
	1 1	14	OU3-B2-SB07-0002			Brown	SAND – poorly graded f/m, trace silt, trace coarse gravel, grass roots, 1 piece wood	SP	Dry – top soil, loose	0	
2	1 2	24	0800 S-1								
	1 1	17	OU3-B2-SB07-0204	2'		Gray-Brown	SAND, some silt, trace coarse gravel (F/M sand, tr. coarse sand, trace roots)	SP-SM	Dry, tighter than above	0	
4	1 1	24	0810 S-2								
	1 1	24	OU3-B2-SB07-0406			Brown	S-3A (0-7in) SAND f/m poorly graded sand , loose roots	SP	Damp, oxidized (red stain), damp	0	
6	1 1	24	0820 S-3			Black	S-3B (7-14") org SILT ,fine gray sand w/ (1/4 thick) laminations low plasticity	OL		0	
	1 ↓	24	OU3-B2-SB07-0608			Brown-black	S-4A (0-5in) org SILT w/ fine med. sand, roots	OL	Sand is red-brown	0	
8	1 ↓	24	0830 S-4				S-4B (5-24in) PEAT - organic material, fibrous root Structure comminuted vegetative tissue	PT	Dense root system, wet	46.5	2.8
	1 1	15	OU3-B2-SB07-0810			Gray-Brown	S-5 (0-15in) SAND, some silt, tr. gravel (coarse), fine sand, tr. Organics (roots)	SP-SM	Damp - lot of seashells	2.7	0.3
10	1 3	24	0840 S-5								
	1 ↓	24	OU3-B2-SB07-1012			Gray-Black	S-6A (0-6") Organic SILT	SM/ OL	No shells observed, no gravel, damp higher plasticity @ top than at base	1.8	0.7
12	1 ↓	24	0850 S-6				S-6B (6-24) org. SILT at top, soft to very soft silty some fine sand, organics (roots)				
	1 6	23	OU3-B2-SB07-1214			Black	S-7A organic SILT, some sand, root matter, soft, very soft	OL (?) SM	similar to above, damp	0	12.7
14	2 2	24	0900 S-7			Black	S-7B SAND (fine), some silt, dense material	SM			
	1 2	16	OU3-B2-SB07-1416			Black Black	S-8A (0-9") similar to S-7B S-8B (9-14")SAND & GRAVEL, coarse,subround gravel, f/c	SM SW-GW	9-14" - coarse sand interval, wet	0	0.3
16	1 4	24	0910 S-8			black	Sand S-8C (14-24) similar to S-8A EOB 16' augers to 14'	SM			

TYPE OF DRILLING RIG:	CME 850 ATV TRACK-MOUNTED		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25' I D HSA 8 IN OD		
METHOD OF SOIL SAMPLING:	3" SPOON, 18" DROP, 300 LB HAMMER (HYDRAULIC)		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	8.3' WATER LEVEL THROUGH AUGERS @ 0920		
OTHER OBSERVATIONS:	BACKFILLED W/ BENTONITE SLURRY	BORING NO.: B2-SB07	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB08
PROJECT NO.:	N7491-0320			START DATE:	8/12/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	FMD	COMPLETION DATE:	8/12/97
DRILLED BY (Company/Driller):	ATL / MARK CHILDS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	5.5 FT.	ELEVATION FROM:	Est. from topo. map	CHECKED BY:	TD

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	2 2	6"	OU3-B2-SB08-0002		Very Loose	Mottled Red +	Thick phragmites @ surface, phrag. roots below surface w/ some sandy silt matrix, trace glass fragments	SM	1st attempt – 1" recovery, phrag. roots blocked nose	
	1 1	24"	1720 S-1			Dark. Gray	from 0-4 "		re-try @ EOB. glass 0-4"	0.0
2	2 2	16"	OU3-B2-SB08-0204			Gray-Brown	SILT, trace fine sand, phragmites roots as well as finer plant roots noted.	ML	H2S odor very strong, Soft, basket fingers	0.0
	2 1	24"	1550 S-2	4ft. 2 in.					squeezing sample.	
4	1 1	24"	OU3-B2-SB08-0406	Peat			S-3A = 2" similar to above, S-3B = 22" PEAT, mostly phragmites roots + stalk fragments	PT	Wet - saturated	326
	1 1	24"	1605 S-3				in silt matrix			
6	1 1	11"	OU3-B2-SB08-0608	Silt			SILT tr. fine sand, few-little plant fibers and roots, also shell fragments and glass fragments (clear)	ML	Glass fragments - saturated	7.5
	1 1	24"	1620 S-4							
8	W.O.H. W.O.H.	17"	OU3-B2-SB08-0810				S-5A = 8" - similar to S-4 above. S-5B = 9" - silt. trace fine sand, no plant or shell frag.		Saturated	5.9
	1 1	24"	1628 S-5				High mica content		1 lg. Phrag. Root in S-5A	
10	W.O.H. W.O.H.	18"	OU3-B2-SB08-1012							220
	1 1	24"	1640 S-6				Tr. Shells and plant fibers		marine deposits	20
12	W.O.H. W.O.H.	24"	OU3-B2-SB08-1214				marine sed. deposits			
	1 1	24"	1650 S-7				tr. Plant debris – very fine, not whole			
14	W.O.H. 1	18"	OU3-B2-SB08-1416				(comminuted)			28
16	1 1	24"	1710 S-8							

EOB @ 16'

TYPE OF DRILLING RIG:	CME-45 SKID RIG		*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 W/18" FALL		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	NOT MEASURED		
OTHER OBSERVATIONS:		BORING NO.: B2-SB08	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SB09
PROJECT NO.:	N7491-0320			START DATE:	7/30/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	FMD	COMPLETION DATE:	7/30/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	3.0 Ft.	ELEVATION FROM:	Est. from topo. map	CHECKED BY:	TD

DEPTH (FEET) 0	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]
	1/12 in.	21	OU3-B2-SB9-0002			brown	S-1A (0-6 in) SAND, fine, dry, loose, grass, roots, trace organic material	SP	top soil, grasses, dry	2.7	0
2	1/12 in.	24	1100 S-1			black	S-1B (6-24in) silty SAND w/ organic plant tissue, roots, phragmite stems, fine sand	SM	org. silt?, damp bottom	0	0
		23	OU3-B2-SB9-0204			black	S-2A (0-12in) org. SILT/PEAT-fibrous tissue, phragmite stems f/m sand fine.	OL (?)	dry @ top, damp at bottom	0	0
4	1/12 in.	24	1110 S-2			black	S-2B (13-24) SAND, some silt, f/m sand poorly graded. w/organics	SP	saturated at ~1', (interval only)	0	0
	1/12 in.	21	OU3-B2-SB09-0406			black	S-3A (0-12) SAND, some silt, f/m sand, poorly graded. w/organics	SP	wet	14.3	8.2
6		24	1120 S-3			brown black	S-3B (12-24) PEAT - organic material, fibrous	PT	can squeeze water out wet	0	0
	WOH WOH	24	OU3-B2-SB09-0608			black	S-4A (0-10in) org SILT, some fine, sand, organic roots	OL	saturated, very soft	0	0
8	1 1	24	1130 S-4			black	S-4B (10-24) PEAT, organic fibers some silt, trace fine sand	PT	seashells	75.2	23.8
	WOH WOH	23	OU3-B2-SB09-0810			black	S-5A (0-10in) similar to S-4A organic roots	OL		0	3.0
10	1 1	24	1140 S-5			black	S-5B (10-23in) silty fine SAND, some sand fine, tr. org.	SM OL (?)	dry, dense, crumbles, tr. seashells	1.0	2.9
	WOH WOH	23	OU3-B2-SB09-1012			black	S-6 (0-23in) similar to S-5B tr. org.	SM OL (?)	no seashells	0	1.2
12	WOH 1	24	1146 S-6			↓					
	WOH WOH	24	OU3-B2-SB09-1214			black	S-7 (0-24in) similar to S-6, few organic, fine sand, silty, fine SAND	SM (?) OL (?)	very soft @ top, dense at bottom	14.9	10.9
14	WOH 1	24	1200 S-7								
	WOH WOH	24	OU3-B2-SB09-1416			black	S-8 (0-24in) similar to S-7 w/ tr. organics, tr. twigs	SM OL (?)	wet	45.3	8.9
16	WOH WOH	24	1210 S-8								

EOB @ 16'

TYPE OF DRILLING RIG:	CME 850 ATV TRACK MOUNTED		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25 IN ID HSA 8 IN OD AUGERS TO 14' SB TO 16'		
METHOD OF SOIL SAMPLING:	3" SPLIT BARREL W/ 300 LB HAMMER (HYDRAULIC) 18 IN DROP		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	1155 HRS WATER NO IN HOLE YET, CHECKED AGAIN - NO WATER ENTERED HOLE @ 1230		
OTHER OBSERVATIONS:	BACKFILL W/ BENT. SLURRY	BORING NO.: B2-SB09	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD01
PROJECT NO.:	N7491-0320			START DATE:	8-6-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8-6-97
DRILLED BY (Company/Driller):	Aqua Survey/J. Nickel			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	Below water in Ferry Creek	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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]
	N.A.		OU3-B2-SD01-0002 1455		Very Soft	Jet BLK	S-1 organic SILT, leaves, twigs, fibrous, organic matter	OL	Saturated petroleum-like odor w/petroleum-like sheen on water on top of sample	0
2			S-1				(Potential asbetos)			
			OU3-B2-SD01-0204 1500		Soft		S-2 Man-made fibers observed			0
4			S-2							
			OU3-B2-SD01-0406 1502				S-3 No fibrous mat noted			0
6			S-3							
7			OU3-B2-SD01-0607 1503 S-4				S-4			6.4
							Note: Jet black coloration may be due to a potential petroleum impact to the sediment. One portion of the core had a gray brown coloration			

TYPE OF DRILLING RIG:	VIBRACORE SETUP	PENETRATED 7'		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:		RECOVERED 6.4'		
METHOD OF SOIL SAMPLING:		0.9' CORE = 1 FT LOG		
METHOD OF ROCK CORING:		CORE PULLED OUT: 1340		
GROUNDWATER LEVELS:		SAMPLES FOR ANALYTICAL 0 – 2-4'		
OTHER OBSERVATIONS:	SATURATED	NO VOC'S FOR ANALYSIS	BORING NO.: B2-SD01	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD02
PROJECT NO.:	N7491-0320			START DATE:	8/6/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/6/97
DRILLED BY (Company/Driller):	Aqua Survey/Jim Nickel			MON. WELL NO.:	
GRD. SURFACE ELEVATION	Below water level in Ferry Creek	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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* = [PID	FI D]
			OU3-B2-SD02-0002		Very Soft	Jet-Blk	Org SILT, few stems, roots. tr. twigs, tr. leaves, petroleum stain visible	OL	Petroleum-like odor, organic decay odor no visible asbestos fiber	10.4	1100
2			1550 S-1								
			OU3-B2-SD02-0204		Very Soft		Org SILT w/potential soil waste material and potential or suspect asbestos fibers	OL/FILL	Petroleum-like odor with olefactory; org. odor pot. Asbestos fiber	21.2	1310
4			1555 S-2					WASTE			
					Very Soft		Resembles soil manufact. sludge like waste with silt (organic) w/pot. asbestos fibers - similar to above	Ol/ WASTE or WASTE	Pot. Asbestos fibers (don't appear to be org.) waste does not stick to fibers. Petroleum like odor	10.4	2545
6			1600 S-3								
7					Soft	6.5	SILT, trace fine sand, trace organic fibers	ML	no petroleum -like odor (pot. Natural)	0	140
8			1605 S-4			Dark brown					
9					Soft			ML	no petroleum-like odor (pot. natural)	0	140
			1610 S-5								

TYPE OF DRILLING RIG:	VIBRACORE SET UP	1515 HRS CORE PULLED OUT		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:		PENETRATED –9'		
METHOD OF SOIL SAMPLING:		RECOVERED – 7'		
METHOD OF ROCK CORING:		0.8' – 1 BG		
GROUNDWATER LEVELS:	SATURATED INTERVAL – 0 – 6.5'	POTENTIAL PETROLEUM IMPACT OF SAMPLE POT.		
OTHER OBSERVATIONS:	6.5 – 7' DAMP	ASBESTOS SAMPLE 2-4'	BORING NO.: B2-SD02	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD04
PROJECT NO.:	N7491-0320			START DATE:	8-7-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8-7-97
DRILLED BY (Company/Driller):	Aqua Survey/J. Nichols			MON. WELL NO.:	
GRD. SURFACE ELEVATION	Below water in Ferry Creek	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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 only]
	NA		OU3-B2-SD04-0002		very soft	black	S-1 Org. SILT, suspect pot-asbestos core , tr. organic roots, trace seashells, petroleum-like odor and sheen	OL/ WASTE	Petroleum-like odor and sheen, pot. asbestos fibers pot. soil waste material (sludge-like)	102-486
2			1606 S-1							
			OU3-B2-SD04-0204		very soft	black	S-2 Org. SILT, suspect pot. asbestos fibers some , trace organic fibers, leaves, roots, potential soil waste sludge-	OL/ WASTE	Petroleum-like odor strong and sheen, pot. asbestos pot. soil waste material (sludge-like)	2200-3600
4			1611 S-2				like material, phragmite fibers			
			OU3-B2-SD04-0406		soft	black	S-3 Org. SILT, similar to above w/fewer visible pot. Asbestos fibers and more organic fibers roots, twigs,	OL/ WASTE	Petroleum-like odor & sheen pot. asbestos, pot. Soil waste sludge like material not as soft as above	103-929
6			1617 S-3				Phragmite fibers			
7			OU3-B2-SD04-0607 1624 S-4		soft	black	S-4 - 6-7' Org. SILT. similar to above w/ more org. root twigs, leaves, roots and fewer pot. Asbestos fibers than	OL/ WASTE	similar to above fewer pot. asbestos fibers visible than above	2700
							above			
							Note: Observed that the pot. asbestos fibers appear to			
							repel any soil like material - nothing sticks to them in the silt material or waste.			

TYPE OF DRILLING RIG:		PULLED CORE @ 1425 HRS	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:		SAMPLE INTERVAL = 2-4'	
METHOD OF SOIL SAMPLING:		PENETRATION = 7"	
METHOD OF ROCK CORING:		RECOVERY = 5.7	
GROUNDWATER LEVELS:		1' LOG= 0.8'	
OTHER OBSERVATIONS:		SATURATED ENTIRE LENGTH	BORING NO.: B2-SD04

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD04D
PROJECT NO.:	N7491-0320			START DATE:	8-7-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8-7-97
DRILLED BY (Company/Driller):	Aqua Survey/J. Nickels			MON. WELL NO.:	
GRD. SURFACE ELEVATION	Below water in Ferry Creek	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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]
					Very Soft	BL	Org. SILT, pot. asbestos fibers, some org. fibers (short, thin) pot. soil waste mixture	OL/ WASTE	Strong petroleum like odor and sheen, pot. Asbestos fibers	1.5-1648
2			1636 S-1							
					Very Soft	BL	Org. SILT, pot. soil waste material (sludge-like) some suspect Suspect pot. asbestos fibers, saturated, org. fibers (thin, short	OL/ WASTE	Strong petroleum like odor and sheen, pot. Asbestos fibers sludge like waste resemblance	165-3276
4			1643 S-2				Short fibers)			
					Soft	BL	↓ Similar to above w/pot. Asbestos soil waste material, more organic roots, twigs, leaves, stems than above	OL/ WASTE	Stiffer than above similar pot. Asbestos and petroleum like odor and sheen	1142-2500
6			1650 S-3							

TYPE OF DRILLING RIG:	VIBRACORE	**FIELD DUPLICATE LOCATION LOCATED ADJACENT TO SEDIMENT LOCATION B2-SD04**		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:				
METHOD OF SOIL SAMPLING:		SAMPLE INTERVAL 2-4'	**(1' LOG = 0.93)**	
METHOD OF ROCK CORING:		PULLED CORE @ 1515		
GROUNDWATER LEVELS:		PENETRATED – 6'		
OTHER OBSERVATIONS:	SATURATED	RECOVERY 5.6'	BORING NO.: B2-SD04D	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD05
PROJECT NO.:	N7491-0320			START DATE:	8-6-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8-6-97
DRILLED BY (Company/Driller):	Aqua Survey/J. Nickels			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	Below water in Ferry Creek	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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* = [PID	FID]
			OU3-B2-SD05-0002		Very Soft	BL	Org. SILT w/ potential waste material (sludge-like paste) Paste) trace organic fibers, twigs	OL/ WASTE	Suspect asbestos fiber matierial – waste does not cling to them. Strong org. odor	52.2	2842
2			1730 S-1							33.5	> 3460*
			OU3-B2-SD05-0204		Very Soft		Few twigs – similar to above w/pot. Asbestos fiber Waste and other waste (sludge-like)	OL/ WASTE	No petroleum-like odor Obvious		
4			1735 S-2							19.6	> 3460
			OU3-B2-SD05-0406		Very Soft						
6			1740 S-3	7'				OL/ WASTE	Pot. asbestos. fibers	10.9	> 3460
			OU3-B2-SD05-0608		Soft		SILT, trace fine sand, trace seashells, trace organic fibers	ML	No suspect asbestos fibers visible, no petroleum-like odor Strong organic odor		
8			1745 S-4			dark brown					
9			OU3-B2-SD05-0810		Soft						
			1750 S-5				S-5				

TYPE OF DRILLING RIG:	VIBRACORE SET-UP	PENETRATION – 9"	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:		RECOVERY – 7.5'	
METHOD OF SOIL SAMPLING:		PULLED CORE @ 1620	
METHOD OF ROCK CORING:		SAMPLE INTERVAL 0-2'	
GROUNDWATER LEVELS:	SATURATED	POT. ASBESTOS 0-7" FT. BGS.	
OTHER OBSERVATIONS:		* = DEFAULT MAX. SIGNAL FOR INSTRUMENT	BORING NO.: B2-SD05 — PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK-OU3-FERRY CREEK			BORING NO.:	B2-SD06
PROJECT NO.:	N7491-0320			START DATE:	8-7-97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION: DATE:	8-7-97
DRILLED BY (Company/Driller):	Aqua Survey / J. Nickels			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	Below water in Ferry Creek & Housatonic River	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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)]
			OU3-B2-SD06-0002		Very Soft	Black	S-1 – Organic SILT, trace roots, trace leaves, some pot. Or suspect asbestos fibers, petroleum-like odor	OL/ WASTE	Sweet odor, pot. Soil waste material (sludge like) petroleum-like sheen on water in sample. Sheen too.	865.2
2			1420 S-1							
			OU3-B2-SD06-0204		Very Soft	Brown	S-2 (2-4) Org. SILT , similar to above, suspect asbestos Fibers (some) trace org. fibers, petroleum like odor	OL/ WASTE	No suspect fibers in S-3B viewed sheen too.	1051
4			1428 S-2	3.5'		Brown	S-3A (4-4.3) SILT, trace fine sand, trace seashells, trace Twigs and roots	ML		937
			OU3-B2-SD06-0406		Very soft	Black	S-3B (4.3-6) org. SILT, trace fine sand, some roots, twigs Leaf matter and pot. Asbestos fibers. Coal pieces & cunker	OL/ WASTE	Suspect fibers in S-3B petroleum-like odor/ sheen. Heavy or strong petroleum odor	312
6			1435 S-3	5.5			S-4A (6-6.5) org. SILT w/suspect asbestos fibers – similar To above no charcoal, some leaves, twigs, roots	OL/ WASTE		
			OU3-B2-SD06-0608		Very Soft	Black	S-4B (6.5-7') silty SAND some fine/med. Sand, some silt, tr. Trace seashells	SM	No visible suspect asbestos fibers, no petroleum like odor	52.7
8			1440 S-4	7.1						
9			OU3-B2-SD06-0809 1445 S-5		Medium dense	Brown	S-5 (8-9') silty SAND – similar to above no suspect fibers Visible.	SM		

TYPE OF DRILLING RIG:	VIBRACORE SET UP	PENETRATION – 9'	SATURATED 0-3'
METHOD OF ADVANCING BORING:		RECOVERY – 7.1'	DAMP – 3'-7'
METHOD OF SOIL SAMPLING:		PULLED CORE @ 1320	
METHOD OF ROCK CORING:		SAMPLE INTERVAL 0-2'	
GROUNDWATER LEVELS:		1 log = 0.8'	
OTHER OBSERVATIONS:		BORING NO.:	B2-SD06

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD07
PROJECT NO.:	N7491-0320			START DATE:	8-8-97
LOGGED BY:	KAYLEEN JULKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8-8-97
DRILLED BY (Company/Driller):	AQUA SURVEY/ J. NICKLES			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	Below water in Ferry Creek & Housatonic	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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]
			OU3-B2-SD08-0002		Very Soft	Black	MUCK, mostly fines., tr. suspect, pot. asbestos fibers, trace roots and twigs	OL/ MUCK	saturated; org. odor, petroleum sheen (tr.), visible trace suspect fibers	1100
2			1220 S-1							
			OU3-B2-SD08-0204	3'			S-2A (2-3') similar to above tr. pot. asbestos	OL/ MUCK		70-1400
4			1225 S-2	4'	Soft	black	S-2B (3-4') SILT, trace f/m sand, tr. root matter, tr. suspect asbestos fibers	ML	stiffer than S-2A trace,pot asbestos	
			OU3-B2-SD08-0406			brown	S-3 (4-6') SAND - mostly fine, tr. med sand, tr. org. fibers, most matter stems, brok. seashells, wood	SP	light petroleum-like odor sheen visible, saturated	0-15 bottom of
6			1230 S-3	6'					no visual suspect fibers	
			OU3-B2-SD08-0608	6.5' 7'		brown	S-4A (6-6.5') SAND, tr. silt, f/m sand, poorly graded	SP	no petroleum like odor, No visual suspect fibers	0
8			1235 S-4			Light brown	S-4B (6.5-7') sandy, GRAVEL f/m sand, some coarse sand, coarse rounded + sr gravel up to 3 in., tr. silt	GW	Saturated gravel, no Suspect fibers visible	
8.5			Not present in core barrel brought back			Yellow-brown	S-4C (7-8') sandy, GRAVEL – similar to above w/ more gravel (rounded + subrounded), w/more silt than above but still trace	GW	3 very large (~4in) cobbles	Not avail. to screen
							8-8.5' not present			

TYPE OF DRILLING RIG:	VIBRACORE SET-UP	PENETRATION – 8.5	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:		RECOVERY – 6.7'	
METHOD OF SOIL SAMPLING:		PULLED CORE @ 1015	
METHOD OF ROCK CORING:		SAMPLE INTERVAL 0-2', 4-6'	
GROUNDWATER LEVELS:		1' log = 0.8' core	
OTHER OBSERVATIONS:		BORING NO.: B2-SD07	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD08
PROJECT NO.:	N7491-0320			START DATE:	8/11/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION: DATE:	8/11/97
DRILLED BY (Company/Driller):	AQUA SURVEY / J.NICKELS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	Below water in Ferry Creek & Housatonic River	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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)]
			OU3-B2-SD08-0002		Very soft	black	S-1 MUCH, tr. Seashells (vivalve), tr. Organic fibers, tr. Visible suspect asbestos fibers	OL MUCK	Saturated, strong pot. Asbestos H_2O odor.	108 ppm
2			1025 S-1							
			OU3-B2-SD08-0204			Black	S-2 similar to above w/tr. Fine sand or tr. Visible suspect Asbestos fibers, tr. Org. fibers	MUCK	One shell-strong H_2S odor, petroleum-like sheen, no petroleum-like odor	670-948
4			1035 S-2	4'						
			OU3-B2-SD08-0406		soft	Brown	S-3 SILT, trace fine sand, tr. Organic fibers, roots, twigs, Stems	ML	No shells, no visible suspect fibers or waste material	206-658
6			1040 S-3	6'						
			OU3-B2-SD08-0608			Black	S-4, silt some fine.med. sand, strong petroleum-like Odor, visible suspect asbestos fibers (some) tr. Org.	ML	Petroleum-like odor, strong & visible suspect fiber, petroleum-like sheen	1900-2700
8			1045 S-4	8'						
9			OU3-B2-SD08-0810 1050 S-5	8.5' sand			S-5A (8-8.5) sandy SILT, tr. To some f/m sand, some silt, Some oyster shells (bed), tr. Visible asbestos fibers	ML	Pot. Asbestos fibers, trace organic fibers – stems, roots strong petroleum odor & no visible suspect fibers, strong petroleum-like odor	1173
						Gray-Brown	S-5B (8.5-9) SAND, tr. Silt, some f/m sand, some oyster Shells (bed)	SP		

TYPE OF DRILLING RIG:	VIBRACORE SET-UP	PENETRATION – 9	Extra samples collected for Atterburg and G.S. 6.5-8.5-9' per K.O.
METHOD OF ADVANCING BORING:		RECOVERY – 7.5	
METHOD OF SOIL SAMPLING:		PULLED CORE @ 0830	
METHOD OF ROCK CORING:		SAMPLE INTERVAL 0-2, 4-6	
GROUNDWATER LEVELS:		1' LOG = 0.83' CORE	
OTHER OBSERVATIONS:	DUPLUCATE FOR DIOX, TOC, GS, ATTERBURG FROM SAME CORE & SAMP. INTERVAL (0-2")(1300 HRS)		BORING NO.: B2-SD08

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD09
PROJECT NO.:	N7491-0320			START DATE:	8/06/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/06/97
DRILLED BY (Company/Driller):	AQUA SURVEY/ JIM NICKELS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	Below water in Ferry Creek & Housatonic River	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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* = [PID]
			OU3-B2-SD09-0002			Gray-Black	S-1 SAND, mostly fine sand, tr. med sand, tr. silt, some shells	SP	Oyster shells - bed, clam shells - bed	36.6 ppm
2			1255 S-1							
			OU3-B2-SD09-0204			Gray-Black	S-2A (2-3.2') SAND, tr. silt, similar to above tr. twigs	SP	Similar shells w/ razor clams	17.0
4			1305 S-2		Soft	Dark Brown	S-2B (3.2-4') SILT, tr. fine sand, tr. org fibers, no Shells	ML	organic odor (decay) fail ribbon test, non plastic	39.3
			OU3-B2-SD09-0406			Dark brown	S-3 SILT, tr. fine sand and tr. org. fibers, no shells	ML	Organic odor (decay) Can roll out 1/4 in. w/o breaks	56.1
6			1320 S-3		Soft					
			OU3-B2-SD09-0608		Soft	Dark Brown	S-4 SILT, tr. fine sand, tr. org. fibers, similar to above	ML	Can't roll out 4 1/8 rapid Reach on to wet test	15.4
8			1325 S-4						↓	
			OU3-B2-SD09-0810			Dark brown	S-5 SILT, similar to above	ML	↓	17.2
10			1340 S-5							

TYPE OF DRILLING RIG:	VIBRACORE RIG	SAMPLES FROM 0-2, 4-6	*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:		10' CORE W/8' RECOVERY DUE TO COMPACTION/COMPRESSION	
METHOD OF SOIL SAMPLING:		PER KO 2' = 1.6 OF BAG	
METHOD OF ROCK CORING:		0.8' = 1 FT OF CORE	
GROUNDWATER LEVELS:		1150 HRS CORE PULLED OUT	
OTHER OBSERVATIONS:		BORING NO.: B2-SD09	PAGE 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	B2-SD10
PROJECT NO.:	N7491-0320			START DATE:	8/07/97
LOGGED BY:	KAYLEEN JALKUT	TRANSCRIBED BY:	MES	COMPLETION DATE:	8/07/97
DRILLED BY (Company/Driller):	AQUA SURVEY/J. NICKELS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:	Below water in Ferry Creek & Housatonic River	ELEVATION FROM:		CHECKED BY:	TD

DEPTH (FEET) 0	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* = [PID	FID]
			OU3-B2-SD10-0002		Very Soft	Black	Org. SILT, trace fine sand, oyster shells (some), some roots, twigs	OL	Shell bed on top, no Petroleum-like odor, org.	5	0
2			1135 S-1						decay odor		
			OU3-B2-SD10-0204	2.0'		Black	S-2A (2.0-2.2') silty SAND - fine sand, tr. med. sand, oyster shells tr. org. fibers	SM	Org. odor, no petroleum Like odor	23.2	0
4			1140 S-2			brown	S-2B (2.2-5') SILT trace org. fibers, tr. fine sand	ML	Damp, org. decay odor, no petroleum-like odor	14.8	0
5			OU3-B2-SD10-0405								
			1145	EOB							
							Note: no visible pot. or suspect asbestos fibers viewed, no waste material obvious.				

TYPE OF DRILLING RIG:	VIBRACORE RIG	PENETRATED – 5'		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:		RECOVERY – 4.3'		
METHOD OF SOIL SAMPLING:		PULLED CORE @ 1005		
METHOD OF ROCK CORING:		SAMPLE INTERVAL 0-2, 2-4+		
GROUNDWATER LEVELS:		SATURATED TOP TO 2.2' DAMP 2.2-END		
OTHER OBSERVATIONS:		0.9' CORE = 1' LOG	BORING NO.: B2-SD10	PAGE 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	D-SB01
PROJECT NO.:	N7491-0320	START DATE:	7-15-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	
COMPLETION DATE:	7-15-97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS	MON. WELL NO.:	
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
CHECKED BY:	

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* = [PID, PPM]
0	12 33	1.35	OU3-D-SB01-0002		Med. Dense	brown	Gravelly, SAND. mostly poorly graded	SP	Dry concrete, slag + cobbles	8.2
	26 20	2.0	0855 S-1		Dense		f/m sand, trace silt, trace slag + concrete fill (slag is vesicular		HSA grinding + catching on cobbles	
2	15 18	0.4	-0204		Med. Dense					10
	16 8	2.0	0905 S-2							
4	24 25	1.7	-0406		Med. Dense	Gray to BLK	Gravel. Few - some fine to coarse sand, trace silt very dense	GM	Wet - moist in nose, broke sampler, had to cut open. HSA to 7.0' w/out sample to get by obstruction	12
	29 53	2.0	0930 S-3							
7	49 56	1.45	-0709		Very Dense	Yellow Orange to Brown	Saprolite ? or coarse gravel, trace few silty, fine sand, gravel size fragments are easily broken apart with fingers			
8.5	100/5"	1.45	1000 S-4						Fill?	
							EOB @ 9,3' bgs.		HSA to 9.3' no let up in grinding. No break through	
							Move approx. 10-15' + re-attempt boring			

EOB @ 9.3 BGS

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25" ID HSA		
METHOD OF SOIL SAMPLING:	3" OD SPLIT-BARREL DRIVEN WITH A 300 LB HAMMER		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:	WATER @ 8.1' BGS W/AUGERS @ 9.3'		
OTHER OBSERVATIONS:		BORING NO.: D-SB01	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	D-SB02
PROJECT NO.:	N7491-0320			START DATE:	7/14/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	RAC	COMPLETION DATE:	7/14/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:		ELEVATION FROM:		CHECKED BY:	

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* = [PID, PPM]
0	2 5	1.8	OU3-D-SB02-0002	Gravel + Sand		brown	S-1A 0-.6' = gravelly, sand, fill. trace silt , trace glass		matrix is held together w/ long asylcular asbestos like fibers dry	0
	5 4	2.0	1515 S-1			dark brown	S-1B .6-2.0 = fill, silty sand, poorly graded sand w/ red paint or pigment, asbestos fibers	SM ML		
2	4 4	2.0	-0204			Dark brn Gray w/red blotches	Similar to S-1B, more silt than sand, very high amount of fibers and dark red pigment		dry fill	0
	4 4	2.0	1540 S-2						moist, damp fill	
4	1 2	2.0	-0406							1.1 ppm
	1 1	2.0	1550 S-3	Fill						
6	4 4	1.3	-0608						fill	0.6
	4 5	2.0	1605 S-4							
8	9 14	1.1	-0810	8.5'		Light Gray	sand -f/m poorly graded trace fine gravel, trace metal	SP	Saturated fill	0.3
	11 10	2.0	1610 S-5							
10	9 19	1.65	-1012			Black	sand, well graded f-c sand, trace silt, dark gray to black, loose, trace - few fine gravel	SW	Saturated, no odor	0.0
	26 25	2.0	1620 S-6							
12	24 26	1.7	-1214		Dense		Sandy, gravel, well graded gravel. Dense and tight trace silt	GW	No odor	0.2
	37 29	2.0	1630 S-7		Mod. Dense					
14	7 7	1.9	-1416			Bright Orange	sand, some fine coarse gravel. Well graded sand	SW	Bright oxidized orange color	0.0
	17 31	2.0	1655 S-8				EOB @16'			

TYPE OF DRILLING RIG:	CME-75		*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:	10.8 BGS W/AUGERS @ 14' LEVEL C @ 1515 FOR RIG GEOLOGIST. DRILLERS USING WATER		
OTHER OBSERVATIONS:	FOR DUST CONTROL	BORING NO.: D-SB02	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	D-SB03
PROJECT NO.:	N7491-0320			START DATE:	8/6/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:		COMPLETION DATE:	
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS			MON. WELL NO.:	
GRD. SURFACE ELEVATION:		ELEVATION FROM:		CHECKED BY:	

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	1 1	18	OU3-D-SB03-0002			BR	Silty sand, few coarse subang. gravel poorly graded org. debris (roots + plant fiber in top 6”)	SP	grinding boney from 1 bgs - 4’ dry moist in nose	0
	3 4	24	1245 S-1							
2	3 3	9	-0204			Gray	Fill. Concrete and brick fragments few - little med. coarse sand, tr. charcoal	fill	Saturated in nose	0
	3 6	24	1258 S-2	Fill					saturated	
4	2 2	6	-0406						Wire (copper) on bit betw. 4-8’	0
	8 3	24	1308 S-3	6’2”						
6	1 1	13	-0608	Silt		BR	Silt, few fine sand, a large qty of plant roots and fibers		sulfide odor black silt @ contact with fill	21
	1 1	24	1315 S-4	8’1”						
8	1 2	13	-0810	Sand		gray	Sand, mostly f-c well graded sand, tr. fine rounded gravel, tr. silt	SW	Saturated	5
	1 1	24	1322 S-5							
10	1 2	22	-1012			brown	incl. gravel = few gravel		Saturated	55
	6 6	24	1330 S-6							
12	2 4	18	-1214			Gray			saturated	0
	5 3	24	1340 S-7							
14	3 4	23	-1416							15
16	5 4	24	1345 S-8				EOB @ 16’			

TYPE OF DRILLING RIG:	CME-850 ATV		*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 @ 5.5’		
OTHER OBSERVATIONS:		BORING NO.: D-SB03	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	D-SB04
PROJECT NO.:	N7491-0320	START DATE:	7/10/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	
COMPLETION DATE:	7/10/97
DRILLED BY (Company/Driller):	ATL / PAUL DAVIS / MIKE HAWKINS	MON. WELL NO.:	No Well
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
CHECKED BY:	

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* = [PID,]
0	4	1.3	OU3-D-SB04-0002	Asphalt			2" asphalt at surface		HSA .5' then drove s.s to 2.0'	0 ppm
2	15 13	1.5	1410			BRN	Gravelly, sand, tr. silt, well graded	SW	lower foot more dense	
	10 22	1.7	-0204				tr. wood and asphalt			0 ppm
4	23 18	2.0	1425							
	4 4	0.75	-0406				fill incl. metal and glass		saturated	0 ppm
6	2 2	2.0	1450							
	2 3	0	No Sample				No sample, no recovery		coarse gravel in nose	no sample
8	2 2	2.0	No Recovery							
	2 1	0.8	-0810			BLK	silty, gravelly sand, fill incl. glass, rubber wire metal and poss.gasket material	SW	gasket material (thin fibrous paper like material) lt. pet. odor	2.5 ppm
10	2 2	2.0	1510							
	2 3	1.2	-1012				1 large piece of wood (tree trunk or limb)			1.5 ppm
12	4 6	2.0	1530							
	3 2	0.75	-1214							2.0 ppm
14	2 3	2.0	1545							
	WOR 2	1.9	-1416			Dk Gray	Silt, some fine sand, trace clay trace glass and ceramic fragments trace wood	ML	trace glass + china/ ceramic frags. peach pit in nose	0.2 ppm
16	2 3	2.0	1600				EOB @ 16'			

TYPE OF DRILLING RIG:	CME-75
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:	4.6' BGS W/HSA TO 12' MEASURED INSIDE PIPE
OTHER OBSERVATIONS:	

BORING NO.: D-SB04

Tetra Tech NUS, Inc.

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	D-SB05
PROJECT NO.:	N7491-0320	START DATE:	7/11/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	
		COMPLETION DATE:	7/11/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS, PAUL DAVIS	MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
		CHECKED BY:	

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 3" Asphalt at surface	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [PID, PPM]
0	4	1.3	OU3-D-SB05-0002			BR	Sand some fine subrounded gravel trace silt, sand is well graded	SW	dry and loose	1.0
2	13 15	1.5	0810							
	10 9	1.2	-0204			Lt. BR Gray	.5' = sand, poorly graded, trace gravel .7' = sandy, gravel trace silt, gravel fine - coarse	SP	dry and loose	2.0
4	8 5	2.0	0820					GM		
	6 4	1.1	-0406			gray	sand well graded, some subrounded f-c gravel	SW	water table (sat.) @ ~5' bgs slight pet. or asphalt odor noted	2.0
6	1 2	2.0	0830			Dark gray				
	2 1	.4	-0608							2.0
8	1 2	2.0	0845							
	3 2	.3	-0810							1.3
10	1 2	2.0	0855	Fill			trace glass and wire noted fill			
	5 3	.6	-1012			Dk Gray	sand, some subrounded f-c gravel, few silt, root and vegetation debris tr. clay		hydrogen sulfide odor	0.5
12	2 1	2.0	0900							
	1 1	1.3	-1214	12.5'-13'			.5' = sand poorly graded trace glass and metal fill	SP	fill	0.3
14	1 2	2.0	0915				.8' = silt, some fine sand, no glass found trace roots and plant fibers , tr. clay	ML	plant fibers	
	1 1	1.7	-1416							0.3
16	2 2	2.0	0920				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:	11.5' BGS W/AUGERS @ 16'
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: D-SB05

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	D-SB06
PROJECT NO.:	N7491-0320	START DATE:	7-16-97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	
COMPLETION DATE:	7-16-97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS	MON. WELL NO.:	
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
CHECKED BY:	

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* = [PID (PPM)]
0	15 32	19	OU3-D-SB06-0002		Dense	BR	Gravelly sand, trace silt fill trace asphalt crumble		loose, dry, no odors HSH grinding 1-3"	0
	35 23	24	0930 S-1							
2	11 16	21	-0204		Med. Dense	Mottled Brown and black	Gravelly sand, trace fen. silt, fill included charcoal, asphalt wood, glass + metal in trace amounts		sm. quantity of fill debris except asphalt + charcoal which are more prevelant	5 ppm
	23 18	24	0940 S-2							
4	7 10	20	- 0406			Dark Gray/BL	Fine sand, little some fine gravel, trace silt sand is poorly graded, fill	SP	Similar debris to 0204, moist, heavy pet. odor?	5 ppm
	16 16	24	0958 S-3				Fill debris incl. charcoal, glass + china/ceramic vegetation and root mat. @ 5-5.5''			
6	9 5	12	-0608		loose		Similar to S-3 above, but no vegetation, less gravel @ bottom		near saturation in nose	2-4 ppm
	7 5	24	1005 S-4							
8	1 2	10	-0810		Very Loose				saturated	1-2 ppm
	1 2	24	1020 S-5							
10	2 3	9	-1012				wood debris, vitrified clay fragments and glass			0
	3 3	24	1035 S-6							
12	2 2	9	-1214				Sand, f.-c well graded, trace silt trace fine gravel, fen, little wood fill	SW	Woody, incl. twigs and branches, also 1 piece	0
	2 3	24	1045 S-7						slag	
14	1 1	24	-1416			gray	silt some fine sand, fill trace glass and ceramic debris.	ML		5 ppm
16	1 1	24	1055 S-8	Fill						

TYPE OF DRILLING RIG:	CME 75		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	4.25" ID HSA		
METHOD OF SOIL SAMPLING:	3" OD SPLIT BARREL W/300 LB HAMMER		
METHOD OF ROCK CORING:			
GROUNDWATER LEVELS:	14' W.AUGERS @ 14'		
OTHER OBSERVATIONS:	START @ 0920	BORING NO.: D-SB06	PAGE: 1 OF 1

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	D-SB07
PROJECT NO.:	N7491-0320	START DATE:	7/16/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	
COMPLETION DATE:	7/16/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS	MON. WELL NO.:	
GRD. SURFACE ELEVATION:		ELEVATION FROM:	
CHECKED BY:	

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* = [PID, (PPM)]
0	6 15	1.6	OU3-D-SB07-0002		Med.	brown to dark brown	Fill - sand, poorly graded fine sand	SP	Dry, no odor	7 ppm
	29 13	2.0	1225 S-1		Dense		Few fine gravel, trace silt, glass vit. clay & org. debris		Vit, clay or brick, glass one piece cobble	
2	4 5	1.6	-0204		Loose		Fill - gravelly sand, well graded		moist, fill incl.	8 ppm
	5 6	2.0	1240 S-2			BL	f-c sand, tr. silt ,bottom 2" black charcoal		glass, metal charcoal tile, vitrified clay, slag	
4	4 5	1.6	DUP -0406				fill - similar to S-2, bottom 3" are asphalt shingle like materials w/ pet. odor		pet. odor bottom is saturated	65 ppm
	5 4	2.0	1250 S-3							
6	5 10	2.0	-0608		Med. Dense		fill - gravelly sand, similar to S-2, black, fill debris incl. newsprint		saturated newspaper near nose	10 ppm
	16 13	2.0	1310 S-4							
8	3 2	0.2	-0810		Very		similar to S-4			4 ppm
	1 1	2.0	1330 S-5	10.2	Loose				fill inc. copper wire	
10	2 1	1.6	-1012	Poss. bottom of fill		Dk Gray	silt, mostly silt, trace fine sand	ML	no man made debris noted below 10.2	2 ppm
	1 1	2.0	1340 S-6				trace organic matter (plant fibers)		organic matter	
12	1 2	1.3	-1214							1 ppm
	1 1	2.0	1355 S-7							
14	1 1	1.8	-1416							1 ppm
16	1 1	2.0	1410 S-8							

EOB @ 16'

TYPE OF DRILLING RIG:	CME-75
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:	12.0' W/HSA @ 14' BGS
OTHER OBSERVATIONS:	

Tetra Tech NUS, Inc.

BORING NO.: D-SB07

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK	BORING NO.:	D-SB08
PROJECT NO.:	N7491-0320	START DATE:	7/11/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:	
COMPLETION DATE:	7/11/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS / PAUL DAVIS	MON. WELL NO.:	
GRD. SURFACE ELEVATION		ELEVATION FROM:	
CHECKED BY:	

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* = [PID,(PPM)]
0	1 2	0.6	OU3-D-SB08-0002			brown	sand, some silt, fill	SM	dry and loose	1.0
2	5 9	2.0	1040							
	9 4	0.5	- 0204				trace broken glass		glass fragments	0 ppm
4	4 6	2.0	1100							
	1 2	0.5	-0406				saturated		Saturated @ ~4' loose ∇ @ ~4' *	0 ppm
6	1 2	2.0	1110							
	1 7	0.6	-0608				fill includes bone fragments glass and wire			0 ppm
8	2 3	2.0	1117							
	1 2	0.7	-0810			BLK	Silt few fine sand, trace clay trace glass fragments	ML		0 ppm
10	3 2	2.0	1130						glass	
	1 1	0.9	-1012				trace glass fragments		hydrogen sulfide odor	0 ppm
12	2 2	2.0	1140							
	1 2	1.4	-1214				trace roots and shell fragments			0.5 ppm
14	2 4	2.0	1155				trace glass fragments			
	1 1	1.9	-1416							
16	2 3	2.0	1205							

EOB @ 16'

TYPE OF DRILLING RIG:	CME-75 TRUCK MOUNT
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 LEVEL MEAS. INSIDE HSA @ 14' BGS W/AUGER IN SILT
OTHER OBSERVATIONS:	* USING POLY BAGS IN NOSE OF SAMPLER TO IMPROVE RECOVERY BELOW WATER TABLE

Tetra Tech NUS, Inc.

BORING NO.: D-SB08

BORING LOG FOR:	RAYMARK – OU3- FERRY CREEK			BORING NO.:	D-SB09
PROJECT NO.:	N7491-0320			START DATE:	7/10/97
LOGGED BY:	TRACY DORGAN	TRANSCRIBED BY:		COMPLETION DATE:	7/10/97
DRILLED BY (Company/Driller):	ATL / MIKE HAWKINS, PAUL DAVIS			MON. WELL NO.:	No Well
GRD. SURFACE ELEVATION		ELEVATION FROM:		CHECKED BY:	

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* = [PID]
0							Asphalt and road bedding 2" asphalt w/ gravel/asphalt brown			
1										
1	1 3	1.8	OU3-D-SB09-0103			Dk gray	fill gravelly sand 2" thick asphalt and 2" thick wood below 2.5'	SP	Saturated @ 2-2.5' wood, asphalt and concrete debris noted	2.5 ppm
3	3 4	2.0	1230							
3	10 7	.5	-0305			Dk Gray	fill, gravelly sand with 2" thick asphalt, black, saturated	SP	Saturated, asphalt odor	0 ppm
5	9 8	2.0	0920							
5	5 4	.5	-0507			Dk Gray	Gravelly sand, poorly graded, dark gray - black	SP	Saturated asphalt odor	0 ppm
7	3 3	2.0	0935		Loose					
7	3 1	.5	-0709							0 ppm
9	1 2	2.0	0940							
9	1 1	.3	-0911				gravel, trace med. course sand, trace glass fragments, fill .	GM		0 ppm
11	1 1	2.0	1130							
11	1 2	1.6	-1113				2 similar to above silt some fine sand, tr. clay	ML	1 piece clear glass in silt	2.5 ppm
13	1 2	2.0	1140			Tan Gray	tan-gray - 1piece glass in silt			
13	WOR 1	2.0	-1315							3 ppm
15	2 2	2.0	DUP 1200 1210							

EOB @ 15'

TYPE OF DRILLING RIG:			*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:			
OTHER OBSERVATIONS:		BORING NO.: D-SB09	PAGE: 1 OF 1

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: HNUS	BORING NO: BC-SA1
DATE START: 05/02/1994	DEPTH TO WATER: --	LOGGED BY: DB	GROUND EL.: 7.10
DATE COMPLETED: 05/02/1994	DATE & TIME: --/--/19-- / --	CHECKED BY:	TOTAL DEPTH: 4.00

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	S-1	N/A	24	16	Inteval= 0002' Fill material observed.	S-1 (16in) SAND, some silt, asbestos fibers, dk brown.	SM?
	2.0	S-2	N/A	24	10	Interval= 0204'	S-2A (2in) SAND, some silt, similar to S-1.	SM
							S-2B (8in) SAND, gravel, well graded, lt brown to gray.	SW
							EOB @ 4ft bgs.	
	4.0							

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 boring with 70lb slide hammer. Performed continuous sampling in 2ft increments, 0-4ft. Advanced 2in barrel w/ slide hammer.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SA1.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	HNUS	BORING NO:	BC-SA2
DATE START:	05/02/1994	DEPTH TO WATER:	--	LOGGED BY:	DB	GROUND EL.:	8.00
DATE COMPLETED:	05/02/1994	DATE & TIME:	--/--/19--/ --	CHECKED BY:		TOTAL DEPTH:	4.00

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	S-1	N/A	4	16	Interval= 0002' Fill material observed.	S-1A (8.5in) SAND, some silt, asbestos fibers, organic root fibers, dk brown w/red streaks, asbestos fibers. S-1B (7.5in) SAND, well graded, 10% gravel, white, brown, gray.	
	2.0	S-2	N/A	24	4	Interval= 0204'	S-2 (4in) SAND, well graded, dry, white, brown, gray. EOB @ 4ft bgs.	
	4.0							

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 boring with 70lb slide hammer. Performed continuous sampling in 2ft increments, 0-4ft. Advanced 2in barrel w/ slide hammer.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SA2.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	HNUS	BORING NO:	BC-SA3
DATE START:	05/02/1994	DEPTH TO WATER:	--	LOGGED BY:	BC	GROUND EL.:	8.30
DATE COMPLETED:	05/02/1994	DATE & TIME:	--/--/19-/ --	CHECKED BY:		TOTAL DEPTH:	4.00

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	S-1	N/A	24	13	Interval= 0002' Fill observed.	S-1A (6.5in) SILTY SAND, roots, dk brown, rubber?	
							S-1B (6.5in) SAND, light brown.	
	2.0	S-2	N/A	24	1	Interval= 0204'	S-2 (1in) SAND, fine to medium, lt brown.	
							EOB @ 4 ftbgs.	
	4.0							

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 boring with 70lb slide hammer. Performed continuous sampling in 2ft increments, 0-4ft. Advanced 2in barrel w/ slide hammer.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SA3.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: HNUS	BORING NO: BC-SA4
DATE START: 05/02/1994	DEPTH TO WATER: --	LOGGED BY: BC	GROUND EL.:
DATE COMPLETED: 05/02/1994	DATE & TIME: --/--/19-- / --	CHECKED BY:	TOTAL DEPTH: 4.00

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	N/A	24	13	Interval= 0002'	S-1A (9.5in) silty SAND - fine to med sand, root fibers, trace leaves, dk brown.	SM
							S-1B (3.5in) SAND, fine to med sand, tr coarse sand, trace fine gravel, lt brown.	SP
	2.0	S-2	N/A	24	13	Interval= 0204'	S-2 (13in) SAND, well graded, 5% gravel, lt brown. At 11in, 1' of red/brown mottled sand.	SW
							EOB @ 4ft bgs.	
	4.0							

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 boring with 70lb slide hammer. Performed continuous sampling in 2ft increments, 0-4ft. Advanced 2in barrel w/ slide hammer.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SA4.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: HNUS	BORING NO: BC-SA5
DATE START: 05/02/1994	DEPTH TO WATER: --	LOGGED BY: BC/DB	GROUND EL.: 9.30
DATE COMPLETED: 05/02/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 4.00

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	N/A	24	12	Interval= 0002'	S-1 (12in) silty SAND, fine sand, reddish flecks (waste?), little gravel (1 piece), root hairs, wood (1 piece), dk brown.	SM
	2.0	S-2	N/A	24	10	Interval= 0204'	S-2 (10.5in) SAND, well graded, lt brown, 1 piece gravel.	SW
							EOB @ 4ft bgs.	
	4.0							

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 boring with 70lb slide hammer. Performed continuous sampling in 2ft increments, 0-4ft. Advanced 2in barrel w/ slide hammer.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SA5.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO:	0890	LOCATION:	STRATFORD, CT	DRILLED BY:	HNUS	BORING NO:	BC-SA6
DATE START:	05/02/1994	DEPTH TO WATER:	--	LOGGED BY:	BC	GROUND EL.:	8.80
DATE COMPLETED:	05/02/1994	DATE & TIME:	--/--/19-/ --	CHECKED BY:		TOTAL DEPTH:	4.00

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	S-1	N/A	24	11	Interval= 0002'	S-1A (8in) silty SAND - fine sand, trace coarse sand, fine gravel, root fibers, dk brown.	SM
							S-1B (3in) SAND, well graded, trace gravel, lt brown, 1 root piece, 1 piece gravel.	SW
	2.0	S-2	N/A	24	15	Interval= 0204'	S-2 (15in) SAND, well graded, lt brown, 2 pieces gravel.	SW
							EOB @ 4ft bgs.	
	4.0							

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 boring with 70lb slide hammer. Performed continuous sampling in 2ft increments, 0-4ft. Advanced 2in barrel w/ slide hammer.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SA6.DWG (8/25/99)

BORING LOG — BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB1
DATE START: 04/04/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 9.70
DATE COMPLETED: 04/04/1994	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	10 18 10 17 / 6 6 6 6	24	19	Interval= 0002' Gravel surface is recent fill.	S-1A (0-7in) SAND and GRAVEL, organic-rich w/ fibrous material (hairs), brick piece. S-1B (7-19in) SAND, some gravel.	
	2.0	S-2	12 14 20 / 6 6 14 6	24	22	Interval= 0002' Augers scraping	S-2A (0-9in) SAND, some gravel, organics, reddish fibrous materials. S-2B (9-13in) SAND, little fines. S-2C (13-22in) SAND and SILT, fibrous material, brick piece.	
	4.0	S-3	1 1 2 1 / 6 6 6 6	24	16	Interval= 0406'	S-3 (16in) SAND, some fines, organics, fibrous material, glass.	
	6.0	S-4	1 2 2 2 / 6 6 6 6	24	14	Interval= 0608'	S-4A (0-7in) SAND, little gravel, fibrous material S-4B (7-14in) SILT, trace sand, fibrous material.	
	8.0	S-5	2 12 9 3 / 6 6 6 6	24	12	Interval= 0810'	S-5 (0-12in) FILL - Fibrous material, piece of wood, structure w/long thick fibers.	
	10.0	S-6	1 5 9 10 / 6 6 6 6	24	20	Interval= 1012'	S-6A (0-9in) SILT, trace sand, some peat, fibrous organic matter, little gravel. S-6B (9-20in) SAND and GRAVEL.	ML
	12.0	S-7	2 5 5 7 / 6 6 6 6	24	15	Interval= 1214'	S-7A (0-4in) SILT, trace sand and gravel, organic material, dk gray, wet. S-7B (4-11in) SAND, little gravel, red-brown. s-7C (11-15in) SAND, poorly graded, gray. EOB @ 14ft bgs. Backfilled. No well installed.	
	14.0							

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 boring with 4.25in ID HSA. Perform continuous sampling in 2ft increments. Potential water table at 12-14' interval. All fibrous material reported was hair-like, except where noted. Backfilled boring. Screening for: Pb, Cu PCB, Asbestos.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB1.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB2
DATE START: 04/04/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 6.80
DATE COMPLETED: 04/04/1994	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	6 9 19 12 / 6 6 6 6	24	14	Interval= 0002' Fill material	S-1 (14in) SILTY SAND, some gravel, root matter, red-colored matted fibrous material, brown.	
	2.0	S-2	9 7 7 8 / 6 6 6 6	24	16	Interval= 0204' Fill material.	S-2 (16in) SILTY SAND, some gravel, roots, fibrous matted material, brick pieces, brown.	
	4.0	S-3	1 2 2 1 / 6 6 6 6	24	0	Interval= 0406' NO RECOVERY.	S-3 (0in) NO RECOVERY.	
	6.0	S-4	6 5 3 2 / 6 6 6 6	24	12	Interval= 0608' Fill in natural material?	S-4 (12in) ORGANIC SILT, some sand, some gravel, trace clay, roots, glass shards, red plastic fibrous matted material, brown to black.	
	8.0	S-5	2 2 2 3 / 6 6 6 6	24	3	Interval= 0810'	S-5 (3in) ORGANIC SILT, trace clay, red plastic or fired-like ceramic material, red fibrous matted material, brown to black. Note: Sediment mixed with fill material appears to be a processed waste, sludge-like.	
	10.0	S-6	1 2 3 3 / 6 6 6 6	24	24	Interval= 1012' Possible nat. material?	S-6 (24in) ORGANIC SILT, trace clay, trace sand, wood or plant fibers, black.	OL
	12.0	S-7	1 3 4 4 / 6 6 6 6	24	24	Interval= 1214'	S-7 (24in) ORGANIC SILT, trace clay, similar to S-6. EOB @ 14 ft bgs. No well installed.	OL
	14.0							

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 boring with 4.25in ID HSA. Perform continuous sampling in 2ft increments. Advanced 3in split-barrel sampler w/140lb hammer. Backfilled boring. Screen samples for PB,Cu,PCB,Asbestos. NR/NM=Not recorded or measured, if applicable.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB2.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB3
DATE START: 04/04/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 9.30
DATE COMPLETED: 04/04/1994	DATE & TIME: --/--/19-- / --	CHECKED BY:	TOTAL DEPTH: 8.00

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 5 3 2 / 6 6 6 6	24	17	Interval= 0002' Fill material.	S-1 (0-17in) SILTY SAND, organic debris with gray and red fibrous materials, dry, brown.	
	2.0	S-2	2 2 5 10 / 6 6 6 6	24	23	Interval= 0204' Fill material.	S-2A (0-18in) SILT, trace sand, organic debris with red and gray fibraus materials.	
							S-2B (18-23in) SAND, some gravel, organic debris.	
	4.0	S-3	2 5 9 12 / 6 6 6 6	24	18	Interval= 0406' Possibly nat. material	S-3A (0-4in) SILT, some sand, organic debris (branch).	ML
							S-3B (4-18in) SAND, poorly graded, brown.	SP
	6.0	S-4	16 12 13 9 / 6 6 6 6	24	12	Interval= 0608' Auger scraping	S-4 (0-12in) SAND, gravel, poorly graded, brown.	SP
	8.0							

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 boring with 4.25in ID HSA. Perform continuous sampling in 2ft increments. Advanced 3in split-barrel sampler w/140lb hammer. Backfilled boring. Screen samples for PB,Cu,PCB,Asbestos. NR/NM=Not recorded or measured, if applicable.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB3.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB4
DATE START: 04/05/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 7.20
DATE COMPLETED: 04/05/1994	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	11 18 10 6 / 6 6 6 6	24	17	Interval= 0002' Grinding augers Fill material.	S-1 (17in) SILTY SAND, some gravel, asphalt, fired ceramic tile or red plastic, fibrous material, fiber pads, sludge-like pastey consistency, brown.	
	2.0	S-2	9 19 41 36 / 6 6 6 6	24	18	Interval= 0204' Grinding augers Fill material.	S-2 (18in) SILTY SAND, trace gravel, asphalt, brick, concrete, charcoal, fibers, ash/cinders, red fired-like tiles, brown.	
	4.0	S-3	50	4	4	Interval= 0406' Grinding augers Fill material.	S-3 (4in) SILTY SAND, some gravel, fibers, fiber pads, brick, concrete, rock frags, brown. Possible water table.	
	6.0	S-4	60 50	6 2	8	Interval= 0608' Fill material.	S-4 (6in) SILT, some sand, concrete or slag 5in in length, pasty sludge-like consistency, gray.	
	8.0	S-5	14 5 6 6 / 6 6 6 6	24	17	Interval= 0810' Augers grinding Fill material.	S-5 (17in) SILT, some sand, similar to S-4, concrete/slag, fiber pads, pasty consistency.	
	10.0	S-6	3 3 3 3 / 6 6 6 6	24	24	Interval= 1012' Fill and nat. material?	S-6A (4in) SILT, some sand, similar to S-5	
							S-6B (14in) SILTY CLAYEY SAND, roots, stems,black.	ML-CL
							S-6C (6in) ORGANIC SILT, trace clay, trace sand, roots, reeds, wood, black.	OL
	12.0	S-7	4 5 5 6 / 6 6 6 6	24	24	Interval= 1214' Natural mat. w/ fill.	S-7 (24in) ORGANIC SILT, some clay, trace sand, organics, plant and wood material, piece of red plastic, gray to black.	OL
	14.0	S-8	4 5 7 4 / 6 6 6 6	24	6	Interval= 1416' No fill viewed	S-8 (6in) ORGANIC SILT, trace clay, trace sand, similar to S-4 w/o fill.	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 with 4.25in ID HSA. Perform continuous sampling in 2ft increments, 0-4ft. Cont. sampling interupted at S-3 & S-4 due to fill. Driller augered through fill to loosen it up. 2ft cont. sampling resumed @ 8ft. Used 3in barrel/140lb hammer. Backfilled boring. Screen samples for: Pb,Cu,PCB,Asbestos. Tentative contact @ S-6 based on sample.

ACAD NAME:A:\BC-SB4A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB4
DATE START: 04/05/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 7.20
DATE COMPLETED: 04/05/1994	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	4 4 5 5 6 6 6 6	24	24	Interval= 1618'	S-9 (24in) ORGANIC SILT, trace clay, some sand, little root matter, dk brown.	OL
	18.0	S-10	2 4 7 8 6 6 6 6	24	24	Interval= 1820'	S-10 (24in) SILTY CLAYEY SAND, poorly graded.	ML/CL
							End of Boring @ 20ft bgs. Backfilled boring.	
	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 boring with 4.25in ID HSA. Perform continuous sampling in 2ft increments, 0-4ft. Cont. sampling interupted at S-3 & S-4 due to fill. Driller augered through fill to loosen it up. 2ft cont. sampling resumed @ 8ft. Used 3in barrel/140lb hammer. Backfilled boring. Screen samples for: Pb,Cu,PCB,Asbestos. Tentative contact @ S-6 based on sample.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB4B.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB5
DATE START: 04/05/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 8.30
DATE COMPLETED: 04/05/1994	DATE & TIME: --/--/19-- --	CHECKED BY:	TOTAL DEPTH: 10.00

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 6 21 6 22 6 13 6	24	19	Interval= 0002' Fill material	S-1A (0-4in) SAND, some fine gravel, brown. S-1B (4-19in) SILT and SAND, some gravel, organic debris, fibrous hair-like material, concrete/tile, gray brown.	
	2.0	S-2	7 6 67 6 28 6 22 6	24	20	Interval= 0204' Fill material	S-2A (0-5in) SILTY SAND, some gravel, rock frags. S-2B (5-11in) FILL - concrete frags. S-2C (11-20in) SILTY SAND, some gravel, schist rock frags, fibrous hair-like material.	
	4.0	S-3	11 6 9 6 9 6 7 6	24	11	Interval= 0406'	S-3 (0-11in) silty SAND, rock frags or gravel(?), gray.	
	6.0	S-4	2 6 1 6 1 6 2 6	24	20	Interval= 0608' Possible nat. material.	S-4 (0-20in) SILT, trace fine sand, roots, clam shells, bark, organic material.	OL
	8.0	S-5	1 6 1 6 3 6 3 6	24	21	Interval= 0810'	S-5A (0-7in) SILT, trace sand, organics, similar to S-4. S-5B (7-17in) silty SAND, fine sand, roots, shells black. S-5C (17-21in) SILTY SAND, some gravel, fewer shells and roots than S-5B. EOB @ 10 ft bgs. Backfill.	
	10.0							

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 boring with 4.25in ID HSA,0-8ft. Perform continuous sampling in 2ft increments, 0-10ft. Advanced 3in barrel w/ 140lb hammer. Backfill boring. Screen samples for: Pb,Cu,PCB Asbestos. NR/NM= Not recorded or measured. Tentative contact with natural material at 6ft bgs based on recovered sample.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB5.DWG (8/25/99)

BORING LOG — BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB6
DATE START: 04/05/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 9.00
DATE COMPLETED: 04/05/1994	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	7 8 11 14 / 6 6 6 6	24	17	Interval= 0002' Fill material.	S-1 (17in) SILTY SAND, some gravel, roots, asphalt twigs, fibrous pads, plastic sheeting, wood chunks rock frags, brown.	
	2.0	S-2	18 7 7 6 / 6 6 6 6	24	22	Interval= 0204' Fill material.	S-2 (22in) SILTY SAND, some gravel, roots, red plastic, rock frags, brown.	
	4.0	S-3	7 6 4 4 / 6 6 6 6	24	0	Interval= 0406' NO RECOVERY	S-3 (0in) NO RECOVERY.	
	6.0	S-4	6 10 11 18 / 6 6 6 6	24	7	Interval= 0608' No obvious fill	S-4 (7in) ORGANIC SILT, trace gravel, trace clay, roots, reddish plant fibers, brown.	OL
	8.0	S-5	4 3 2 2 / 6 6 6 6	24	18	Interval= 0810' Fill material.	S-5 (18in) ORGANIC SILT, some sand, trace clay, roots, brick, asphalt, fiber pads, dk brown.	
	10.0	S-6	1 2 3 3 / 6 6 6 6	24	9	Interval= 1012' No fill viewed.	S-6 (9in) ORGANIC SILT, some sand, trace clay, similar to S-5.	OL
	12.0	S-7	2 3 3 4 / 6 6 6 6	24	24	Interval= 1214' No fill viewed.	S-7 (24in) ORGANIC SILT, some sand, trace clay, trace gravel, roots, dk brown to black.	OL
	14.0	S-8	2 4 3 4 / 6 6 6 6	24	22	Interval= 1416' No fill viewed.	S-8 (22in) ORGANIC SILT, some sand, trace clay, similar to S-6.	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 with 4.25inID HSA,0-18ft. Perform continuous sampling in 2ft increments, 0-20ft. Advanced 3in barrel w/ 140lb hammer. Backfill boring. Screen samples for: Pb,Cu,PCB Asbestos. NR/NM= Not recorded or measured. Tentative contact with natural material at 10ft bgs based on recovered sample.

ACAD NAME:A:\BC-SB6A.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB6		
DATE START: 04/05/1994	DEPTH TO WATER: --	LOGGED BY: KJ	GROUND EL.: 9.00		
DATE COMPLETED: 04/05/1994	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	2 4 5 7 / 6 6 6 6	24	24	Interval= 1618' No fill viewed.	S-9 (24in) ORGANIC SILT, some gravel, trace sand, trace clay, roots, stems, shells, black.	OL
	18.0	S-10	9 6 5 8 / 6 6 6 6	24	24	Interval= 1820' No fill viewed.	S-10A (22in) ORGANIC SILT, some gravel, trace clay trace sand, similar to S-9.	OL
							S-10B (2in) SILTY SAND, trace gravel, well graded, gray.	SM
							EOB @ 20ft. Backfilled boring. No well installed.	
	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 boring with 4.25inID HSA,0-18ft. Perform continuous sampling in 2ft increments, 0-20ft. Advanced 3in barrel w/ 140lb hammer. Backfill boring. Screen samples for: Pb,Cu,PCB Asbestos. NR/NM= Not recorded or measured. Tentative contact with natural material at 10ft bgs based on recovered sample.

ACAD NAME:A:\BC-SB6B.DWG

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB7		
DATE START: 04/06/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 7.20		
DATE COMPLETED: 04/06/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 6.00		

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 8 14 20	6 6 6 6	24	19	Interval= 0002' Fill viewed.	S-1A (0-9in) sandy SILT, low plasticity, some organic debris, trace gravel, damp, brown. S-1B (9-19in) silty SAND, trace gravel, well graded, asphalt, glass, damp, brown.	
	2.0	S-2	16 25 35 26	6 6 6 6	24	16	Interval= 0204' Possible nat. material.	S-2 (0-16in) SAND, some gravel, well graded, damp, brown.	
	4.0	S-3	26 18 28 20	6 6 6 6	24	14	Interval= 0406' NO RECOVERY INITIALLY.	S-3 (14in) SAND, well graded trace gravel, trace organic debris, trace rock frags, light brown, moist, fining downwards. Note: Initial barrel plugged by a 3.5in diameter gravel. Removed blockage and re-advanced barrel w/o advancing auger flight. EOB @ 6ft.	
	6.0								

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 boring with 4.25in ID HSA,0-4ft. Perform continuous sampling in 2ft increments, 0-6ft. Advanced 3in barrel w/ 140lb hammer. Screen samples for: Pb,Cu,PCB, Asbestos. NR/NM= Not recorded or measured. Tentative contact with natural material at 2ft bgs based on recovered sample.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB7.DWG (8/25/99)

BORING LOG — BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB8
DATE START: 04/26/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 7.30
DATE COMPLETED: 04/26/1994	DATE & TIME: --/--/19--/ --	CHECKED BY:	TOTAL DEPTH: 10.00

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 5 10 11 / 6 6 6 6	24	19	Interval= 0002' Fill material.	S-1A (0-10in) SAND and GRAVEL, trace silt, trace plant debris, poorly graded, dry, brown. S-1B (10-15in) SAND and SILT, poorly graded, mod. plasticity, trace gravel, brown, trace lime-green dry. S-1C (15-19in) SILT, mod plasticity, some fibrous hair-like material, ruby red, dry.	
	2.0	S-2	5 5 6 6 / 6 6 6 6	24	23	Interval= 0204' Fill material.	S-2A (0-11in) SILT, mod plasticity, fibrous hairs, mottled colors, trace hay, dry. S-2B (11-23in) SAND, little roots, wood, trace gravel, trace hay, dry, black.	
	4.0	S-3	3 12 8 9 / 6 6 6 6	24	18	Interval= 0406' Possible nat. material.	S-3A (0-7in) silty SAND, poorly graded, low plas. trace gravel, fibrous hairs, wood, brown/black, dry. S-3B (7-18in) SAND, well graded, trace gravel, trace silt, gray. Tent. contact with nat. mat. based on this sample.	SW
	6.0	S-4	2 3 5 5 / 6 6 6 6	24	12	Interval= 0608' No fill viewed.	S-4 (0-12in) SAND, well graded, trace gravel, trace silt, dry, brown.	SW
	8.0	S-5	7 7 7 5 / 6 6 6 6	24	11	Interval= 0810' No fill viewed. Pot. water tab.	S-5 (0-11in) SAND, poorly graded, trace gravel, some silt, trace wood, wet, brown. EOB @ 10 ft bgs.	SP
	10.0							

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 boring with 4.25in ID HSA,0-8ft. Perform continuous sampling in 2ft increments, 0-10ft. Advanced 3in barrel w/ 140lb hammer. Screen samples for: Pb,Cu,PCB, Asbestos. NR/NM= Not recorded or measured. Tentative contact with natural material at 4-6ft bgs based on recovered sample.

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

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB8A
DATE START: 05/03/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 7.30
DATE COMPLETED: 05/03/1994	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-X				SEE LOG FOR BC-SB8.		
	2.0	S-Y				SEE LOG FOR BC-SB8.		
	6.0	S-Z				SEE LOG FOR BC-SB8.		
	8.0	S-2	6 6 9 10 / 6 6 6 6	24	21	Interval= 0810' No obvious fill	S-2 (0-21in) SAND, poorly graded, wet, dk brown.	SP
	10.0	S-3	8 8 10 9 / 6 6 6 6	24	24	Interval= 1012' No obvious fill	S-3 (0-24in) SAND, poorly graded, trace gravel, wet, dk brown.	SP
	12.0	S-4	6 8 16 21 / 6 6 6 6	24	20	Interval= 1214' No obvious fill	S-4A (0-6in) SAND, similar to S-3.	SP
							S-4B (6-14in) SAND, well graded, trace gravel, bedding, wet, red/brown.	SW
							S-4C (14-20in) SAND and GRAVEL, wet, red/brown.	SW
	14.0	S-5	10 41 75 50 / 6 6 6 6	24	24	Interval= 1416' No obvious fill	S-5A (8in) SAND, poorly graded, wet, gray/brown, wash?	SP
							S-5B (8in) SAND and GRAVEL, wet, red/brown.	SW
							S-5C (8in) SAND and GRAVEL, similar to S-5B, w/>% fine sand, 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 with 4.25inID HSA,0-16ft. Perform continuous sampling in 2ft increments, 6-18ft. Advanced 3in barrel w/ 140lb hammer. Screen samples for: Pb,Cu,PCB, Asbestos. NR/NM= Not recorded or measured. No obvious fill logged. BC-SB8A @ same location as BC-SB8. See BC-SB8 for soil descriptions 0-6ft bgs.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB8AA.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890 LOCATION: STRATFORD, CT DRILLED BY: PENN DRILLING CO. BORING NO: BC-SB8A

DATE START: 05/03/1994 DEPTH TO WATER: -- LOGGED BY: JM GROUND EL.: 7.30

DATE COMPLETED: 05/03/1994 DATE & TIME: --/--/19-7 -- 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-6	21 6 48 6 75 6 48 6	24	14	Interval= 16-18' No obvious fill	S-6 (14in) SAND and GRAVEL, well graded, wet, red/brown. Note: Top 10in = probable wash, see S-5A. EOB @ 18ft bgs.	SW
	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 boring with 4.25inID HSA,0-16ft. Perform continuous sampling in 2ft increments, 6-18ft. Advanced 3in barrel w/ 140lb hammer. Screen samples for: Pb,Cu,PCB, Asbestos. NR/NM= Not recorded or measured. No obvious fill logged. BC-SB8A @ same location as BC-SB8. See BC-SB8 for soil descriptions 0-6ft bgs.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB8AB.DWG (8/25/99)

BORING LOG

BROWN & ROOT ENVIRONMENTAL

PROJECT NO: 0890	LOCATION: STRATFORD, CT	DRILLED BY: PENN DRILLING CO.	BORING NO: BC-SB9
DATE START: 05/03/1994	DEPTH TO WATER: --	LOGGED BY: JM	GROUND EL.: 6.80
DATE COMPLETED: 05/03/1994	DATE & TIME: --/--/19-7 --	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	4 7 9 11 / 6 6 6 6	24	19	Interval= 0002' Fill material.	S-1A (0-5in) TOPSOIL, 40% organics, some well graded sand, trace gravel, dry, dk brown/gray. S-1B (5-16in) SAND and GRAVEL, well graded, asphalt, dry, brown/black. S-1C (16-19in) SAND and SILT, well graded, mod. plas., dry, gray.	
	2.0	S-2	13 7 3 5 / 6 6 6 6	24	14	Interval= 0204' Fill material.	S-2A (0-6in) SAND, little silt, little gravel, asphalt, moist, red/brown. S-2B (6-14in) SAND and SILT, poorly graded, mod. plas., little organics, moist, black/gray.	
	4.0	S-3	20 41 50 50 / 6 6 6 6	24	7	Interval= 0406' Possible nat. material.	S-3 (0-7in) SAND, some silt, little gravel, little organics, poorly graded, wet, brown/black. Possibly intercepted water table.	
	6.0	S-4	11 15 9 8 / 6 6 6 6	24	14	Interval= 0608' Possible nat. material.	S-4 (0-14in) SAND, some gravel, little silt, well graded, wet, brown.	
	8.0	S-5	8 8 15 13 / 6 6 6 6	24	19	Interval= 0810' Possible nat. material.	S-5 (0-19in) SAND and GRAVEL, trace silt, well graded, wet, red/brown.	
	10.0	S-6	9 18 18 16 / 6 6 6 6	24	17	Interval= 1012' Possible nat. material.	S-6 (0-17in) SAND and GRAVEL, similar to S-5.	
	12.0	S-7	5 8 8 9 / 6 6 6 6	24	16	Interval= 1214' Possible nat. material.	S-7 (0-15in) SAND, well graded, trace silt, trace gravel, wet, brown. EOB @ 14 ft bgs.	
	14.0							

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 boring with 4.25inID HSA,0-12ft. Perform continuous sampling in 2ft increments, 0-14ft. Advanced 3in barrel w/ 140lb hammer. Screen samples for: Pb,Cu,PCB, Asbestos. NR/NM= Not recorded or measured. Tentative contact with nat. material at 4-6ft. Possibly intercepted water table at 4ft. Soil boring advanced & logged during low tide.

ACAD NAME: RAYMARK\BORINGS_ALTERED\BC-SB9.DWG (8/25/99)

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/8/96 TIME: 0730
TOTAL CORE DEPTH: 17.4 (includes SW)
CORE LOCATION: SP08
DEPTH OF WATER: 1.5 FT at 1423 on 11/07/96
LOGGED BY: K. JALKUT
TOTAL SEDIMENT DEPTH CORED: 15.9 FT
TOTAL CORE RECOVERY: 10.96'
PHOTO TAKEN? (YES) NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0 0.4	Highly organic sapric peat (muck), very loose, less than 20% fibrous matter approximately, dark brown to black, saturated and soupy	RM-SD-SP08-S01 0 - 0.4 FT	Collected extra volume with Eckman sampler for analyses
1.9	Hemic peat more fibrous texture (approximately 50 - 60% fibrous texture), brown, presence of few (<10%) twigs, more firm than S01, saturated	RM-SD-SP08-S02 0.4 to 1.9 FT	Strong hydrogen sulfide odor when core was opened
3.4 4.9	Similar to above, hemic peat, highly organic soil approximately 70% fibrous matter, orange-brown, saturated, presence of few (~15%) twigs up to 3 inches length 1/4 in diam., leaf matter	RM-SD-SP08-S03 1.9 to 3.4 FT RM-SD-SP08-S04 3.4 to 4.9 FT	
10.96	Sapric peat, very soupy, no texture, dark orange-brown to black, loose 20% fiber	RM-SD-SP08-S05 8.5 to 10 FT	~1 inch at bottom not sampled Not enough volume for dioxin, TOC filled contained by order of priority
		EOR	
			LEGEND: EOR = End of Recovery SD = sediment SP = Selby Pond fp = fibric peat hp = hemic peat sp = sapric peat

HNUS FORM 0074

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VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
DATE: 11/08/96 TIME: 1000
CORE LOCATION: SP09
LOGGED BY: K. JALKUT
TOTAL CORE RECOVERY: 13.95'

JOB NO.: 0890-0810
TOTAL CORE DEPTH: 16.95 (includes SW)
DEPTH OF WATER: 2.0 FT at 08:30 on 11-8-96
TOTAL SEDIMENT DEPTH CORED: 14.95 FT
PHOTO TAKEN? YES NO #4 and #5

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0 – 0.2	Highly organic sapric soil, muck, loose, saturated, little fibrous material, dark black, soupy	RM-SD-SP09-S01 0 - 0.2 FT	Strong hydrogen sulfide odor when core was opened
0.2 – 1.7	Hemic peat - more fibrous texture than S01 (less than 50% fibers) dark brown, red-brown, saturated, twigs > 1/8 inch diameter plus 3 inches length silt visible	RM-SD-SP09-S02 0.2 to 1.7 FT	TAL metals - no TCLP metals no asbestos
1.7 – 3.2	Hemic peat - approximately 50% or more fibrous texture, little to some silt, saturated, dark red/orange brown, few twigs or wood pieces up to 1/2 inch length, loose but not soupy	RM-SD-SP09-S03 1.7 to 3.2 FT	
3.2 – 4.7	Hemic peat - saturated, dark brown to red-brown, leaves, twigs, wood fragments, some silt, approximately fibers 60%, loose but not soupy. Wood fragments up to 2-3 inches length.	RM-SD-SP09-S04 3.2 to 4.7 FT	
4.7 – 6.5	Hemic peat, fibous texture, some silt, saturated very dark red/brown, large (3 inches x 3/4 inch width) twig/branch, >50% fibrous material, loose but not soupy, twigs	5 - 6.5 FT	Not sampled

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
DATE: 11/08/96 TIME: 1000
CORE LOCATION: SP09
LOGGED BY: K. JALKUT
TOTAL CORE RECOVERY: 13.95'

JOB NO.: 0890-0810
TOTAL CORE DEPTH: 16.95 (includes SW)
DEPTH OF WATER: 2.0 FT at 08:30 on 11-8-96
TOTAL SEDIMENT DEPTH CORED: 14.95 FT
PHOTO TAKEN? YES NO #4 and #5

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
6.5 – 8.0	Hemic peat, similar to above with more evidence of wood pieces, up to 4 or 5 inch length, some silt, red brown to black, loose, but not soupy, >50% fibrous material by vol., twigs	6.5 - 8 FT	Not sampled
8.0 – 8.5	Hemic peat similar to above with less large pieces of wood, small pieces of wood up to 1.5 inches, fibrous material ~50%, some silt, loose, not soupy, twigs, leaf matter	8 - 8.5 FT	Not sampled
8.5 – 10.0	Hemic peat, saturated, dark brown to red brown, >50% fibrous material (organic), loose not soupy, presence of twigs up to 1/4"/1/2" diam., 2-3 in length leaf matter, plant roots	RM-SD-SP09-S05 8.5 - 10 FT	
10.0 – 13.95	Highly org soil, hemic peat, similar to above		Not sampled
		EOR	

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/08/96 TIME: 1410
TOTAL CORE DEPTH: 19.07 FT (includes SW)
CORE LOCATION: SP10
DEPTH OF WATER: 2.07 FT at 11:26 on 11-8-96
LOGGED BY: K. JALKUT
TOTAL SEDIMENT DEPTH CORED: 17.0
TOTAL CORE RECOVERY: 10.5'
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0 – 0.5	Highly organic sapric soil - muck, very soupy fibrous <20%, saturated twigs (few), mostly silt	RM-SD-SP10-S01 0 - 0.5 FT	Duplicate #1, all analyses, used Eckman for extra volume No PID
0.5 – 2.0	Hemic peat - fibrous >50%, little silt (15%) brown/red to brown, twigs 2-3 in long/1/4" diam, fibers interwoven and thready (mat-like), saturated, soft but not soupy.	RM-SD-SP10-S02 0.5 - 2 FT	Strong hydrogen sulfide odor when core was opened
2.0 – 3.5	Hemic peat similar to above less thready interwoven fibers >50% little silt (15%) twigs, red-brown to dark brown satuated soft but not soupy	RM-SD-SP10-S03 2 - 3.5 FT	
3.5 – 5.0	Hemic peat - more wood fragments than S02, less fibers, more twigs, dark red brown, saturated, soft but not soupy	RM-SD-SP10-S04 3.5 - 5 FT	
5.0 – 6.5	Fibric peat - fibrous, interwoven, little to few silt (10-15%), twigs up to 3 inches x 1/4 in diam, dark red/brown, saturated, softer than above fibers are occassionally mat-like		Not sampled
6.5 – 8.5	Hemic peat - fibrous, silt up to 25%, saturated, very soft with wood fragments, dark brown		Not sampled

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/08/96 TIME:
TOTAL CORE DEPTH: 19.07 FT (includes SW)
CORE LOCATION: SP10
DEPTH OF WATER: 2.07 FT at 11:26 on 11-8-96
LOGGED BY: K. JALKUT
TOTAL SEDIMENT DEPTH CORED: 17.0
TOTAL CORE RECOVERY: 10.5'
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
8.5	Sapric peat - some fibrous material up to 8.8' very soupy, dark brown, black, muck below 8.8' red-brown, saturated waterery, org odor	RM-SD-SP10-SP05 8.5 - 10 FT	Priority analyses only, not enough volume Asbestos TAL metals SVOC PCB/Pest only
10.1	Long fibrous roots, dark brown, woody roots, 1/4 to 1/2 inch diameter, apparent historic shrub layer	10.1 - 10.5'	No recovery beyond root wad, not sampled
10.5		EOR	

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

HNUS FORM 0074

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VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/11/96 TIME: 0800
TOTAL CORE DEPTH: 18.1 FT (includes SW)
CORE LOCATION: SP11
DEPTH OF WATER: 3.2 FT at 14:35 on 11-10-96
LOGGED BY: K. O'NEILL
TOTAL SEDIMENT DEPTH CORED: 14.90
TOTAL CORE RECOVERY: ~11', loose bottom
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0 – 0.4	Organic sapric soil - muck, dark black/brown, little plant fiber	RM-SD-SP11-S01 0 - 0.4 FT	Grain size, duplicate, MS/MSD with exception of asbestos, grain size
0.4 – 1.9	Hemic peat - dark brown/black H_2S odor throughout core, saturated, some small tree/shrub branch material throughout core	RM-SD-SP11-S02 0.4 - 1.9 FT	TAL metals, not TCLP No asbestos
1.9 – 3.4	Fibric peat brown/orange brown	RM-SD-SP11-S03 1.9 - 3.4 FT	Strong hydrogen sulfide odor when core was opened
3.4 – 4.9	Hemic peat to 6.4' gradual shift in fiber content to looser sapric peat, dark brown	RM-SD-SP11-S04 3.4 - 4.9 FT	TAL metals, not TCLP No asbestos
4.9 – 6.4			
6.4 – 8.7	Sapric peat, dark brown	RM-SD-SP11-S05 7.5 - 9 FT	
8.7 – 9.0	~4" of root/stem material mixed with material resembling *Spartina patens*		Not sampled
9.0 – 15.6	Very liquid sapric peat/muck to bottom @ 15.6' very little material for sampling		Not sampled
15.6		EOR	

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
DATE: 11/12/96 TIME: 0950
CORE LOCATION: SP12
LOGGED BY: K. O'NEILL/T. DORGAN
TOTAL CORE RECOVERY: 12.0 FEET

JOB NO.: 0890-0810
TOTAL CORE DEPTH: 17.0 FT (includes SW)
DEPTH OF WATER: 2.6 FT at 16:10 on 11-10-96
TOTAL SEDIMENT DEPTH CORED: 14.4 FT
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0.15	Organic muck to 0.15'	RM-SD-SP12-S01 0 - 0.2 FT	Strong hydrogen sulfide odor when core was opened
0.8	Hemic peat, dark brown to 0.8'	RM-SD-SP12-S02 0.2 - 1.7 FT	
3.4	Dark brown sapric peat	RM-SD-SP12-S03 1.7 - 3.2 FT	
5.0	Reddish-brown sapric peat @ 3.4 - 3.8 FT	RM-SD-SP12-S04 3.2 - 5.0 FT	
8.4	Dark brown sapric peat	RM-SD-SP12-S05 6.9 - 8.4 FT	Becomes more decomposed with depth
11.7	Very poor recovery? Some very loose organic muck/water mix, most lost during core retrieval and cutting		Not sampled
12.0	Woody root mass, mixed with dark brown fibric peat, up to 1/4" diam. roots, caught in core basket, apparent historic shrub layer		Not sampled
		EOR	LEGEND: EOR = End of Recovery SD = sediment SP = Selby Pond fp = fibric peat hp = hemic peat sp = sapric peat

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
DATE: 11/11/96 TIME: 1300
CORE LOCATION: SP13
LOGGED BY: K. O'NEILL
TOTAL CORE RECOVERY: 11.9

JOB NO.: 0890-0810
TOTAL CORE DEPTH: 18 FT (includes SW)
DEPTH OF WATER: 1.6 FT at 09:29 on 11-11-96
TOTAL SEDIMENT DEPTH CORED: 16.4 FT
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0	Fibrous living roots with brown org. matter, leaf matter	RM-SD-SP13-S01 0 - 0.5 FT	Duplicate #2 for all but grain size Strong hydrogen sulfide odor when core was opened
0.5	Subangular gravel 1" and 2" diam., fill material		
2.0	Hemic peat - brown, more decomposed material than above	RM-SD-SP13-S02 0.5 - 2 FT	
2.5	Sapric peat, dark brown, more fines than above	RM-SD-SP13-S03 2 - 3.5 FT	
3.0	Occassional wood fragments		
3.5		RM-SD-SP13-S04 3.5 - 5'	
5.0	Large wood (root?) section 1" x 3"		
5.3			
	Sapric Peat to 11.9'		
	Woody branch like fragments @ 7.2'		
	4 inches plant fibers @ 9.8'		
	4 inches plant fibers @ 10.8'	RM-SD-SP13-S05 8.5 - 10 FT	
11.9			
		EOR	LEGEND: EOR = End of Recovery SD = sediment SP = Selby Pond fp = fibric peat hp = hemic peat sp = sapric peat

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/11/96 TIME: 0850
TOTAL CORE DEPTH: 17.2 FT (includes SW)
CORE LOCATION: SP14
DEPTH OF WATER: 1.6 FT at 12:30 on 11-11-96
LOGGED BY: K. O'NEILL/T. DORGAN
TOTAL SEDIMENT DEPTH CORED: 15.6 FT
TOTAL CORE RECOVERY: 13.9 FEET
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0.6	Silty gravelly SAND, mostly poorly graded med. sand, black sand, few silt some gravel, shell frags, fill material, glass	RM-SD-SP14-S01 0 - 0.5 FT	Duplicate = 2002 (extra vol. with Eckman & Bowl.). Brick glass frags, slag
1.2	Black sandy SILT, mostly silt, little fine sand poorly graded, trace shell fragments	RM-SD-SP14-S02 0.5 - 2.0 FT	Strong hydrogen sulfide odor when core was opened
3.3	SILT, mostly poorly graded trace fine sand, trace clay shell frags, olive green	RM-SD-SP14-S03 2.0 - 3.5 FT	some org matter, plant fibers, leaf matter
3.5	SAND, mostly fine med poorly graded sand, trace silt	RM-SD-SP14-S03 3.5 - 5.0 FT	quartz sand
3.9	Similar to SILT above		
4.6	Similar to SAND above		
8.7	Hemic/sapric peat, dark brown, trace fine sand mixed to 4.4'		At 5.4' to 5.8' noted large plant fiber fragments. At 7.5', wood fragments
9.2	Reddish-brown hemic peat		
13.9	Dark-brown sapric peat, some wood fragments Same material to 13.9'	RM-SD-SP14-S05 8.5 - 10.0 FT	Wood fragments throughout
		EOR	LEGEND: EOR = End of Recovery SD = sediment SP = Selby Pond fp = fibric peat hp = hemic peat sp = sapric peat

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/12/96 TIME: 0800
TOTAL CORE DEPTH: 27.6 FT (includes SW)
CORE LOCATION: SP15
DEPTH OF WATER: 4.4 FT at 12:20 on 11-16-96
LOGGED BY: K. O'NEILL/T. DORGAN
TOTAL SEDIMENT DEPTH CORED: 23.2 FT
TOTAL CORE RECOVERY: 14.4 FEET
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0	Organic muck/sapric peat Dark brown/black	RM-SD-SP15-S01 & RM-SD-2004 (D#4) - 0 - 0.5 FT	Extra vol. w/Eckman clamshell
		RM-SD-SP15-S02 0.5 - 2.0 FT	Strong hydrogen sulfide odor when core was opened
3.5		RM-SD-SP15-S03 3 - 3.5 FT	Shagbark hickory (*Carya glabra*) husk fragment at 2'
	Hemic peat, reddish-brown		
6.8	Wood fragments at 5'	RM-SD-SP15-S04 3.5 - 5 FT	
	Sapric peat, reddish-brown		
10.0		RM-SD-SP15-S05 8.5 - 10 FT	
	Sapric/hemic peat, reddish-brown		
14.0		RM-SD-SP15-S06 12.5 - 14 FT	
14.4	Woody root matter up to 3/8" diam. x 6" long, with hemic peat, reddish-brown, apparent historic shrub layer		
		EOR	LEGEND: EOR = End of Recovery SD = sediment SP = Selby Pond fp = fibric peat hp = hemic peat

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
DATE: 11/13/96 TIME: 1328
CORE LOCATION: SP16
LOGGED BY: K. O'NEILL
TOTAL CORE RECOVERY: 13.1 FEET

JOB NO.: 0890-0810
TOTAL CORE DEPTH: 28.04 FT (includes SW)
DEPTH OF WATER: 5.94 FT at 09:30 on 11-13-96
TOTAL SEDIMENT DEPTH CORED: 22.1 FT
PHOTO TAKEN? (YES) NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0.5	Very loose organic muck Dark brown/black	RM-SD-SP16-S01 Dup 2005 #6, MS/MSD$_2$ - 0 - 0.5 FT	Extra vol. w/Eckman clamshell
	Dark grey/brown sapric peat, (org. muck) very few plant fibers, wet/loose	RM-SD-SP16-S02 0.5 - 2.0 FT	Strong hydrogen sulfide odor when core was opened
		RM-SD-SP16-S03 2 - 3.5 FT	
		RM-SD-SP16-04 3.5 - 5 FT	
	Becoming dryer, more solidified with depth		
		RM-SD-SP16-05 6.5 - 8.4 FT	
8.4			
	Hemic peat dark brown, some wood material 1/4 - 3/8" diam. x 1", fine fibrous roots	RM-SD-SP16-S06 8.5 - 10 FT	
10.4	Sapric peat, some fine fibrous (roots?)		
		RM-SD-SP16-S07 11 - 12.5 FT	
11.6	Fibric peat, sphagnum like, light tan/brown		
12.5	Woody material, root mass with hemic peat from 12.5 to 13.1, apparent historic shrub layer		Woody section ~1" diam. x 3" soft, decayed, wood roots some 1/4 - 3/8 diam. (Photo)
13.1		EOR	

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/13/96
TIME: 0825
TOTAL CORE DEPTH: 25.45 FT (includes SW)
CORE LOCATION: SP17
DEPTH OF WATER: 0.8 FT at 13:45 on 11-12-96
LOGGED BY: K. O'NEILL/T. DORGAN
TOTAL SEDIMENT DEPTH CORED: 24.65 FT
TOTAL CORE RECOVERY: 18.1 FEET
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0 0.4	Concrete fragments up to 1"x2"x.5" with some fine sand and muck. Black	RM-SD-SP17-S01 0 - 0.5 FT	Core completed near residential backyard that has obvious fill material in wetlands
0.7	Sapric peat, dark brown		
1.8	Hemic peat, reddish-dark brown	RM-SD-SP17-S02 0.5 - 2.0 FT	Strong hydrogen sulfide odor when core was opened
	Sapric peat, dark brown	RM-SD-SP17-S03 2 - 3.5 FT	
	Wood branch 3/4" diam x 3" long	RM-SD-SP16-04 3.5 - 5.0 FT	
5.1	hemic peat @ 5.1 - 5.5, red/brown		
	Sapric peat, dark brown		
	Very loose, sapric peat		
9.7		RM-SD-SP17-S05 8 - 9.7 FT	
17.7	Some watery, loose, muck, poss. void or lost material, reddish-brown, possible material below 9.7 feet probably slipped down core barrel during core excavation from sediments		Most of the watery material lost during core opening Not enough material/recovery for sample collection
18.1	Sapric peat, dark brown, very loose	RM-SD-SP16-S06 17.7 - 18.1 FT	Metals only. This material may have slipped down core barrel from 9.7 FT
		EOR	

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/15/96
TIME: 1012
TOTAL CORE DEPTH: 16.4 FT (includes SW)
CORE LOCATION: SP18
DEPTH OF WATER: Shore Location ~0.3 FT
LOGGED BY: K. O'NEILL
TOTAL SEDIMENT DEPTH CORED: 16.4 FT
TOTAL CORE RECOVERY: 8.75 FEET
PHOTO TAKEN? (YES) NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0.7	Mostly living root fibers with some fibric peat	RM-SD-SP18-S01 0 - 0.5 FT	Living roots material removed from sample. Strong hydrogen sulfide odor when core was opened
2.5	Hemic peat, dark brown	RM-SD-SP18-S02 0.5 - 2.0 FT	
4.4	Hemic/fibric peat, dark brown, large fibers, light tan	RM-SD-SP18-S03 2 - 3.5 FT	
	Sapric peat, dark brown, loose, wet	RM-SD-SP18-04 3.5 - 5.0 FT	
6.0	Some woody fragments		Wood fragments
		RM-SD-SP17-S05 7.25 - 8.75 FT	Wood fragments in CLP sample
8.75	Wood fragments 3/4" x 2" with sapric peat		
		EOR	

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

HNUS FORM 0074

Halliburton NUS CORPORATION

VIBRACORE CORE LOG REPORT

SITE NAME: Raymark Industries, Inc. Selby Pond
JOB NO.: 0890-0810
DATE: 11/15/96 TIME: 1025
TOTAL CORE DEPTH: 16.85 FT (includes SW)
CORE LOCATION: SP19
DEPTH OF WATER: 25 FT
LOGGED BY: K. O'NEILL
TOTAL SEDIMENT DEPTH CORED: 16.6 FT
TOTAL CORE RECOVERY: 10.85 FEET
PHOTO TAKEN? YES NO

DEPTH IN FEET	CORE DESCRIPTION	SAMPLE ID	NOTES:
0	Fibric peat, with living root material, fibrous	RM-SD-SP19-S01 0 - 0.5 FT	Living root material removed from sample. Strong hydrogen sulfide odor when core was opened
0.5	Hemic peat, dark brown, with wood fragments	RM-SD-SP19-S02 0.5 - 2.0 FT	Wood fragments throughout
		RM-SD-SP19-S03 2 - 3.5 FT	
4.1		RM-SD-SP19-04 3.5 - 5.0 FT	Wood fragments 1" diam x 3" @ 4'
	Sapric peat, dark brown, somewhat firmer		Wood fragments 3/4" x 3" @ 5'
7.0	Sapric peat becoming looser with depth	RM-SD-SP19-S05 8.8 - 10.8 FT	Sapric peat, very loose, very few fibers (muck like)
10.8		EOR	

LEGEND:
EOR = End of Recovery
SD = sediment
SP = Selby Pond
fp = fibric peat
hp = hemic peat
sp = sapric peat

HNUS FORM 0074

BORING LOG FOR:	Raymark OU6		BORING NO.: DI-201
PROJECT NO.:	N4106-0320		START DATE: 5/6/03
LOGGED BY:	K. O'Neill	TRANSCRIBED BY: LAH	COMPLETION DATE: 5/6/03
DRILLED BY (Company/Driller):	ADT/Scott Przybylski		MON. WELL NO.: N/A
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY: JL

DEPTH (FEET) 0	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)]
		1.8 / 2.0	OU6-SO-DI-201-0002				0.0-0.5' - Asphalt road base removed	GP		0.0 FID
2			1048				0.5–1.8 – Medium-fine SAND with black streaks, organics	SP		
		2.0 / 2.0	OU6-SO-DI-201-0204				Fine-medium SAND	SP		0.0 FID
4			1050				Moist, black streaking top 1'			
		1.8 / 2.0	OU6-SO-DI-201-0406				Fine-medium SAND	SP		0.0 FID
6			1100				Fine SAND well graded	SP		
		1.6 / 2.0	OU6-SO-DI-201-0608		Stratified					0.0 FID
8			1112		~6' start				Saturated ~6'	
				EOB @ 8' bgs						
							Appears to be native soil so stopped DPT			
							4 screening samples collected			

TYPE OF DRILLING RIG:	Geo-Probe		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	D.P.T.		
METHOD OF SOIL SAMPLING:	Acetate liner		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	NA		
OTHER OBSERVATIONS:	South side of Dresser Ind. Building	BORING NO.: DI-201	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU6		BORING NO.: DI-203
PROJECT NO.:	N4106-0320		START DATE: 5/6/03
LOGGED BY:	K. O'Neill	TRANSCRIBED BY: LAH	COMPLETION DATE: 5/6/03
DRILLED BY (Company/Driller):	ADT/Scott		MON. WELL NO.: N/A
GRD. SURFACE ELEVATION:		ELEVATION FROM:	CHECKED BY: JL

DEPTH (FEET) 0	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)]
		1.6 / 2.0	OU6-SO-DI-203-0002				0-0.2 - Fill – dump pile? 0.2-0.6 – PEAT and medium SAND, dredged		Wood debris	0.0 FID
2			1320				0.6-1.6 - Mix PEAT with black SILT		Dry	
		1.7 / 2.0	OU6-SO-DI-203-0204				2-2.7 - PEAT (dry)			0.0 FID
4			1325			Gray	0.7-1.2 -SILT 1.2 – 1.7 - Poorly graded SAND with some gravel	ML SW	Moist	
		1.2 / 2.0	OU6-SO-DI-203-0406							0.0 FID
6			1335				Well graded GRAVEL with sand	GW		
		1.0 / 2.0	OU6-SO-DI-203-0608				Well graded GRAVEL with small chunk of peat @ 10'	GW	Saturated @ ~ 8'	0.0 FID
8			1345							
		0.8 / 2.0	OU6-SO-DI-203-0810							0.0 FID
10			1355							
		2.0 / 2.0	OU6-SO-DI-203-1012				10-11 - PEAT with gravel in top 1'	PT	Saturated	
12			1405				11-12 - Hemic PEAT	PT		
				EOB @ 12' bgs						

TYPE OF DRILLING RIG:	Geo-Probe		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	D.P.T.		
METHOD OF SOIL SAMPLING:	D.P.T.		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	NA		
OTHER OBSERVATIONS:	Phragmites/small soil piles	BORING NO.: DI-203	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU6			BORING NO.:	DI-210
PROJECT NO.:	N4106-0320			START DATE:	5/21/03
LOGGED BY:	M. Bouvier	TRANSCRIBED BY:	LAH	COMPLETION DATE:	5/21/03
DRILLED BY (Company/Driller):	ADT/Scott			MON. WELL NO.:	N/A
GRD. SURFACE ELEVATION:		ELEVATION FROM:		CHECKED BY:	JL

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										
			OU6-SO-DI-210-0002	Reworked Native Material	Loose	Lt-dark Brown	0-6" topsoil – reworked native material, dry	SP	Reworked native material	0.0
2			1220				Poorly graded SAND with silt, trace of asphalt, roots and gravel			
			OU6-SO-DI-210-0204	Manmade Fill		Brown Blue	2-2.5' - Poorly graded SAND 2.5-3' - Asbestos material sludge	SP	Manmade fill	0.0
4			1240			Red	3-3.5' - Asbestos material, coarse GRAVEL and silt		Native material	
			OU6-SO-DI-210-0406	Blue/ Gray		Black	Crushed GRAVEL, black, saturated @ 4'	GP	Native material (reworked fill)	0.0
6			1320							
			OU6-SO-DI-210-0608			Black	6-6.5' similar to above 6.5-7' poorly graded fine SAND	GP SP	Native material	0.0
8			1350		Med		7-8' organic PEAT, saturated	PT	Native, some asbestos like material likely sloff from above 2' of water in sleeve	
			OU6-SO-DI-210-0810		Med	Black/	Organic PEAT, wet	PT	Native material	0.0
10			1430			Brown				0.0
				EOB @ 10' bgs			Native material from 6.5-10'			
							Collected "full suite" for each interval plus one 8 oz jar for screening			

TYPE OF DRILLING RIG:	Geo-Probe			*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	D.P.T.			
METHOD OF SOIL SAMPLING:	Grab using macro-core			
METHOD OF ROCK CORING:	NA			
GROUNDWATER LEVELS:	NA			
OTHER OBSERVATIONS:	Instrument Group: D	BORING NO.:	DI-210	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR:	Raymark OU6			BORING NO.:	DPW-104
PROJECT NO.:	N4106-0320			START DATE:	7/23/02
LOGGED BY:	A. Roy	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	7/23/02
DRILLED BY (Company/Driller):	ADT/A. Hurst			MON. WELL NO.:	NA
GRD. SURFACE ELEVATION:		ELEVATION FROM:		CHECKED BY:	

DEPTH (FEET) 0	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)]
1		1.8 / 2.0	OU6-SO-DPW-104-0002 7/23/02 @ 0845	Silty sand	Medium	Brown	Silty sand, mostly silt and fine sand, trace medium and coarse sand and gravel.	SM	Dry, piece of tile noted.	PID = 0.0 FID = 0.0
2										
3		1.2 / 2.0	OU6-SO-DPW-104-0204 7/23/02 @ 0855	Fill W/sand					Dry-moist fill, pieces of slag and asphalt noted in sample.	PID = 0.0 FID = 0.0
4						Reddish Brown				
5		0.3 / 2.0	OU6-SO-DPW-104-0406 7/23/02 @ 0905		Loose	Brown			No man made material noted in sample.	PID = 0.0 FID = not functioning
6										
7		0.4 / 2.0	OU6-SO-DPW-104-0608 7/23/02 @ 0910				Poorly graded sand, mostly medium to fine sand w/some coarse sand, trace gravel and silt.	SP	Man made material observed (glass, possible slag & tile) moist.	PID = 0.0 FID = not functioning
8										
9		0.8 / 2.0	OU6-SO-DPW-104-0810 7/23/02 @ 0915						Trace slag noted in top of sample, moist.	PID = 0.0 FID = not functioning
10				Sand						
11		1.8 / 2.0	OU6-SO-DPW-104-1012 7/23/02						Moist, no man made material noted in sample.	PID = 0.0 FID = 0.0
12										
				BOE						

TYPE OF DRILLING RIG:	Geo-Probe		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DPT		
METHOD OF SOIL SAMPLING:	Grab/Macro-Core		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	NA		
OTHER OBSERVATIONS	H&S Instrument Group: B, 1-1 BOE at 12.0 ft. bgs, man made material noted, soils appear to be of natural origin.	BORING NO.: DPW-104	PAGE: 1 OF 1

BORING LOG FOR:	Raymark OU6			BORING NO.:	VPA95-106
PROJECT NO.:	N4106-0320			START DATE:	8/14/02
LOGGED BY:	A. Roy	TRANSCRIBED BY:	LJD	COMPLETION: DATE:	8/14/02
DRILLED BY (Company/Driller):	ADT/A. Hurst			MON. WELL NO.:	NA
GRD. SURFACE ELEVATION:		ELEVATION FROM:		CHECKED BY:	KJ 10/14/02

DEPTH (FEET) 0	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)]
1		0.6 / 2.0	OU6-SO-VPA95-106-0002 8/14/02 @ 1500	Silty Sand		Dark brown	Silty sand, mostly f. sand and silt, trace organics & gravel.	SM	Dry, PACM material noted, possible tile.	
2										PID = 0.0 FID = 0.0
3		1.7 / 2.0	OU6-SO-VPA95-106-0204 8/14/02 @ 1520	Silt			Silt – mostly silt – trace f. sand and organics.	ML	Dry, PACM noted in sample.	
4										PID = 0.0 FID = 38.3
5		1.25 / 2.0	OU6-SO-VPA95-106-0406 8/14/02						Moist, soils appear to be natural.	
6 (1)				Organic Silt			Organic silt – mostly silt & organics	OL/OH		PID = 232 FID = 29.5
				B.O.E.						
				1. Bottom of Exploration (B.O.E.) @ 6.0 ft. bgs, soils appear to be natural. No man made material noted.						

TYPE OF DRILLING RIG:	Truck Mount Geo-Probe rig		*Tetra Tech NUS, Inc.*
METHOD OF ADVANCING BORING:	DPT		
METHOD OF SOIL SAMPLING:	Grab Using Macro-Core		
METHOD OF ROCK CORING:	NA		
GROUNDWATER LEVELS:	NA		
OTHER OBSERVATIONS:	Instrument Group: A FID: B	BORING NO.: VPA95-106	PAGE: 1 OF 1

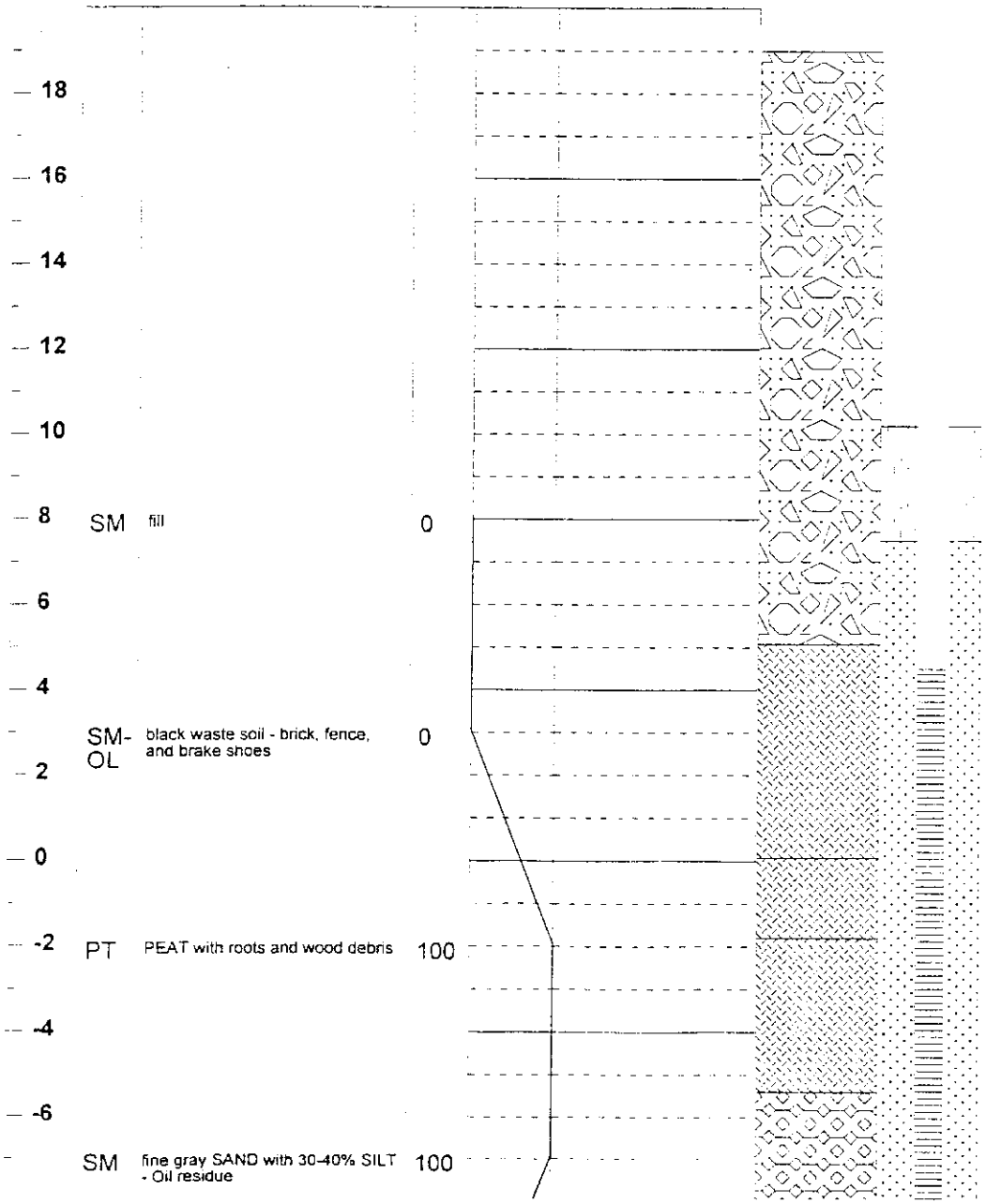
FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-01
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 07/07/97
DATE COMPLETED: 07/25/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-01S	899073.32, 634106.61	18.81 FT-MSL	(4.5 to -10.5)
PC-01M	899076.36, 634104.35	18.69 FT-MSL	(-28.6 to -38.6)
PC-01D	899074.31, 634102.04	18.76 FT-MSL	(-57.5 to -63.0)
PC-01B	899071.55, 634104.39	18.79 FT-MSL	(-73.0 to -88.0)

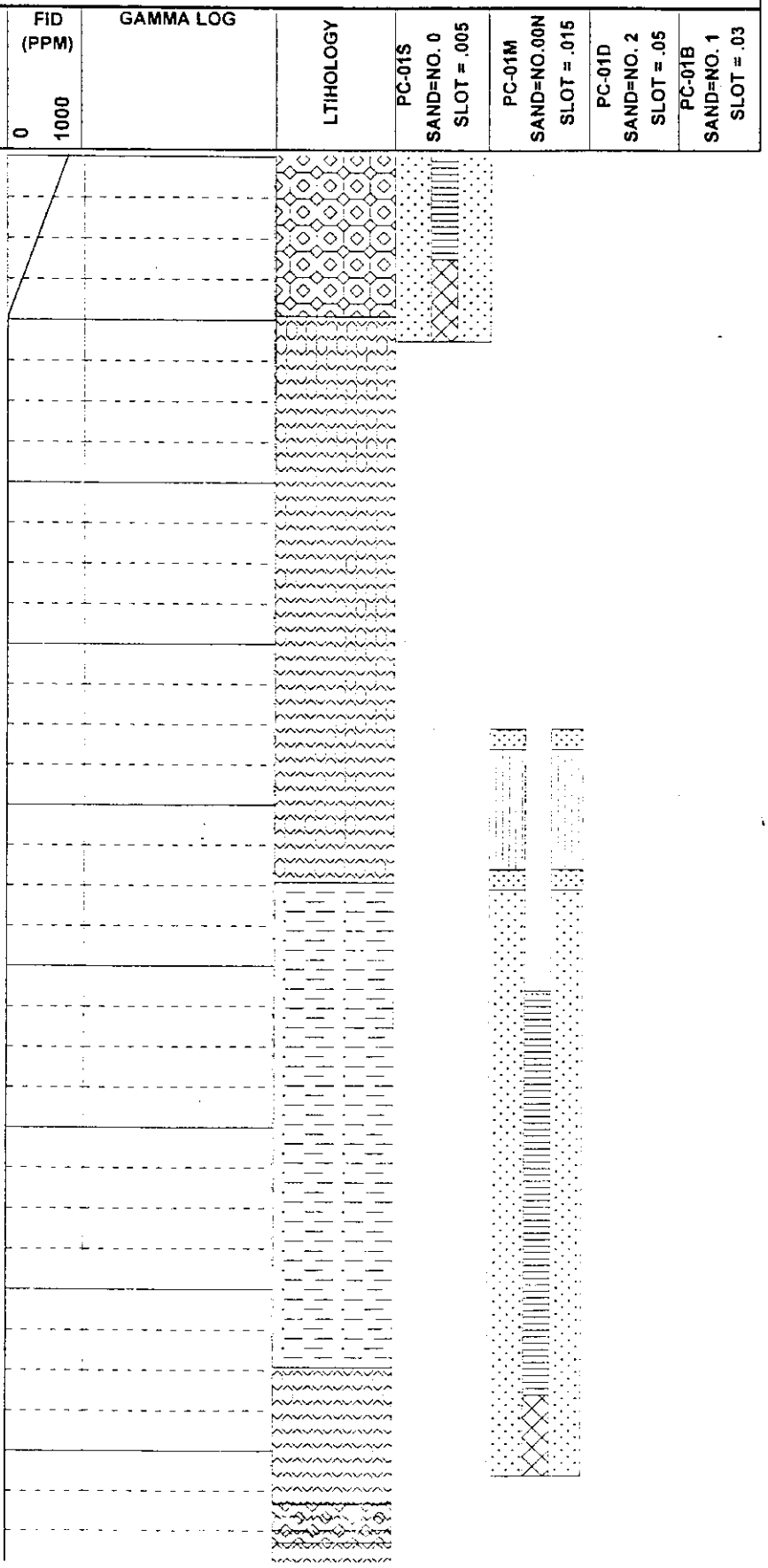
FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
8	SM	fill	0
2	SM-OL	black waste soil - brick, fence, and brake shoes	0
-2	PT	PEAT with roots and wood debris	100
-6	SM	fine gray SAND with 30-40% SILT - Oil residue	100



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-01
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

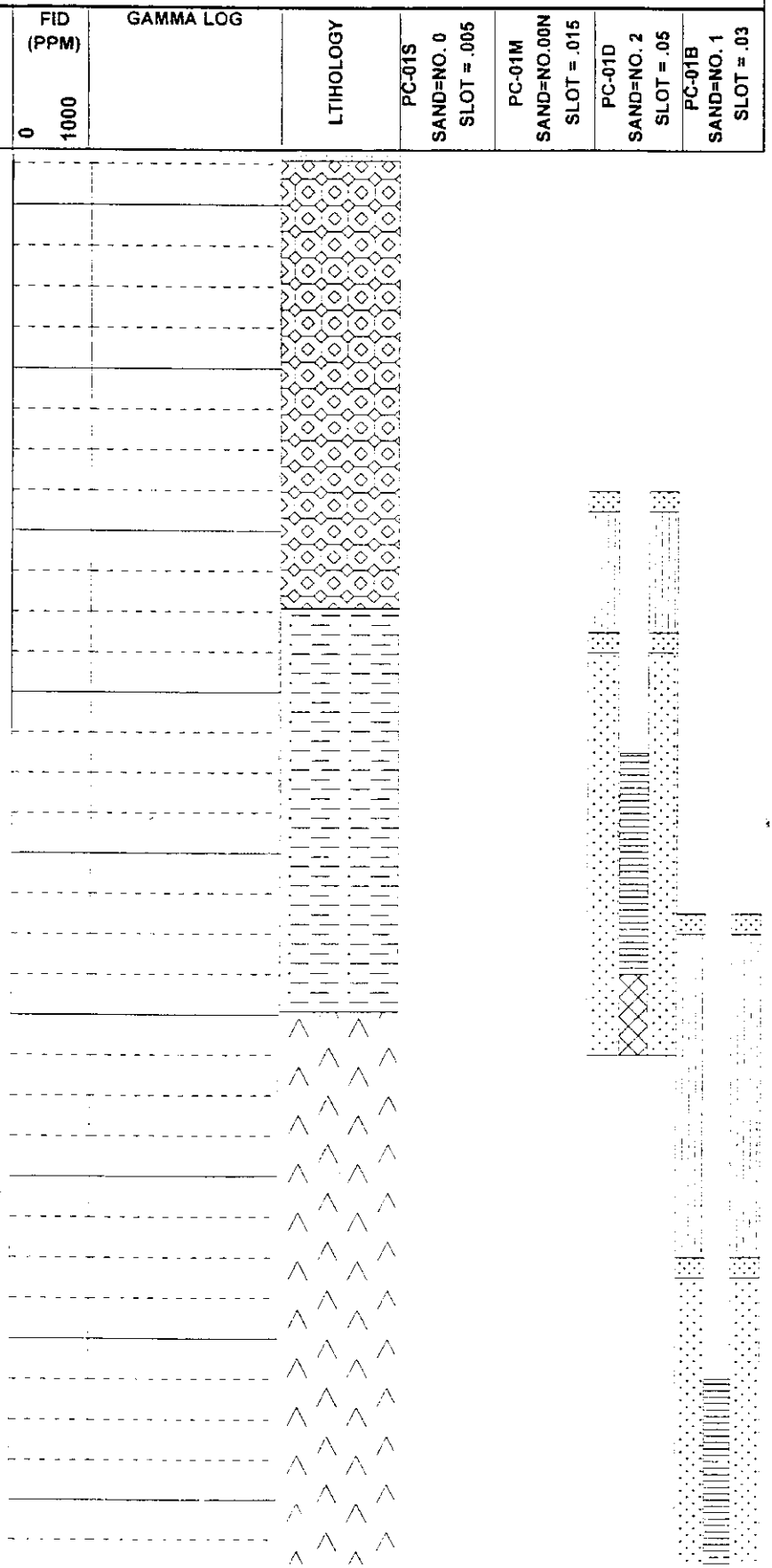
FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-8			
-10			
-12	SP	medium-coarse brown-gray SAND	6
-14			
-16			
	SP	brown-orange medium-corse SAND	5
-18			
-20			
-22	SP	medium brown SAND	4
-24			
-26			
	GP	angular GRAVEL with (15-25%) medium-coarse sand	0
-28			
-30			
-32	GP	angular gravel with medium-coarse SAND (15-25%)	0
-34			
-36			
	SP	brown fine SAND	4
-38			
-40			
-42	SM	fine brown-olive SAND with 15-25% silt	6



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-01
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-44			
-46			
	SM	fine brown-olive SAND with 15-25% silt	0
-48			
-50			
-52	SM	fine brown-olive SAND with 15-25% silt	0
-54			
-56			
	GP	rounded fine GRAVEL with 20-30% medium sand	0
-58			
-60			
-62			
-64		Bedrock	
-66			
-68			
-70			
-72			
-74			
-76			



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-01
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG	LTIHOLOGY	PC-01S SAND=NO. 0 SLOT = .005	PC-01M SAND=NO.00N SLOT = .015	PC-01D SAND=NO. 2 SLOT = .05	PC-01B SAND=NO. 1 SLOT = .03
-78										
-80										
-82										
-84										
-86										
-88										
-90										

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-02
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

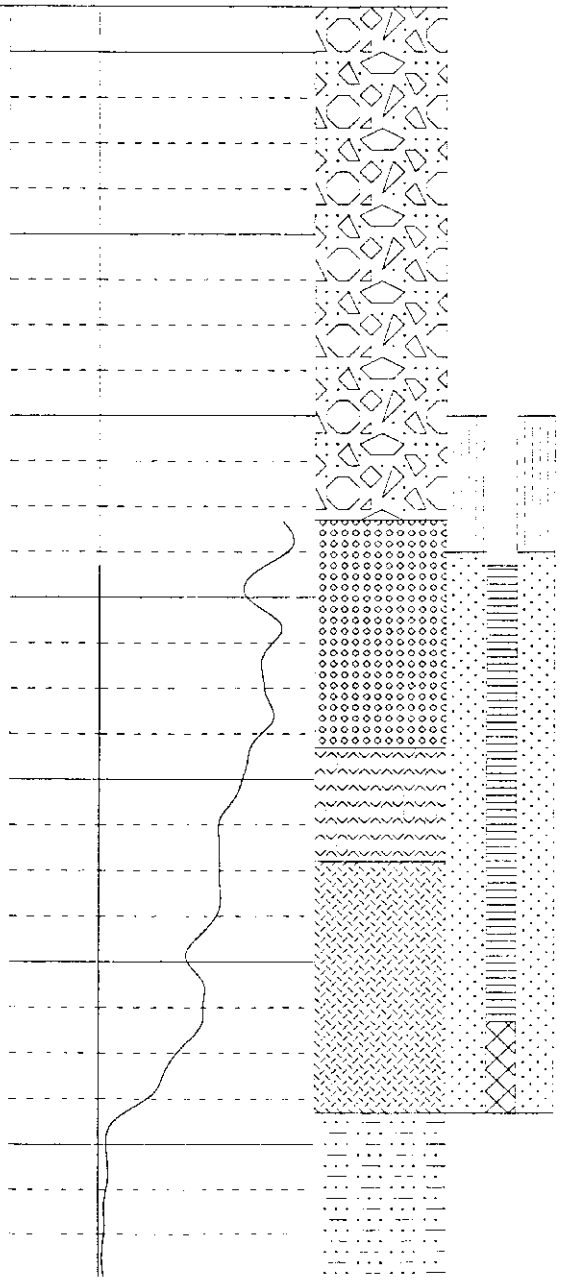
DATE STARTED: 12/09/96
DATE COMPLETED: 01/23/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-02S	898716.84, 633766.62	15.07 FT-MSL	(4.7 to -5.3)
PC-02M	898710.86, 633767.30	15.15 FT-MSL	(-53.1 to -63.1)
PC-02D	898715.33, 633769.73	15.10 FT-MSL	(-77.1 to -92.1)
PC-02B	898713.05, 633763.16	15.20 FT-MSL	(-100.1 to -115.1)

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
16			
14			
12			
10			
8			
6	ML	waste soil - black SILT with 30-40% fine-medium sand and 10% gravel	
4			100
			100
2			100
			100
0	SP	medium-coarse SAND with 10-20% fine subangular gravel	100
			100
-2	PT	dark brown PEAT - large pink roots visable	100
			100
-4			100
			100
-6			100
			100
-8	SP-SM	gray medium-coarse SAND with 5-15% silt / gray medium SAND with 5-15% silt	100
			100
-10			100

FID (PPM) 0 – 1000

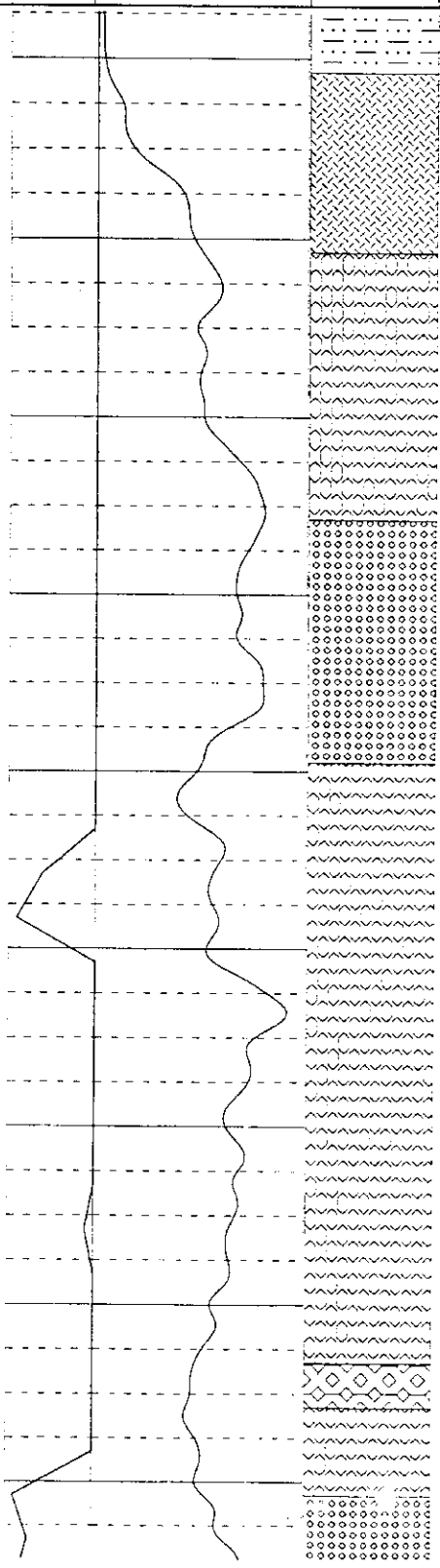
GAMMA LOG 0 – 60



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-02
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-12	PT	dark brown PEAT with large pink roots	100
-14			100
-16	SP	gray medium-coarse SAND	100
-18			100
-20			100
-22	ML	gray SILT with 20-30% fine sand	100
-24			100
-26			100
-28	SP	medium-coarse SAND with 10-20% fine-coarse gravel	100
-30	SP	gray fine-medium SAND	400
-32			100
-34			100
-36	SP	coarse SAND with fine-coarse subangular gravel	100
-38			900
-40	SP	medium gray SAND	100
-42	SM	fine SAND with 20-30% silt	100
	SP	gray coarse SAND with fine subangular gravel	100
-44	ML	gray SILT	84



PC-02S SAND=NO. 0 SLOT = .02

PC-02M SAND=NO.00N SLOT = .015

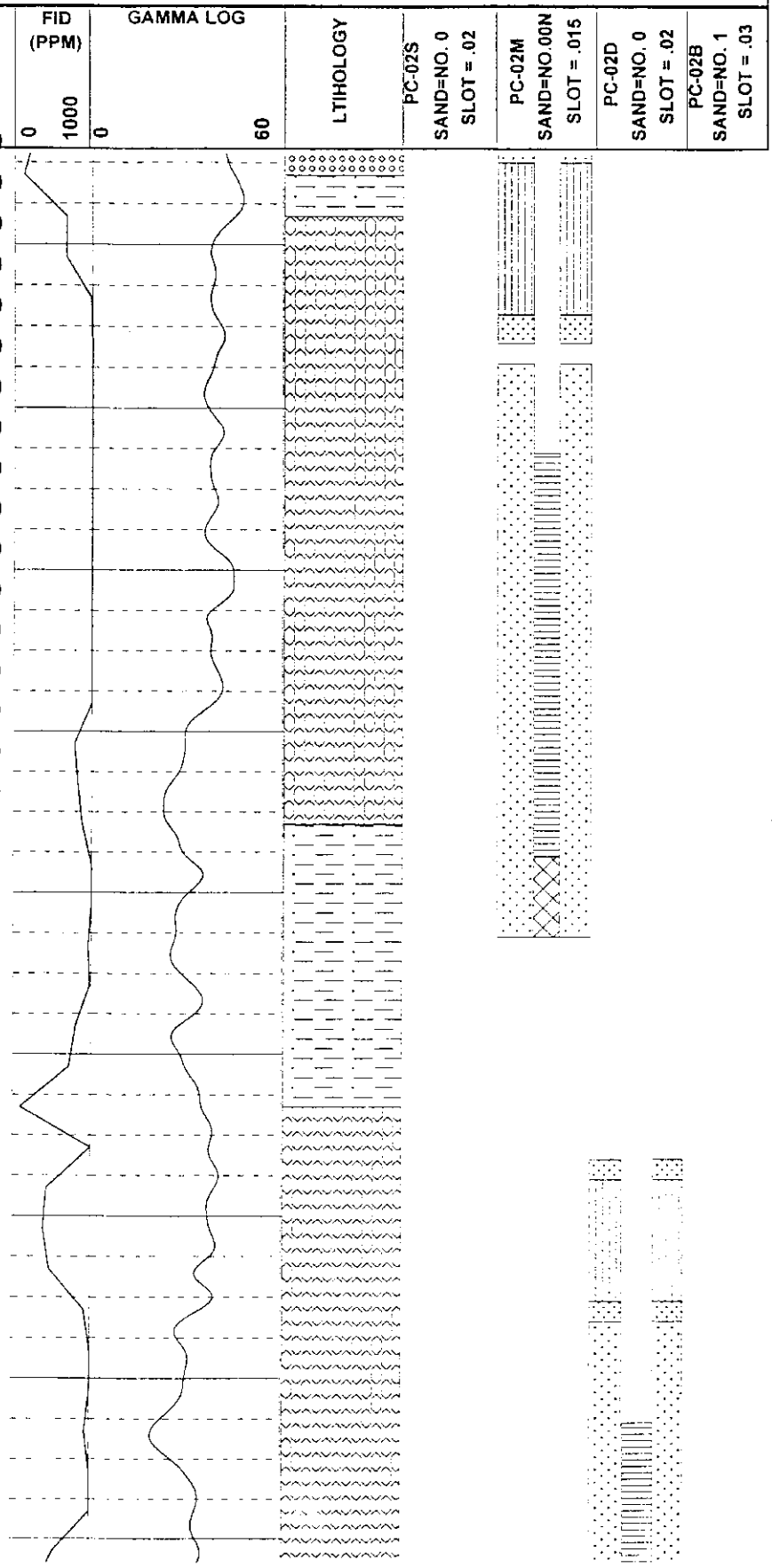
PC-02D SAND=NO. 0 SLOT = .02

PC-02B SAND=NO. 1 SLOT = .03

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-02
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

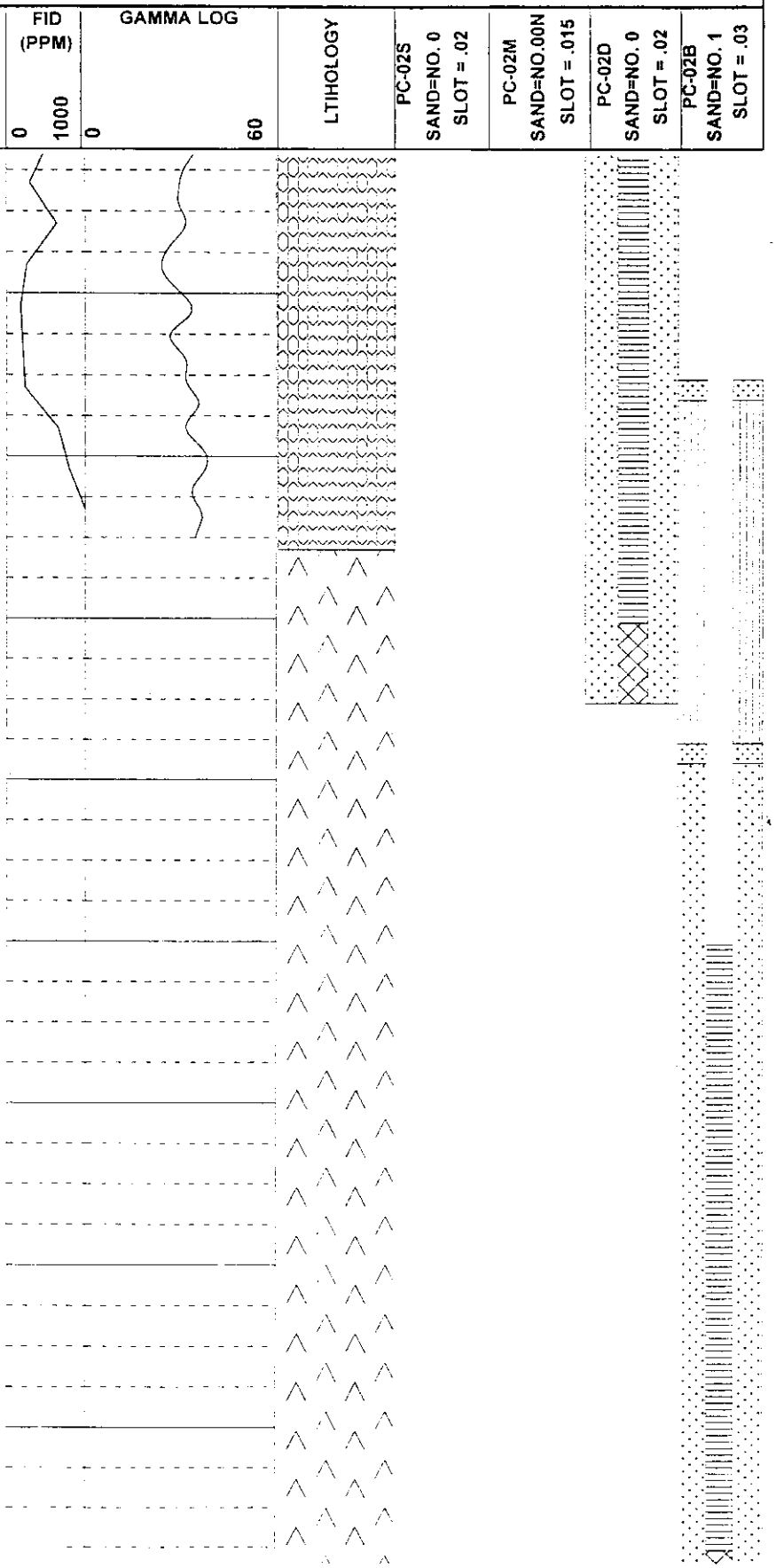
FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-46	GP	coarse GRAVEL	120
	SP	medium-coarse SAND with 10-20% fine gravel	660
-48			660
			980
-50	SP	red-brown fine-medium SAND	100
			100
-52			100
			100
-54	SP	medium-coarse SAND with 15-25% fine subangular gravel	100
			100
-56	SP	medium SAND	100
			100
-58			100
	SP	fine-medium gray SAND	100
-60			780
			820
-62	GP	fine-coarse subangular GRAVEL with 20-30% sand	880
			100
-64			100
			960
-66			980
			800
-68			720
	SP	medium brown SAND	100
-70			100
			440
-72			400
			480
-74	SP	medium-coarse brown SAND with fine subangular gravel	920
			100
-76			100
			940
-78			100
			100
-80			



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-02
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
	SP	fine medium brown SAND	540
			300
-82			640
			260
-84			180
	SP	medium-coarse brown SAND with 5-15% fine gravel	210
-86			240
			660
-88			800
			100
-90	BR	bedrock	
-92			
-94			
-96			
-98			
-100			
-102			
-104			
-106			
-108			
-110			
-112			
-114			



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470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-02
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 60	LITHOLOGY	PC-02S SAND=NO. 0 SLOT = .02	PC-02M SAND=NO.00N SLOT = .015	PC-02D SAND=NO. 0 SLOT = .02	PC-02B SAND=NO. 1 SLOT = .03
-116										
-118										
-120										

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-03
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

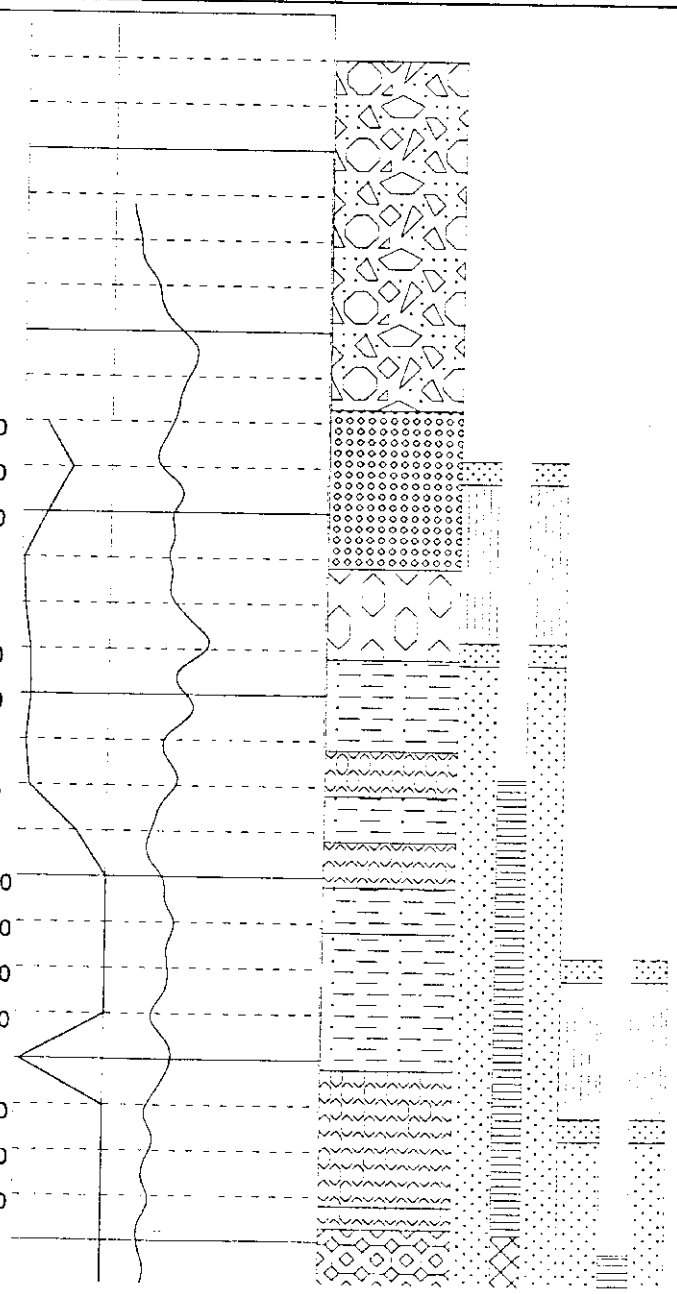
DATE STARTED: 01/03/97
DATE COMPLETED: 01/27/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-03S	898865.40, 634392.21	22.21 FT-MSL	6.2 to -3.8
PC-03D	898868.43, 634389.95	22.22 FT-MSL	-4.2 to -10.2
PC-03B	898868.55, 364393.62	22.22 FT-MSL	-18.6 to -33.6

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
22	SP	void space through sleeve	
20			
18			
16			
14		red crushed brick	260
		waste soil - asphalt, brick, fine-medium gravel	560
12			280
10	GM	fine-coarse subrounded GRAVEL with 20-30% fine-coarse brown sand and 5-15% silt - dry to moist	20
			42
8	GP	fine-coarse SAND with 15-25% fine gravel and 5% coarse gravel	110
			120
6	SP	light brown fine-coarse SAND, dry white powder	70
	GP	fine-coarse GRAVEL with 35-45% fine-coarse sand	120
4	SP	brown fine-medium SAND	660
	GP	fine-coarse GRAVEL with 35-45% medium-coarse sand	1000
2	GP	black stained fine-coarse subrounded GRAVEL with 20-30% medium-coarse sand	1000
			1000
0			1000
	SP	medium black stained SAND	48
-2			1000
			1000
-4	SP	fine-medium brown SAND	1000
	SM	fine-medium brown SAND with 10-20% silt	

FID (PPM) 0 – 1000

GAMMA LOG 30 – 120



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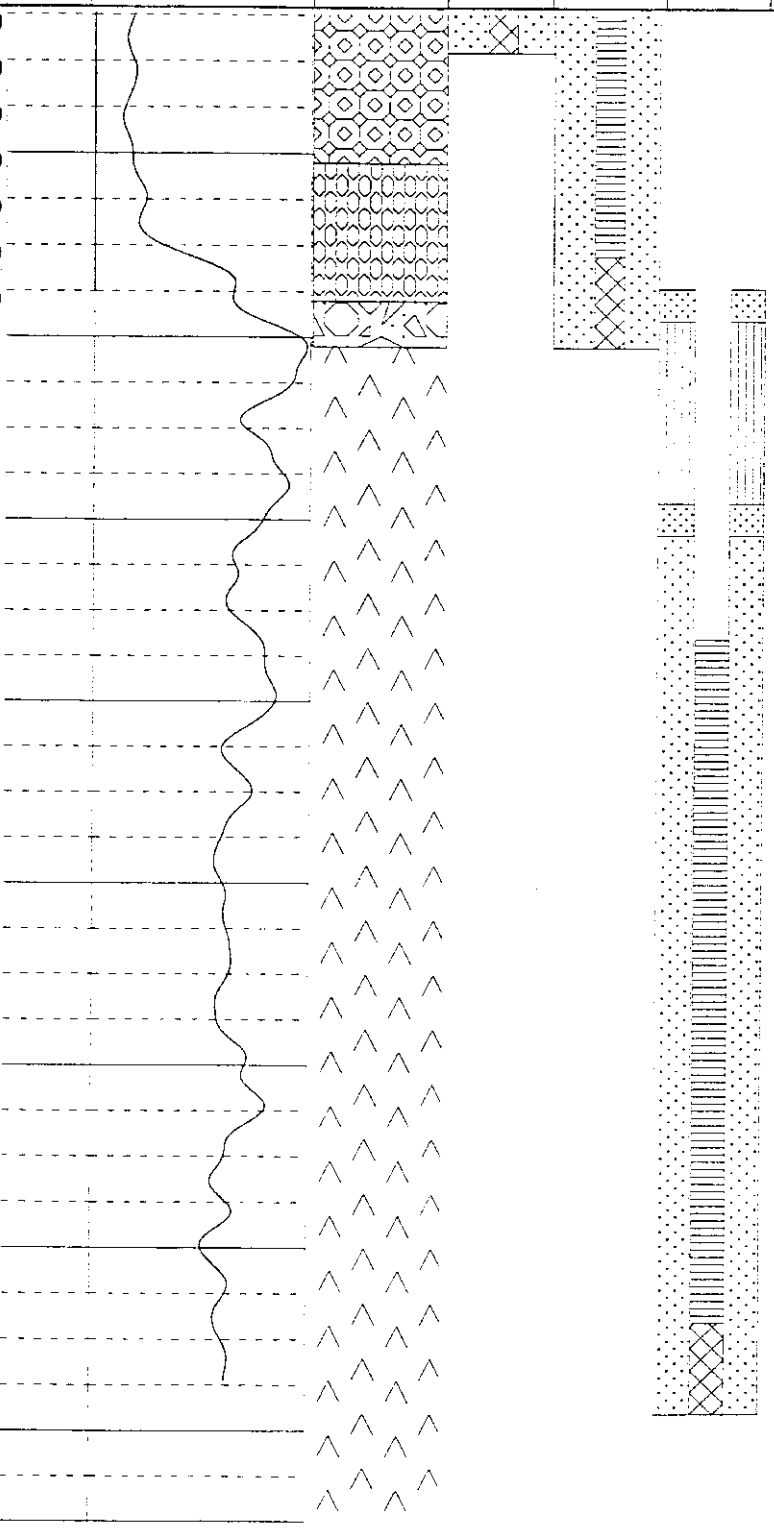
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-03
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-6			1000
			1000
			1000
-8	SP	cobble - medium brown SAND	1000
			1000
-10			1000
		cobbles - pieces of bedrock	1000
-12	BR	bedrock	
-14			
-16			
-18			
-20			
-22			
-24			
-26			
-28			
-30			
-32			
-34			
-36			
-38			



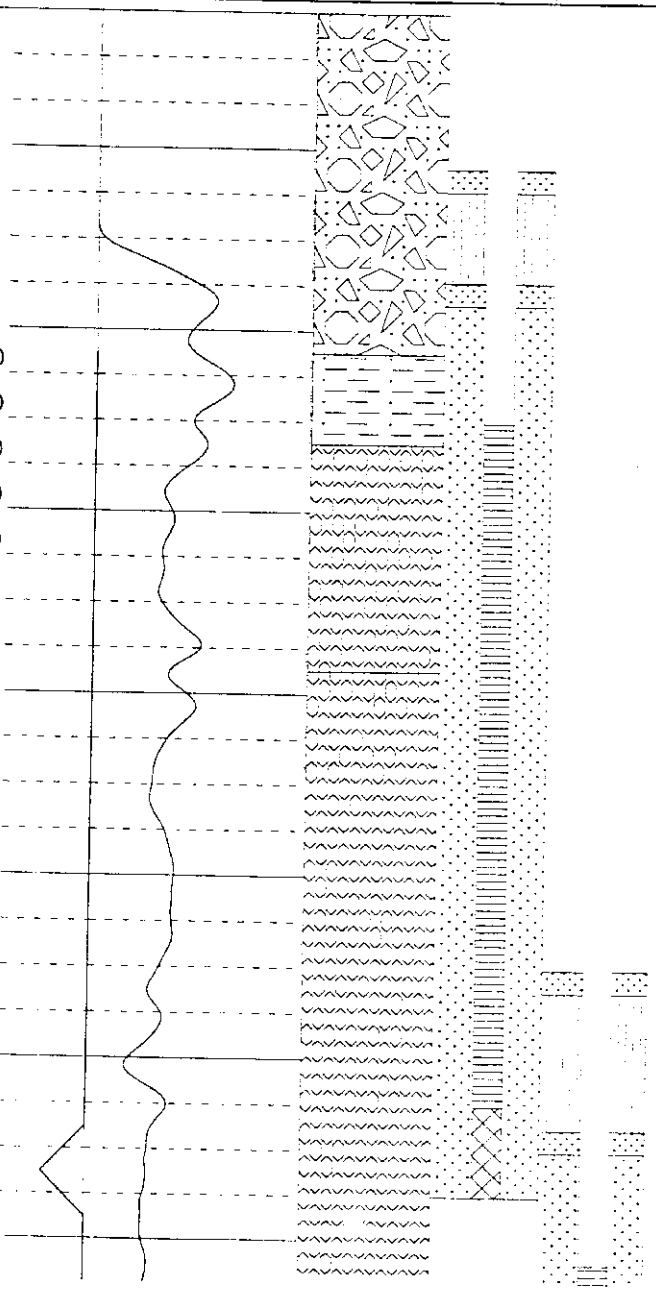
FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-04
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 01/23/97
DATE COMPLETED: 01/25/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-04S	898832.74,634635.14	14.08 FT-MSL	6.0 to -9.0
PC-04D	898827.59,634637.12	14.09 FT-MSL	-12.5 to -22.5
PC-04B	898829.15,634633.58	13.88 FT-MSL	-30.9 to -45.9

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
14		fill	
12			
10			
8	GP	fine-coarse GRAVEL with cobbles and brown fine sand	1000
6	SP	brown medium-coarse SAND with 20-30% fine-coarse gravel	1000
4			1000
2			1000
0	SP	gray medium-coarse SAND with 35-45% fine-coarse gravel	1000
-2			1000
-4			1000
-6			1000
-8			1000
-10			1000
-12			500



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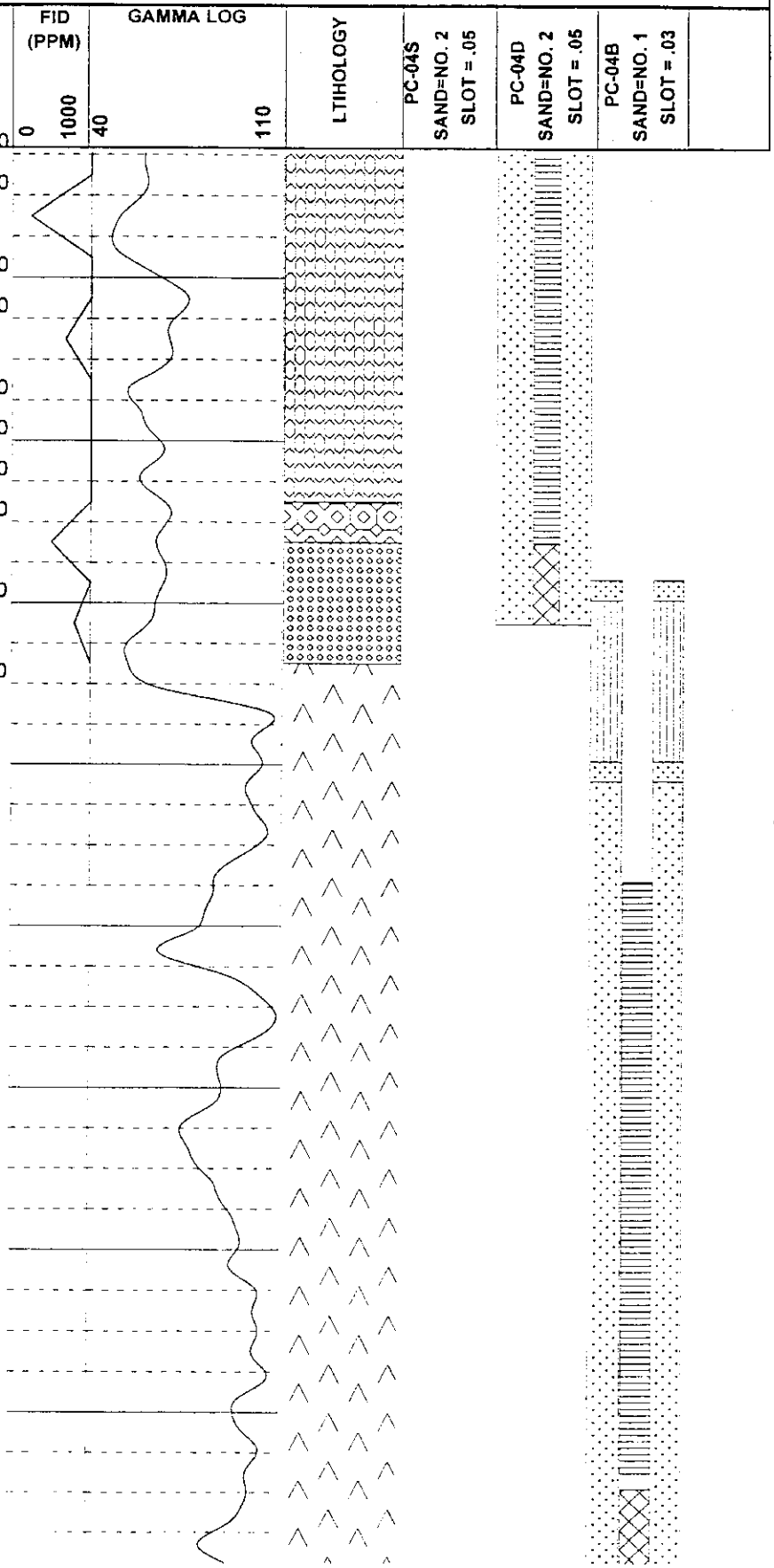
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-04

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11

STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-14			1000
			240
-16			1000
			1000
-18			680
			1000
-20			1000
			1000
-22	SM	fine-medium gray SAND with 20-30% silt	1000
	ML	gray CLAY with 10-20% fine sand and 5% coarse gravel	500
-24			1000
			800
-26	BR	bedrock	1000
-28			
-30			
-32			
-34			
-36			
-38			
-40			
-42			
-44			
-46			



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470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-04

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11

STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 40 110	LTIHOLOGY	PC-04S SAND=NO. 2 SLOT = .05	PC-04D SAND=NO. 2 SLOT = .05	PC-04B SAND=NO. 1 SLOT = .03
-48									
-50									

FOSTER WHEELER ENVIRONMENTAL CORPORATION
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MONITORING WELL CLUSTER: PC-05
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 07/17/97
DATE COMPLETED: 07/25/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

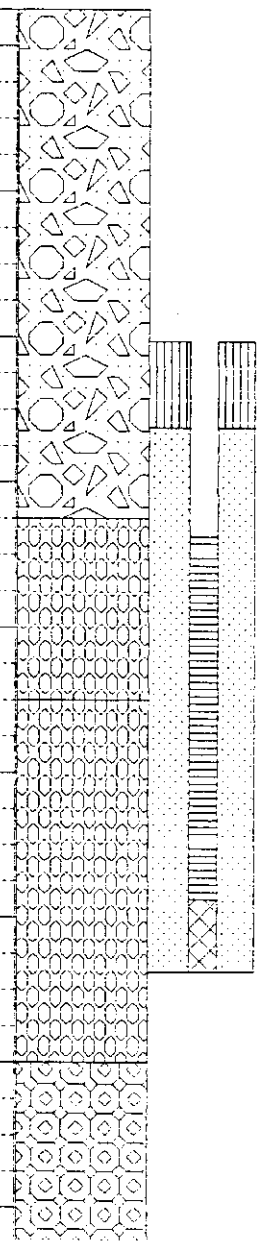
WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-05S	898546.46, 634565.08	20.49 FT-MSL	(6.5 to -3.5)
PC-05M	898542.59, 634557.92	20.63 FT-MSL	(-34.0 to -44.0)
PC-05D	898540.84, 634562.56	20.60 FT-MSL	(-46.0 to -56.0)
PC-05B	898548.56, 634560.24	20.64 FT-MSL	(-68.0 to -83.0)

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
20	SP	clean fill	
18			
16			
14			
12			
10			
8			
6	SP	process waste and SAND	10
4			
2	SP	SAND with gravel, black stained medium-coarse SAND with fine subrounded gravel, trace silt	350
0			
-2			
-4			200
-6			
-8	SM	SAND with silt	6
-10			
-12			

FID (PPM) 0 – 1000

GAMMA LOG

LITHOLOGY



PC-05S SAND=NO. 00N SLOT = .015

PC-05M SAND=NO.00 SLOT = .01

PC-05D SAND=NO. 000 SLOT = .005

PC-05B SAND=NO. 1 SLOT = .03

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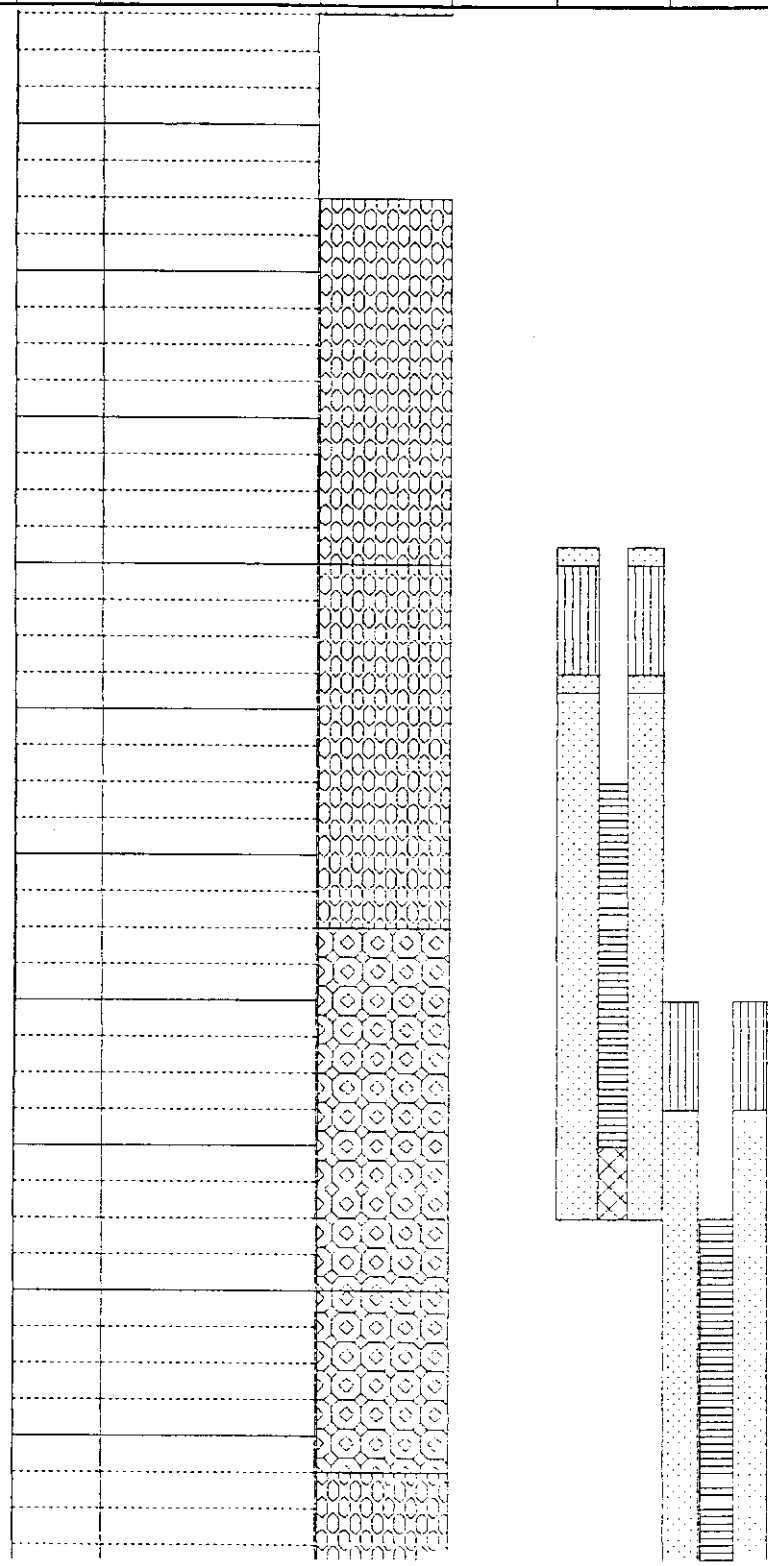
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-05
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-14			12
-16			
-18	SP	brown medium SAND with 5-10% silt	0
-20			
-22			
-24			0
-26			
-28	SP	SAND; layered gray to brown fine-medium	0
-30			
-32			
-34			
-36			
-38	SM	SAND; medium gray/brown SAND with silt	20
-40			
-42			
-44			1.5
-46			
-48	SM	SAND; 80% gray fine-medium SAND, 20% silt	
-50			
-52			
-54	SP	SAND with gravel	0



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470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-05
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG	LITHOLOGY	PC-05S SAND=NO. 00N SLOT = .015	PC-05M SAND=NO.00 SLOT = .01	PC-05D SAND=NO. 000 SLOT = .005	PC-05B SAND=NO. 1 SLOT = .03
-56										
-58	SP	SAND with gravel	0							
-60		Bedrock								
-62										
-64										
-66										
-68										
-70										
-72										
-74										
-76										
-78										
-80										
-82										
-84										
-86										
-88										
-90										

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

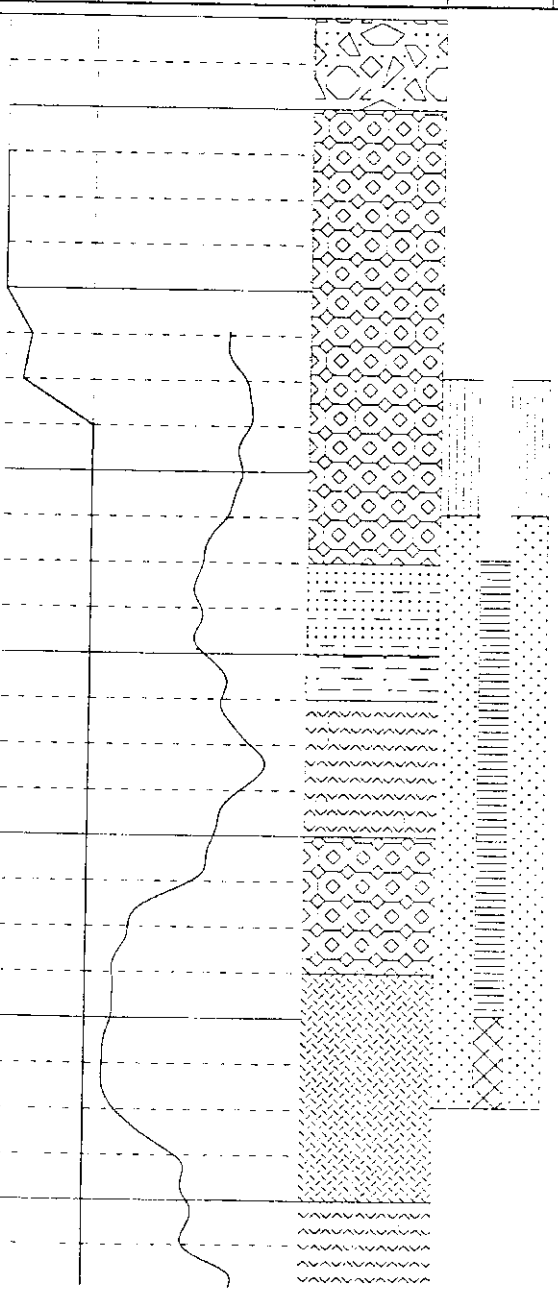
MONITORING WELL CLUSTER: PC-06
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 01/14/97
DATE COMPLETED: 03/04/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-06S	898478.30, 634704.37	17.43 FT-MSL	6.1 to -3.9
PC-06M	898475.50, 634709.12	17.48 FT-MSL	-32.5 to -42.5
PC-06D	898471.78, 634706.36	17.52 FT-MSL	-52.7 to -62.7
PC-06B	898474.39, 634702.26	17.41 FT-MSL	-91.3 to -106.3

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
16	FILL	clean FILL	
14			0
			6.5
			7.5
12			1.5
			300
10			200
			1000
8			1000
			1000
6	SP-SM	brown-black oil stained fine-medium SAND with 5% silt	1000
			1000
4	GP	fine-coarse red/black GRAVEL with 30-40% coarse sand	1000
	SP	black process fill - medium to coarse SAND with 30-40% fine gravel	1000
2			1000
			1000
0	SM	gray fine-medium SAND with 10-20% silt	1000
			1000
-2			1000
	OL	dark brown PEAT with large woody roots	1000
-4			1000
			1000
-6	SP		1000
			1000
-8		gray medium-coarse SAND with 20% silt	1000
			1000

FID (PPM) 0 – 1000; GAMMA LOG 0 – 75



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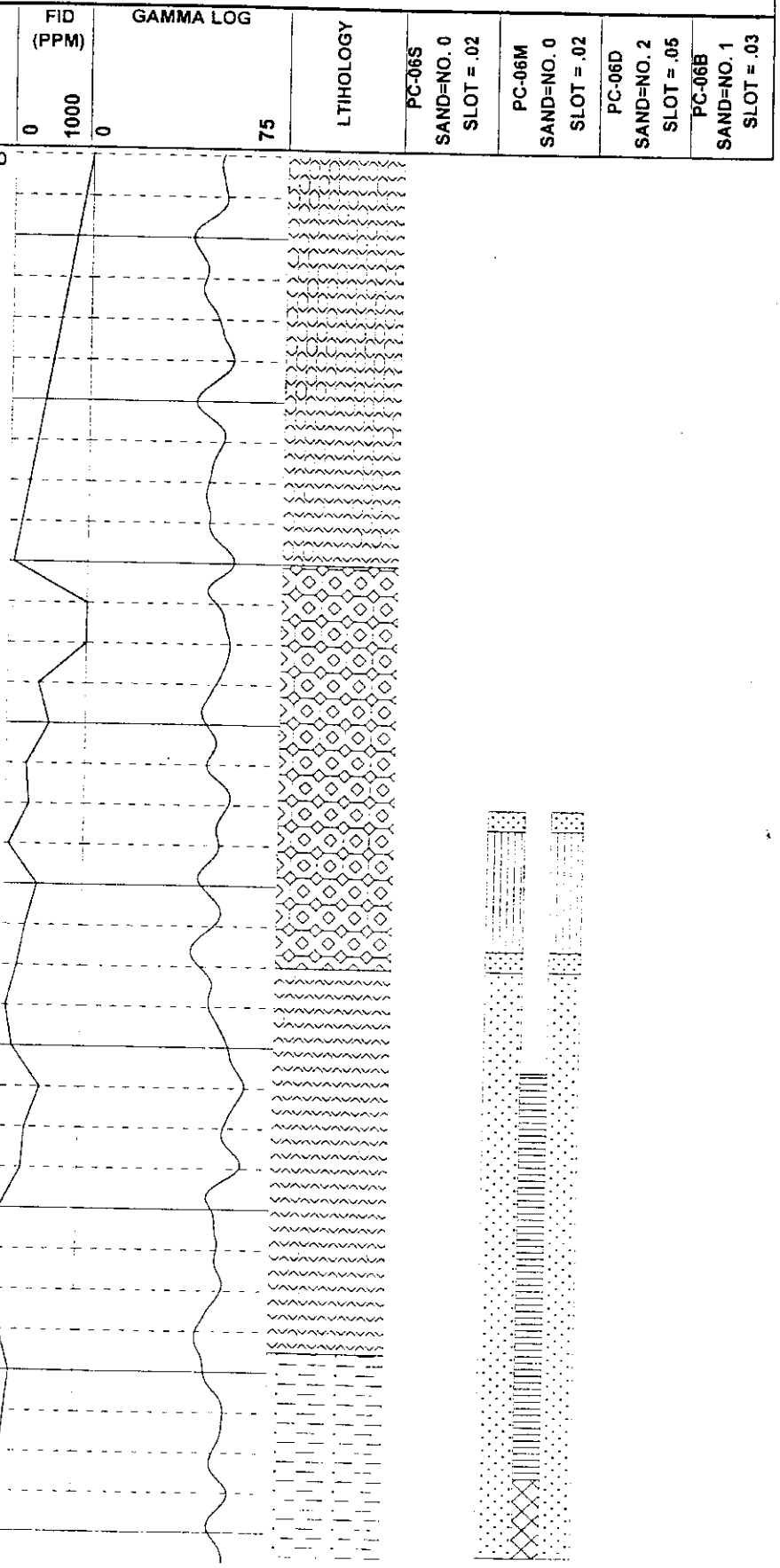
AVENUE
CHUSETTS 02210

MONITORING WELL CLUSTER: PC-06
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEE	ASTM CL	LITHOLOGIC DESCRIPTION	FID (PPM)
-10			1000
-12			
-14			
-16		gray medium-coarse SAND	
-18			
-20	SM	fine brown SAND with 25-35% silt aand 5-15% fine gravel	60
-22	SM	brown fine-coarse SAND with 15-25% silt and 15-25% fine-coarse gravel	1000
-24			400
-26			540
-28			260
-30	SP	fine-medium brown-gray SAND	300
-32			50
-34			420
-36	SP	brown medium-coarse SAND with 35-45% fine gravel	280
-38			180
-40	GP	fine-coarse GRAVEL with 10-20% sand and cobbles	50
-42			140
-44			500
			320
			280
			16
			20
			22
			40
			180
			10
			26



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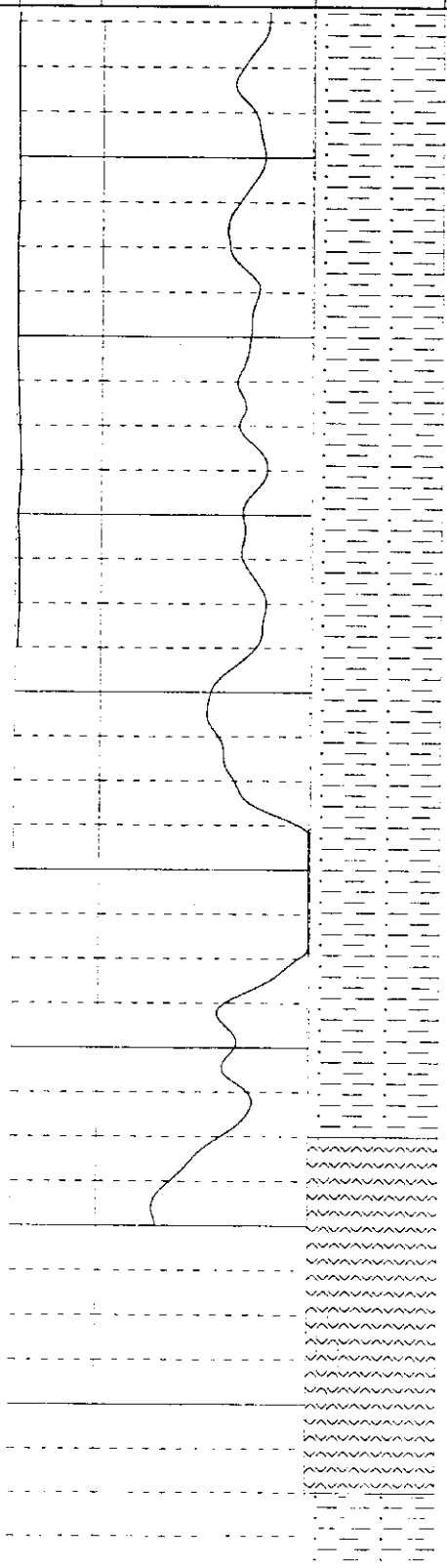
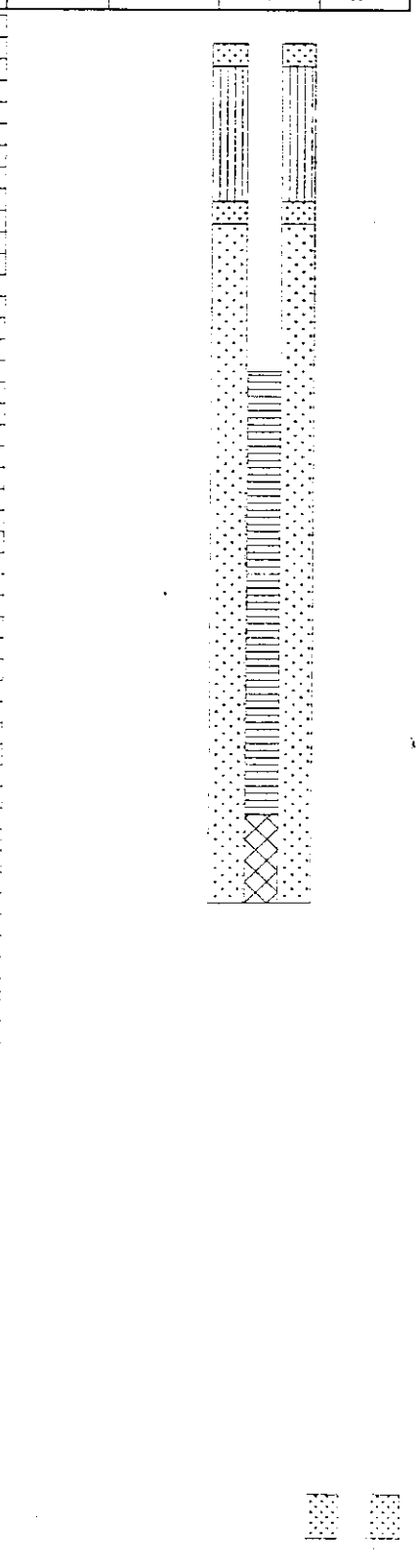
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-06
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
			15
-46			10
		cobles - round with 10-20% fine-coarse gravel and 5% medium coarse sand	18
-48			20
			24
-50			5
			10
-52			8
	GP	fine-coarse gravel with 35-45% fine medium sand	20
-54			40
		fine-coarse GRAVEL with 10-20% sand, occasional cobble	62
-56			28
			48
-58			50
			30
-60		boulder - gneiss-schist	
-62			
-64			
-66			
-68			
-70	SP		
-72			
-74			
-76		brown medium-coarse SAND with 15-25% rounded fine-coarse gravel	
-78	GP	coarse rounded GRAVEL with 10-20% sand	





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470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-06
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 75	LTIHOLOGY	PC-06S SAND=NO. 0 SLOT = .02	PC-06M SAND=NO. 0 SLOT = .02	PC-06D SAND=NO. 2 SLOT = .05	PC-06B SAND=NO. 1 SLOT = .03
-80		weathered bedrock - fractured bedrock fragments with medium-coarse SAND and gravel								
-82	BR	competent bedrock								
-84										
-86										
-88										
-90										
-92										
-94										
-96										
-98										
-100										
-102										
-104										
-106										
-108										
-110										

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-07
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

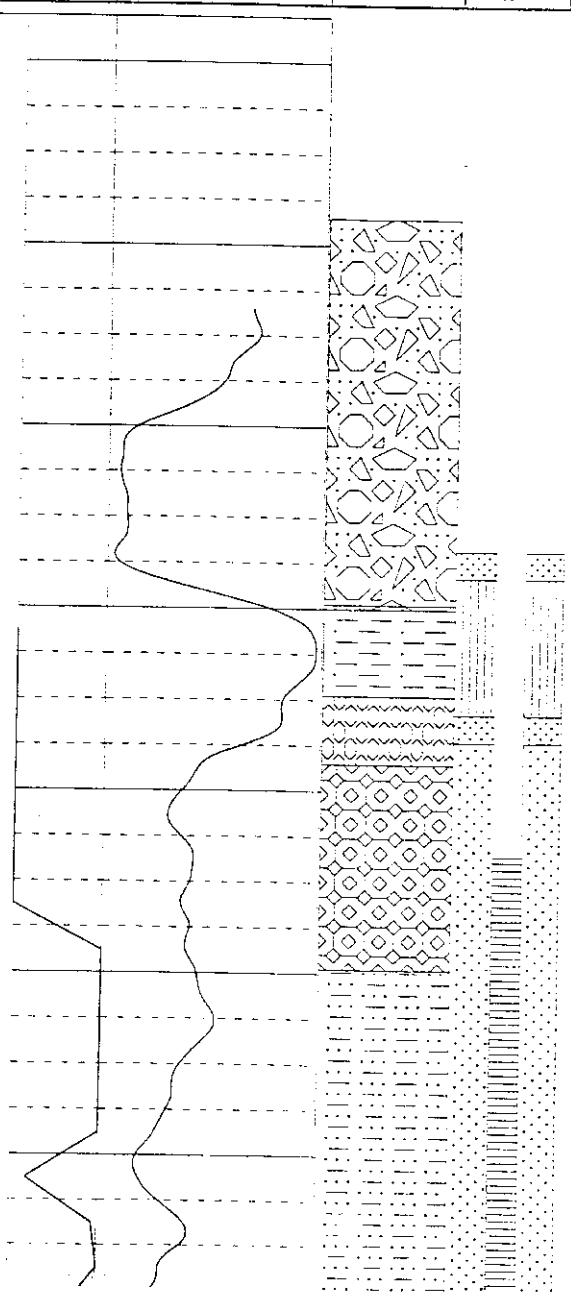
DATE STARTED: 01/27/97
DATE COMPLETED: 01/28/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-07S	898663.09, 634846.40	22.60 FT-MSL	(6.6 to -8.4)

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
24			
22			
20	SP	FILL	
18			
16			
14			
12	GP	fine-medium GRAVEL and fine brown SAND, 10-15% silt	0
10	SP	brown fine SAND, roots, 10% silt	0
			0
8	SM	brown-tan fine SAND with 15-20% silt, roots	0
			0
6			0
	SM	fine gray SAND, 20% silt	0
4	SP	gray medium-coarse SAND, 10% subrounded gravel	100
			100
2			100
			100
0	SP	brown medium SAND with 20% medium-fine gravel	100
	SP	gray fine SAND	180
-2	SP	gray medium SAND with 10% subrounded gravel	940

FID (PPM) 0 – 1000

GAMMA LOG 30 – 120



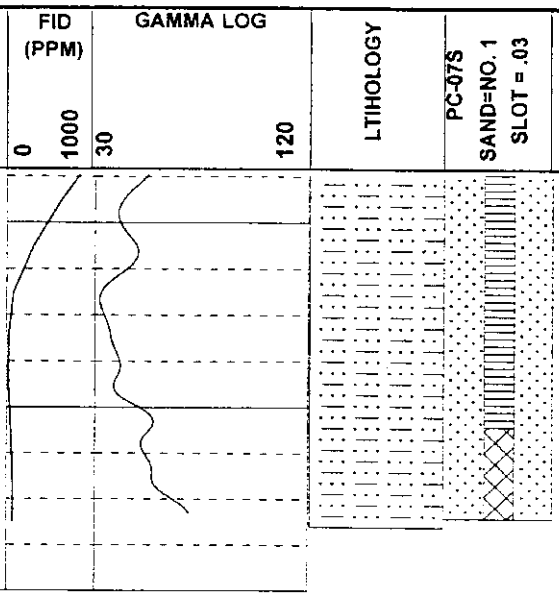
LITHOLOGY

PC-07S SAND=NO. 1 SLOT = .03

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER:
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-4	SP	medium to fine gray SAND, 10% gravel	620
			300
-6			80
			20
-8	SP	medium gray SAND, 10% gravel	20
	SP	fine tan SAND	50
-10			70
-12			70



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

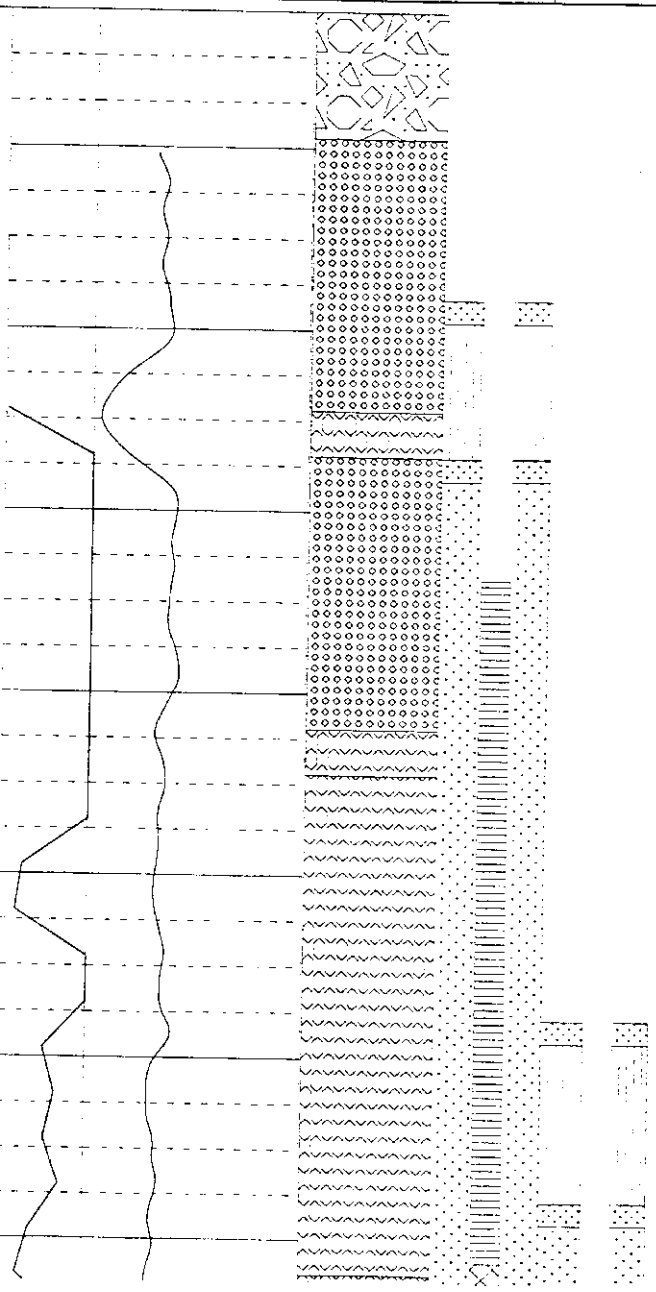
MONITORING WELL CLUSTER: PC-08
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 12/07/96
DATE COMPLETED: 02/06/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-08S	898367.63, 633860.22	19.22 FT-MSL	(6.5 to -8.5)
PC-08D	898365.82, 633864.24	19.31 FT-MSL	(-10.1 to -20.1)
PC-08B	898370.73, 633863.49	19.22 FT-MSL	(-28.3 to -43.3)

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
18			
16			
14			
12			
10	SP	brown medium-coarse SAND (fill)	30
	ML	black process fill with fabric strings - silt/fine sand with high organic content	100
8			100
			100
6			100
			100
4			100
	SP	gray-brown SAND with concrete fragments	100
2			100
	SP	brown-gray medium-coarse SAND with 40-50% fine coarse subangular gravel	100
0			260
			180
-2			100
			100
-4			520
			660
-6			540
			720
-8			380

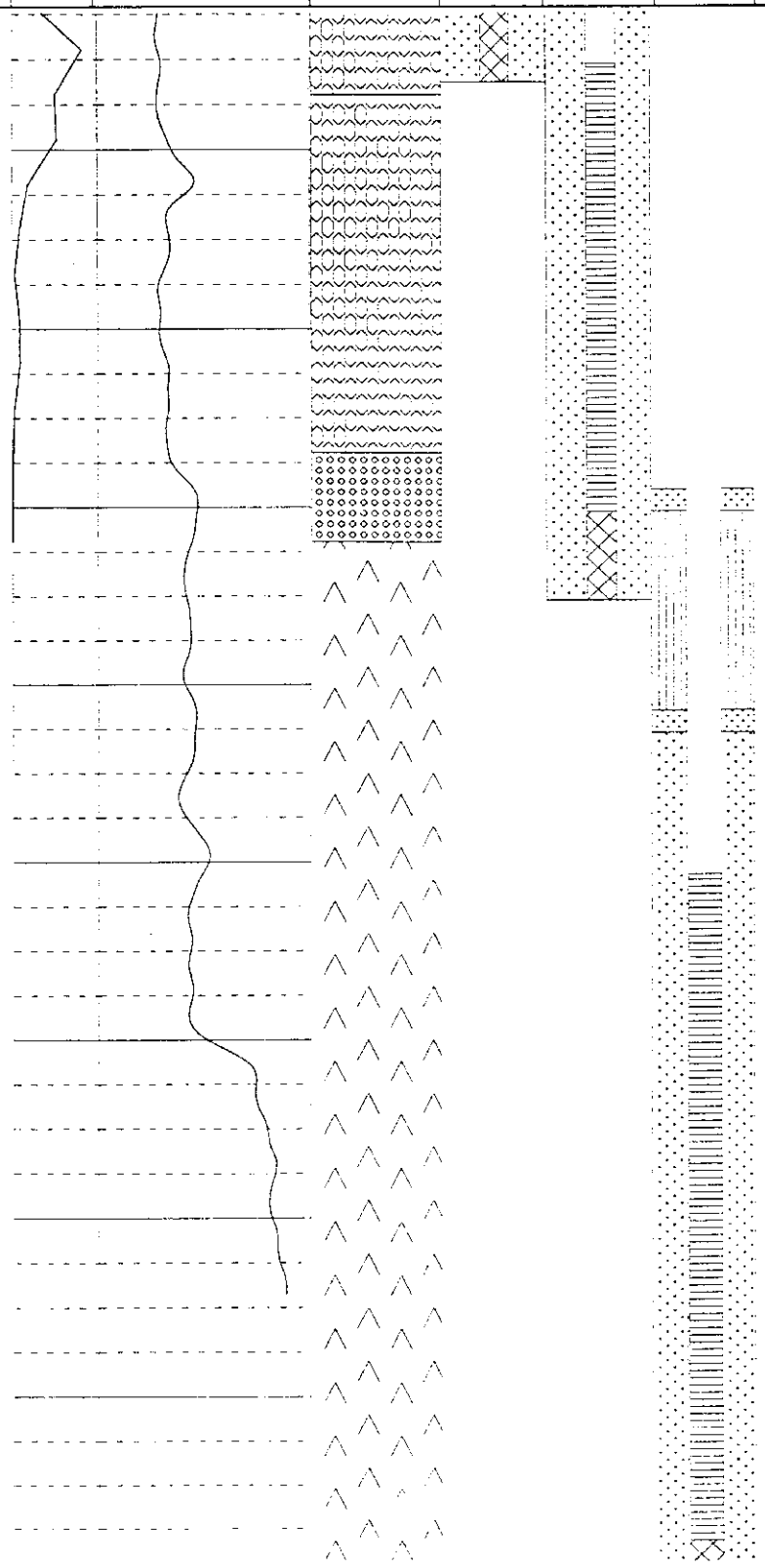
FID (PPM) 0 – 1000; GAMMA LOG 0 – 150



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-08
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
	SP	brown-gray medium-coarse SAND	240
-10			820
	SP	brown medium-coarse SAND with 25-35% fine-coarse gravel	500
-12			520
			180
-14			84
			28
-16			87
			89
-18			24
	ML	gray clay/silt - weathered bedrock fragments	10
-20			0
	BR	Bedrock	5
-22			
-24			
-26			
-28			
-30			
-32			
-34			
-36			
-38			
-40			
-42			



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-08
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 150	LTIHOLOGY	PC-08S SAND=NO. 2 SLOT = .05	PC-08D SAND=NO. 1 SLOT = .03	PC-08B SAND=NO. 1 SLOT = .03
-44									
-46									
-48									
-50									

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-09
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 12/08/96
DATE COMPLETED: 02/09/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

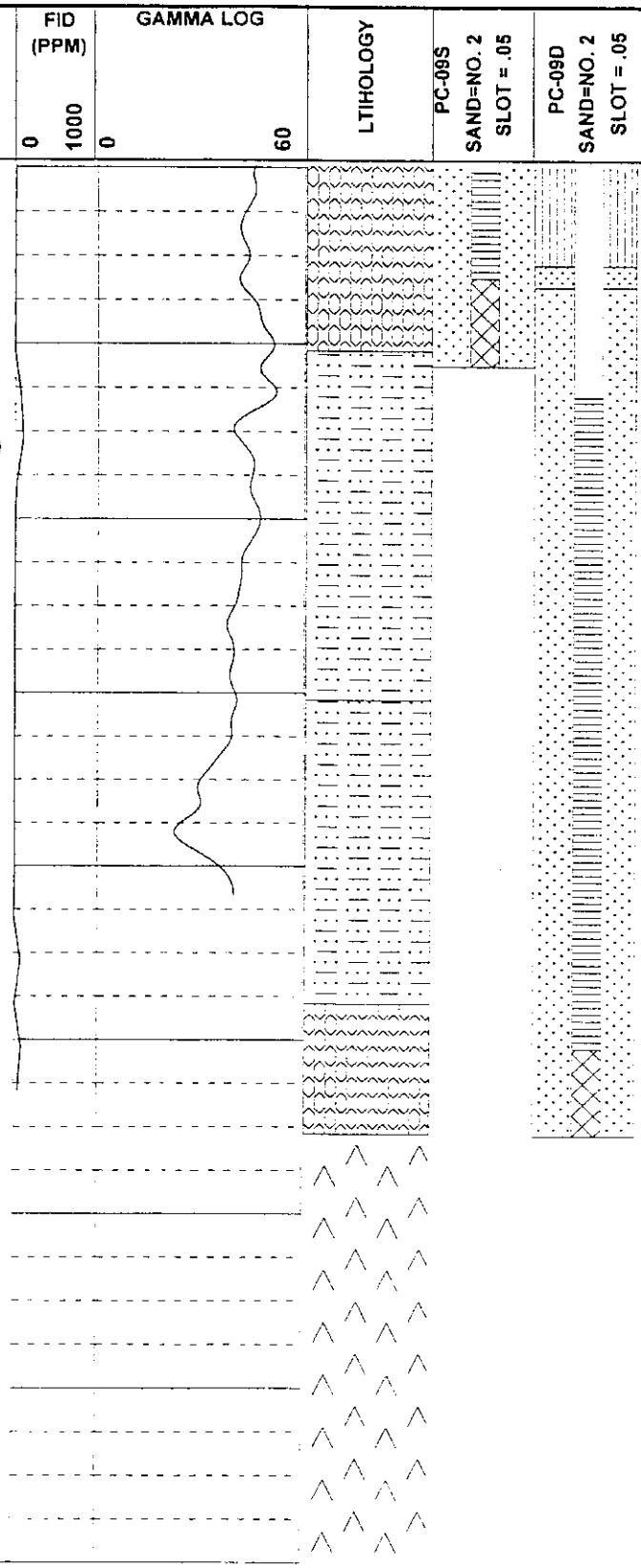
WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-09S	898309.32, 633551.04	19.49 FT-MSL	(4.5 to -10.5)
PC-09D	898312.40, 633552.97	19.41 FT-MSL	(-13.2 to -28.2)

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 60	LITHOLOGY	PC-09S SAND=NO. 2 SLOT = .05	PC-09D SAND=NO. 2 SLOT = .05		
	SP	clean fill								
18										
16										
14										
12										
10	ML	waste soil								
8										
6										
4	SP	fine-medium brown-gray SAND								
2			8							
0			0							
	SP	gray medium-coarse SAND with 15-25% fine subangular gravel	2							
-2			0							
			0							
-4			10							
			10							
-6	SP	brown fine-medium SAND	6							
			4							

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-09
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-8			8
			0
-10			0
			0
-12	SP-SM	brown fine-coarse SAND with roots and black plastic debris and 5-15% silt	0
			72
-14			100
			20
-16			0
			0
-18			0
			1.9
-20	SP-SM	gray medium-coarse SAND with 20-30% fine subangular gravel and 5-15% silt	10
			0.5
-22			0
			7.5
-24			9.2
			2.5
-26			82
	SP	brown medium-coarse SAND with 20-30% fine gravel	13
-28			92
			52
-30	BR	BR	15
-32			
-34			
-36			
-38			
-40			



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470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-10
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

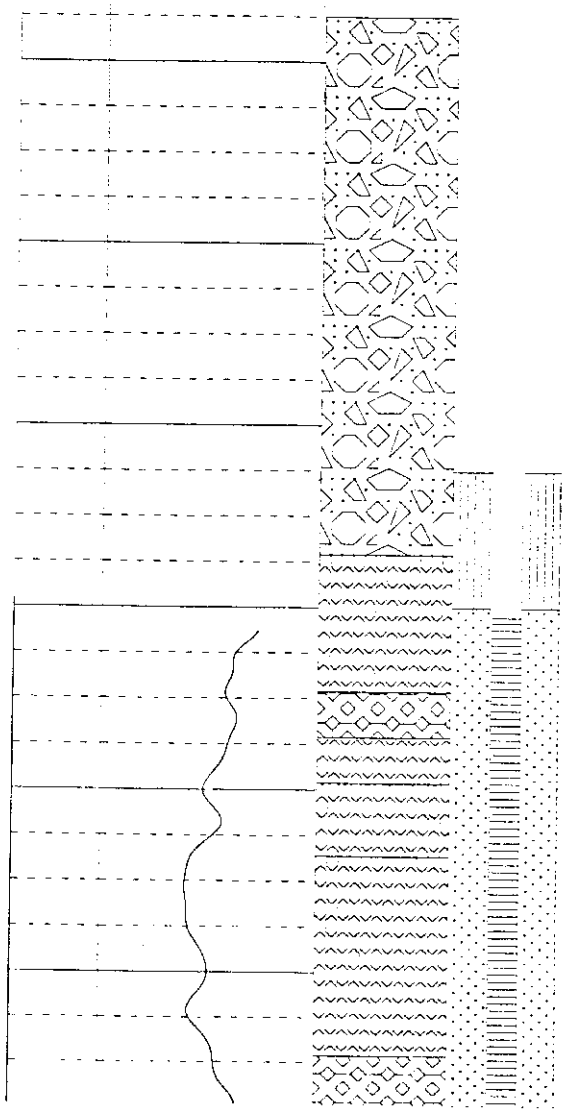
DATE STARTED: 12/13/96
DATE COMPLETED: 01/07/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-10S	897888.97, 634232.13	20.72 FT-MSL	(15.75 to 0.75)
PC-10M	897885.95, 634229.0	20.71 FT-MSL	(-12.07 to -22.07)
PC-10D	897890.24, 634226.86	20.73 FT-MSL	(-41.45 to -56.45)
PC-10B	897892.24, 634230.06	20.73 FT-MSL	(-69.45 to -84.45)

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
24			
22			
20		clean FILL	
18			
16			
14			
12			
10			
8	SP	fine-coarse brown-black SAND with 5-15% subangular gravel	0
			0
6	SM	black process fill with string material	0
	SP	fine-medium SAND with 20-30% fine-coarse gravel	0
4	SP	fine-medium gray SAND with 15-25% fine-coarse gravel	0
		fine-medium brown SAND	0
2	SP		0
			0
0			0
			0
-2	SM	fine-medium SAND with 20-30% silt	0

FID (PPM) 0 – 1000

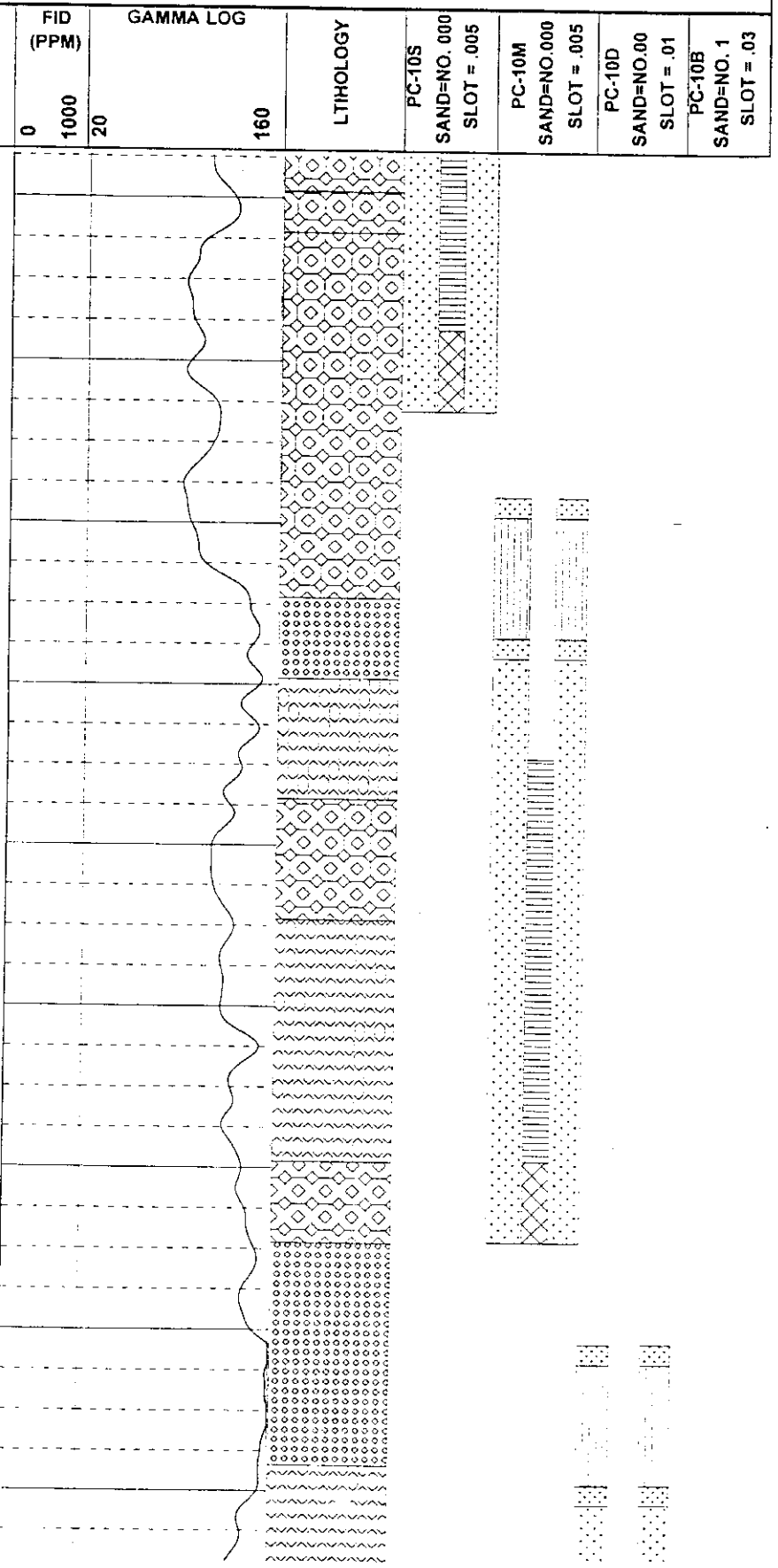
GAMMA LOG 20 – 160



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-10
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
			0
-4	SM	fine brown SAND with 30-40% silt	0
	SM	brown fine-medium SAND with 15-25% silt	0
-6			0
			0
-8			0
			0
-10			0
			0
-12			0
			0
-14	ML	brown SILT with 30-40% fine sand -15.84 brown-gray fine-medium SAND	0
			3.5
-16	SP		0
			9
-18			4
	SM	fine brown SAND with 30-40% brown silt	3.5
-20			2.5
			0
-22	SP	brown medium-coarse SAND with 20-30% fine-coarse subangular gravel	0
			0
-24			1.5
			4.5
-26			1.2
			0.5
-28	SP-SM	brown fine-coarse SAND with 5-15% silt	0
			0
-30	ML	brown SILT with 15-25% fine sand	0
			0
-32			0
			0
-34			0
			4
-36	SP	gray-brown medium-coarse SAND with 30-40% fine-coarse gravel	8.5
			6.5



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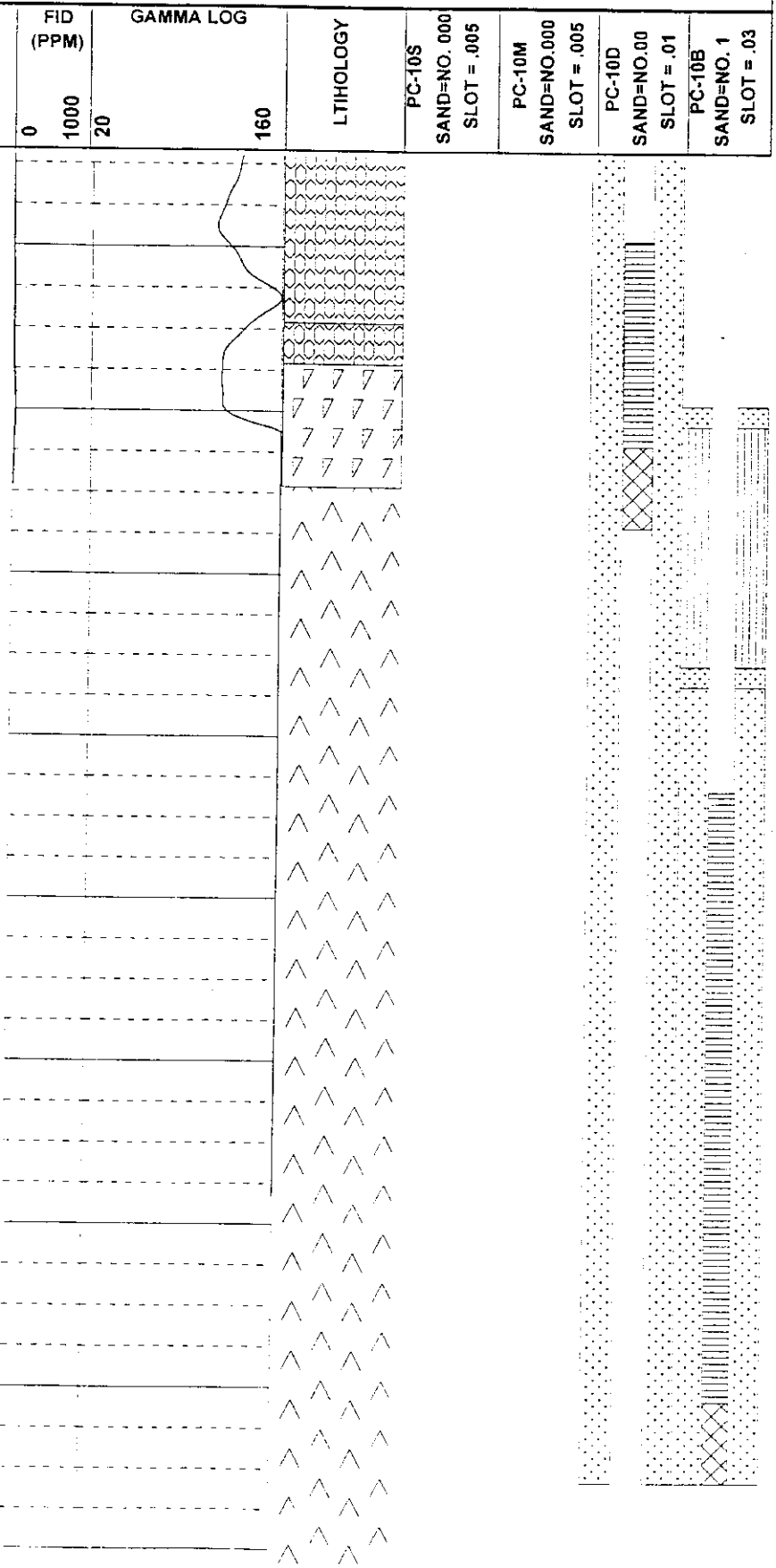
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-10
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-38			0
			2
-40			0
			9
-42	SP	red-brown fine-medium SAND	10
	MH	blue-gray clay with fragments of weathered bedrock	15
-44			38
			22
-46	BR	competent bedrock	14
-48			
-50			
-52			
-54			
-56			
-58			
-60			
-62			
-64			
-66			
-68			
-70			
-72			



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470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-10
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 20 160	LITHOLOGY	PC-10S SAND=NO. 000 SLOT = .005	PC-10M SAND=NO.000 SLOT = .005	PC-10D SAND=NO.00 SLOT = .01	PC-10B SAND=NO. 1 SLOT = .03
-74										

FOSTER WHEELER ENVIRONMENTAL CORPORATION
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BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-11
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 01/29/97
DATE COMPLETED: 02/18/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-11S	898019.53, 633793.91	22.43 FT-MSL	5.9 to -9.1
PC-11M	898015.74, 633792.76	22.46 FT-MSL	-13.3 to -23.3
PC-11D	898018.08, 633798.33	22.41 FT-MSL	-28.3 to -38.3
PC-11B	898014.83, 633797.35	22.51 FT-MSL	-46.9 to -61.9

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 200	LITHOLOGY	PC-11S SAND=NO.000 SLOT=.005	PC-11M SAND=NO.000 SLOT=.005	PC-11D SAND=NO.000 SLOT=.005	PC-11B SAND=NO. 1 SLOT = .03
22										
20	FILL	Tilcon material								
18										
16			1000							
			1000							
14			1000							
			1000							
12	DC FILL	DC divot fill	1000							
			10							
			4							
10	SP	dark gray medium SAND with medium to fine subrounded gravel (DC backfill)	290							
			130							
8			1000							
6	ML	black SILT, waste soil with brake shoes	1000							
			1000							
4										
2			400							
	SM	black fine-medium SAND with 10-40% silt	1000							
0			400							
	SM	gray fine SAND with 20-30% silt	100							
-2			200							
			220							
-4			300							

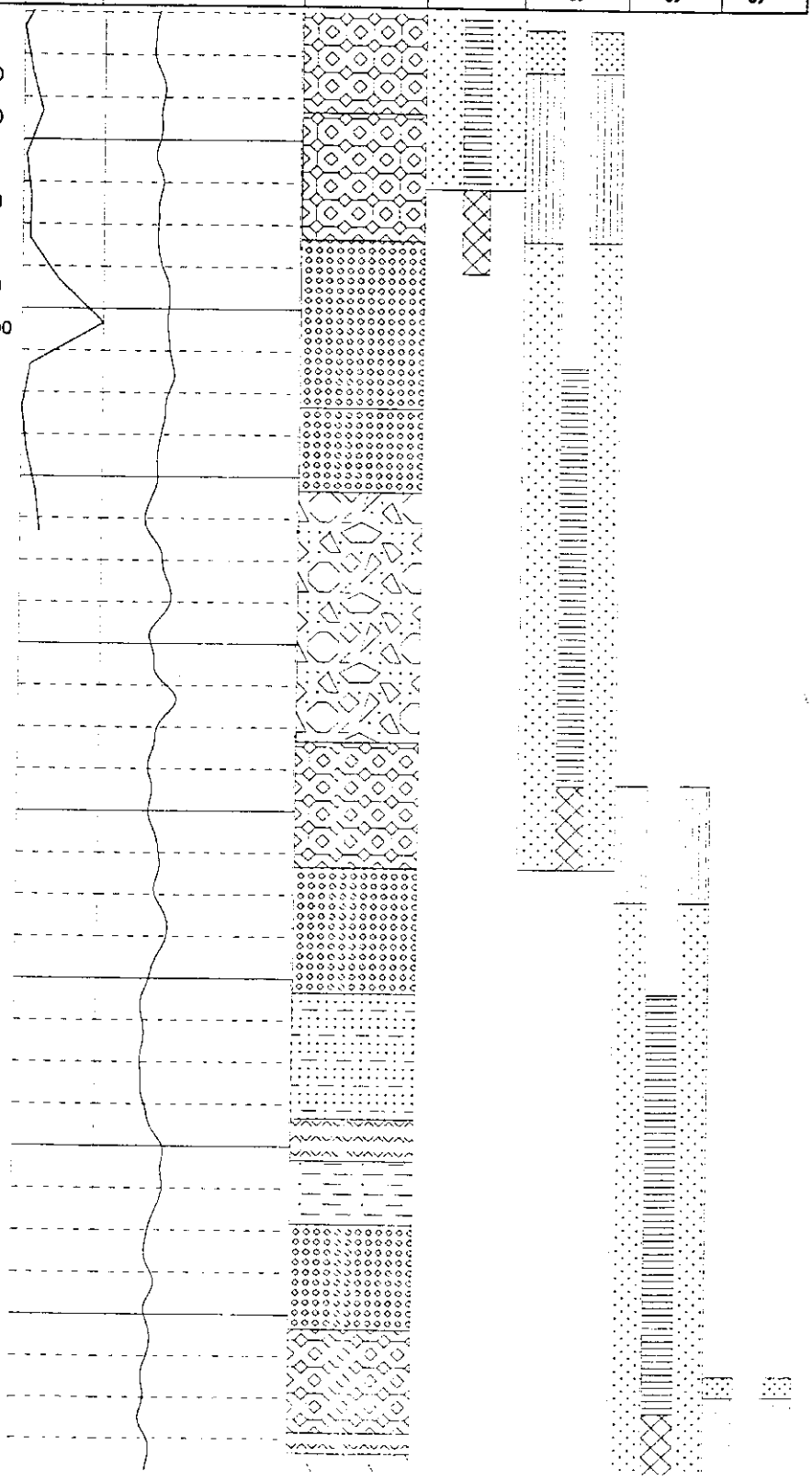
FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-11

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11

STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-6			10
			100
-8	SM	black/gray medium SAND with 20-25% silt	240
			40
-10			100
	ML	tan/gray fine SILT with 35-45% sand	90
-12			450
			1000
-14			100
	ML	tan/gray fine SILT with 15-25% sand	6
-16			60
	CO	cobbles with 20% gray silt and 10% medium-coarse subrounded gravel	180
-18			240
-20			
-22	SM	tan-brown fine-medium SAND, cobbles to 41' and 30-40% silt	
-24			
-26	ML	tan-brown SILT with 30-40% sand	
-28	SP-SM	fine-medium tan/brown SAND with 10% silt	
-30			
-32	SP	fine-coarse brown SAND	
	GP	fine-medium subrounded GRAVEL and coarse to medium orange-brown SAND	
-34	ML	tan-gray SILT with 10-20% fine sand	
-36	SM	fine tan/gray SAND with 20-30% silt	
-38	SP	tan-brown fine-coarse SAND with 30% fine-medium rounded gravel	
		Bedrock	



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470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-11

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11

STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 200	LTIHOLOGY	PC-11S SAND=NO.000 SLOT=.005	PC-11M SAND=NO.000 SLOT=.005	PC-11D SAND=NO.000 SLOT=.005	PC-11B SAND=NO. 1 SLOT = .03
-40										
-42										
-44										
-46										
-48										
-50										
-52										
-54										
-56										
-58										
-60										
-62										
-64										
-66										
-68										
-70										

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-12
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 03/05/97
DATE COMPLETED: 07/22/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

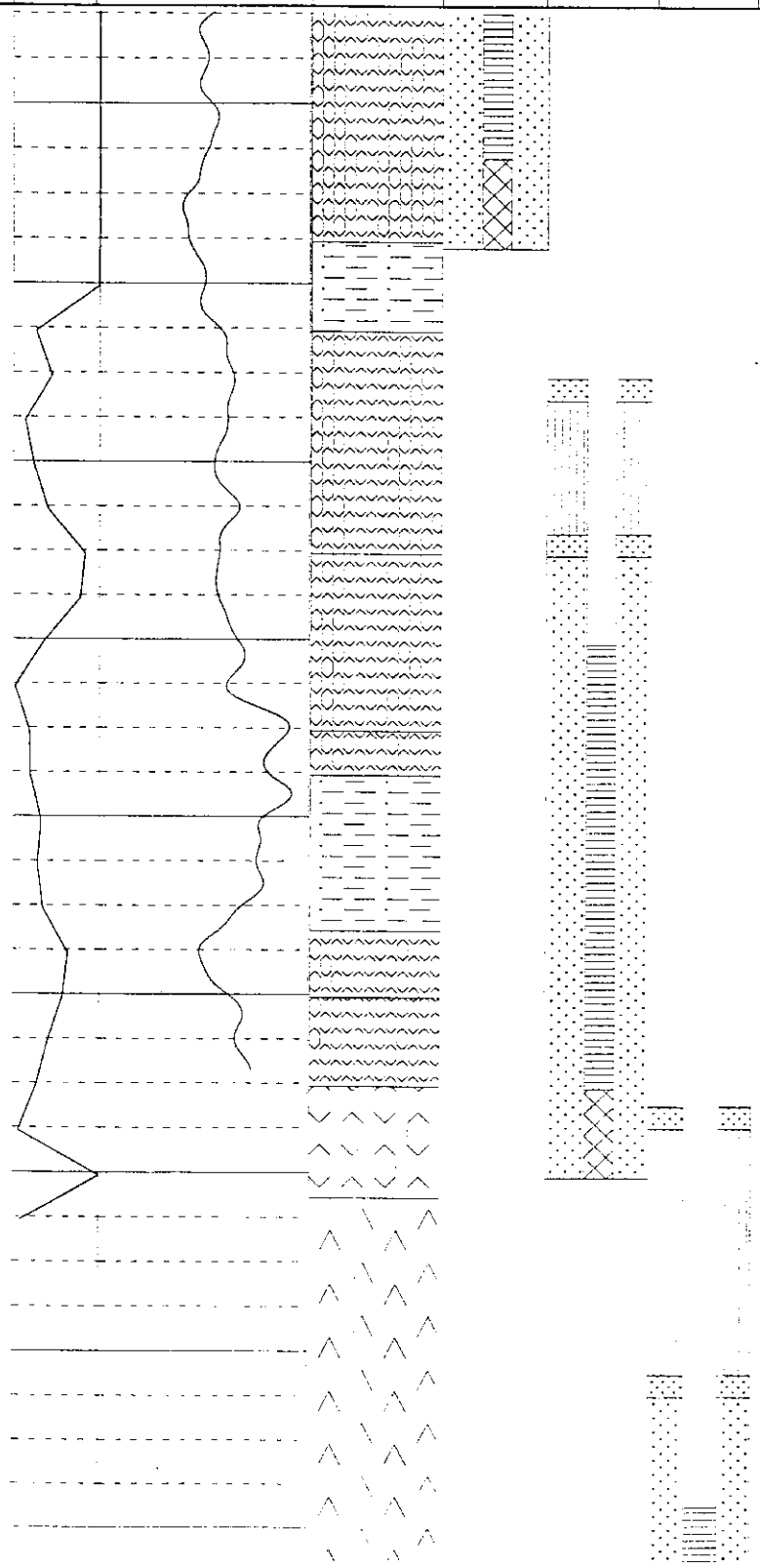
WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-12S	897881.99, 633459.89	21.72 FT-MSL	4.3 to -9.2
PC-12D	897877.51, 633457.35	21.78 FT-MSL	-20.1 to -30.1
PC-12B	897877.06, 633460.69	21.72 FT-MSL	-39.5 to 54.5

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 60	LITHOLOGY	PC-12S SAND=NO. 000 SLOT = .005	PC-12D SAND=NO. 00 SLOT = .01	PC-12B SAND=NO. 1 SLOT = .03
	SP	fill							
20									
18									
16									
14									
12									
10	ML	dark brown organic SILT with grass and debris							
8			280						
			300						
6			880						
			90						
4			340						
			320						
	SM	gray fine SAND	50						
2			40						
			22						
0			100						
			220						
-2			16						
	SP	black-gray medium SAND with 5% fine rounded gravel	55						
-4			880						
			100						

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-12
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-6			100
			100
-8	SP		100
			100
-10			100
-12	GP	fine rounded GRAVEL with (30-40%) medium black sand	100
			990
-14	SP	medium SAND with 30-40% round gravel	260
			440
-16			140
			240
-18	SP	medium-coarse brown SAND	400
			830
-20			770
			340
-22	SP	cobbles with 5-15% gravel and 5-15% brown sand	20
	GP	coarse GRAVEL with 20-30% fine-medium sand	190
-24			200
			320
-26	SP	fine-medium brown SAND	280
			340
-28	SP	medium-coarse SAND with 25-35% fine rounded gravel	630
			570
-30	GM	coarse GRAVEL - bedrock fragment and dense dry gray clay	400
			270
-32		competent bedrock	66
			100
-34			90
-36			
-38			
-40			



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-12

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11

STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 60	LITHOLOGY	PC-12S SAND=NO. 000 SLOT = .005	PC-12D SAND=NO. 00 SLOT = .01	PC-12B SAND=NO. 1 SLOT = .03
-42									
-44									
-46									
-48									
-50									
-52									
-54									
-56									
-58									

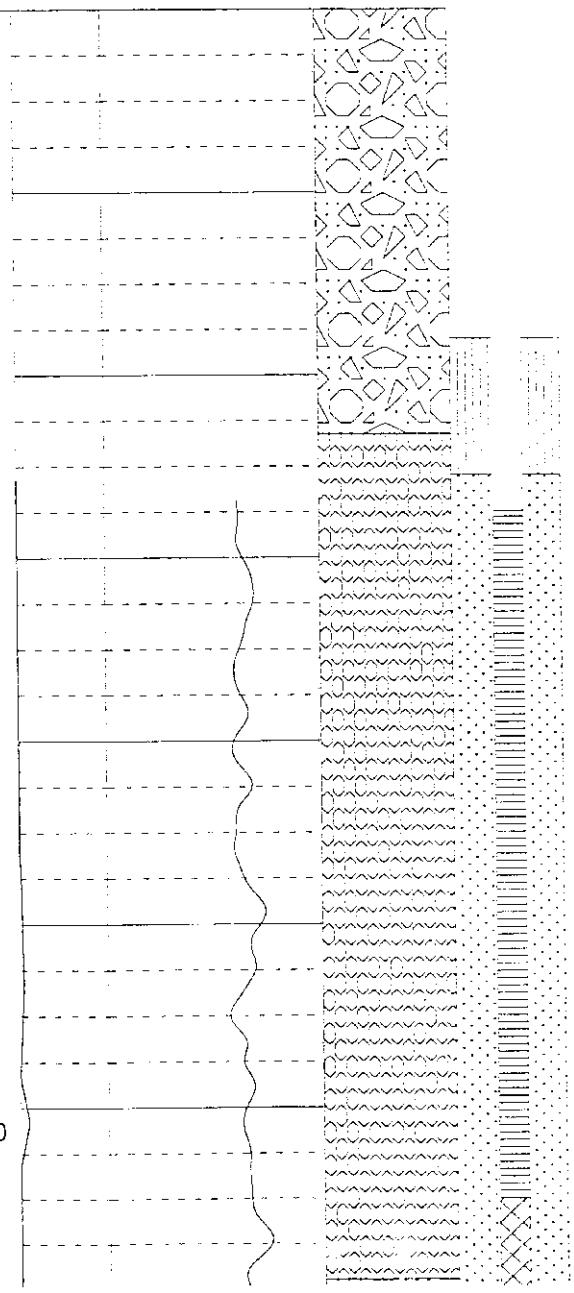
FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-13
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 12/11/96
DATE COMPLETED: 12/20/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-13S	897568.65, 633933.14	19.30 FT-MSL	(9.0 to -6.0)
PC-13M	897571.82, 633936.05	19.28 FT-MSL	(-30.1 to -40.1)
PC-13D	897569.02, 633938.83	19.13 FT-MSL	(-51.0 to -61.0)
PC-13B	897565.91, 633936.23	19.21 FT-MSL	(-67.4 to -82.4)

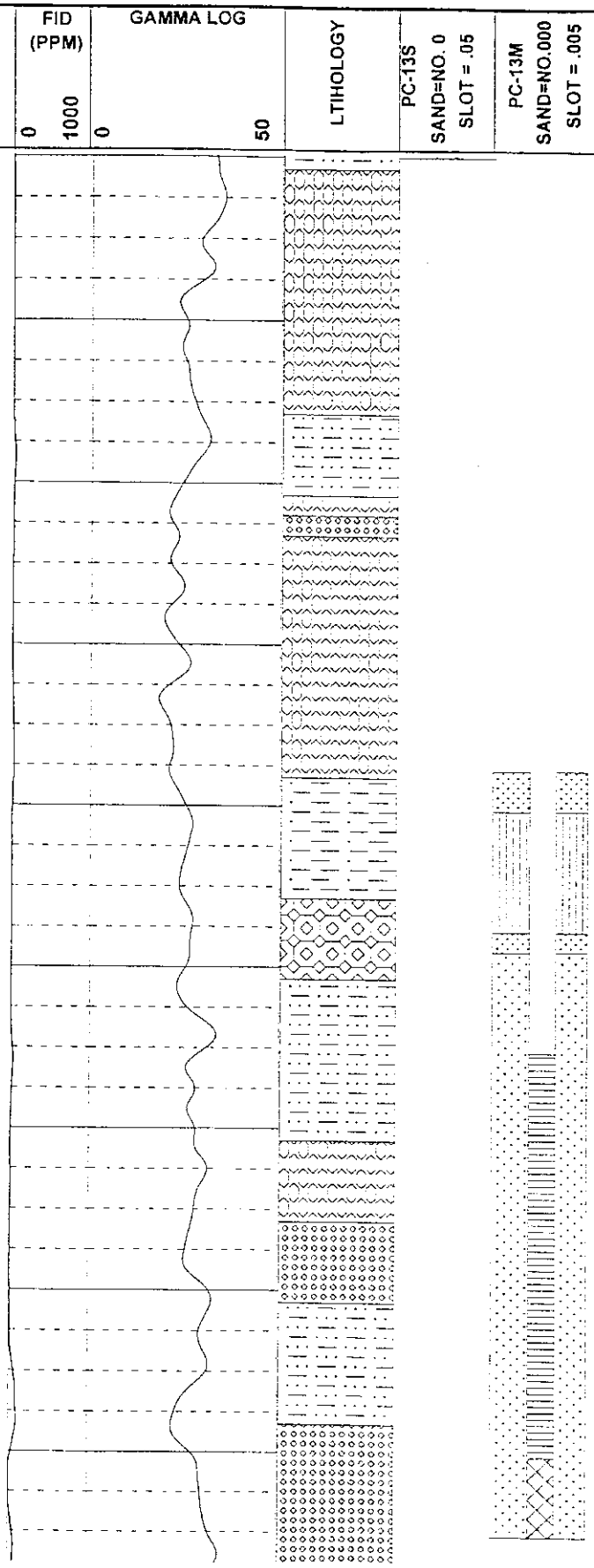
FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
18			
16			
14			
12	SP		
10	SP	brown fine-coarse SAND with fine angular gravel and concrete (fill)	0
			0
8			0
		brown fine-coarse SAND with concrete and asphalt fragments (fill)	0
6	SP	brown medium-coarse SAND	0
			1
4			8
	SP	brown medium-coarse SAND with fine angular gravel with angular gravel (30-40%)	7.5
2			10
			28
0			35
			45
-2		brown medium-coarse SAND with fine angular gravel (35-45%)	30
			0
-4			100
		medium-coarse SAND with 20-30% fine gravel	0
-6	SP	fine-coarse angular GRAVEL	0
			0



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-13
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

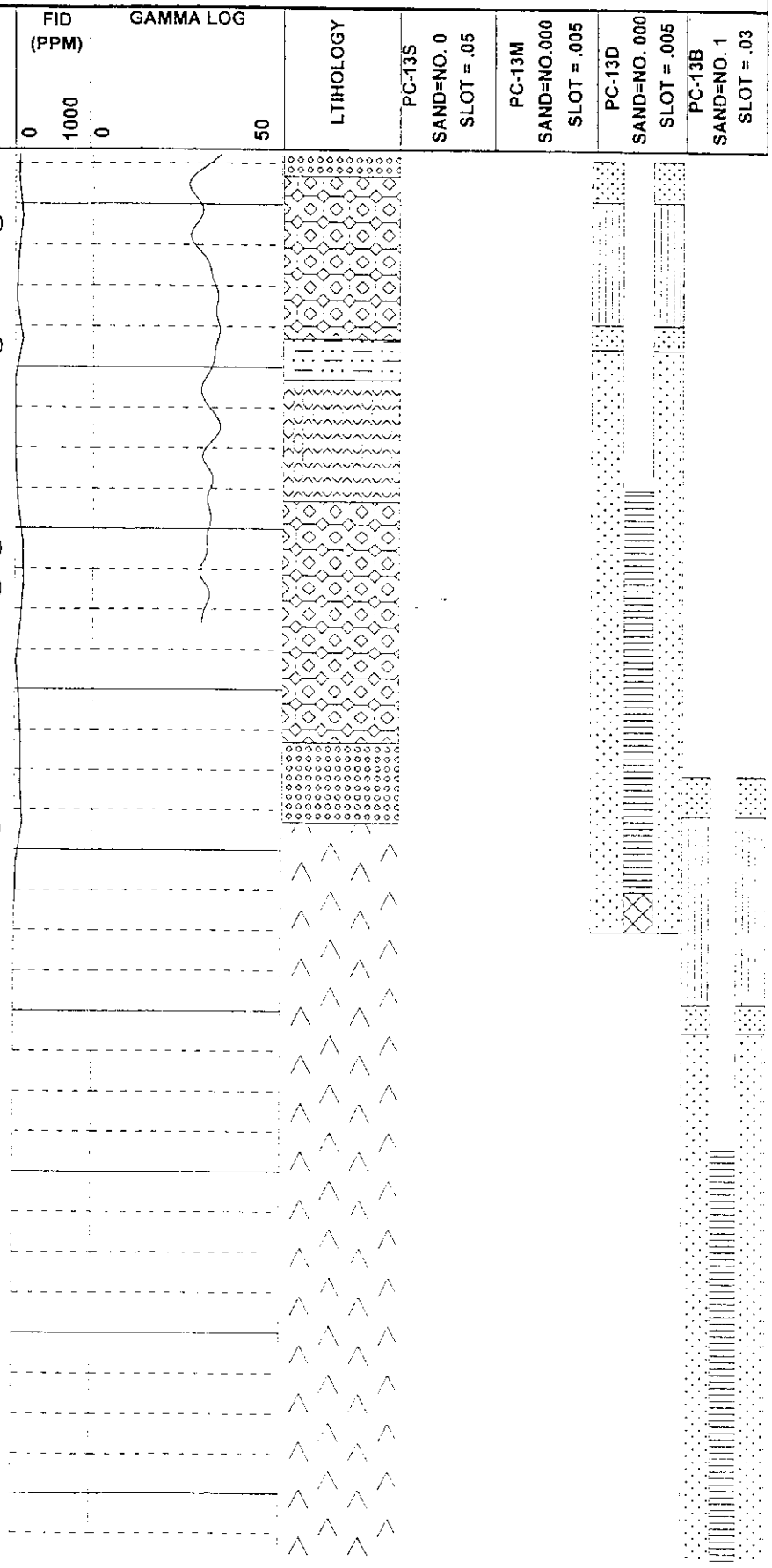
FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-8	SM	fine brown SAND with 15-25% silt	
	SP	fine-medium SAND with 15-25% fine gravel	0
-10		medium-coarse SAND with 30-40% angular fine gravel	0
			0
-12	SP	medium-coarse brown SAND with 10-20% brown gravel	0
-14	SP	medium brown SAND	0
	SP-SM	red-brown fine SAND with 10-20% silt	0
-16			30
	SP	gray-brown fine SAND	10
-18	SP-ML	gray SILT with 20-30% sand	5.5
		gray-brown fine SAND	0
-20			1
			0.5
-22	SP	brown-gray fine-coarse SAND with 10-20% subangular gravel	10
			20
-24	SP	fine-coarse GRAVEL	22
			0
-26			7
	SM	fine brown SAND with 20-30% silt	2.5
-28			5
	SP-ML	fine-medium brown SAND with 5-15% silt	0
-30	SM		0
			34
-32			10
	SP	medium-coarse SAND with 5-15% fine gravel	1.5
-34			10
	ML	brown SILT with 20-30% fine sand	0
-36			0
	SP-SM	brown fine SAND with 5-15% silt	8
-38			6
			82
-40	ML	brown SILT with 35-45% fine brown sand	100
			5
-42			10



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-13
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
			72
-44	SM	brown fine SAND with 20-30% silt	50
			100
-46	SM	brown fine SAND with 30-40% silt	43
			18
-48	SP-SM	brown fine SAND with 10-20% silt	100
	SP	red fine-medium SAND	0
-50	SP	fine-coarse SAND with 5-10% gravel	0
			6
-52	SM	brown fine SAND with 20-30% silt	34
			100
-54			110
-56			14
			58
-58	ML	gray-blue SILT with 5-10% fine subrounded gravel	80
		blue-gray SILT	74
-60	BR	weathered bedrock	100
			20
-62		competent bedrock	12
-64			
-66			
-68			
-70			
-72			
-74			
-76			



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-13

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11

STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 50	LTIHOLOGY	PC-13S SAND=NO. 0 SLOT = .05	PC-13M SAND=NO.000 SLOT = .005	PC-13D SAND=NO. 000 SLOT = .005	PC-13B SAND=NO. 1 SLOT = .03
-78										
-80										
-82										
-84										
-86										
-88										
-90										

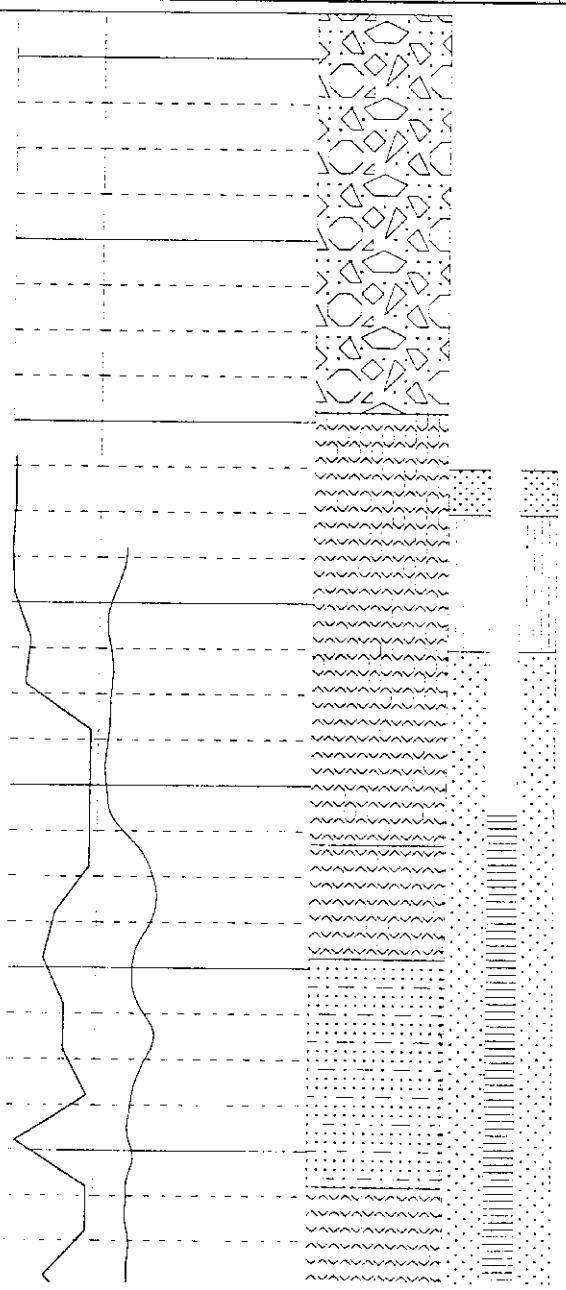
FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-14
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 02/22/97
DATE COMPLETED: 07/29/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INC ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-14S	897663.80, 633593.38	23.64 FT-MSL	7.40 to -7.6
PC-14D	897661.08, 633590.66	24.55 FT-MSL	-18.25 to -31.75
PC-14B	897666.03, 633590.28	24.64 FT-MSL	-40.30 to -55.30

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
24			
22		clean FILL	
20			
18			
16	SP		
14		waste soil- organic process fill with 20-30% SAND, some roots (not peat) and brake pads	40
			42
			9
12			32
			240
10			180
			100
8	SP		100
			100
6		black petroleum stained medium SAND	100
			580
4	SP-SM	gray-brown fine-medium SAND with 5% silt - petroleum odor	440
			700
2			700
			100
0			110
	SP	gray-brown fine SAND	100
-2			100

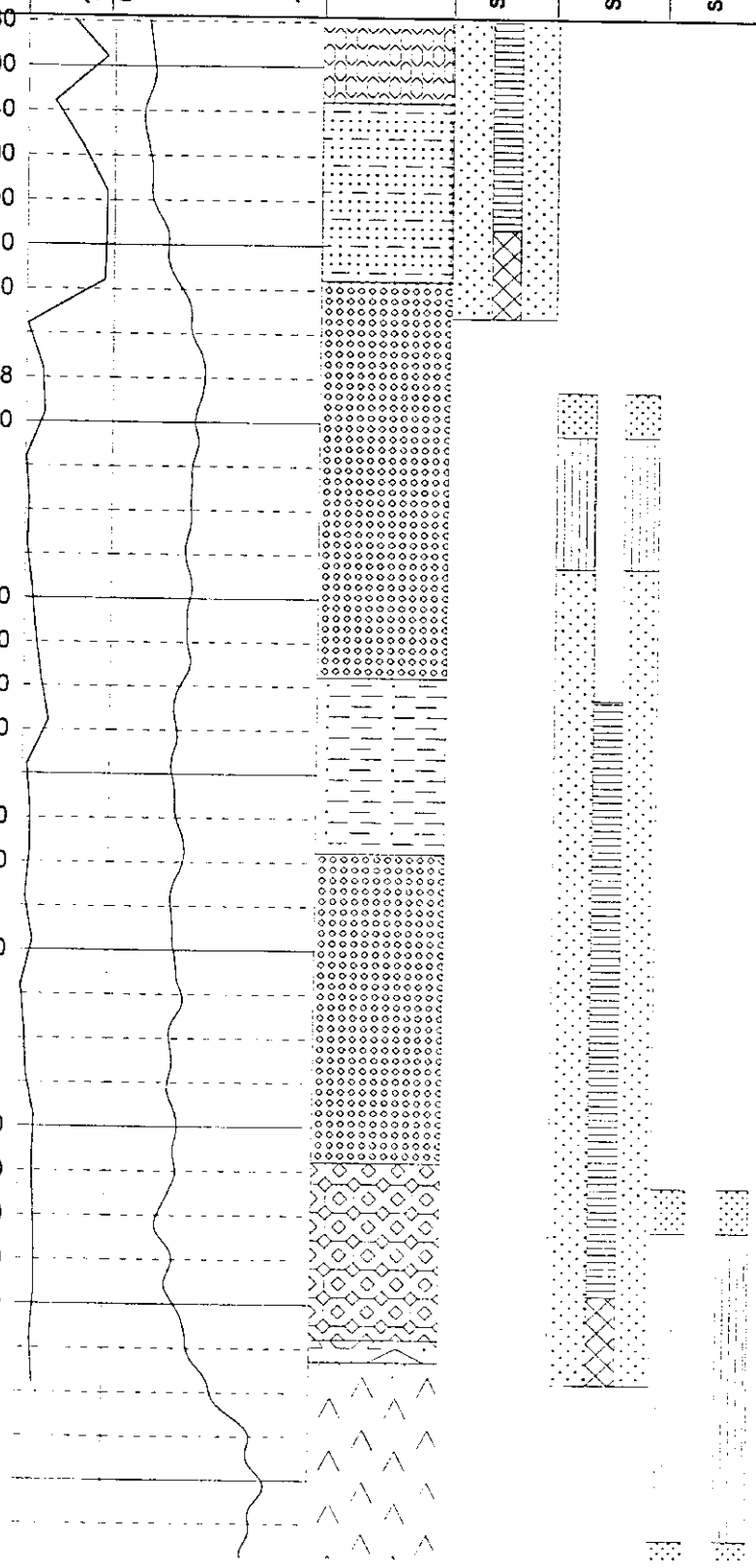


FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-14

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

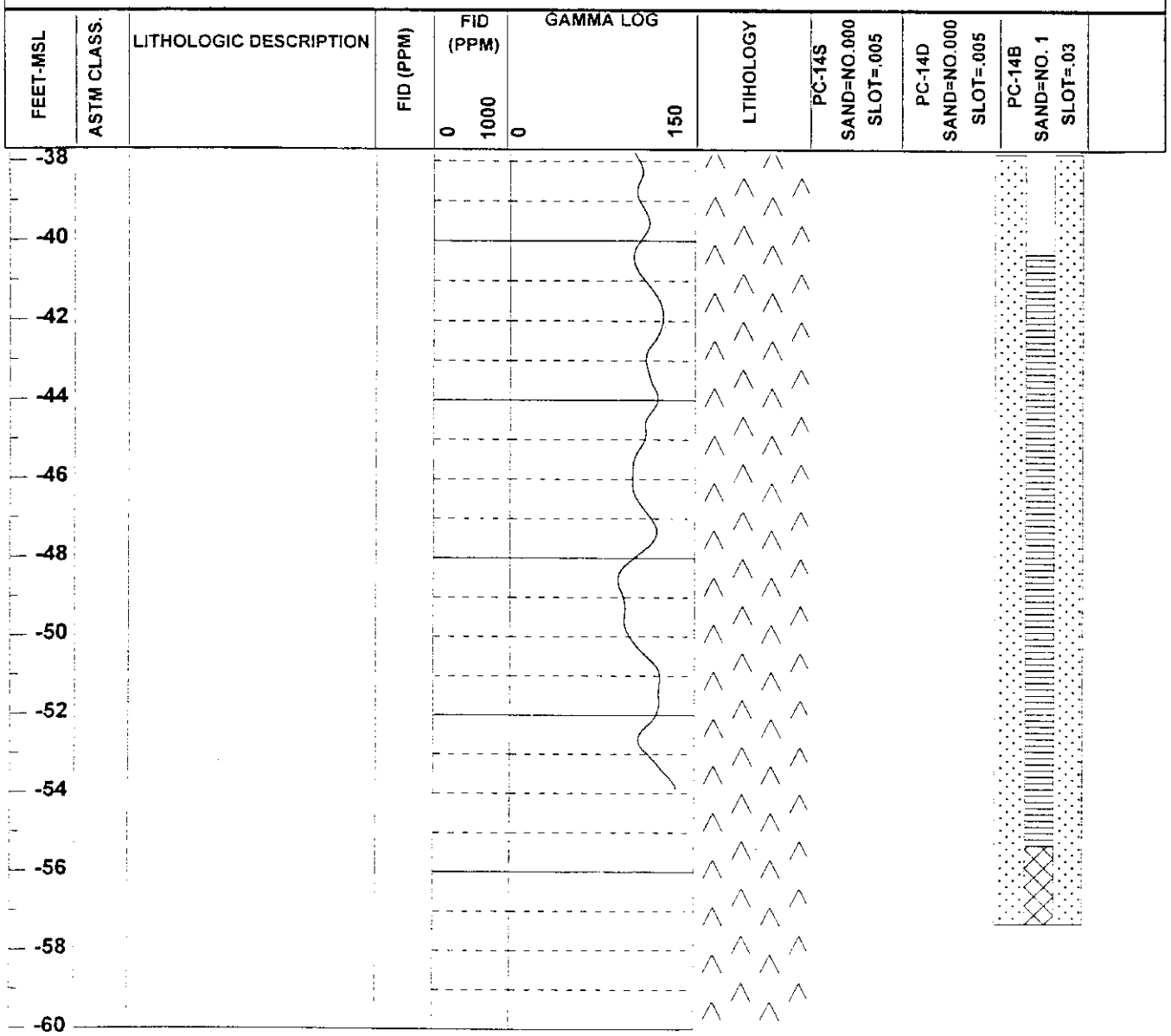
FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
			480
-4			100
	SP-SM	brown fine SAND with 5-15% silt	340
-6			700
			100
-8			100
	ML	dense brown SILT	980
-10			16
			208
-12			240
			10
-14			50
			34
-16	ML	brown SILT with 20-30% red fine sand	100
			150
-18	GP	fine GRAVEL with 35-45% fine-medium sand	220
			320
-20			60
			100
-22	ML	brown SILT with 15-25% fine sand - dense	100
			50
-24			150
			10
-26			62
			90
-28	ML	red-brown SILT with 35-45% fine sand	200
	SM	brown fine SAND with 35-45% silt	180
-30			200
			220
-32			220
		till - red dense silt with fine-coarse gravel - bedrock fragments	180
-34	Bed	competent bedrock	220
-36			



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-14

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT



FOSTER WHEELER ENVIRONMENTAL CORPORATION
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BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-15
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 01/08/97
DATE COMPLETED: 02/22/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-15S	897429.79, 633383.18	23.64 FT-MSL	7.9 to -7.1
PC-15D	897425.83, 633384.67	23.71 FT-MSL	-6.0 to -12.0
PC-15B	897426.87, 633380.40	23.74 FT-MSL	-21.0 to -36.1

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
24		clean FILL	
22			
20	GP	graded aggregat base - fine-coarse GRAVEL with 40% gray medium sand	100
18			900
			1000
16	ML	black silt with 20% rounded fine gravel and trace sand	1000
			120
14	SM	fine-medium brown SAND with 10-20% black silt and trace fine subrounded gravel	10
			12
12			100
	SP	dark brown medium SAND with 40% fine-coarse subrounded gravel	450
10			220
			400
8	ML	process waste - black SILT with 20-30% medium sand - asbestos fibers and wood debris present	20
			80
6	SM	gray medium SAND with 15% silt roots	400
			550
4	SP	gray fine-medium SAND	1000
	SM	gray fine SAND with 30% silt	1000
2	SP	gray-tan fine-medium SAND with 5% silt	400
			100
0	SM	gray-tan fine SAND with 40% silt	200
			220
-2			300
			10

FID (PPM) 0 – 1000

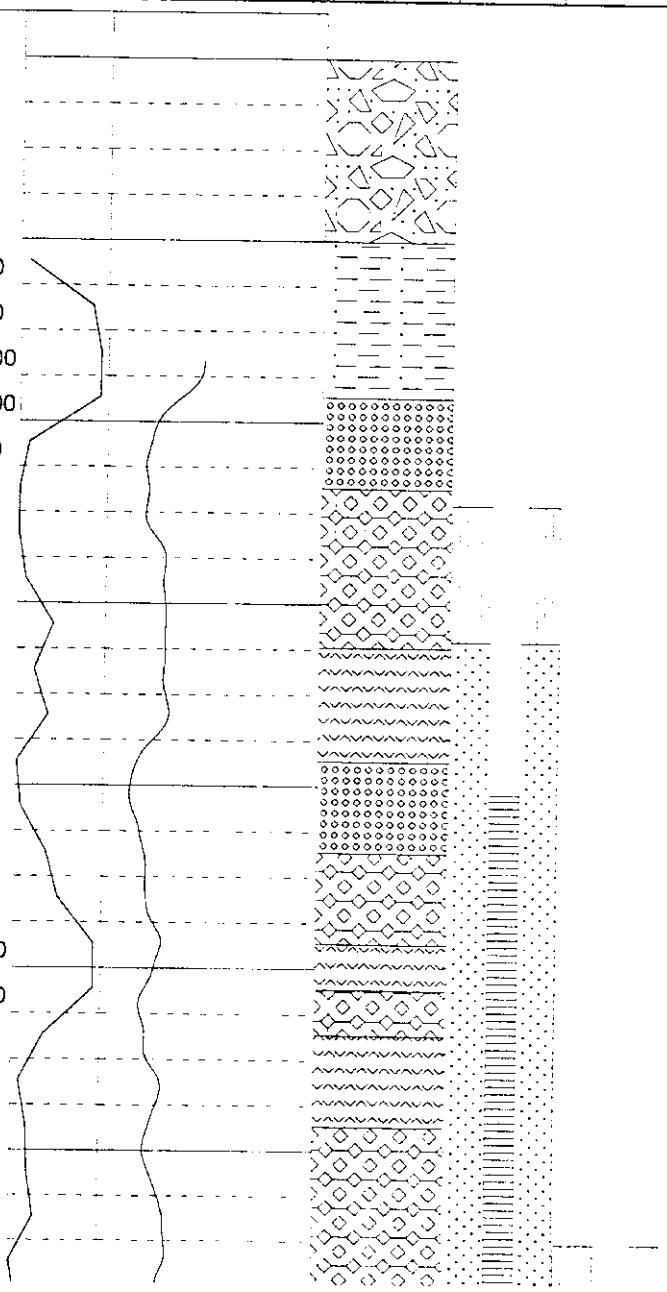
GAMMA LOG 0 – 150

LITHOLOGY

PC-15S SAND=NO.000 SLOT=.005

PC-15D SAND=NO.000 SLOT=.005

PC-15B SAND=NO. 1 SLOT = .03



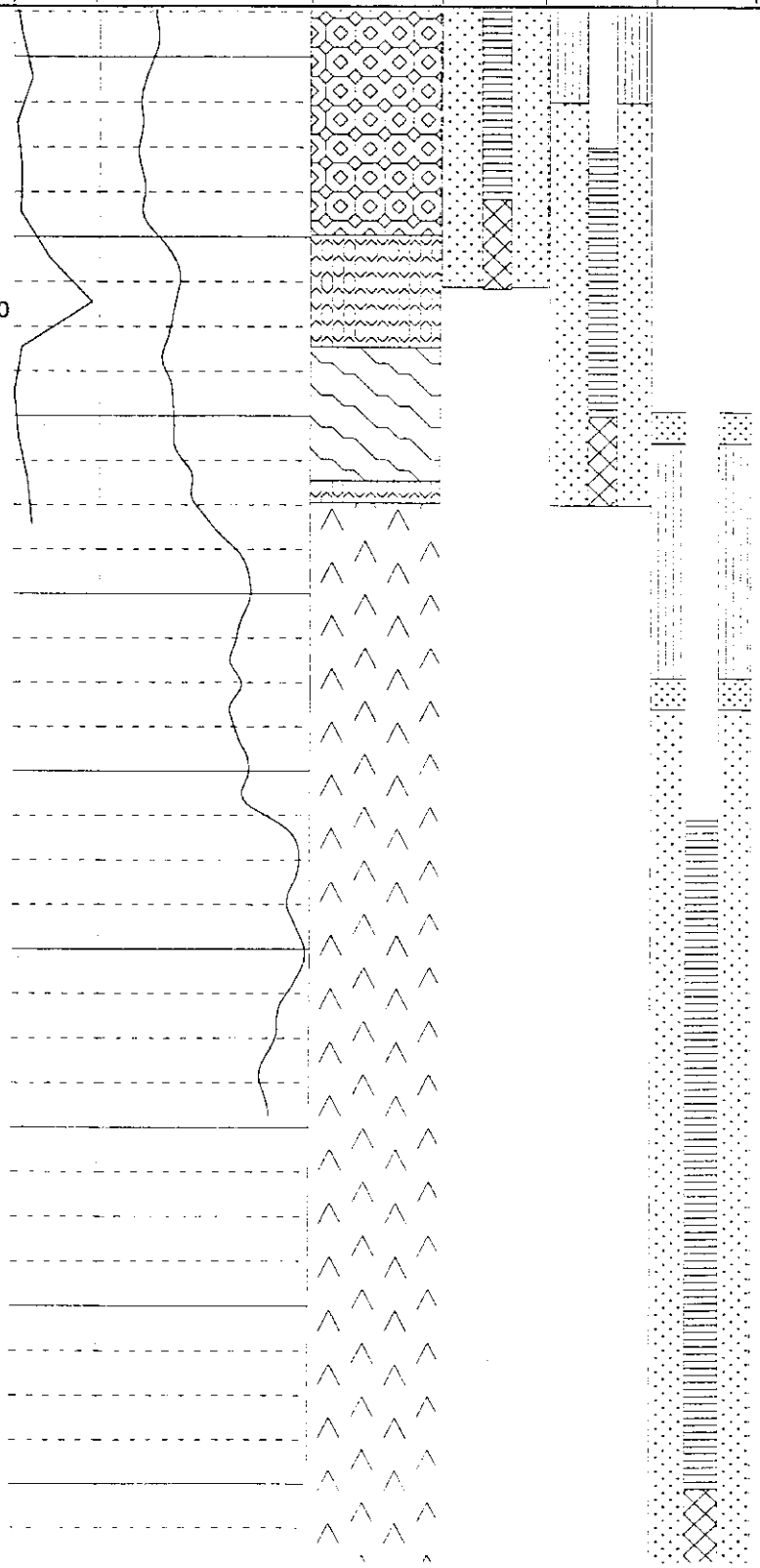
FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-15

RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11

STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
-4			100
			240
-6			40
			100
-8	SP	brown medium SAND with 40% fine-coarse subrounded gravel	90
			450
-10			1000
	CH	gray-brown clay with some silt and 10% subrounded fine gravel	100
-12			6
			60
-14	SP	brown medium-coarse SAND with 30% fine-coarse subrounded gravel	180
	Bed	Bedrock	240
-16			
-18			
-20			
-22			
-24			
-26			
-28			
-30			
-32			
-34			
-36			



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-15
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 150	LITHOLOGY	PC-15S SAND=NO.000 SLOT=.005	PC-15M SAND=NO.000 SLOT=.005	PC-15B SAND=NO. 1 SLOT=.03
-38									
-40									

FOSTER WHEELER ENVIRONMENTAL CORPORATION
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BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-16
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

DATE STARTED: 01/08/97
DATE COMPLETED: 02/07/97
GEOLOGIST: KERNEN/ANDERSON
INSTALLED BY MAHER ENVIRONMENTAL
2-INCH ID, 316 STAINLESS STEEL

WELL ID	LOCATION	TIC ELEVATION (FT-MSL)	SCREEN INT. (FT-MSL)
PC-16S	897173.36, 633563.64	27.17 FT-MSL	(9.8 to -5.2)
PC-16M	897177.41, 633565.18	27.24 FT-MSL	(-18.3 to -28.3)
PC-16D	897175.59, 633562.40	27.20 FT-MSL	(-48.3 to -63.0)
PC-16B	897174.72, 633566.78	27.20 FT-MSL	(-77.8 to -92.8)

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
		clean FILL	
26			
24			
22			
20			
18			
16			
14			
12			
10	SP-SM	black fine SAND with 25-35% fine-coarse gravel and 5-15% silt-red fabric material present (fill)	1000
			1000
8			1000
			1000
6			1000
			1000
4			1000
	SP	black fine-medium SAND	980
2			620
			120
			44

FID (PPM) 0 – 1000; GAMMA LOG 0 – 70

FOSTER WHEELER ENVIRONMENTAL CORPORATION
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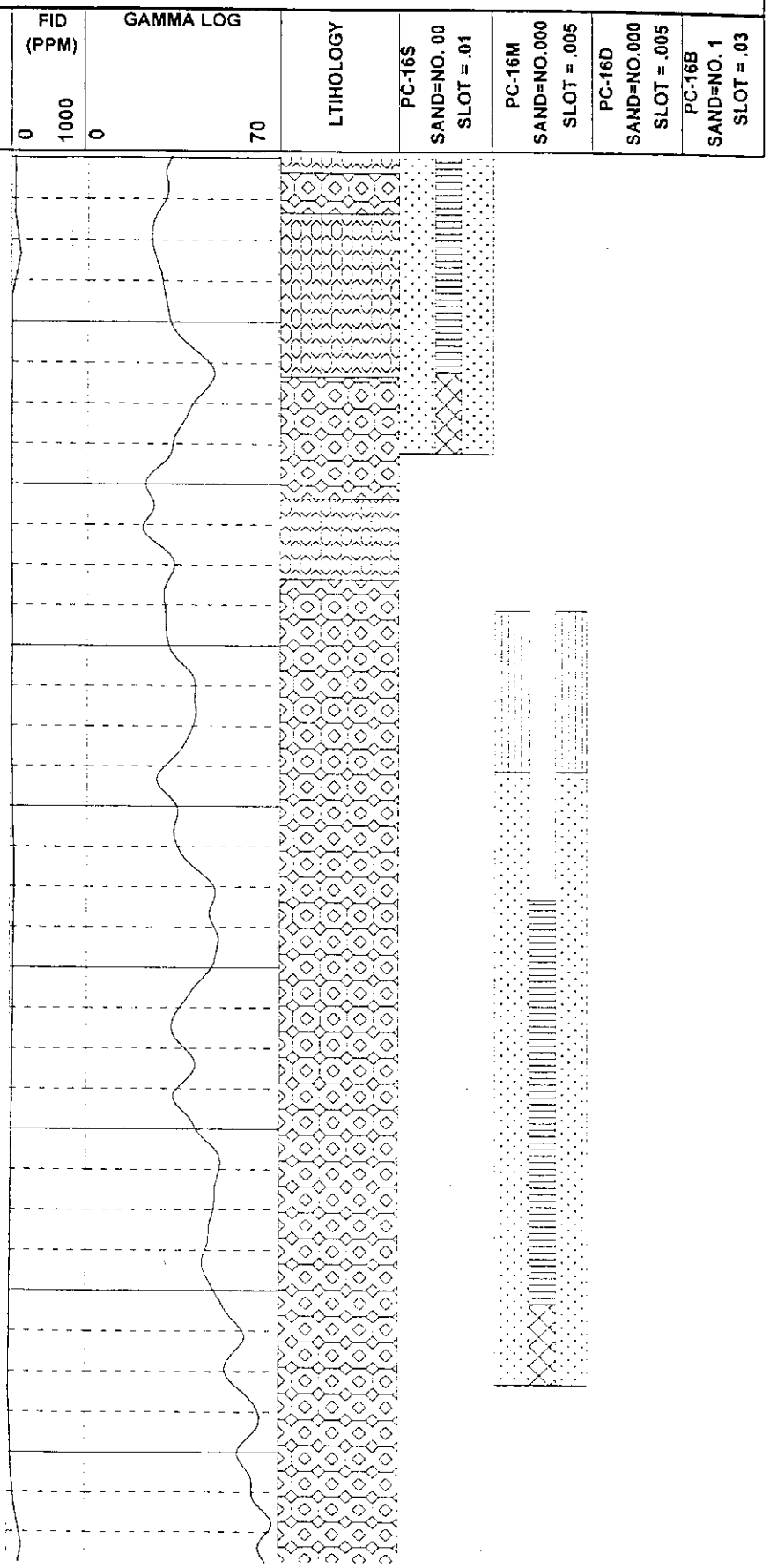
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-16
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)
0	SM	fine gray SAND with 15-25% silt	52
	SP	gray-brown fine-medium SAND	46
-2			120
			12
-4			12
	SM	brown fine SAND with 30-40% silt	10
-6			4
			7
-8	SP	brown medium SAND	4
			6.5
-10	SM	brown fine-medium SAND with 20-25% silt	18
			20
-12	SM	brown fine SAND with 35-45% silt	22
	SM	brown fine SAND with 20-30% silt	18
-14			12
			32
-16			34
			54
-18			
-20			
-22			
-24			
-26			
-28	SM	brown fine SAND with 20-25% silt-cobble at -30.34	
-30			12
			6
-32			30
			42
-34			88



FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

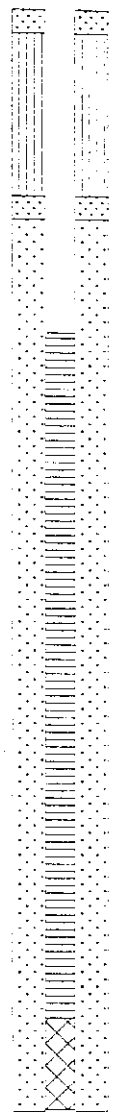
MONITORING WELL CLUSTER: PC-16
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 70	LTIHOLOGY	PC-16S SAND=NO. 00 SLOT = .01	PC-16M SAND=NO.000 SLOT = .005	PC-16D SAND=NO.000 SLOT = .005	PC-16B SAND=NO. 1 SLOT = .03
			180							
-36	ML	SILT with 5-15% fine sand	80							
			80							
-38			80							
			10							
-40	ML		4							
			10							
-42			70							
			30							
-44			55							
			100							
-46			100							
			80							
-48			300							
			10							
-50			36							
			20							
-52			100							
			90							
-54			36							
-56			44							
			60							
-58			92							
			90							
-60			100							
			68							
-62	SP		100							
			100							
-64	SM	gray fine-coarse SAND with 20-30% silt, bedrock fragments, dry	260							
			540							
-66		competent BEDROCK	300							
-68										

FOSTER WHEELER ENVIRONMENTAL CORPORATION
470 ATLANTIC AVENUE
BOSTON, MASSACHUSETTS 02210

MONITORING WELL CLUSTER: PC-16
RAYMARK INDUSTRIES FACILITY SITE - D.O. NO. 11
STRATFORD, CONNECTICUT

FEET-MSL	ASTM CLASS.	LITHOLOGIC DESCRIPTION	FID (PPM)	FID (PPM) 0 1000	GAMMA LOG 0 70	LTIHOLOGY	PC-16S SAND=NO. 00 SLOT = .01	PC-16M SAND=NO.000 SLOT = .005	PC-16D SAND=NO.000 SLOT = .005	PC-16B SAND=NO. 1 SLOT = .03
-70										
-72										
-74										
-76										
-78										
-80										
-82										
-84										
-86										
-88										
-90										
-92										
-94										
-96										
-98										
-100										



SUPPLEMENTAL HYDROGEOLOGIC INVESTIGATION REPORT

VOLUME 1 OF 2

REPORT AND APPENDICES A & B

Synthetic Products Company
Stratford, Connecticut

MAY 1996
REF. NO. 3627 (4)
This report printed on recycled paper

CONESTOGA-ROVERS & ASSOCIATES

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-01)
Page 1 of 2

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-1
DATE COMPLETED: MAY 15, 1995
DRILLING METHOD: 4" Ø MUD ROTARY
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
	GROUND SURFACE	11.32					
	Asphalt	11.02					
	FILL, gravel	10.32					
2.5	SM-SAND, some silt, trace fine gravel, medium dense, fine to medium grained, brown			1SS		21	0.3
				2SS		15	0
5.0				3SS		9	0
7.5	- 3" PT-PEAT seam			4SS		21	0
10.0			CEMENT/ BENTONITE GROUT	5SS		17	0.8
	GW-GRAVEL, some medium to coarse sand, dense, fine grained, gray	.32		6SS		41	0.7
12.5	SM-SAND, some silt, trace fine gravel, very dense, fine grained, brown, wet	-.68		7SS		51	0.9
15.0				8SS		105	NR
17.5				9SS		50+	0.9
20.0			4" Ø BOREHOLE	10SS		100	0.6
22.5	SW-SAND, little fine gravel, well graded, extremly dense, medium to coarse grained, dark gray, wet	-10.68		11SS		50+	0.4
25.0				12SS		82	0.8
27.5				13SS		50+	0.3
30.0				14SS		81	0.4
32.5				15SS		50+	0.3
				16SS		91	0.7
				17SS		92	0.5

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-1
DATE COMPLETED: MAY 15, 1995
DRILLING METHOD: 4" Ø MUD ROTARY
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
37.5				18SS		32	1.1
				19SS		30	0.9
		-27.68					
40.0	SP-SAND, dense, poorly graded, fine to medium grained, brown, wet		CEMENT/ BENTONITE GROUT	20SS		23	0.8
42.5				21SS		28	0.6
				22SS		28	0.6
45.0				23SS		48	0.5
47.5				24SS		95	NR
			4" Ø BOREHOLE				
50.0				25SS		50+	0.3
		-40.18					
52.5	BEDROCK, Derby Hill Schist; thin, almost vertically foliated, fine to medium grained, greenish-gray, alternating laminae of chlorite-muscovite and quartz-plagioclase, some biotite and garnet						
55.0	A core was collected from 51.5 to 56.5ft BGS. The RQD was 90.9%		2" Ø COREHOLE				
		-45.18					
57.5	END OF HOLE @ 56.5ft BGS Notes: NR - no recovery						
60.0							
62.5							
65.0							
67.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(CL-04)
Page 1 of 1

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-1A
DATE COMPLETED: MAY 30, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
	GROUND SURFACE	11.33					
	Asphalt	11.03					
	FILL, gravel	10.33					
2.5	SM-SAND, some silt, trace fine gravel, medium dense, fine to medium grained, brown, no odor or staining			1SS		13	0.2
				2SS		65	0.2
5.0			8" Ø BOREHOLE	3SS		6	0.2
7.5				4SS		13	0.1
10.0			CEMENT/ BENTONTIE GROUT	5SS		7	0.1
12.5	SW-SAND, some fine to medium gravel, very dense, well graded, medium to coarse grained, no odor	-.67		6SS		60	0.2
				7SS		100+	0.1
15.0	END OF HOLE @ 15ft BGS	-3.67					
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(CL-05)
Page 1 of 1

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNETICUT

HOLE DESIGNATION: SB-1B
DATE COMPLETED: MAY 30, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.01					
	Asphalt	10.71					
	FILL, gravel	10.01					
2.5	SM-SAND, some silt, trace fine gravel, medium dense, fine to medium grained, brown			1SS		21	0.3
				2SS		14	0.2
5.0			8" Ø BOREHOLE	3SS		6	0.2
7.5				4SS		4	0.3
10.0			CEMENT/ BENTONTIE GROUT	5SS		49	0.1
	SW-SAND, some fine to medium gravel, very dense, well graded, medium to coarse grained, brown, no odor	.01		6SS		51	0.2
12.5				7SS		108	0.2
15.0	END OF HOLE @ 15ft BGS	-3.99					
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(CL-06)
Page 1 of 1

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-1C
DATE COMPLETED: MAY 31, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.13					
	Asphalt	10.83					
	FILL, gravel	10.13					
2.5	SM-SAND, some fine to medium gravel, medium dense, medium to coarse grained, brown			1SS		23	0.3
				2SS		11	0.5
5.0			8" Ø BOREHOLE	3SS		7	0.4
7.5				4SS		15	0.2
10.0			CEMENT/ BENTONTIE GROUT	5SS		31	0.2
	SW-SAND, some medium gravel, very dense, medium to coarse grained, brown	.13		6SS		72	0.3
12.5				7SS		73	0.1
15.0	END OF HOLE @ 15ft BGS	-3.87					
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(CL-07)
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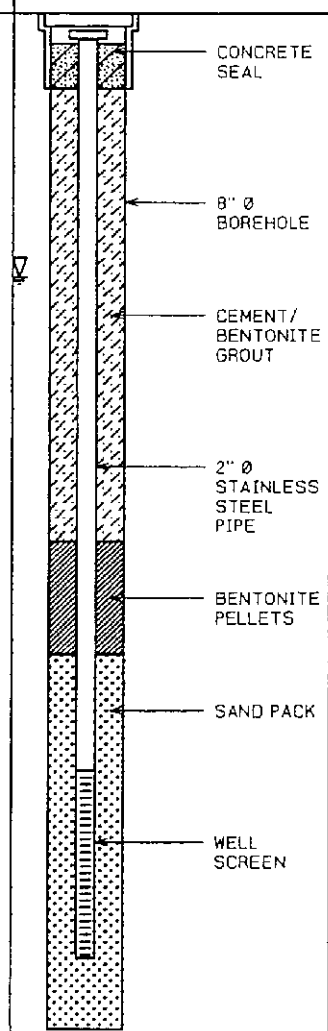
PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-2/CRA2D-95
DATE COMPLETED: MAY 16, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL
	GROUND SURFACE REFERENCE POINT (Top of Riser)	*11.03* *10.88*
	Asphalt	*10.73*
	FILL, gravel	*10.03*
-2.5	SP-SAND, medium dense, poorly graded, fine to medium grained, brown, dry	
-5.0	SW-SAND, trace fine gravel, very dense, well graded, medium to coarse gained, brown, wet	*6.03*
-7.5		
-10.0	- spilt spoon not attempted due to rocks	
-12.5		
-15.0	- gravel increases in size (medium to coarse)	
-17.5		
-20.0		
-22.5		
-25.0		
-27.5	END OF HOLE @ 27ft BGS Notes: NA - not applicable	*-15.97*
-30.0		
-32.5		

MONITOR INSTALLATION



SCREEN DETAILS
Screened interval:
20.1 to 25.1ft BGS
Length: 5ft
Diameter: 2"
Slot Size: #10
Material: Stainless Steel
Sand Pack:
17 to 27ft BGS
Material: No. 1 Sand

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS		13	0.3
2SS		12	0.4
3SS		26	0.7
4SS		34	0.5
5ST		NA	NA
6SS		66	0.8
7SS		36	3.5
8SS		27	3.1
9SS		20	2.7
10SS		49	3.1
11SS		62	3.0
12SS		NA	NA

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-3
DATE COMPLETED: MAY 12, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	10.18					
	Concrete	9.68					
2.5	SM-SAND, some silt, trace fine gravel, well graded, fine grained, brown, strong chemical odor		CEMENT/ BENTONITE GROUT	1SS		8	130
			8" Ø BOREHOLE	2SS		11	216
	END OF HOLE @ 4.2ft BGS	5.98					
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-3A
DATE COMPLETED: MAY 13, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.08					
	Concrete	*10.58*					
	SM-SAND, some silt, trace fine gravel, well graded, fine grained, brown		CEMENT/ BENTONITE GROUT	1SS		27	3.1
2.5			8" Ø BOREHOLE	2SS		28	6.5
5.0	END OF HOLE @ 5ft BGS	*6.08*					
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ⊏⊐

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-4
DATE COMPLETED: MAY 13, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.51					
	Concrete						
	SM-SAND, some silt, trace fine gravel, dense, fine grained, brown	10.01					
2.5			CEMENT/ BENTONITE GROUT	1SS		24	18.1
5.0				2SS		16	45
			8" Ø BOREHOLE	3SS		25	27
7.5	END OF HOLE @ 7.5ft BGS	4.01					
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ⊏⊐

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-4A
DATE COMPLETED: MAY 25, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.19					
	Asphalt	10.89					
	FILL, gravel	10.19					
2.5	SP-SAND, medium dense, poorly graded, fine to medium grained, gray		CEMENT/ BENTONITE GROUT	1SS		21	0.1
5.0				2SS		73	0.1
			8" Ø BOREHOLE	3SS		50+	0.1
7.5	END OF HOLE @ 7ft BGS	4.19					
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-5
DATE COMPLETED: MAY 12, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	9.26					
	SM-SAND, some silt, medium dense, fine to medium grained, brown, damp		CEMENT/ BENTONITE GROUT	1SS		20	0.8
2.5			8" Ø BOREHOLE	2SS		43	63.2
	END OF HOLE @ 4ft BGS	5.26					
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

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Page 1 of 1

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-5A
DATE COMPLETED: MAY 14, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.03					
	Concrete	10.53					
	SP-SAND, dense, poorly graded, fine grained, brown, dry	9.03					
-2.5	SM-SAND, some silt, trace fine gravel, fine grained, brown		CEMENT/ BENTONITE GROUT	1SS		13	16.3
				2SS		12	28
-5.0	SP-SAND, dense, poorly graded, fine to medium grained, brown	6.03	8" Ø BOREHOLE	3SS		17	95
-7.5	END OF HOLE @ 7ft BGS	4.03					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-6
DATE COMPLETED: MAY 11, 1995
DRILLING METHOD: 4" Ø MUD ROTARY
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
	GROUND SURFACE	7.80					
	Asphalt	7.30					
	SP-SAND, medium dense, poorly graded, fine grained, gray, dry	6.30		1SS		12	11.5
-2.5	PT-PEAT	5.80					
	ML-SILT, some fine sand, trace fine gravel, gray, damp		▽	2SS		7	12.1
-5.0				3SS		9	1.2
-7.5	SW-SAND, little silt, trace fine to medium gravel, medium grained, gray, wet	.80		4SS		31	1.3
-10.0			CEMENT/ BENTONITE GROUT	5SS		48	1.1
-12.5				6SS		28	0.8
	GW-GRAVEL, some fine sand, dense, fine to medium grained, wet	-5.20		7SS		30	0.6
-15.0	SW-SAND, trace fine gravel, medium dense, well graded, coarse, gray	-6.20		8SS		21	0.6
-17.5				9SS		20	0
-20.0			4" Ø BOREHOLE	10SS		21	1.0
-22.5				11SS		29	1.5
-25.0				12SS		34	4.3
-27.5				13SS		26	3.8
-30.0				14SS		24	9.5
-32.5	- gravel content and size increase			15SS		80	4.3
-35.0				16SS		37	2.8
	SM-SAND, trace silt, dense, fine grained, brown, wet	-28.20		17SS		63	2.3
-37.5	SW-SAND, little fine to medium gravel, dense, well graded, medium to coarse grained, brown, wet	-30.20		18SS		36	6.2
				19SS		59	4.2
				20SS		27	4.4

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

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-6
DATE COMPLETED: MAY 11, 1995
DRILLING METHOD: 4" Ø MUD ROTARY
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
				21SS		30	4.1
43.5				22SS		31	4.0
46.0			CEMENT/ BENTONITE GROUT	23SS		28	2.8
48.5				24SS		40	2.0
51.0				25SS		9	7.9
53.5				26SS		22	8.5
56.0			4" Ø BOREHOLE	27SS		23	3.5
58.5				28SS		38	2.8
61.0				29SS		61	2.6
63.5				30SS		52	2.6
66.0				31SS		78	2.1
68.5				32SS		62	1.5
71.0	BEDROCK, Derby Hill Schist; thin, almost vertically foliated, fine to medium grained, greenish-gray, alternating laminae of chlorite-muscovite and quartz-plagioclase, some biotite and garnet	-62.40	2" Ø COREHOLE	33SS		26	3.1
73.5	A core was collected from 70 to 75ft BGS. The RQD was 100%	-67.20		34SS		32	3.8
76.0	END OF HOLE @ 75ft BGS			35SS		76	3.9
78.5							

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

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-9
DATE COMPLETED: MAY 10, 1995
DRILLING METHOD: 4" Ø MUD ROTARY
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
	GROUND SURFACE	10.07					
	SM-SILT, some fine sand, trace fine gravel, dense, gray, dry			1SS		30	38
2.5	SP-SAND, very dense, poorly graded, fine grained, gray, damp	7.57		2SS		45	25
5.0			▽	3SS		20	21
7.5				4ST		NA	NA
10.0			CEMENT/ BENTONITE GROUT	5SS		16	32
				6SS		18	18.9
12.5	SW-SAND, trace fine gravel, medium dense, well graded, medium to coarse grained, gray, wet	-2.93		7SS		28	12.1
15.0	→ black staining			8SS		22	8.7
17.5				9SS		42	6.3
20.0			4" Ø BOREHOLE	10SS		30	15.1
				11SS		38	12.3
22.5	SM-SAND, some silt, very dense, fine grained, olive gray, wet	-12.93		12SS		61	10.2
25.0				13SS		35	8.4
27.5				14SS		35	5.8
30.0				15SS		66	21
				16SS		94	1.2
32.5	SW-SAND, little silt, trace fine gravel, extremely dense, well graded, coarse grained, olive, wet	-22.93		17SS		50+	1.3

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-9
DATE COMPLETED: MAY 10, 1995
DRILLING METHOD: 4" Ø MUD ROTARY
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GW-GRAVEL, some medium sand, well graded, fine to medium grained, gray, wet	-25.93	CEMENT/ BENTONITE GROUT	18SS		21	1.2
37.5				19SS		36	1.6
	SM-SAND, some silt, very dense, fine grained, gray, wet	-28.93	4" Ø BOREHOLE	20SS		35	1.8
40.0							
42.5				21SS		57	2.1
	BEDROCK, Derby Hill Schist; thin, almost vertically foliated, fine to medium grained, greenish-gray, alternating laminae of chlorite-muscovite and quartz-plagioclase, some biotite and garnet A core was collected from 43 to 48ft BGS. The RQD was 90.7%	-32.93	2" Ø COREHOLE				
45.0							
47.5							
	END OF HOLE @ 48BGS Notes: NA - not applicable	-37.93					
50.0							
52.5							
55.0							
57.5							
60.0							
62.5							
65.0							
67.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

(CL-23)
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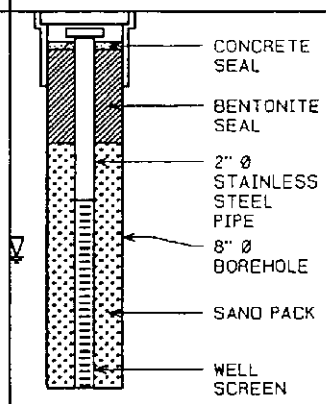
PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-9A/CRA6S-95
DATE COMPLETED: MAY 22, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE REFERENCE POINT (Top of Riser)	*10.03* *9.73*					
	Asphalt	*9.73*					
	FILL, gravel	*9.03*					
2.5	SM-SAND, some silt, medium dense, fine grained, gray, dry	*7.03*		1SS		40	130
	SP-SAND, medium dense to loose, poorly graded, brown			2SS		14	143
5.0				3SS		3	160
7.5				4SS		5	81
10.0				5SS		5	70
	END OF HOLE @ 11ft BGS	*-.97*					
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

SCREEN DETAILS
Screened interval:
5 to 10ft BGS
Length: 5ft
Diameter: 2"
Slot Size: #10
Material: Stainless Steel
Sand Pack:
3.5 to 10ft BGS
Material: No. 1 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-10
DATE COMPLETED: MAY 12, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.64					
	Concrete	10.64	CEMENT/ BENTONITE GROUT	1SS		57	0
	SM-SAND, some silt, trace fine gravel, very dense		8" Ø BOREHOLE	2SS		100+	NR
2.5	- Auger refusal	8.64					
	END OF HOLE @ 3ft BGS						
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

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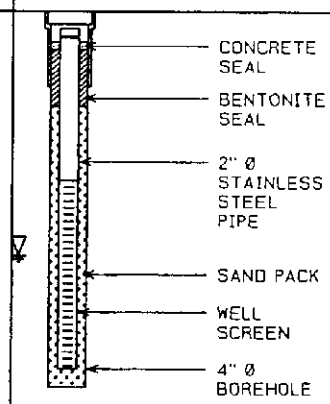
PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-11/CRA7-95
DATE COMPLETED: MAY 23, 1995
DRILLING METHOD: 4" TRICONE
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE REFERENCE POINT (Top of Riser)	*11.65* *11.36*					
	Concrete	*11.15*					
-2.5	SM-SAND, some silt, trace fine gravel, extremely dense, well graded, fine grained, brown, dry - 6" GW-GRAVEL seam, some coarse sand	*9.15*		1SS		69	0
-5.0	SP-SAND, extremly dense, poorly graded, fine grained, brown			2SS		200	0
-7.5				3SS		NA	0
-10.0	END OF HOLE @ 9.5ft BGS NOTES: NA - not applicable, used 300 lb. hammer.	*2.15*		4SS		NA	0
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							



SCREEN DETAILS
Screened interval:
4.5 to 9.5ft BGS
Length: 10ft
Diameter: 2"
Slot Size: #10
Material: Stainless Steel
Sand Pack:
2.5 to 10ft BGS
Material: No. 1 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-12
DATE COMPLETED: MAY 25, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	11.28					
	Concrete	10.28					
	SP-SAND, medium dense, poorly graded, fine to medium grained, brown-red, dry		CEMENT/ BENTONITE GROUT	1SS		14	0.2
2.5				2SS		14	0.1
5.0			8" Ø BOREHOLE	3SS		20	0.2
7.5	- interbedded less than 1" lenses of SW-SAND and trace fine gravel			4SS		26	0.1
	END OF HOLE @ 9ft BGS	2.28					
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

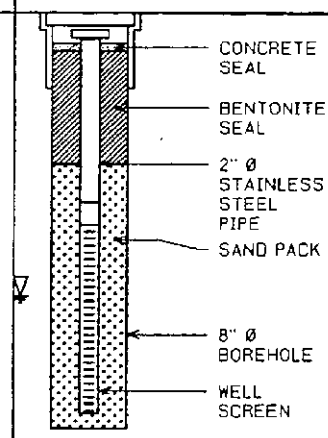
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-13/CRA8-95
DATE COMPLETED: MAY 25, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE REFERENCE POINT (Top of Riser)	*12.77* *12.28*					
	Asphalt	*12.47*					
	FILL, gravel	*11.77*					
-2.5	SP-SAND, medium dense to loose, poorly graded, fine to medium grained, brown, dry			1SS		9	0.1
-5.0				2SS		4	0.1
				3SS		8	0.2
-7.5				4SS		14	0.2
		3.77					
-10.0	GW-GRAVEL, little medium to fine sand, medium to coarse grained, rounded-unlike other gravel on Site, brown, wet			5SS		16	0.1
	END OF HOLE @ 11ft BGS	*1.77*					
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							



SCREEN DETAILS
Screened interval:
5.6 to 10.6ft BGS
Length: 5ft
Diameter: 2"
Slot Size: #10
Material: Stainless Steel
Sand Pack:
4 to 11ft BGS
Material: No. 1 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭

Continue Viewing Appendix A

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: SYNTHETIC PRODUCTS
PROJECT NUMBER: 3627
CLIENT: KRAFT FOODS
LOCATION: STRATFORD, CONNECTICUT

HOLE DESIGNATION: SB-13A
DATE COMPLETED: MAY 31, 1995
DRILLING METHOD: 4 ¼" HSA
CRA SUPERVISOR: J. HARGENS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	12.62					
	Asphalt	12.32					
	FILL, gravel	11.62					
2.5	SP-SAND, loose, poorly graded, fine to medium grained, brown			1SS		2	0.8
5.0			8" Ø BOREHOLE	2SS		1	0.6
7.5				3SS		1	0.6
				4SS		3	0.4
10.0	GW-GRAVEL, some coarse sand, medium dense, well graded, fine to medium grained, rounded, brown, wet	2.62	CEMENT/ BENTONITE GROUT	5SS		13	NR
12.5				6SS		10	0.8
	END OF HOLE @ 13ft BGS Notes: NR – no recovery	-.38					
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭ GEOTECHNICAL ANALYSIS ▭