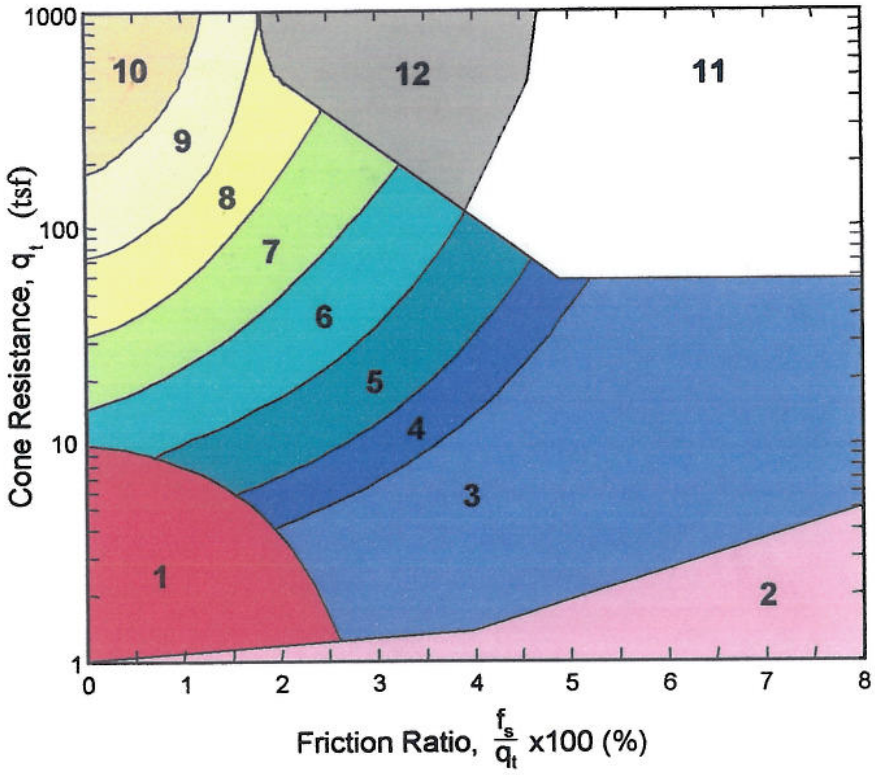
Appendix B
Boring and CPT Logs, Well and Probe Data, Aquifer Test Data, Survey Information

Boring and CPT Logs

CPT Soil Behavior Type Legend
(Robertson et al. 1986)



Zone	Soil Behavior Type
1	Sensitive, Fine Grained
2	Organic Material
3	Clay
4	Silty Clay to Clay
5	Clayey Silt to Silty Clay (Silt Mix)
6	Sandy Silt to Clayey Silt
7	Silty Sand to Sandy Silt (Sand Mix)
8	Sand to Silty Sand
9	Sand
10	Gravelly Sand to Sand
11	Very Stiff Fine Grained*
12	Sand to Clayey Sand*

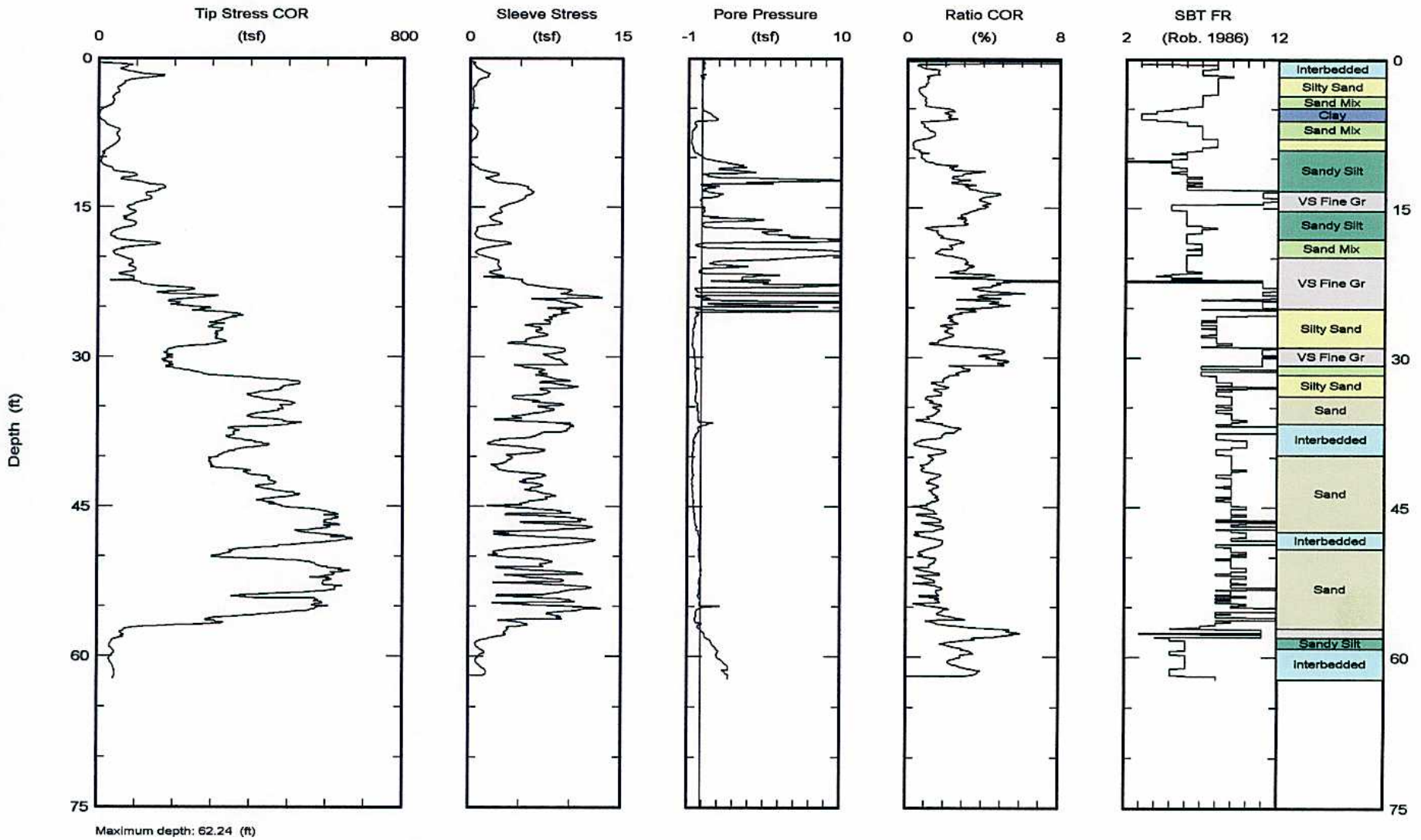
*Overconsolidated or cemented

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 15/Sep/2004
Test ID: RGW-1
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 62.24 (ft)

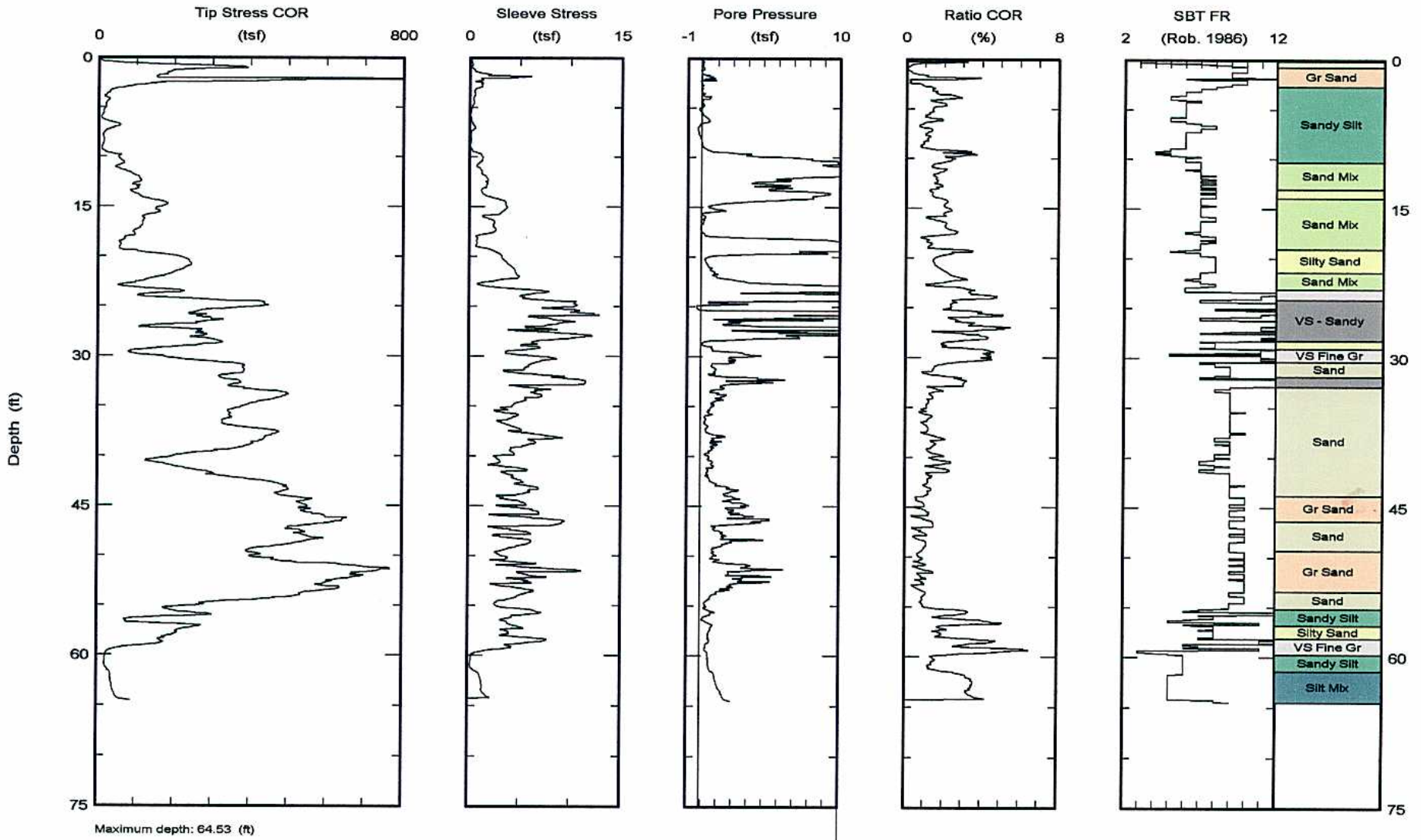
Test ID: RGW-1
File: C15S0404C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 17/Sep/2004
Test ID: RGW-2
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 64.53 (ft)

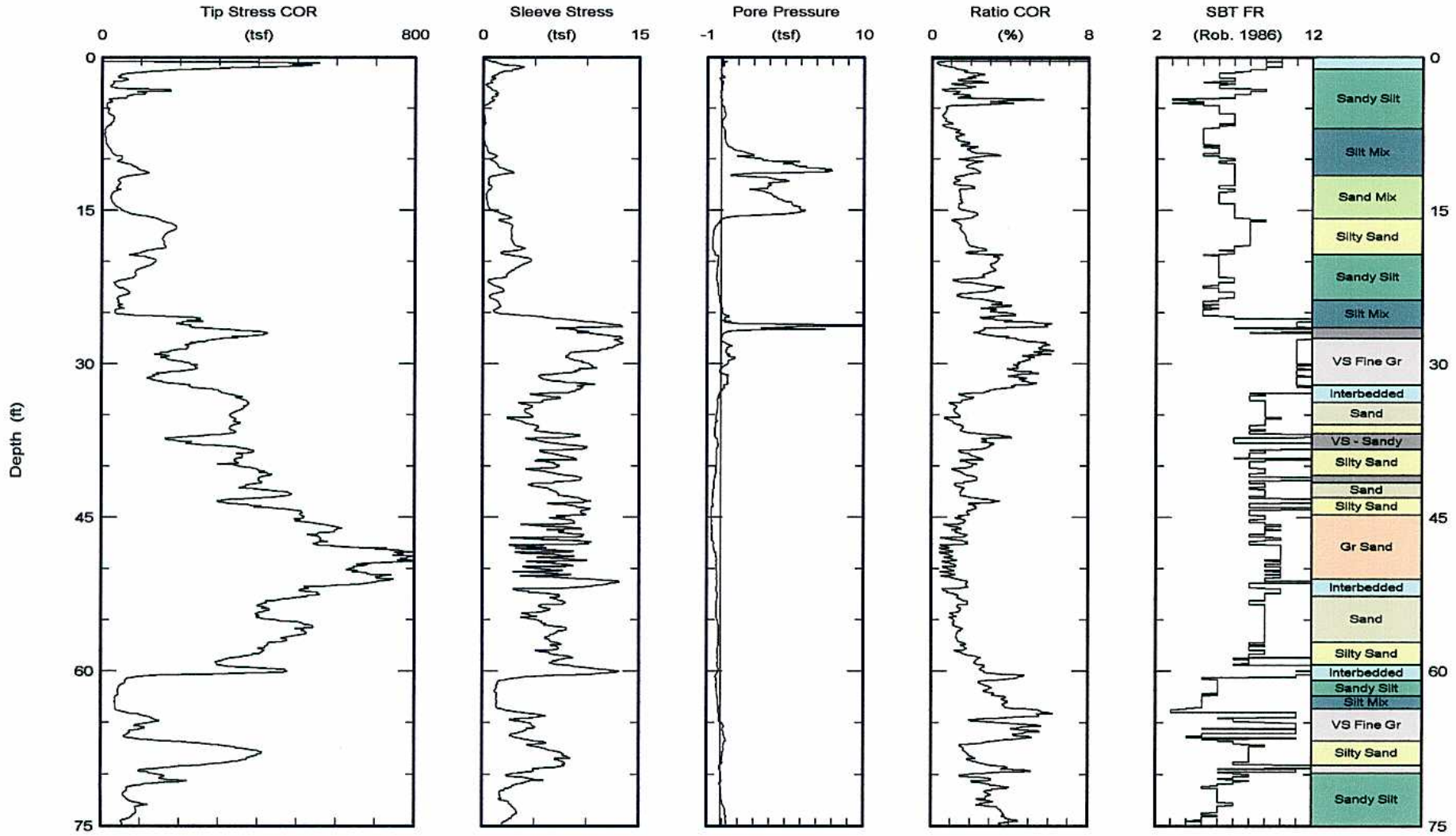
Test ID: RGW-2
File: C17S0402C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 14/Sep/2004
Test ID: RGW-3
Project: Oakland

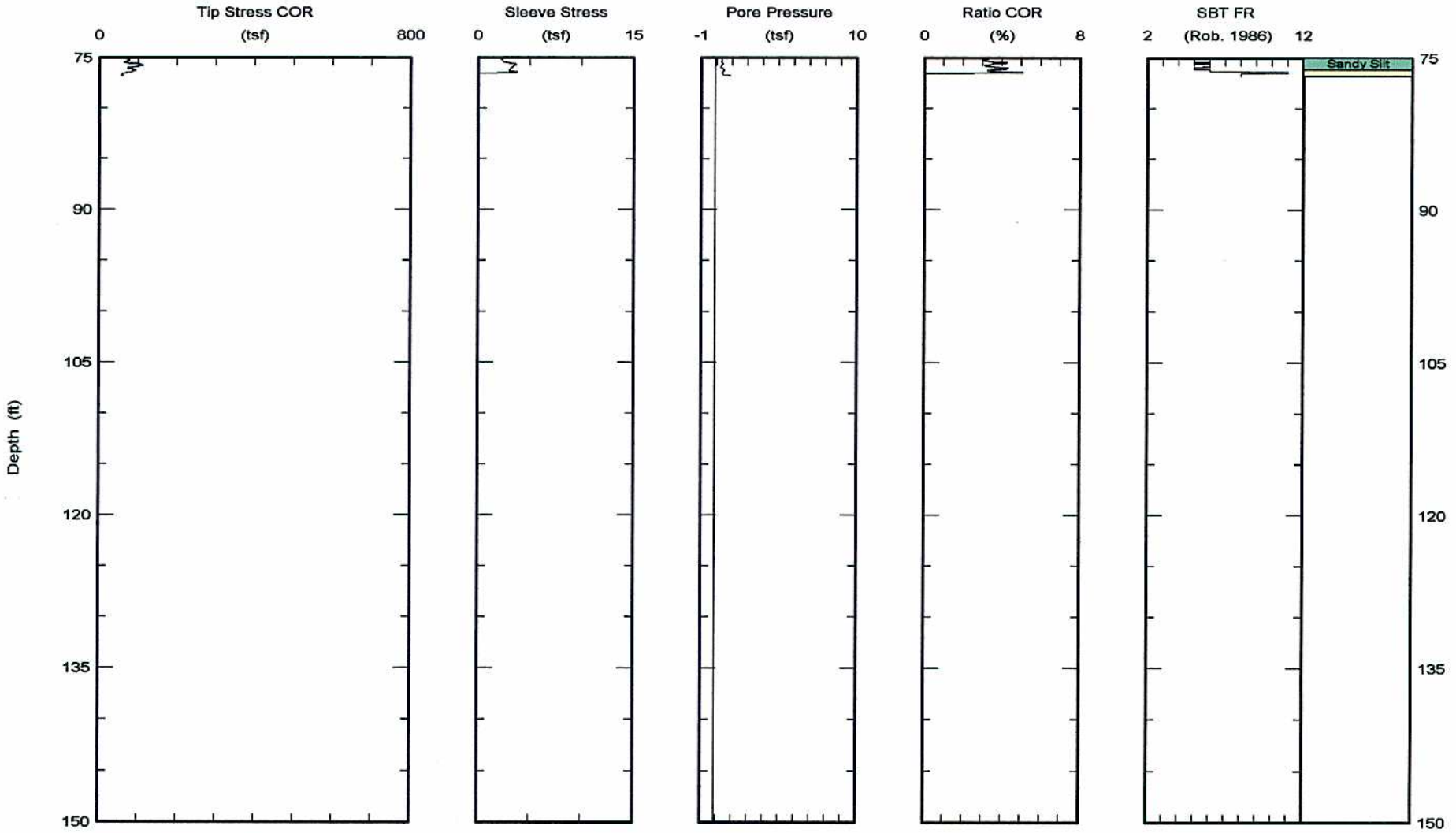
Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 76.84 (ft)

Test ID: RGW-3
File: C14S0402C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 skehoe@msn.com	CPT Data 30 ton rig	Date: 14/Sep/2004 Test ID: RGW-3 Project: Oakland
	Client: Precision Sampling Inc. Job Site: 1414 3rd St.	



Maximum depth: 76.84 (ft)

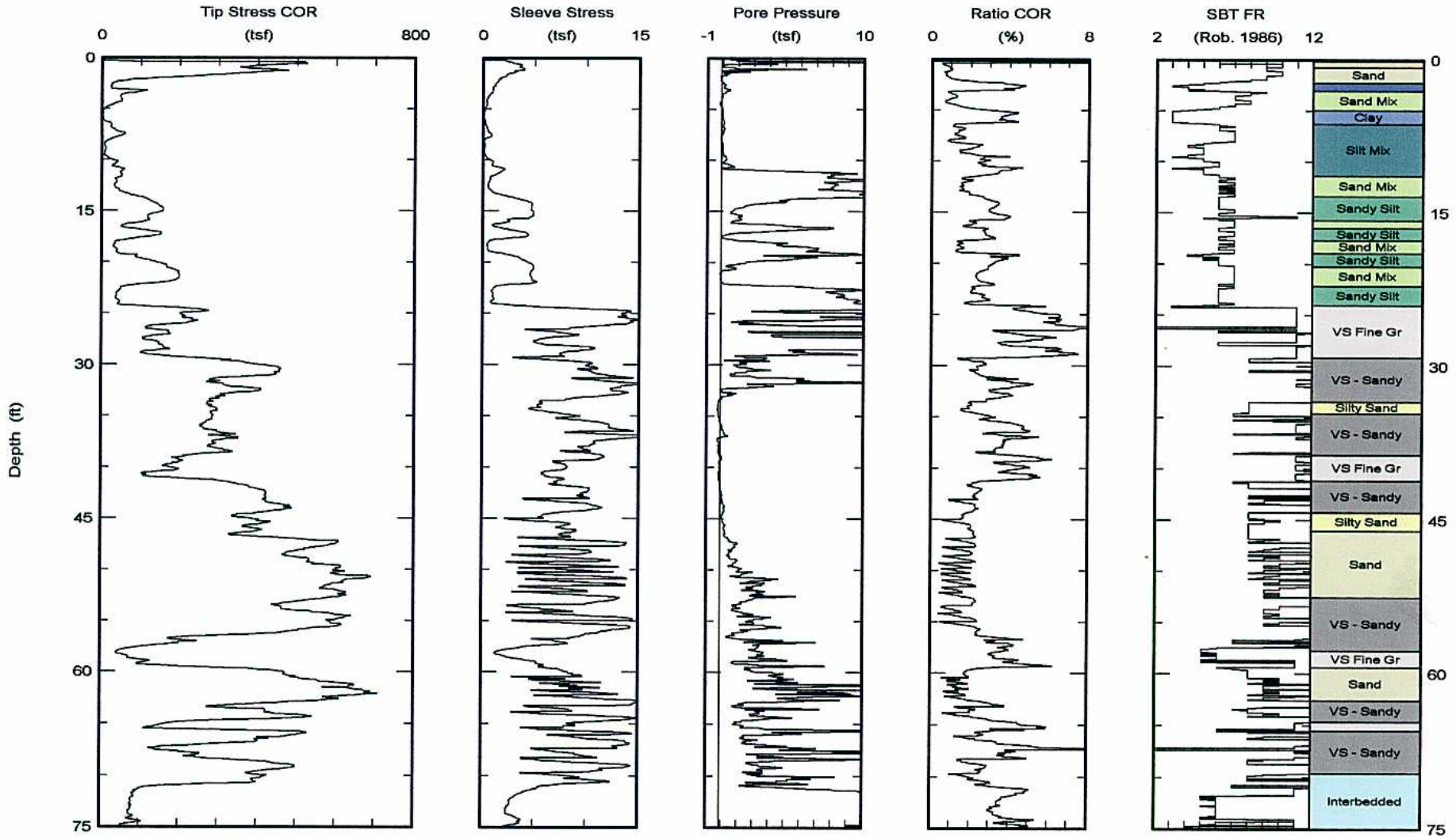
Test ID: RGW-3
File: C14S0402C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 15/Sep/2004
Test ID: RGW-4
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 76.78 (ft)

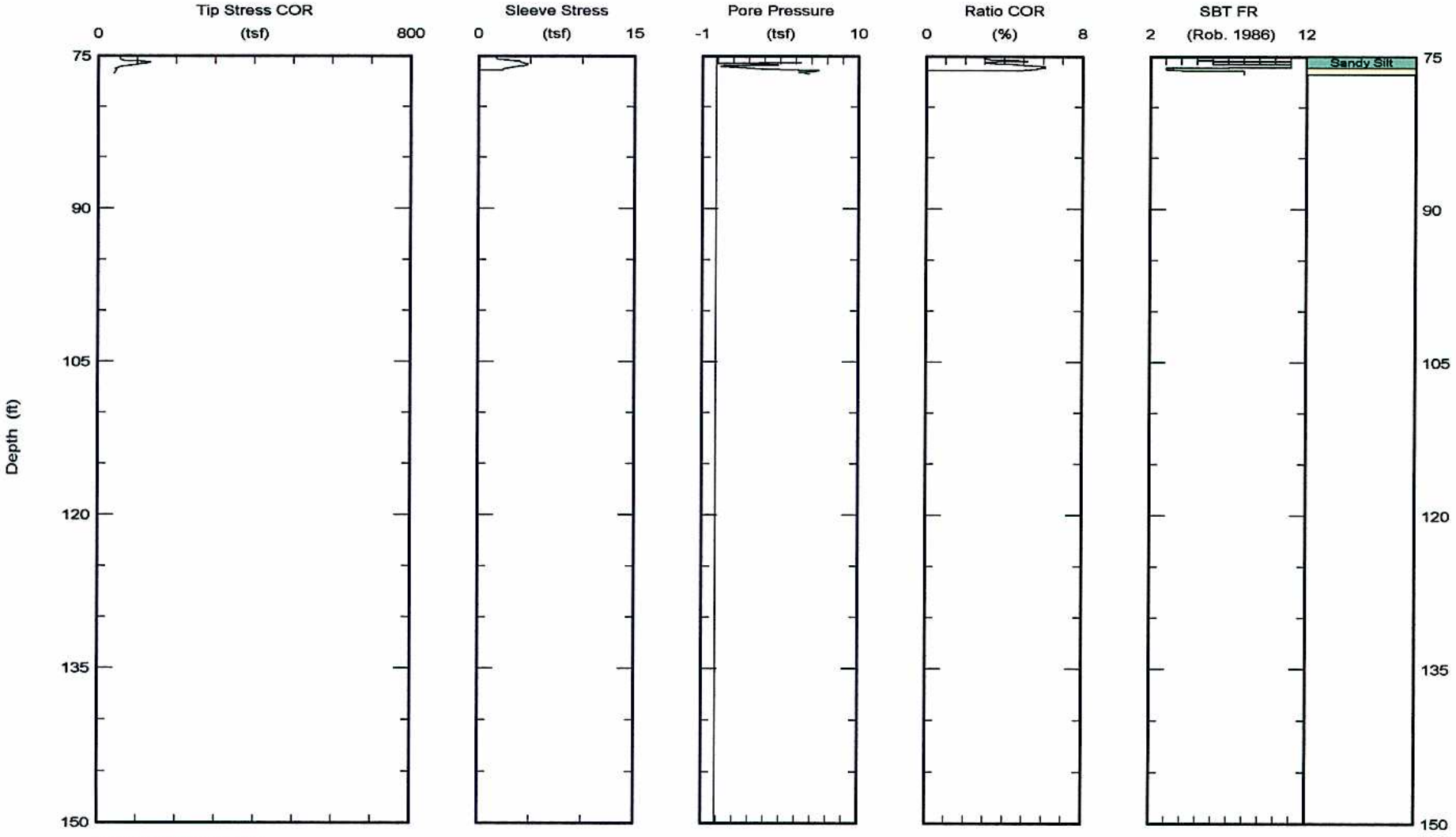
Test ID: RGW-4
File: C15S0403C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 15/Sep/2004
Test ID: RGW-4
Project: Oakland

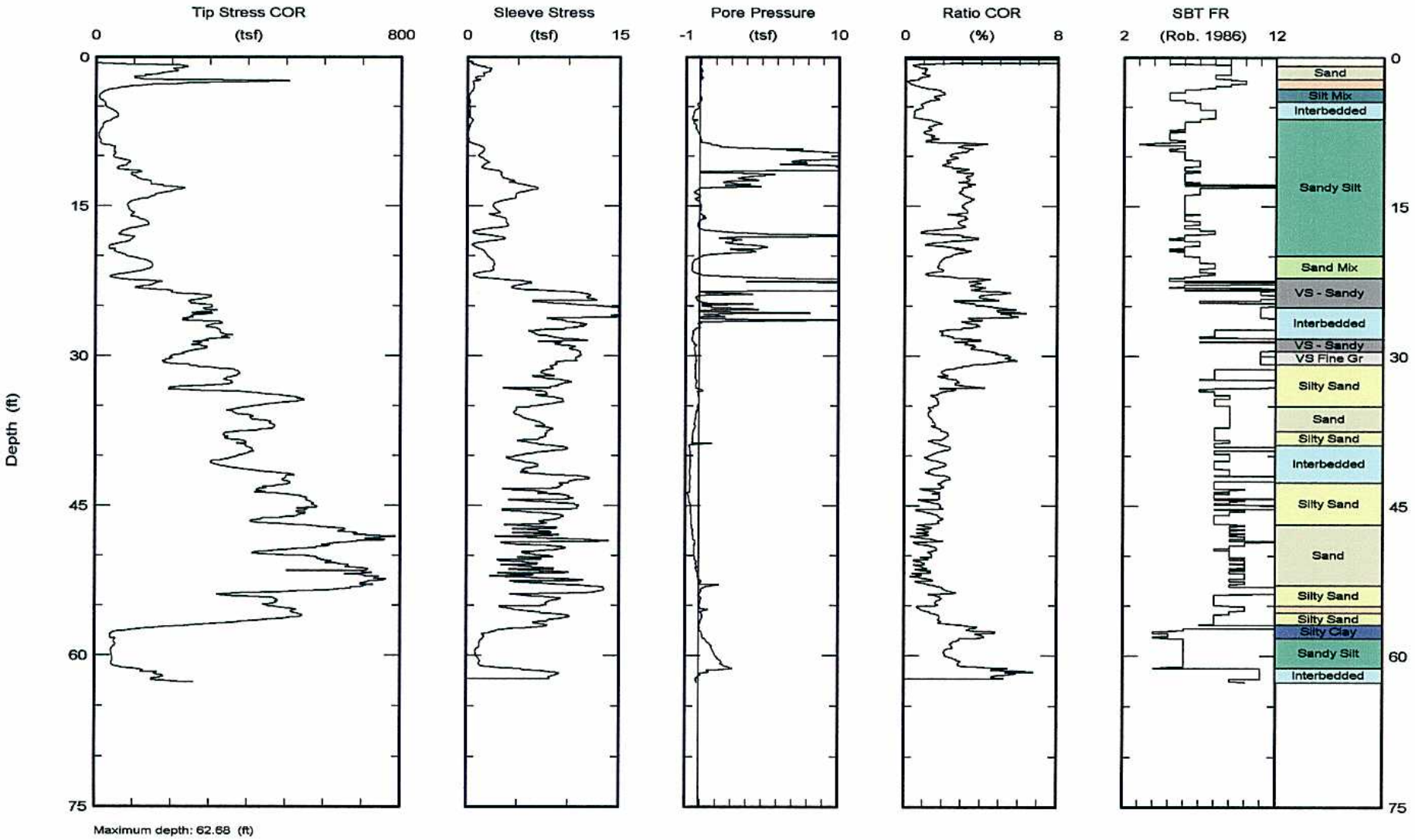
Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 76.78 (ft)

Test ID: RGW-4
File: C15S0403C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 skehoe@msn.com	CPT Data 30 ton rig	Date: 14/Sep/2004 Test ID: RGW-5 Project: Oakland
	Client: Precision Sampling Inc. Job Site: 1414 3rd St.	



Maximum depth: 62.68 (ft)

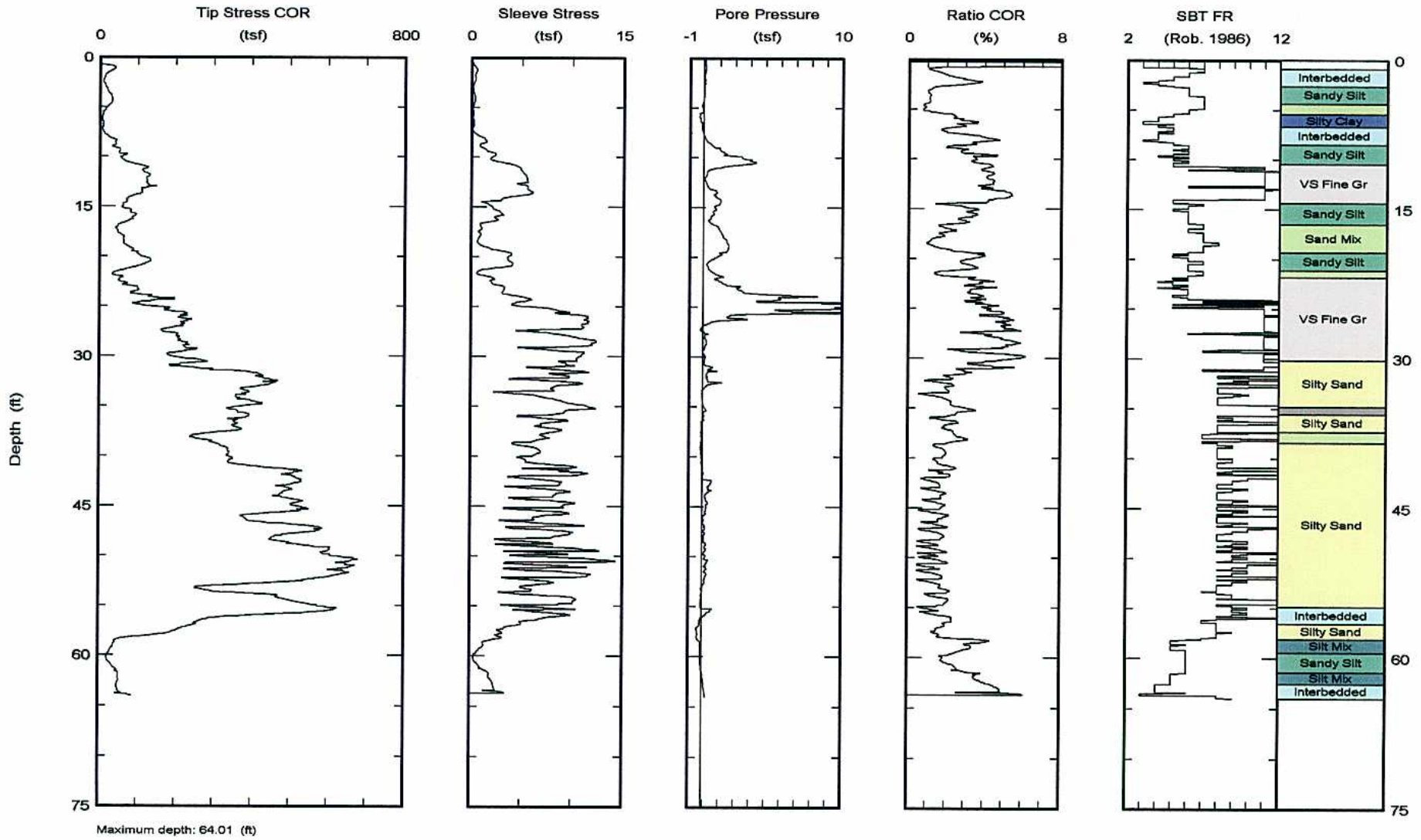
Test ID: RGW-5
File: C14S0404C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 16/Sep/2004
Test ID: RGW-6
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 64.01 (ft)

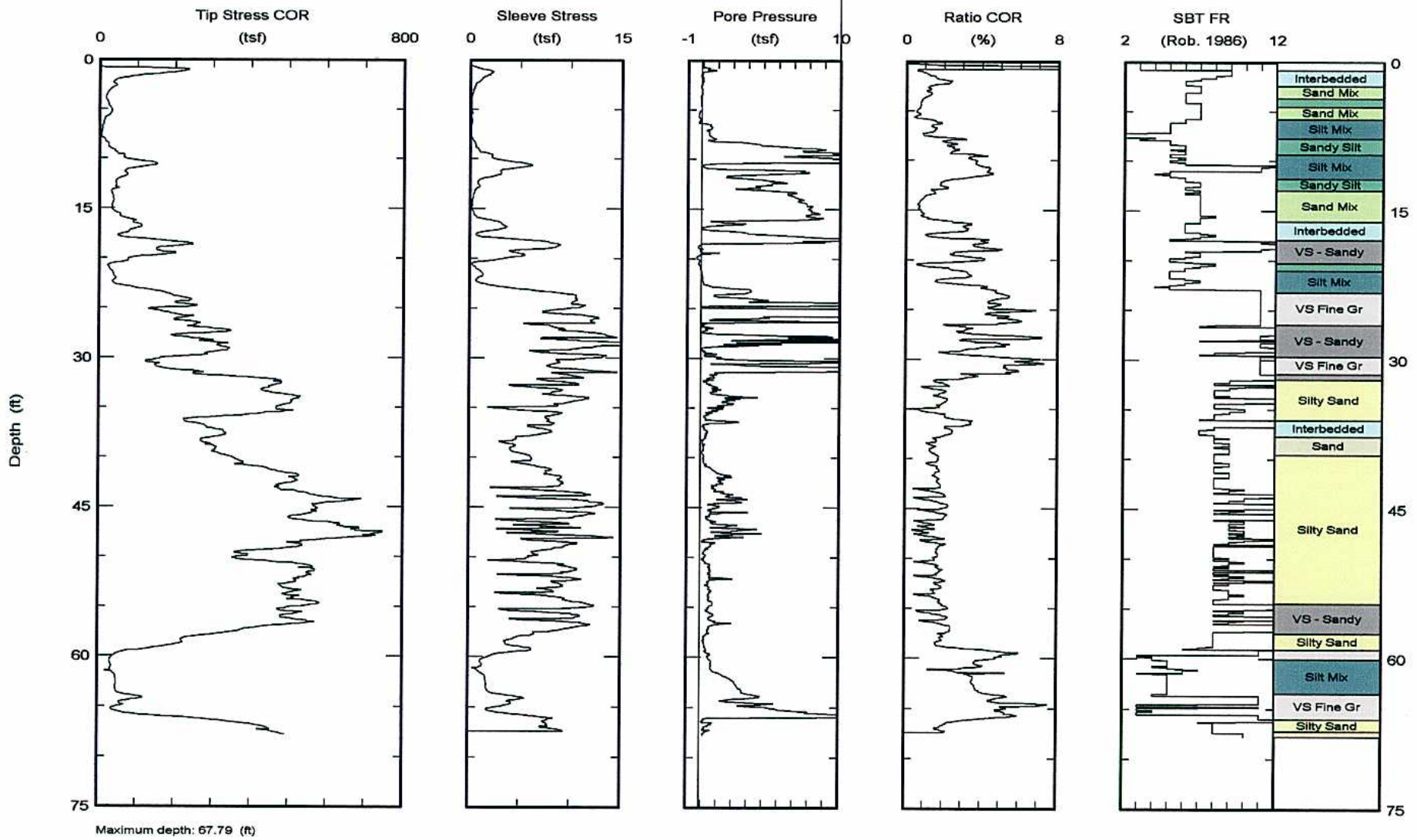
Test ID: RGW-6
File: C16S0402C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 14/Sep/2004
Test ID: RGW-7
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 67.79 (ft)

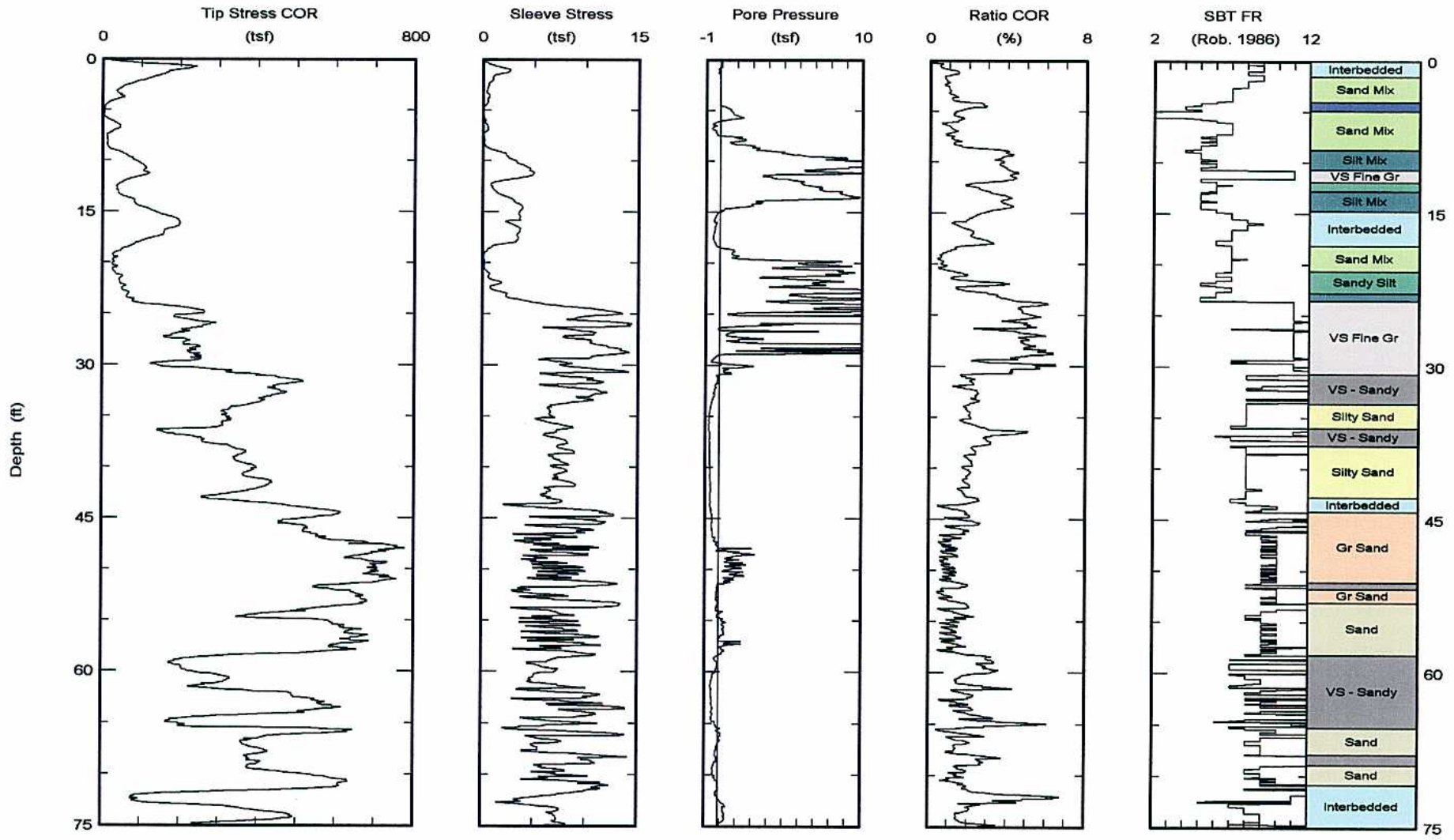
Test ID: RGW-7
File: C14S0405C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 16/Sep/2004
Test ID: RGW-8
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 80.88 (ft)

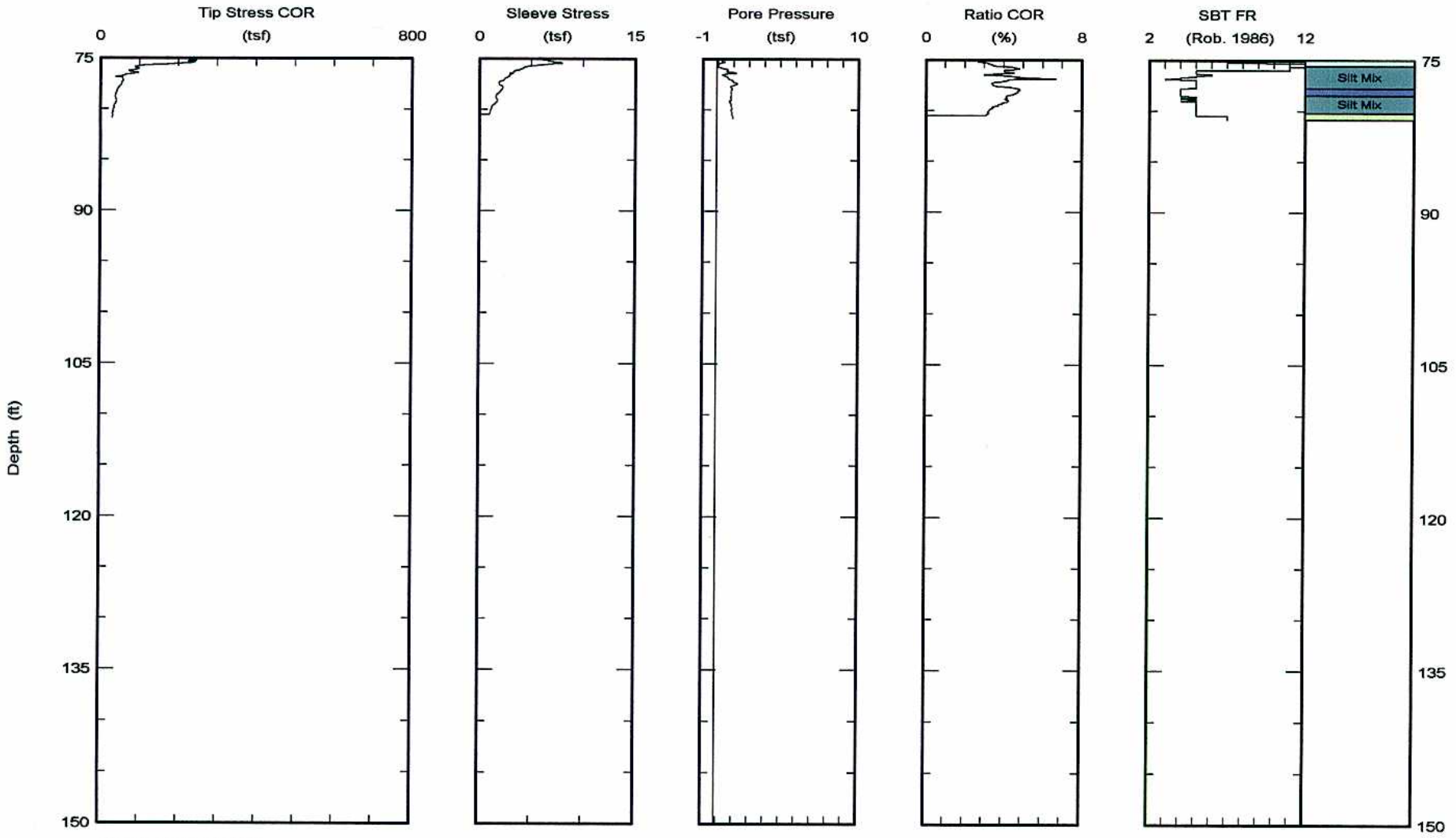
Test ID: RGW-8
File: C16S0401C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 16/Sep/2004
Test ID: RGW-8
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 80.88 (ft)

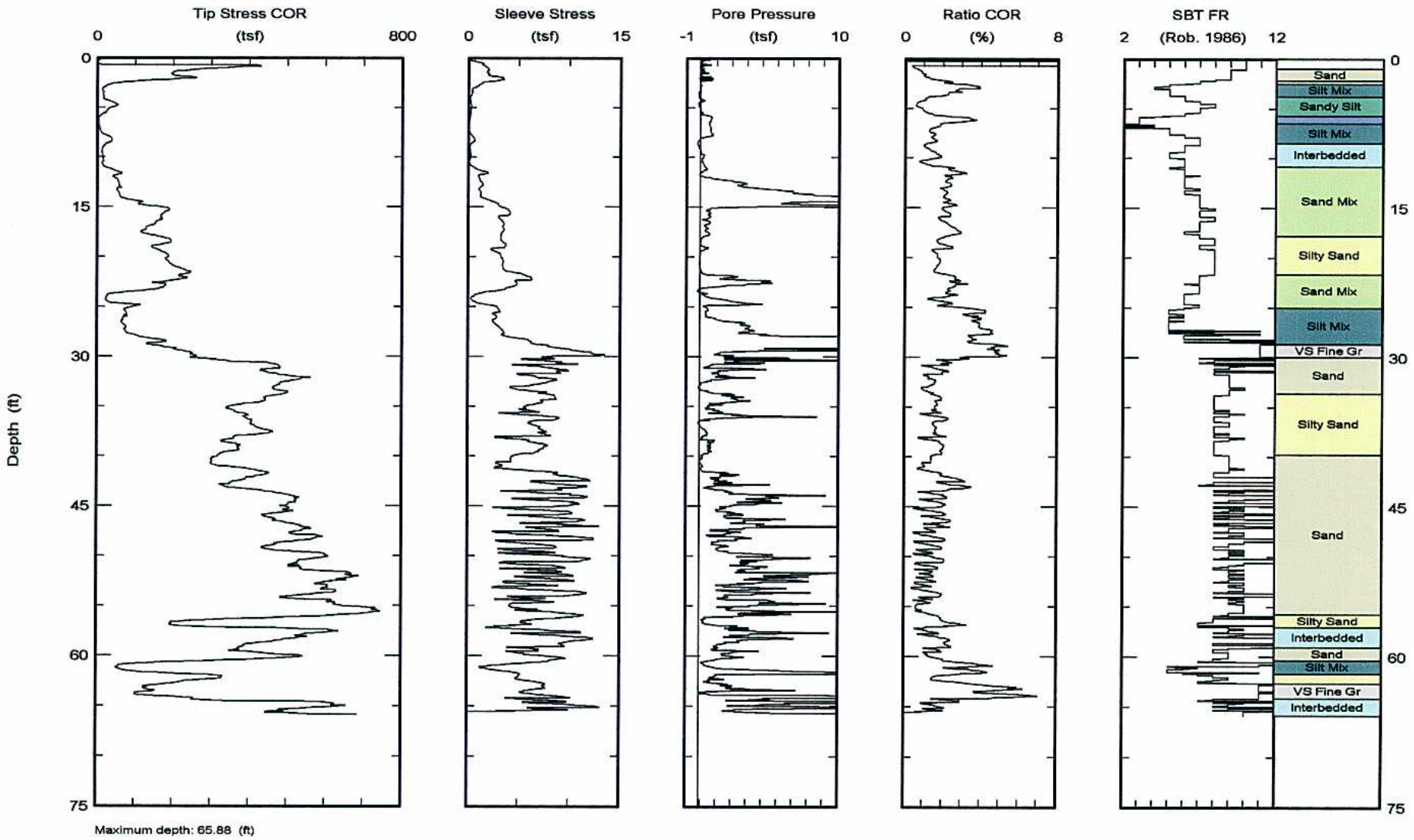
Test ID: RGW-8
File: C16S0401C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 15/Sep/2004
Test ID: RGW-9
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 65.88 (ft)

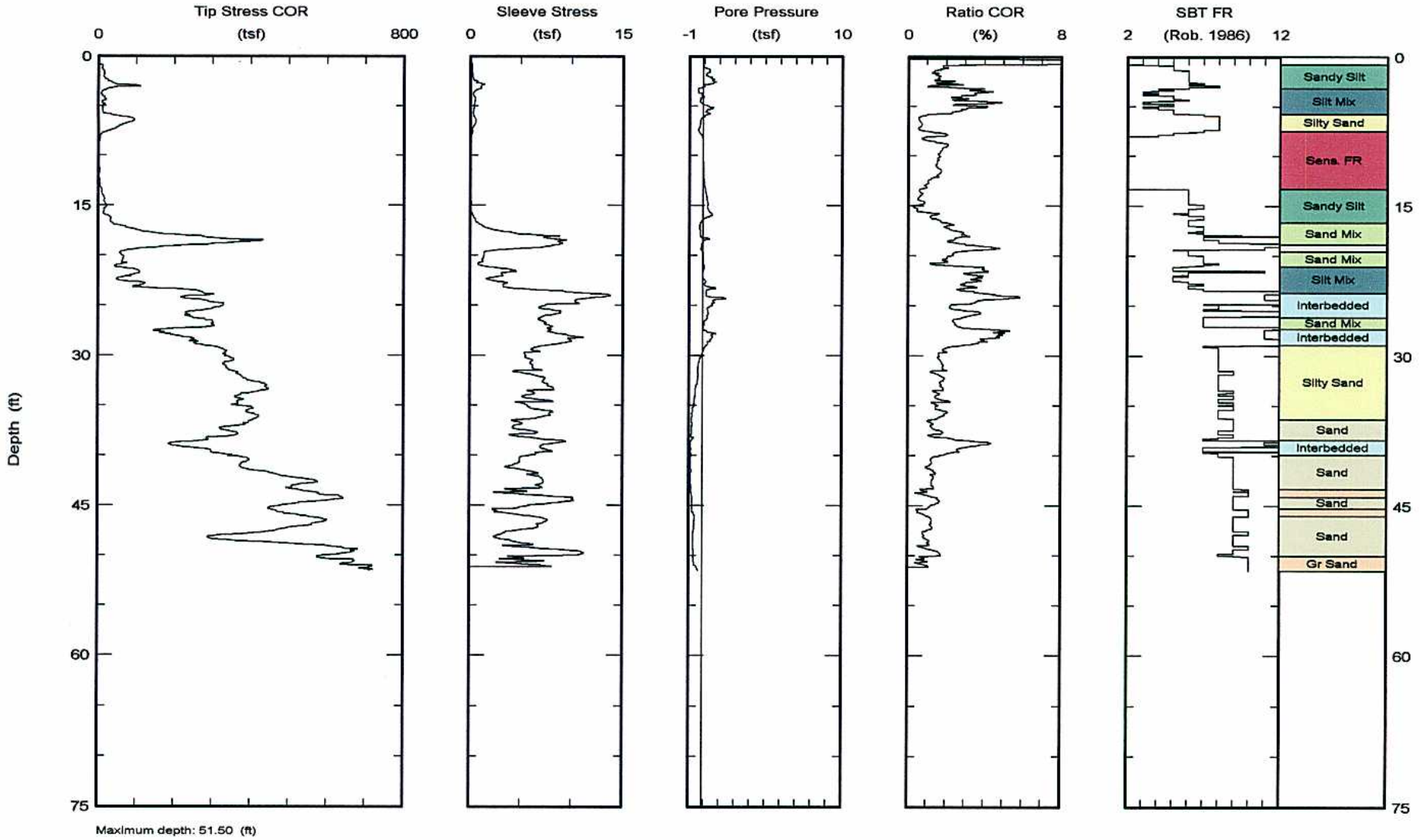
Test ID: RGW-9
File: C15S0401C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 14/Sep/2004
Test ID: RGW-10
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 51.50 (ft)

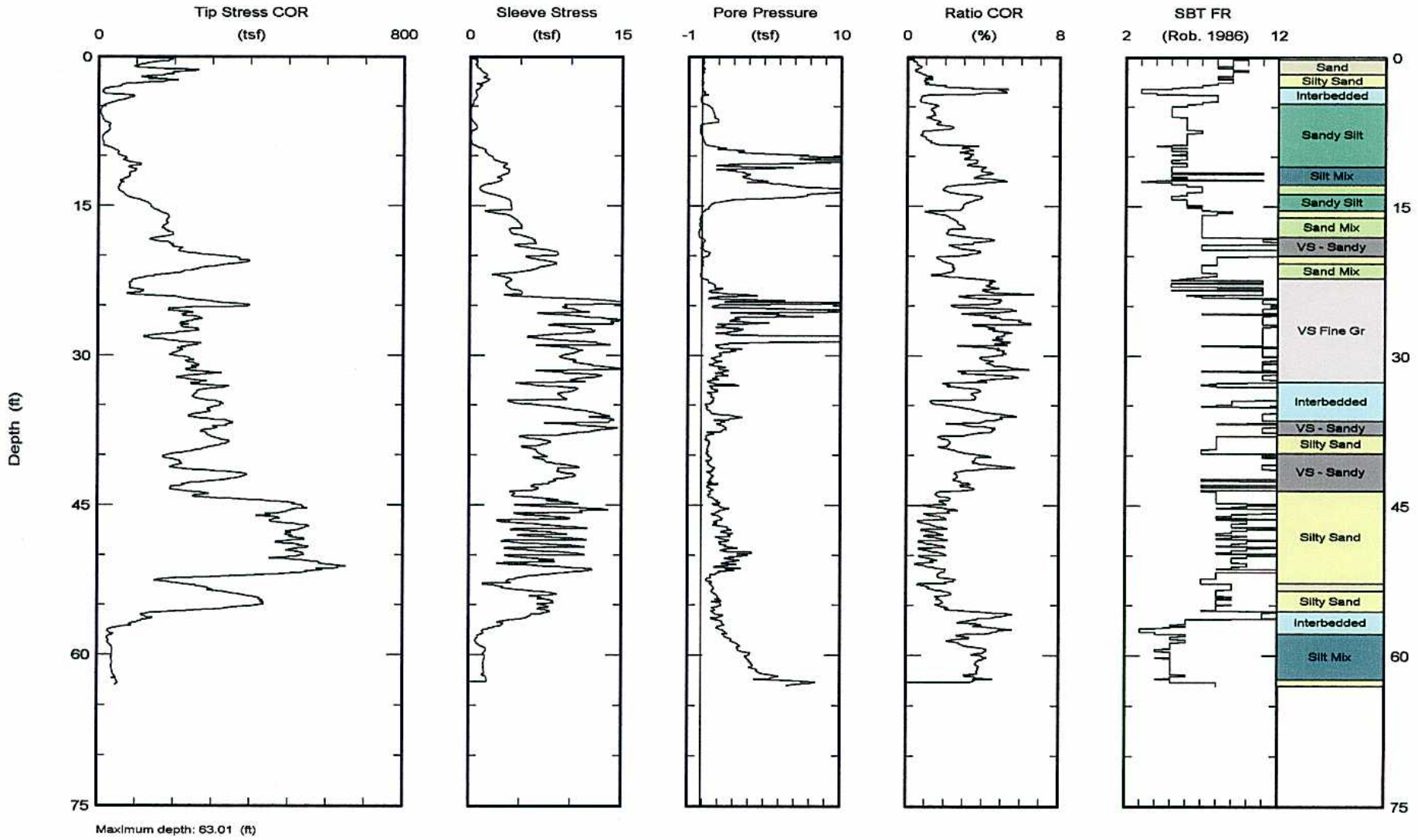
Test ID: RGW-10
File: C14S0401C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 16/Sep/2004
Test ID: RGW-11
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 63.01 (ft)

Test ID: RGW-11
File: C16S0403C.ECP

SHEET 1 of 2	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RGW-12

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		49.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	10/18/2004	10/18/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Vibra-Push		Dual-Tube Coring System (3' long cores, 1.75 diameter)		
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (DC Yard)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
5							**CONCRETE**	
		1.2		0			- 0.5' of crushed concrete with miscellaneous debris (chips, sediments) that has washed into borehole to top of concrete base	
10		1.6				SM	**SILTY FINE SAND (SM)** - dk olive gray (5YR3/2) to black (5YR2.5/2) grading to dk greenish gray (5GY4/1), black material is wet and greenish is tighter and only moist, loose, mild petrol odor	
		2.5		0		SM	**SILTY FINE SAND (SM)** - dk greenish gray as above, moist, very dense, vary concentrations of fines, 30-35% silt, <5% clay (in zones) - SM, dark greenish gray as above (10-13'), moist - wet, med dense interval from 13-13.5'	this includes the Ray area and where cores are being opened
15		2.5					- SM, dk greenish gray material as above, saturated, loose	
		3				SM	**SILTY FINE SAND (SM)** - lt gray (10YR7/2) to yellowish brn (10YR5/6) mottled with oxidation, saturated, loose, no odor	
20		3		0		SM/SC	SM as seen above, with increase fines (25-30%, some clay), wet to moist, dense, no odor	
		3				SM	**SILTY FINE SAND (SM)** - brownish yellow (10YR6/6), saturated (flowing material), loose - SM as seen from 21-22', moist to wet, med dense	
25		3		0		SM	**SILTY FINE SAND (SM)** - SM as seen at 24.5', heavier oxidation, moist, med dense with varying concentrations of fines (~25% at top of core to ~10% at bottom) - SM as seen from 27.5-28', moist, med dense, ~10-15% fines (no clay), no odor from 28-31'	
30		3					- from 31-31.7, SM as directly above, moist, dense - from 31.7 to 32.4, gap in core, full of sand/silty water	
		3				SM/SP	**FINE SAND WITH VERY LITTLE FINES (SM/SP)** - grayish brn (10YR5/2), moist to wet, med dense, <10% fines - saturated, increasing fines (~20%)	
35				0				

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
175868.FI.02	RGW-12

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 49.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 10/18/2004	**DATE COMPLETED:** 10/18/2004
DRILLING METHOD: Vibra-Push		**DRILLING EQUIPMENT:** Dual-Tube Coring System (3' long cores, 1.75 diameter)		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		3				SM/SP	**FINE SAND WITH VERY LITTLE FINES (SM/SP)** - grayish brn (10YR5/2), moist to wet, med dense, <10% fines	
						SM	**SILTY FINE SAND (SM)** - dry to moist, very dense, <20% fines, no odor	flowing material: silty/sandy water, zones of flowing material may not be representative of actual conditions, may only exist due to temporary pauses in advancement for core retrieval
		3						
40				0		SM/SP	**FINE SAND WITH VERY LITTLE FINES (SM/SP)** - grayish brn (10YR5/2), moist, med dense to dense at 40' - flowing material: silty/sandy water - SM/SP as described from 38.3-40', moist, med dense to dense at 43	
		3						
		2.5				SM/SP	**FINE SAND WITH VERY LITTLE FINES (SM/SP)** - grayish brn (10YR5/2), moist to wet, no odor - SM/SP as described directly above, moist to wet, med dense to loose, no odor	density cannot be determined due to core extraction from sampler
45								
		3						
				0			Boring Terminated at 49 ft	refusal at 49' due to heaving sands before pulling outer casing, water level is at 12.1' bgs and rising

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

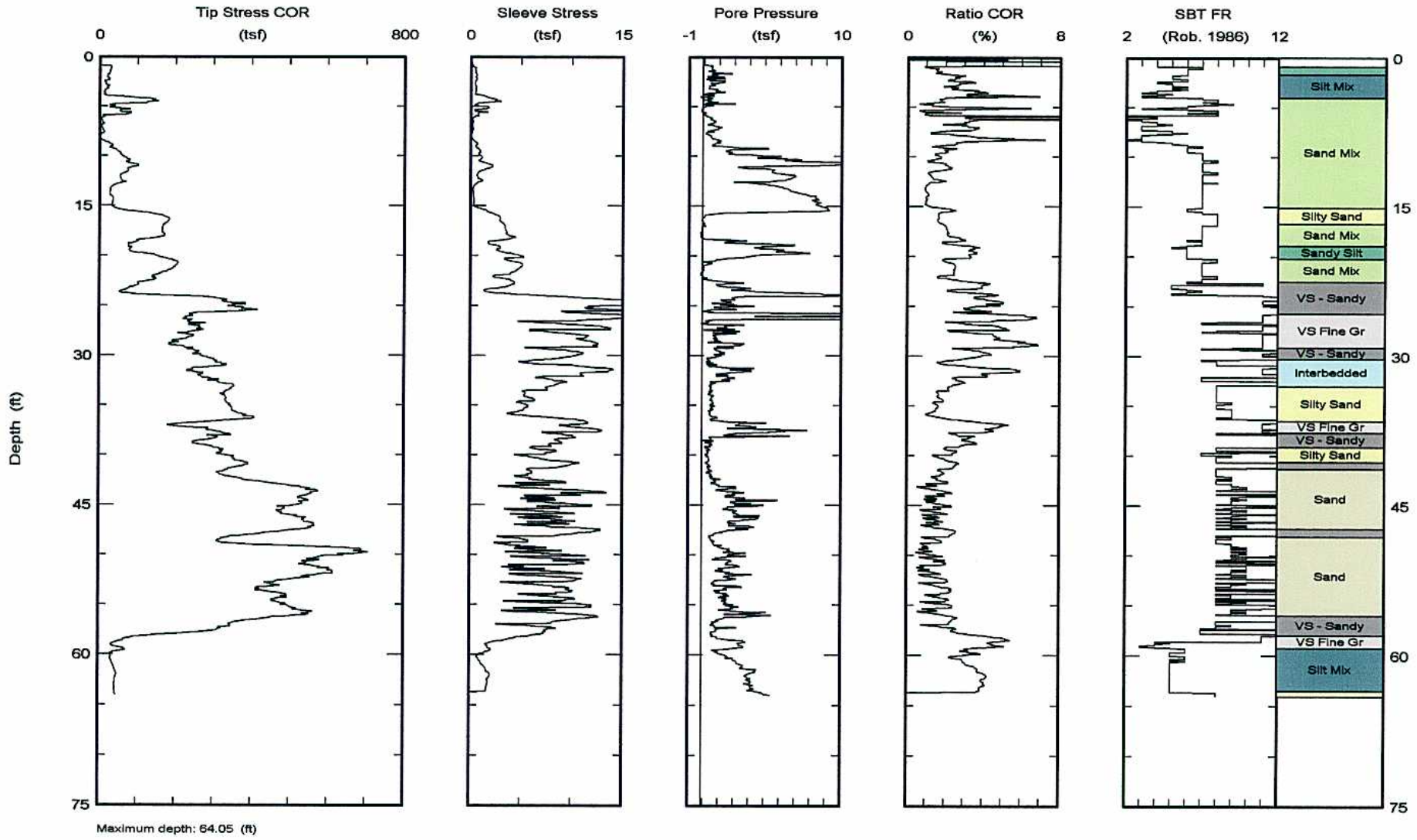
CH2MHILL

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
skehoe@msn.com

CPT Data
30 ton rig

Date: 16/Sep/2004
Test ID: RGW-13
Project: Oakland

Client: Precision Sampling Inc.
Job Site: 1414 3rd St.



Maximum depth: 64.05 (ft)

Test ID: RGW-13
File: C16S0404C.ECP

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RGW-14

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 49.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 10/21/2004	**DATE COMPLETED:** 10/21/2004
DRILLING METHOD: Vibra-Push		**DRILLING EQUIPMENT:** Dual-Tube Coring System (3' long cores, 1.75 diameter)		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (AMTRAK - Under I-880)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							FILL - silt with sand and gravel to gravel with silt and sand, virtually no recovery due to gravel	
		0.5		0				
5		1.5				SM	**SILTY FINE SAND (SM)** - very dk grayish brn (2.5YR3/2) to lt olive brn (2.5YR5/4), moist to wet, loose, ~40% fines, no clay, no odor	
		2.5				SM	**SILTY FINE SAND (SM)** - gray (2.5YR6/1) mottled with oxide, moist, med dense, cohesive, ~50% fines, no odor, contains root structures	
10				0				
		1.7				SM	**SILTY FINE SAND (SM)** - yellowish brn (10YR4/6), less mottling and more thoroughly oxidized, moist, decreasing fines ~35%, no odor	
15		2.3					- as above from 10', decreasing fines	
		2.7				SM	**SILTY FINE SAND (SM)** - lt yellowish brn (2.5YR6/4), saturated, loose, 20% silt, no clay, no odor	
				0			- SM as directly above, wet, med dense, ~25% silt, no odor	
20		3					- SM as described at 7.4', gray, mottled, wet to saturated	
						SM/SC	**SILTY/CLAYEY FINE SAND (SM/SC)** - bluish gray (5B6/1) mottled with oxide, moist, med dense to dens, 40-50% fines, no odor	
		2.9				SM	**SILTY FINE SAND (SM)** - bluish gray (5B6/1), little to no oxidation, wet, loose, ~15% fines, no odor	
25							- SM as directly above, oxidized throughout, moist, med dense to dense, ~20% fines	
		2.9					- moist to wet, loose from 25.2-26.4'	
				0			- wet to saturated	
30		3						
		3				SM/SP	**SILTY FINE SAND (SM)** - grayish brn (10YR5/2), wet to moist, med dense to dense, <10% fines, no odor	
						SM	**SILTY FINE SAND (SM)** - grayish brn (10YR5/2), saturated, med dense to dense, ~20% fines, no odor	
35						SM/SP		

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
175868.FI.02	RGW-14

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 49.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 10/21/2004	**DATE COMPLETED:** 10/21/2004
DRILLING METHOD: Vibra-Push		**DRILLING EQUIPMENT:** Dual-Tube Coring System (3' long cores, 1.75 diameter)		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (AMTRAK - Under I-880)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		1.5		0		SM/SP	**SILTY FINE SAND (SM)** - grayish brn (10YR5/2), wet to moist, saturated, med dense to dense, <10% fines, no odor	
		2.4					- SM/SP as directly above - cemented interval (mildly), ~30% fines, flowing material from 37.3-38.3'	
40		1.9					- SM/SP, saturated fine sand with ~10% fines as described from 31'	
45		3		0			- reddish brn (5YR4/3), oxidation stain	
		3					- SM/SP as described at 40'	
							Boring Terminated at 49 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RGW-15

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 43.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 10/25/2005	**DATE COMPLETED:** 10/25/2005
DRILLING METHOD: Vibra-Push		**DRILLING EQUIPMENT:** Limited Access Rig with Dual-Tube Coring System (3' long cores, 1.75 diameter)		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Under I-880, AMTRAK, South of Park)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	COMMENTS (DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.)
							FILL: SILT WITH SAND AND GRAVEL - lt yellowish brn (10YR6/4) to very dk gray (10YR3/2), dry to moist, no odor	
		3		0				
5		2.5				SM	**SILTY FINE SAND (SM)** - moist to wet from 5.2', loose, ~40% silt, <5% clay, no odor - SC/ML, as above with increased clay concentration, soft, wet, organic odor	
		3				SM	**SILTY FINE SAND (SM)** - dk grayish brn (10YR4/2), moist, loose to med dense, ~30% silt, <5% clay, no odor - SM as directly above, bluish gray (5B6/1) mottled with orange oxide - becomes wet	
10		3		0		SM	**SILTY FINE SAND (SM)** - lt olive brn (2.5YR5/6), oxidized throughout, moist, med dense, ~25% silt, no odor	
		3				SM	**SILTY FINE SAND (SM)** - yellowish brn (10YR5/8), oxidized, moist, med dense to dense, 25-35% silt with occasional concentration of clay (14.2'), no odor	
15		3				SM	**SILTY FINE SAND (SM)** - lt gray (10YR7/1) with zoned oxidation, moist to wet (16-17'), med dense, no odor - wet, less dense from 19.5-21.8' - SM as described from 16', moist, grading more dense and with less fines	
		3		0				
20		3						
		3						
25		2.4				SM	**SILTY FINE SAND (SM)** - yellowish brn (10YR5/6), moist, med dense,~20% silt, no odor	
		2.6		0				
30		2.6				SM/SP	**SILTY FINE SAND (SM)** - grayish brn (10YR5/2), moist, med dense to dense, 15-20% silt, no odor - SM/SP as directly above with intervals of ~,10% silt from 34-35', wet	
35				0				

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
175868.FI.02	RGW-15

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 43.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 10/25/2005	**DATE COMPLETED:** 10/25/2005
DRILLING METHOD: Vibra-Push		**DRILLING EQUIPMENT:** Limited Access Rig with Dual-Tube Coring System (3' long cores, 1.75 diameter)		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Under I-880, AMTRAK, South of Park)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		3					**SILTY FINE SAND (SM)** - grayish brn (10YR5/2), moist, med dense to dense, 15-20% silt, no odor	drilling rods are saturated but core isn't visibly saturated
		2.3				SM/SP		wet in core (above recovered material)
40								
		3						sample tube stuck in outer barrel: material shows same as above
							Boring Terminated at 43 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

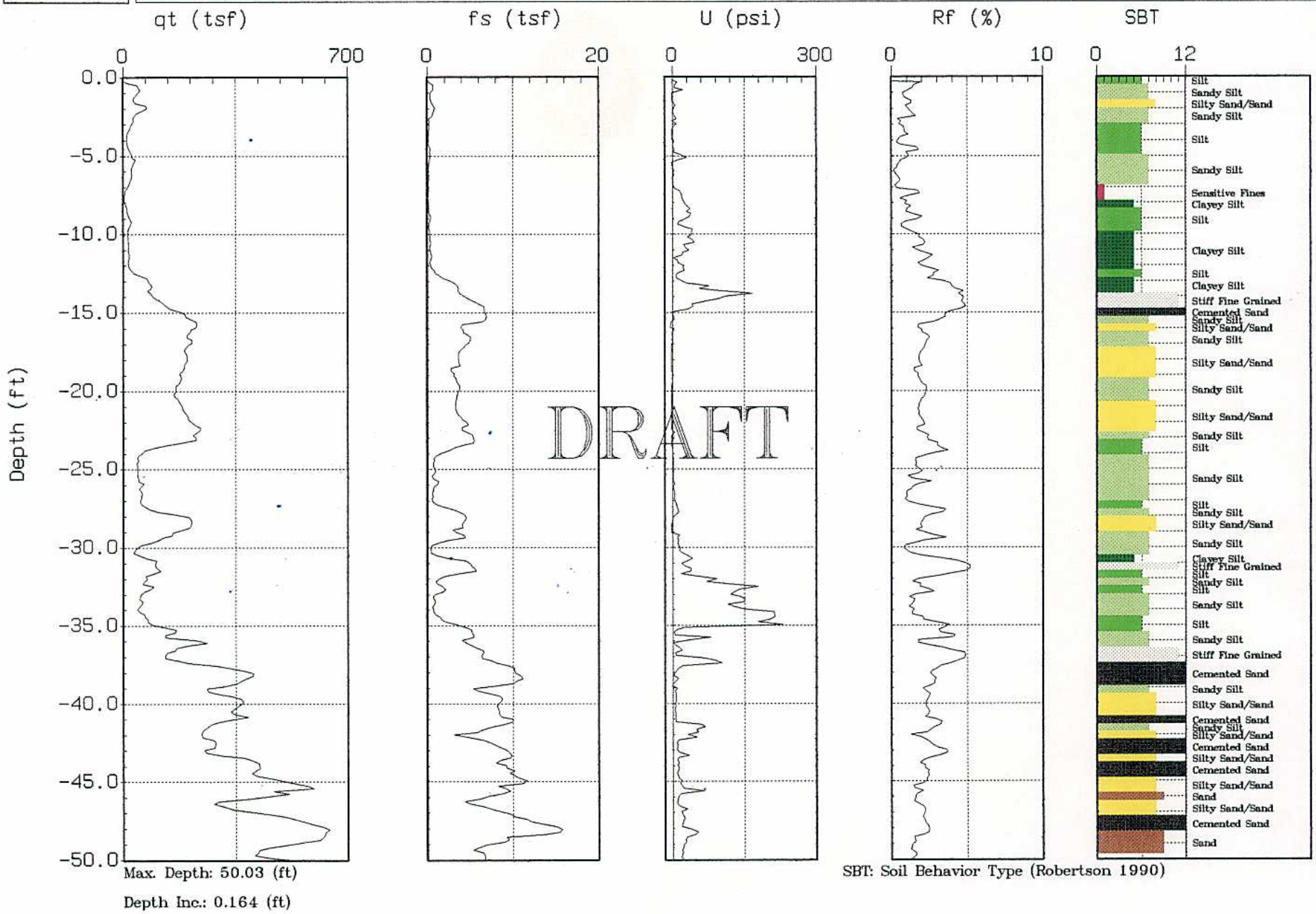
CH2MHILL

GREGG

CH2M HILL

Location : RGW-16
Site : AMCO CHEMICAL

Geologist : B. FROHLICH
Date : 11:30:04 09:09



Max. Depth: 50.03 (ft)

Depth Inc.: 0.164 (ft)

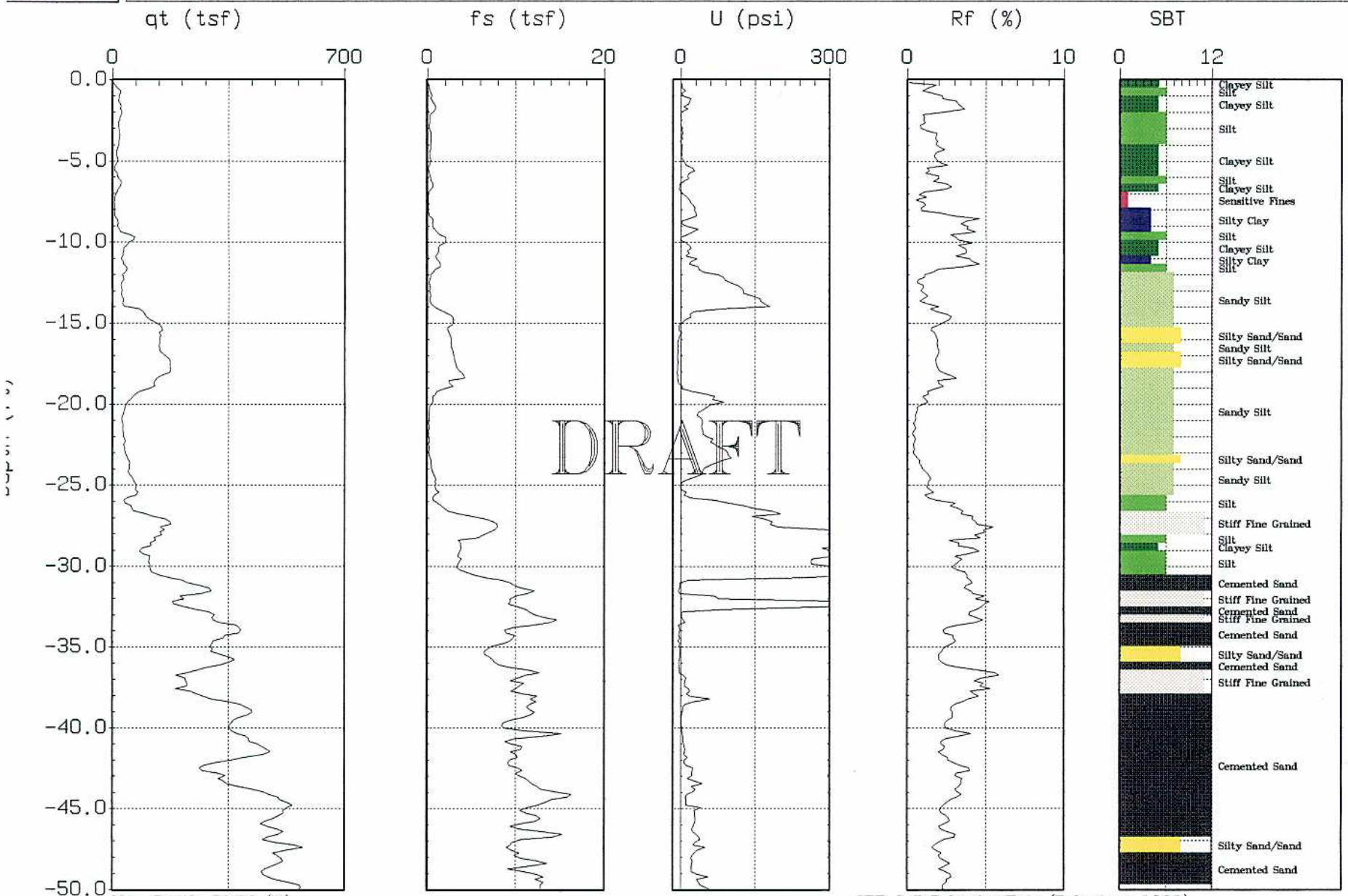
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CH2M HILL

Location : RGW-17
Site : AMCO CHEMICAL

Geologist : B. FROHLICH
Date : 11:30:04 10:50



Max. Depth: 50.03 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

SHEET 1 of 1

PROJECT NUMBER: 175868.RR.01

BORING NUMBER: *RMW-01-17*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 17.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)	
SURFACE ELEVATION: 11.2 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,692.44	**EASTING (CCS NAD 83 Z 3):** 6,043,062.76	**DATE STARTED:** 01/12/2005 08:10	**DATE COMPLETED:** 01/12/2005 10:00
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** 3 continuous core		**WATER LEVEL:** 6.74 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Southwest Corner), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
							DEBRIS / FILL - mottled dk gray (10YR3/1), moist, silty clayey fine sand with glass, oyster shells, and gravel, no odor	Grout
5				0.0		SM	**SILTY SAND (SM)** - dk gray (10YR4/1) appears stained, wet to saturated, f sand, no debris or gravel, no odor - color grades to yellowish brn (10YR5/6), moist, more dense, no odor	Seal
10				0.0		SC	**CLAYEY SAND WITH SILT (SC)** - mottled dk yellowish brn (10YR4/6) with oxidized zones and some blue-green clay (CL), moist, f sand, no odor	
15				0.0		SM	**SILTY SAND (SM)** - dk yellowish brn (10YR4/6), wet to saturated, 70% f sand, 30% silt, no blue clay, no odor - varying concentrations (20-40%) of silt with minor clay (=5%)	Pack

Total Depth = 17 ft bgs

Note 1) Lithology log based on log from RMW-01-35

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.RR.01

BORING NUMBER: *RMW-01-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 40.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)
SURFACE ELEVATION: 11.0 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,694.87	**EASTING (CCS NAD 83 Z 3):** 6,043,054.43	**DATE STARTED:** 01/11/2005 10:56 / **DATE COMPLETED:** 01/11/2005 16:05
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** 3 continuous core	**WATER LEVEL:** 7.59 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Southwest Corner), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
							DEBRIS / FILL - mottled dk gray (10YR3/1), moist, silty clayey fine sand with glass, oyster shells, and gravel, no odor	
5				0.0		SM	**SILTY SAND (SM)** - dk gray (10YR4/1) appears stained, wet to saturated, f sand, no debris or gravel, no odor - color grades to yellowish brn (10YR5/6), moist, more dense, no odor	
10				0.0		SC	**CLAYEY SAND WITH SILT (SC)** - mottled dk yellowish brn (10YR4/6) with oxidized zones and some blue-green clay (CL), moist, f sand, no odor	Grout
15				0.0		SM	**SILTY SAND (SM)** - dk yellowish brn (10YR4/6), wet to saturated, 70% f sand, 30% silt, no blue clay, no odor - varying concentrations (20-40%) of silt with minor clay (=5%)	
20				0.0		SC	**CLAYEY SAND WITH SILT (SC)** - dk yellowish brn with lt gray (clayier) zones (10YR7/1), moist to wet, 80% f sand, ~20% clay, <5% silt, no odor	Seal
25				0.0		SM	**SILTY SAND (SM)** - dk yellowish brn (10YR4/6), wet to saturated, 70% f sand, 30% silt, no blue clay, no odor - grades to SM/SP with less silt (=10%)	Pack
30				0.0		SM/SP	**SILTY SAND TO SAND (SM/SP)** - brn (10YR5/3), 80-90% f sand - brown (10YR5/3), grades with very little silt (=5%)	
35								

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
175868.RR.01	*RMW-01-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 40.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)	
SURFACE ELEVATION: 11.0 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,694.87	**EASTING (CCS NAD 83 Z 3):** 6,043,054.43	**DATE STARTED:** 01/11/2005 10:56	**DATE COMPLETED:** 01/11/2005 16:05
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** 3 continuous core		**WATER LEVEL:** 7.59 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Southwest Corner), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
				0.0		SM/SP	**SILTY SAND TO SAND (SM/SP)** - brn (10YR5/3), 80-90% f sand	
40				0.0				
							Total Depth = 40 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-02-13*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 13.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)	
SURFACE ELEVATION: 10.7 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,729.07	**EASTING (CCS NAD 83 Z 3):** 6,043,136.11	**DATE STARTED:** 01/12/2005 11:27	**DATE COMPLETED:** 01/12/2005 12:18
DRILLING METHOD: Rotosonic	**DRILLING EQUIPMENT:** no core tools	**WATER LEVEL:** 3.26 ft bgs on 03/22/2005	
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA	**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							CONCRETE	Grout
							DEBRIS / FILL - black, silty fine sand with wood, glass, and small metal debris, strong odor, flowing separate phase product and water present, piping observed in saw cut	Seal
							CONCRETE	
5				465.0		SM	**SILTY SAND (SM)** - dk gray (10YR4/1), saturated, 70% f sand, 30% silt and fines with minor clay concentrations, cohesive, strong odor, interface has very oily appearance - color changing to greenish gray (5GY5/1) - cohesive, less pronounced odor	Pack
10				12.7			- no PID detections in breathing zone, or perimeter - max of 8.6 ppm in drill casing	
							Total Depth = 13 ft bgs	

Note 1) Lithology log based on log from RMW-02-50

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-02-32*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 32.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)
SURFACE ELEVATION: 11.2 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,750.16	**EASTING (CCS NAD 83 Z 3):** 6,043,138.76	**DATE STARTED:** 01/13/2005 12:30 / **DATE COMPLETED:** 01/13/2005 14:28
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** no sampling tools	**WATER LEVEL:** 3.88 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
							DEBRIS / FILL - black, silty fine sand with wood, glass, and small metal debris, strong odor, flowing separate phase product and water present, piping observed in saw cut	
							CONCRETE	
5				465.0			**SILTY SAND (SM)** - dk gray (10YR4/1), saturated, 70% f sand, 30% silt and fines with minor clay concentrations, cohesive, strong odor, interface has very oily appearance	
							- color changing to greenish gray (5GY5/1)	
							- cohesive, less pronounced odor	Grout
10				12.7		SM		
15				34.0			- olive gray (5Y5/2) with increasing yellow-brown oxides, saturated, 75% fine sand, 25% silt, faint odor	
20				19.6		SC	**CLAYEY SILTY SAND (SC)** - brnish gray (10YR6/2) with bands of oxidation, moist-wet, dense, 80% f sand, 20% silt/clay, no odor	
							SILTY SAND WITH CLAY (SM) - yellowish brn (10YR5/4), saturated, med dense, 75% sub ang f sand, 25% silt, no odor	Seal / Seal
25				34.2				Pack
30				11.3		SM		
							Total Depth = 32 ft bgs	
							Note 1) Lithology log based on log from RMW-02-50	
							ABBREVIATIONS	

CH2MHILL

SHEET 2 of 2	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** *RMW-02-32*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 32.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)	
SURFACE ELEVATION: 11.2 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,750.16	**EASTING (CCS NAD 83 Z 3):** 6,043,138.76	**DATE STARTED:** 01/13/2005 12:30	**DATE COMPLETED:** 01/13/2005 14:28
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** no sampling tools		**WATER LEVEL:** 3.88 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE					USCS CODE	SOIL DESCRIPTION	WELL CONSTRUCTION DIAGRAM
	INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	
							brn = brown *lt = light* *dk = dark* *vf = very fine-grained* *f = fine-grained* *m = medium-grained* *c = coarse-grained* *ang = angular* *subang = subangular* *subrnd = subrounded* *rnd = rounded*	

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-02-50*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 50.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)
SURFACE ELEVATION: 11.1 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,738.81	**EASTING (CCS NAD 83 Z 3):** 6,043,138.41	**DATE STARTED:** 01/12/2005 14:05 / **DATE COMPLETED:** 01/13/2005 11:00
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** 3 continuous core	**WATER LEVEL:** 3.65 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
							DEBRIS / FILL - black, silty fine sand with wood, glass, and small metal debris, strong odor, flowing separate phase product and water present, piping observed in saw cut	
							CONCRETE	
5							**SILTY SAND (SM)** - dk gray (10YR4/1), saturated, 70% f sand, 30% silt and fines with minor clay concentrations, cohesive, strong odor, interface has very oily appearance	
				465.0			- color changing to greenish gray (5GY5/1)	
							- cohesive, less pronounced odor	
10								
				12.7		SM		
15							- olive gray (5Y5/2) with increasing yellow-brown oxides, saturated, 75% fine sand, 25% silt, faint odor	
				34.0				Grout
20							**CLAYEY SILTY SAND (SC)** - brnish gray (10YR6/2) with bands of oxidation, moist-wet, dense, 80% f sand, 20% silt/clay, no odor	
				19.6		SC		
							SILTY SAND WITH CLAY (SM) - yellowish brn (10YR5/4), saturated, med dense, 75% sub ang f sand, 25% silt, no odor	
25								
				34.2				
						SM		
30								
				11.3				
35								

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
175868.FI.02	*RMW-02-50*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 50.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)	
SURFACE ELEVATION: 11.1 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,738.81	**EASTING (CCS NAD 83 Z 3):** 6,043,138.41	**DATE STARTED:** 01/12/2005 14:05	**DATE COMPLETED:** 01/13/2005 11:00
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** 3 continuous core	**WATER LEVEL:** 3.65 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
				0.0		SM	**SILTY SAND WITH CLAY (SM)** - yellowish brn (10YR5/4), saturated, med dense, 75% sub ang f sand, 25% silt, no odor	Seal
40				0.0		SM/SP	**SAND WITH FINES (SM/SP)** - brn (10YR5/3), saturated, loose, 90% sub ang f sand slightly coarser than above, 10% fines, no odor	Pack
45				0.0				
50				0.0			- no PID detections in breathing zone or perimeter, max in drill casing = 2.1 ppm	
							Total Depth = 50 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-03-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 10.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,832.29	**EASTING (CCS NAD 83 Z 3):** 6,043,245.05	**DATE STARTED:** 02/15/2005 12:40 / **DATE COMPLETED:** 02/15/2005 14:30
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 2.43 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Northwest Corner), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-03-05SS-0105

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
							CONCRETE	Grout
		1.5	5-7-12	0.0		SM/SC	**FILL - SILTY SAND / CLAYEY SAND (SM/SC)** - moist to wet, silty fine sand with fines and coarse brick/aggregate fragments, no odor	
		1.5	15-25-50	0.0			- sample: RMW-3-05SS-0105	Seal
5		0.5	12-30-18	0.0			- large concrete fragment	
		0.7	11-14-21	0.0			- sporadic recovery	
		1	4-5	0.0		CH	**FAT CLAY (CH)** - dk bluish gray (5B4/1), saturated, very soft, high plasticity, riddled with fibrous roots, no odor	
10		0						Pack
		1.5	2-4-5	0.0		SC	**CLAYEY SAND (SC)** - black (N2.5), saturated, med dense, f sand, some root structures (less than above), no odor	
		1.4	2-4-7	0.0			- color becomes very dk gray (N3)	
15		1.9	2-5-8-18	0.0			- color changes to grayish green (5G5/2) gradually	
							Total Depth = 15 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-04-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 10.1 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,603.90	**EASTING (CCS NAD 83 Z 3):** 6,043,231.73	**DATE STARTED:** 02/17/2005 14:05 / **DATE COMPLETED:** 02/17/2005 16:30
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 6.59 ft bgs on 03/22/2005
LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
		NA		0.0		SM	**FILL - SILTY SAND (SM)** - moist, silty sand with gravel/debris, brick, glass, aggregate etc, no odor	Grout
5		2	3-3-5-5	0.0		SM	**SILTY SAND(SM)** - black (2.5YR2.5/1), moist to wet, loose, cohesive, f sand, no odor - minor root structures throughout core	Seal
		1.3	2-4-5	0.0			- color changing to lt brownish gray (2.5YR6/2)	
		1.5	4-4-6	0.0		SM	**SILTY SAND (SM)** - bluish gray (5B6/1) mottled with orange oxide, heavily oxidized, moist to wet, medium dense, cohesive, f sand, no odor	
10		1.8	4-7-13-16	0.0			- color changing to lt blue brn (2.5YR5/4), less fines - saturated	Pack
		1.5	4-7-12	0.0				
		1.5	5-5-9	0.0		SM	**SILTY SAND (SM)** - yellowish brn (10YR5/6) (no gray/blue gray) oxidized throughout, wet-saturated, med dense, f sand, no odor	
15		2	8-12-16-18	0.0				

Total Depth = 15 ft bgs

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-05-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 9.3 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,502.68	**EASTING (CCS NAD 83 Z 3):** 6,043,116.85	**DATE STARTED:** 02/18/2005 12:30 / **DATE COMPLETED:** 02/18/2005 14:40
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 2.8 ft bgs on 03/22/2005
LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
		NA		0.0			**ASPHALT**	
						SW	**FILL - SILTY SAND WITH GRAVEL (SW)** - dk gray (10YR4/1), dry-moist, loose, silty sand with gravel (road-bed aggregate/asphalt chunks), no odor	Grout
5		1.7	5-10-9-8	0.0			**SILTY SAND (SM)** - very dk gray (10YR3/1), moist-wet, loose, f sand, no odor	Seal
		1.2	3-7-9	0.0		SM	- color becoming lighter to 7.5'	
		1.3	5-5-7	0.0				
						SM	**SILTY SAND(SM)** - greenish gray (5GY5/1) mottled with orange oxide, wet-saturated, med dense, f sand, no odor	
10		2	4-4-7-12	0.0		ML	**SANDY CLAYEY SILT (ML)** - bluish gray (5B5/1), wet, dense, 50% silt, 30% clay, 20% f sand, no odor	Pack
		1.1	4-8-11	0.0			**SILTY SAND (SM)** - greenish gray (5GY5/1) mottled with orange oxide, wet-saturated, med dense, f sand, no odor	
		1.2	5-8-9	0.0		SM	- increasingly oxidized	
15		1.6	5-8-13-17	0.0			- yellowish brn (10YR5/6), heavily oxidized	
							Total Depth = 15 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** *RMW-06-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** Resonant Sonic (Driller Val Godoy)	
SURFACE ELEVATION: 10.7 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,932.64	**EASTING (CCS NAD 83 Z 3):** 6,042,961.31	**DATE STARTED:** 01/19/2005 09:10	**DATE COMPLETED:** 01/19/2005 15:00
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** 3 continuous core		**WATER LEVEL:** 2.24 ft bgs on 03/22/2005
LOCATION: 336-346 Center St. - Large Vacant Lot (Southwest Corner), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
						SM	**FILL - SILTY SAND(SM)** - dk gray (10YR4/1), moist to wet, dense, loose, 60% f sand, 40% silt, no odor	Grout
5						SM	- color gradually changing to brownish yellow (10YR6/6), saturated	Seal
				0.0		SP	**FILL - GRAVELLY SAND WITH SILT (SP)** - moist, gravelly sand with silt (chert and clasts), no odor	
						SM	**SILTY SAND (SM)** - very dk gray (10YR3/1), loose, 60% f sand, 40% silt	
10				0.0		SM	**SILTY SAND (SM)** - yellowish brn (10YR5/8) with fine oxidation, wet, 70% f sand, 30% silt, with a blue-green clay concentration at top of interval, no odor	Pack
15				0.2				
							Total Depth = 15 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-07-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 10.5 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,756.28	**EASTING (CCS NAD 83 Z 3):** 6,042,936.12	**DATE STARTED:** 02/15/2005 08:50 / **DATE COMPLETED:** 02/15/2005
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 3.14 ft bgs on 03/22/2005
LOCATION: 1448 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-07-03SS-0105

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
		1.5	12-15-17	0.0		SM	**FILL - SILTY SAND (SM)** - moist, silty f sand with debris/gravel, glass, brick, wood, no odor	Grout
		1.5	5-7-7	0.0		SM	**SILTY SAND (SM)** - very dk gray (10YR3/1), saturated, loose, f sand - sample: RMW-7-03SS-0105	Seal
5		0					- no recovery	
		1.5	4-5-8	0.0			**SILTY SAND (SM)** - yellowish brn (10YR5/8), oxidized, wet to saturated, cohesive, f sand, no odor - small concentration of clay	
		1.5	6-9-11					
10		1.3	5-7-7-14	0.0				Pack
		1.5	6-10-16	0.0		SM		
		1.5	3-8-11	0.0				
15		2	10-12-13-16	0.0				
							Total Depth = 15 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-07-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 35.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 10.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,746.02	**EASTING (CCS NAD 83 Z 3):** 6,042,933.47	**DATE STARTED:** 09/07/2005 12:10	**DATE COMPLETED:** 09/08/2005 13:30
DRILLING METHOD: Rotosonic	**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing		**WATER LEVEL:** 4.88 ft bgs on 10/07/2005
LOCATION: 1448 3rd St., Oakland, CA	**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
		0.6		0.0			**CONCRETE**	
		3.9		0.0		SM	**FILL - SILTY SAND (SM)** - dk yellowish brn (10YR4/4) mottled with black, dry to moist, f-m sand with 10% clay, brick fragments and oyster shells, no odor	
5		2.5		0.0		SC	**FILL - CLAYEY SAND (SC)** - grayish green (5G5/2), moist to wet, cohesive, fine sand, no odor **CONCRETE** - solid concrete, old building foundation?	
10		3		0.0		SM	**SILTY SAND (SM)** - mottled greenish gray (5G6/1) with yellowish brn (10Y2.5/6) moderately oxidized, moist, cohesive, 60% f sand, 40% silt, no odor	Grout
15		5		0.0			- wet to saturated, less silt ~70% f sand, 30% silt, loose	
20		5		0.0				
25		5		0.0			- saturated, 75% f sand, 25% silt, no odor	Seal
30		5		0.0		SP	**SAND (SP)** - dk yellowish brn (10YR4/4), saturated, 80% f sand, 20% silt, no odor - less oxidized	Pack
35		5		0.0			- dk yellowish brn (10YR4/6) oxidized, saturated, 90% f sand, 10% clay, no odor	

CH2MHILL

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-07-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 35.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 10.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,746.02	**EASTING (CCS NAD 83 Z 3):** 6,042,933.47	**DATE STARTED:** 09/07/2005 12:10	**DATE COMPLETED:** 09/08/2005 13:30
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing		**WATER LEVEL:** 4.88 ft bgs on 10/07/2005
LOCATION: 1448 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							Total Depth = 35 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-08-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 11.8 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,857.11	**EASTING (CCS NAD 83 Z 3):** 6,043,054.37	**DATE STARTED:** 02/24/2005 09:00 / **DATE COMPLETED:** 02/24/2005 10:45
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 6.49 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Western Fence Line), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** SS-0105

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
							CONCRETE	Grout
							FILL-DEBRIS - dk olive brn (2.5YR3/3) to black (2.5YR2.5/1), wet-saturated, wood, metal, bricks with fine silty sandy material, no pronounced odor	Seal
5								
10		~1.3	2-6-9	0.0		SM	**SILTY SAND (SM)** - greenish grey (5GY5/1) at upper 0.2' and then increasing orange oxidation (heavy) yellowish brn (10YR5/8), moist to wet, med dense, f sand, no odor - olive yellow (2.5YR6/6), loose, saturated, no odor - sample: RMW-08-10SS-0105	Pack
15							*Total Depth = 15 ft bgs*	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-08-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 46.5	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)	
SURFACE ELEVATION: 11.7 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,849.49	**EASTING (CCS NAD 83 Z 3):** 6,043,052.90	**DATE STARTED:** 02/23/2005 09:32	**DATE COMPLETED:** 02/23/2005 16:30
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 7.12 ft bgs on 03/22/2005	
LOCATION: 1414-3rd St. (Western Fence Line), Oakland, CA	**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-08-03SS-0105	

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
							DEBRIS / FILL - dk olive brn (2.5YR3/3) to black (2.5YR2.5/1), wet-saturated, wood, metal, bricks with fine silty sandy material, no pronounced odor	
5		1.5	5-3-2	0.0			- sample: RMW-08-03SS-0105	
		1.3	2-3-6	0.0				
		1.1	6-15-16	0.0			- full recovery is a single piece of wood approximately 1.1' long, no odor	
10		1.4	6-6-12-17	0.0		SM	**SILTY SAND (SM)** - greenish grey (5GY5/1) at upper 0.2' and then increasing orange oxidation (heavy) yellowish brn (10YR5/8), moist to wet, med dense, f sand, no odor	
		1	5-7-16	0.0			**SILTY SAND** - very dk gray (10YR3/1), super saturated, f sand, no odor	Grout
		0.2	32-50/4	0.0		SM	**SILTY SAND (SM)** - lt olive brn (2.5YR5/4), saturated, loose, 60% f sand, 40% silt, no odor	
15		1.7	15-30-40-50	0.0			**SILTY SAND (SM)** - greenish grey (5GY5/1) at upper 0.2' and then increasing orange oxidation (heavy) yellowish brn (10YR5/8), moist to wet, med dense, f sand, no odor	
		0	9-9-18	0.0				
		0.9	8-9-11	0.0				
20		1.4	6-7-13-16	0.0		SM		
		0.7	10-14-16	0.0				
		1.1	11-12-12	0.0				Seal
25		1.6	6-12-12-16	0.0				
		1.2	6-14-19	0.0			**SILTY SAND (SM)** - dk yellowish brn (10YR3/6), heavy oxidation (mildly generated), wet - saturated, 70% f sand, 30% silt, med dense, no odor	
		1.5	9-17-25	0.0			- color lighter, decreasing oxidation - fines decreasing, saturated	
30		2	12-12-16-25	0.0		SM		Pack
		0.9	7-15-20	0.0			- dk grayish brn (10YR4/2)	
		1.5	5-8-12	0.0			- intermittent zones of SP(85/15), sand	
35		2	5-8-9-12	0.0			- single iron nodule	

CH2MHILL

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-08-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 46.5	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 11.7 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,849.49	**EASTING (CCS NAD 83 Z 3):** 6,043,052.90	**DATE STARTED:** 02/23/2005 09:32 / **DATE COMPLETED:** 02/23/2005 16:30
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 7.12 ft bgs on 03/22/2005
LOCATION: 1414-3rd St. (Western Fence Line), Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-08-03SS-0105

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
		1.5	8-12-13	0.0			**SILTY SAND (SM)** - dk yellowish brn (10YR3/6), heavy oxidation (mildly generated), wet - saturated, 70% f sand, 30% silt, med dense, no odor	Pack
		1.5	8-8-16	0.0				
40		2	15-25-50/6	0.0				
		1.4	14-17-30	0.0		SM		Seal
		1.5	7-9-17	0.0				
45		1.5	8-30-50/3	0.0				
			18-35-76/1	0.0				

Total Depth = 46.5 ft bgs

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-09-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 10.3 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,597.79	**EASTING (CCS NAD 83 Z 3):** 6,042,947.48	**DATE STARTED:** 02/17/2005 09:30 / **DATE COMPLETED:** 02/17/2005 11:30
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 6.69 ft bgs on 03/22/2005
LOCATION: 1401 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	WELL CONSTRUCTION DIAGRAM
						SM	**SILTY SAND (SM)** - olive brn (2.5YR4/3) mottled with oxide (orange), dry to moist, dense, 60% f sand, 40% silt, no odor	Grout
							- color changes to dk gray (2.5YR4/1), grading to black (2.5YR2.5/1)	Seal
5						SM	**SILTY SAND (SM)** - black (2.5/1), moist, loose, 50% silt, 50% f sand, mild weathered, odor	
							No Recovery	
							SILTY SAND (SM) - bluish gray (5B6/1) mottled with orange oxide (dk gray staining in top 6), moist to wet, medium dense, minor clay <10%, f sand, no odor	
10							- riddled with root structures	Pack
						SM	- yellowish brn (10YR5/6), heavily oxidized, wet	
15							- grayish brn (2.5YR5/2), saturated, loose, 70% f sand, 30% silt, no odor	
							Total Depth = 15 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-09-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 36.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 10.3 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,597.44	**EASTING (CCS NAD 83 Z 3):** 6,042,939.14	**DATE STARTED:** 02/16/2005 11:15 / **DATE COMPLETED:** 02/22/2005 15:00
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 6.8 ft bgs on 03/22/2005
LOCATION: 1401 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-0-10SS-0105

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							SILTY SAND (SM) - olive brn (2.5YR4/3) mottled with oxide (orange), dry to moist, dense, 60% f sand, 40% silt, no odor	
		1.5	9-13-22	0.0				
				0.0		SM		
		1	5-7-11				- color changes to dk gray (2.5YR4/1), grading to black (2.5YR2.5/1)	
5		1	4-5	0.0		SM		
		0	2-2-5	0.0			**SILTY SAND (SM)** - black (2.5/1), moist, loose, 50% silt, 50% f sand, mild weathered, odor	
							No Recovery	
		1.5	5-5-5	0.0			**SILTY SAND (SM)** - bluish gray (5B6/1) mottled with orange oxide (dk gray staining in top 6), moist to wet, medium dense, minor clay <10%, f sand, no odor	
		1.6	3-4-9-15	0.0			- riddled with root structures	
10								Grout
		1	7-14-23	0.0			- sample: RMW-0-10SS-0105	
		1.5	5-10-18	0.0				
		1.8	6-10-14-25	0.0			- grayish brn (2.5YR5/2), saturated, loose, 70% f sand, 30% silt, no odor	
15								
		1.1	7-10-15	0.0				
		1.5	5-14-15	0.0			- heavily oxidized (orange), wet, dense	
		1.9	8-10-14-19	0.0		SM	- becomes increasingly saturated	
20								
		1.4	7-8-15	0.0			- moist to wet, dense	Seal
		1.5	4-9-14	0.0				
		1.8	8-15-19-24	0.0			- heavily oxidized, wet, dense - no oxidation, saturated	
25								
		1.3	15-26-33	0.0				
		0.3	13-6-20	0.0				
		0.7	25-50/6	0.0				Pack
30								
		0	50/2					
		0.8	50/6 - 50/3	0.0			**SILTY SAND (SM)** - olive brn (2.5YR4/3) saturated, loose, 80% f sand, 20% silt, no odor	
		0.6	40 - 50/4	0.0		SP/SM		
35								

CH2MHILL

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-09-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 36.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)	
SURFACE ELEVATION: 10.3 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,597.44	**EASTING (CCS NAD 83 Z 3):** 6,042,939.14	**DATE STARTED:** 02/16/2005 11:15	**DATE COMPLETED:** 02/22/2005 15:00
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon		**WATER LEVEL:** 6.8 ft bgs on 03/22/2005
LOCATION: 1401 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-0-10SS-0105	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
		0	75/3			SP/SM		

Total Depth = 36 ft bgs

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** *RMW-10-15*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 15.0	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)	
SURFACE ELEVATION: 9.7 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,513.81	**EASTING (CCS NAD 83 Z 3):** 6,042,979.03	**DATE STARTED:** 02/18/2005 09:50	**DATE COMPLETED:** 02/18/2005 00:05
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon		**WATER LEVEL:** 6.71 ft bgs on 03/22/2005
LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							ASPHALT	
		NA	NA	0.0		SM	**FILL- SILTY SAND WITH GRAVEL (SM)** - dk gray (10YR4/1), dry to moist, loose, road bed aggregate, no odor	Grout
		1.8	2-4-5-6	0.0		SM	**SILTY SAND (SM)** - dk yellowish brn (10YR4/4), wet-saturated, loose, 60% f sand, 40% silt, no odor	Seal
5								
		1.2	4-4-6	0.0		SM/SC	**CLAYEY SILTY SAND(SM/SC)** - black (10YR2/1), wet, med dense, cohesive, 50% f sand, 40% silt, 10% clay, swampy odor - dk grayish brn (10YR3/2), saturated, less fines	
		1	5-7-8	0.0				
		1.3	6-10-11-16	0.0			**SILTY FINE SAND (SM)** - gray (10YR6/1) mottled with orange oxide, wet-saturated, med dense, 60% f sand, 40% silt, swampy odor	
10								Pack
		0.8	6-6-14	0.0		SM	- heavily oxidized	
		1.4	5-7-10	0.0			- yellowish brn (10YR5/4)	
		1.8	6-7-13-16					
15								
							Total Depth = 15 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-10-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 46.5	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)
SURFACE ELEVATION: 9.8 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,526.34	**EASTING (CCS NAD 83 Z 3):** 6,042,980.61	**DATE STARTED:** 02/21/2005 10:05 / **DATE COMPLETED:** 02/21/2005 18:30
DRILLING METHOD: Hollow Stem Auger / CME 55		**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 7.08 ft bgs on 03/22/2005
LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-10-45SS-0105

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							ASPHALT	
						SW	**FILL- SILTY SAND WITH GRAVEL (SM)** - dk gray (10YR4/1), dry to moist, loose, road bed aggregate, no odor	
5						SM	**SILTY SAND (SM)** - dk yellowish brn (10YR4/4), wet-saturated, loose, 60% f sand, 40% silt, no odor	
						SM/SC	**CLAYEY SILTY SAND(SM/SC)** - black (10YR2/1), wet, med dense, cohesive, 50% f sand, 40% silt, 10% clay, swampy odor	
10						SM	**SILTY FINE SAND (SM)** - gray (10YR6/1) mottled with orange oxide, wet-saturated, med dense, 60% f sand, 40% silt, swampy odor	Grout
15							- yellowish brn (10YR5/4)	
		1.1	7-9-16	1.4		SM	**SILTY SAND (SM)** - olive (5YR5/4), wet-saturated, loose, 70% f sand, 30% silt, swampy metallic odor	
		1.3	4-9-11	0.0				
20		1.5	6-16-22-26	0.0		SM	**SILTY SAND WITH CLAY (SM)** - bluish gray (5B6/1) mottled with orange oxide, wet-saturated, med dense, 60% f sand, 30% silt, <10% clay, odor persists	
		1.2	10-13-23	0.0				
		1.5	11-15-25	0.0		SP	**SAND WITH SILT (SP)** - saturated, loose, 85% f sand, 15% silt - grades with increasing fines, oxidation	Seal
25		2	16-31-35-37	0.0		SC	- odor persists **CLAYEY SILTY SAND (SC)** - bluish gray (5B6/1) mottled with orange oxide, moist, dense, f sand, no odor	
		1.4	9-12-17	0.0		SM	**SILTY SAND (SM)** - olive (5YR4/4) mottled with red orange oxide, wet to saturated, med dense, f sand, grades with less fines, odor persists	
		1.3	3-7-13	0.0			- less oxidation, bluish gray zones	
30		1.8	8-13-50/6	0.0				Pack
		0.8	14-20-25	0.0		SM	**SILTY SAND (SM)** - olive (5YR4/4), wet-saturated, loose, 70% f sand, 30% silt, faint odor	
		1.1	14-21-33	0.0			- grades with less silt	
35		1.5	13-30-50/6	0.0				

CH2MHILL

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-10-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 46.5	**DRILLING CONTRACTOR:** West HAZMAT, (Driller Oscar Gonzales)	
SURFACE ELEVATION: 9.8 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,526.34	**EASTING (CCS NAD 83 Z 3):** 6,042,980.61	**DATE STARTED:** 02/21/2005 10:05	**DATE COMPLETED:** 02/21/2005 18:30
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING EQUIPMENT:** 8 Auger. CA-Mod. Split Spoon	**WATER LEVEL:** 7.08 ft bgs on 03/22/2005	
LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA	**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:** RMW-10-45SS-0105	

DEPTH BGS (feet)	SAMPLE INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
		1.5	12-20-25	0.0		SP	**FINE SAND WITH SILT (SP)** - olive (5YR5/4), saturated, loose, 85% f sand, 15% silt, faint odor	Pack
		1.4	25-50/5	0.0				
40		1.6	17-33-50/5	0.0				
		1.2	26-50/5	0.0				Seal
		1.2	24-50/6	0.0				
45		1	16-35-50/3	0.0				
		1.3	30-70-75/3	0.0			- sample: RMW-10-45SS-0105	

Total Depth = 46.5 ft bgs

Note 1) Top 15' of lithology log based on log from RMW-10-15

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-11-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 35.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 8.5 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,928.89	**EASTING (CCS NAD 83 Z 3):** 6,043,326.95	**DATE STARTED:** 09/20/2005 12:06	**DATE COMPLETED:** 09/21/2005 16:40
DRILLING METHOD: Rotosonic	**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing	**WATER LEVEL:** 5.95 ft bgs on 10/07/2005	
LOCATION: Northbound bike lane on Mandella Pkwy between 3rd and 5th St., Oakland, CA	**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							ASPHALT	
		5		0.0		GP	**FILL - GRAVEL (GP)** - roadbase, ang gravel with sand and silt	
5						GM	**FILL - GRAVEL (GM)** - vc ang gravel to cobbles (1-4), zones of silt and sand, metal slag, moist to wet, no odor	
		5		0.0		ML	**FILL - GRAVELLY SANDY SILT (ML)** - wet to saturated, 35% subrnd gravel (1-3), no odor	
10								
		5		0.0		SM	**SILTY SAND (SM)** - very dark grayish brn (10YR3/2), saturated, loose, 55% sand, 45% silt, no odor, likely top of native material - layers of clayey silt, some are rich in organic material	Grout
15								
		5		0.0		OL	**ORGANIC CLAYEY SILT (OL)** - grayish brn (10YR5/2), rich in organic material, med stiff, low plasticity, mild sulfur odor, wet	
20						OL/PT	**ORGANIC SILT / PEAT (OL/PT)** - dk. yellowish brn (10YR3/4) to black (10YR2/1), cohesive and soft, moist to wet, strong sulfur odor - black silt, virtually no organic debris	
		5		0.0		SM	**SILTY SAND (SM)** - dk greenish gray (5FY4/1), wet, 60% f sand, 40% silt, no odor - dk yellowish brn (10YR4/4), wet to saturated, 75% sand, 25% silt, no odor	Seal
25								
		5		0.0				Pack
30							- loose	
		5		0.0				
35						SM/SP	**SILTY SAND (SM/SP)** - grayish brn (10YR4/3), saturated, loose,	

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
175868.FI.02	*RMW-11-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 35.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 8.5 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,928.89	**EASTING (CCS NAD 83 Z 3):** 6,043,326.95	**DATE STARTED:** 09/20/2005 12:06	**DATE COMPLETED:** 09/21/2005 16:40
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing		**WATER LEVEL:** 5.95 ft bgs on 10/07/2005
LOCATION: Northbound bike lane on Mandella Pkwy between 3rd and 5th St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE					USCS CODE	SOIL DESCRIPTION	WELL CONSTRUCTION DIAGRAM
	INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	
							85% f sand, 15% silt,no odor *Total Depth = 35 ft bgs*	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-12-32*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 32.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 9.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,625.72	**EASTING (CCS NAD 83 Z 3):** 6,043,111.43	**DATE STARTED:** 09/21/2005 12:43	**DATE COMPLETED:** 09/21/2005 16:40
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing		**WATER LEVEL:** 3.99 ft bgs on 10/11/2005
LOCATION: 3rd St. gutter in front of 1414 3rd St., Oakland, CA		**LOGGED BY:** W. Frohlich / well construction M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
5		5		1.4		SM	**FILL - SILTY SAND (SM)** - dk reddish brn (5YR3/2), some black, wet, little to no clay	
10		5		3.2 24.9		SM	**SILTY SAND WITH CLAY AND GRAVEL (SM)** - greyish green (5GY45/1) with black staining in veins, wet to saturated, slightly plastic, vf-f sand - no more black veins, slightly more plastic	Grout
15		5		22.7 1.4		SM		
20		5		0.0 0.0		SP	**SAND (SP)** - greyish green (5GY4/1), saturated, loose, no plasticity, poorly graded f sand, no fines	
25		0 2		0.0		SP	- dk greenish grey (5BG4/1)	Seal
30		5		0.0		SP	- f sand with 20% m sand	Pack
		2		0.0		SP	- mottled dk greenish grey (5G4/1) and dk bluish grey (5B4/1), unconsolidated, f-m sand	
							Total Depth = 32 ft bgs	

ABBREVIATIONS

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
175868.FI.02	*RMW-12-32*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 32.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 9.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,625.72	**EASTING (CCS NAD 83 Z 3):** 6,043,111.43	**DATE STARTED:** 09/21/2005 12:43	**DATE COMPLETED:** 09/21/2005 16:40
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing		**WATER LEVEL:** 3.99 ft bgs on 10/11/2005
LOCATION: 3rd St. gutter in front of 1414 3rd St., Oakland, CA		**LOGGED BY:** W. Frohlich / well construction M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE					USCS CODE	SOIL DESCRIPTION	WELL CONSTRUCTION DIAGRAM
	INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-12-51*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 53.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 9.3 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,628.72	**EASTING (CCS NAD 83 Z 3):** 6,043,101.57	**DATE STARTED:** 09/15/2005 13:00	**DATE COMPLETED:** 09/19/2005 18:00
DRILLING METHOD: Rotosonic	**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing	**WATER LEVEL:** 3.85 ft bgs on 10/11/2005	
LOCATION: 1414 3rd St., Oakland, CA	**LOGGED BY:** W. Frohlich	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							CONCRETE	
		5		1.4		SM	**FILL - SILTY SAND (SM)** - dk reddish brn (5YR3/2), some black, wet, little to no clay	
5								
		5		3.2		SM	**SILTY SAND WITH CLAY AND GRAVEL (SM)** - greyish green (5GY45/1) with black staining in veins, wet to saturated, slightly plastic, vf-f sand	
10				24.9			- no more black veins, slightly more plastic	
		5		22.7				
15				1.4				
		5		0.0				Grout
20				0.0				
		0					- dk greenish grey (5BG4/1)	
25		2		0.0		SP		
		5		0.0			- f sand with 20% m sand	
30				0.0				
		5		0.2			- mottled dk greenish grey (5G4/1) and dk bluish grey (5B4/1), unconsolidated, f-m sand	
35				0.4				

CH2MHILL

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-12-51*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 53.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ
SURFACE ELEVATION: 9.3 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,628.72	**EASTING (CCS NAD 83 Z 3):** 6,043,101.57	**DATE STARTED:** 09/15/2005 13:00 / **DATE COMPLETED:** 09/19/2005 18:00
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing	**WATER LEVEL:** 3.85 ft bgs on 10/11/2005
LOCATION: 1414 3rd St., Oakland, CA		**LOGGED BY:** W. Frohlich	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
40		5		8.4		SP	**SAND (SP)** - greyish green (5GY4/1), saturated, loose, no plasticity, poorly graded f sand, no fines - dk yellowish brn (10YR4/4), dense, f-m sand	Grout
				10.8			- looser with some iron staining	Seal
45		5		0.0				Pack
				0.0				
50		5		0.0				
				0.0				
		3		0.0				Slough

Total Depth = 53 ft bgs

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-13-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund	**HOLE DEPTH (ft):** 35.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 10.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,397.02	**EASTING (CCS NAD 83 Z 3):** 6,042,992.94	**DATE STARTED:** 09/13/2005 12:20	**DATE COMPLETED:** 09/14/2005 15:50
DRILLING METHOD: Rotosonic	**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing		**WATER LEVEL:** 4.6 ft bgs on 10/07/2005
LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA	**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							ASPHALT -	
5		5		0.0		SM	**FILL - SILTY SAND WITH CLAY AND GRAVEL (SM)** - dk yellowish brn (10YR3/4) to black (10YR2/1), contains brick fragments, metal, and other debris, dry to moist, loose, no odor	
							- bluish gray (5B5/1), mottled with oxide, m dense, low plasticity, moist, no odor	
10		5		0.0		OL	**ORGANIC CLAYEY SILT (OL)** - black (N2.5), organic rich, very soft, saturated, strong sulfur odor	
						OH	**ORGANIC SILTY CLAY (OH)** - greenish gray (5GY5/1), saturated, med plasticity, organic rich with organic debris, strong sulfur odor	Grout
15		5		0.0		OL	**ORGANIC CLAYEY SILT (OL)** - dark olive brn (2.5Y3/3), wet to saturated, low plasticity, organic rich with roots and organic debris, strong sulfur odor, black (N2.5), 10% f sand, organic rich with little to no debris, very soft, saturated	
20		5		0.0		SM	**SAND WITH SILT (SM)** - greenish gray (5GY5/1), saturated, 60% f sand, 40% silt loose, mild sulfur odor	
							- little to no odor	
25		5		0.0			- lt olive brn (2.5Y5/6), saturated, 70% sand, 30% silt, loose	Seal
							- brnish yellow (10YR5/6) with concentrated orange zones of oxidation, saturated, no odor	
30		5		0.0		SM/SP	**SILTY SAND (SM/SP)** - yellowish brn (10YR5/8), saturated, loose, 80% f sand, 20% silt, no odor	Pack
						SP	**SAND WITH SILT (SP)** - grayish brn (10YR4/2), saturated, very loose, f sand with 10% silt, no odor	
35		5		0.0		SM/SP	**SILTY SAND (SM/SP)** - yellowish brn (10YR5/8), saturated, loose, 80% f sand, 20% silt, no odor	

CH2MHILL

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-13-35*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 35.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ	
SURFACE ELEVATION: 10.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,397.02	**EASTING (CCS NAD 83 Z 3):** 6,042,992.94	**DATE STARTED:** 09/13/2005 12:20	**DATE COMPLETED:** 09/14/2005 15:50
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing		**WATER LEVEL:** 4.6 ft bgs on 10/07/2005
LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
							Total Depth = 35 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 2

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-14-50*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 50.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ
SURFACE ELEVATION: 10.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,578.17	**EASTING (CCS NAD 83 Z 3):** 6,042,842.31	**DATE STARTED:** 09/09/2005 11:27 / **DATE COMPLETED:** 05/01/912 16:30
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing	**WATER LEVEL:** 4.29 ft bgs on 10/07/2005
LOCATION: UPRR Property - Adjacent Prescott Park / BMW-7, Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
5		5		2.2		SM	**FILL - SILTY SAND (SM)** - dk bluish grey (5B4/1), dry to moist, some root structures, loose, dry to moist, 60% f sand, 40% silt, no odor	
				8.6		SM	**SILTY SAND (SM)** - dk brn (10YR3/4), dry to moist, no root structures, 60% f sand, 40% silt, no odor	
10		5		12.2		SM	- dk greyish brn (10YR3/2), no odor - v dark grey (10YR3/1), no odor	
15		5				SM	**SILTY SAND (SM)** - greenish grey (5G5/1) mottled with oxidation light yellowish brn (2.5Y6/4), wet to saturated, finer than above, loose-cohesive, wet to saturated, 60% f sand, 40% silt, no odor	
20		5		0.0		SM	- olive yellow (2.5Y6/8), m. dense, no odor	Grout
25		5		0.0		SM	- oxidized zones are more orange in color, increased mottling, m. dense, no odor	
30		5		0.0		SM	- brn (10Yr4/3), saturated, loose, 75% sand, 25% silt, no odor	
35		5		0.0		SM	- brn (10YR4/3), saturated, no odor - density increasing	

CH2MHILL

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: *RMW-14-50*

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 50.0	**DRILLING CONTRACTOR:** Boart Longyear (Shawn Martinez); Peoria, AZ
SURFACE ELEVATION: 10.4 ft. MSL	**NORTHING (CCS NAD 83 Z 3):** 2,119,578.17	**EASTING (CCS NAD 83 Z 3):** 6,042,842.31	**DATE STARTED:** 09/09/2005 11:27 / **DATE COMPLETED:** 05/01/912 16:30
DRILLING METHOD: Rotosonic		**DRILLING EQUIPMENT:** Limited Access Rig, 8 outer casing, 6 sample core casing	**WATER LEVEL:** 4.29 ft bgs on 10/07/2005
LOCATION: UPRR Property - Adjacent Prescott Park / BMW-7, Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	WELL CONSTRUCTION DIAGRAM
40		5		0.0		SM	**SILTY SAND (SM)** - greenish grey (5G5/1) mottled with oxidation light yellowish brn (2.5Y6/4), wet to saturated, finer than above, loose-cohesive, wet to saturated, 60% f sand, 40% silt, no odor	Grout / Seal
45		5		0.0			- heavily oxidized	Pack
50		5		0.0		SP	**SAND (SP)** - brn (10YR4/3) with minor oxidation, saturated, loose, 90% f sand, 10% silt, no odor	
							Total Depth = 50 ft bgs	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-01

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/16/2004	**DATE COMPLETED:** 09/16/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Large Lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
				0			dk brn (3/3), fill like material, rock, dry, gravel, no odor	
				1.7				
5							- saturated at 5', color stays dk gray (2.5YR) all the way to 8'	
				0				
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-02

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 9.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/15/2004	**DATE COMPLETED:** 09/15/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (thin lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		3		3.4		SM	**SILTY SAND (SM)** - dk olive brn (2.5YR3/3), moist to wet, loose, no odor	
5							- approximate level of saturation - SM as described above, color is light olive brn (2.5YR5/6), saturated. Color change is gradual from ~5.5 bgs	
		3.8						
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-03

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/20/2004	**DATE COMPLETED:** 09/20/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (RSB-02, DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		2.5		2.5		GM	**SILTY SANDY GRAVEL (GM)** - dry (fill), loose	
						SM	**SILTY FINE SAND (SM)** - black (2.5YR2.5/1), moist, loose, no odor	
5		3.5		1.4		SM	- SM as described from 1.5' - saturated from 5.5', color gradually changes to olive brn (2.5YR4/4)	
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-04

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		10.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/24/2004	09/24/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (DC Yard)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
				10		SM	**SILTY FINE SAND (SM)** - black (5YR2.5/1), moist to wet, loose, 20% fine, faint petrol odor, wood fragments - becomes saturated from 3.5-4'	
5		2				SM	**SILTY FINE SAND (SM)** - dk olive gray (5YR3/2), saturated, loose, 10% fine, no odor	
				3.3		SM	**SILTY FINE SAND (SM)** - mottled light olive brn to gray (2.5YR5/6-6/1), moist to wet, loose to medium dense, no odor - appears to be a zone that is perching minor amounts of groundwater. Mildly cemented by oxides due to water table fluctuation. This zone is not continuous across the site	
10		4					Boring Terminated at 10 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-05

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		9.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/24/2004	09/24/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (DC Yard)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		3		2		SM	**SILTY FINE SAND (SM)** - black (2.5YR2.5/1), moist (last 6 is wet), loose, no odor - mild oxidation at ~2' - black fragments/glass	
5						SM	**SILTY FINE SAND (SM)** - dk grayish brn (7.5YR6/2), wet to saturated, loose, no odor, no fill debris	
		4		2.5		SM/SC	**CLAYEY SILTY FINE SAND (SM/SC)** - mottled light olive brn (2.5YR5/6) to gray (2.5YR5/1), moist, medium stiff, no odor	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-06

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		9.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/30/2005	09/30/2005
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (DC Yard)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.8		0		SM	**SILTY FINE SAND (SM)** - black (2.5YR2.5/1), moist to wet (last 6), loose, no odor	
		4					- as described above with no fill, saturated	
						ML/SC	**CLAYEY FINE SAND (ML/SC)** - greenish gray, wet to saturated, stiff, no odor	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-07

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 10.5	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/15/2004	**DATE COMPLETED:** 09/15/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.5		2.4		SM	**SILTY SAND WITH CONCRETE GRAVELS (SM)** - dk olive brn (2.5YR3/3), dry to moist, loose, concentrated in small zones, no odor	
10		3.5					- no more concrete gravels, saturated - SM as described above (no gravel), color gradually changes to olive gray (5YR4/2), saturated from ~6'	
							Boring Terminated at 10.5 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-08

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 11.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/15/2004	**DATE COMPLETED:** 09/15/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.5		0.8		SM	**SITLY SAND (SM)** - black (5YR2.5/1), moist to wet, med dense, ~25% silt, no odor - brick fragments (fill)	
10		4		0		SM	- SM with high silt content as described above, moisture content varies. Gradational zones of lower silt content are obviously saturated, zones of low plasticity clay (~3) throughout the core. - entire core is below water table	
							Boring Terminated at 11 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-09

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		8.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/16/2004	09/16/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (DC Yard)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.8				SM	**SILTY SAND (SM)** - black (2.5YR2.5/1), saturated from 4', loose, sand with black fragments, no odor	
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-10

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		8.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/14/2004	09/14/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		3		4.2			**FILL: SILTY SAND (SM)** - black (5YR2.5/1), moist to wet, loose, minor wood content, silty fine sand with crushed concrete interlayered, slight petrol odor.	
5		2.5		4.9		SM	- SM as above, no wood content - wet, saturated, no odor, poor recovery	
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-11

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/15/2004	**DATE COMPLETED:**
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		3.5		4.8		SM	**SILTY SAND (SM)** - dk gray (5YR4/1), dry to moist, med dense, ~25% fines, some clay zones of SC, no odor - brick fragments - 0.3' layer of charcoal	
5		3		0		SM	**SILTY SAND (SM)** - black (5YR2.5/1), saturated, loose, less fines, no odor, no brick in core - saturated	
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-12

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/20/2004	**DATE COMPLETED:** 09/20/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Mandela Pkwy)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		3.2		7.1		GM	**SANDY SILTY GRAVEL (GM)** - dk gray (5YR4/1), dry to moist, loose, no odor, tile fragments	
5		2.5		1.9		SM	**SILTY FINE SAND (SM)** - black (5YR2.5/1), moist to wet, med dense, zones of sc, no odor - SM as above with wood, wet to saturated (~5.3')	
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-13

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		8.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/16/2004	09/16/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE					USCS CODE	SOIL DESCRIPTION	COMMENTS
	INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		2		1.4		GM	**SILTY FINE SAND WITH ASPHALT AGGREGATE/GRAVEL (GM)** - olive brn (2.5YR4/4), dry, loose, no odor	
5		3		2.1		SM	**SILTY FINE SAND (SM)** - black (2.5YR2.5/1), wet to saturated at ~3.5', loose - approx saturated	
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-14

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:**	**DATE COMPLETED:**
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	COMMENTS (DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.)
		3		1.7		GM	**SILTY SANDY GRAVEL (GM)** - dk olive brn (2.5YR3/3), dry, no odor	
5		4		1.3		SM	**SILTY FINE SAND (SM)** - black (2.5YR2.5/1), saturated, loose, no odor - same as above, color changes gradually to dk grayish brn (2.5YR4/2), saturated at 7.3' Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-15

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		3.5	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/22/2004	09/22/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (3rd St. at Mandela)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE					USCS CODE	SOIL DESCRIPTION	COMMENTS
	INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
				6.2		GM	**SILTY SANDY FINE GRAVEL (GM)** - gray (5YR5/1), dry, loose, no odor	
						SM	**SILTY SAND (SM)** - very dk gray (5YR3/1), moist, loose, slight petrol odor	refusal at 3.5' bgs, concrete. We believe we are encountering an unmarked utility. This area is riddled with utilities, we are aborting the remainder of the borehole and not offsetting due to potentially unsafe conditions. USA was notified twice at this location
							Boring Terminated at 3.5 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-17

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		11.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/22/2004	09/22/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (DC Yard)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		3.5		606		SM	**SILTY FINE SAND (SM)** - black (2.5YR2.5/1), moist, loose, strong PID	
10		4				SM	- as above, saturated, color gradually changes to gray	
							Boring Terminated at 11 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-18

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 10.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/27/2004	**DATE COMPLETED:** 09/27/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2		1470		SM	**SILTY FINE SAND (SM)** - black (5YR2.5/1), moist, loose, oily	
		4		2373		ML	**FINE SANDY SILT (ML)** - soft black (5YR2.5/1), wet, oily - saturated at ~7.5'	
10						SM	**SILTY FINE SAND (SM)** - dk gray (5YR4/1), wet, loose	
							Boring Terminated at 10 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-19

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:**	**DATE COMPLETED:**
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION:		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
				52		GM/SM	**CONCRETE** **FILL: GRAVEL MIXED WITH SILTY FINE SAND (GM/SM)** - black (5YR2/2), moist, loose - crushed brick	
5						SM	**SILTY FINE SAND (SM)** - black (5YR2/2), moist to wet, loose, oily - SM, silty fine sand, black, loose, oily, saturated, sweet odor	
							Boring Terminated at 8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-20

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.5	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/17/2004	**DATE COMPLETED:** 09/17/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard near office)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		3.2		246		SM	**SILTY FINE SAND (SM)** - black (2.5YR2.5/1), moist, loose, strong odor (petrol) - black aggregate fill	
5							- SM grades to SC	
		4				SC	**CLAYEY SAND (SC)** - grayish brn (2.5YR4/2), saturated from ~4.3', medium stiff, strong odor as above	
							Boring Terminated at 8.5 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-21

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 12.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:**	**DATE COMPLETED:** 12:00:00 AM
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
		3.1		1508			**CONCRETE** **GRAVEL (CONCRETE FOUNDATION) WITH SILTY SAND** **FILL: SILTY FINE SAND (SM)** - black (5YR2/2), moist to wet, loose, oily, fine sand with wood, brick, strong petrol/solvent odor	
5		3.7		1520		SM	- SM, silty fine sand (no wood, bricks), black, oily, saturated	
10		4					- as above; olive (5YR4/3), wet, med dense	
							Boring Terminated at 12 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-22

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 9.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/27/2004	**DATE COMPLETED:** 09/27/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	COMMENTS (DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.)
							CONCRETE	
5		2.5		1183		SM	**SILTY FINE SAND WITH FILL (SM)** - black (5YR2.5/1), moist, loose, black fragments, aggregate - SM as above with little or no fill material	
		4		1876				
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-23

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		8.8	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/28/2004	09/28/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		2.3		1867		SM	**SILTY FINE SAND WITH CONCRETE, FINE GRAVEL (SM)** - pale olive, moist, loose	
5		4		2485		SM	**SILTY FINE SAND (SM)** - black (5YR2.5/1) gradually changing to gray (5YR5/1), moist to wet to saturated at ~6', loose, no gravel	
							Boring Terminated at 8.75 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-24

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.8	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/29/2004	**DATE COMPLETED:** 09/29/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		2.5		2142		SM	**SILTY FINE SAND WITH AGGREGATE AND GLASS (SM)** - black to dk greenish gray (5GY4/1), moist	
5								
		3.8				SM	**SILTY FINE SAND WITH NO AGGREGATE OR FILL (SM)** - black to olive (5YR5/3), saturated	
							Boring Terminated at 8.8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-25

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		8.8	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/14/2004	09/14/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Center St. Lot)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		2.8		4.2			**SILTY FINE SAND (SM)** - very dk brn (7.5YR2.5/2) to black (7.5YR2.5/1), moist, loose, no odor	
5						SM		
		4		4.6			- SM as described above, color changes gradually to dk olive gray (5YR3/2) - saturated from ~6'	
							Boring Terminated at 8.8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-26

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		8.8	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/14/2004	09/14/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Center St. Lot)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		4		1.7			**SILTY FINE SAND (SM)** - very dk brn (7.5YR2.5/2), moist, loose, no odor - minor root matter	
5						SM		
		4		0.7			- SM as above, color becomes black (7.5YR2.5/1) - saturated from ~6'	
							Boring Terminated at 8.8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-27

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		8.8	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/14/2004	09/14/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Center St. Lot)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		3.8		2.2		SM	**SILTY FINE SAND (SM)** - black (10YR2/1) to strong brn (7.5YR5/6), dry to moist, loose, no odor - zone of concrete aggregate	
5		4		1.6			- bentonite clay nodule in core at 5' - saturated at ~6.0'	
							Boring Terminated at 8.8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-28

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		8.8	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/14/2004	09/14/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Center St. Lot)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
				3.2		SP	**POORLY GRADED SAND (SP)** - dry, loose, coarse fine, no odor (fill)	
		4					**SILTY FINE SAND (SM)** - dk yellowish brn (10YR4/4) to black (10YR2/1), moist, loose, no odor	
5				1.8		SM	- increased fines in darker soil (black)	
		3.8					- SM (black) as above - saturated from 6.0'	
							Boring Terminated at 8.8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-29

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		8.8	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/14/2004	09/14/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		2.75		0			**SILTY FINE SAND (SM)** - very dk grayish brn (10YR3/2), moist, loose, areas of higher fines concentrations, no odor	
5				2.8		SM	- SM, silty sand as above, color changes slightly lighter dk grayish brn (10YR4/2) - saturated from 6.0'	
		3.8		0				
							Boring Terminated at 8.8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-30

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 9.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/15/2004	**DATE COMPLETED:**
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (thin lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		3		2.8		SM	**SILTY FINE SAND (SM)** - dk brn (7.5YR3/3), moist to wet (last 6), loose, varying concentration of fines (silt) not exceeding 20%, some cobbles in top foot of core, no odor	
		4				SM	**SILTY FINE SAND (SM)** - color gradually changes to yellowish brn (10YR5/6), loose to medium dense, no odor, saturated from ~5' - zone from 8.5' plus is slightly cemented (iron?/mottled reddish gray), not saturated, (oxides from water table fluctuation)	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-31

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		8.8	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/17/2004	09/17/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Field office lot)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		3		0.4		SM	**SILTY SAND (SM)** - black (2.5YR2.5/1), moist to wet (last 6), loose to med dense in last foot, no odor	
5								
		4		0.3		SM	**SILTY FINE SAND (SM)** - lt olive brn (2.5YR5/6), med dense to dense, cohesive, saturated from ~5.5', no odor - SC: increased clay content from 7.5-7.9'	
							Boring Terminated at 8.8 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-32

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		9.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/16/2004	09/16/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE					USCS CODE	SOIL DESCRIPTION	COMMENTS
	INTERVAL	RECOVERY (ft)	SPT RESULTS	PID (PPM)	SOIL SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
				0.6			- soil is gravel like and silty sandy, color is dk brn and gets dense from 2'-3'. Looks saturated at 3.5'	
				0				
				1.3				
5							- soil is saturated, color is lt brn (4/7.5), no odor	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-33

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.5	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/17/2004	**DATE COMPLETED:** 09/17/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		4		1.2		SM	**SILTY SAND (SM)** - black (2.5YR2.5/1), dry to moist, loose, no odor	
						SP	**WELL GRADED SAND (SP)** - pale yellow (2.5YR7/3), dry, loose, no odor	
5		4		0.5		SM	**SILTY FINE SAND (SM)** - color gradually changes from dk grayish brn (2.5YR4/2) to mottled strong brn (7.5YR5/6), saturated, med dense to dense, cohesive, no odor	
							Boring Terminated at 8.5 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-34

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		9.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/28/2004	09/28/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Big lot on Center St.)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		2.3		858		SW	**WELL GRADED GRAVELLY SILTY SAND (SW)** - color is mottled, moist, loose, no odor - greenish hue from 1.3-1.8'	
5								
		3				SM	**SILTY FINE SAND (SM)** - black (5YR2.5/1) to olive yellow (5YR6/6), saturated at ~5.25', loose, no gravel, no odor	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-35

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 9.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/28/2004	**DATE COMPLETED:** 09/28/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Big lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.7		1.8		SW	**WELL GRADED GRAVELLY SILTY SAND (SW)** - light olive brn (2.5YR5/6), moist, loose, no odor, concrete base	
						SM	**SILTY FINE SAND (SM)** - color changes gradually from dk grayish brn (2.5YR4/2) to black (2.5YR2.5/1), moist to wet at 4.5', loose, no odor	
		2.8				SM	**SILTY FINE SAND (SM)** - as described above, color is dk olive gray (5YR3/2), saturated from 5.5' - no sample collected, poor recovery, above saturation, fill from above (cave) - color becomes olive (5YR5/4)	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-36

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 9.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/29/2004	**DATE COMPLETED:** 09/29/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Big lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	PID (PPM)	SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.5		0.6		SM	**SILTY FINE SAND WITH FILL (SM)** - mottled black to light olive brn (2.5YR3/3), moist, loose, no odor, brick, metal fragments, aggregate	
		3.7		0.5		SM	**SILTY FINE SAND WITH NO FILL (SM)** - black to light olive brn (2.5YR5/3)-gradual, wet to saturated at 6.01', loose, no odor, core becomes more dense at depth	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-37

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 9.5	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/29/2004	**DATE COMPLETED:** 09/29/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Big lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE INTERVAL	SAMPLE RECOVERY (ft)	SAMPLE SPT RESULTS	SAMPLE PID (PPM)	SAMPLE SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		2.5		0.5		SM	**SILTY FINE SAND (SM)** - black (5YR2.5/1), moist, loose, no odor - gravel (75%) and trash material (nails, glass) from 1.5-2.5' - olive brn color (2.5YR4/4), no trash in soil, less silt from 2.5-4'	
5								
		3.6		0.3			- wet at 5.8' - SM, black (2.5YR2.5/1), saturated, increase fines concentration - SM, light olive brn (2.5YR3/3), color change is gradual, wet	
							Boring Terminated at 9.5 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	PROJECT NUMBER: 175868.FI.02	BORING NUMBER: RSB-38

SOIL BORING LOG

PROJECT NAME:		HOLE DEPTH (ft):	DRILLING CONTRACTOR:	
AMCO Superfund		9.0	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/28/2004	09/28/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Big lot on Center St.)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.8		0		SM	**SILTY FINE SAND (SM)** - black (5YR2.5/1) to dk olive gray (5YR3/2), moist, loose, no odor - roots in last 6 of core	
		3.2		0			- SM as described above, no roots - wet to saturated at 6'	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-39

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 9.0	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/29/2004	**DATE COMPLETED:** 09/29/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Big lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.3		0.9		SM	**SILTY FINE SAND (SM)** - very dk gray (2.5YR3/1), moist, loose, no odor, no aggregate, brick or metals	
		3.4				SM	**SILTY FINE SAND (SM)** - as described above, color gradually changes to light olive brn (2.5YR3/3) at depth, saturated (entire core), med dense, no odor	
							Boring Terminated at 9 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-40

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 8.5	**DRILLING CONTRACTOR:** Precision	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:** 09/29/2004	**DATE COMPLETED:** 09/29/2004
DRILLING METHOD: Geoprobe		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (Big lot on Center St.)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
		2.5		0.9		SM	**SILTY FINE SAND WITH AGGREGATE (SM)** - dk olive brn (2.5YR3/3) to black (2.5YR2.5/1), moist, loose, no odor - no aggregate seen in last 1' of core	
5		4				SM	**SILTY FINE SAND (SM)** - olive brn (2.5YR4/4) to olive yellow (2.5YR5/6) (mottled gray), saturated (entire core), loose to med dense at depth, no odor	
							Boring Terminated at 8.5 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1	**PROJECT NUMBER:** 175868.FI.02	**BORING NUMBER:** RSB-41

SOIL BORING LOG

PROJECT NAME:		**HOLE DEPTH (ft):**	**DRILLING CONTRACTOR:**	
AMCO Superfund		9.1	Precision	
SURFACE ELEVATION:	**NORTHING (CCS NAD 27 Z 5):**	**EASTING (CCS NAD 27 Z 5):**	**DATE STARTED:**	**DATE COMPLETED:**
--- ft. MSL	---	---	09/29/2004	09/29/2004
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
Geoprobe				
LOCATION:		**LOGGED BY:**	**SAMPLE NAME:**	
Oakland, CA (Big lot on Center St.)		M. Cavaliere		

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5		2.8		1.2		SM	**SILTY FINE SAND WITH NO FILL (SM)** - dk olive brn (2.5YR3/3), moist to wet (last 6), loose, no odor - top1-1.5" of SM with fill not seen here without going through that interval. The second core went deeper stratigraphically and we are seeing the mottled interval (possibly perching) from 8.3-9.1' - saturated	
		3.9				SM	**SILTY FINE SAND (SM)** - mottled olive yellow/gray (2.5YR5/6), wet, med dense, less fines	
							Boring Terminated at 9.1 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

SHEET 1 of 1

PROJECT NUMBER: 175868.FI.02

BORING NUMBER: RSB-42

SOIL BORING LOG

PROJECT NAME: AMCO Superfund		**HOLE DEPTH (ft):** 7.0	**DRILLING CONTRACTOR:**	
SURFACE ELEVATION: --- ft. MSL	**NORTHING (CCS NAD 27 Z 5):** ---	**EASTING (CCS NAD 27 Z 5):** ---	**DATE STARTED:**	**DATE COMPLETED:**
DRILLING METHOD:		**DRILLING EQUIPMENT:**		**WATER LEVEL (ft):**
LOCATION: Oakland, CA (DC Yard, Central)		**LOGGED BY:** M. Cavaliere	**SAMPLE NAME:**	

DEPTH BGS (feet)	SAMPLE: INTERVAL	SAMPLE: RECOVERY (ft)	SAMPLE: SPT RESULTS	SAMPLE: PID (PPM)	SAMPLE: SOIL SAMPLE	USCS CODE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DRILLING OBSERVATIONS AND OPERATIONS, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
							CONCRETE	
5	X	4		589 0		SM	**SILTY FINE SAND (SM)** - black to gray, wet to saturated (5.5'), loose, strong odor, oily appearance where black - saturated - color gradually changes to gray at 6.5'. The sand fraction of the gray material is slightly coarser grained yet still considered fine Boring Terminated at 7 ft	

ABBREVIATIONS

brn = brown
lt = light
dk = dark
vf = very fine-grained
f = fine-grained
m = medium-grained
c = coarse-grained
ang = angular
subang = subangular
subrnd = subrounded
rnd = rounded

CH2MHILL

Well and Probe Data

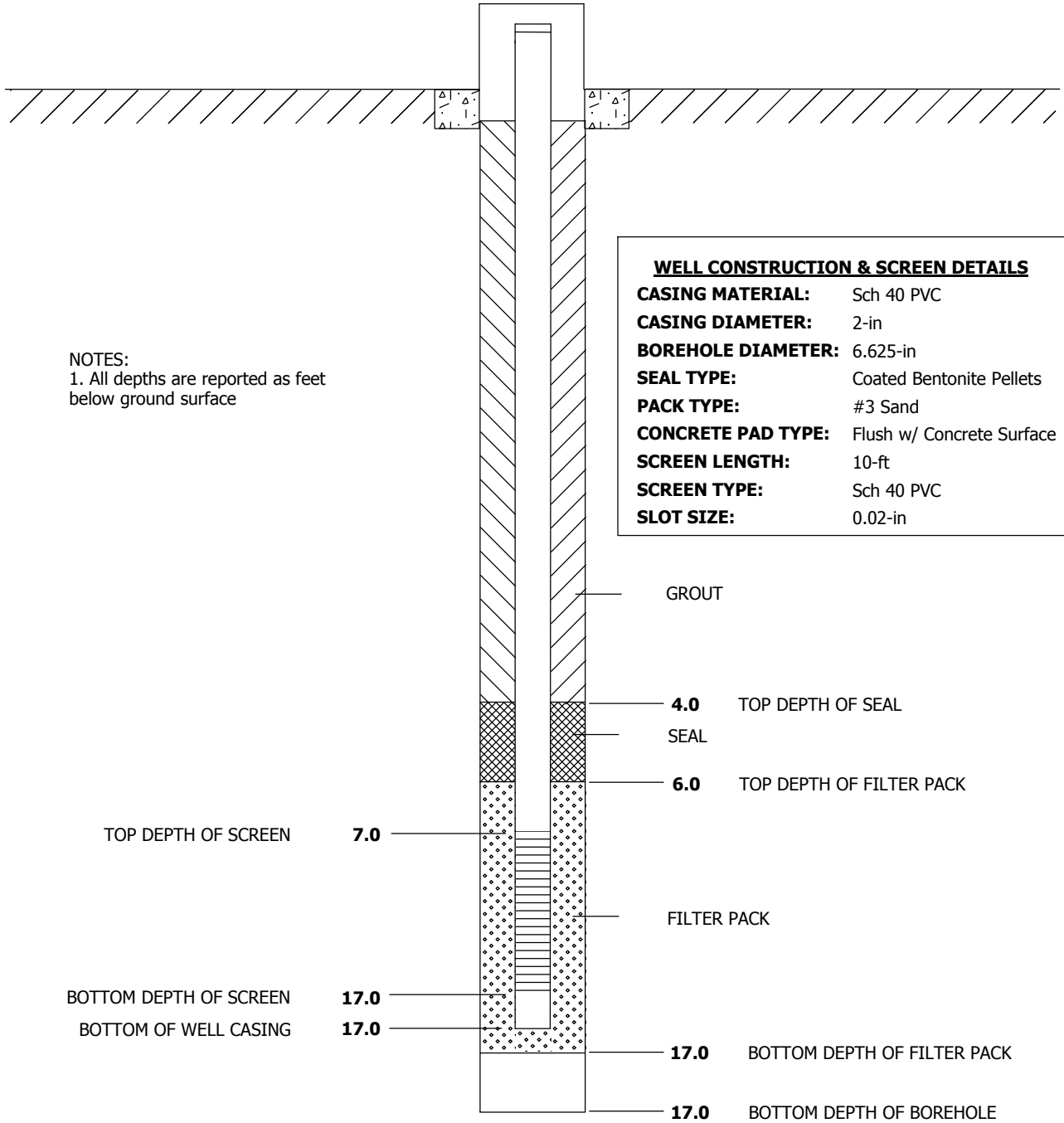
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.RR.01	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-01-17***

LOCATION: 1414-3rd St. (Southwest Corner), Oakland, CA

DRILLING CONTRACTOR: Resonant Sonic (Driller Val Godoy)	**DRILLING START:** 01/12/2005 08:10
DRILLING METHOD: Rotosonic	**DRILLING END:** 01/12/2005 10:00
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 01/12/2005
GROUND SURFACE ELEVATION (NAVD 88): 11.22	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	6.625-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

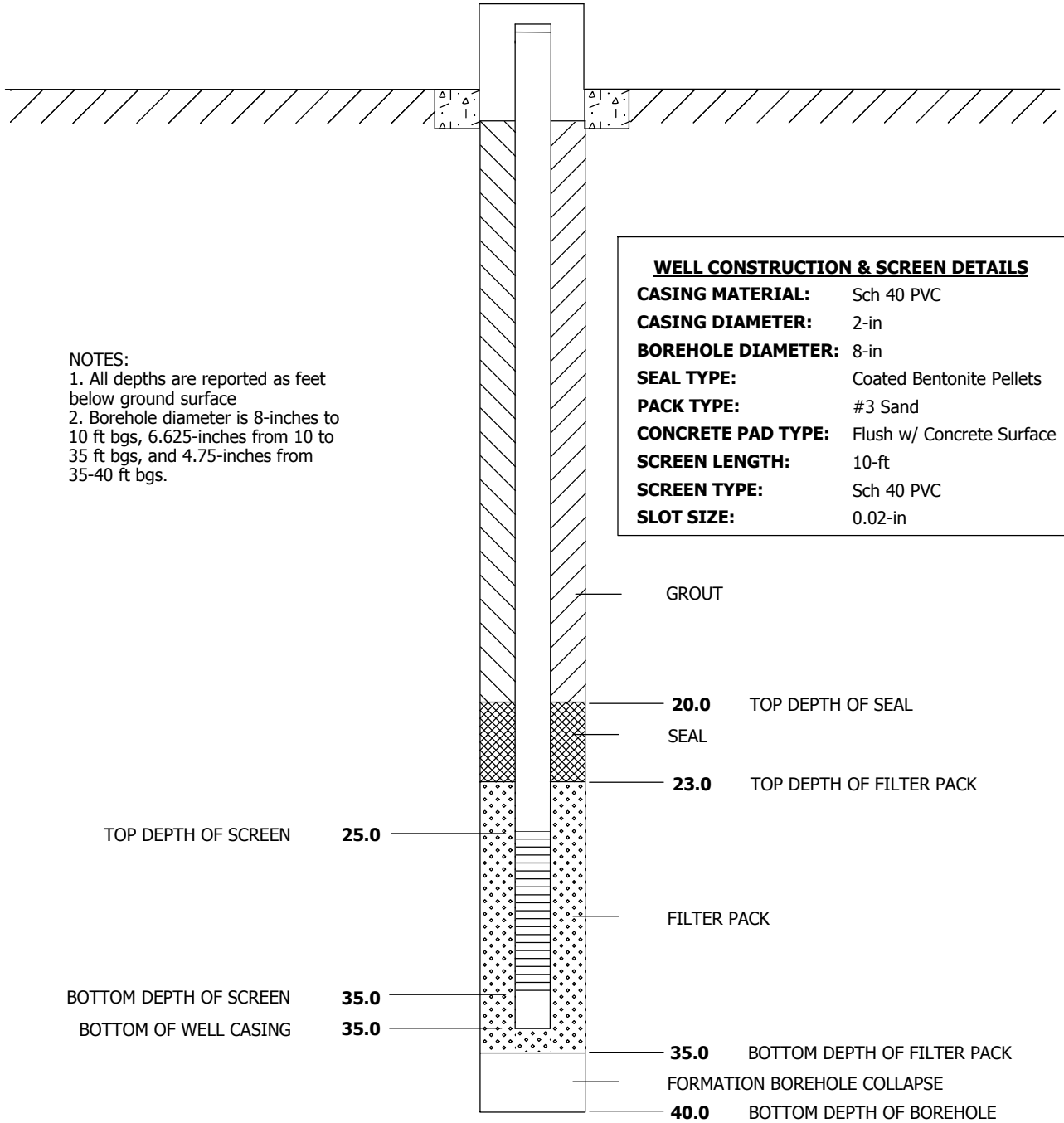
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.RR.01	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-01-35***

LOCATION: 1414-3rd St. (Southwest Corner), Oakland, CA

DRILLING CONTRACTOR: Resonant Sonic (Driller Val Godoy)	**DRILLING START:** 01/11/2005 10:56
DRILLING METHOD: Rotosonic	**DRILLING END:** 01/11/2005 16:05
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 01/11/2005
GROUND SURFACE ELEVATION (NAVD 88): 11.04	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface
2. Borehole diameter is 8-inches to 10 ft bgs, 6.625-inches from 10 to 35 ft bgs, and 4.75-inches from 35-40 ft bgs.

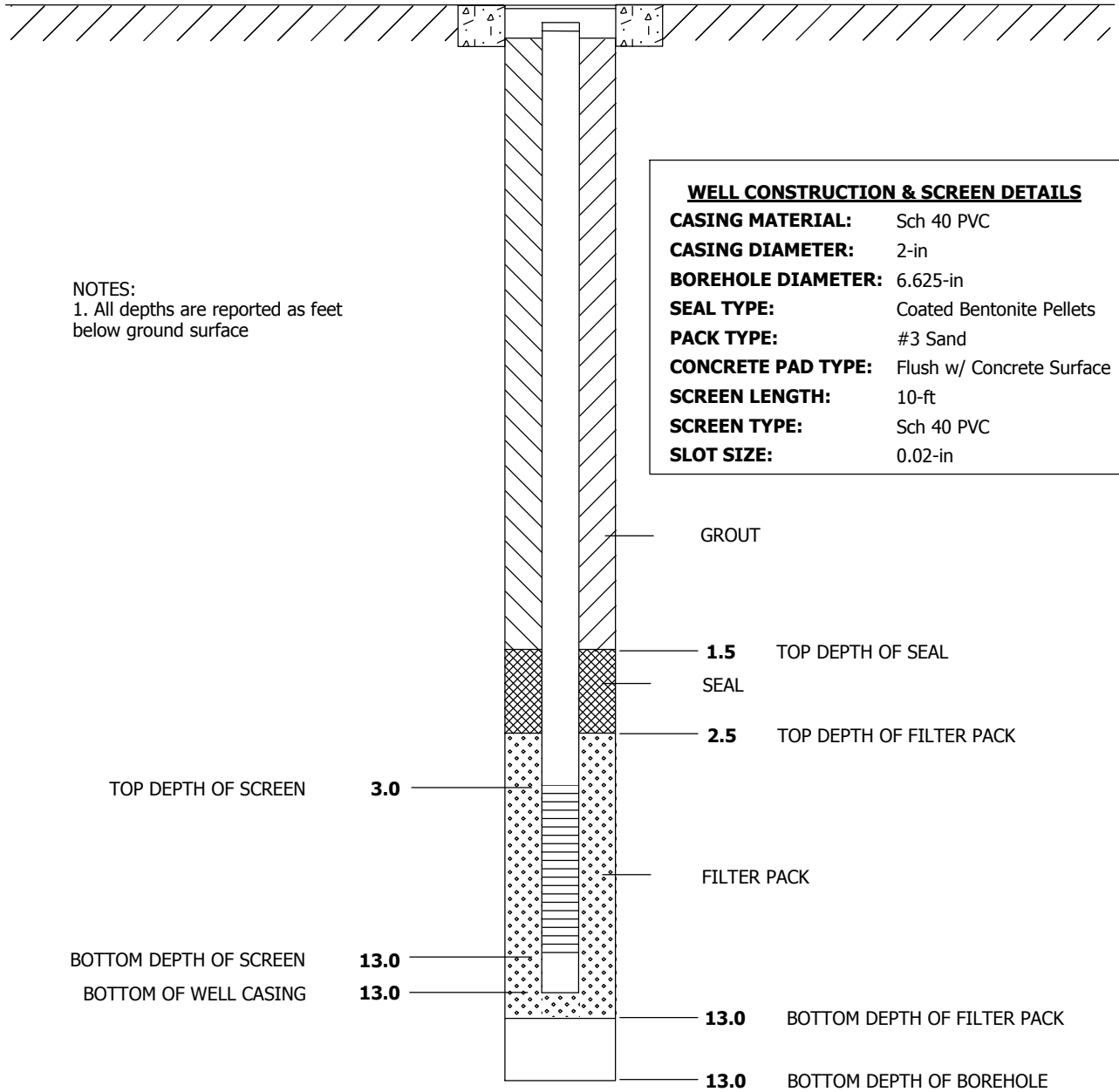
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-02-13***
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA		
DRILLING CONTRACTOR: Resonant Sonic (Driller Val Godoy)	**DRILLING START:** 01/12/2005 11:27	
DRILLING METHOD: Rotosonic	**DRILLING END:** 01/12/2005 12:18	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 01/12/2005	
GROUND SURFACE ELEVATION (NAVD 88): 10.74	**GENERAL REMARKS:** ---	

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	6.625-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

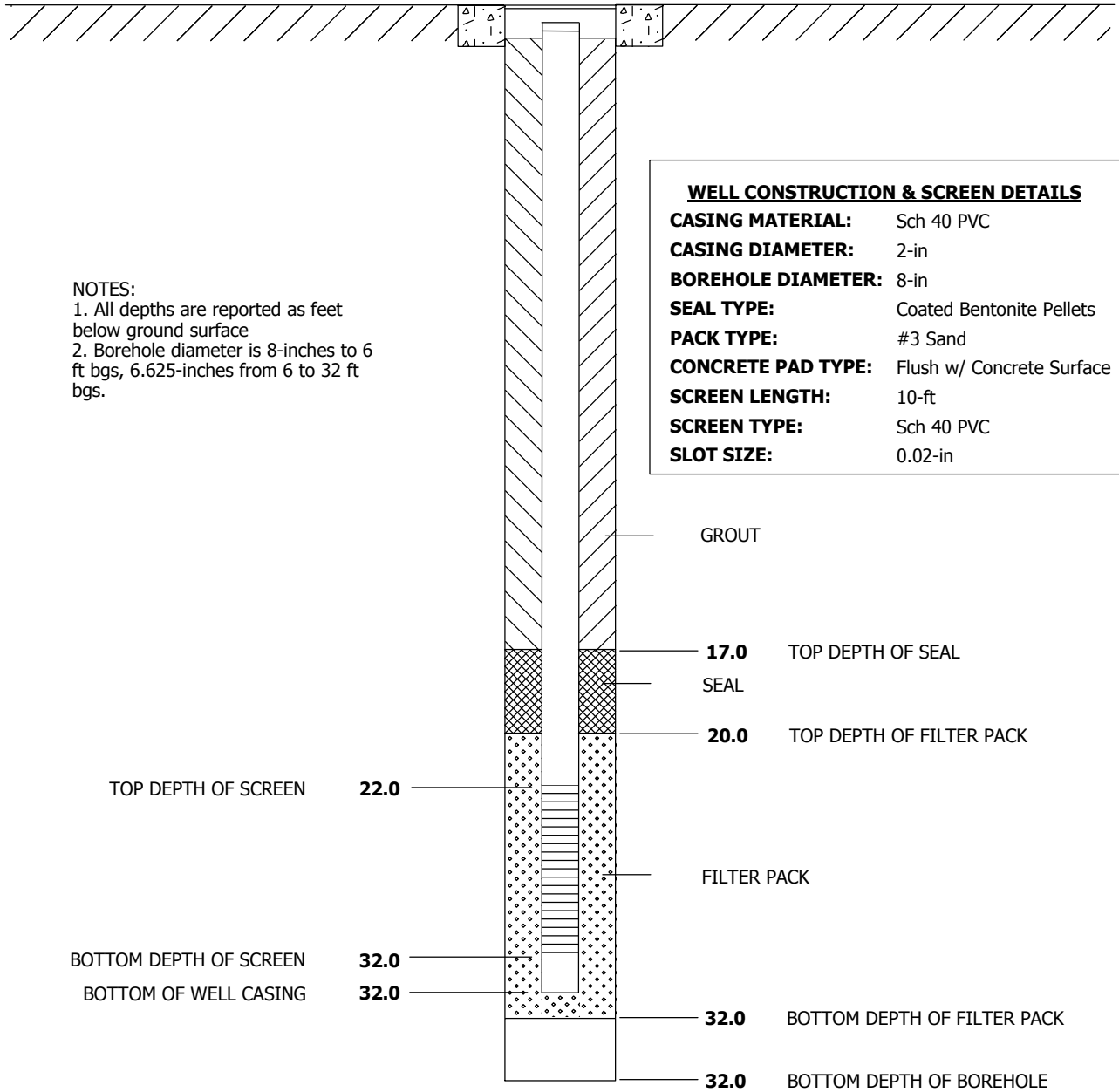
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-02-32***
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA		
DRILLING CONTRACTOR: Resonant Sonic (Driller Val Godoy)	**DRILLING START:** 01/13/2005 12:30	
DRILLING METHOD: Rotosonic	**DRILLING END:** 01/13/2005 14:28	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 01/13/2005	
GROUND SURFACE ELEVATION (NAVD 88): 11.21	**GENERAL REMARKS:** ---	

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface
2. Borehole diameter is 8-inches to 6 ft bgs, 6.625-inches from 6 to 32 ft bgs.

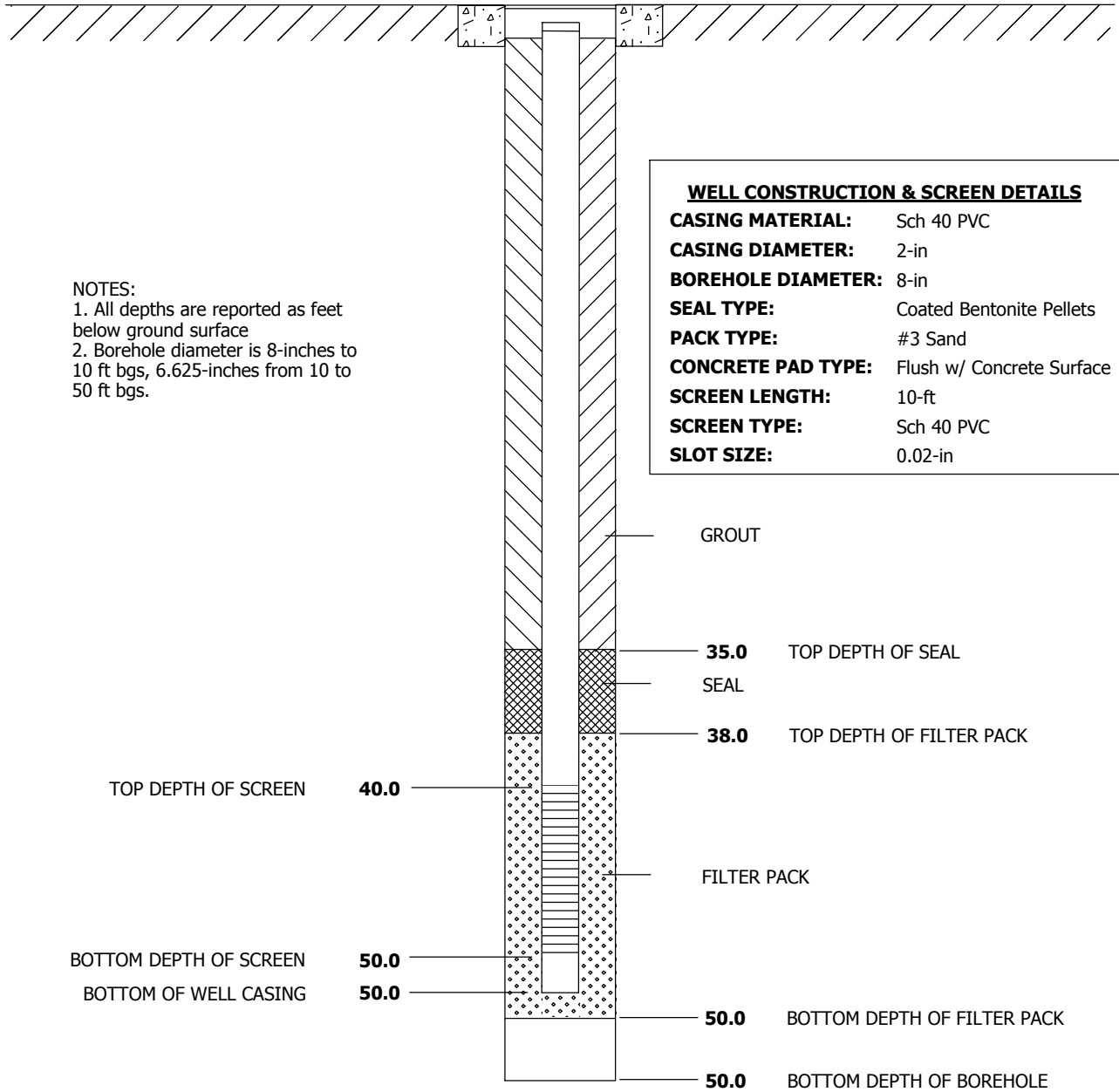
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-02-50***
LOCATION: 1414-3rd St. (Central Yard), Oakland, CA		
DRILLING CONTRACTOR: Resonant Sonic (Driller Val Godoy)	**DRILLING START:** 01/12/2005 14:05	
DRILLING METHOD: Rotosonic	**DRILLING END:** 01/13/2005 11:00	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 01/13/2005	
GROUND SURFACE ELEVATION (NAVD 88): 11.07	**GENERAL REMARKS:** ---	

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface
2. Borehole diameter is 8-inches to 10 ft bgs, 6.625-inches from 10 to 50 ft bgs.

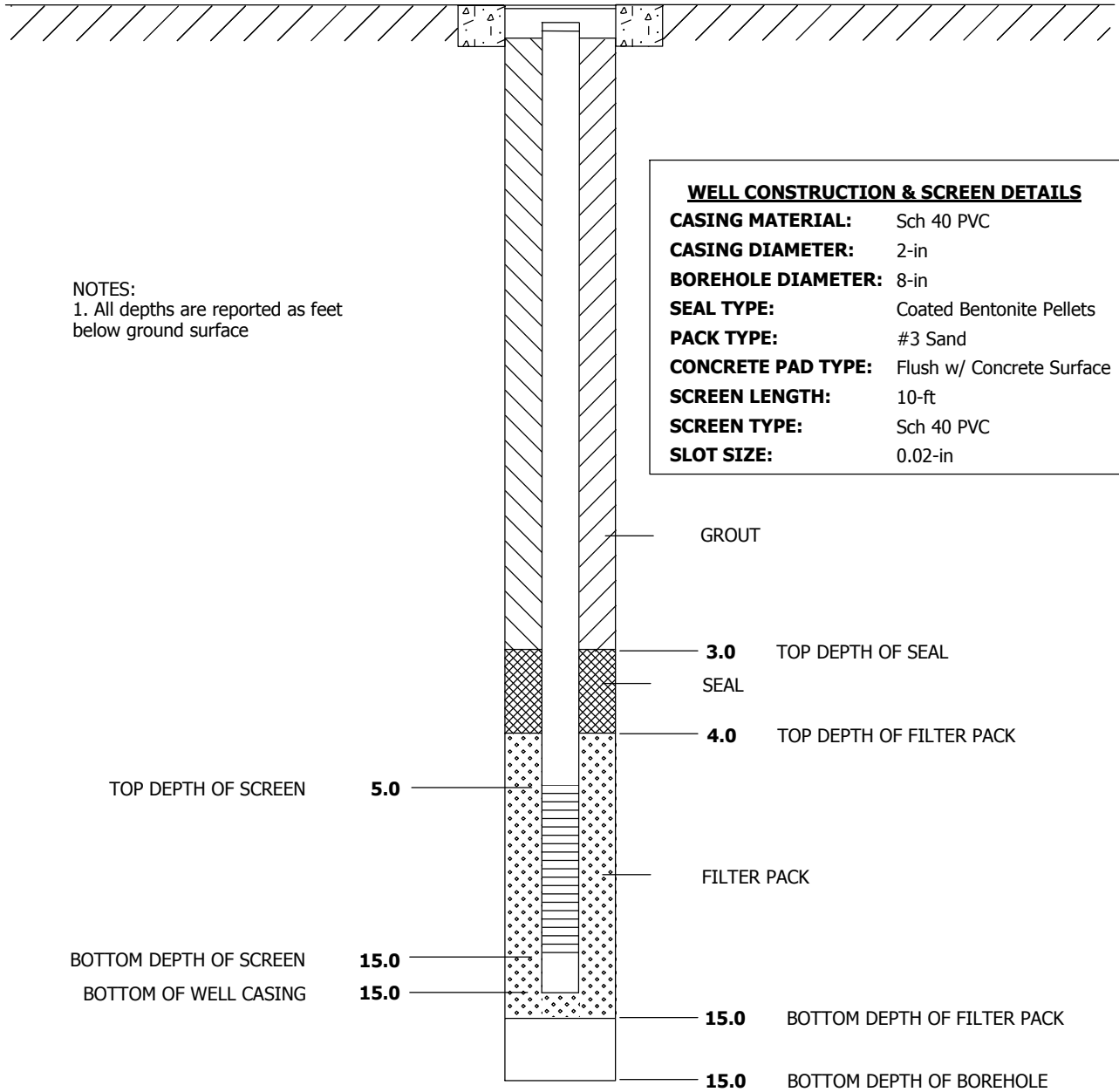
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-03-15***
LOCATION: 1414-3rd St. (Northwest Corner), Oakland, CA		
DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/15/2005 12:40	
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/15/2005 14:30	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/15/2005	
GROUND SURFACE ELEVATION (NAVD 88): 10.43	**GENERAL REMARKS:** ---	

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

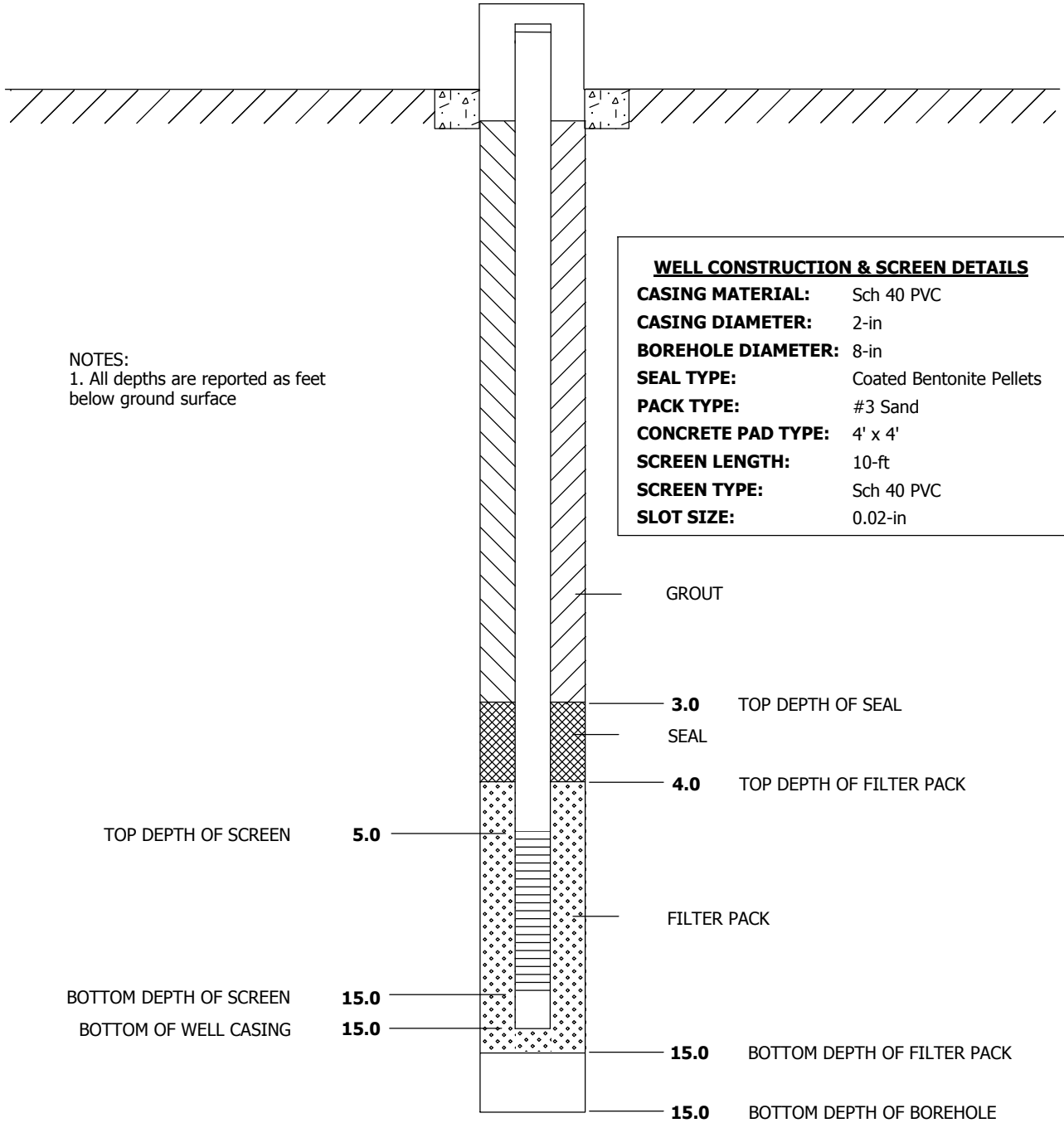
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-04-15***

LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA

DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/17/2005 14:05
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/17/2005 16:30
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/17/2005
GROUND SURFACE ELEVATION (NAVD 88): 10.09	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	4' x 4'
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

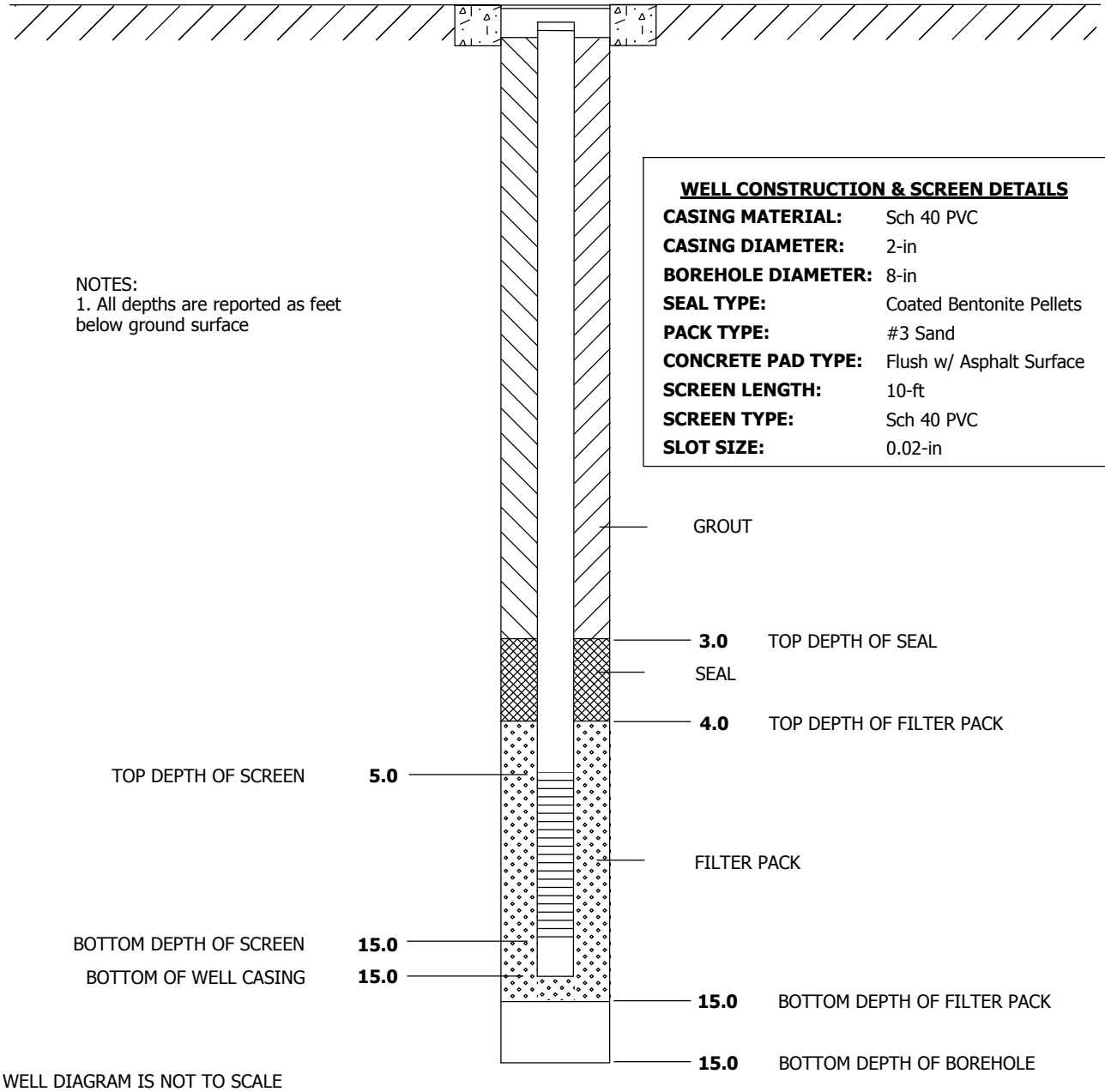
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-05-15***

LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA

DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/18/2005 12:30
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/18/2005 14:40
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/18/2005
GROUND SURFACE ELEVATION (NAVD 88): 9.27	**GENERAL REMARKS:** ---

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Asphalt Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

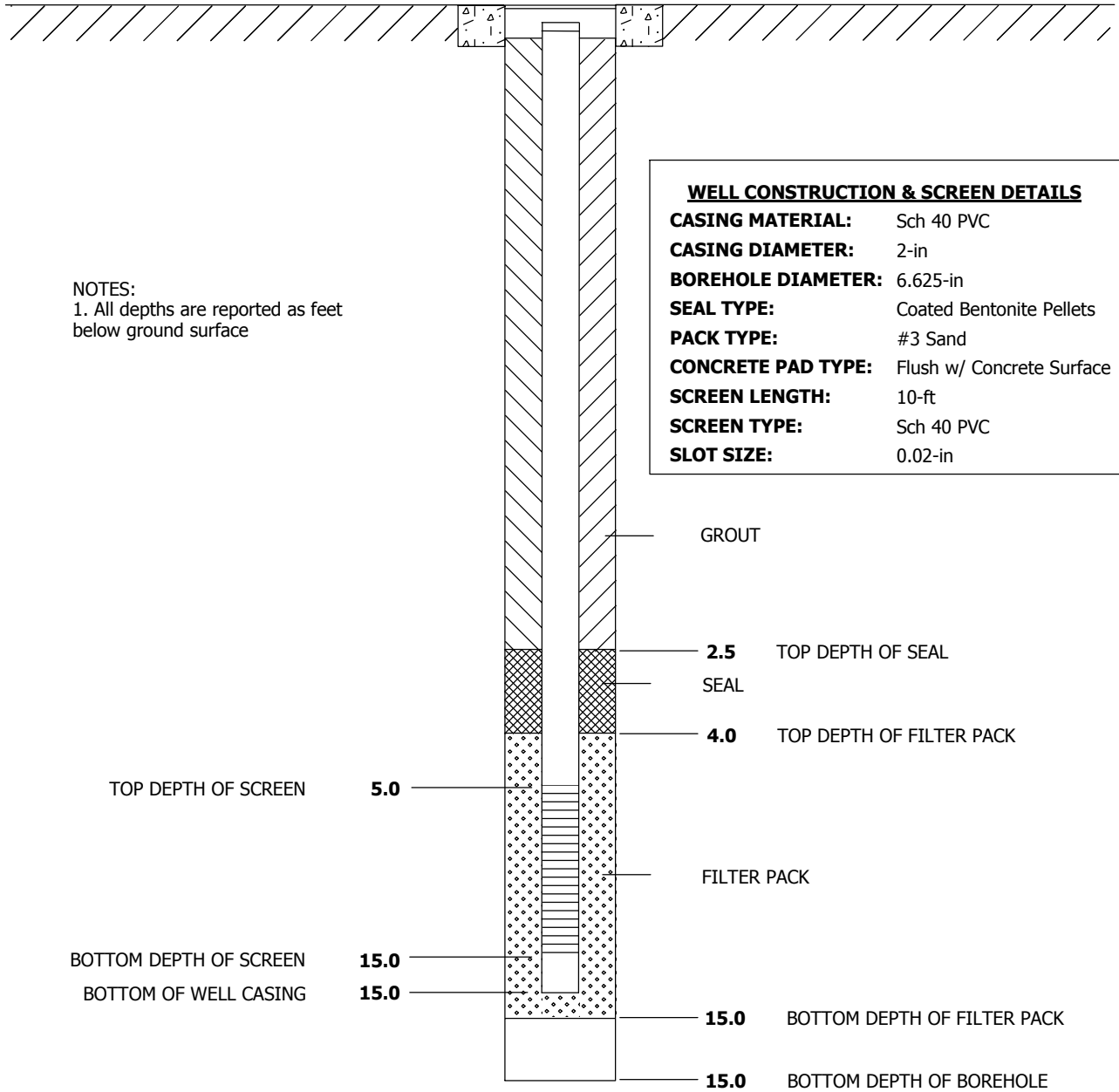
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-06-15***

LOCATION: 336-346 Center St. - Large Vacant Lot (Southwest Corner), Oakland, CA

DRILLING CONTRACTOR: Resonant Sonic (Driller Val Godoy)	**DRILLING START:** 01/19/2005 09:10
DRILLING METHOD: Rotosonic	**DRILLING END:** 01/19/2005 15:00
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 01/19/2005
GROUND SURFACE ELEVATION (NAVD 88): 10.68	**GENERAL REMARKS:** ---

LOCKING FLUSH COMPLETION



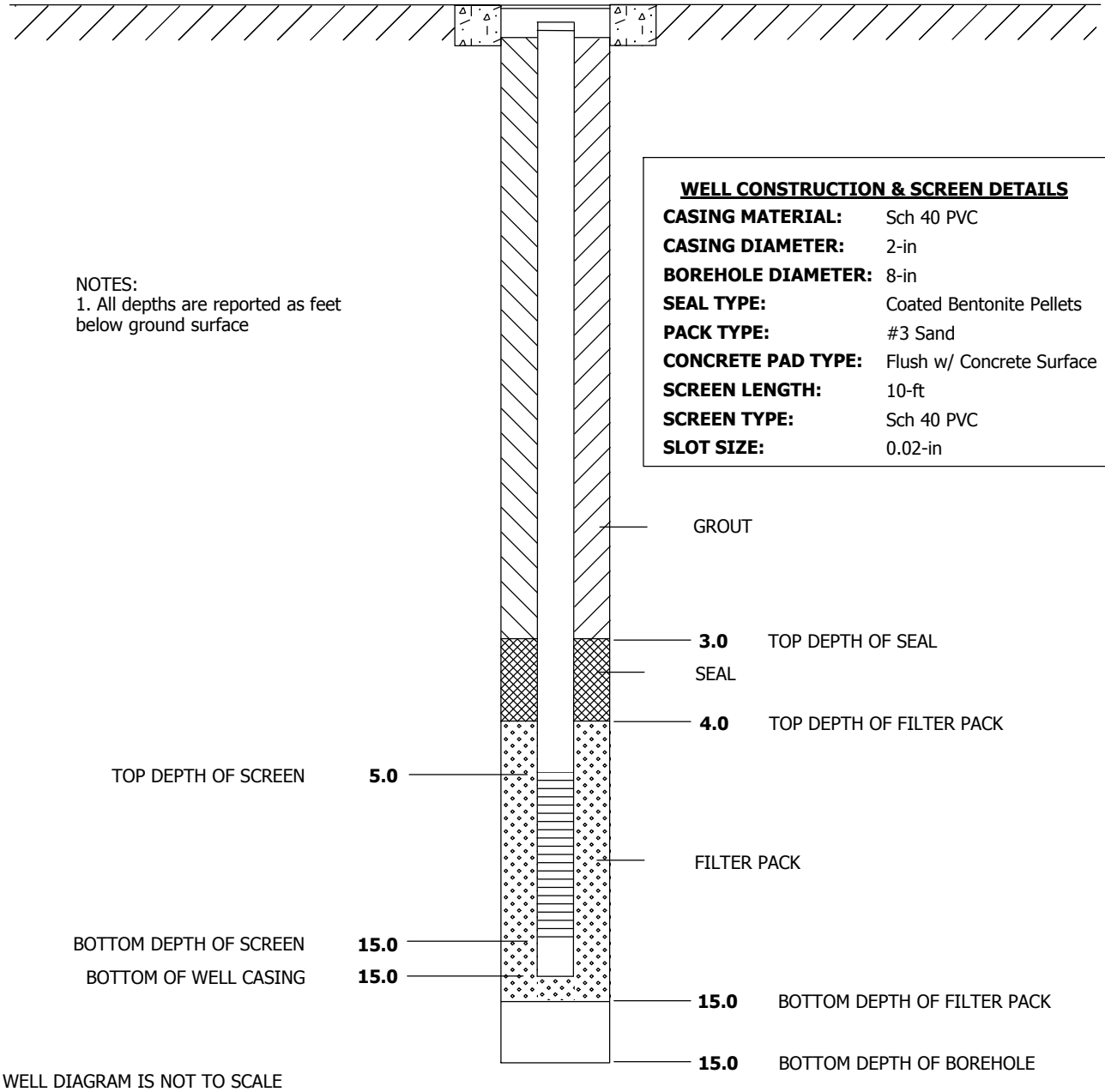
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-07-15***
LOCATION: 1448 3rd St., Oakland, CA		
DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/15/2005 08:50	
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/15/2005	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/15/2005	
GROUND SURFACE ELEVATION (NAVD 88): 10.45	**GENERAL REMARKS:** ---	

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

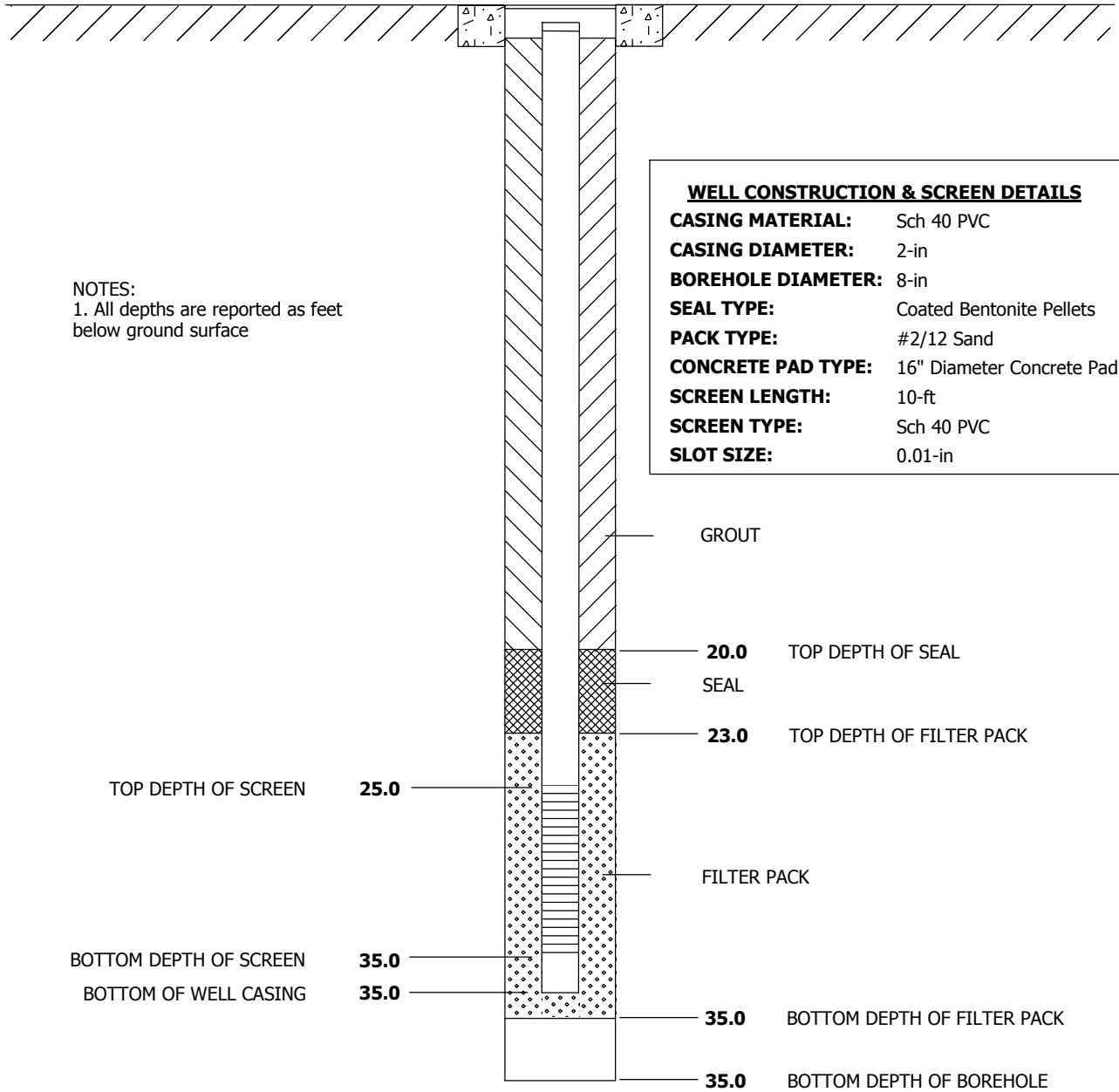
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-07-35***
LOCATION: 1448 3rd St., Oakland, CA		
DRILLING CONTRACTOR: Boart Longyear (Shawn Martinez); Peoria, AZ	**DRILLING START:** 09/07/2005 12:10	
DRILLING METHOD: Rotosonic	**DRILLING END:** 09/08/2005 13:30	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/07/2005	
GROUND SURFACE ELEVATION (NAVD 88): 10.42	**GENERAL REMARKS:** ---	

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	16" Diameter Concrete Pad
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.01-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

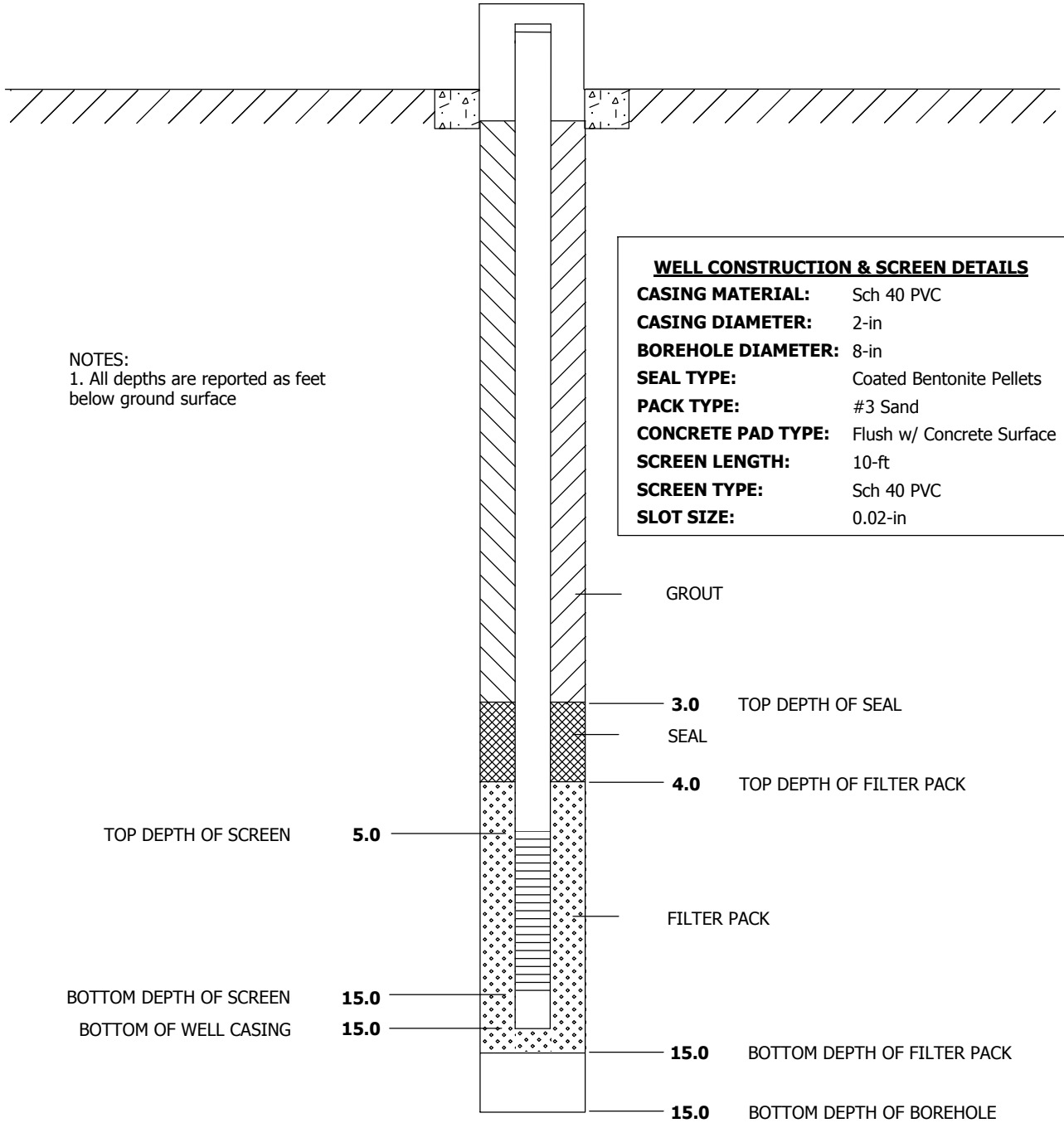
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-08-15***

LOCATION: 1414-3rd St. (Western Fence Line), Oakland, CA

DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/24/2005 09:00
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/24/2005 10:45
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/24/2005
GROUND SURFACE ELEVATION (NAVD 88): 11.76	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

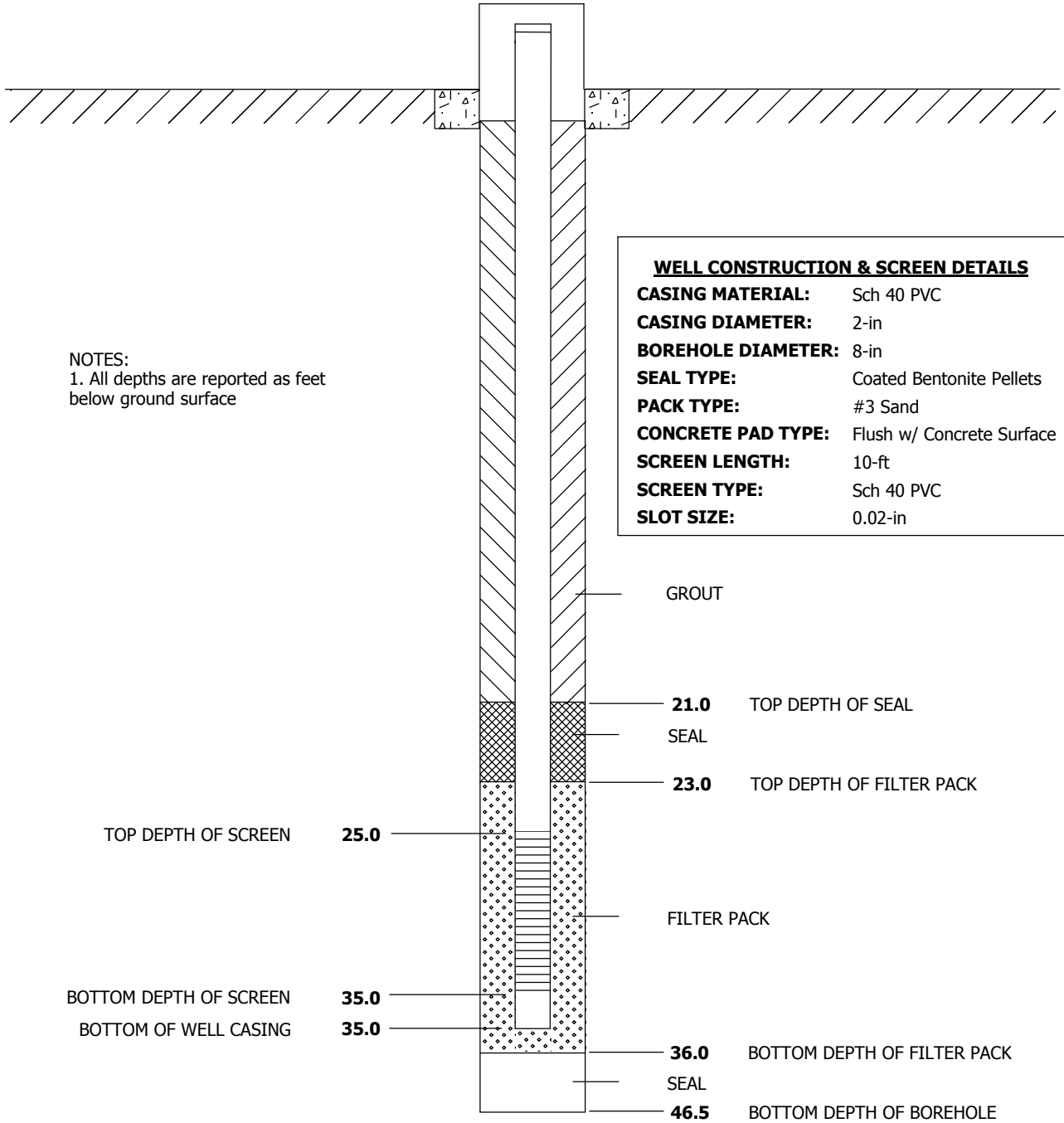
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-08-35***

LOCATION: 1414-3rd St. (Western Fence Line), Oakland, CA

DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/23/2005 09:32
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/23/2005 16:30
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/23/2005
GROUND SURFACE ELEVATION (NAVD 88): 11.73	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Concrete Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

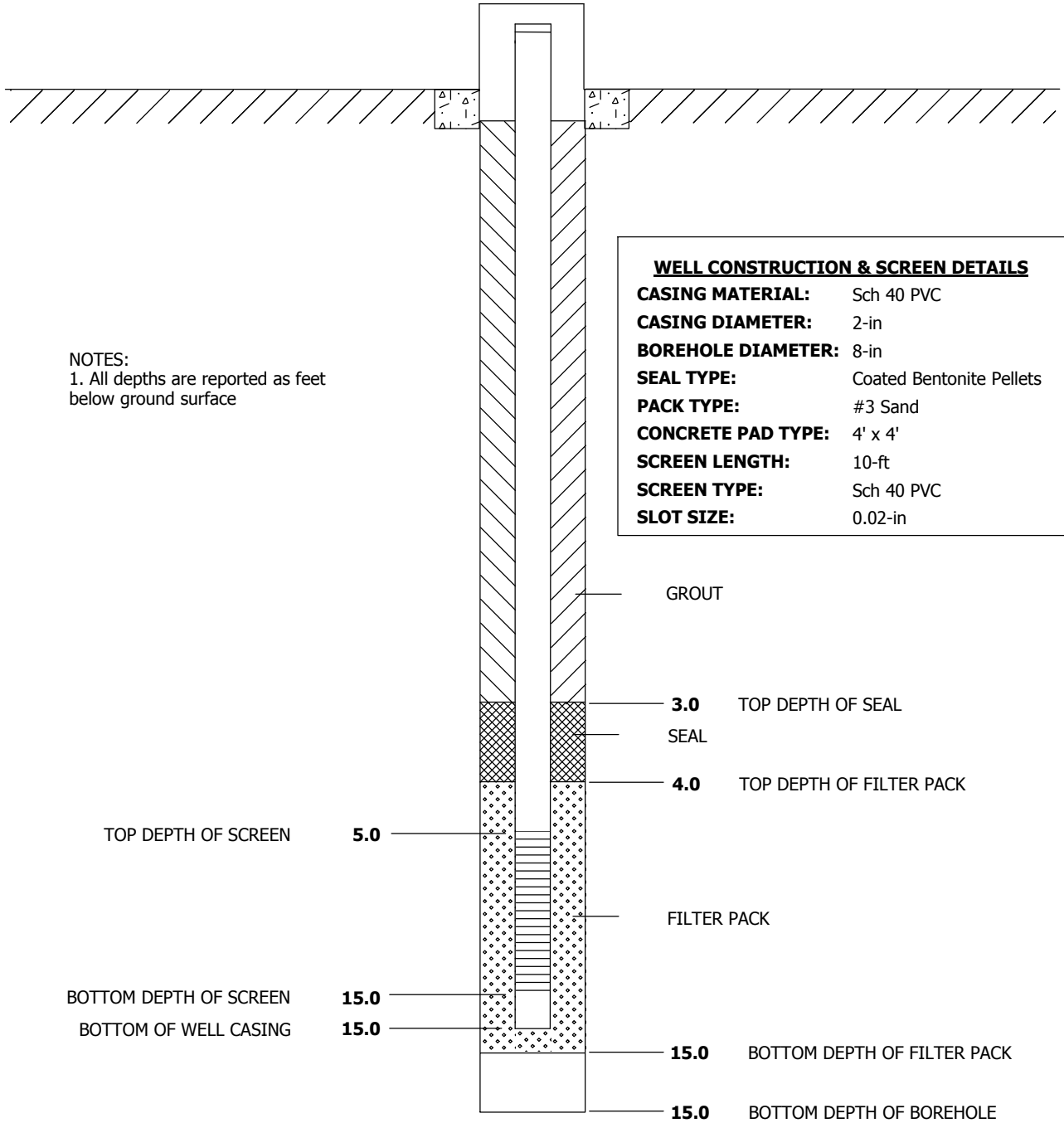
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-09-15***
LOCATION: 1401 3rd St., Oakland, CA		
DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/17/2005 09:30	
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/17/2005 11:30	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/17/2005	
GROUND SURFACE ELEVATION (NAVD 88): 10.26	**GENERAL REMARKS:** ---	

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	4' x 4'
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

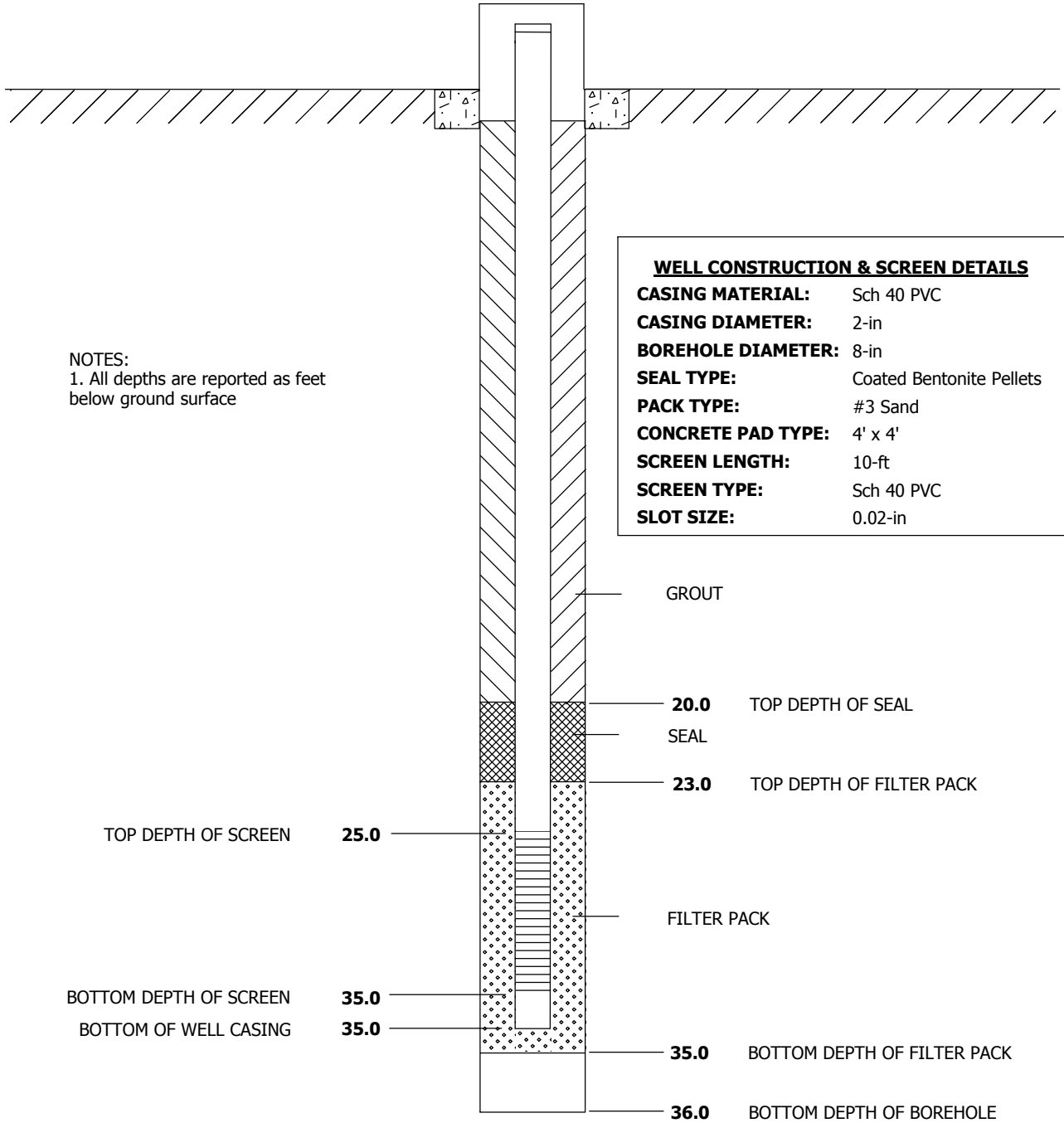
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-09-35***
LOCATION: 1401 3rd St., Oakland, CA		
DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/16/2005 11:15	
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/22/2005 15:00	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/22/2005	
GROUND SURFACE ELEVATION (NAVD 88): 10.30	**GENERAL REMARKS:** ---	

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	4' x 4'
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

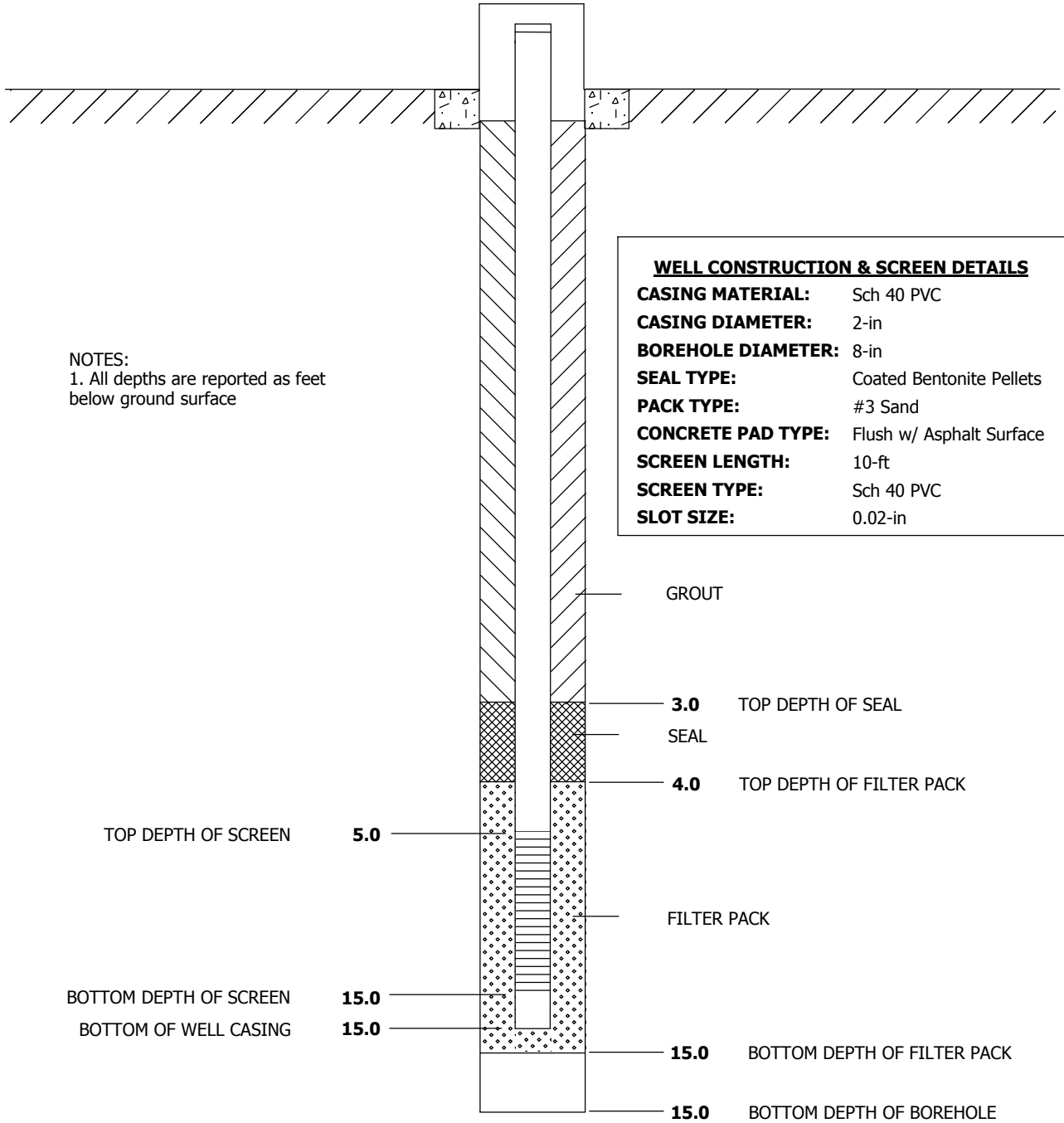
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-10-15***

LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA

DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/18/2005 09:50
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/18/2005 00:05
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/18/2005
GROUND SURFACE ELEVATION (NAVD 88): 9.74	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Asphalt Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

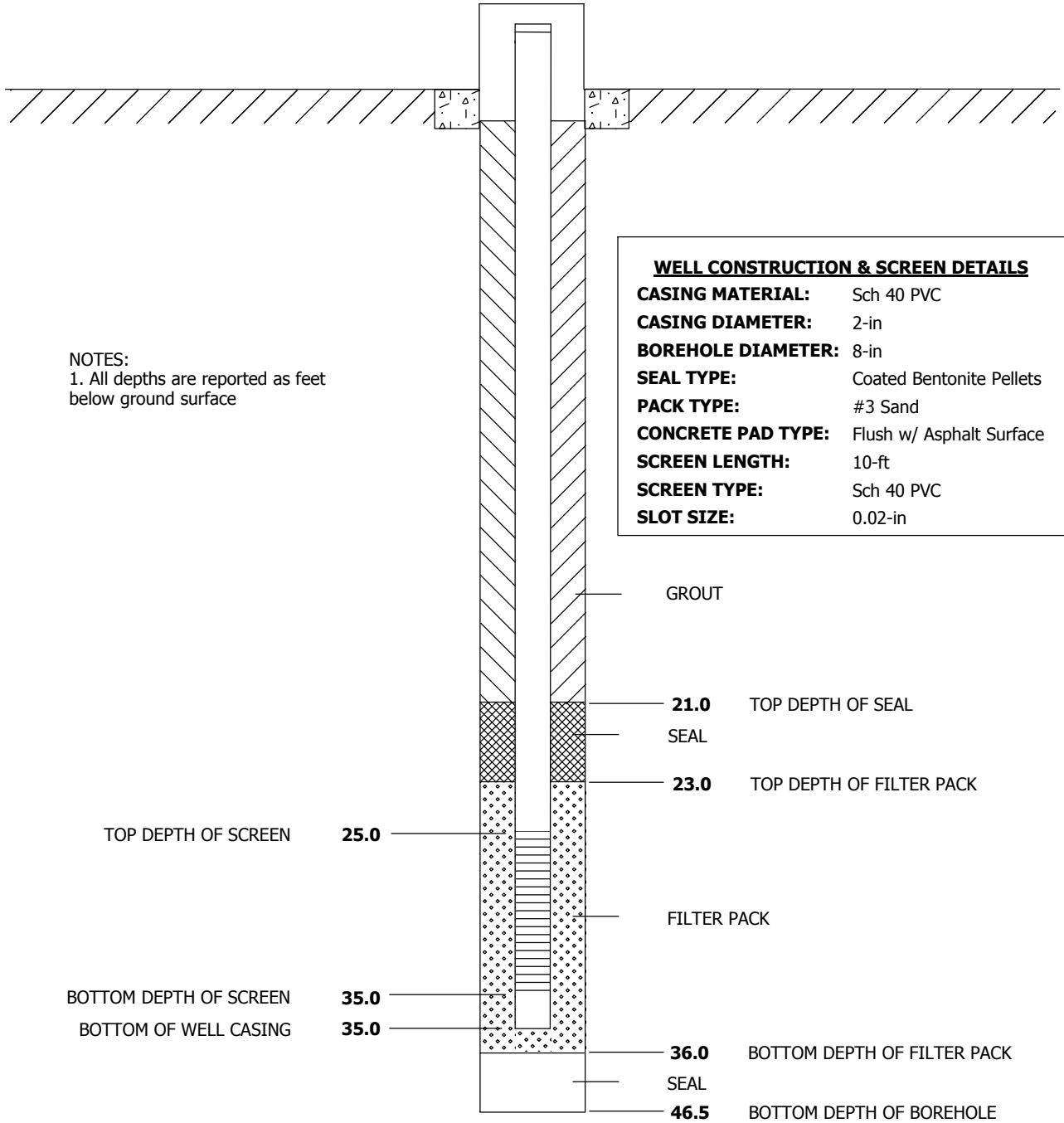
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-10-35***

LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA

DRILLING CONTRACTOR: West HAZMAT, (Driller Oscar Gonzales)	**DRILLING START:** 02/21/2005 10:05
DRILLING METHOD: Hollow Stem Auger / CME 55	**DRILLING END:** 02/21/2005 18:30
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 02/21/2005
GROUND SURFACE ELEVATION (NAVD 88): 9.77	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



NOTES:
1. All depths are reported as feet below ground surface

WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Coated Bentonite Pellets
PACK TYPE:	#3 Sand
CONCRETE PAD TYPE:	Flush w/ Asphalt Surface
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

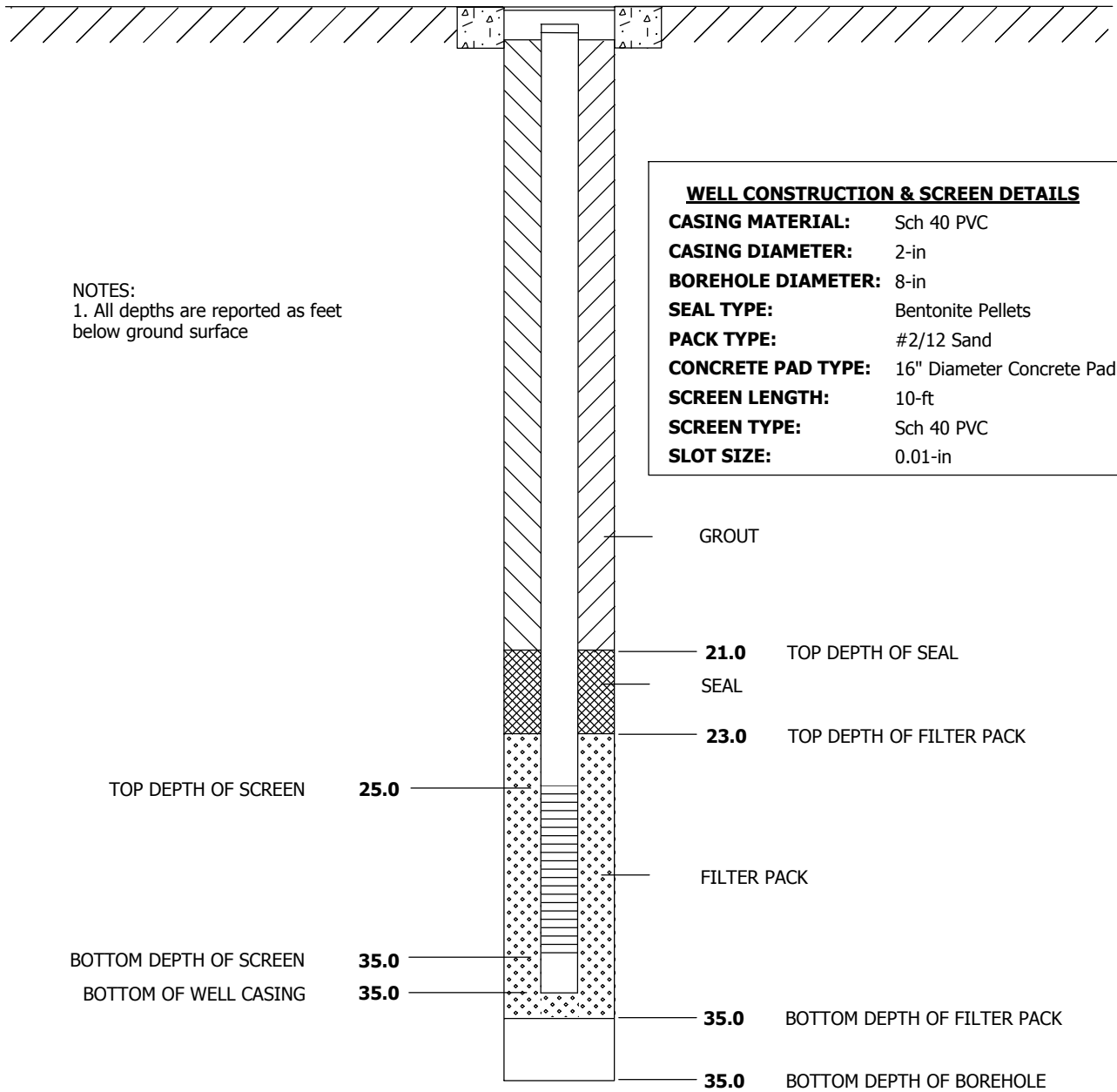
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-11-35***

LOCATION: Northbound bike lane on Mandella Pkwy between 3rd and 5th St., Oakland, CA

DRILLING CONTRACTOR: Boart Longyear (Shawn Martinez); Peoria, AZ	**DRILLING START:** 09/20/2005 12:06
DRILLING METHOD: Rotosonic	**DRILLING END:** 09/21/2005 16:40
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/20/2005
GROUND SURFACE ELEVATION (NAVD 88): 8.52	**GENERAL REMARKS:** ---

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Bentonite Pellets
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	16" Diameter Concrete Pad
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.01-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

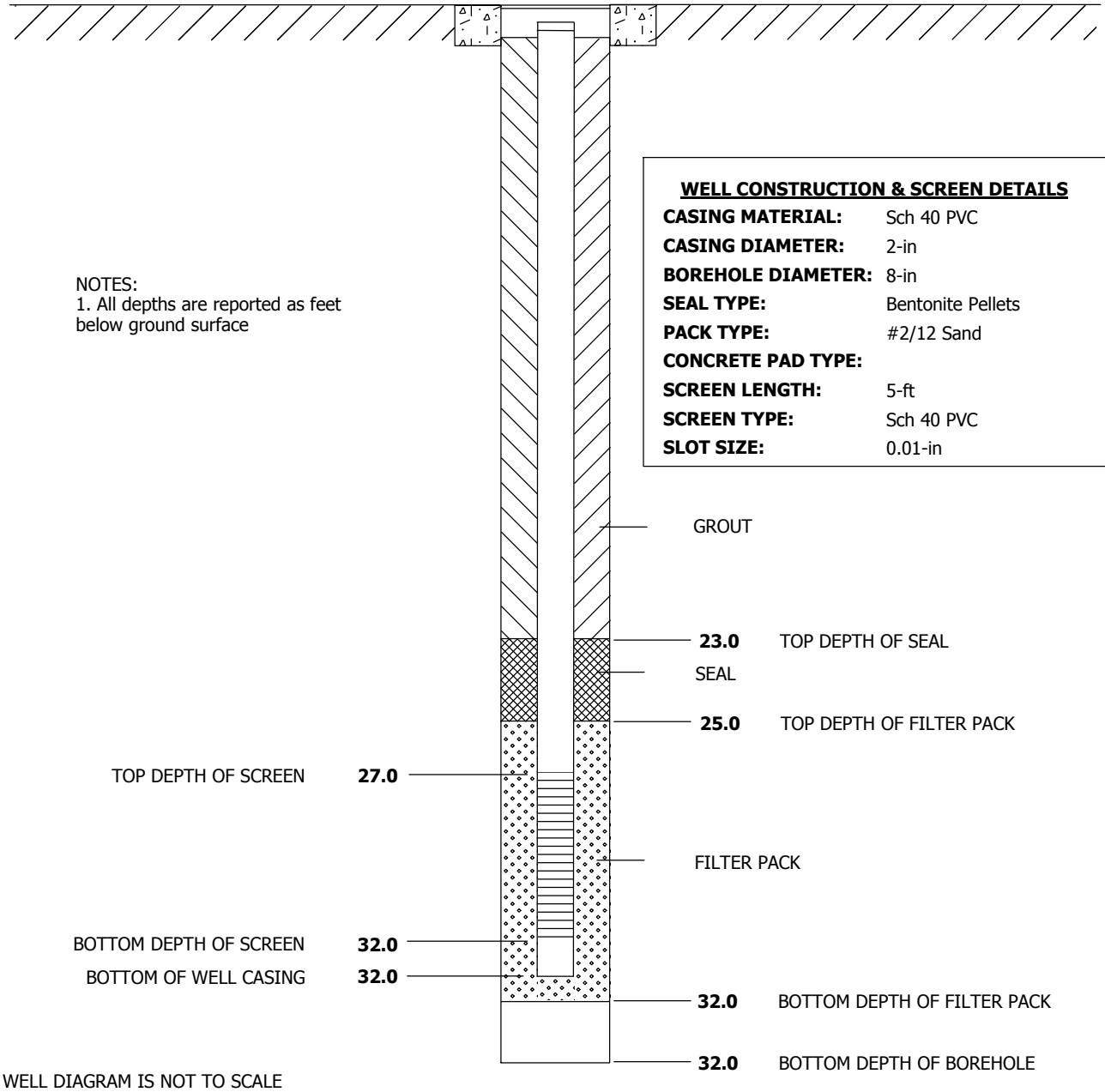
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-12-32***

LOCATION: 3rd St. gutter in front of 1414 3rd St., Oakland, CA

DRILLING CONTRACTOR: Boart Longyear (Shawn Martinez); Peoria, AZ	**DRILLING START:** 09/21/2005 12:43
DRILLING METHOD: Rotosonic	**DRILLING END:** 09/21/2005 16:40
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/21/2005
GROUND SURFACE ELEVATION (NAVD 88): 9.44	**GENERAL REMARKS:** ---

LOCKING FLUSH COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Bentonite Pellets
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	
SCREEN LENGTH:	5-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.01-in

NOTES:
1. All depths are reported as feet below ground surface

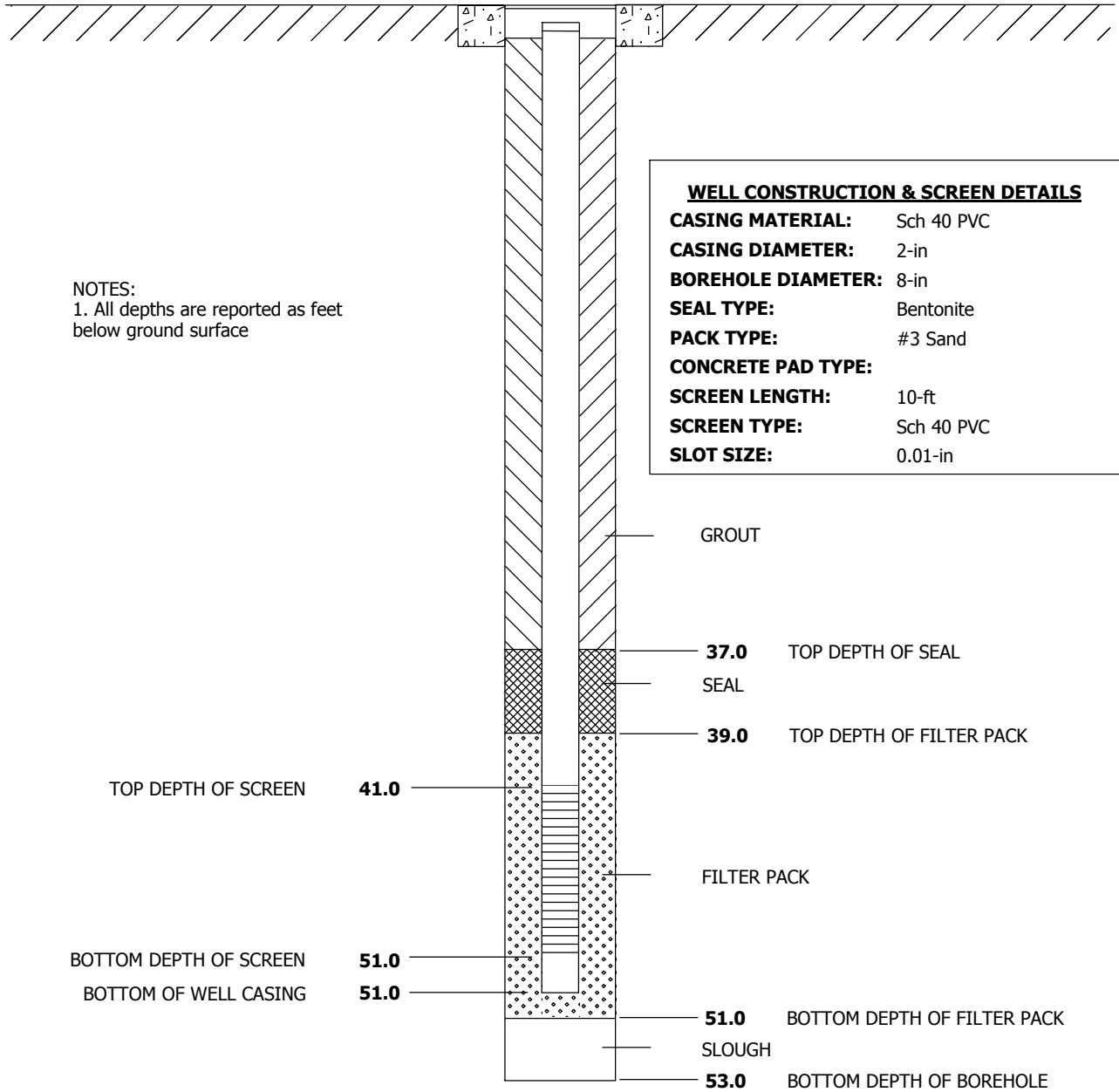
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-12-51***
LOCATION: 1414 3rd St., Oakland, CA		
DRILLING CONTRACTOR: Boart Longyear (Shawn Martinez); Peoria, AZ	**DRILLING START:** 09/15/2005 13:00	
DRILLING METHOD: Rotosonic	**DRILLING END:** 09/19/2005 18:00	
LOGGER: W. Frohlich	**WELL COMPLETION DATE:** 09/15/2005	
GROUND SURFACE ELEVATION (NAVD 88): 9.27	**GENERAL REMARKS:** ---	

LOCKING FLUSH COMPLETION



WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

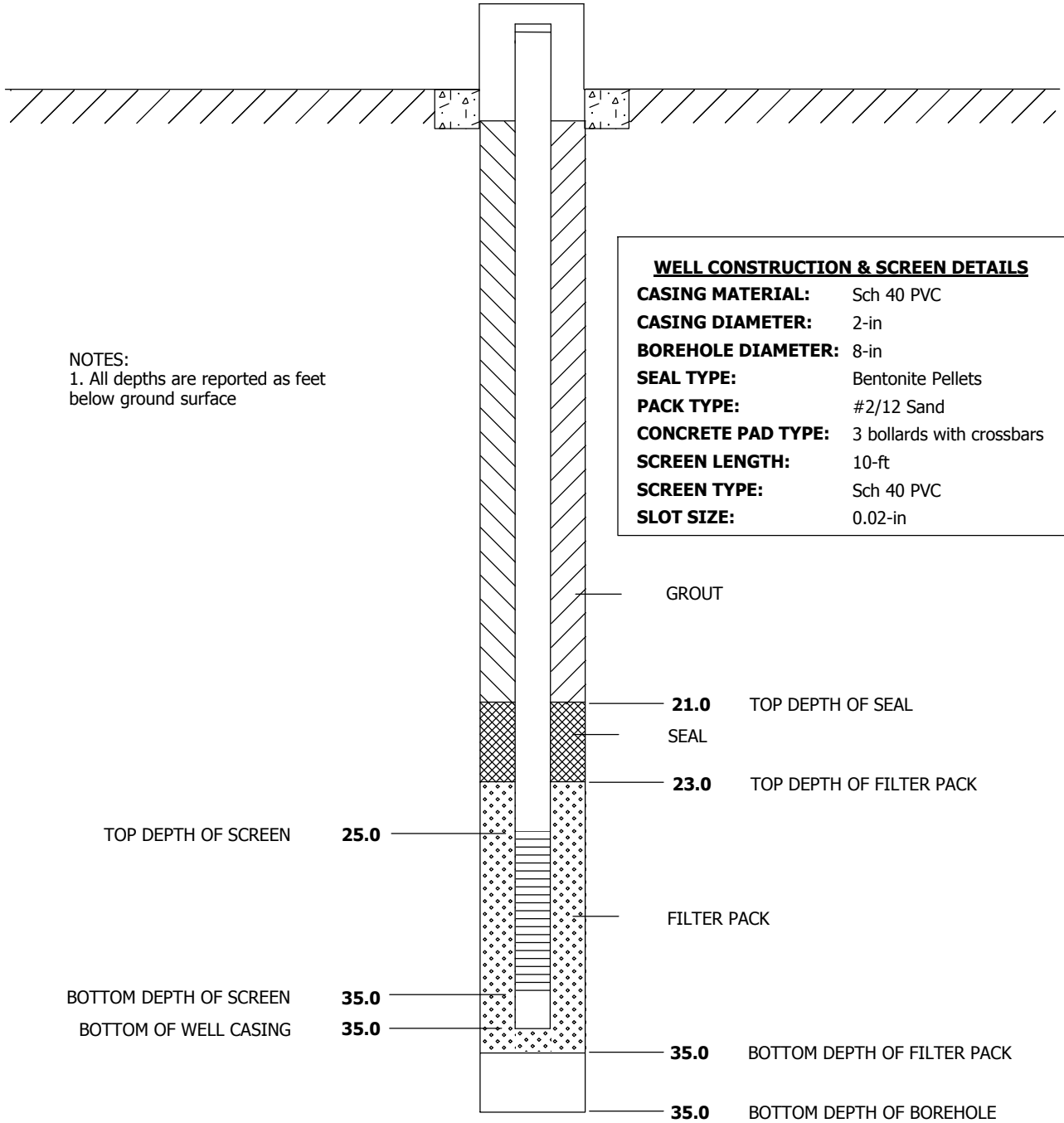
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-13-35***

LOCATION: AMTRAK Yard - 1303 3rd St., Oakland, CA

DRILLING CONTRACTOR: Boart Longyear (Shawn Martinez); Peoria, AZ	**DRILLING START:** 09/13/2005 12:20
DRILLING METHOD: Rotosonic	**DRILLING END:** 09/14/2005 15:50
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/13/2005
GROUND SURFACE ELEVATION (NAVD 88): 10.38	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Bentonite Pellets
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	3 bollards with crossbars
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

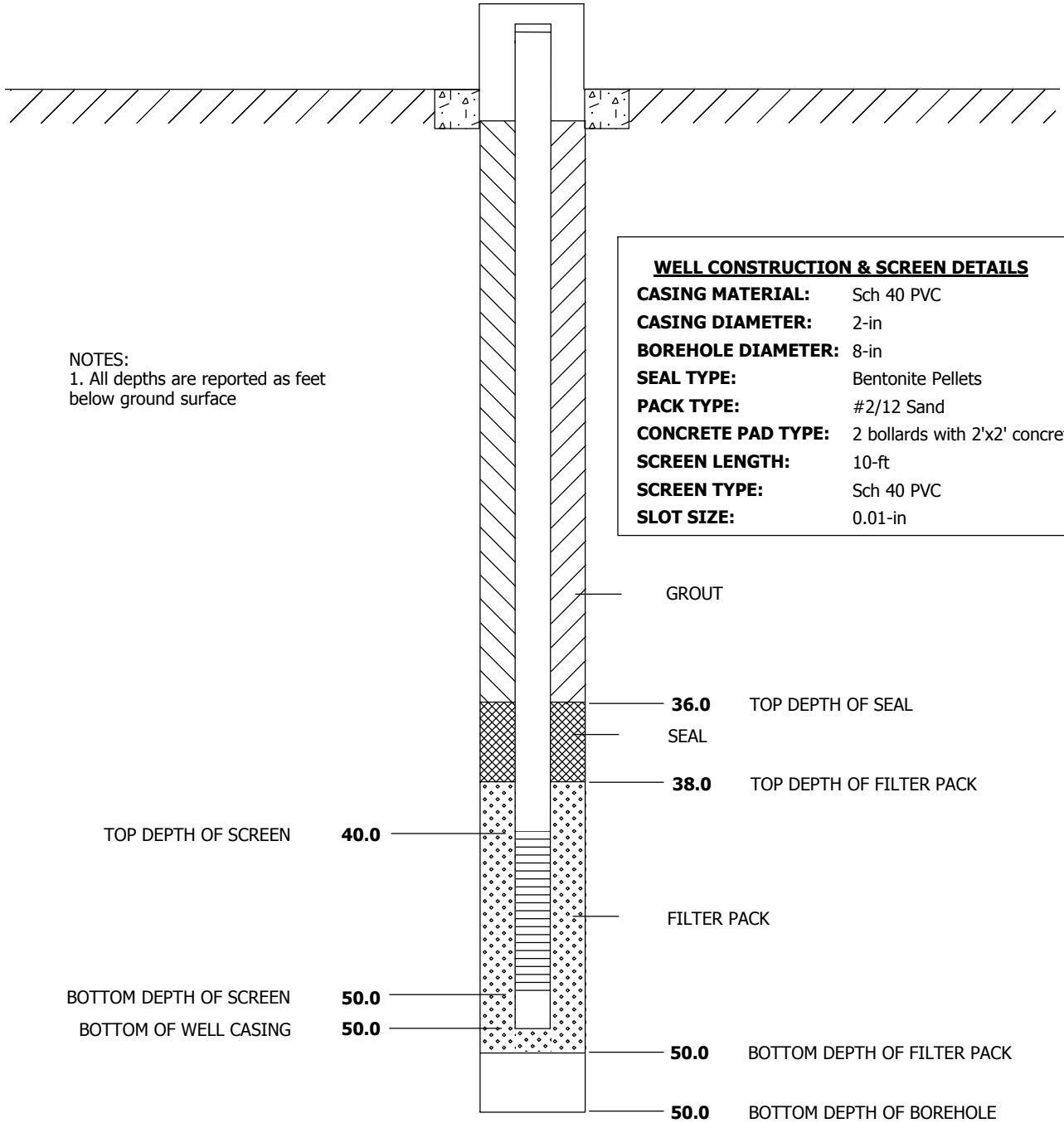
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** ***RMW-14-50***

LOCATION: UPRR Property - Adjacent Prescott Park / BMW-7, Oakland, CA

DRILLING CONTRACTOR: Boart Longyear (Shawn Martinez); Peoria, AZ	**DRILLING START:** 09/09/2005 11:27
DRILLING METHOD: Rotosonic	**DRILLING END:** 05/01/912 16:30
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/09/2005
GROUND SURFACE ELEVATION (NAVD 88): 10.39	**GENERAL REMARKS:** ---

LOCKING MONUMENT COMPLETION



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	8-in
SEAL TYPE:	Bentonite Pellets
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	2 bollards with 2'x2' concrete pad
SCREEN LENGTH:	10-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.01-in

NOTES:
1. All depths are reported as feet below ground surface

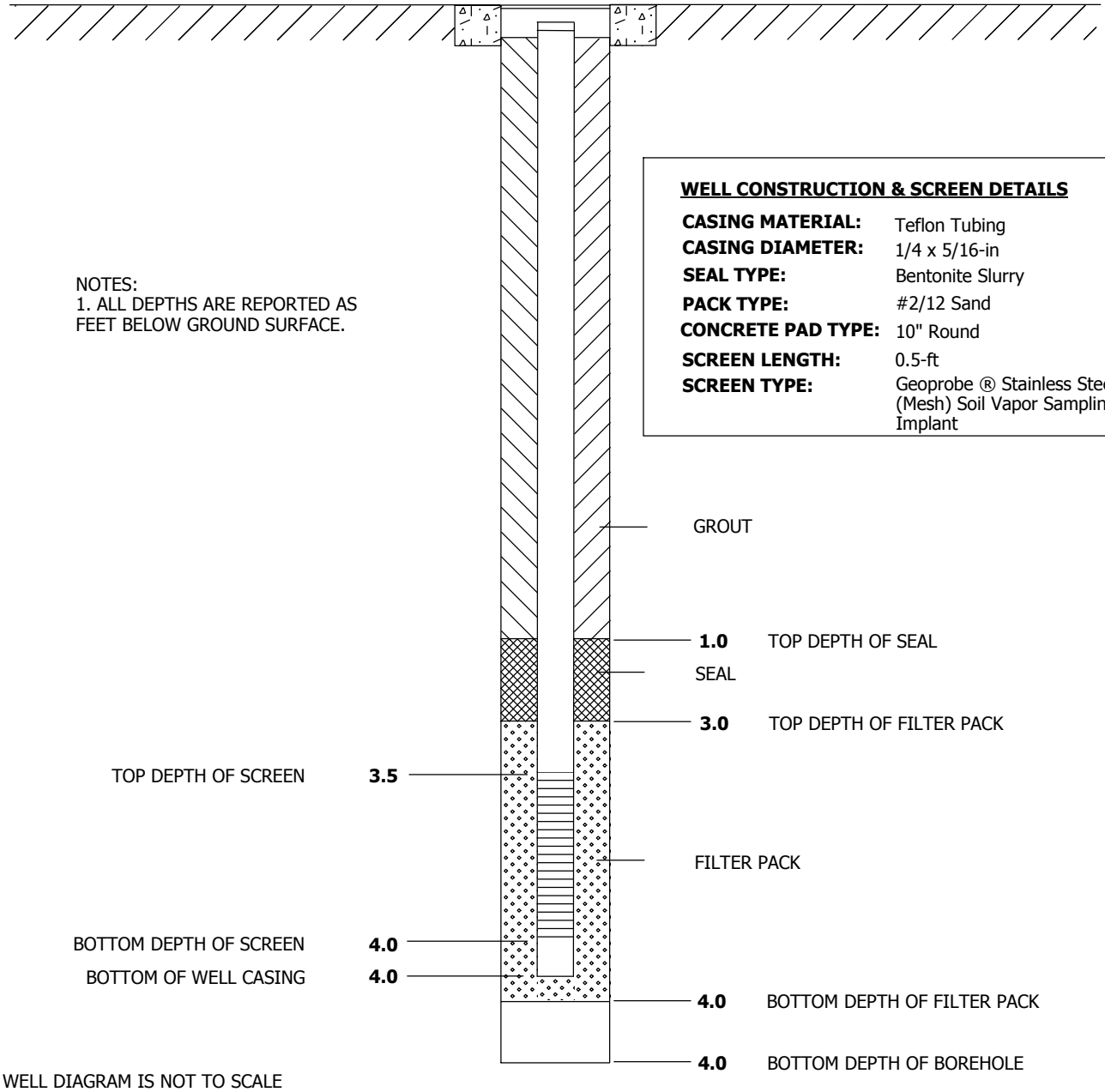
WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-01**
LOCATION: Oakland, CA (Center St. Lot [BRI])		
DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 09/28/2004 8:35:00 AM	
DRILLING METHOD: Geoprobe, Concrete Core	**DRILLING END:** 09/28/2004 9:15:00 AM	
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/28/2004	
GROUND SURFACE ELEVATION (NGVD 29): 11.22	**GENERAL REMARKS:** See soil boring log for RSB-01 for lithology	

FLUSH MOUNTED LOCKING WELL



WELL DIAGRAM IS NOT TO SCALE

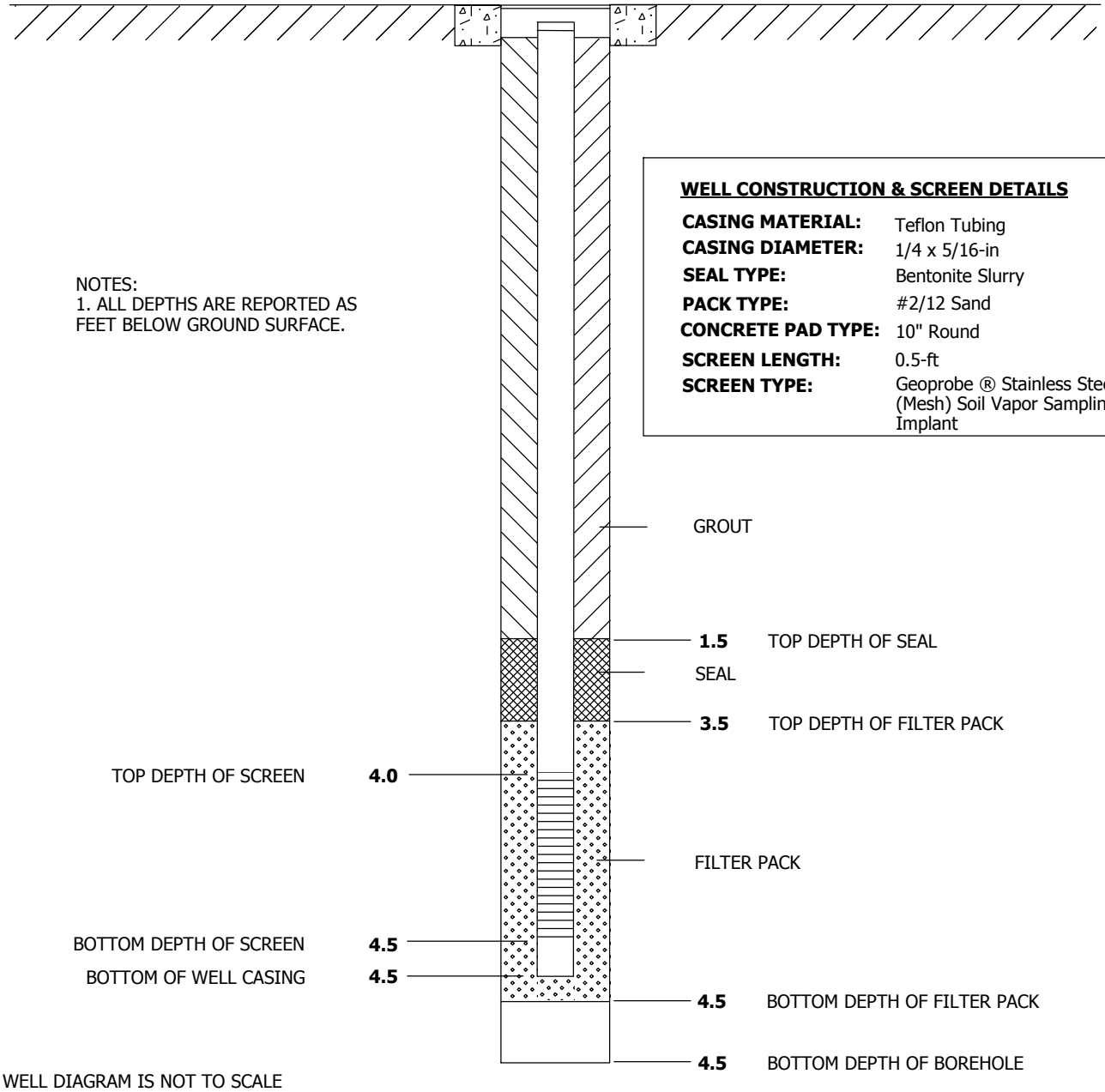
CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-02**
LOCATION: Oakland, CA (thin lot on Center St.)		

DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 09/27/2004 3:00:00 PM
DRILLING METHOD: Geoprobe	**DRILLING END:** 09/27/2004 3:32:00 PM
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/27/2004
GROUND SURFACE ELEVATION (NGVD 29): 11.02	**GENERAL REMARKS:** See soil boring log for RSB-02 for lithology

FLUSH MOUNTED LOCKING WELL



WELL DIAGRAM IS NOT TO SCALE

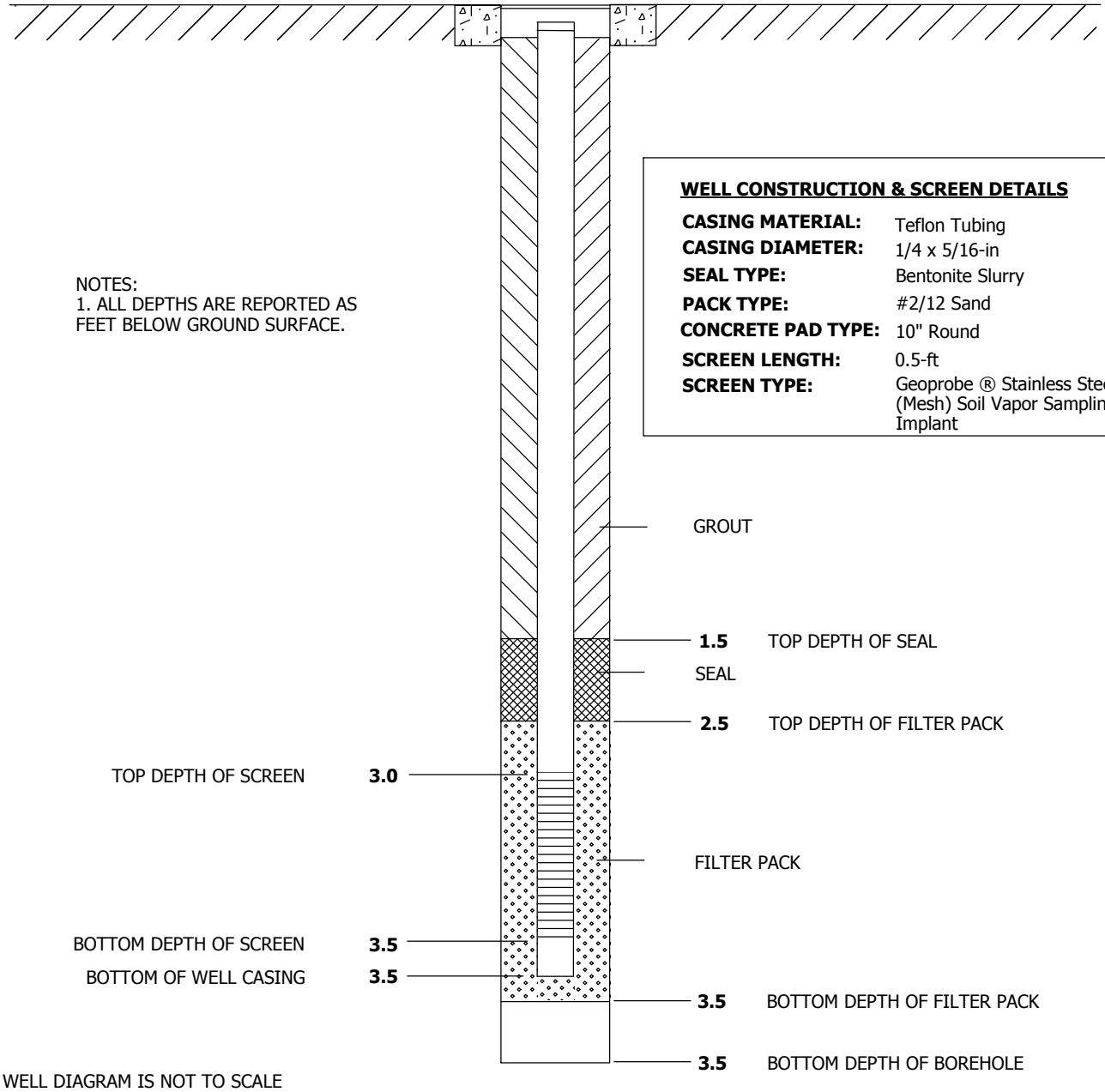
CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-03**
LOCATION: Oakland, CA (DC Yard)		

DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 09/30/2004 12:05:00 AM
DRILLING METHOD: Geoprobe	**DRILLING END:** ---
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/30/2004
GROUND SURFACE ELEVATION (NGVD 29): 11.58	**GENERAL REMARKS:** ---

FLUSH MOUNTED LOCKING WELL



WELL DIAGRAM IS NOT TO SCALE

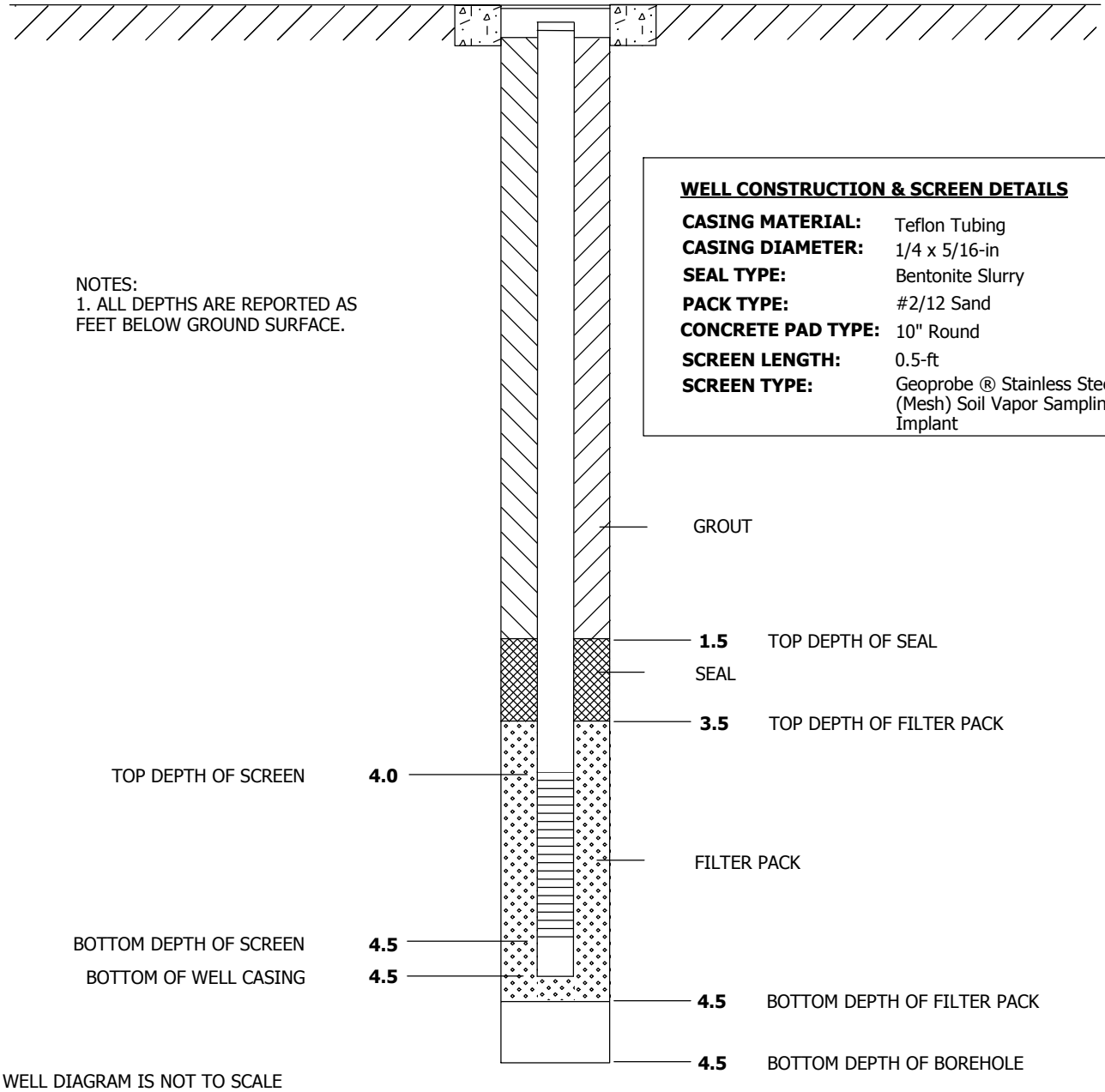
CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-04**
LOCATION: Oakland, CA (DC Yard)		

DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 09/24/2004 10:50:00 AM
DRILLING METHOD: Geoprobe	**DRILLING END:** ---
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/24/2004
GROUND SURFACE ELEVATION (NGVD 29): 11.57	**GENERAL REMARKS:** See soil boring log for RSB-04 for lithology

FLUSH MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Teflon Tubing
CASING DIAMETER:	1/4 x 5/16-in
SEAL TYPE:	Bentonite Slurry
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	10" Round
SCREEN LENGTH:	0.5-ft
SCREEN TYPE:	Geoprobe ® Stainless Steel (Mesh) Soil Vapor Sampling Implant

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

WELL DIAGRAM IS NOT TO SCALE

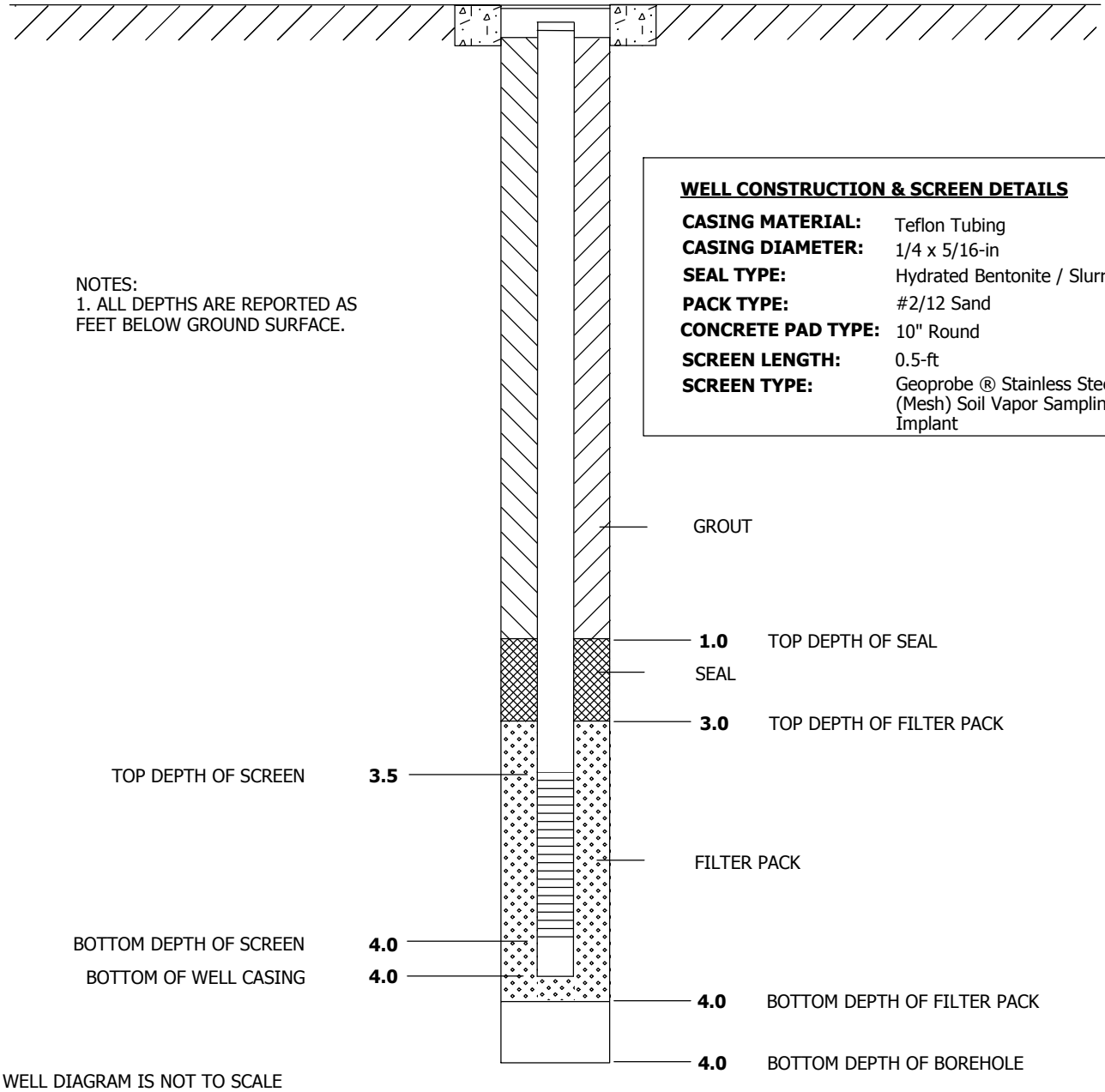
CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-05**
LOCATION: Oakland, CA (DC Yard)		

DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 09/24/2004 2:05:00 PM
DRILLING METHOD: Geoprobe	**DRILLING END:** 09/24/2004 2:30:00 PM
LOGGER: M. Cavaliere	**WELL COMPLETION DATE:** 09/24/2004
GROUND SURFACE ELEVATION (NGVD 29): 11.22	**GENERAL REMARKS:** See soil boring log for RSB-05 for lithology

FLUSH MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Teflon Tubing
CASING DIAMETER:	1/4 x 5/16-in
SEAL TYPE:	Hydrated Bentonite / Slurry
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	10" Round
SCREEN LENGTH:	0.5-ft
SCREEN TYPE:	Geoprobe ® Stainless Steel (Mesh) Soil Vapor Sampling Implant

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

WELL DIAGRAM IS NOT TO SCALE

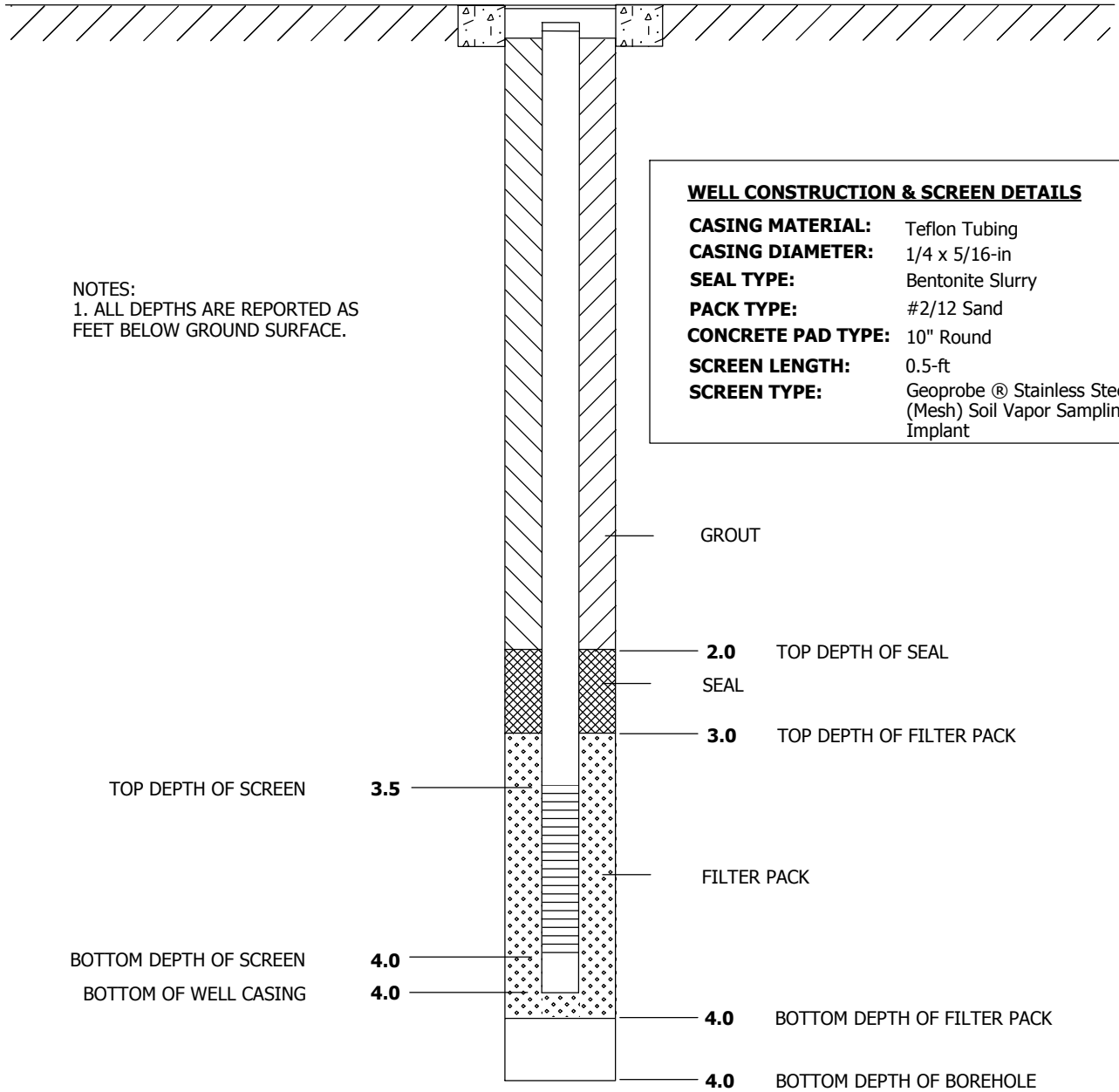
CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-06**
LOCATION: Oakland, CA (DC Yard)		

DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 09/30/2004 3:34:00 PM
DRILLING METHOD: Geoprobe	**DRILLING END:** ---
LOGGER: K. Ebel	**WELL COMPLETION DATE:** 09/30/2004
GROUND SURFACE ELEVATION (NGVD 29): 11.06	**GENERAL REMARKS:** ---

FLUSH MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Teflon Tubing
CASING DIAMETER:	1/4 x 5/16-in
SEAL TYPE:	Bentonite Slurry
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	10" Round
SCREEN LENGTH:	0.5-ft
SCREEN TYPE:	Geoprobe ® Stainless Steel (Mesh) Soil Vapor Sampling Implant

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

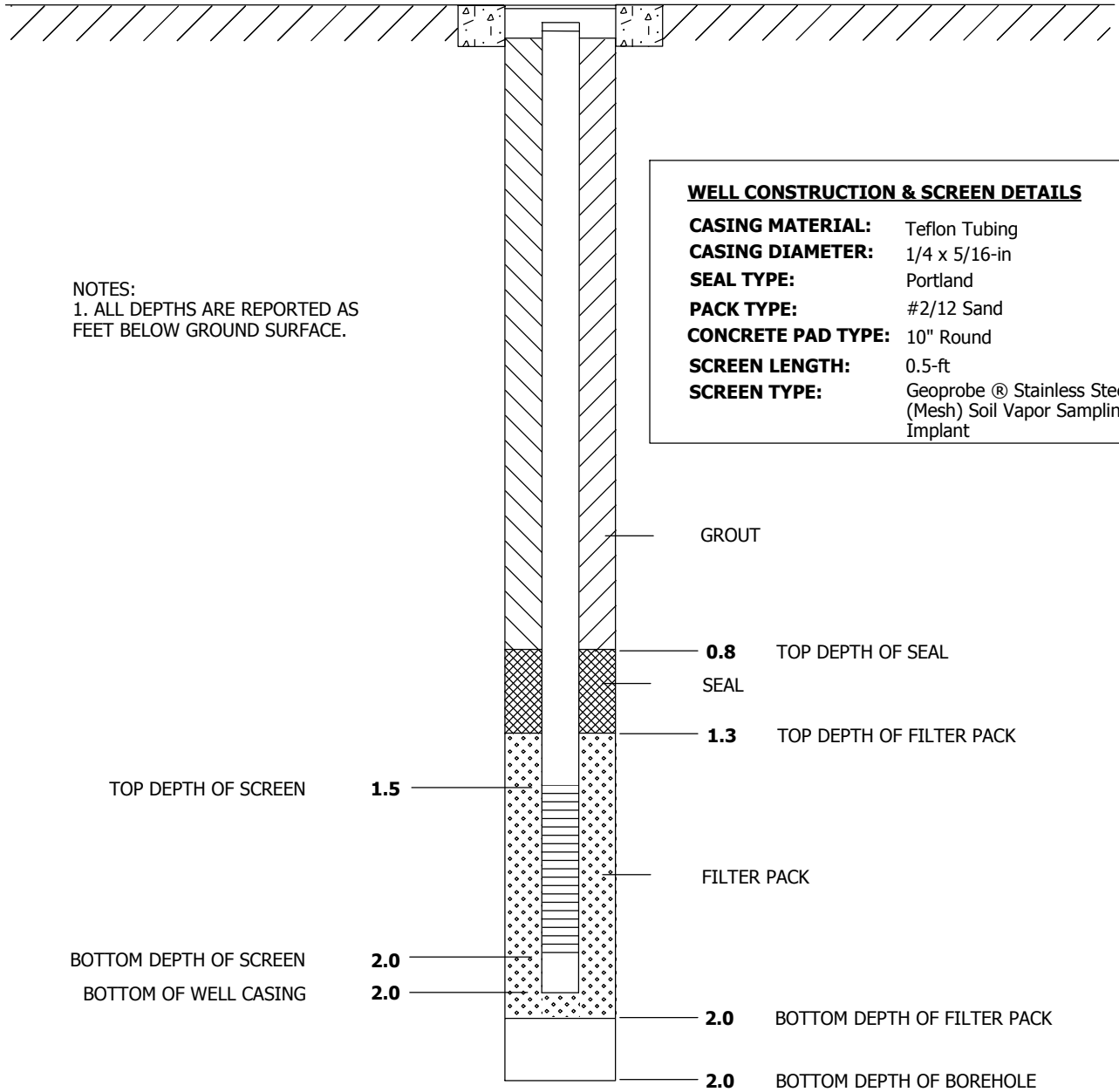
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-07**

LOCATION: Oakland, CA (Sidewalk in front of DC Metals Office)

DRILLING CONTRACTOR: ---	**DRILLING START:** 10/07/2004
DRILLING METHOD: ---	**DRILLING END:** 10/07/2004
LOGGER: M. Cavaliere / B. Frohlich	**WELL COMPLETION DATE:** 10/07/2004
GROUND SURFACE ELEVATION (NGVD 29): 9.53	**GENERAL REMARKS:** Probe installed in remediation "T" trench. 10" of concrete from sidewalk surface to 4" of coarse gravel. Below the gravel, blue-gray fill sand was encountered. 10" diameter concrete core to 10". PID in hole ~200 ppm, breating zone ~0.3 ppm

FLUSH MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Teflon Tubing
CASING DIAMETER:	1/4 x 5/16-in
SEAL TYPE:	Portland
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	10" Round
SCREEN LENGTH:	0.5-ft
SCREEN TYPE:	Geoprobe ® Stainless Steel (Mesh) Soil Vapor Sampling Implant

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

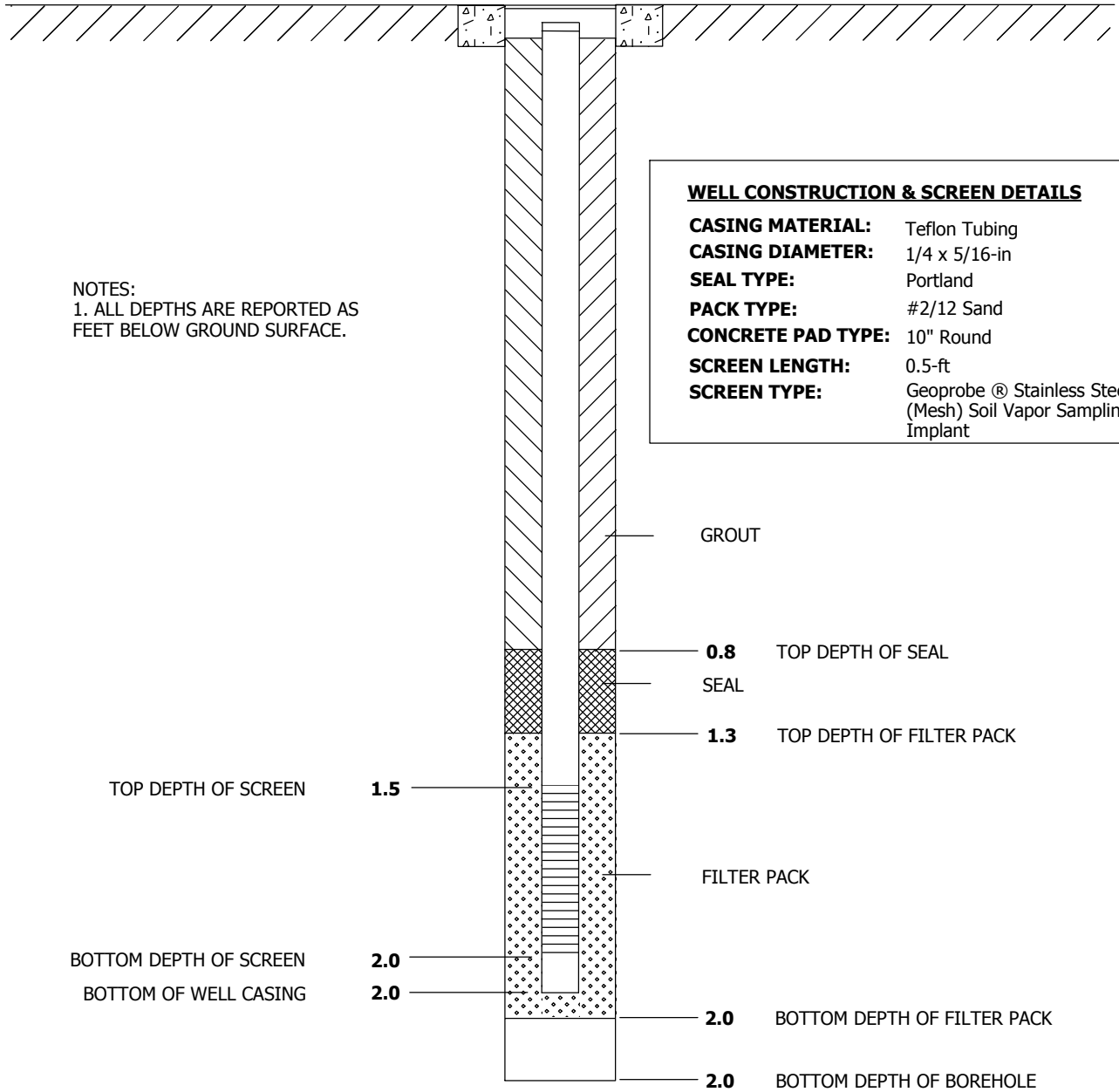
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-08**

LOCATION: Oakland, CA (Sidewalk in front of 1428 3rd St.)

DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 10/07/2004 9:20:00 AM
DRILLING METHOD: Concrete Core, Hand Auger	**DRILLING END:** 10/07/2004 11:55:00 AM
LOGGER: M. Cavaliere / B. Frohlich	**WELL COMPLETION DATE:** 10/08/2004
GROUND SURFACE ELEVATION (NGVD 29): 9.71	**GENERAL REMARKS:** Probe installed one foot into fine fill sand. First foot was a fine silty sand fill (sidewalk base). 10" concrete core to 4". PID 0 ppm in breathing zone.

FLUSH MOUNTED LOCKING WELL



WELL DIAGRAM IS NOT TO SCALE

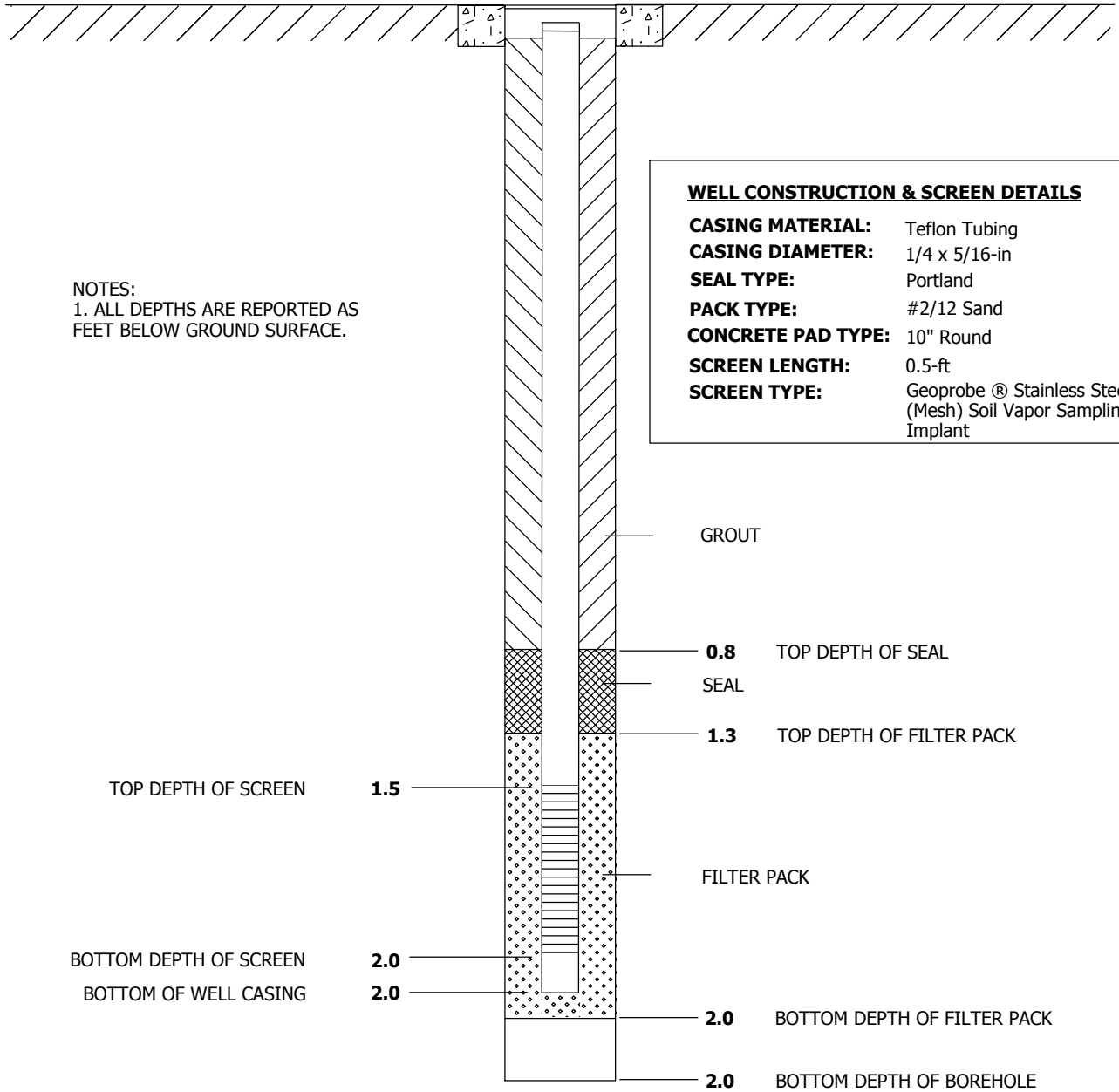
CH2MHILL

WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-09**
LOCATION: Oakland, CA (Sidewalk in front of 1436 3rd St.)		

DRILLING CONTRACTOR: Precision Sampling, Inc	**DRILLING START:** 10/07/2004 9:00:00 AM
DRILLING METHOD: Concrete Core, Hand Auger	**DRILLING END:** 10/07/2004 11:20:00 AM
LOGGER: M. Cavaliere / B. Frohlich	**WELL COMPLETION DATE:** 10/09/2004
GROUND SURFACE ELEVATION (NGVD 29): 9.52	**GENERAL REMARKS:** Probe installed one foot into fine fill sand. First foot was a fine silty sand fill (sidewalk base). 10" concrete core to 4". PID 0 ppm in breathing zone.

FLUSH MOUNTED LOCKING WELL



WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

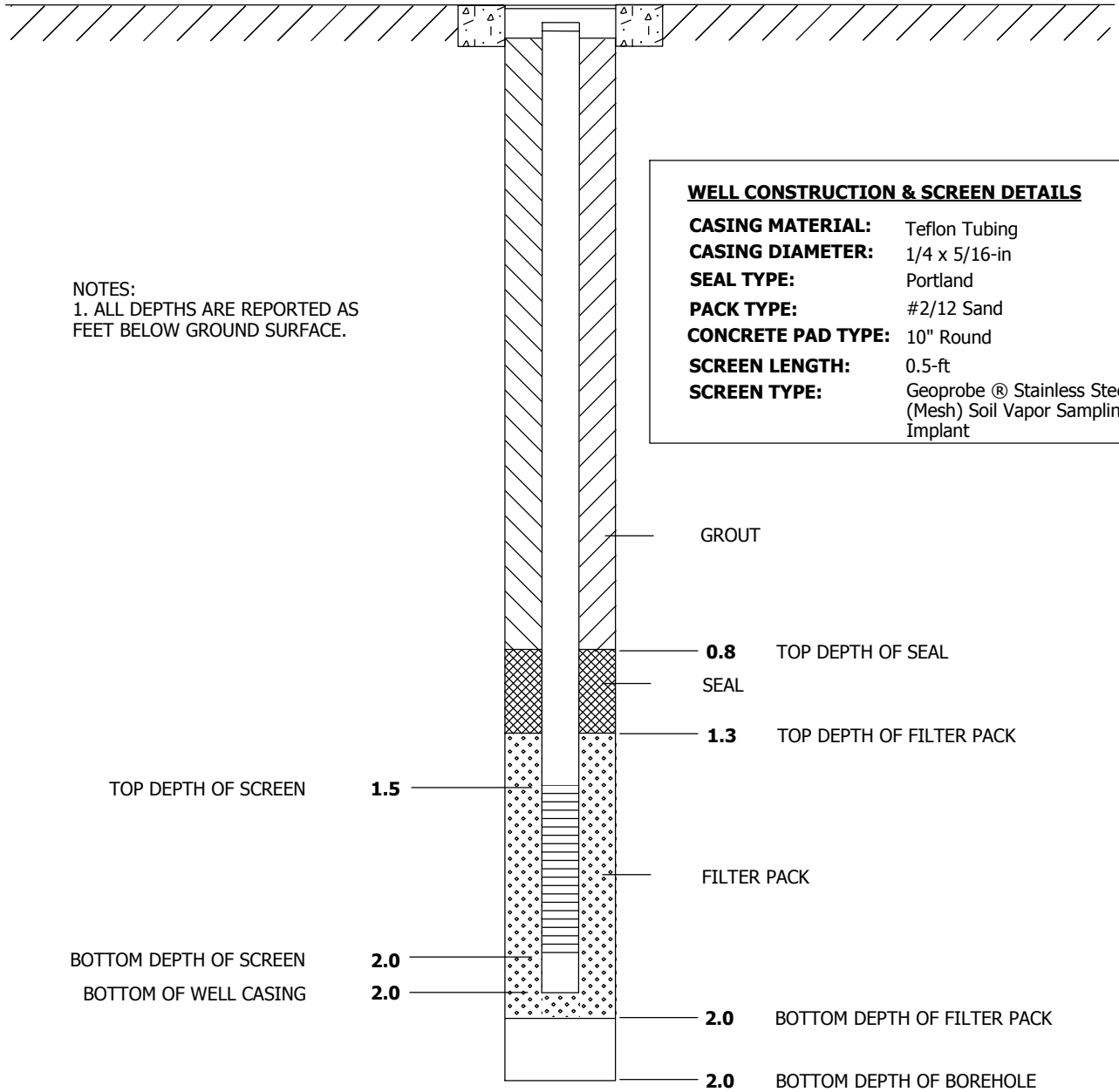
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-10**

LOCATION: Oakland, CA (Corner of 3rd and Center on Sidewalk in front of 1448 3rd St.)

DRILLING CONTRACTOR: Osbourne Concrete Drilling / Coring	**DRILLING START:** 10/07/2004 8:44:00 AM
DRILLING METHOD: Core	**DRILLING END:** 10/07/2004 10:30:00 AM
LOGGER: M. Cavaliere / B. Frohlich	**WELL COMPLETION DATE:** 10/10/2004
GROUND SURFACE ELEVATION (NGVD 29): 9.50	**GENERAL REMARKS:** Probe installed one foot into fine fill sand. First foot was a fine silty sand fill (sidewalk base). 10" concrete core to 4". PID 0.2 ppm in breathing zone.

FLUSH MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Teflon Tubing
CASING DIAMETER:	1/4 x 5/16-in
SEAL TYPE:	Portland
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	10" Round
SCREEN LENGTH:	0.5-ft
SCREEN TYPE:	Geoprobe ® Stainless Steel (Mesh) Soil Vapor Sampling Implant

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

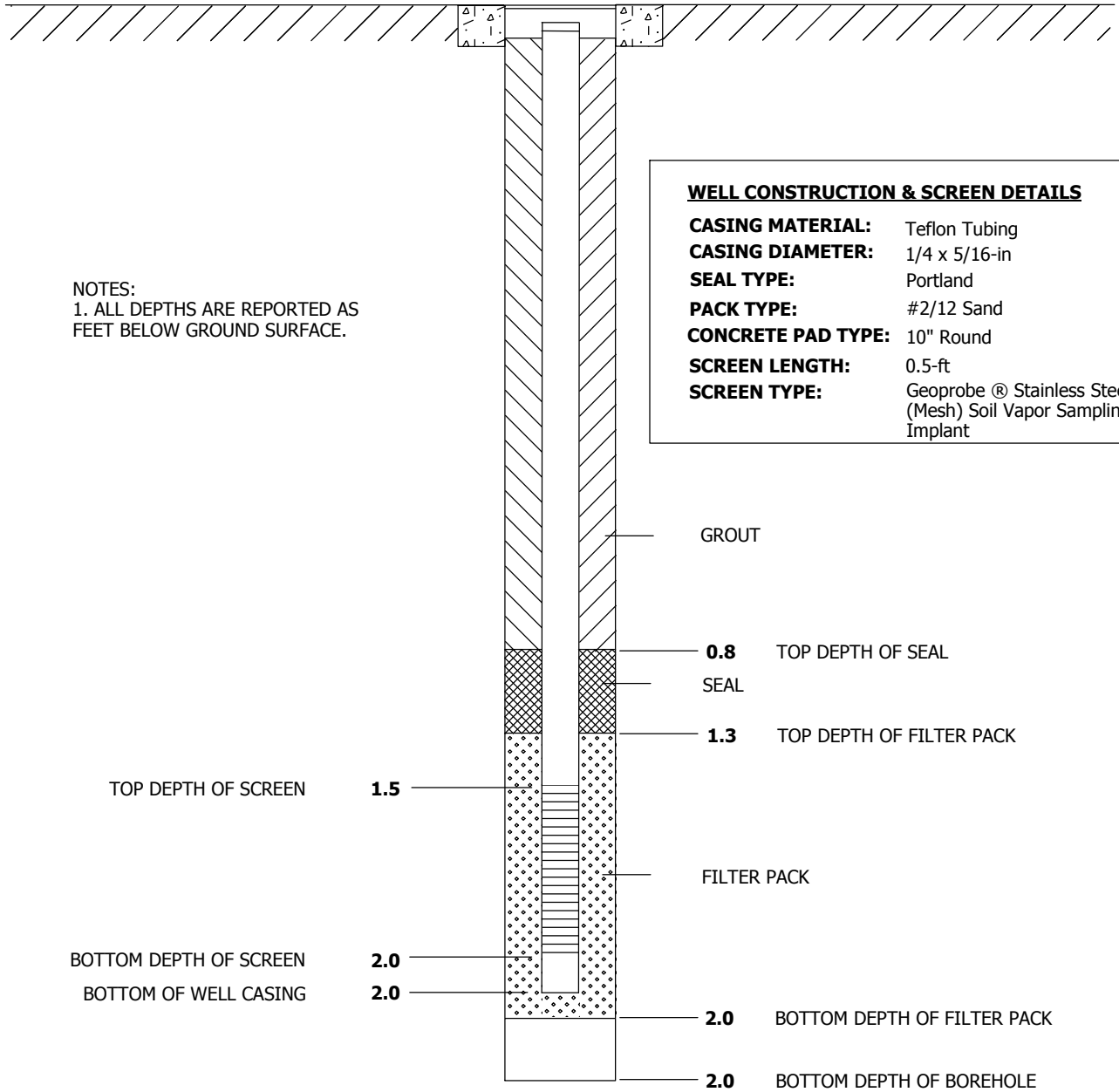
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-11**

LOCATION: Oakland, CA (320 Center St. over gas line)

DRILLING CONTRACTOR: Osbourne Concrete Drilling / Coring	**DRILLING START:** 10/07/2004 8:27:00 AM
DRILLING METHOD: Core	**DRILLING END:** 10/07/2004 9:45:00 AM
LOGGER: M. Cavaliere / B. Frohlich	**WELL COMPLETION DATE:** 10/11/2004
GROUND SURFACE ELEVATION (NGVD 29): 9.38	**GENERAL REMARKS:** Probe installed one foot into poorly graded fine-grained fill sand. Top foot was asphalt and road bed gravels. 10" concrete core through 5-6" of asphalt. PID reading .2-.3 ppm in breathing zone.

FLUSH MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Teflon Tubing
CASING DIAMETER:	1/4 x 5/16-in
SEAL TYPE:	Portland
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	10" Round
SCREEN LENGTH:	0.5-ft
SCREEN TYPE:	Geoprobe ® Stainless Steel (Mesh) Soil Vapor Sampling Implant

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

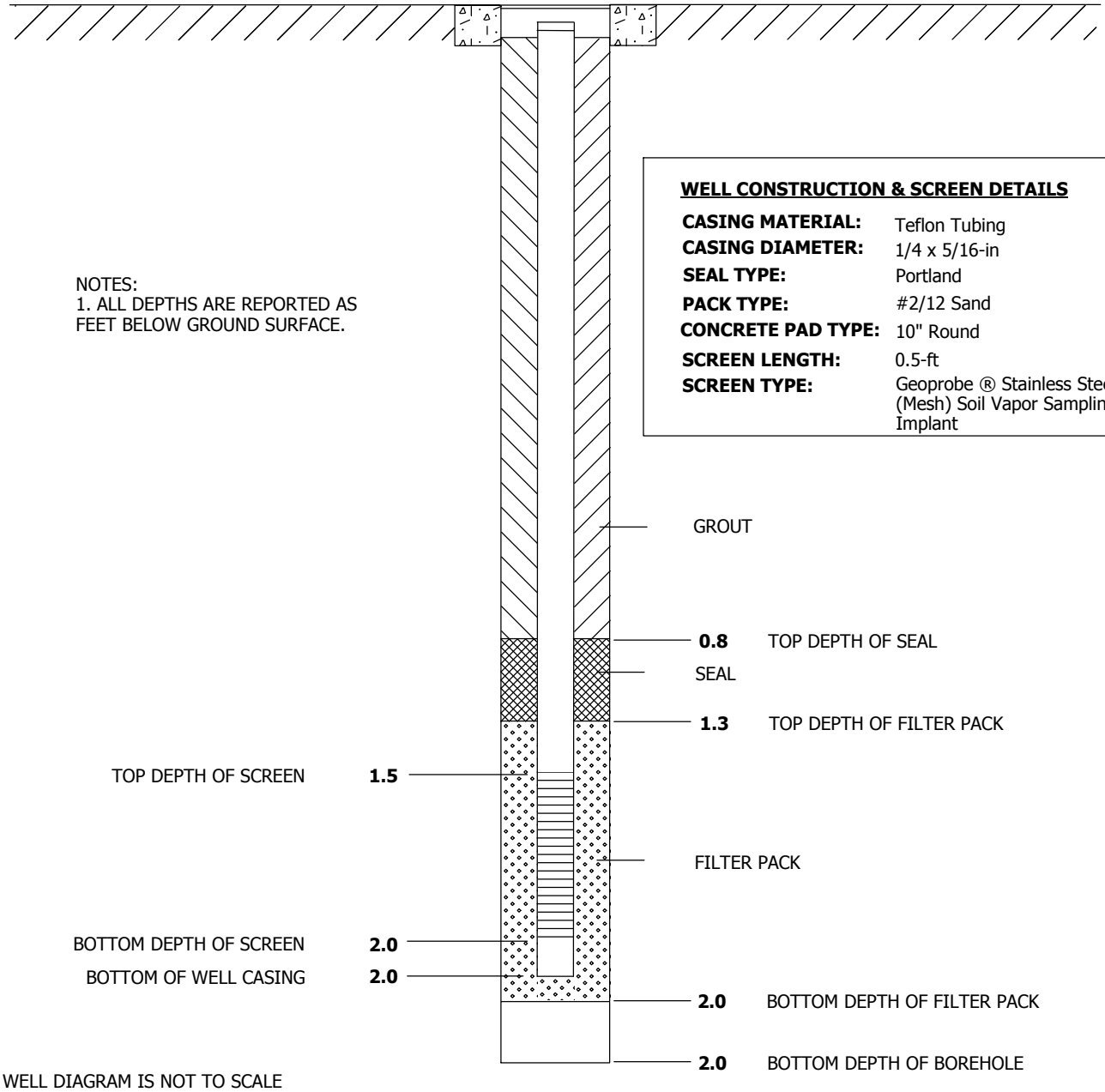
WELL COMPLETION DIAGRAM

PROJECT NO: 175868.FI.02	**PROJECT:** AMCO Superfund	**WELL NO:** **RSP-12**

LOCATION: Oakland, CA (328 Center St. over gas line)

DRILLING CONTRACTOR: Osbourne Concrete Drilling / Coring	**DRILLING START:** 10/07/2004 8:20:00 AM
DRILLING METHOD: Concrete Core, Hand Auger	**DRILLING END:** 10/07/2004 9:00:00 AM
LOGGER: M. Cavaliere / B. Frohlich	**WELL COMPLETION DATE:** 10/12/2004
GROUND SURFACE ELEVATION (NGVD 29): 9.54	**GENERAL REMARKS:** Probe installed one foot into poorly graded, fine-grained fill sand. Top foot was asphalt and road bed gravles. 10" concrete core through 4-6" of asphalt.

FLUSH MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	Teflon Tubing
CASING DIAMETER:	1/4 x 5/16-in
SEAL TYPE:	Portland
PACK TYPE:	#2/12 Sand
CONCRETE PAD TYPE:	10" Round
SCREEN LENGTH:	0.5-ft
SCREEN TYPE:	Geoprobe ® Stainless Steel (Mesh) Soil Vapor Sampling Implant

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

WELL DIAGRAM IS NOT TO SCALE

CH2MHILL

Well Construction Log

SP ENVIRONMENTAL SYSTEMS, INC.

Boring Location ADJACENT TANK PIT #1			**Boring/Well Name** MW-1
Drilling Company HEW DRILLING			**Project Name** 5TH & KIRKHAM
Drilling Method HOLLOW STEM AUGER	**Rig Type** CME 75		**Project Number** 05032
Hole Diameter 10 **In.**	**Driller** JEFF	**Date** 10/23/90	**Logged By** W. FLOYD
Ground Elevation	**Water Elevation**		**Total Depth** 22'

Well Construction Specifics

Screen Placement	from	5	ft.	to	22	ft.	Slot Size 0.020 inches	Diameter 4 inches	Completion Type:
Blank Casing	from	0	ft.	to	5	ft.	Schedule 40	Diameter 4 inches	Above Ground ___
Filter Pack	from	4	ft.	to	22	ft.	Size #3	Type SAND	At Grade X
Bentonite Pellets	from	3	ft.	to	4	ft.	Type VOLCLAY	Size 3/8 inches	Hydrated X yes ___ no
Cement/Bentonite	from	0	ft.	to	3	ft.	Type PORTLAND	Percent Bentonite 3	

Sample Number	Recov.	Blows / 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Color	Sample Description	FID/PID (ppm)
			1	BENTONITE/ CEMENT GROUT				3" ASPHALT CAP	
			2					1' OF SUBGRADE	
			3					SILTY SAND: DARK GREY TO BLACK, CONTAINS ASHES, BOTTLES, BRICKS, SHOES, ETC....., NO ODORS, SOFT.	
			4			SM			
MW-1 5'	100%	2 1 1	5	BENTONITE PELLETS					
			6						
			7			SP		SAND: YELLOWISH BROWN, NO ODORS, PLANT REMAINS, MEDIUM TO FINE GRAINED, MEDIUM DENSE POORLY GRADED.	
MW-1 8.5'	100%	4 8 10	8	FILTER PACK					
			9						
			10					SATURATED AT 10', NO ODORS	
			11	SCREENED PVC					
			12						
			13						
			14						
MW-1 15'	100%	4 7 8	15						

SA 008296

Well Construction Log

SP ENVIRONMENTAL SYSTEMS, INC.

Well Number MW-1 | **Project Number** 05032 | **Project Name** 5TH & KIRKHAM

Sample Number	Recov.	Blows / 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Color	Sample Description	FID/PID (ppm)
MW-1 20'	100%	7 12 13	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35			SP		SAME	

SA 008297

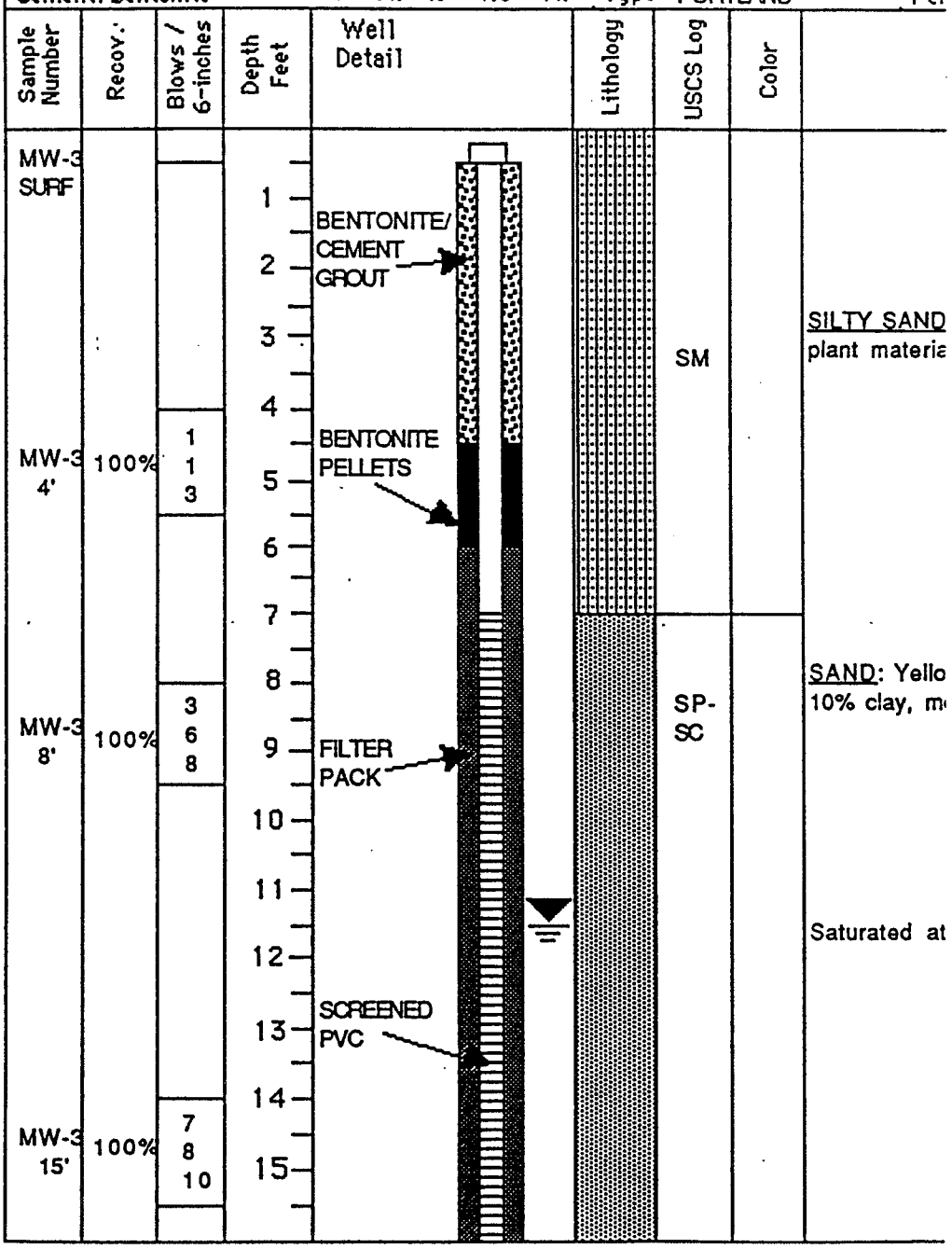
Well Construction Log

SP ENVIRONM

Boring Location	ADJACENT TANK PIT #3				**Boring/**
Drilling Company	HEW DRILLING				**Project**
Drilling Method	HOLLOW STEM AUGER	**Rig Type**	CME 55		**Project**
Hole Diameter	**In.**	**Driller**	ANIBAL	**Date** 11/1/90	**Logged B**
Ground Elevation		**Water Elevation**			**Total De**

Well Construction Specifics

Screen Placement	from	7	ft.	to	22	ft.	Slot Size	0.020	inches	Dia
Blank Casing	from	0	ft.	to	7	ft.	Schedule	40		Dia
Filter Pack	from	6	ft.	to	22	ft.	Size	#3		Typ
Bentonite Pellets	from	4.5	ft.	to	6	ft.	Type	VOLCLAY		Siz
Cement/Bentonite	from	0	ft.	to	4.5	ft.	Type	PORTLAND		Per



Well Construction Log

SP ENVIRONMENTAL SYSTEMS, INC.

Well Number MW-3 | **Project Number** 05032 | **Project Name** 5TH & KIRKHAM

Sample Number	Recov.	Blows / 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Color	Sample Description	FID/PID (ppm)
MW-3 20'	100%	4 8 9	17–35			SP-SC		SAME	

SA 008299

Well Construction Log

SP ENVIRONMENTAL SYSTEMS, INC.

Boring Location ADJACENT TO TANK PIT #4			**Boring/Well Name** MW-4
Drilling Company HEW DRILLING			**Project Name** 5TH & KIRKHAM
Drilling Method HOLLOW STEM AUGER	**Rig Type** CME 75		**Project Number** 05032
Hole Diameter 10 **In.**	**Driller** JEFF	**Date** 10/24/90	**Logged By** W. FLOYD
Ground Elevation	**Water Elevation**		**Total Depth** 22'

Well Construction Specifics

Screen Placement	from	7	ft.	to	22	ft.	Slot Size 0.020 inches		Diameter 4 inches		Completion Type:	
Blank Casing	from	0	ft.	to	7	ft.	Schedule 40		Diameter 4 inches		Above Ground ___	
Filter Pack	from	6	ft.	to	22	ft.	Size #3		Type SAND		At Grade X	
Bentonite Pellets	from	5	ft.	to	6	ft.	Type VOLCLAY		Size 3/8 inches		Hydrated X yes ___ no	
Cement/Bentonite	from	0	ft.	to	5	ft.	Type PORTLAND		Percent Bentonite 3			

Sample Number	Recov.	Blows / 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Color	Sample Description	FID/PID (ppm)
			1	BENTONITE/ CEMENT GROUT		AF		4" CONCRETE CAP 1.5' OF SILTY GRAVEL SUBGRADE	
			2					SILTY SAND; DARK GREY, NO ODORS, LOOSE, MOIST.	
			3			SM			
			4						
MW4 4'	100%	1 1 3	5						0
			6	BENTONITE PELLETS		SP-SC		SAND; BROWN, MEDIUM GRAINED, PLANT REMAINS, NO ODOR, POORLY GRADED, 10% CLAY.	
			7						
			8						
			9					YELLOWISH BROWN, MEDIUM DENSE, SOME ROOT HAIRS.	
MW4 8'	30%	6 8 10	10	SCREENED PVC					
			11						
			12	FILTER PACK					
			13						
			14						
		8 7 6	15						

SA 008300

Well Construction Log

SP ENVIRONMENTAL SYSTEMS, INC.

Well Number MW-4 | **Project Number** 05032 | **Project Name** 5TH & KIRKHAM

Sample Number	Recov.	Blows / 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Color	Sample Description	FID/PID (ppm)
MW-4 20'	100%	8 8 12	17–35			SP-SC		SAME	

Well Construction Log

SP ENVIRONMENTAL SYSTEMS, INC.

Boring Location	Eastern side of property			**Boring/Well Name**	MW-6
Drilling Company	HEW Drilling			**Project Name**	5TH & KIRKHAM
Drilling Method	Hollow Stem Auger	**Rig Type**	CME 75	**Project Number**	05032
Hole Diameter	10" In.	**Driller**	Jeff	**Date** 10/23/90	**Logged By** W. FLOYD
Ground Elevation		**Water Elevation**		**Total Depth**	29'

Well Construction Specifics

Screen Placement	from	9	ft. to	29	ft.	Slot Size	0.020 inches	Diameter	4 inches	Completion Type:	
Blank Casing	from	0	ft. to	9	ft.	Schedule	40	Diameter	4 inches	Above Ground	___
Filter Pack	from	8	ft. to	29	ft.	Size	#3	Type	SAND	At Grade	X
Bentonite Pellets	from	6.5	ft. to	8	ft.	Type	VOLCLAY	Size	3/8 inches	Hydrated	X yes ___ no
Cement/Bentonite	from	0	ft. to	6.5	ft.	Type	PORTLAND	Percent Bentonite	3		

Sample Number	Recov.	Blows / 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Color	Sample Description	FID/PID (ppm)
			1			AF		4" ASPHALT CAP	
			2	BENTONITE/ CEMENT GROUT				1.5' OF SILTY GRAVEL SUBGRADE	
			3			SM		SILTY SAND; DARK GREY, NO ODORS, LOOSE	
MW-6 5'	100%	6 3 3	4						
			5						
			6						
			7	BENTONITE PELLETS		CH		BAY MUD; DARK GREY, STRONG SULFIDE ODOR, VERY SOFT, HIGHLY PLASTIC, FIBROUS PLANT REMAINS	
			8						
			9						
MW-6 10'	100%	0 0 0	10	FILTER PACK					
			11						
			12						
			13	SCREENED PVC		SP-SC		SAND; MEDIUM TO FINE GRAINED, DARK GREY, LOOSE, SOME PLANT REMAINS, POORLY GRADED, SATURATED.	
			14						
MW-6 15'	100%	1 2 1	15						

Well Construction Log

SP ENVIRONMENTAL SYSTEMS, INC.

Well Number MW-6 | **Project Number** 05032 | **Project Name** 5TH & KIRKHAM

Sample Number	Recov.	Blows / 6-inches	Depth Feet	Well Detail	Lithology	USCS Log	Color	Sample Description	FID/PID (ppm)
			17						
			18			SP-SC		COLOR CHANGE AT 20' TO YELLOWISH BROWN.	
			19						
MW-6 20'	100%	2 2 2	20						
			21						
			22						
			23						
			24			SC		DENSER	
MW-6 25'	100%	16 21	25						
			26						
			27						
			28						
			29						
MW-6 30'	100%	18 26	30						
			31						
			32						
			33						
			34						
			35						

SA 008303

ERM
1777 Botelho Drive
Suite 260
Walnut Creek, California 94596
(925) 946-0455

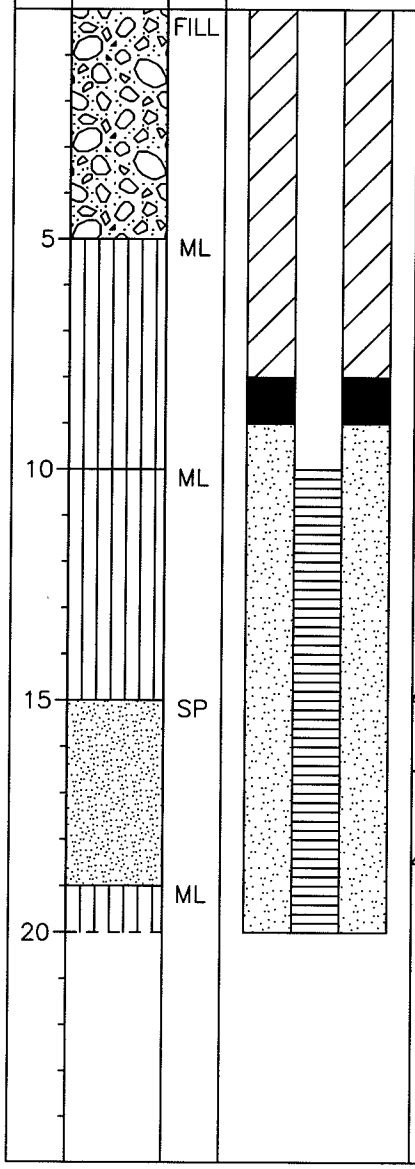
BOREHOLE LOG

Site Id: MW-7

Project Number: 8040.14
Project Name: Bobo's
Location: 1401 Third Street, Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hollow Stem Auger
Logged By: K. Fox-Dobbs, J. Tundermann
Date(s): 12/11/00

Total Depth: 20.00'
Completed Depth: 20.00'
Borehole Dia.: 8.00in

Blank Casing:				
type: Sch 40 PVC		dia: 2.00in	fm: 0.0'	to: 10.00'
Screens:				
type: Slotted	size: 0.020in	dia: 2.00in	fm: 10.00'	to: 20.00'
Annular Fill:				
type: Grout			fm: 0.00'	to: 8.00'
type: Bentonite Seal			fm: 8.00'	to: 9.00'
type: Sand Filter (Lonestar #2/12)			fm: 9.00'	to: 20.00'



Sample Recovery	Recovery	PID (ppm)	Description/Soil Classification
HAND AUGER		0.0	SILTY SAND/GRAVEL (FILL): brown gray.
	NO REC.	0.0	SILT (ML): dark brown, some organics, dry.
	NO REC.	0.0	CLAYEY SILT (ML): brown gray, sandy, iron oxide present, slightly moist.
	NO REC.	0.0	SAND (SP): brown, fine grained, increasing clay with depth, moist.
		0.0	SANDY SILT (ML): brown, moist. Bottom of Boring - 20.0'

ERM
1777 Botelho Drive
Suite 260
Walnut Creek, California 94596
(925) 946-0455

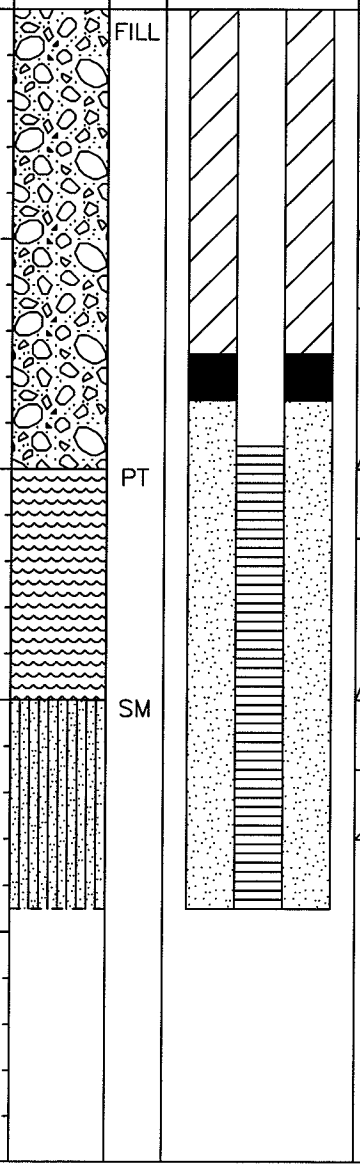
BOREHOLE LOG

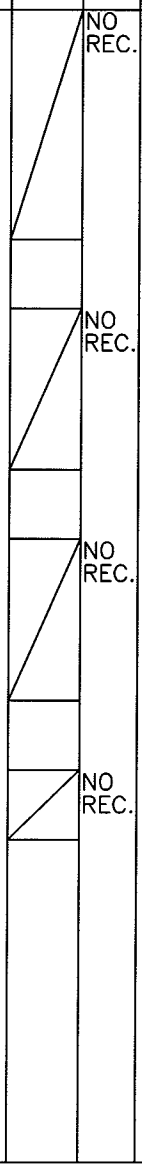
Site Id: MW-8

Project Number: 8040.14
Project Name: Bobo's
Location: 1401 Third Street, Oakland, California
Contractor: Gregg Drilling
Drilling Method: Hollow Stem Auger
Logged By: K. Fox-Dobbs, J. Tundermann
Date(s): 12/11/00

Total Depth: 19.50'
Completed Depth: 19.50'
Borehole Dia.: 8.00in

Blank Casing: type: Sch 40 PVC		dia: 2.00in	fm: 0.0'	to: 9.50'
Screens: type: Slotted	size: 0.020in	dia: 2.00in	fm: 9.50'	to: 19.50'
Annular Fill: type: Grout			fm: 0.00'	to: 7.50'
type: Bentonite Seal			fm: 7.50'	to: 8.50'
type: Sand Filter (Lonestar #2/12)			fm: 8.50'	to: 19.50'



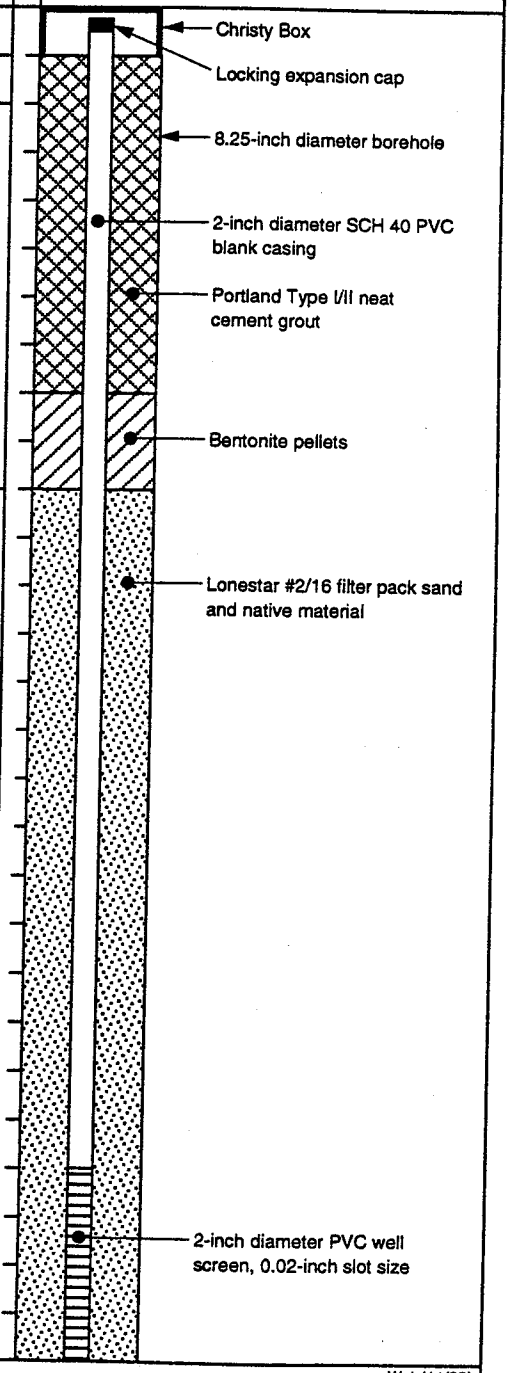


PID (ppm)	Description/Soil Classification
	SILTY SAND/GRAVEL (FILL): brown.
0.0	GRAVELLY SILT (FILL): brown, ceramic chips, wood fragments, glass chips.
70	PEAT (Pt): black to blue gray, organic material, hydrogen sulfide odor.
0.0	SILTY SAND (SM): blue gray, very fine grained, moist.
0.0	SILTY SAND (SM): as above.
	Bottom of Boring - 19.5'

PROJECT: I-880 Oakland, California	**Log of Piezometer No. P-1**
BORING LOCATION: Bobo's Junkyard	ELEVATION AND DATUM: N/A
DRILLING CONTRACTOR: Gregg Drilling and Testing	DATE STARTED: 3/3/95 / DATE FINISHED: 3/3/95
DRILLING METHOD: Hollow stem auger	TOTAL DEPTH: 18 feet / SCREEN INTERVAL: 12' - 17'
DRILLING EQUIPMENT: Mobile Drill B-61	DEPTH TO WATER ATD: 4 feet / CASING: 2-inch SCH 40 PVC
SAMPLING METHOD: 5-foot continuous core	LOGGED BY: C. F. Rome
HAMMER WEIGHT: N/A / DROP: N/A	RESPONSIBLE PROFESSIONAL: Gary Foote / REG. NO. RG 5044

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION (NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.)
					Surface Elevation:
					CONCRETE
1					POORLY GRADED GRAVEL with SILT and SAND (GP - GM) Black (2.5Y 2/0), moist, 60% gravel, subangular, to 2 inches diameter, 30% fine to coarse sand, 10% low plasticity fines
2					
3					POORLY GRADED SAND (SP) Dark gray (2.5Y 4/0), moist, 85% fine to coarse sand, 10% fine gravel, 5% fines
4					Wet
5					SILTY SAND (SM) Black (2.5Y 2/0), wet, 70% fine to medium sand, 30% low plasticity fines
6					
7					LEAN CLAY (CL) Gley (5GY 4/1), moist, 100% fines, low plasticity, root fragments
8					
9					Peat, dark brown (10YR 3/3), wet, 100% fines and organics
					Color change to black (2.5Y 2/10)
10					POORLY GRADED SAND with SILT (SP - SM) Black (2.5Y 2/0), wet, 90% fine to medium sand, 10% low plasticity fines
11					
12					POORLY GRADED SAND (SP) Gley (5G 4/1), wet, 95% fine to medium sand, 5% fines
13					
14					

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



PROJECT: I-880
Oakland, California

Log of Piezometer No. P-1 (cont.)

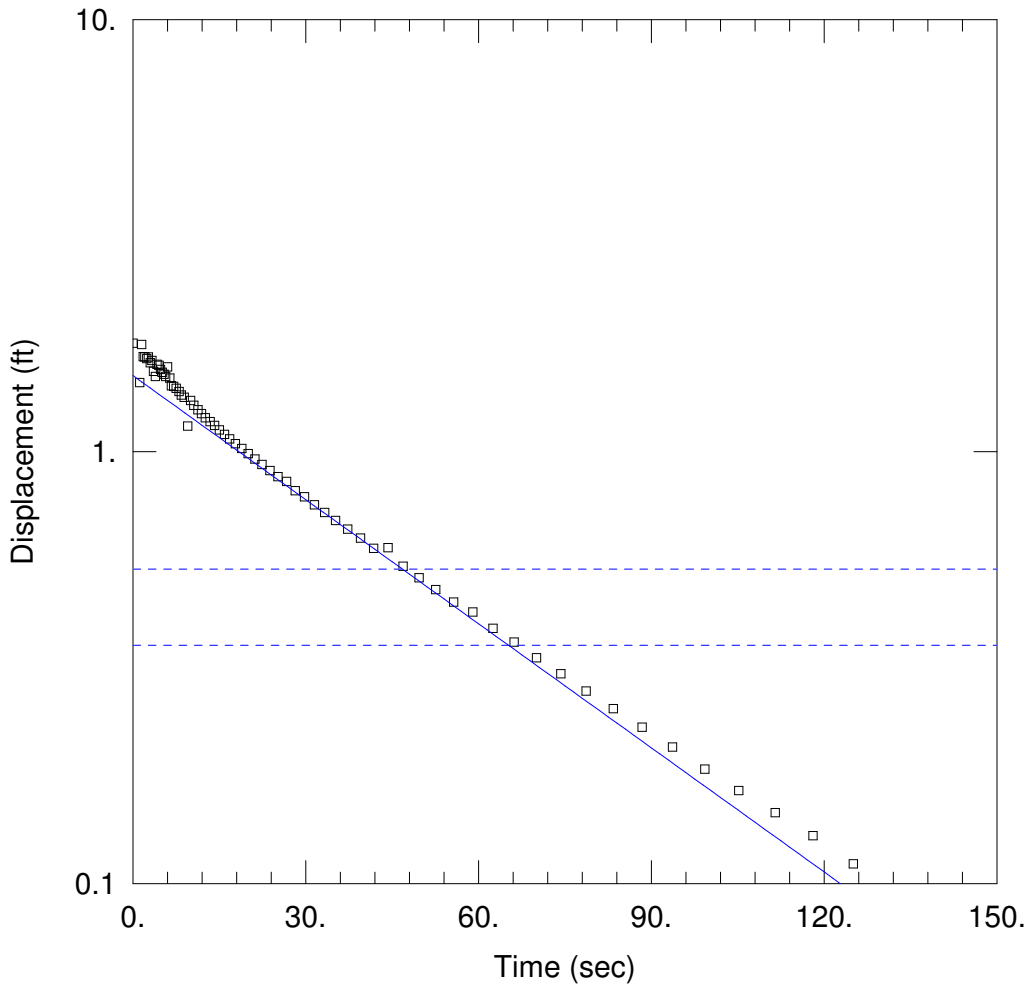
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
15					POORLY GRADED SAND (SP) (continued)	8.25-inch diameter borehole; Lonestar #2/16 filter pack sand
16						
17						2-inch diameter PVC well screen, 0.02-inch slot size; PVC threaded end cap
18					Bottom of boring at 18 feet bgs	
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

W-2 (11/92)

2686L.002

Geomatrix Consultants | Project No. 2686L | Figure ---

Aquifer Test Data



IN 1

Data Set: \...\RMW-07-15_in_1.aqt
Date: 10/10/07 Time: 13:00:52

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-07-15
Test Date: 4/12/05

AQUIFER DATA

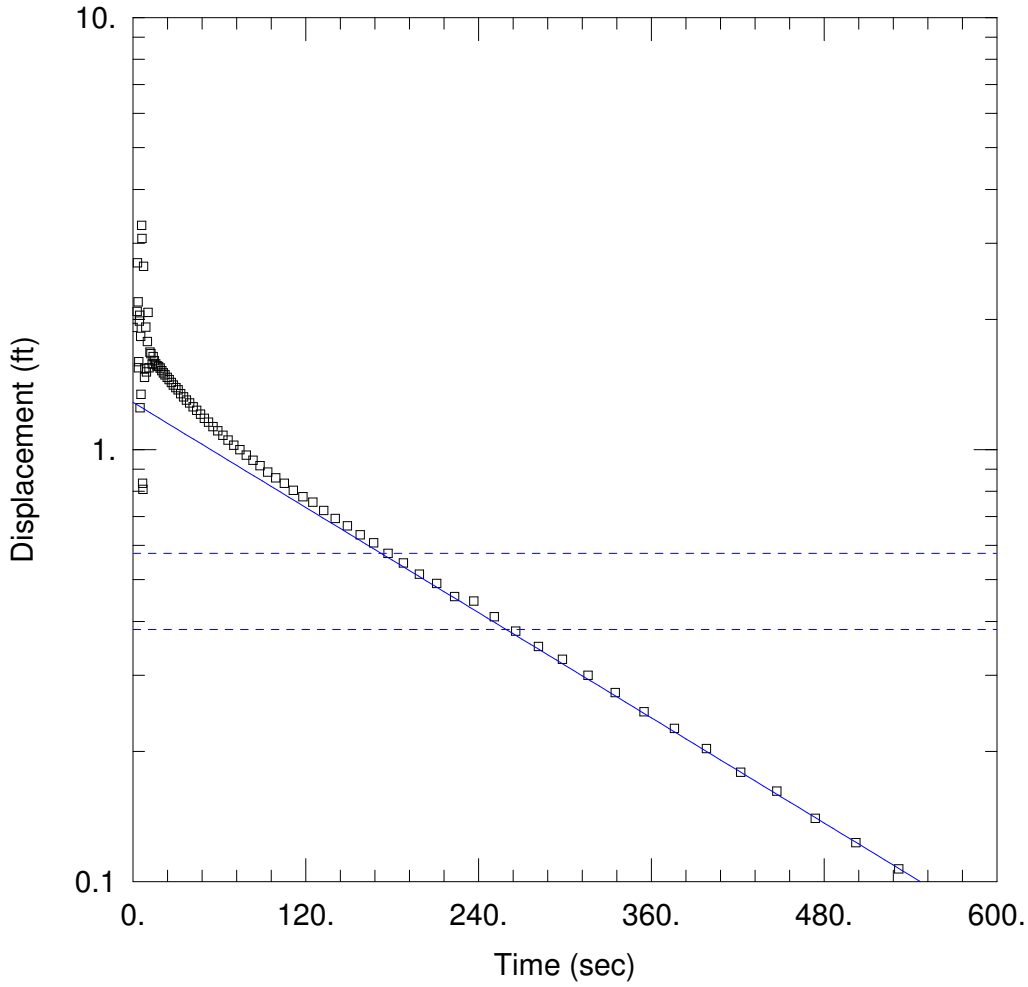
Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RMW-07-15-i1)

Initial Displacement: 1.781 ft Static Water Column Height: 11.54 ft
Total Well Penetration Depth: 11.54 ft Screen Length: 10. ft
Casing Radius: 0.0833 ft Wellbore Radius: 0.0833 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.0007671 cm/sec y0 = 1.498 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-07-15_in_2.aqt
Date: 10/05/07 Time: 15:12:37

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO
Test Well: RMW-07-15-i2
Test Date: 4/12/05

AQUIFER DATA

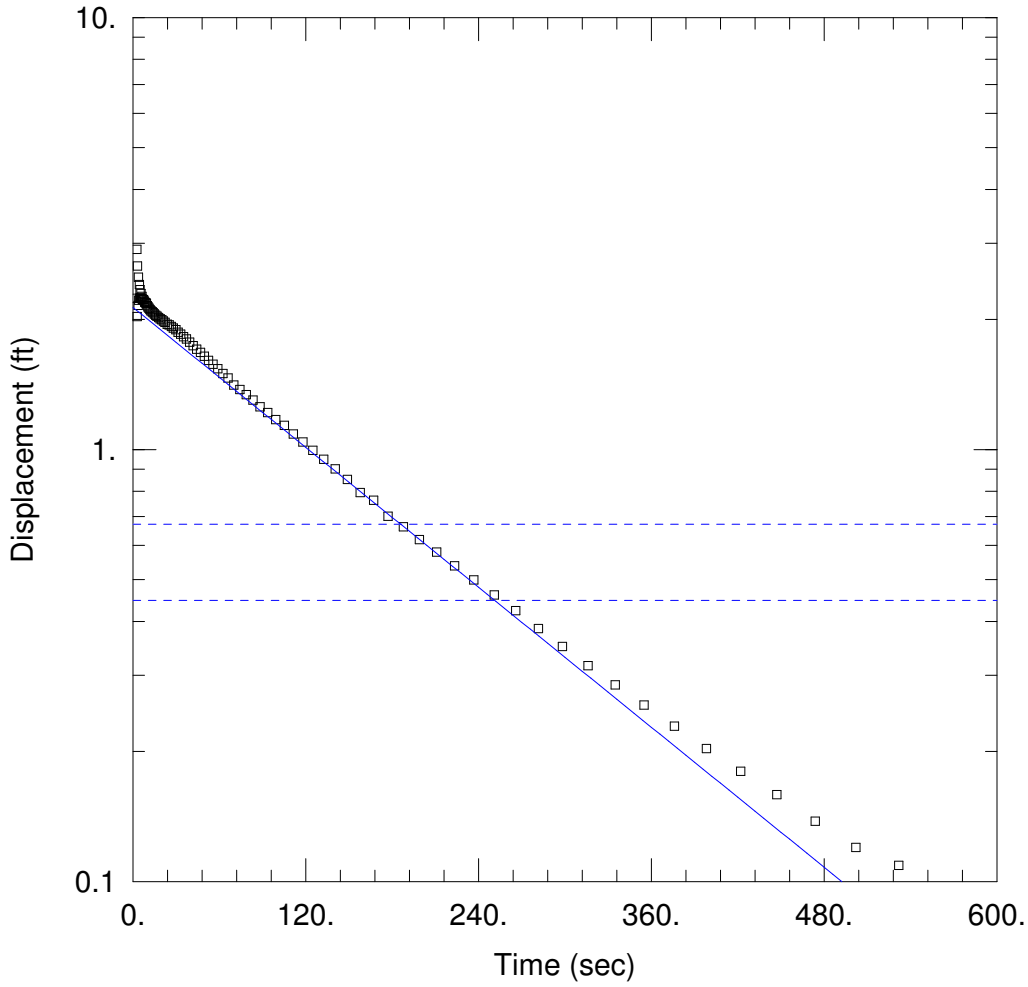
Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RMW-07-15)

Initial Displacement: 1.916 ft
Total Well Penetration Depth: 11.54 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 11.54 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0001627 cm/sec
y0 = 1.286 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-07-15_out_1.aqt
Date: 10/05/07 Time: 15:11:39

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-07-15-o1
Test Date: 4/12/2005

AQUIFER DATA

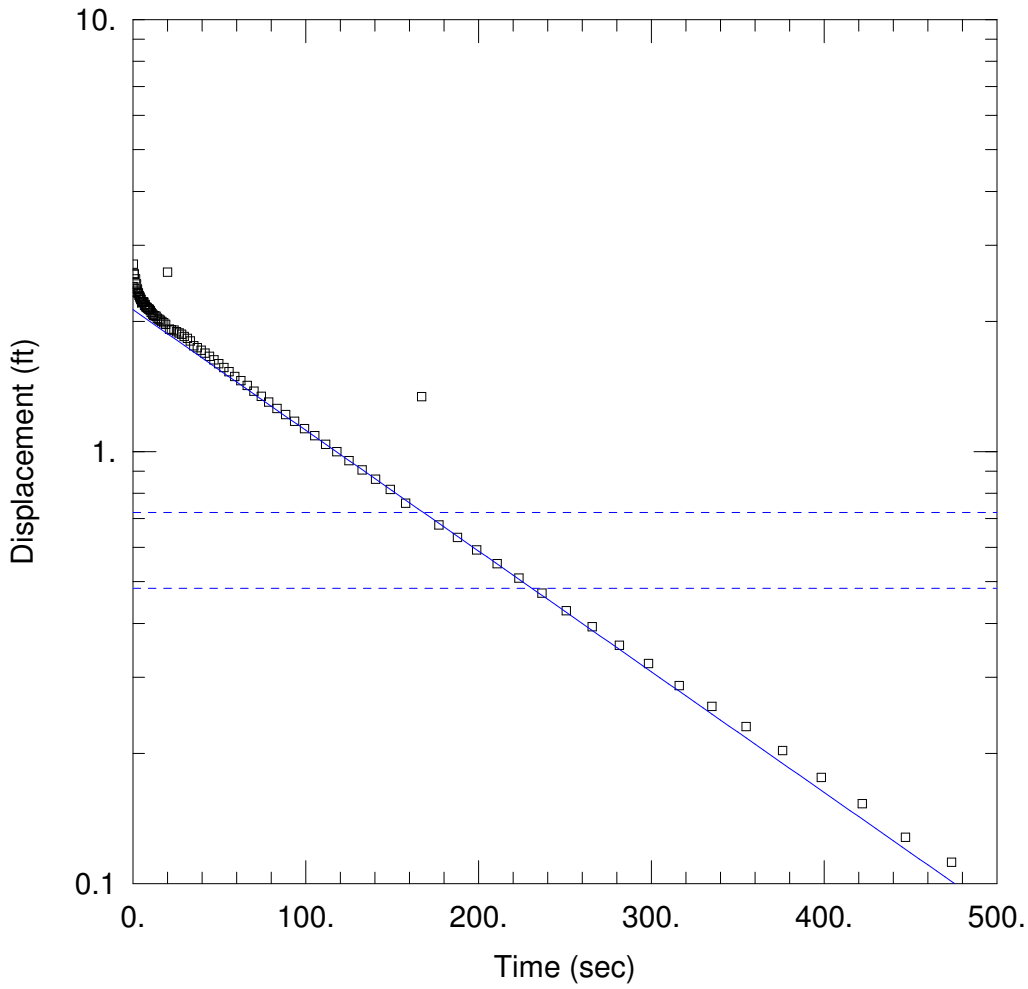
Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RMW-07-15)

Initial Displacement: 2.238 ft Static Water Column Height: 11.54 ft
Total Well Penetration Depth: 11.54 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.0002164 cm/sec y0 = 2.132 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-07-15_out_2.aqt
Date: 10/05/07 Time: 15:13:07

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-07-15-o2
Test Date: 4/12/2005

AQUIFER DATA

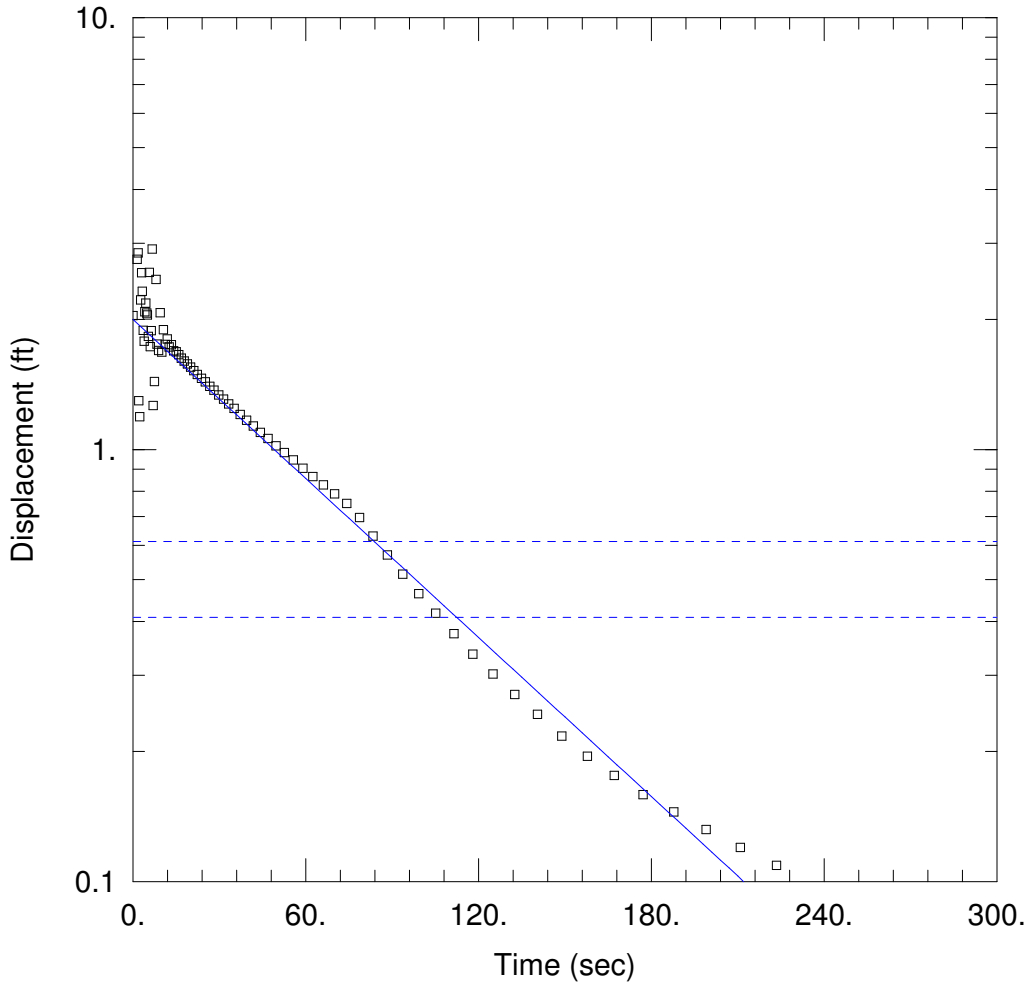
Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RMW-07-15)

Initial Displacement: 2.41 ft Static Water Column Height: 11.54 ft
Total Well Penetration Depth: 11.54 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.000224 cm/sec y0 = 2.13 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-08-15_in_1.aqt
Date: 10/05/07 Time: 15:13:58

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-08-15-i1
Test Date: 4/13/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

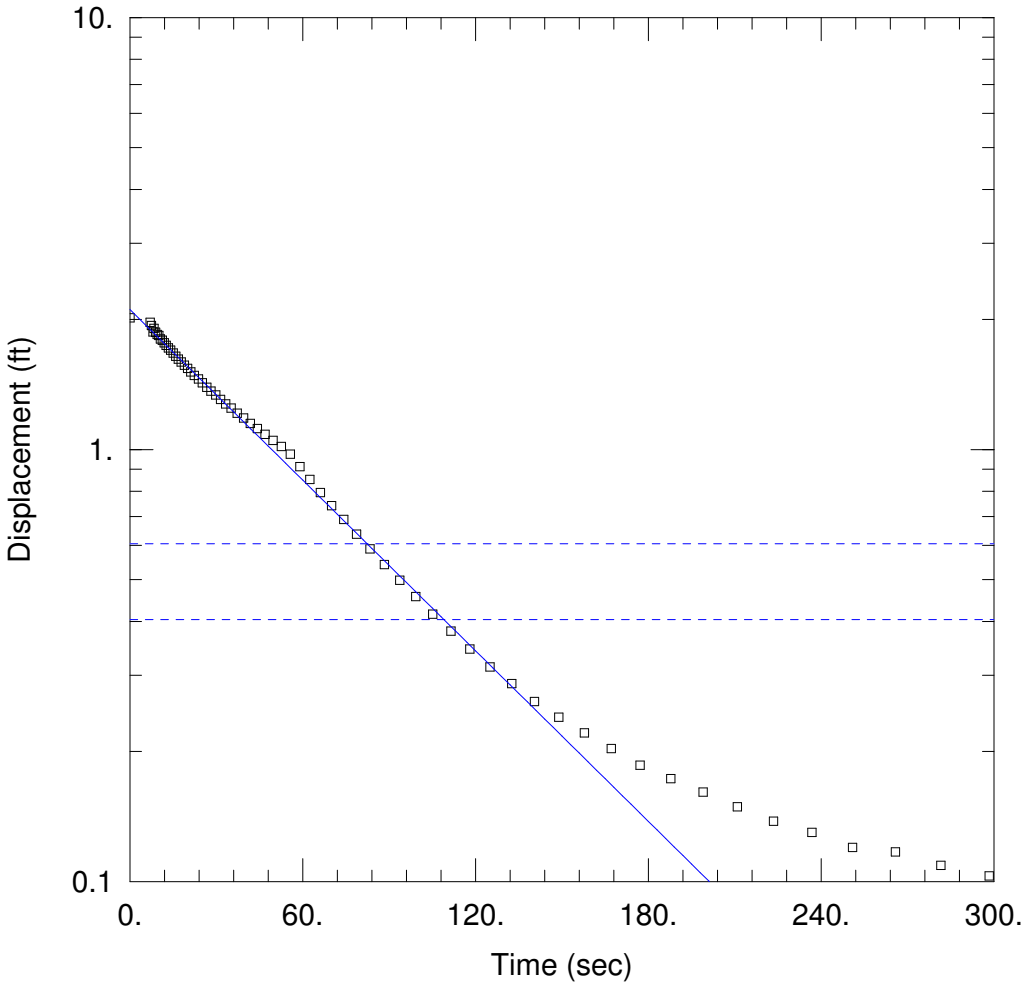
WELL DATA (RMW-08-15in1)

Initial Displacement: 2.043 ft
Total Well Penetration Depth: 10.42 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 10.42 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0004843 cm/sec y0 = 1.999 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-08-15_in_2.aqt
Date: 10/05/07 Time: 15:14:40

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-08-15-in2
Test Date: 4/13/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

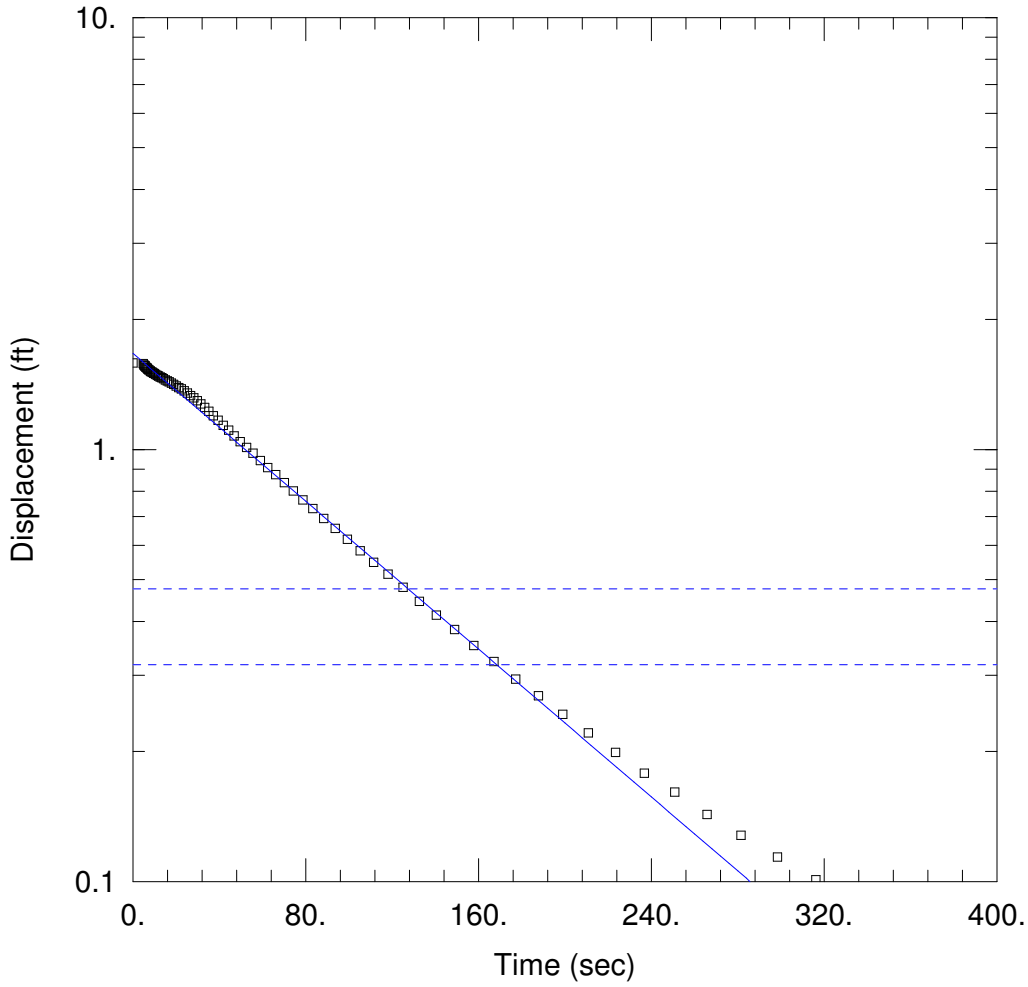
WELL DATA (RMW-08-15-i2)

Initial Displacement: 2.018 ft Static Water Column Height: 10.42 ft
Total Well Penetration Depth: 10.42 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0005196 cm/sec y0 = 2.108 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-08-15_out_1.aqt
Date: 10/05/07 Time: 15:15:30

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-08-15-o1
Test Date: 4/12/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

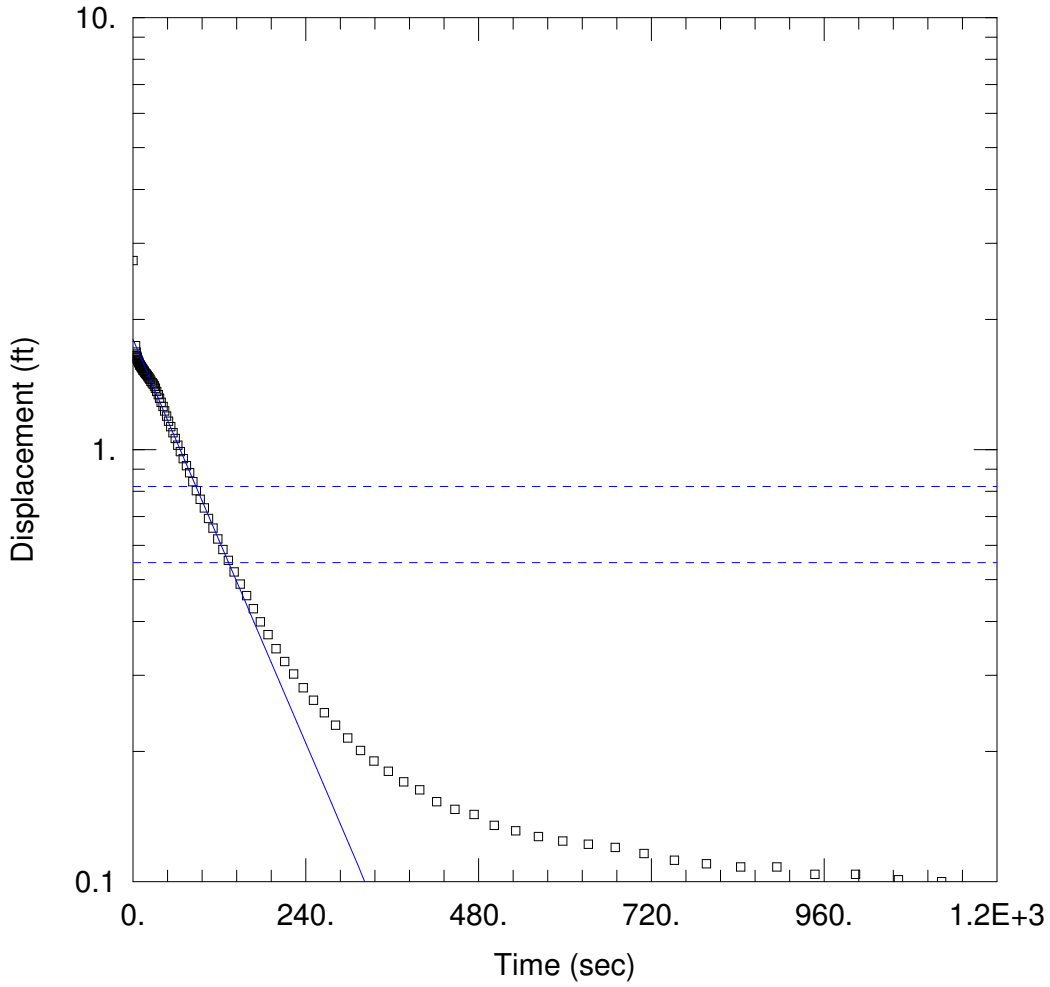
WELL DATA (RMW-08-15-o1)

Initial Displacement: 1.587 ft Static Water Column Height: 10.42 ft
Total Well Penetration Depth: 10.42 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003377 cm/sec y0 = 1.669 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-08-15_out_2.aqt
Date: 10/05/07 Time: 15:15:09

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-08-15-o2
Test Date: 4/13/2005

AQUIFER DATA

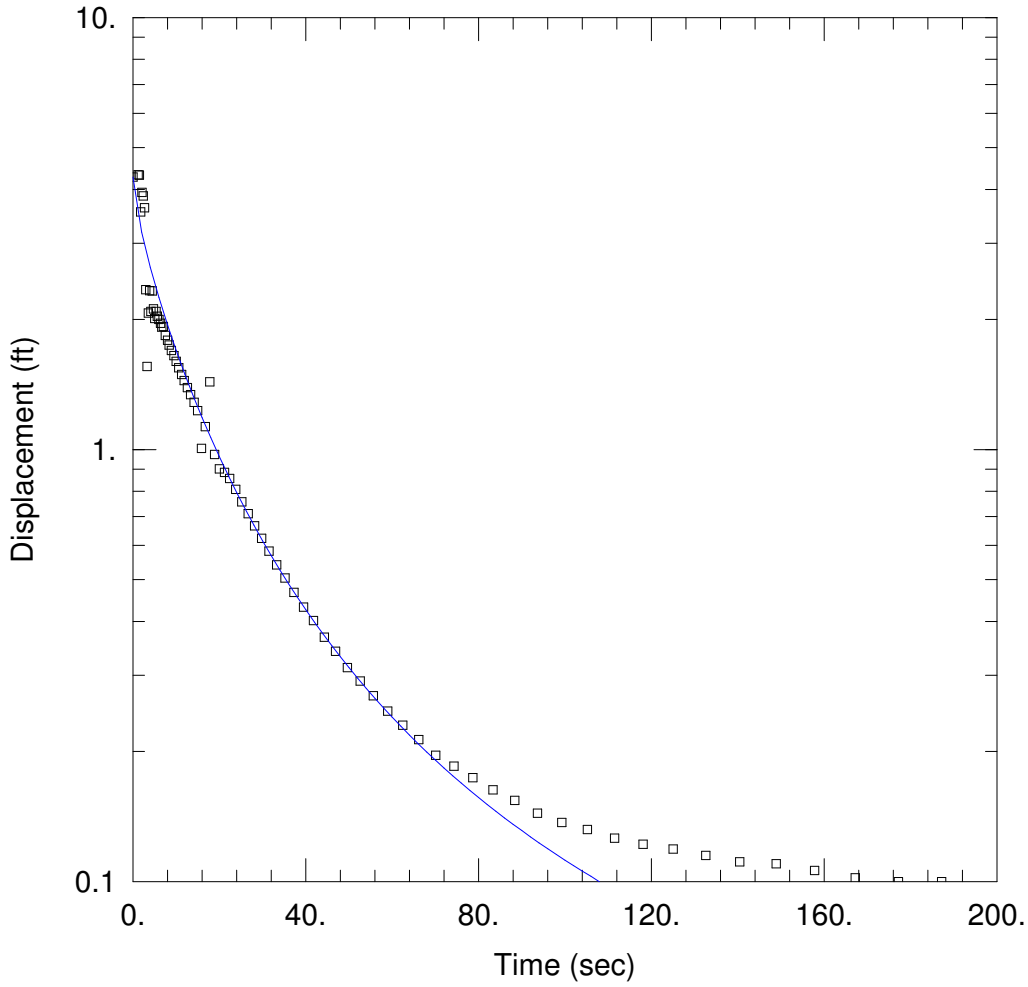
Saturated Thickness: 50. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RMW-08-15)

Initial Displacement: 2.736 ft
Total Well Penetration Depth: 10.42 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 110.4 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0003075 cm/sec
y0 = 1.799 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-08-35_in_1.aqt
Date: 10/05/07 Time: 15:16:05

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-08-35-i1
Test Date: 4/12/2005

AQUIFER DATA

Saturated Thickness: 50. ft

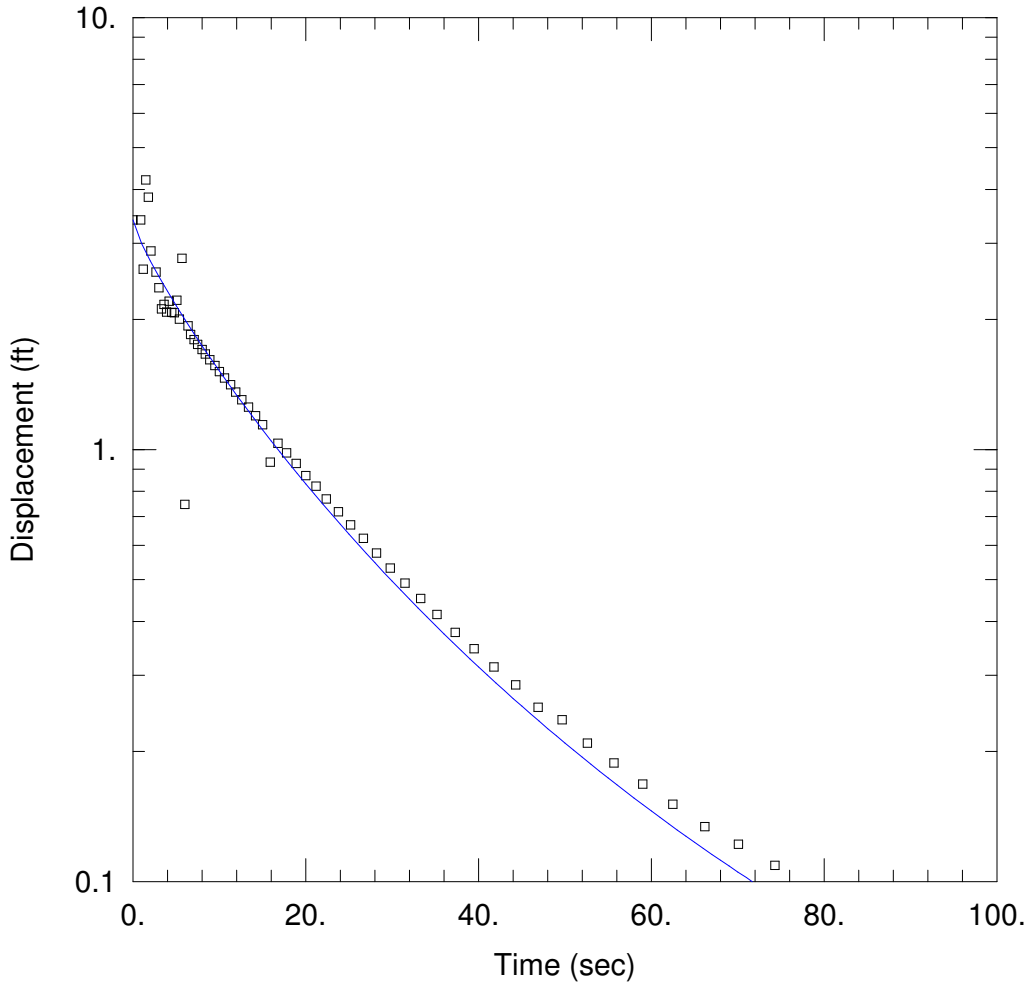
WELL DATA (RMW-08-35_i1)

Initial Displacement: 4.272 ft
Total Well Penetration Depth: 28.24 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 28.24 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.002275 cm/sec
Kz/Kr = 1.
Ss = 0.001821 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-08-35_in_2.aqt
Date: 10/05/07 Time: 15:16:28

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-03-35-i2
Test Date: 4/12/2005

AQUIFER DATA

Saturated Thickness: 50. ft

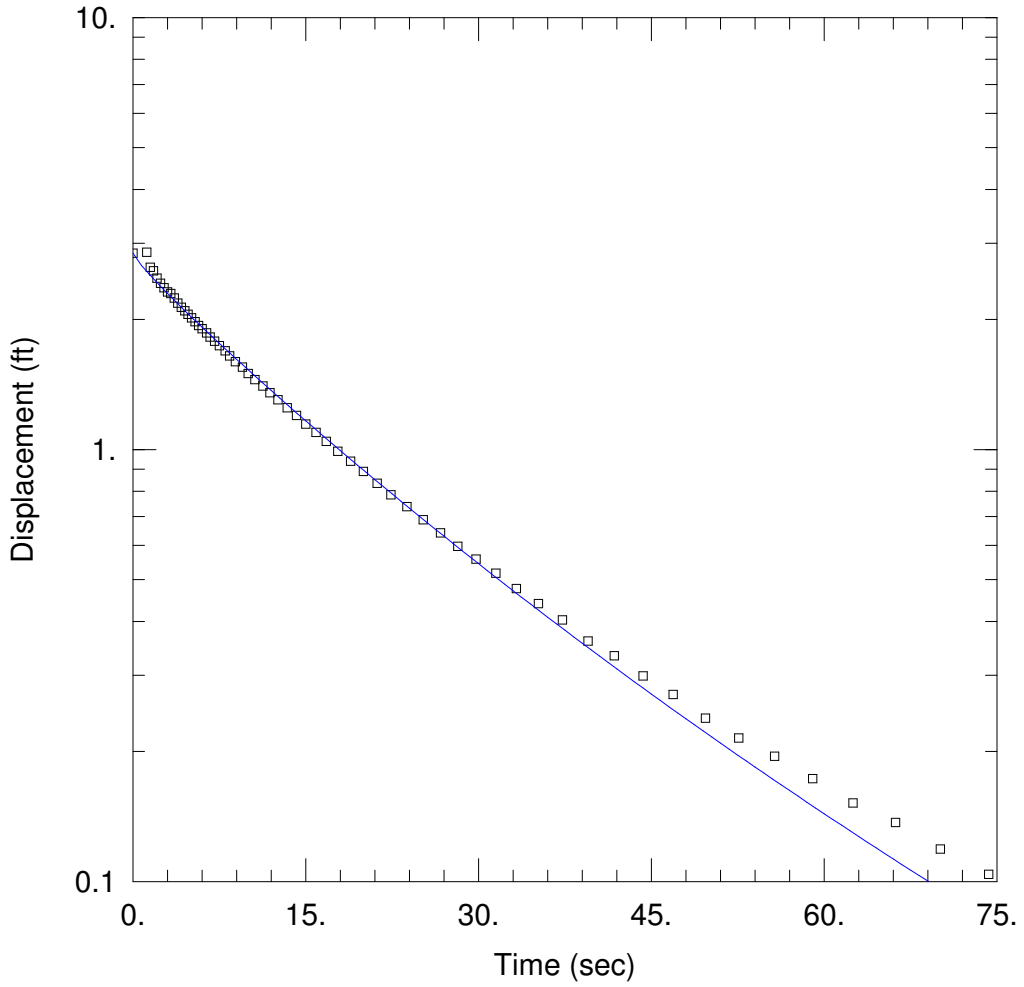
WELL DATA (RMW-08-35_i2)

Initial Displacement: 3.399 ft
Total Well Penetration Depth: 28.24 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 28.24 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.002765 cm/sec
Kz/Kr = 1.
Ss = 0.0002123 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-08-35_out_1.aqt
Date: 10/05/07 Time: 15:16:46

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-08-35-o1
Test Date: 4/13/2005

AQUIFER DATA

Saturated Thickness: 50. ft

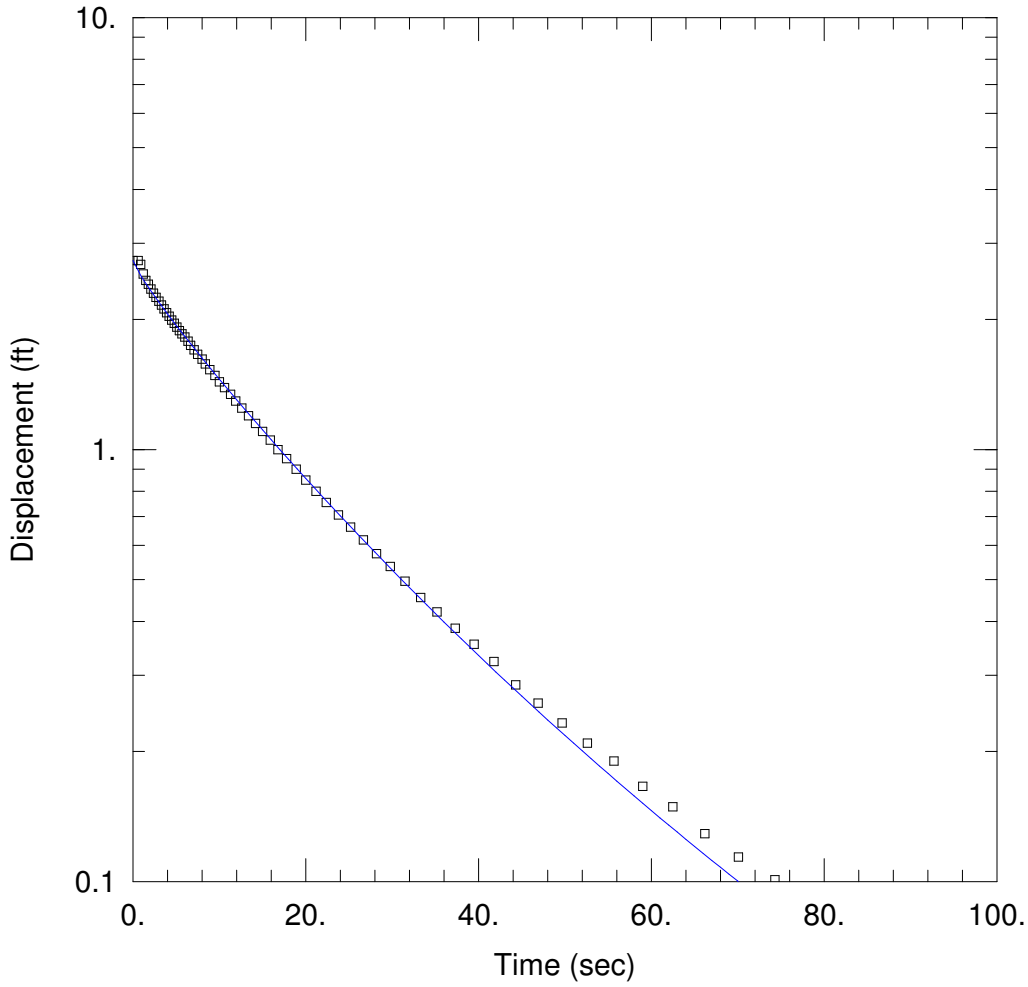
WELL DATA (RMW-08-35_o1)

Initial Displacement: 2.846 ft
Total Well Penetration Depth: 28.24 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 28.24 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.002492 cm/sec
Kz/Kr = 1.
Ss = 3.213E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-08-35_out_2.aqt
Date: 10/05/07 Time: 15:17:03

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-08-35-o2
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft

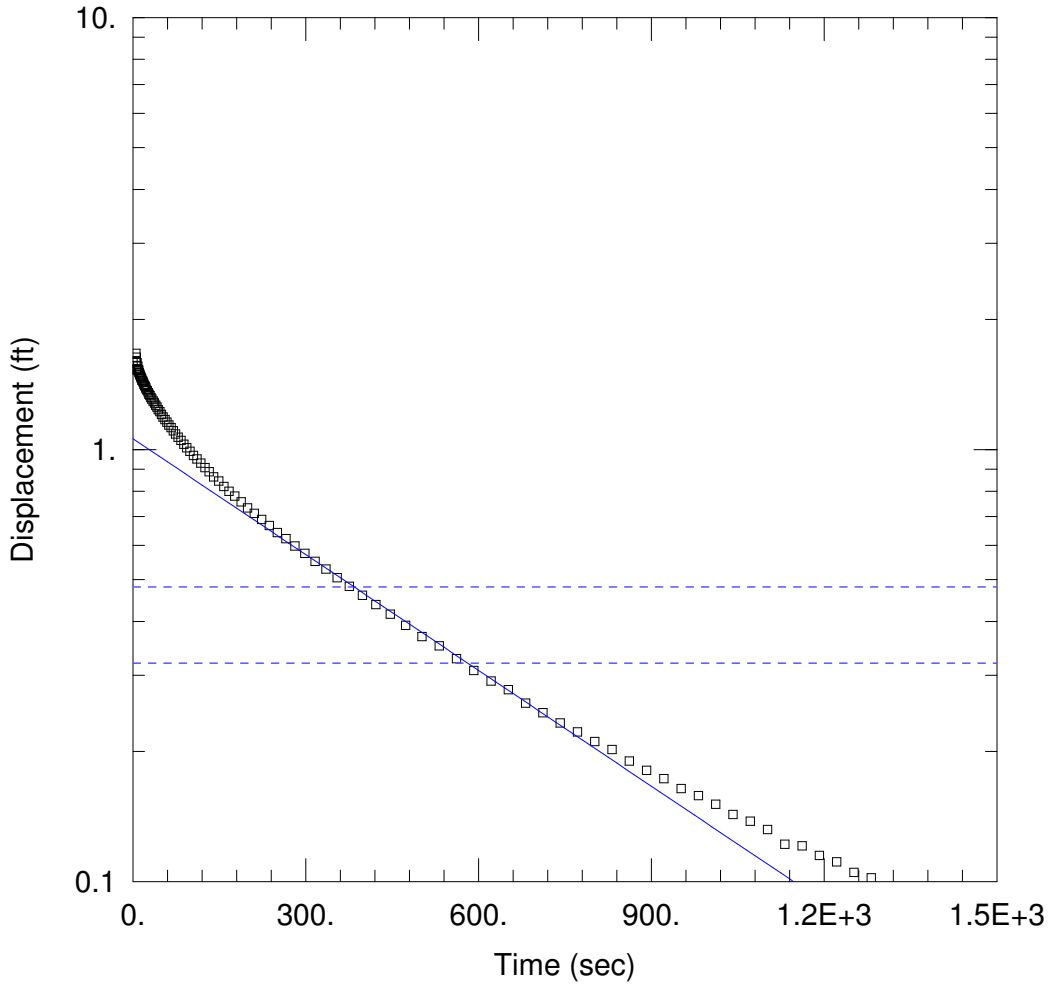
WELL DATA (RMW-08-35_o2)

Initial Displacement: 2.736 ft
Total Well Penetration Depth: 28.24 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 28.24 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.002448 cm/sec
Kz/Kr = 1.
Ss = 4.907E-5 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-09-15_in_1.aqt
Date: 10/05/07 Time: 15:17:33

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-09-15-i1
Test Date: 4/12/2006

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

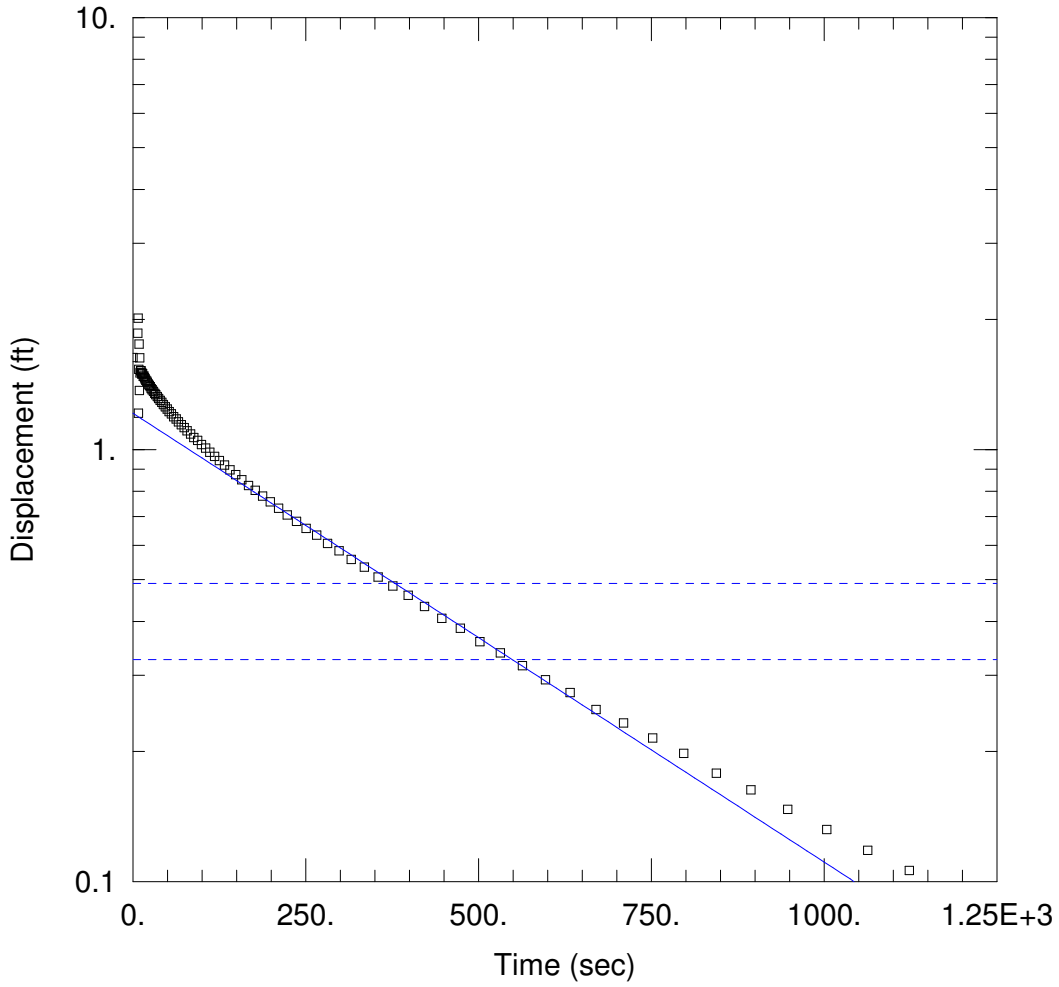
WELL DATA (RMW-09-15)

Initial Displacement: 1.601 ft Static Water Column Height: 11.64 ft
Total Well Penetration Depth: 11.64 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 7.175E-5 cm/sec y0 = 1.059 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-09-15_in_2.aqt
Date: 10/05/07 Time: 15:17:50

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335338
Location: AMCO Superfund
Test Well: RMW-09-15-i2
Test Date: 4/12/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

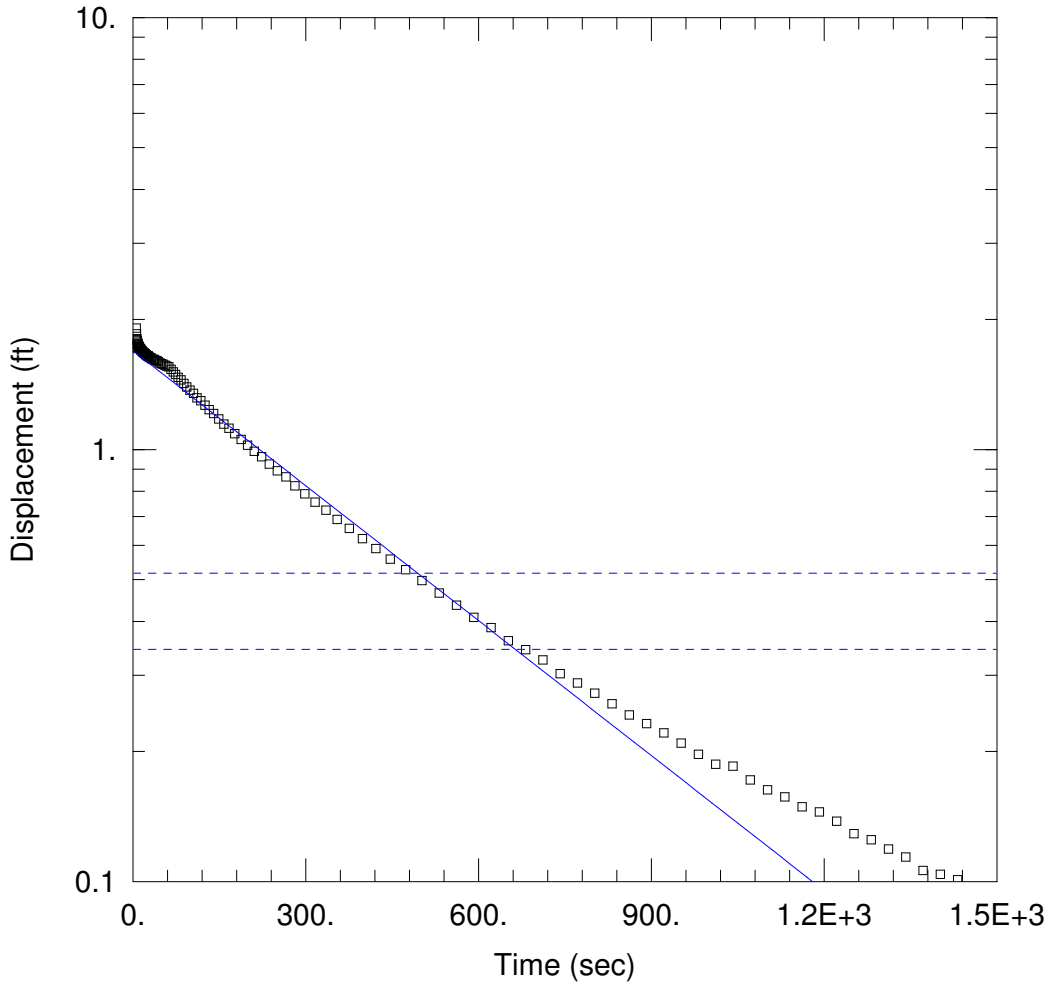
WELL DATA (RMW-09-15-i2)

Initial Displacement: 1.632 ft Static Water Column Height: 11.64 ft
Total Well Penetration Depth: 11.64 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 8.341E-5 cm/sec y0 = 1.213 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-09-15_out_1.aqt
Date: 10/05/07 Time: 15:18:06

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-09-15-o1
Test Date: 4/14/2005

AQUIFER DATA

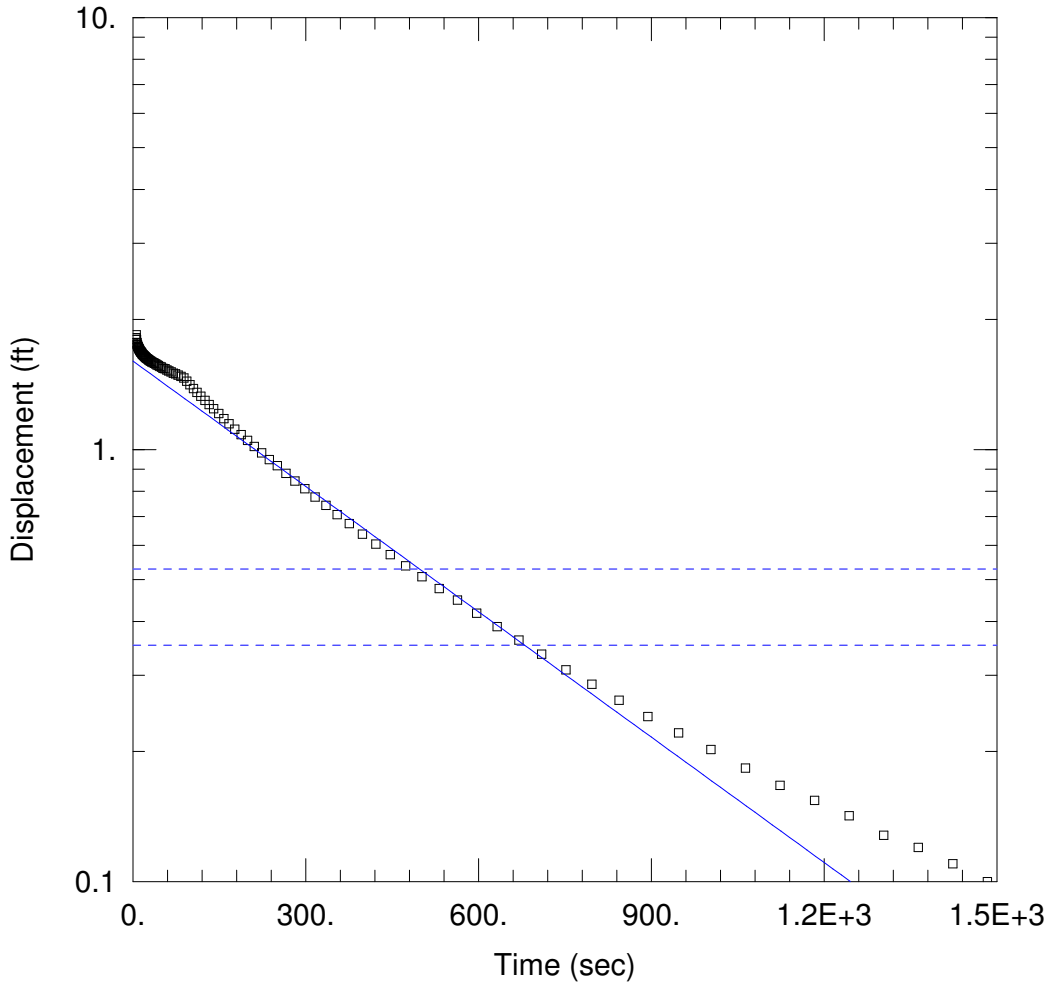
Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RMW-09-15-o1)

Initial Displacement: 1.724 ft Static Water Column Height: 11.64 ft
Total Well Penetration Depth: 11.64 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 8.36E-5 cm/sec y0 = 1.693 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-09-15_out_2.aqt
Date: 10/05/07 Time: 15:18:18

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-09-15-o2
Test Date: 4/14/2005

AQUIFER DATA

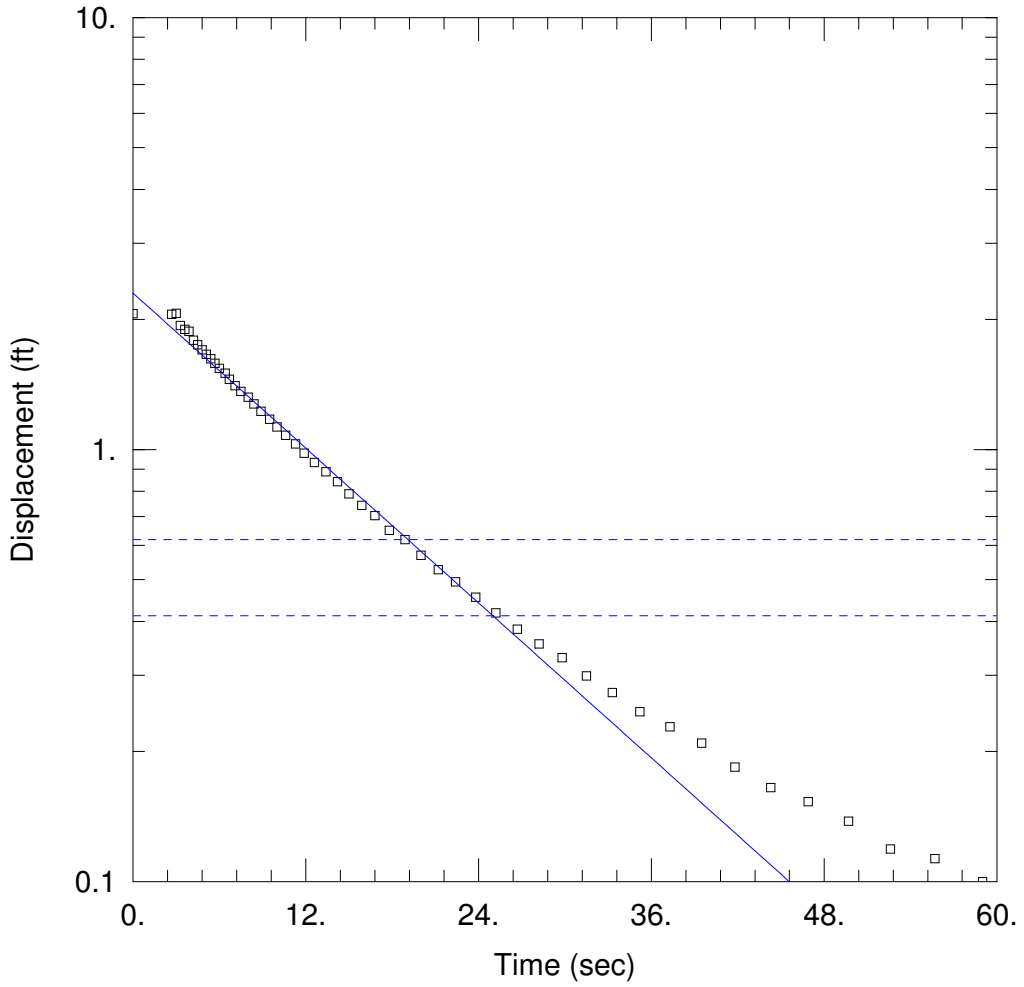
Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RMW-09-15-o2)

Initial Displacement: 1.762 ft Static Water Column Height: 11.64 ft
Total Well Penetration Depth: 11.64 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 7.765E-5 cm/sec y0 = 1.602 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-09-35_in_1.aqt
Date: 10/05/07 Time: 15:18:57

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-09-35-i1
Test Date: 4/12/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

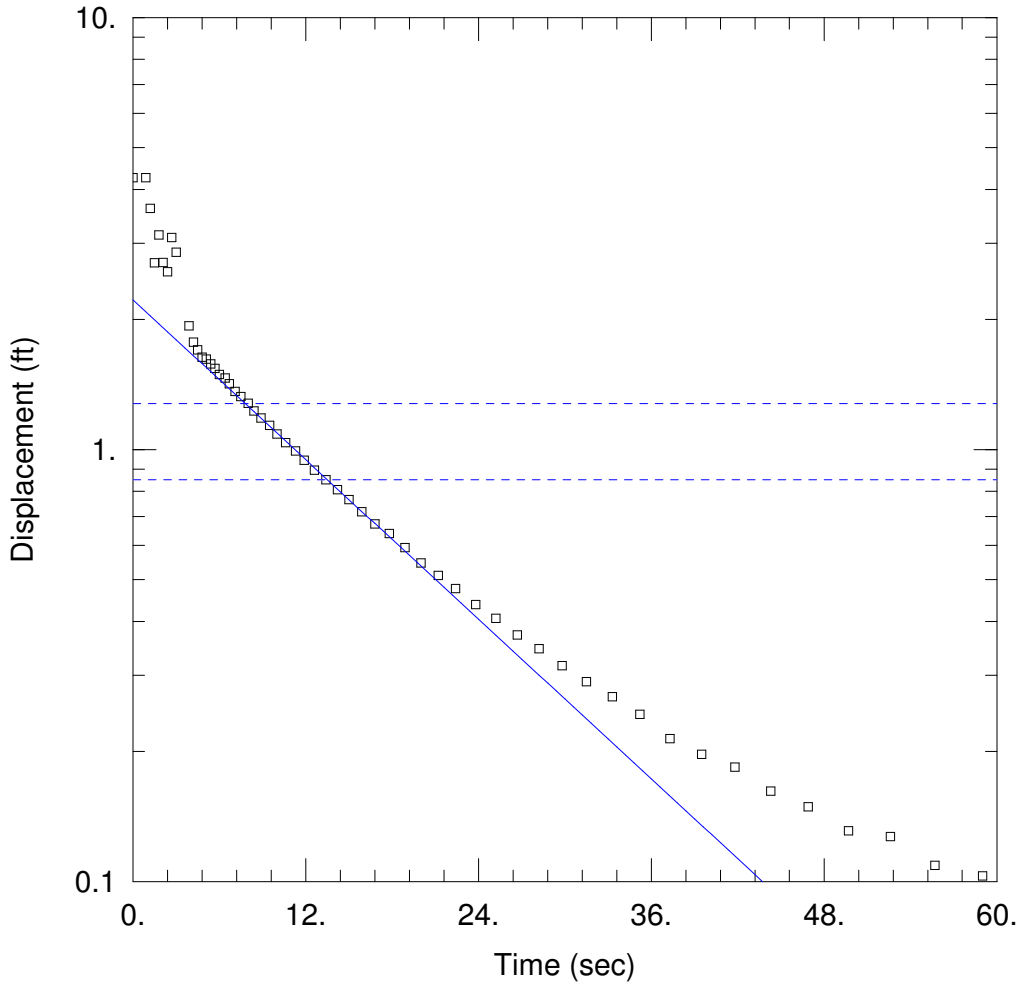
WELL DATA (RMW-09-35-i1)

Initial Displacement: 2.062 ft Static Water Column Height: 31.51 ft
Total Well Penetration Depth: 31.51 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002778 cm/sec y0 = 2.302 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-09-35_in_2.aqt
Date: 10/05/07 Time: 15:19:18

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-09-35-i2
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

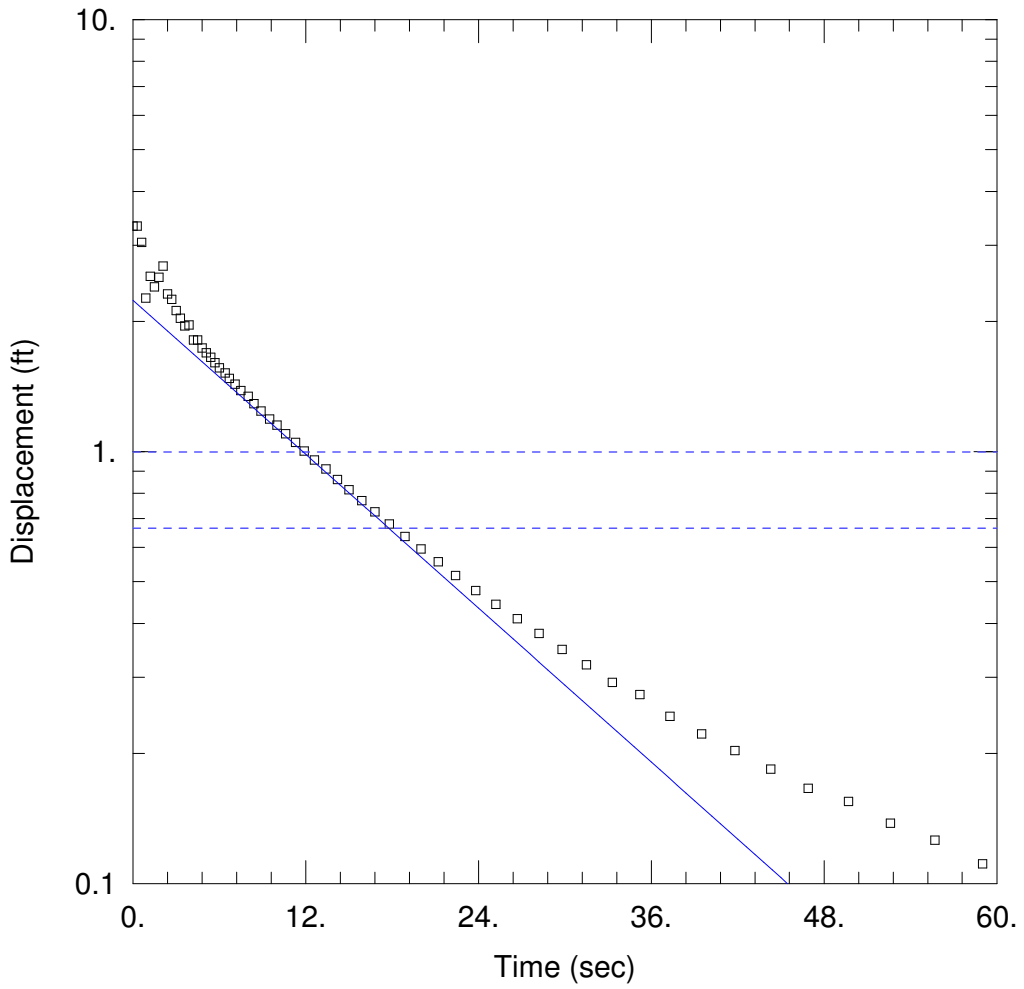
WELL DATA (RMW-09-35-i2)

Initial Displacement: 4.259 ft Static Water Column Height: 31.51 ft
Total Well Penetration Depth: 31.51 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002863 cm/sec y0 = 2.22 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-09-35_out_1.aqt
Date: 10/05/07 Time: 15:19:45

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-09-35-o1
Test Date: 4/12/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

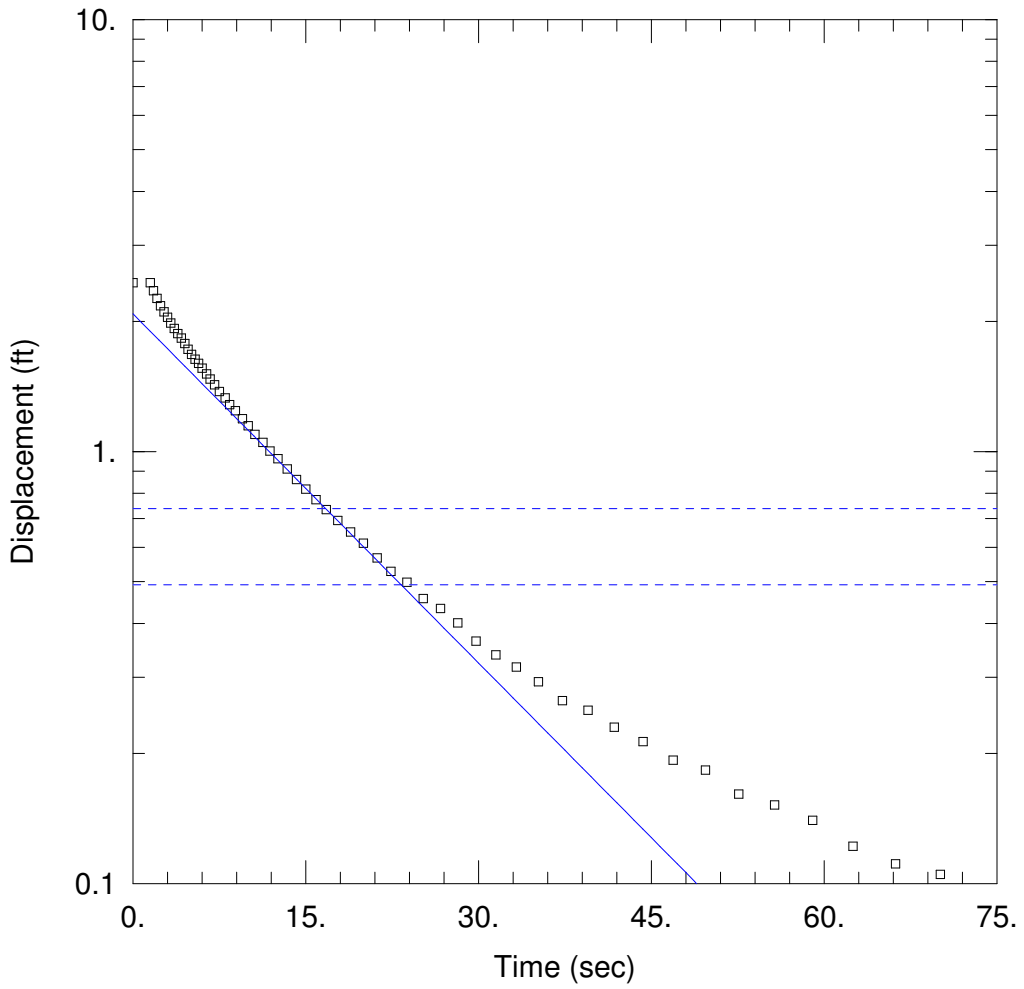
WELL DATA (RMW-09-35-o1)

Initial Displacement: 3.325 ft Static Water Column Height: 31.51 ft
Total Well Penetration Depth: 31.51 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002761 cm/sec y0 = 2.24 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-09-35_out_2.aqt
Date: 10/05/07 Time: 15:20:33

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-09-35-o2
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

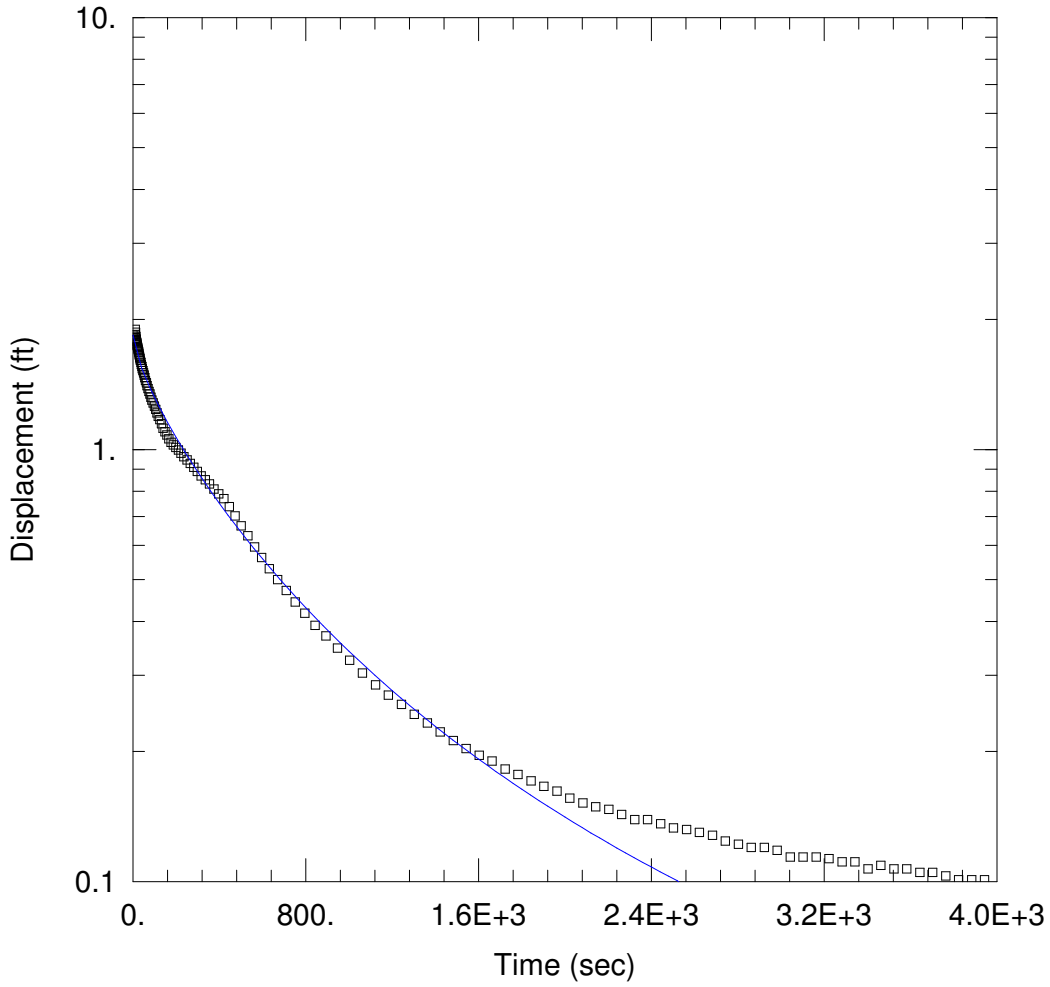
WELL DATA (RMW-09-35)

Initial Displacement: 2.459 ft Static Water Column Height: 31.51 ft
Total Well Penetration Depth: 31.51 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002505 cm/sec y0 = 2.083 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-10-15_in_1.aqt
Date: 10/05/07 Time: 15:21:22

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-15-i1
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft

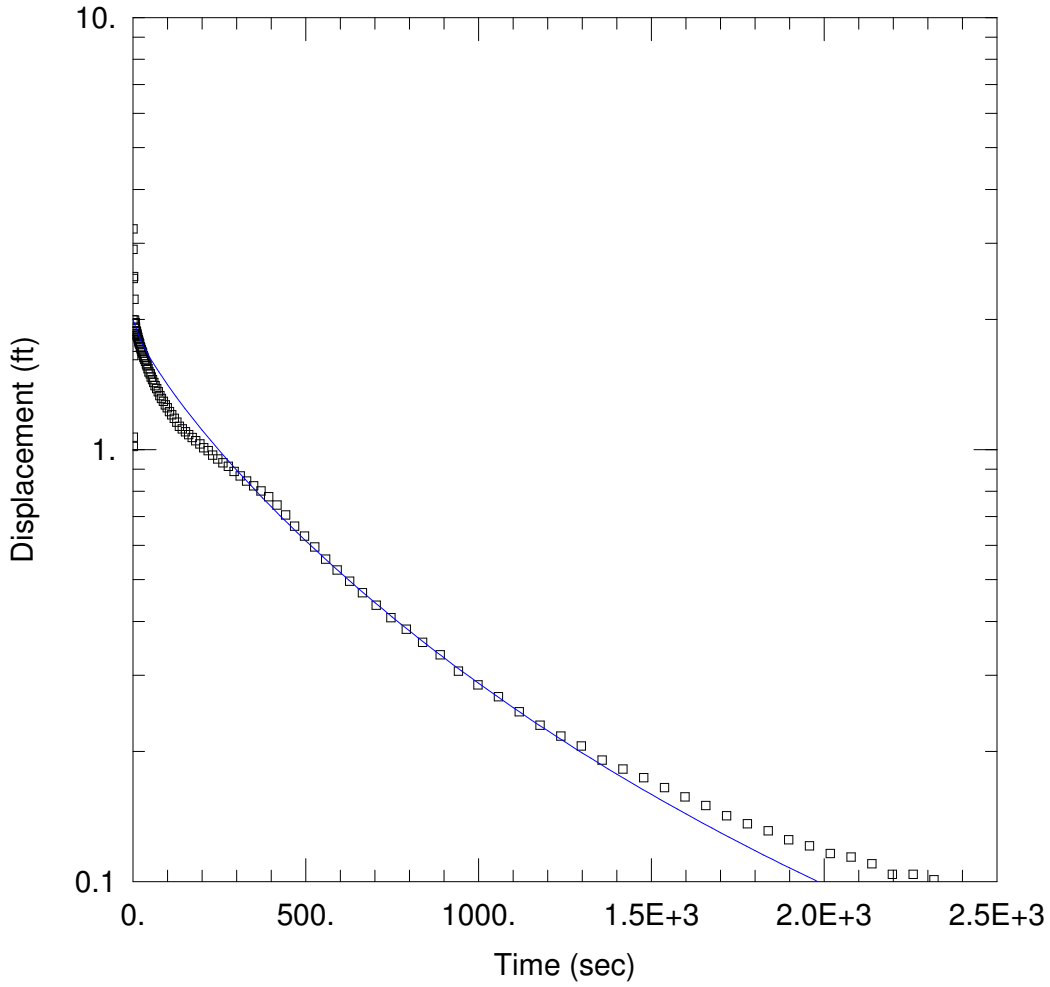
WELL DATA (RMW-10-15-i1)

Initial Displacement: 1.839 ft
Total Well Penetration Depth: 11.36 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 11.36 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 5.519E-5 cm/sec
Kz/Kr = 1.
Ss = 0.001725 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-10-15_in_2.aqt
Date: 10/05/07 Time: 15:21:37

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-15-i2
Test Date: 4/15/2005

AQUIFER DATA

Saturated Thickness: 50. ft

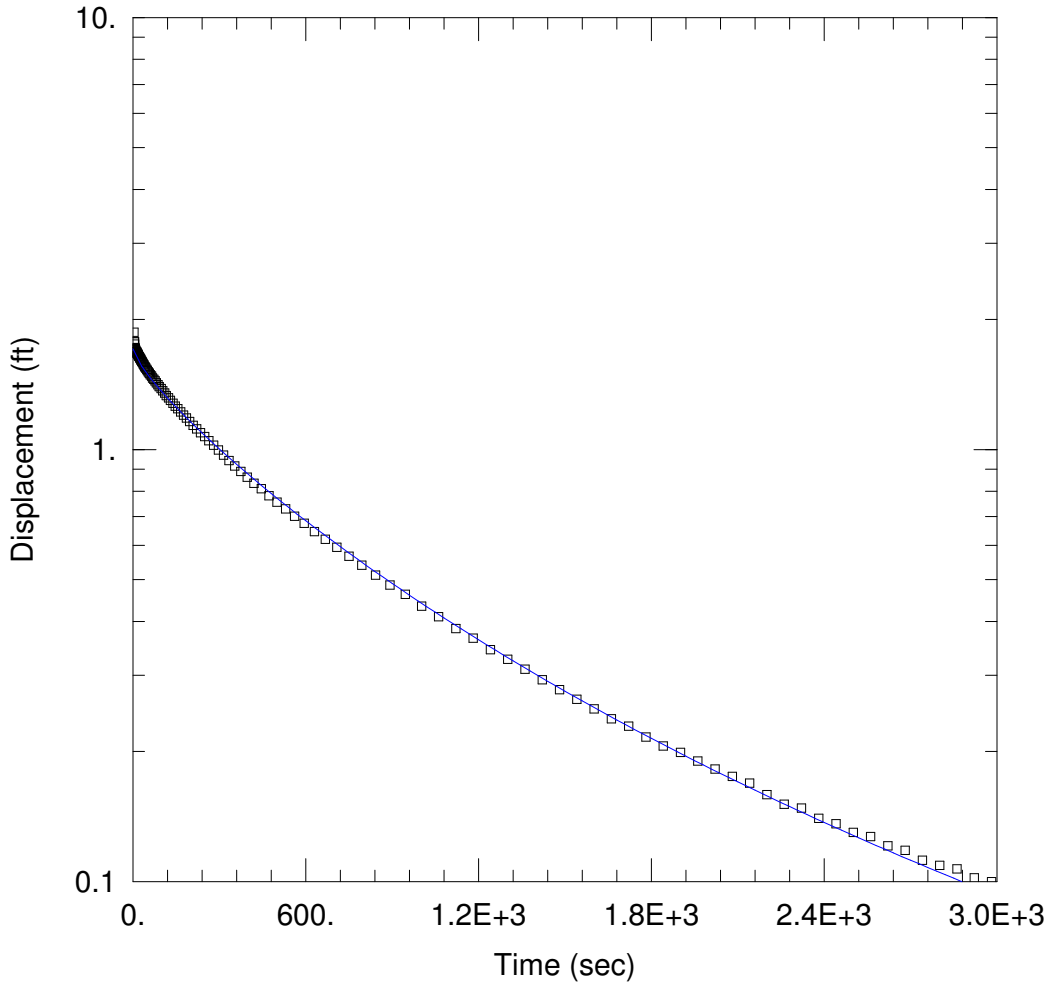
WELL DATA (RMW-10-15)

Initial Displacement: 1.998 ft
Total Well Penetration Depth: 11.36 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 11.36 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 7.58E-5 cm/sec
Kz/Kr = 1.
Ss = 0.0007096 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-10-15_out_1.aqt
Date: 10/05/07 Time: 15:21:54

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-15-o2
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft

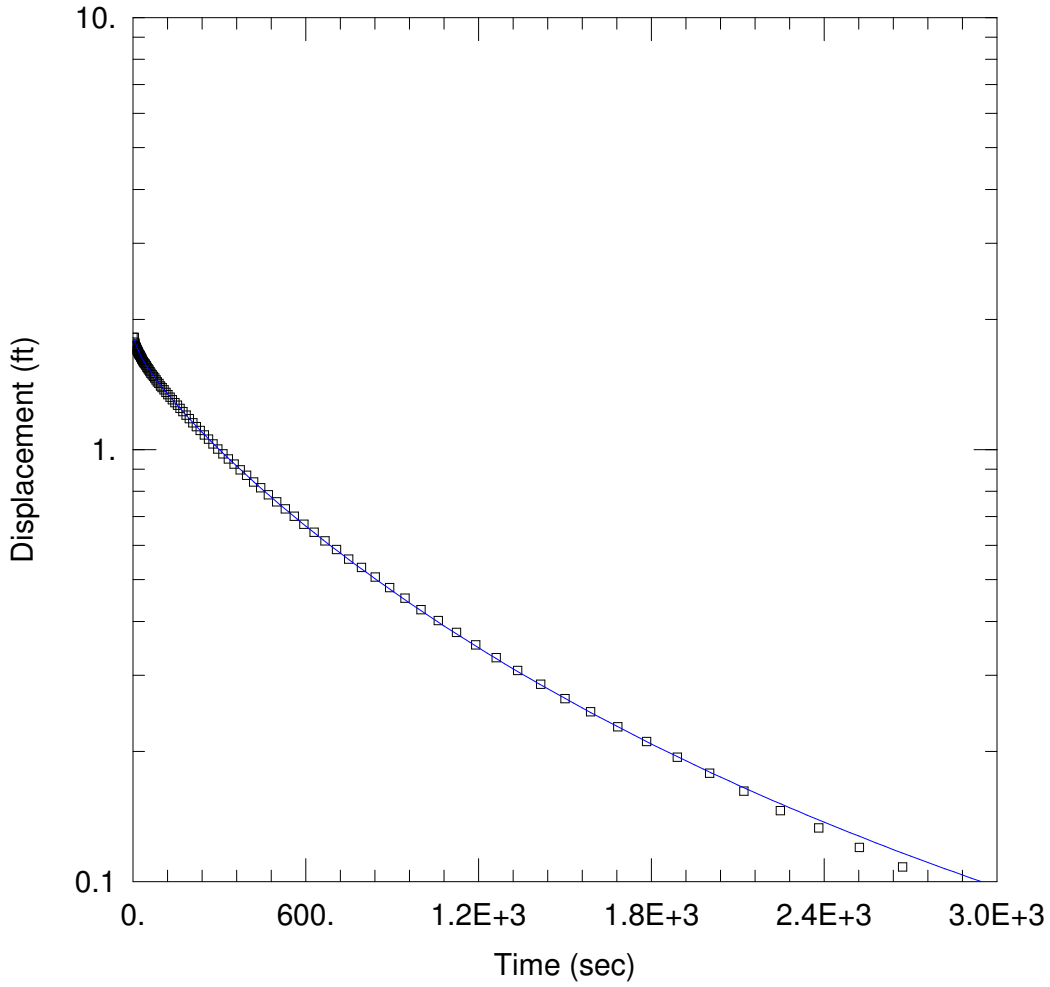
WELL DATA (RMW-10-15-o1)

Initial Displacement: 1.71 ft
Total Well Penetration Depth: 11.36 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 11.36 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 4.787E-5 cm/sec
Kz/Kr = 1.
Ss = 0.0005001 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-10-15_out_2.aqt
Date: 10/05/07 Time: 15:22:29

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-15-o2
Test Date: 4/18/2005

AQUIFER DATA

Saturated Thickness: 50. ft

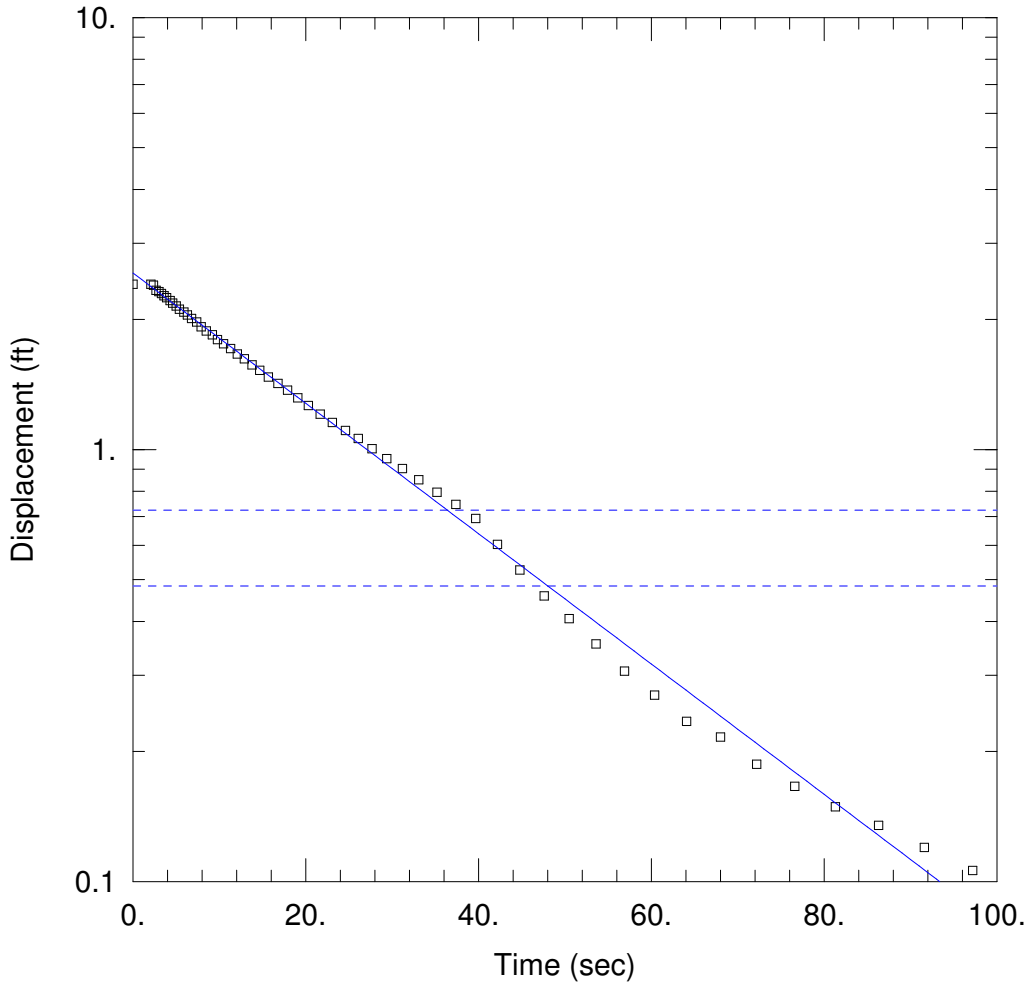
WELL DATA (RMW-10-15)

Initial Displacement: 1.817 ft
Total Well Penetration Depth: 11.36 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 11.36 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 4.904E-5 cm/sec
Kz/Kr = 1.
Ss = 0.0009007 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-10-35_in_1.aqt
Date: 10/05/07 Time: 15:23:16

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-35-i1
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

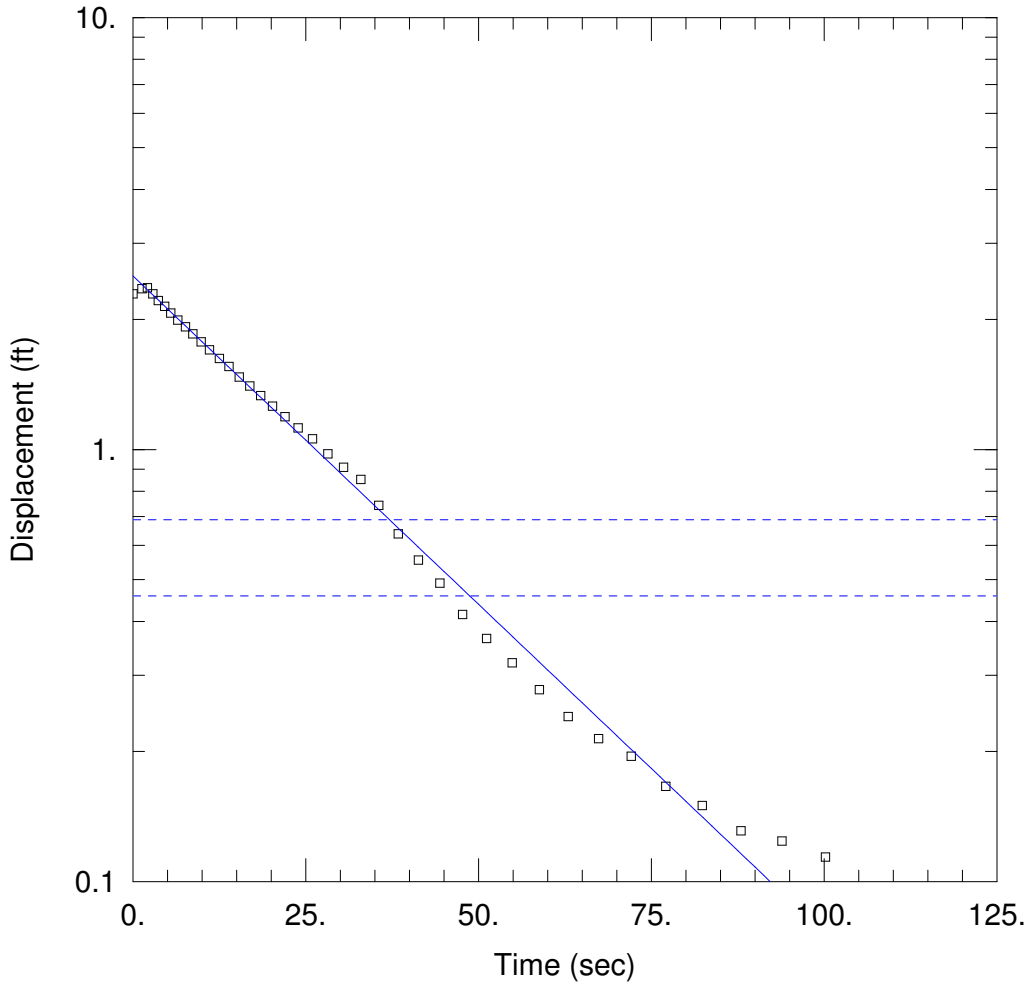
WELL DATA (RMW-10-35-i1)

Initial Displacement: 2.414 ft Static Water Column Height: 30.5 ft
Total Well Penetration Depth: 30.5 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.001395 cm/sec y0 = 2.561 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-10-35_in_2.aqt
Date: 10/05/07 Time: 15:23:42

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-35-i2
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 1.

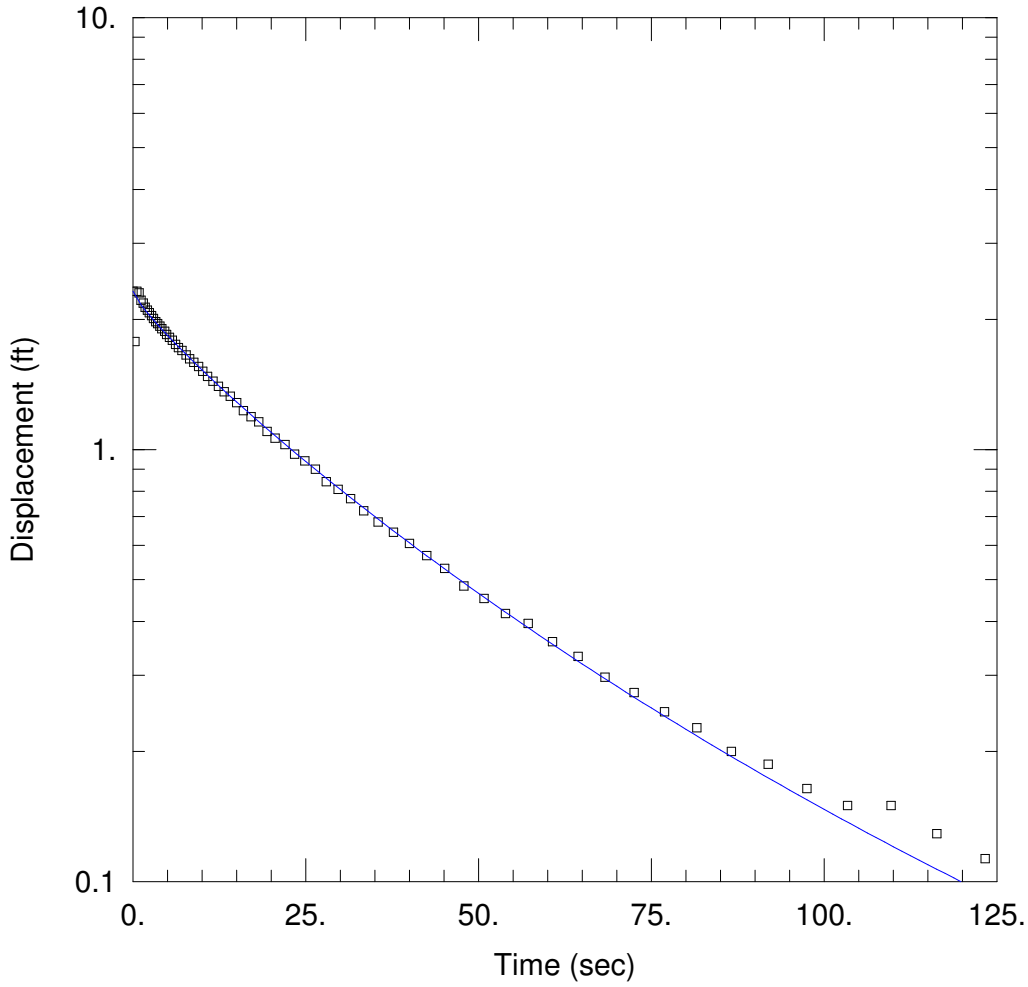
WELL DATA (RMW-10-35-i2)

Initial Displacement: 2.292 ft Static Water Column Height: 30.5 ft
Total Well Penetration Depth: 30.5 ft Screen Length: 10. ft
Casing Radius: 0.08333 ft Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.001406 cm/sec y0 = 2.521 ft



WELL TEST ANALYSIS

Data Set: \...\RMW-10-35_out_1.aqt
Date: 10/05/07 Time: 15:24:09

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-35-o1
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft

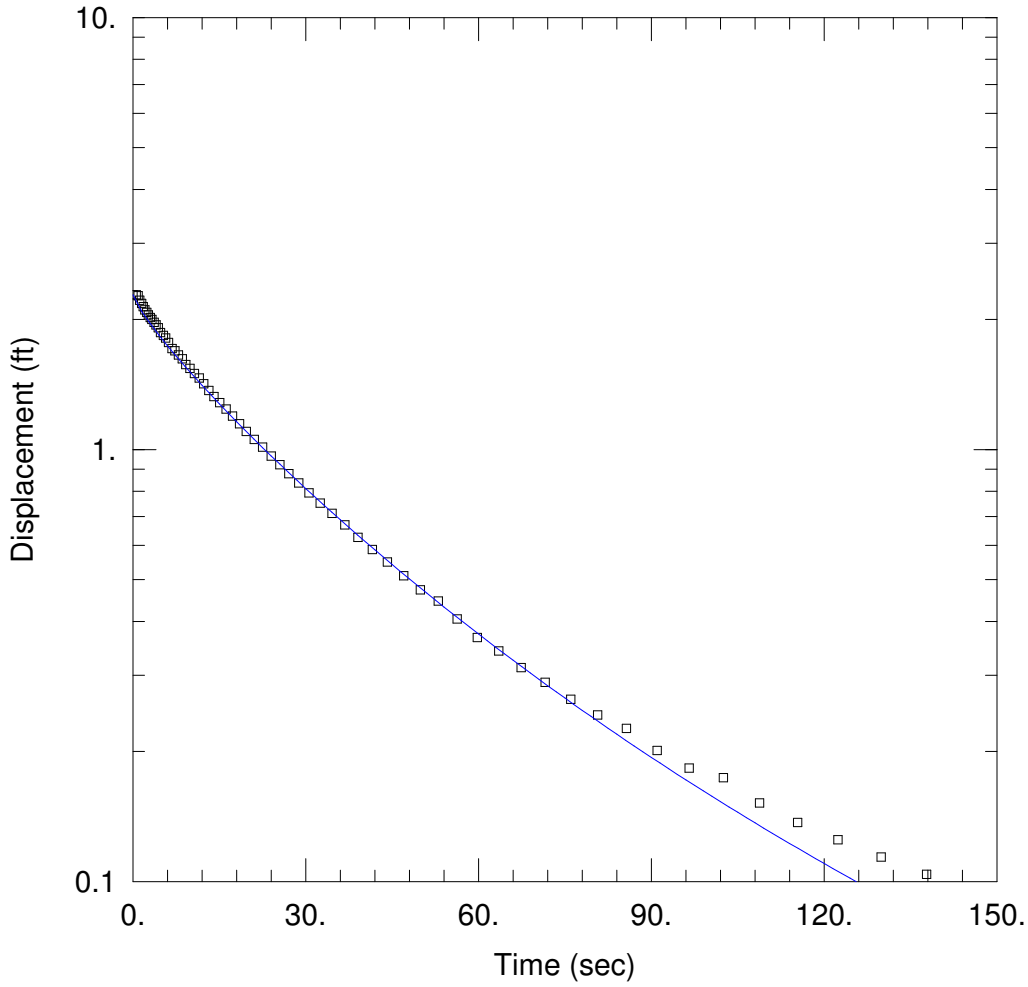
WELL DATA (RMW-10-35-o1)

Initial Displacement: 2.325 ft
Total Well Penetration Depth: 30.5 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 30.5 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.001367 cm/sec
Kz/Kr = 1.
Ss = 0.0001206 ft^{-1}



WELL TEST ANALYSIS

Data Set: \...\RMW-10-35_out_2.aqt
Date: 10/05/07 Time: 15:23:55

PROJECT INFORMATION

Company: CH2M HILL
Client: US EPA Region IX
Project: 335389
Location: AMCO Superfund
Test Well: RMW-10-35-o2
Test Date: 4/14/2005

AQUIFER DATA

Saturated Thickness: 50. ft

WELL DATA (RMW-10-35-o2)

Initial Displacement: 2.283 ft
Total Well Penetration Depth: 30.5 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 30.5 ft
Screen Length: 10. ft
Wellbore Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.0013 cm/sec
Kz/Kr = 1.
Ss = 0.0001537 ft^{-1}

Survey Information

CHAUDHARY & ASSOCIATES, INC.
ENGINEERS
SURVEYORS
INSPECTORS
851 NAPA VALLEY CORPORATE WAY ▪ SUITE G ▪ NAPA, CALIFORNIA 94558-7551
PHONE: 707.255.2729 ▪ FAX: 707.255.5021 ▪ WWW.CHAUDHARY.COM

May 23, 2005
#04-08-054

SURVEY REPORT

Mr. Bill Frohlich
CH2M Hill
155 Grand Avenue, Suite 1000
Oakland, Ca 94612

Re: AMCO, Oakland, California
Subject: Monitoring Well Survey

Dear Mr. Frohlich:

Horizontal and Vertical control was established at the AMCO site from offsite monuments.

Vertical Control: NAVD '88 site elevations were established from NGS monument J1444 located in the City of Oakland at the intersection of 5th and Chestnut Streets (see attached NGS data sheet). A conventional level loop was run from J1444 to site control and then back to J1444.

Horizontal Control: NAD '83 Epoch 1997.30
California coordinate system Zone 3 Coordinates were established at the site based on NGS monument HT0664 located at the Port of Oakland Franklin D. Rosevelt Pier (see NGS data sheet attached). NAD '83 coordinates were established on site control points CA1 through CA7 by RTK GPS survey. A conventional traverse was run between RTK points to confirm compatibility and to establish secondary control.

See Attachment 'A' for survey results. Please feel free to call me at (707) 255-2729 ext. 115 should you have any questions.

Sincerely,

CHAUDHARY & ASSOCIATES, INC.
A California Corporation

Edward A. Krumrei, P.E.
Project Manager

REGISTERED PROFESSIONAL ENGINEER * EDWARD A. KRUMREI * No. 23922 CIVIL STATE OF CALIFORNIA

EXPIRES 12/31/05

ATTACHMENT 'A'

Chaudhary & Associates, Inc.,
851 Napa Valley Corporate Way, Suit G
Napa, CA 94558-7551
Project #04-08-054
Date of Survey: April 8, 2005
Client: CH2M Hill / AMCO
Rev.6-7-05

Name	Northing	Easting	Latitude	Longitude	Elevation	Description
CA.1	2119673.63	6042832.59			8.75	WELL MON
CA.3	2119771.67	6042514.39			8.30	WELL MON
					10.68	RMW-06-15 Ground
					10.71	RMW-06-15 RIM
201	2119932.64	6042961.31	37ø48'11.83	122ø17'43.76	10.47	RMW-06-15 Top of Casing
202	2119931.28	6042959.86	37ø48'11.81	122ø17'43.77	10.62	RGW-05
203	2119926.69	6042958.49	37ø48'11.77	122ø17'43.79	10.62	RGW-05-CPT
204	2119917.13	6042963.62	37ø48'11.67	122ø17'43.72	10.94	RSB/G-29
205	2119934.88	6042971.32	37ø48'11.85	122ø17'43.63	10.95	RSB/G-35
206	2119929.90	6042989.87	37ø48'11.80	122ø17'43.40	11.30	RSB/G-34
207	2119905.53	6043001.47	37ø48'11.57	122ø17'43.25	11.37	RSB/G-28
208	2119937.12	6043011.99	37ø48'11.88	122ø17'43.13	11.54	RSB/G-36
209	2119896.78	6043033.39	37ø48'11.49	122ø17'42.85	11.25	RSB/G-27
210	2119890.02	6043051.03	37ø48'11.42	122ø17'42.63	11.22	RSP-01
211	2119896.41	6043051.45	37ø48'11.49	122ø17'42.62	11.18	RGW-01
212	2119897.20	6043048.67	37ø48'11.49	122ø17'42.66	11.22	RGW-01-CPT
213	2119891.73	6043055.27	37ø48'11.44	122ø17'42.58	11.14	RSB/G-01
214	2119925.47	6043064.69	37ø48'11.77	122ø17'42.47	10.89	RSB/G-26
215	2119930.66	6043045.20	37ø48'11.82	122ø17'42.71	11.24	RSB/G-37
216	2119954.93	6043081.03	37ø48'12.07	122ø17'42.27	11.31	RSB/G-25
217	2119964.44	6043054.31	37ø48'12.16	122ø17'42.60	10.97	RSB/G-38
218	2119974.39	6043022.41	37ø48'12.25	122ø17'43.00	10.64	RSB/G-39
219	2119986.99	6042985.07	37ø48'12.37	122ø17'43.47	10.42	RSB/G-40
220	2119961.73	6042977.72	37ø48'12.12	122ø17'43.56	10.43	RSB/G-41
221	2119857.24	6042986.47	37ø48'11.09	122ø17'43.42	10.64	RSB/G-30
222	2119840.02	6043031.83	37ø48'10.92	122ø17'42.85	10.86	RSB/G-02
223	2119846.76	6043039.95	37ø48'10.99	122ø17'42.76	11.02	RSP-02
224	2119798.12	6042921.64	37ø48'10.49	122ø17'44.22	10.07	RGW-06-CPT

ATTACHMENT 'A'

Name	Northing	Easting	Latitude	Longitude	Elevation	Description
225	2119797.00	6042924.55	37ø48'10.48	122ø17'44.18	10.07	RGW-06
226	2119710.02	6042878.32	37ø48'09.61	122ø17'44.74	9.50	RSP-10
227	2119665.39	6042775.14	37ø48'09.15	122ø17'46.01	9.85	PP-NW-SG-0904
228	2119611.47	6042770.26	37ø48'08.62	122ø17'46.06	10.03	PP-SW-SG-0904
229	2119627.77	6042897.78	37ø48'08.81	122ø17'44.48	9.64	PP-E-SG-0904
					10.33	RMW-09-35 Ground
					13.45	RMW-09-35 RIM
230	2119597.44	6042939.14	37ø48'08.51	122ø17'43.95	13.22	RMW-09-35 Top of Casing
					10.26	RMW-09-15 Ground
					13.40	RMW-09-15 RIM
231	2119597.79	6042947.48	37ø48'08.52	122ø17'43.85	12.74	RMW-09-15 Top of Casing
232	2119612.00	6042942.57	37ø48'08.65	122ø17'43.91	9.75	RGW-08-CPT
233	2119600.63	6042941.22	37ø48'08.54	122ø17'43.93	10.01	RGW-08
234	2119757.96	6042973.77	37ø48'10.10	122ø17'43.56	10.12	RSB/G-31
235	2119779.70	6042949.47	37ø48'10.31	122ø17'43.87	10.54	RSB/G-32
					10.45	RMW-07-15 Ground
					10.49	RMW-07-15 RIM
236	2119756.28	6042936.12	37ø48'10.08	122ø17'44.03	10.10	RMW-07-15 Top of Casing
237	2119720.57	6042930.78	37ø48'09.72	122ø17'44.09	10.31	RGW-07-CPT
238	2119722.26	6042924.46	37ø48'09.74	122ø17'44.16	10.30	RGW-07
239	2119723.18	6042920.48	37ø48'09.75	122ø17'44.21	10.99	RSB/G-33
240	2119686.13	6042960.19	37ø48'09.39	122ø17'43.71	9.52	RSP-09
241	2119632.99	6043130.45	37ø48'08.90	122ø17'41.58	9.53	RSP-07
242	2119674.54	6043225.24	37ø48'09.32	122ø17'40.41	9.78	15 OS
243	2119671.39	6043214.70	37ø48'09.29	122ø17'40.54	10.30	4 OS
244	2119670.24	6043210.87	37ø48'09.28	122ø17'40.58	10.40	RGW-11
245	2119668.62	6043218.99	37ø48'09.27	122ø17'40.48	9.72	RGW-11-CPT
246	2119674.52	6043209.99	37ø48'09.32	122ø17'40.60	10.35	RSB/G-14
247	2119725.68	6043225.76	37ø48'09.83	122ø17'40.41	10.60	RSB/G-13
248	2119793.91	6043254.74	37ø48'10.51	122ø17'40.07	9.60	RSB/G-12
					10.43	RMW-03-15 CONC
					10.45	RMW-03-15 RIM
249	2119832.29	6043245.05	37ø48'10.89	122ø17'40.20	10.00	RMW-03-15 Top of Casing
250	2119832.58	6043243.42	37ø48'10.89	122ø17'40.22	10.58	RGW-10
251	2119831.01	6043247.96	37ø48'10.88	122ø17'40.16	10.06	RGW-10-CPT
252	2119835.93	6043248.03	37ø48'10.92	122ø17'40.16	10.30	RSB/G-10

ATTACHMENT 'A'

Name	Northing	Easting	Latitude	Longitude	Elevation	Description
253	2119816.14	6043214.50	37ø48'10.72	122ø17'40.57	10.95	RSB/G-11
254	2119845.81	6043203.22	37ø48'11.02	122ø17'40.72	11.10	RSB/G-09
255	2119850.54	6043158.85	37ø48'11.05	122ø17'41.27	12.05	15 OS
256	2119859.57	6043158.62	37ø48'11.14	122ø17'41.28	12.12	6 OS
257	2119865.57	6043158.46	37ø48'11.20	122ø17'41.28	12.12	RSB/G-08
258	2119883.50	6043112.63	37ø48'11.37	122ø17'41.86	11.85	RSB/G-07
259	2119819.61	6043144.97	37ø48'10.74	122ø17'41.44	12.13	RGW-12
260	2119819.47	6043139.94	37ø48'10.74	122ø17'41.50	12.06	RGW-12-CPT
261	2119817.91	6043144.70	37ø48'10.73	122ø17'41.44	12.17	RSB/G-42
263	2119809.70	6043168.00	37ø48'10.65	122ø17'41.15	12.28	RSB/G-17
265	2119827.90	6043094.21	37ø48'10.82	122ø17'42.07	11.66	RSB/G-16
					11.73	RMW-08-35 CONC
					14.94	RMW-08-35 RIM
266	2119849.09	6043052.90	37ø48'11.02	122ø17'42.59	14.60	RMW-08-35 Top of Casing
					11.76	RMW-08-15 CONC
					14.88	RMW-08-15 RIM
267	2119857.71	6043054.37	37ø48'11.10	122ø17'42.58	14.61	RMW-08-15 Top of Casing
268	2119819.24	6043057.35	37ø48'10.72	122ø17'42.53	11.78	RGW-02
269	2119818.97	6043063.02	37ø48'10.72	122ø17'42.46	11.66	RGW-02-CPT
270	2119815.81	6043037.86	37ø48'10.69	122ø17'42.77	10.87	RSB/G-03
271	2119818.59	6043037.61	37ø48'10.71	122ø17'42.78	11.31	RSB/G-03A
272	2119813.54	6043041.31	37ø48'10.66	122ø17'42.73	11.58	RSP-03
					11.21	RMW-02-32 CONC
					11.22	RMW-02-32 RIM
273	2119750.16	6043138.76	37ø48'10.05	122ø17'41.50	10.91	RMW-02-32 Top of Casing
					11.07	RMW-02-45 CONC
					11.08	RMW-02-45 RIM
274	2119738.81	6043138.41	37ø48'09.94	122ø17'41.50	10.67	RMW-02-45 Top of Casing
					10.74	RMW-02-13 CONC
					10.77	RMW-02-13 RIM
275	2119729.07	6043136.11	37ø48'09.85	122ø17'41.53	10.50	RMW-02-13 Top of Casing
					10.82	MW-14 CONC
					10.83	MW-14 RIM
276	2119728.90	6043152.75	37ø48'09.85	122ø17'41.32	10.56	MW-14 Top of Casing
277	2119715.31	6043132.35	37ø48'09.71	122ø17'41.57	10.62	RGW-13-CPT
278	2119722.32	6043134.43	37ø48'09.78	122ø17'41.55	10.57	RGW-13

ATTACHMENT 'A'

Name	Northing	Easting	Latitude	Longitude	Elevation	Description
279	2119752.80	6043109.50	37ø48'10.08	122ø17'41.87	11.49	RSB/G-22
280	2119773.42	6043070.51	37ø48'10.27	122ø17'42.36	11.57	RSP-04
281	2119783.56	6043078.98	37ø48'10.37	122ø17'42.25	11.84	MW?
282	2119773.49	6043072.77	37ø48'10.27	122ø17'42.33	11.58	RSB/G-04
283	2119708.98	6043093.39	37ø48'09.64	122ø17'42.06	11.42	RSB/G-21
					11.22	RMW-01-17 CONC
					14.34	RMW-01-17 RIM
284	2119692.44	6043062.76	37ø48'09.47	122ø17'42.43	13.64	RMW-01-17 Top of Casing
					11.04	RMW-01-35 CONC
					14.67	RMW-01-35 RIM
285	2119694.87	6043054.43	37ø48'09.50	122ø17'42.54	14.30	RMW-01-35 Top of Casing
286	2119731.12	6043054.99	37ø48'09.85	122ø17'42.54	11.22	RSP-05
287	2119729.40	6043061.42	37ø48'09.84	122ø17'42.46	11.07	RSB/G-05
288	2119676.51	6043079.05	37ø48'09.32	122ø17'42.23	11.08	RSB/G-19
289	2119672.55	6043073.34	37ø48'09.28	122ø17'42.30	10.92	RGW-03-CPT
290	2119667.96	6043072.03	37ø48'09.23	122ø17'42.31	10.75	RGW-03
291	2119646.61	6043134.55	37ø48'09.03	122ø17'41.53	10.57	RSB/G-20
313	2119851.85	6042896.69	37ø48'11.02	122ø17'44.54	9.38	RSP-11
314	2119906.04	6042913.13	37ø48'11.55	122ø17'44.35	9.54	RSP-12
378	2119671.95	6043005.37	37ø48'09.26	122ø17'43.15	9.71	RSP-08
					9.77	RMW-10-35 Ground
					13.07	RMW-10-35 RIM
392	2119526.34	6042980.61	37ø48'07.82	122ø17'43.42	12.75	RMW-10-35 Top of Casing
					9.74	RMW-10-15 Ground
					13.23	RMW-10-15 RIM
393	2119513.81	6042979.03	37ø48'07.69	122ø17'43.43	12.89	RMW-10-15 Top of Casing
					9.27	RMW-5-15 Ground
					9.30	RMW-5-15 RIM
394	2119502.68	6043116.85	37ø48'07.61	122ø17'41.71	8.90	RMW-5-15 Top of Casing
					10.09	RMW-4-15 Ground
					13.11	RMW-4-15 RIM
395	2119603.90	6043231.73	37ø48'08.63	122ø17'40.31	12.82	RMW-4-15 Top of Casing
396	2119686.10	6043046.31	37ø48'09.41	122ø17'42.64	11.06	RSP-06
405	2119696.79	6043152.90	37ø48'09.53	122ø17'41.31	10.84	RSB/G-23
406	2119751.14	6043167.98	37ø48'10.07	122ø17'41.14	11.33	RSB/G-24
407	2119803.41	6043180.37	37ø48'10.59	122ø17'41.00	12.46	RSB/G-18

ATTACHMENT 'A'

Name	Northing	Easting	Latitude	Longitude	Elevation	Description
451	See #481					
452	2119493.12	6043239.56	37ø48'07.53	122ø17'40.18	11.50	BMW1 Top of Casing
453	2119493.51	6043239.45	37ø48'07.54	122ø17'40.19	9.12	BMW1 AC
454	2119430.96	6043040.68	37ø48'06.88	122ø17'42.65	12.61	BPZ1 Top of Casing
455	2119431.43	6043040.77	37ø48'06.89	122ø17'42.65	10.30	BPZ1 AC
456	2119583.16	6043031.84	37ø48'08.38	122ø17'42.79	13.54	BMW3 Top of Casing
457	2119583.35	6043032.09	37ø48'08.39	122ø17'42.79	10.85	BMW3 CONC BASE
458	2119584.64	6043032.70	37ø48'08.40	122ø17'42.78	10.25	BMW3 Ground
459	2119460.55	6042863.39	37ø48'07.14	122ø17'44.86	13.16	BMW8 Top of Casing
460	2119460.91	6042863.47	37ø48'07.14	122ø17'44.86	10.78	BMW8 CONC BASE
461	2119461.92	6042863.79	37ø48'07.15	122ø17'44.86	10.19	BMW8 Ground
462	2119576.66	6042830.02	37ø48'08.28	122ø17'45.31	13.14	BMW7 Top of Casing
463	2119576.92	6042830.26	37ø48'08.28	122ø17'45.30	10.69	BMW7 CONC BASE
464	2119577.93	6042830.73	37ø48'08.30	122ø17'45.30	10.41	BMW7 Ground
465	2119704.32	6043318.20	37ø48'09.64	122ø17'39.26	8.40	BMW6 Top of Casing
466	2119704.12	6043318.26	37ø48'09.64	122ø17'39.26	8.91	BMW6 RIM
467	2119705.19	6043318.34	37ø48'09.65	122ø17'39.26	8.87	BMW6 AC
481	2119622.25	6043122.35	37ø48'08.79	122ø17'41.68	9.16	MW-12 Top of Casing
					9.54	MW-12 Rim
					9.44	MW-12 AC
483	2119843.78	6043050.48	37ø48'10.97	122ø17'42.63	11.79	RSB/G-15
484	2119691.77	6043050.81	37ø48'09.47	122ø17'42.59	11.01	RSB/G-6

CHAUDHARY & ASSOCIATES, INC.
ENGINEERS
SURVEYORS
INSPECTORS
851 NAPA VALLEY CORPORATE WAY ▪ SUITE G ▪ NAPA, CALIFORNIA 94558-7551
PHONE: 707.255.2729 ▪ FAX: 707.255.5021 ▪ WWW.CHAUDHARY.COM

November 4, 2005
#04-08-054

SURVEY REPORT

Mr. Bill Frohlich
CH2M Hill
155 Grand Avenue, Suite 1000
Oakland, Ca 94612

Re: AMCO, Oakland, California
Ref: Monitoring Well Survey
Subject: Date of Survey 10/18/05

Dear Mr. Frohlich:

Horizontal and Vertical control was established at the AMCO site from offsite monuments.

Vertical Control: NAVD '88 site elevations were established from NGS monument J1444 located in the City of Oakland at the intersection of 5th and Chestnut Streets (see attached NGS data sheet). A conventional level loop was run from J1444 to site control and then back to J1444.

Horizontal Control: NAD '83 Epoch 1997.30
California coordinate system Zone 3 Coordinates were established at the site based on NGS monument HT0664 located at the Port of Oakland Franklin D. Rosevelt Pier (see NGS data sheet attached). NAD '83 coordinates were established on site control points CA1 through CA7 by RTK GPS survey. A conventional traverse was run between RTK points to confirm compatibility and to establish secondary control. Additional control points No. 601 and 602 set for this survey.

See Attachment 'A' for survey results. Please feel free to call me at (707) 255-2729 ext. 115 should you have any questions.

Sincerely,

CHAUDHARY & ASSOCIATES, INC.
A California Corporation

Edward A. Krumrei, P.E.
Project Manager

Chaudhary & Associates, Inc.,
851 Napa Valley Corporate Way, Suit G
Napa, CA 94558-7551
Project #04-08-054
Date of Survey: October 18, 2005
Client: CH2M Hill / AMCO

Name	Northing	Easting	Latitude	Longitude	Elevation	Number	Description
254	2119845.81	6043203.22			11.10	RSB/G-09	
651	2119746.02	6042933.47			10.08	RMW-07-35	Northedge Top of Casing
					10.45	RMW-07-35	Rim
					10.42	RMW-07-35	Concrete
652	2119628.72	6043101.57			8.94	RMW-12-50	Northedge Top of Casing
					9.33	RMW-12-50	Rim
					9.27	RMW-12-50	AC
653	2119625.72	6043111.43			9.04	RMW-12-32	Northedge Top of Casing
					9.45	RMW-12-32	Rim
					9.44	RMW-12-32	AC
654	2119578.17	6042842.31			13.56	RMW-14-50	Northedge Top of Casing
					13.56	RMW-14-50	Rim
					10.39	RMW-14-50	Ground
655	2119397.02	6042992.94			13.08	RMW-13-35	Northedge Top of Casing
					13.00	RMW-13-35	Rim
					10.38	RMW-13-35	AC
659	2119928.89	6043326.95			8.25	RMW-11-35	Northedge Top of Casing
					8.53	RMW-11-35	Rim
					8.52	RMW-11-35	AC