Table 1: Summary of Previous Results - 1991 SCI Soil Investigation
Martin Luther King Jr. Way, Between 11th and 12th Street
Oakland, California

Sample ID	Depth	Units	TEH	TVH	Oil and Grease	Lead	Other Detections
1	1.5	mg/kg	--	ND	--	**31.0**	
	4	mg/kg	--	--	--	ND	
	5.5	mg/kg	--	--	--	ND	
2	1	mg/kg	--	--	--	**102**	
	3	mg/kg	--	--	--	ND	
	5	mg/kg	--	--	--	ND	
	7	mg/kg	ND	ND	ND	ND	
3	3	mg/kg	--	**2,300**	--	--	
	6.5	mg/kg	--	**51**	--	--	
	15.5	mg/kg	--	**4,000**	--	--	
	20.5	mg/kg	ND	**980**	ND	--	1,2-Dichloroethane (330 ug/kg)
4	24	mg/kg	--	ND	--	--	
		mg/kg	--	--	--	--	
6	26	mg/kg	ND	ND	--	--	
	27.5	mg/kg	ND	ND	--	--	
7	3	mg/kg	--	--	--	ND	
	5.5	mg/kg	--	--	--	ND	
	21	mg/kg	~~ND~~ 10	~~ND~~ 140	--	--	
	26	mg/kg	ND	ND	--	--	
8	2	mg/kg	ND	--	--	**363**	Wet Lead (8,350 ug/l)
	4	mg/kg	--	--	--	ND	
	5.5	mg/kg	--	--	--	ND	
9	1.5	mg/kg	--	--	--	ND	
	7	mg/kg	--	--	--	ND	
10	1	mg/kg	--	--	--	**598**	
	3	mg/kg	ND	--	**58**	ND	
	5.5	mg/kg	--	--	--	ND	
11	16.5	mg/kg	**620**	**54**	--	--	
	20.5	mg/kg	--	--	ND	--	
	21	mg/kg	**1,800**	**2,000**	--	--	
12	20.5	mg/kg	--	--	ND	--	
	21	mg/kg	**1,300**	**650**	--	--	Chlorobenzene (280 ug/kg)
	22.5	mg/kg	ND	ND	--	--	
	26	mg/kg	ND	ND	--	--	
13	21	mg/kg	ND	ND	--	--	
	26	mg/kg	ND	ND	--	--	
14	24	mg/kg	ND	ND	--	--	
	26	mg/kg	ND	ND	--	--	
15	19.5	mg/kg	--	--	ND	--	
	20	mg/kg	ND	ND	--	--	1,2-Dichloroethane (52 ug/kg)

Table 1: Summary of Previous Results - 1991 SCI Soil Investigation
Martin Luther King Jr. Way, Between 11th and 12th Street
Oakland, California

Sample ID	Depth	Units	TEH	TVH	Oil and Grease	Lead	Other Detections
16	21	mg/kg	ND	ND	--	--	
	26	mg/kg	ND	ND	--	--	
17	25	mg/kg	ND	ND	--	--	
	30	mg/kg	ND	ND	--	--	
S-1	1.0	mg/kg	**7.6**	ND	ND	--	
S-2	0.5	mg/kg	--	--	--	**118**	
S-4	0.5	mg/kg	ND	--	ND	--	
S-6	0.5	mg/kg	ND	--	ND	--	
S-8	0.5	mg/kg	ND	--	**52**	--	
S-10	0.5	mg/kg	ND	--	ND	--	
S-13	0.5	mg/kg	ND	--	**82**	--	

Notes:
TEH: Total Extractable Hydrocarbons as diesel
TVHg: Total Volatile Hydrocarbons as gasoline
VOCs: Volatile Organic Compounds
mg/kg: milligrams per kilogram
ug/l: micrograms per liter
Detected concentrations shown in bold
--: Sample not analyzed

Reference: *Soil Contamination Assessment*, dated June 17, 1991 by SCI

Table 2: Summary of Previous Results - 1998 Tetra Tech Investigation
Martin Luther King Jr. Way, Between 11th and 12th Street
Oakland, California

Boring ID	Depth	Units	TPH Extractables	TPH Purgeables	Benzene	Toluene	Ethyl benzene	Xylenes	Lead	Detectable VOCs
Soil Samples										
SB1	9.5	mg/kg	**480.0**	**1,000.0**	**0.021**	**0.096**	**2.9**	**12.8**	**6.6**	
	16.5	mg/kg	**53.0**	**38.0**	ND	**0.03**	**0.12**	**1.0**	**27.4**	
	23.5	mg/kg	**1,400.0**	**1,800.0**	**3.2**	**26.0**	**19.0**	**156.0**	**4.9**	
SB2	9.5	mg/kg	ND	ND	ND	ND	ND	ND	**2.9**	
	16.5	mg/kg	ND	ND	ND	ND	**0.01**	**0.03**	**78.6**	
	23.5	mg/kg	**4.6**	**190.0**	**23.5**	**24.0**	**14.0**	**89.0**	**2.3**	
SB3	9.0	mg/kg	ND	ND	ND	ND	ND	ND	**2.4**	
	16.0	mg/kg	ND	ND	ND	ND	ND	ND	**2.3**	
	23.5	mg/kg	ND	ND	ND	ND	ND	ND	**0.88**	
Grab Groundwater Samples										
SB1	–	mg/L	**17.0**	**33.0**	**0.35**	**1.8**	**0.64**	ND	**0.43**	
SB2	–	mg/L	**0.09**	**0.11**	**0.02**	**0.026**	**0.0031**	**0.02**	**0.18**	1,2,4-Trimethylbenzene (0.0056 mg/L), 1,2-Dichlorethane (0.0014 mg/L), 1,3,5-Trimethylbenzene (0.0017 mg/L), and Napthalene (0.0014 mg/L)
SB3	–	mg/L	ND	ND	ND	ND	ND	ND	**0.04**	

Notes:
TPH: Total Petroleum Hydrocarbons
VOCs: Volatile Organic Compounds
mg/kg: milligrams per kilogram
mg/l: milligrams per liter
–: Sample not analayzed
ND: Not Detected
Detected concentrations shown in bold

Reference: *Final Phase II - Environmental Site Assessment Report*, dated June 23, 2000 by Tetra Tech EM, Inc.

Table 3: Results for Test Pit Samples
Martin Luther King Jr. Way, Between 11th and 12th Street
Oakland, California

Sample ID	Units	TEHd *	TEHo *	TVHg	Benzene	Toluene	Ethyl benzene	Xylenes	Lead	WET Lead	TCLP Lead
TP-1@0.0	mg/kg	--	--	--	--	--	--	--	160	--	--
TP-1@2.0	mg/kg	--	--	--	--	--	--	--	3.1	--	--
TP-1@5.0	mg/kg	<1	<5	<0.97	<4.9	<4.9	<4.9	<4.9	3.6	--	--
TP-2@0.0	mg/kg	--	--	--	--	--	--	--	20	--	--
TP-2@2.0	mg/kg	<1	<5	<0.97	<4.9	<4.9	<4.9	<4.9	1.6	--	--
TP-2@5.0	mg/kg	--	--	--	--	--	--	--	2.1	--	--
TP-3@0.0	mg/kg	--	--	--	--	--	--	--	160	--	--
TP-3@3.0	mg/kg	--	--	--	--	--	--	--	1.8	--	--
TP-3@6.0	mg/kg	<.99	<5	<0.95	<4.8	<4.8	<4.8	<4.8	7.0	--	--
TP-4@0.0	mg/kg	--	--	--	--	--	--	--	170	--	--
TP-4@2.5	mg/kg	6.3	46	<0.97	<4.9	<4.9	<4.9	<4.9	86	--	--
TP-4@6.0	mg/kg	--	--	--	--	--	--	--	91	--	--
TP-5@0.0	mg/kg	--	--	--	--	--	--	--	110	--	--
TP-5@2.0	mg/kg	<1	<5	<0.93	<4.7	<4.7	<4.7	<4.7	4.5	--	--
TP-5@6.0	mg/kg	--	--	--	--	--	--	--	2.4	--	--
TP-6@0.0	mg/kg	--	--	--	--	--	--	--	190	--	--
TP-6@2.5	mg/kg	--	--	--	--	--	--	--	1.9	--	--
TP-6@6.0	mg/kg	<1	<5	<0.92	<4.6	<4.6	<4.6	<4.6	2.0	--	--
TP-7@0.0	mg/kg	--	--	--	--	--	--	--	220	--	--
TP-7@2.0	mg/kg	<1	<5	<0.93	<4.7	<4.7	<4.7	<4.7	2.1	--	--
TP-7@6.0	mg/kg	--	--	--	--	--	--	--	2.5	--	--
TP-8@0.0	mg/kg	--	--	--	--	--	--	--	220	--	--
TP-8@2.5	mg/kg	4.6	36	<0.95	<4.8	<4.8	<4.8	<4.8	180	--	--
TP-8@6.0	mg/kg	--	--	--	--	--	--	--	1.7	--	--
TP-9@0.0	mg/kg	--	--	--	--	--	--	--	220	--	--
TP-9@2.0	mg/kg	--	--	--	--	--	--	--	1.4	--	--
TP-9@5.0	mg/kg	<1	<5	<0.95	<4.8	<4.8	<4.8	<4.8	1.3	--	--
TP-10@0.0	mg/kg	--	--	--	--	--	--	--	150	--	--
TP-10@2.0	mg/kg	<1	<5	<0.94	<4.7	<4.7	<4.7	<4.7	1.9	--	--
TP-10@5.0	mg/kg	--	--	--	--	--	--	--	2.2	--	--
TP-11@0.0	mg/kg	--	--	--	--	--	--	--	200	--	--
TP-11@2.0	mg/kg	--	--	--	--	--	--	--	15	--	--
TP-11@5.0	mg/kg	<1	<5	<0.97	<4.9	<4.9	<4.9	<4.9	1.9	--	--
TP-12@0.0	mg/kg	--	--	--	--	--	--	--	72	--	--
TP-12@2.0	mg/kg	6.6	81	<0.94	<4.7	<4.7	<4.7	<4.7	110	--	--
TP-12@5.0	mg/kg	--	--	--	--	--	--	--	19	--	--
COMP-1	mg/l	--	--	--	--	--	--	--	--	3.6	--
COMP-2	mg/l	--	--	--	--	--	--	--	--	7.7	--
Q1 though Q5	mg/l	--	--	--	--	--	--	--	--	--	<0.5

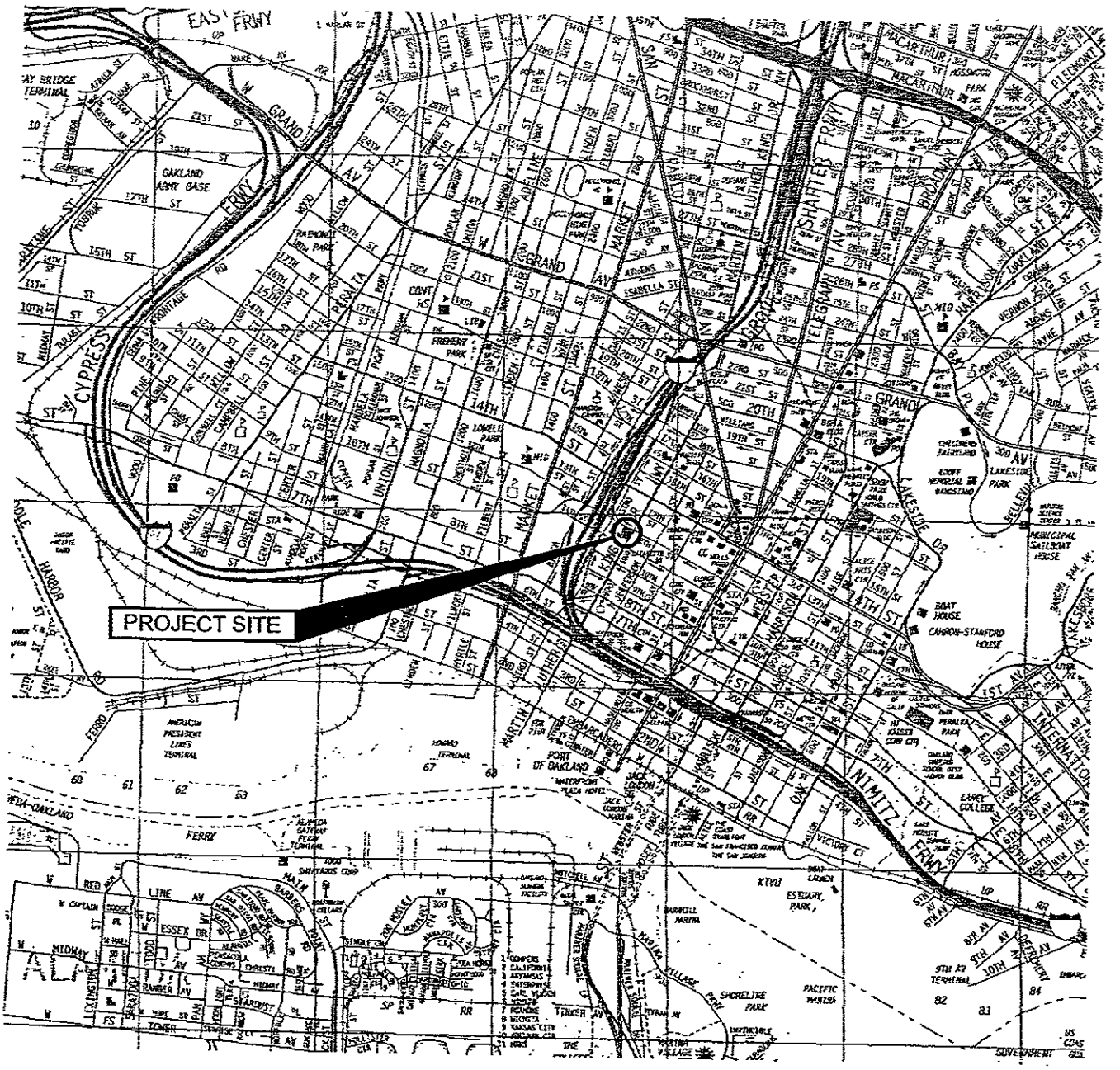
Notes:
Soil samples collected on August 4, 2000
Detected concentrations shown in bold
TEHd Total Extractable Hydrocarbons as diesel
TEHo Total Extractable Hydrocarbons as motor oil
TVHg Total Volatile Hydrocarbons as gasoline
* Using silica gel cleanup
WET Waste Extraction Test
TCLP Toxic Characteristic Leachability Procedure

mg/kg milligrams per kilogram
mg/l milligrams per liter
-- Sample not analyzed
< Not detected at or above the laboratory reporting limit
COMP - 1 is a composite of TP-4@6', TH-8@6', and TP-12@5'
COMP - 2 is a composite of TP-4@2.5', TH-8@2.5', and TP-12@2'

Table 4: Results for Monitoring Well Locations
Martin Luther King Jr. Way, Between 11th and 12th Street
Oakland, California

					Volatile Organic Compounds**									
Sample ID	Date	Units	TEHd *	TVHg	Benzene	Toluene	Ethyl Benzene	Xylenes	Propyl benzene	1,3,5-Trimethyl benzene	1,2,4-Trimethyl benzene	n-Butyl benzene	Napthalene	1,2-Dichloroethane
Soil Sample:														
TW-1@18.5	03/03/01	mg/kg	**170**	**680**	<500	**2,500**	**1,600**	**11,000**	**1,500**	**4,400**	**14,000**	**1,800**	**2,900**	<500
Grab Groundwater Samples:														
TW-1	03/03/01	ug/l	**3,100**	**96,000**	**4,000**	**11,000**	**2,200**	**13,400**	<500	**1,200**	**3,800**	<500	<500	<500
TW-2	03/03/01	ug/l	<50	**120**	<5.0	**5.1**	<5.0	**10**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
TW-3	03/03/01	ug/l	<50	**70**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**180**

Notes:
Detected concentrations shown in bold
TEHd Total Extractable Hydrocarbons as diesel
TVHg. Total Volatile Hydrocarbons as gasoline
* Using silica gel cleanup
** = only the detected VOC analytes are listed
mg/kg milligrams per kilogram
ug/l micrograms per liter
< Not detected at or above the laboratory reporting limit



APPROXIMATE SCALE IN FEET

0 2400 4800

N

NOTE:

THIS VICINITY MAP IS BASED ON A THOMAS GUIDE MAP FOR SAN FRANCISCO, ALAMEDA AND CONTRA COSTA COUNTIES, CALIFORNIA, MAP 649, YEAR 2000

VICINITY MAP

12TH STREET AND MARTIN LUTHER KING JR. WAY
OAKLAND, CALIFORNIA

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY	DATE	PLATE
CFY	3/8/01	1
JOB NUMBER	FILE NUMBER	
272 054	A272 054.03	

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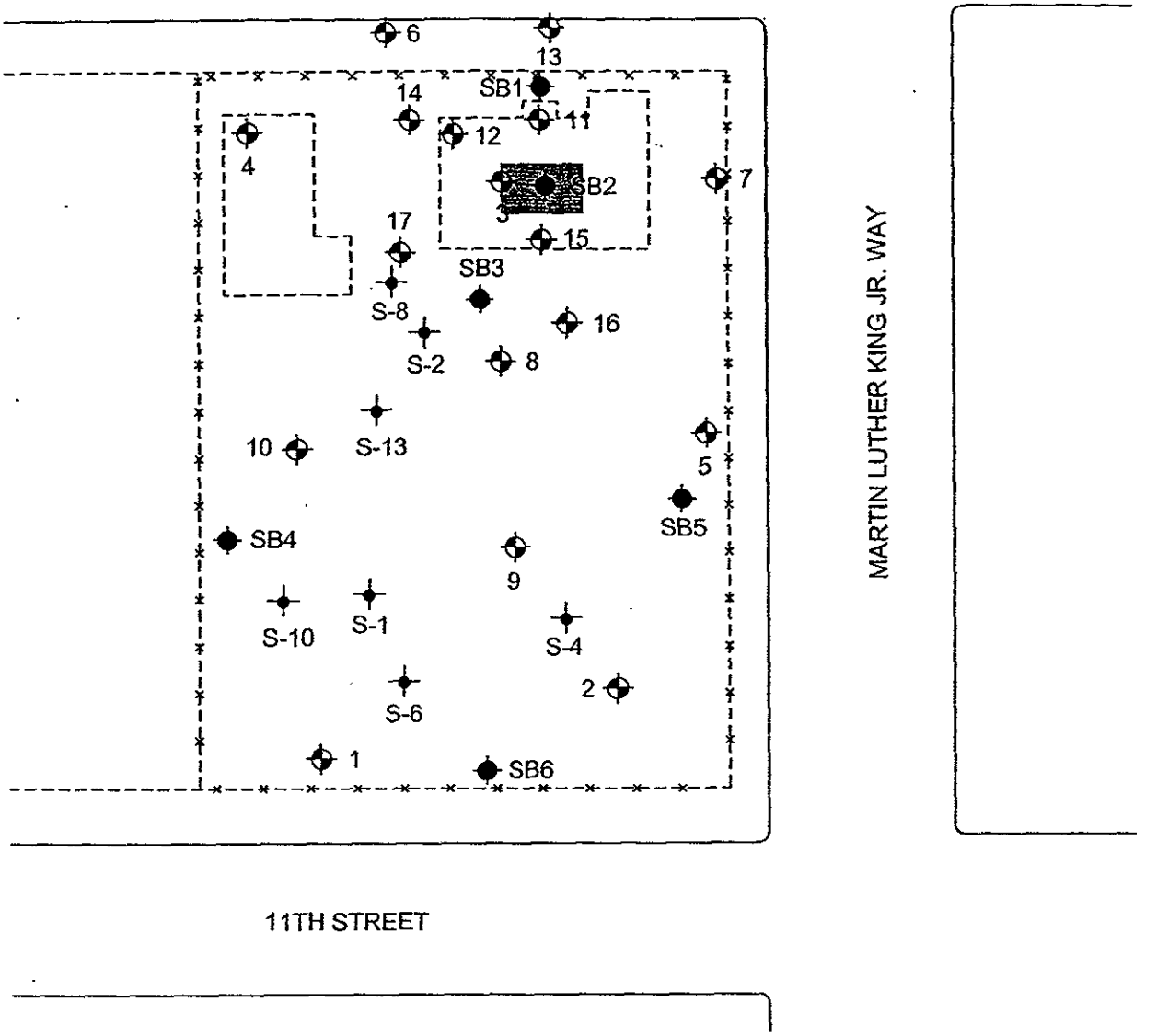


LEGEND:

1 — APPROXIMATE LOCATION OF TEST BORING BY SCI

S-1 — APPROXIMATE LOCATION OF SURFACE SAMPLE BY SCI

SB1 — SOIL BORING BY OTHERS

FENCE

APPROXIMATE LOCATION OF PREVIOUS BASEMENTS

APPROXIMATE LOCATION OF FORMER TANKS

APPROXIMATE SCALE IN FEET

0 50 100

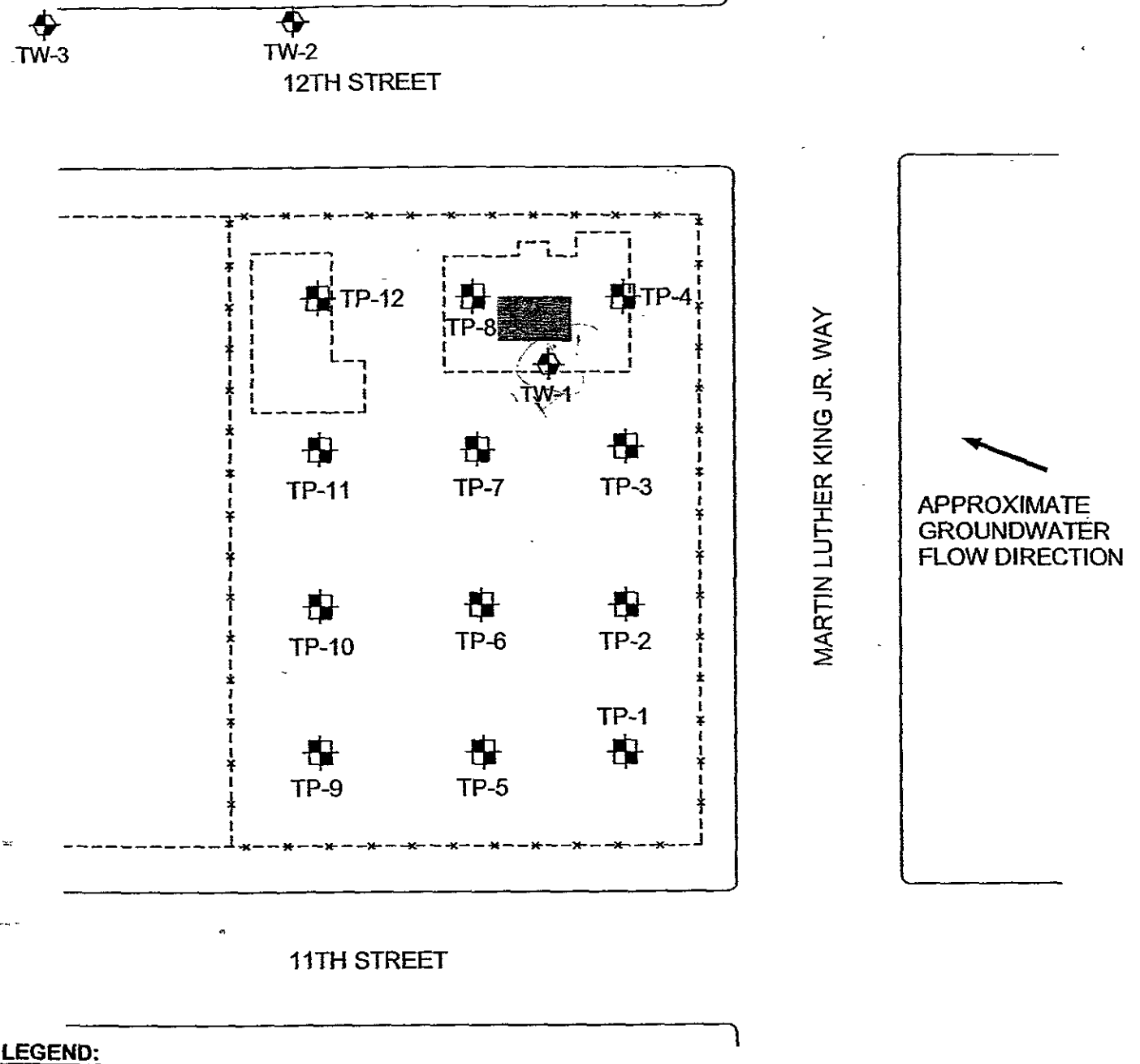
N

PREVIOUS SAMPLING LOCATIONS

12TH STREET AND MARTIN LUTHER KING JR. WAY
OAKLAND, CALIFORNIA

Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY	DATE	PLATE
CFY	08/21/00	2
JOB NUMBER	FILE NUMBER	
272.054	A272.054.01	



LEGEND:

TW-1 — APPROXIMATE LOCATION OF MONITORING WELL

TP-10 — APPROXIMATE LOCATION OF TEST PIT EXCAVATED ON 8/4/00

FENCE

APPROXIMATE LOCATION OF PREVIOUS BASEMENTS

APPROXIMATE LOCATION OF FORMER TANKS

APPROXIMATE SCALE IN FEET

0 50 100

N

SAMPLE LOCATIONS

12TH STREET AND MARTIN LUTHER KING JR. WAY
OAKLAND, CALIFORNIA

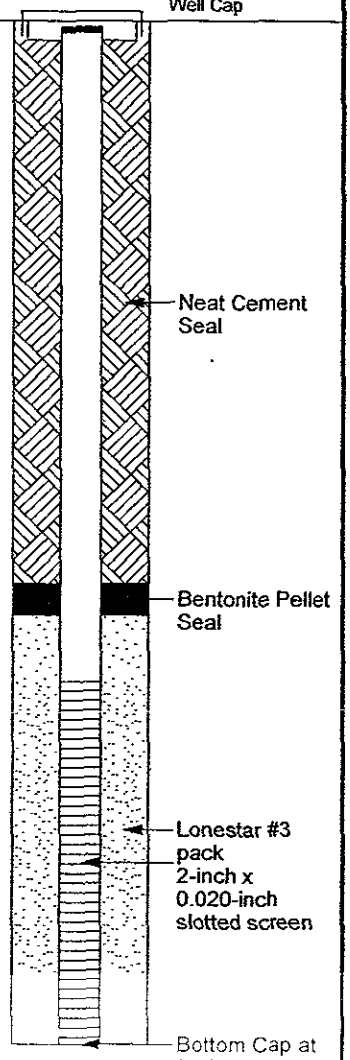
Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY	DATE	PLATE
CFY	08/21/00	3
JOB NUMBER	FILE NUMBER	
272.054	A272.054.02	

Project Name & Location: 12th Street and Martin Luther King Jr. Way Oakland, California	Ground Surface Elevation:
	Elevation Datum:
Drilling Coordinates: not surveyed	Start: Date 3/2/01 Time 07:30 / Finish: Date 3/2/01 Time 10:30
Drilling Company & Driller: Precision, Terry McAdoo	Drilling Fluid: None / Hole Diameter: 8 inches
Rig Type & Drilling Method: Mobile B-4500 / Hollow Stem Auger	
Sampler Type(s): A) Modified California (3" O.D., 2.5" I.D.)	Logged By: JTW / GWL During Drilling
Sampling Method(s): A) 140 lb hammer with 30" drop (Rope and Cathead)	Backfill Method: Completed as Well / Date: 3/2/01

Depth (feet)	Sampler Type	Blows/6 inches or Pressure	Blows/12 inches	OVM (ppm)	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)
0							**ASPHALTIC CONCRETE 8 - INCHES THICK** **CONCRETE SLAB 4 - INCHES THICK** **CLAYEY SAND (SC)** Mottled dark yellowish-brown
5	A	50/6"	50/6"	0			
							POORLY GRADED SAND WITH CLAY (SP) Light brown, very dense, moist
10	A	35 50	85/12"	0			
							CLAYEY SAND (SC) Grayish-brown and dark yellowish-brown, very dense, moist, poorly graded, fine to medium grained
15	A	36 50	86/12"	0			
							POORLY GRADED SAND WITH CLAY (SP) Yellowish-brown to light olive-brown, fine to medium grained
20	A	28 41 50/5"	91/11"	0			
							POORLY GRADED SAND (SP) Light olive-brown, very dense, moist, fine to medium grained
25	A	18 48 50/3"	98/9"	0			▽
30	A	36 50/5"	86/11"	0			
35							Bottom of boring at 31 feet below ground surface

WELL CONSTRUCTION



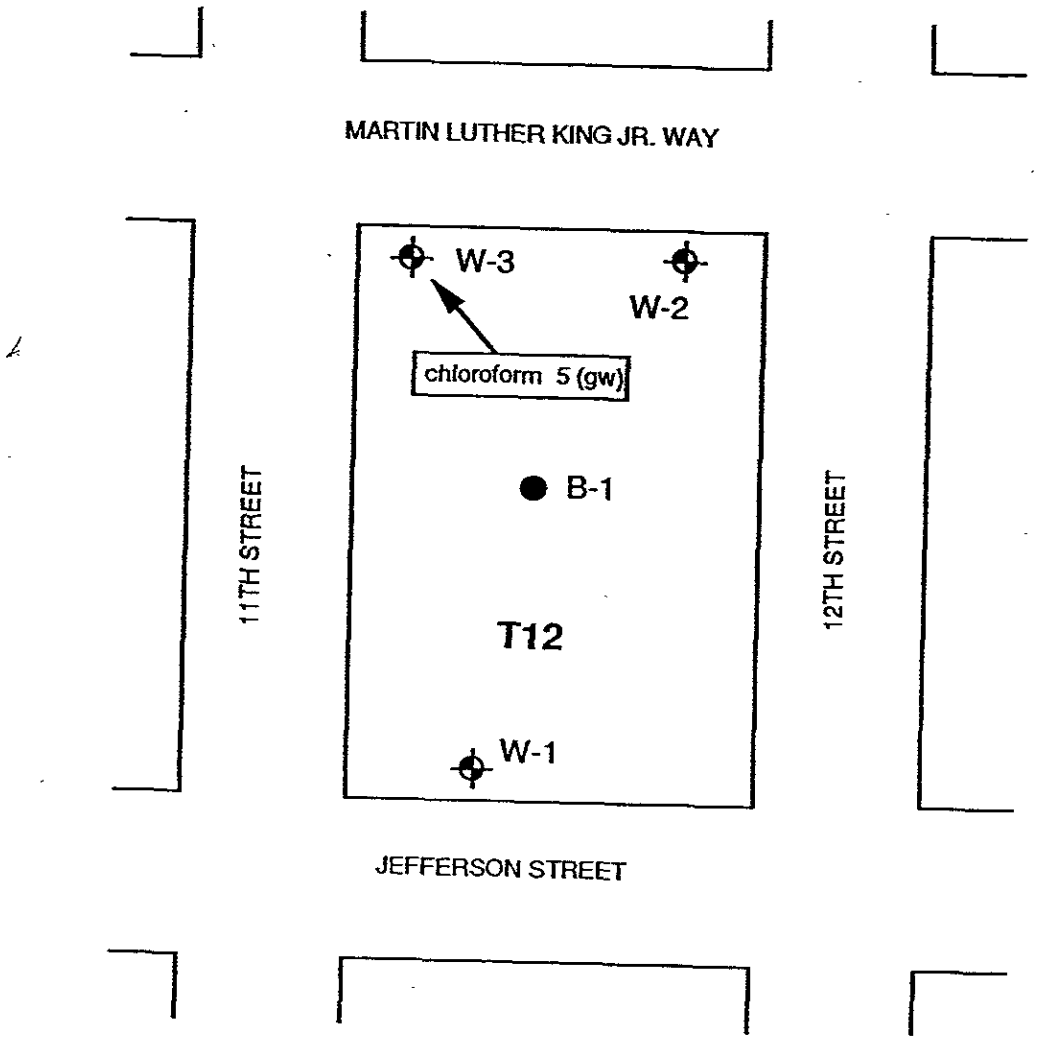
LOG OF BORING 272-054.GPJ GEO-ENV.GDT 3/14/01

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

12th Street and Martin Luther King Jr Way
Oakland, California

JOB NUMBER 272 054 | DATE 3/01

BORING **TW-3**



0 100
FEET

groundwater gradient = 0.0036 ft/ft

Approximate Groundwater Flow Direction

N

Legend:

- Monitoring Well
- Soil Boring

chloroform 5 (gw) - analysis indicates compound in groundwater (gw) or soil (soil), concentration expressed as ppb

Project No. 90C0039A	City Center Environmental Assesment	PARCEL T12 - BORING AND MONITORING WELL LOCATIONS	FIGURE 4
Woodward-Clyde Consultants			

Project Name & Location: 12th Street and Martin Luther King Jr. Way, Oakland, California	Ground Surface Elevation:
	Elevation Datum:
Drilling Coordinates: not surveyed	Start: Date 3/2/01 Time 14:00 / Finish: Date 3/2/01 Time 17:00
Drilling Company & Driller: Precision, Terry McAdoo	Drilling Fluid: None / Hole Diameter: 8 inches
Rig Type & Drilling Method: Mobile B-4500 / Hollow Stem Auger	
Sampler Type(s): A) Modified California (3" O.D., 2.5" I.D.)	Logged By: JTW / ▽ GWL During Drilling
Sampling Method(s): A) 140 lb hammer with 30" drop (Rope and Cathead)	Backfill Method: Completed as Well / Date: 3/2/01

Depth (feet)	Sampler Type	Blows/6 inches or Pressure	Blows/12 inches	OVM (ppm)	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)
0	A	14 14 12	26	0			**SILTY SAND (SM)** Dark brown, medium dense, moist with trace of brick fragments, ash, poorly graded, fine grained
5	A	27 50/3"	77/9"	0			Wet, perched water?
							POORLY GRADED SAND (SP) Yellowish-brown, very dense
10	A	48 50/3"	98/9"	0			
							POORLY GRADED SAND WITH CLAY (SP) Mottled light grayish-brown and yellowish-brown, very dense, moist strong hydrocarbon odor
15	A	69 50/3"	119/9"	1200			
	A	81 50/1"	131/7"	2500			**POORLY GRADED SAND (SP)** Dark yellowish-brown, very dense, moist, fine to medium grained, very strong hydrocarbon odor
20	A	85 50/.5"	133/6.5"	2300			
							POORLY GRADED SAND (SP) Light olive-brown, very dense, wet, fine grained, mild hydrocarbon odor
25	A	94 50/1"	144/7"	888			▽
	A	74 50/2"	124/7"	12			
30	A	34 50/4"	84/10"	146			Color change to light brownish-yellow at 29.0'
							Bottom of boring at 31 feet below ground surface
35							

WELL CONSTRUCTION

Flush Mounted Well Cover

Locking Well Cap

Neat Cement Seal

Bentonite Pellet Seal

Lonestar #3 pack

2-inch x 0.020-inch slotted screen

Bottom Cap at 31 feet

LOG OF BORING 272-054.GPJ GEO-ENV.GDT 3/21/01

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

12th Street and Martin Luther King Jr. Way
Oakland, California

JOB NUMBER 272 054

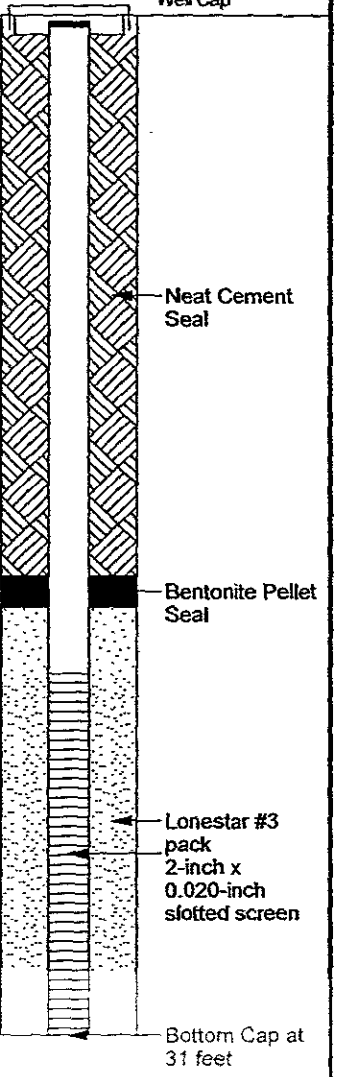
DATE 3/01

BORING **TW-1**

Project Name & Location: 12th Street and Martin Luther King Jr. Way Oakland, California	Ground Surface Elevation: Elevation Datum:
Drilling Coordinates: *not surveyed*	Start: Date 3/2/01 Time 10:45 / Finish: Date 3/2/01 Time 00:00
Drilling Company & Driller: Precision, Terry McAdoo	Drilling Fluid: None / Hole Diameter: 8 inches
Rig Type & Drilling Method: Mobile B-4500 / Hollow Stem Auger	
Sampler Type(s): A) *Modified California* (3" O.D., 2.5" I.D.)	Logged By: JTW / ▽ GWL During Drilling
Sampling Method(s): A) 140 lb hammer with 30" drop (Rope and Cathead)	Backfill Method: Completed as Well / Date: 3/2/01

Depth (feet)	Sampler Type	Blows/6 inches or Pressure	Blows/12 inches	OVM (ppm)	Sample Interval	Graphic Log	SOIL DESCRIPTIONS GROUP NAME (GROUP SYMBOL) color, consistency/density, *moisture condition, other descriptions* (Local Name or Material Type)
0							**ASPHALTIC CONCRETE 6 - INCHES THICK** **CONCRETE SLAB 4 - INCHES THICK** **POORLY GRADED SAND (SP)** Light olive-brown, very dense, moist, fine to medium grained
5	A	28 37 50/3"	87/9"	0			***INTERBEDDED CLAYEY SAND AND POORLY GRADED SAND (SP-SC)*** Dark yellowish-brown and olive-brown, very dense, moist, fine to medium grained
10	A	38 50/2"	88/8"	0			**POORLY GRADED SAND WITH SILT (SP)** *Dark yellowish-brown, very dense, moist, fine to medium grained*
15	A	27 50/4"	77/10"	0			***POORLY GRADED SAND WITH CLAY (SP)*** Light olive-brown, very dense, moist, fine to medium grained
20	A	34 50/3"	84/9"	0			**POORLY GRADED SAND (SP)** Light olive-brown, very dense, moist, fine to medium grained
25	A	81/6	81/6"	0			No odor or staining observed for cuttings on auger ▽
30	A	47 50/1"	97/7"	0			
35							Bottom of boring at 31 feet below ground surface

WELL CONSTRUCTION



LOG OF BORING 272-054.GPJ GEO-ENV.GDT 3/21/01

Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

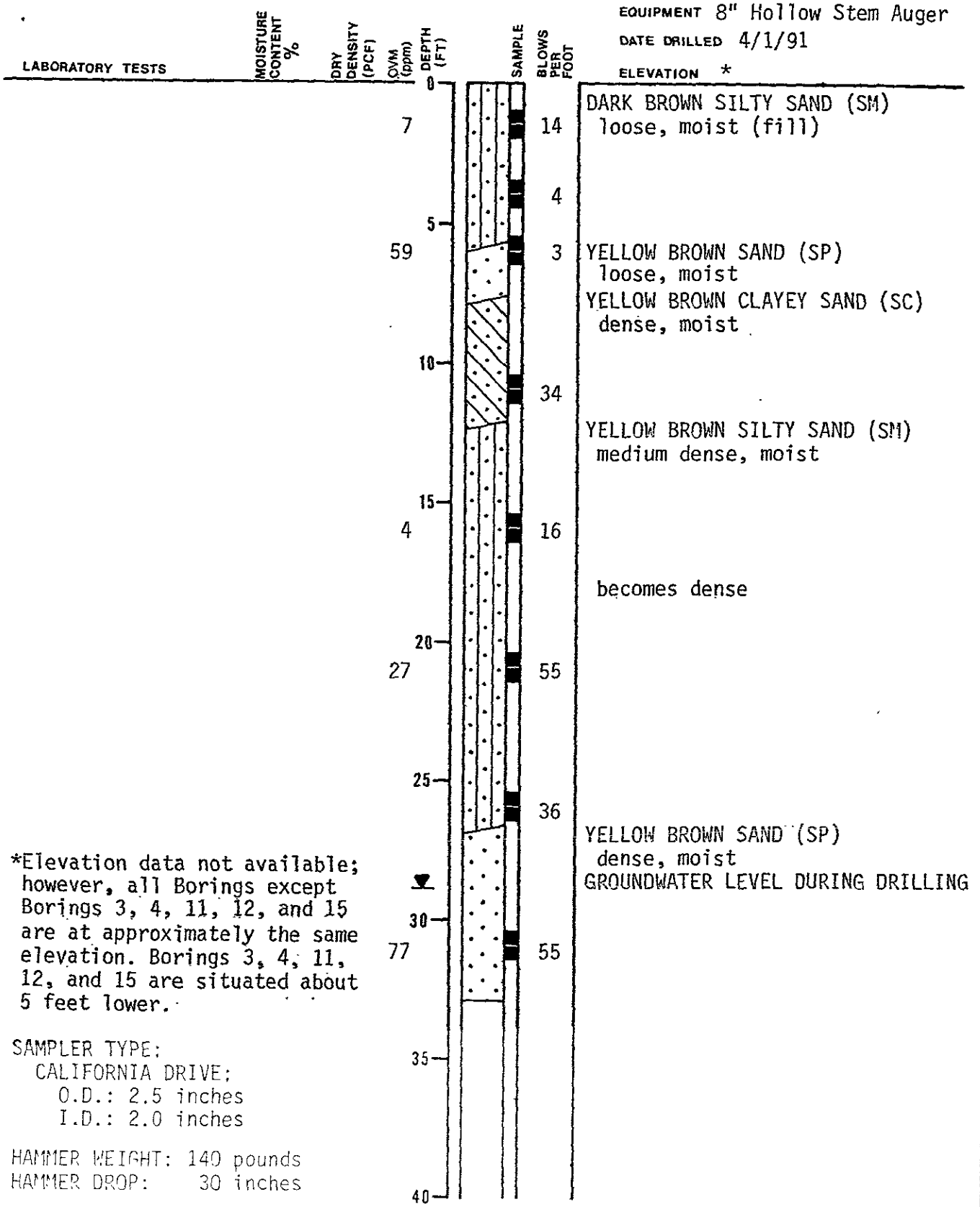
12th Street and Martin Luther King Jr. Way
Oakland, California

JOB NUMBER 272 054 | DATE 3/01

BORING **TW-2**

LOG OF TEST BORING 1

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/1/91
ELEVATION *



*Elevation data not available; however, all Borings except Borings 3, 4, 11, 12, and 15 are at approximately the same elevation. Borings 3, 4, 11, 12, and 15 are situated about 5 feet lower.

SAMPLER TYPE:
CALIFORNIA DRIVE;
O.D.: 2.5 inches
I.D.: 2.0 inches

HAMMER WEIGHT: 140 pounds
HAMMER DROP: 30 inches

Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY			PLATE
	JOB NUMBER	DATE	APPROVED	A-1
	272.021	4/5/91	JVB	

LOG OF TEST BORING 2

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/1/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	OVM (ppm)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
				0			BLACK-BROWN SAND (SM) loose, moist (fill)
			189			3	BROWN SILTY SAND (SM-SP) loose, moist (fill)
			10	5		3	
			421			17	RED-BROWN CLAYEY SAND (SC) medium dense, moist
			10	10		29	becomes dense
			17	15		17	MOTTLED RED BROWN-GRAY CLAYEY SAND (SC) medium dense to dense, moist
			123	20		38	
			280	25		30	
							GRAY-BROWN SILTY SAND (SP) dense, moist
							GROUNDWATER LEVEL DURING DRILLING
			38	30		65	
				35			
				40			

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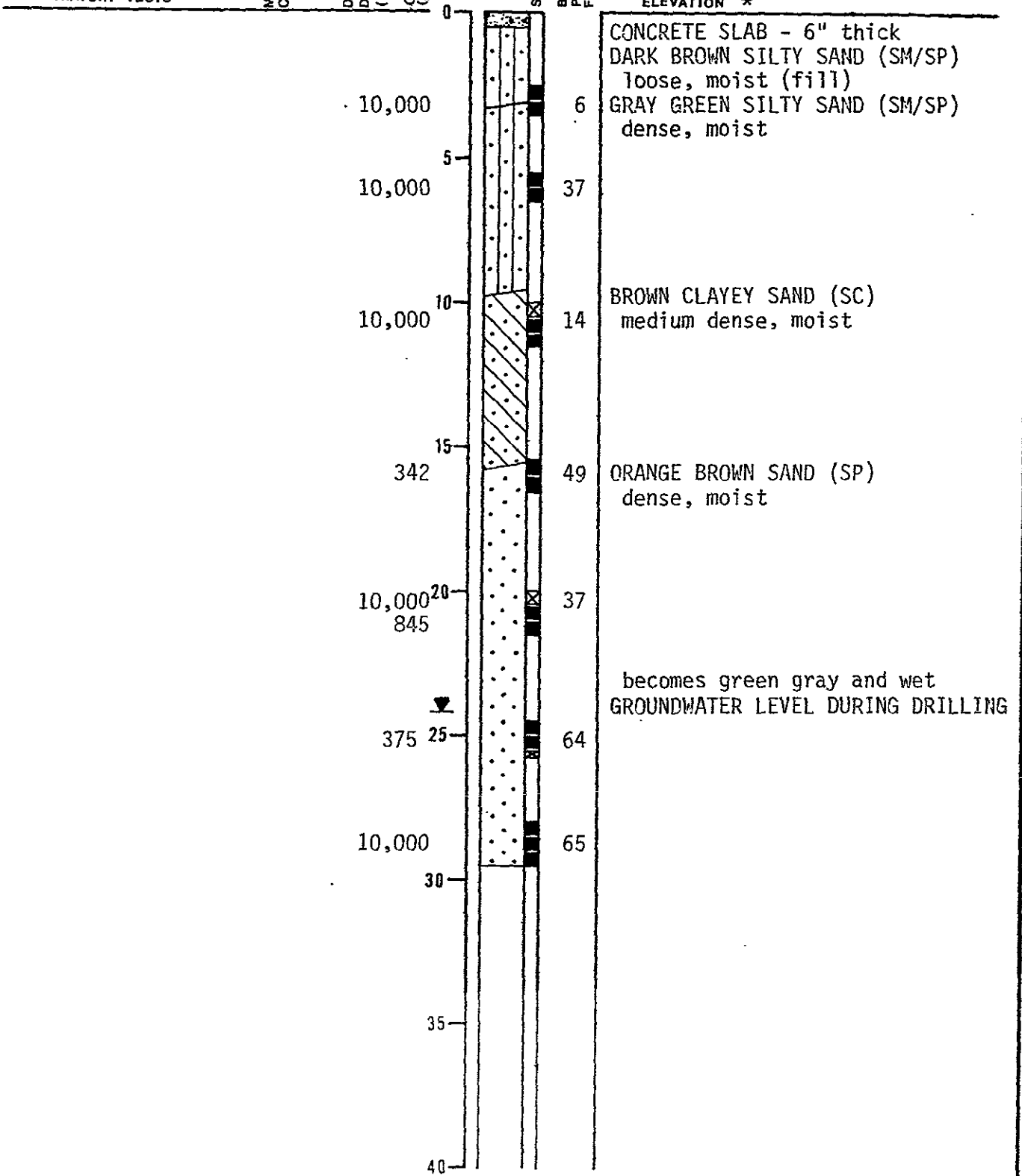
12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER 272.021 | DATE 4/5/91 | APPROVED JVB

PLATE A-2

LOG OF TEST BORING 3

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/2/91
ELEVATION *



Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY			PLATE
	JOB NUMBER	DATE	APPROVED	A-3
	272.021	4/5/91	JVB	

LOG OF TEST BORING 4

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/2/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	OVM (ppm)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
				0			BROWN SAND (SP) medium dense to dense, moist
			0	5		25	
			2	10		36	
			2	15		21	
							BROWN SILTY SAND (SM/SP) dense, moist
			2	20		28	
			3	25		54	
			3 ▼			45	GROUNDWATER LEVEL DURING DRILLING
							BROWN SAND (SP) very dense, wet
			6	30		92	
				35			
				40			

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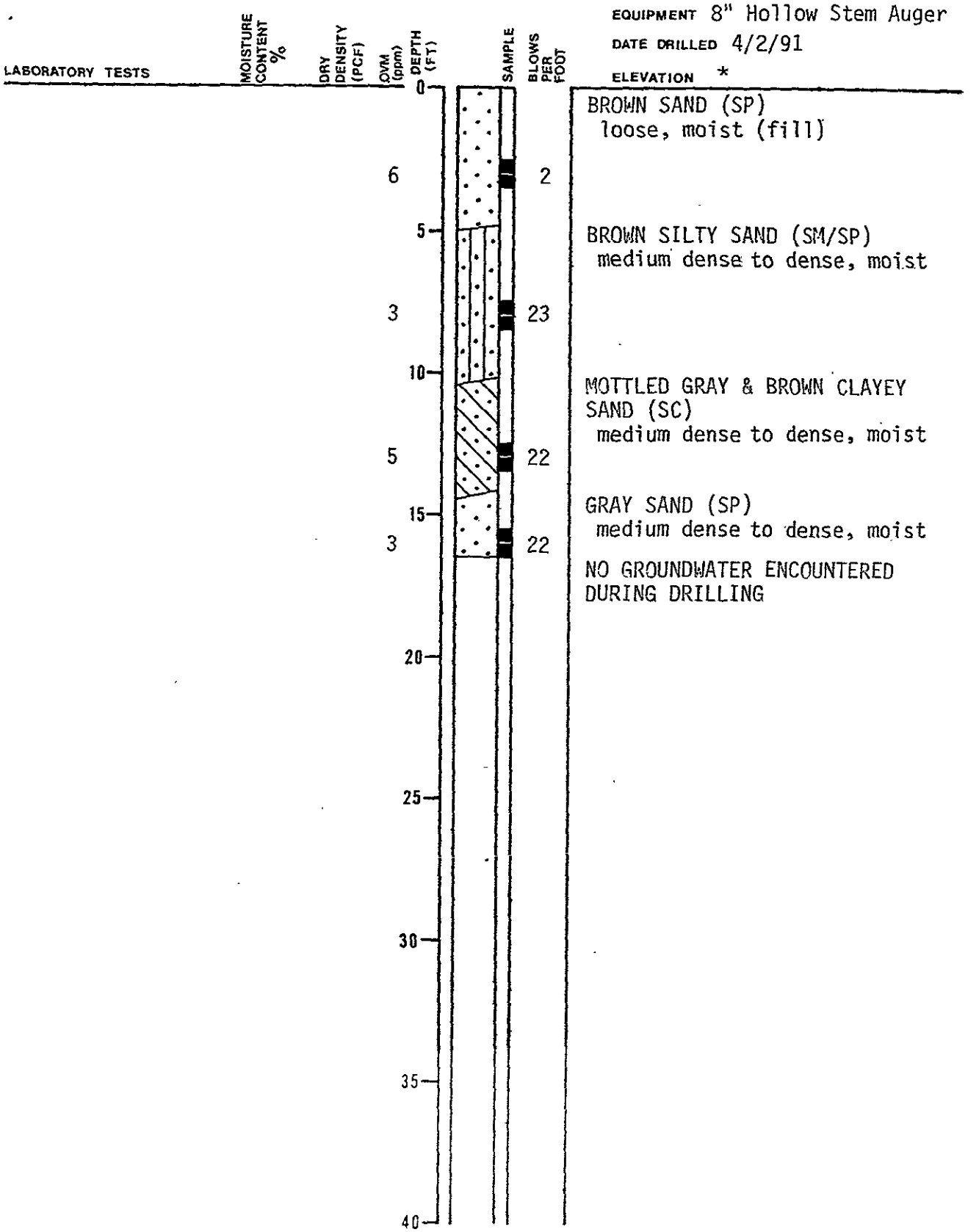
12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER 272.021 | DATE 4/5/91 | APPROVED JVB

PLATE A-4

LOG OF TEST BORING 5

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/2/91
ELEVATION *



Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY			PLATE
	JOB NUMBER 272.021	DATE 4/5/91	APPROVED JVB	A-5

LOG OF TEST BORING 6

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/13/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	OVM (ppm)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
				0			DARK BROWN SILTY SAND (SM) loose to medium dense (fill)
			0	5		19	RED BROWN CLAYEY SAND (SC) medium dense to dense, moist
				10		38	BROWN SILTY SAND (SM) dense, moist
				15		17	
			100	20		45	
				25		56	GROUNDWATER LEVEL DURING DRILLING
			13			79	BROWN SILTY SAND (SM/SP) dense to very dense, wet
				30			Boring backfilled with cement grout
				35			
				40			

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12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER 272.021 | DATE 5/23/91 | APPROVED JVB

PLATE A-6

LOG OF TEST BORING 7

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/13/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	OVM (ppm)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
				0			DARK BROWN SILTY SAND (SM) loose, moist (fill)
			10			4	BROWN SILTY SAND (SM) loose, moist
				5			
			75			17	RED BROWN SILTY SAND (SM) dense, moist
			-			42	
				10			
			100			45	
				15			
			850			23	
							BROWN GRAY SILTY SAND (SM/SP) dense, moist
				20			
			2000+			46	hydrocarbon odor
				25			
			250			48	
							GROUNDWATER LEVEL DURING DRILLING
			20			64	color change to brown
				30			
			30			67	
							Boring backfilled with cement grout
				35			
				40			

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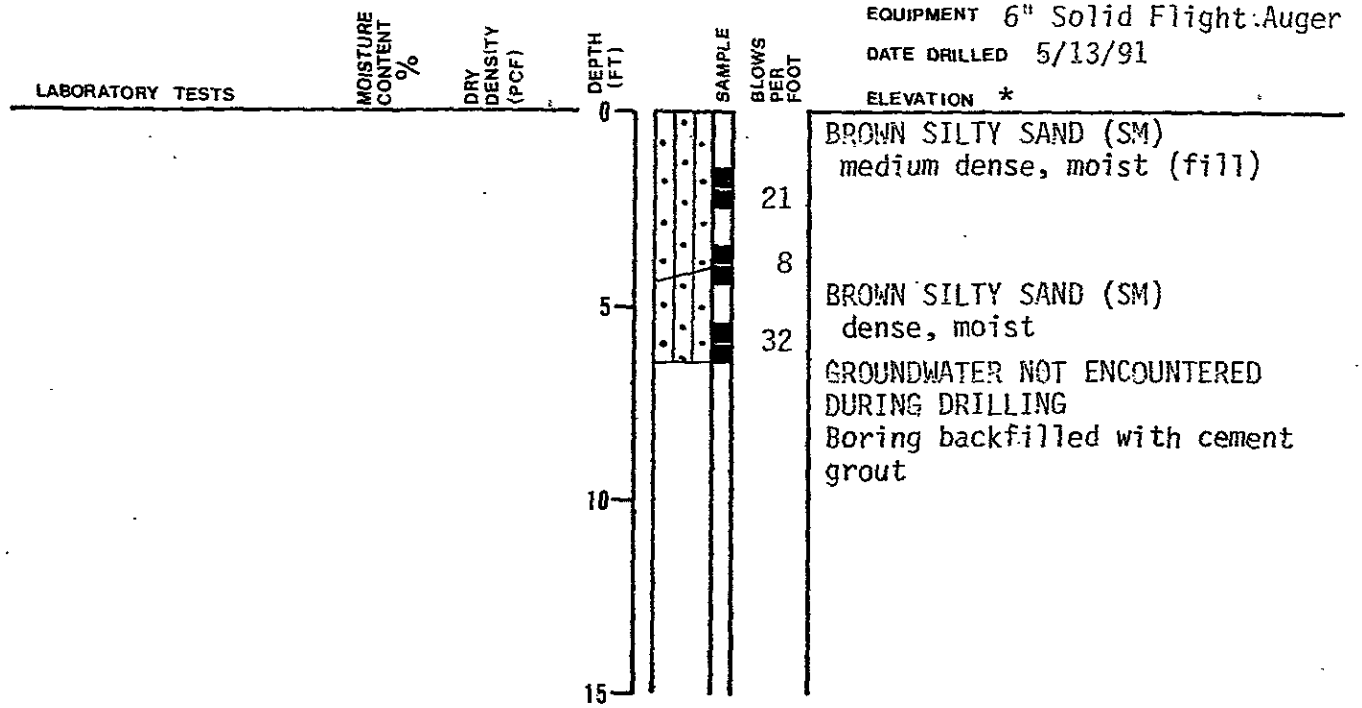
12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER	DATE	APPROVED
272.021	5/23/91	JVB

PLATE A-7

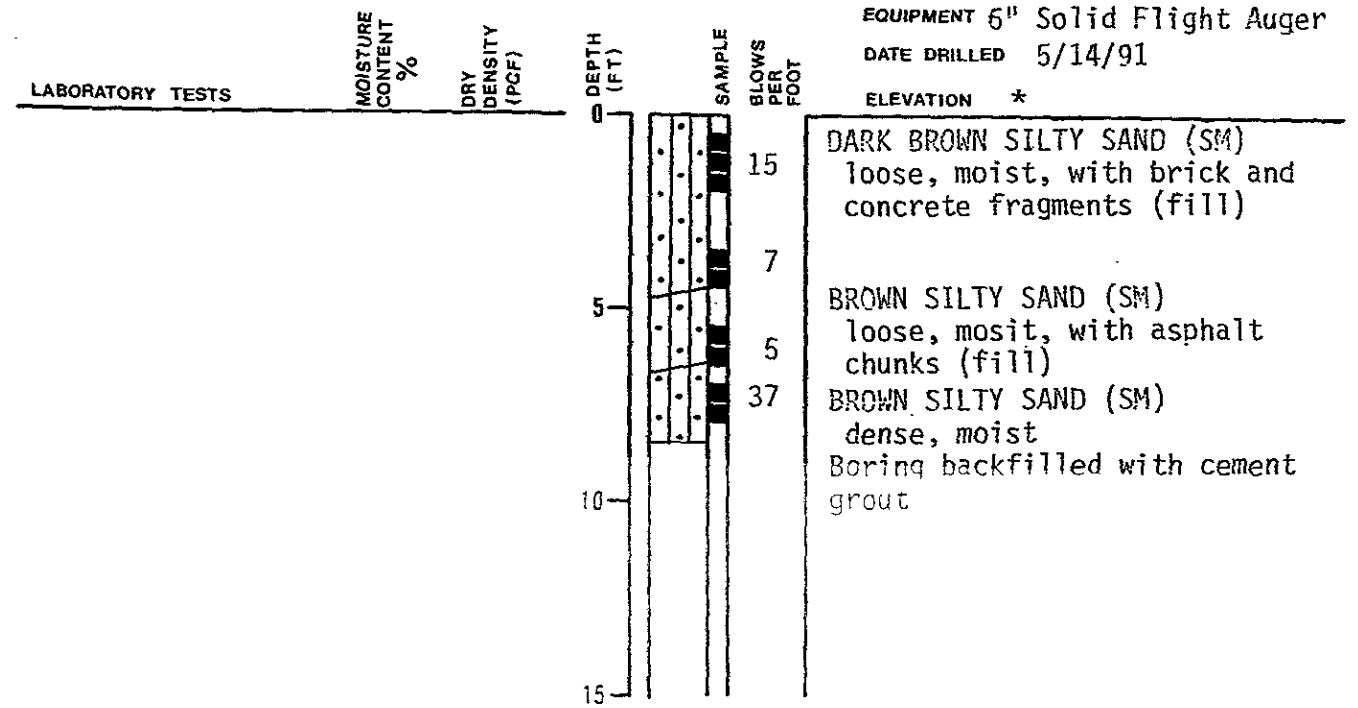
LOG OF TEST BORING 8

EQUIPMENT 6" Solid Flight Auger
DATE DRILLED 5/13/91
ELEVATION *



LOG OF TEST BORING 9

EQUIPMENT 6" Solid Flight Auger
DATE DRILLED 5/14/91
ELEVATION *



Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY			PLATE A-8
	JOB NUMBER 272.021	DATE 5/23/91	APPROVED JVB	

LOG OF TEST BORING 10

EQUIPMENT 6" Solid Flight Auger
DATE DRILLED 5/14/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
			0			DARK BROWN SILTY SAND (SM) loose, moist (fill)
						BROWN SILTY SAND (SM) loose, moist (fill)
			5			RED BROWN SILTY SAND (SM) dense, moist (fill)
						RED BROWN CLAYEY SAND (SC) dense, moist
			10			Boring backfilled with cement grout
			15			

Subsurface Consultants

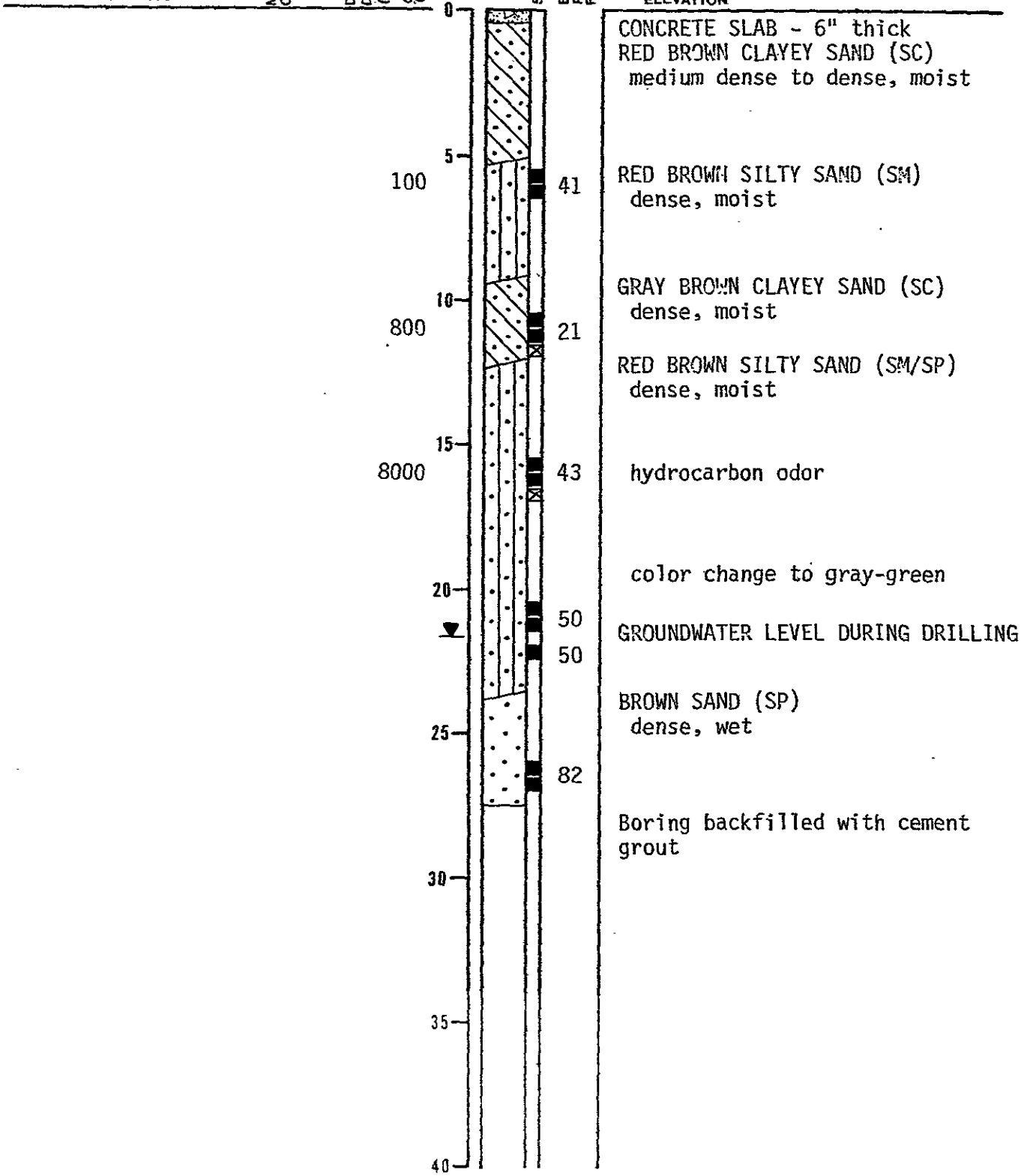
12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER	DATE	APPROVED
272.021	5/23/91	JVB

PLATE A-9

LOG OF TEST BORING 11

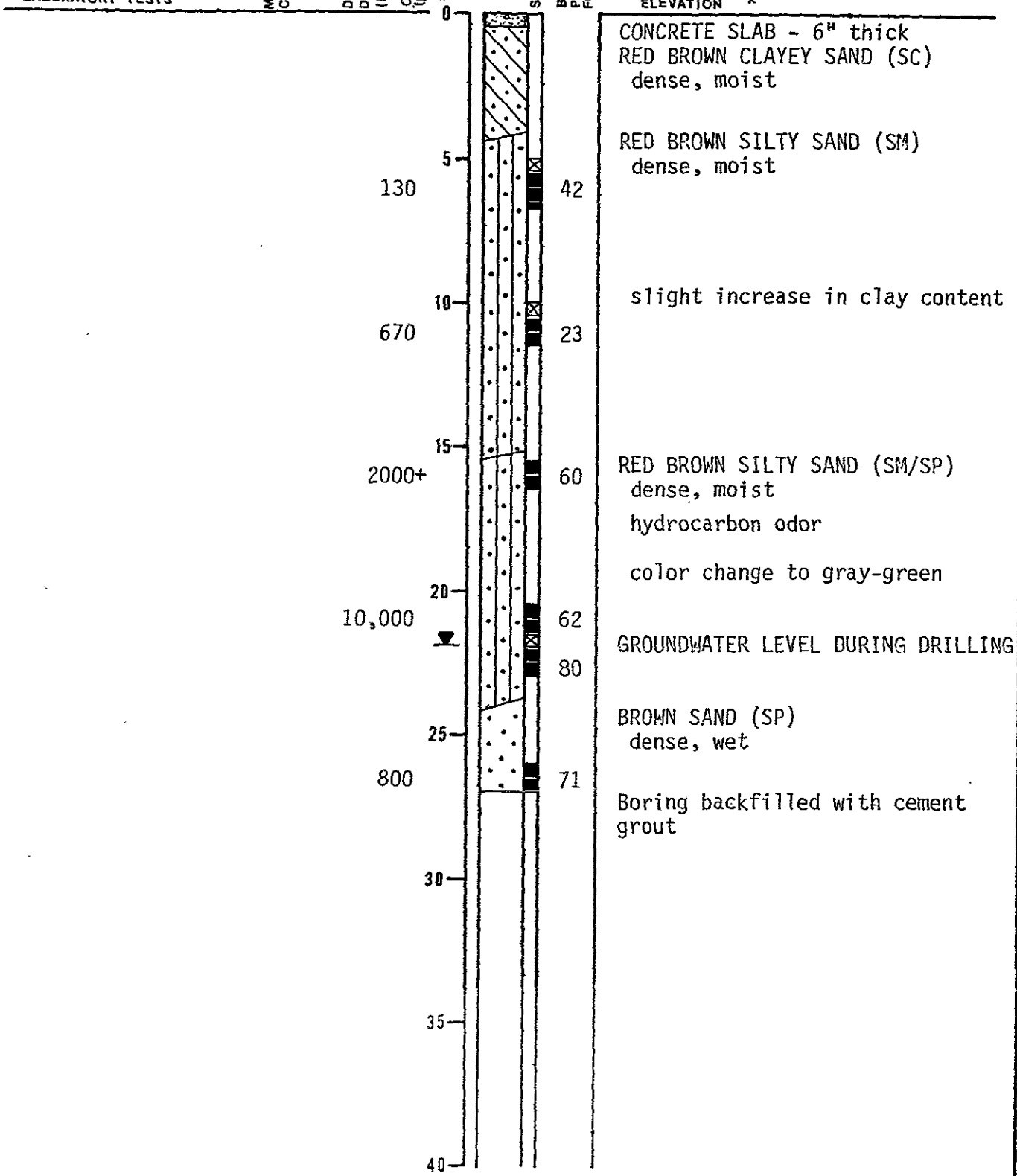
EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/13/91
ELEVATION *



Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY			PLATE
	JOB NUMBER	DATE	APPROVED	A-10
	272.021	5/23/91	JVB	

LOG OF TEST BORING 12

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/13/91
ELEVATION *



Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY			PLATE
	JOB NUMBER	DATE	APPROVED	A-11
	272.021	5/23/91	JVB	

LOG OF TEST BORING 13

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/14/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	OVM (ppm)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
				0			DARK BROWN SILTY SAND (SM) loose to medium dense, moist (fill)
			31	5			BROWN SILTY SAND (SM) medium dense to dense, moist
							RED BROWN CLAYEY SAND (SC) dense, moist
			67	10			color change to brown
			73	15			
			103				BROWN GRAY SILTY SAND (SM/SP) dense, moist
			3150	20		39	
			-			47	
			-	25		74	GROUNDWATER LEVEL DURING DRILLING
			192			85	cecrease in silt content
				30		80	
							Boring backfilled with cement grout
				35			
				40			

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12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER 272.021 | DATE 5/23/91 | APPROVED JVB

PLATE A-12

LOG OF TEST BORING 14

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/14/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	OVM (ppm)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
				0			DARK BROWN SILTY SAND (SM) loose, moist (fill)
				5			BROWN SILTY SAND (SM) medium dense, moist
							RED BROWN CLAYEY SAND (SC) dense, moist
			47	10			decrease in clay content
			51				
			56	15			
				20			BROWN SILTY SAND (SM/SP) dense, moist
			300			48	hydrocarbon odor color change to gray-brown
			2000			44	
				25			
						64	
			500				GROUNDWATER LEVEL DURING DRILLING
						61	
			200				
				30			decrease in silt content
			120			73	
							Boring backfilled with cement grout
				35			
				40			

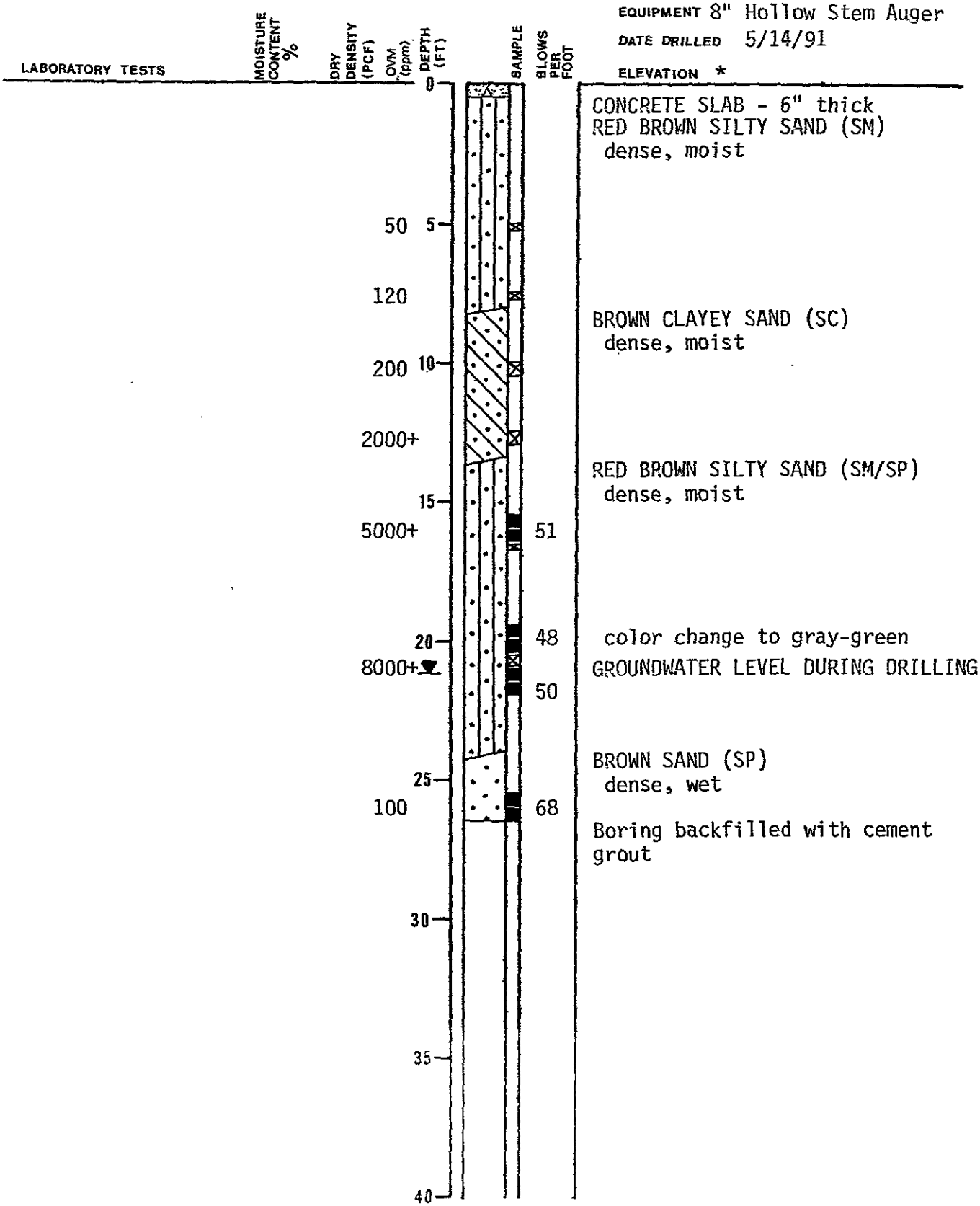
Subsurface Consultants

12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER	DATE	APPROVED	PLATE
272.021	5/23/91	JVB	A-13

LOG OF TEST BORING 15

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/14/91
ELEVATION *



Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY			PLATE
	JOB NUMBER	DATE	APPROVED	A-14
	272.021	5/23/91	JVB	

LOG OF TEST BORING 16

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/14/91
ELEVATION *

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	OVM (ppm)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
				0			DARK BROWN SILTY SAND (SM) loose, moist (fill)
				5			BROWN SILTY SAND (SM) medium dense to dense, moist
				10			RED BROWN CLAYEY SAND (SC) dense, moist
		95		15			BROWN SILTY SAND (SM/SP) dense, moist
		200		20		50	
		406		25		55	
		80				48	GROUNDWATER LEVEL DURING DRILLING BROWN CLAYEY SAND (SC) dense, wet BROWN SILTY SAND (SM/SP) dense, wet
				30		82	Boring backfilled with cement grout
				35			
				40			

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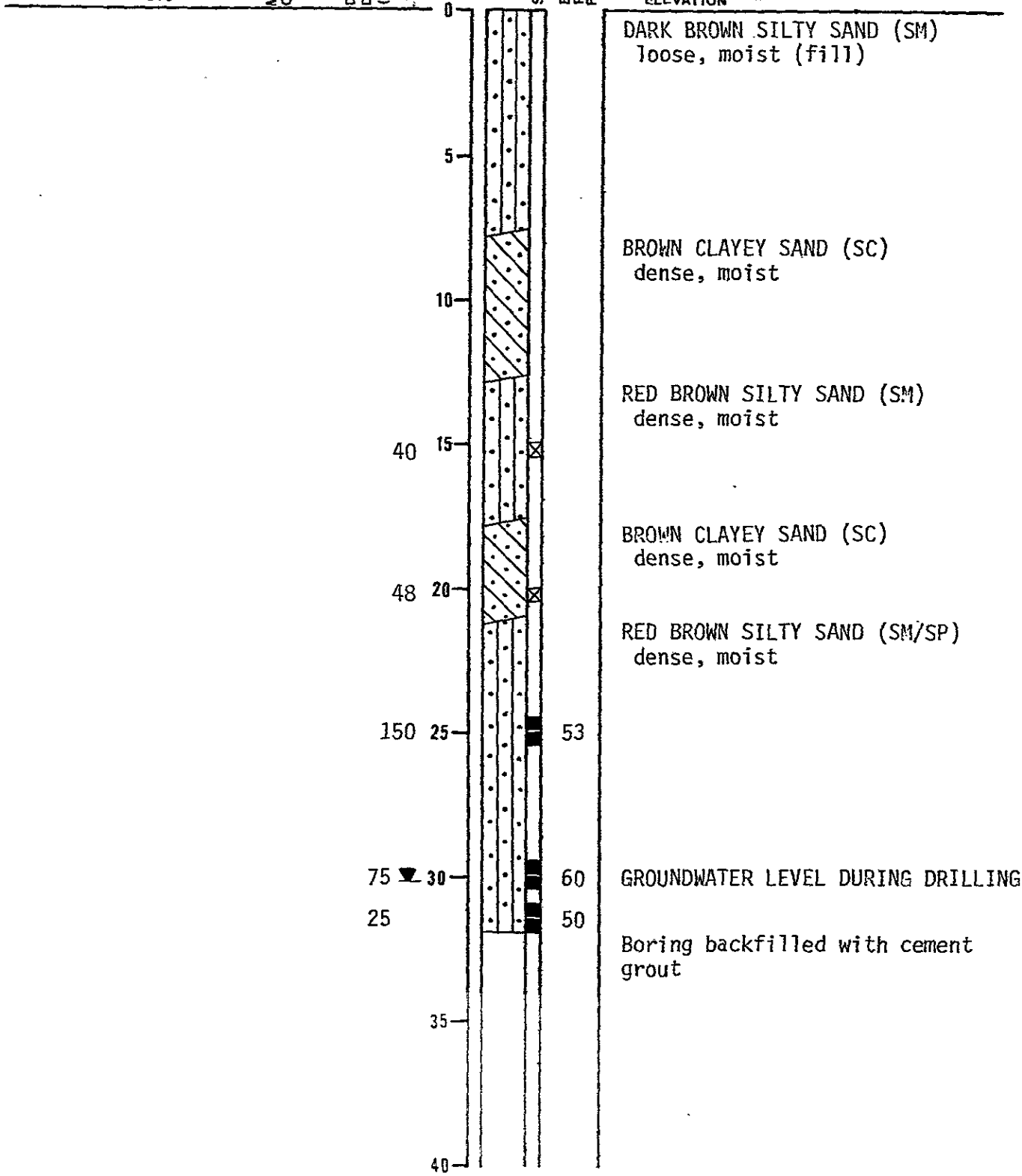
12TH ST. & MARTIN LUTHER KING JR. WAY

JOB NUMBER 272.021 | DATE 5/23/91 | APPROVED JVB

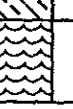
PLATE A-15

LOG OF TEST BORING 17

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 5/14/91
ELEVATION *



Subsurface Consultants	12TH ST. & MARTIN LUTHER KING JR. WAY		PLATE A-16
	JOB NUMBER 272.021	DATE 5/23/91	APPROVED JVB

GENERAL SOIL CATEGORIES			SYMBOLS		TYPICAL SOIL TYPES
COARSE GRAINED SOILS More than half is larger than No. 200 sieve	**GRAVEL** More than half coarse fraction is larger than No. 4 sieve	Clean Gravel with little or no fines	GW		Well Graded Gravel, Gravel-Sand Mixtures
			GP		Poorly Graded Gravel, Gravel-Sand Mixtures
		Gravel with more than 12% fines	GM		Silty Gravel, Poorly Graded Gravel-Sand-Silt Mixtures
			GC		Clayey Gravel, Poorly Graded Gravel-Sand-Clay Mixtures
	SAND More than half coarse fraction is smaller than No. 4 sieve size	Clean sand with little or no fines	SW		Well Graded Sand, Gravelly Sand
			SP		Poorly Graded Sand, Gravelly Sand
		Sand with more than 12% fines	SM		Silty Sand, Poorly Graded Sand-Silt Mixtures
			SC		Clayey Sand, Poorly Graded Sand-Clay Mixtures
FINE GRAINED SOILS More than half is smaller than No. 200 sieve	**SILT AND CLAY** Liquid Limit Less than 50%		ML		Inorganic Silt and Very Fine Sand, Rock Flour, Silty or Clayey Fine Sand, or Clayey Silt with Slight Plasticity
			CL		Inorganic Clay of Low to Medium Plasticity, Gravelly Clay, Sandy Clay, Silty Clay, Lean Clay
			OL		Organic Clay and Organic Silty Clay of Low Plasticity
	SILT AND CLAY Liquid Limit Greater than 50%		MH		Inorganic Silt, Micaceous or Diatomaceous Fine Sandy or Silty Soils, Elastic Silt
			CH		Inorganic Clay of High Plasticity, Fat Clay
			OH		Organic Clay of Medium to High Plasticity, Organic Silt
HIGHLY ORGANIC SOILS			PT		Peat and Other Highly Organic Soils

UNIFIED SOIL CLASSIFICATION SYSTEM

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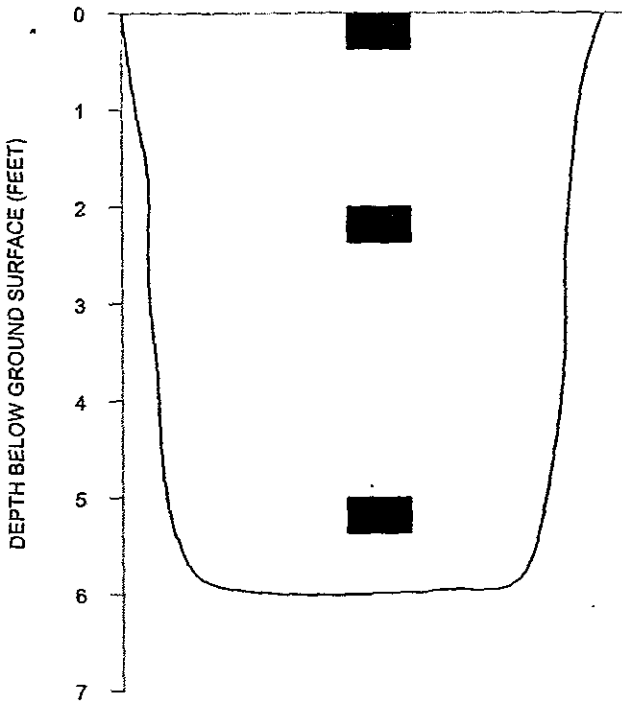
12TH ST. & MARTIN LUTHER KING JR. WAY

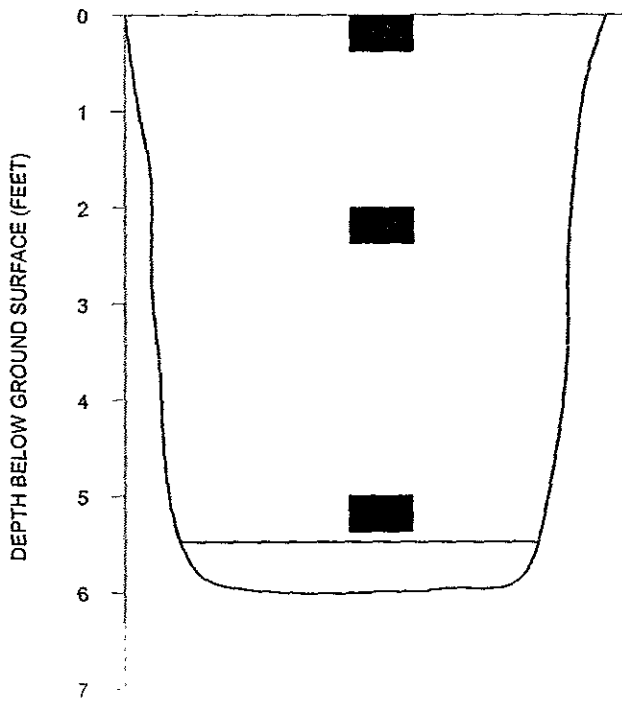
JOB NUMBER	DATE	APPROVED
272.021	4/23/91	JVB

PLATE A-17

TP-11



TP-12



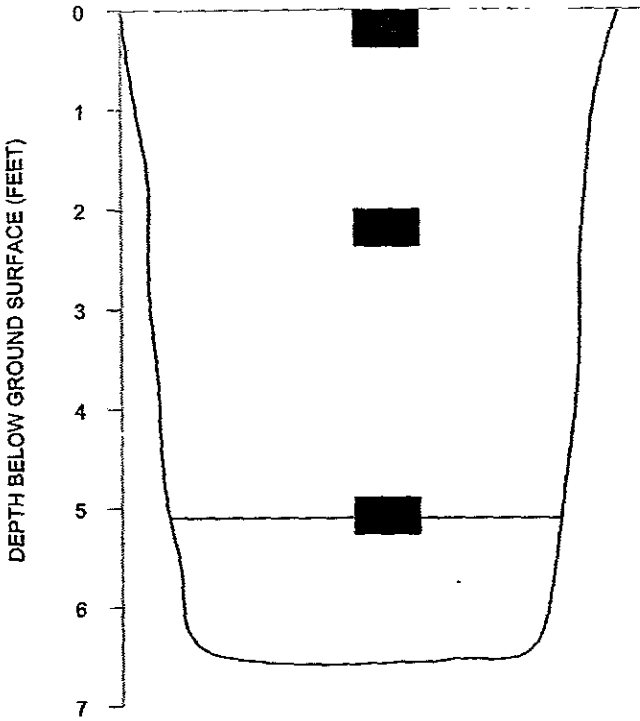
TEST PIT LOGS

MLK. JR. WAY BETWEEN 11TH AND 12TH STREETS
OAKLAND, CALIFORNIA

Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

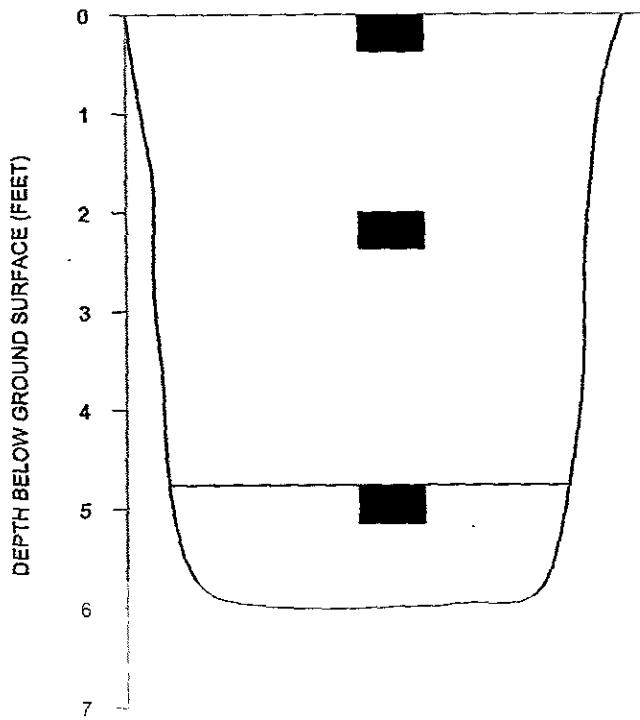
DRAWN BY	DATE	TEST PIT
CFY	9/13/00	TP-11 & TP-12
JOB NUMBER	FILE NUMBER	
272.054	A272.054.04	

TP-9



SAMPLE	DESCRIPTION	OVM
	SILTY SAND WITH GRAVEL (SM) Brown, loose, dry, bricks	7.5
	Grades to silty sand (SM)	
		5.1
	CLAYEY SAND (SC) Brown - mottled orange, moist, medium stiff	5.1
	Test pit terminated at 6.5 feet	

TP-10



SAMPLE	DESCRIPTION	OVM
	SILTY SAND WITH GRAVEL (SM) Brown, loose, dry	7.5
	Grades to a poorly graded, silty sand	7.3
	CLAYEY SAND (SC) Brown - mottled orange, moist, medium stiff	7.2
	Test pit terminated at 6 0 feet	

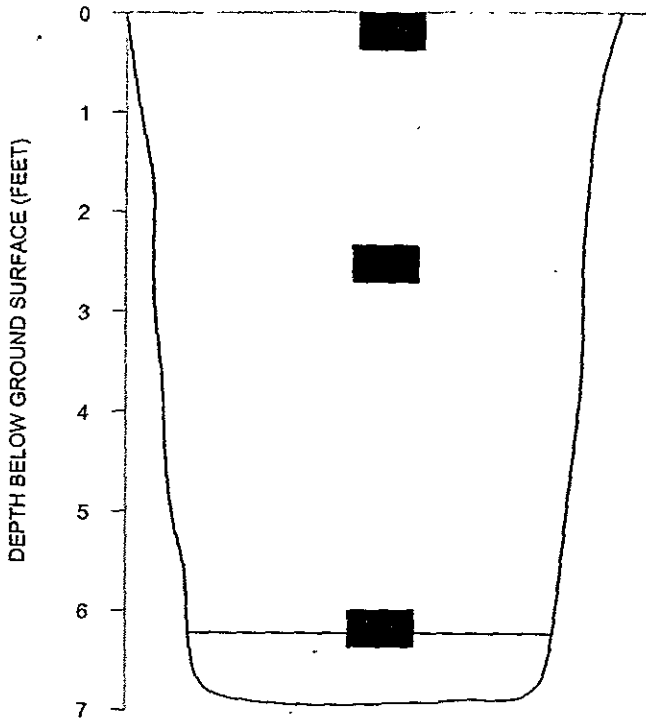
TEST PIT LOGS

MLK. JR. WAY BETWEEN 11TH AND 12TH STREETS
OAKLAND, CALIFORNIA

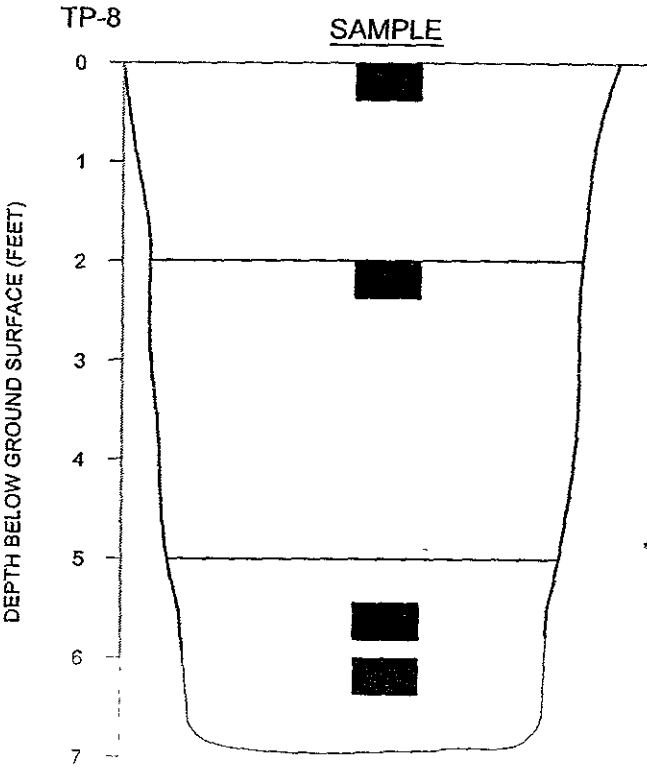
Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY:	DATE	TEST PIT
CFY	9/13/00	TP-9 & TP-10
JOB NUMBER	FILE NUMBER	
272.054	A272.054.04	

TP-7



TP-8

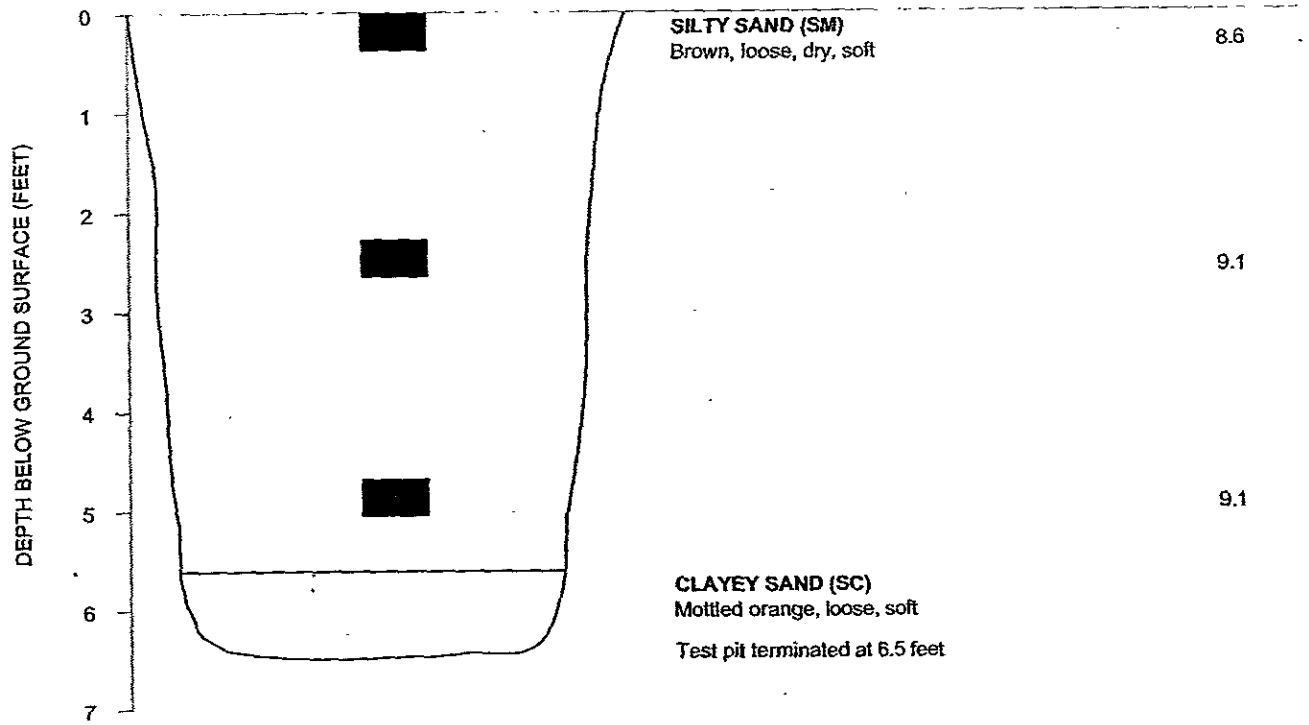


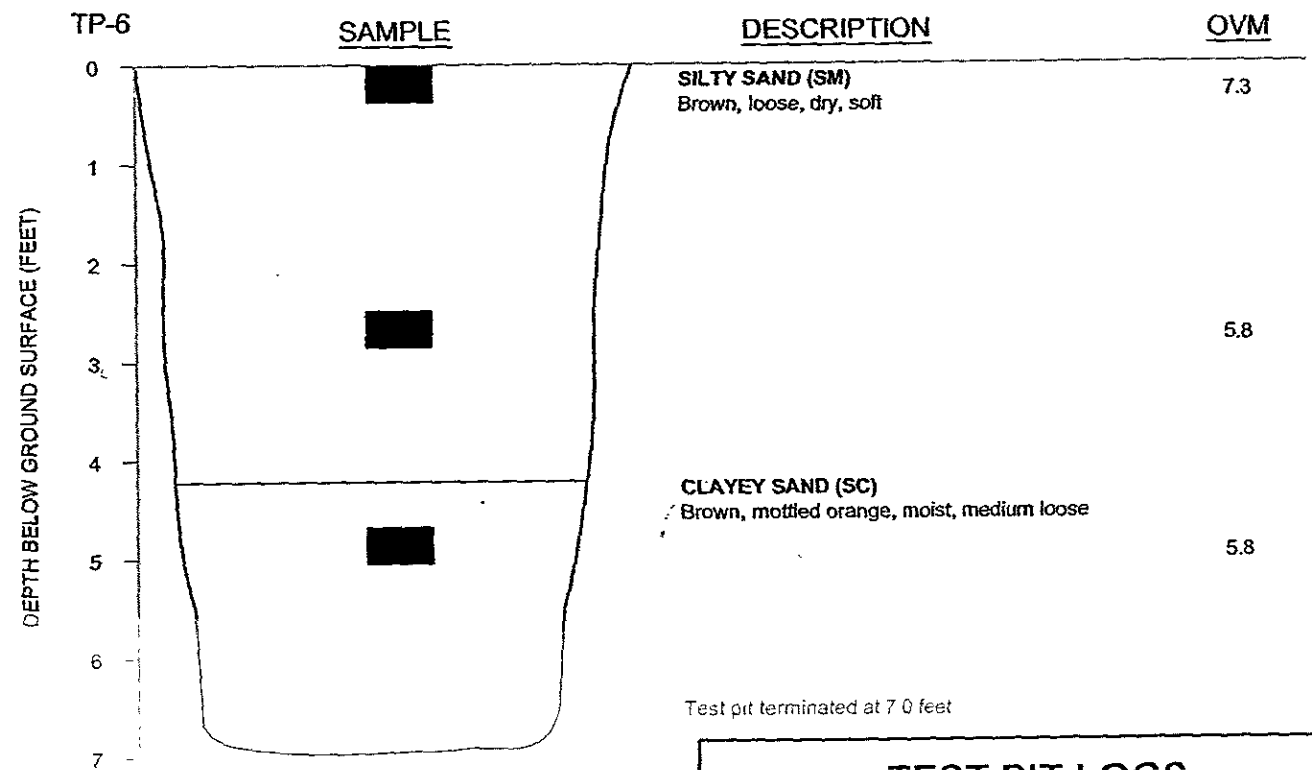
TEST PIT LOGS

MLK JR. WAY BETWEEN 11TH AND 12TH STREETS
OAKLAND, CALIFORNIA

DRAWN BY	DATE	TEST PIT
CFY	9/13/00	TP-7 & TP-8
JOB NUMBER	FILE NUMBER	
272 054	A272.054 04	

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers





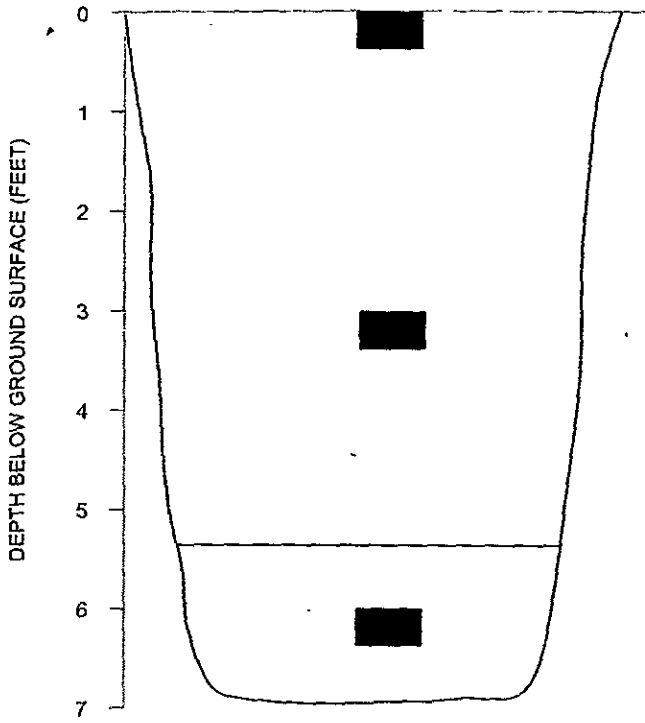
TEST PIT LOGS

MLK. JR. WAY BETWEEN 11TH AND 12TH STREETS
OAKLAND, CALIFORNIA

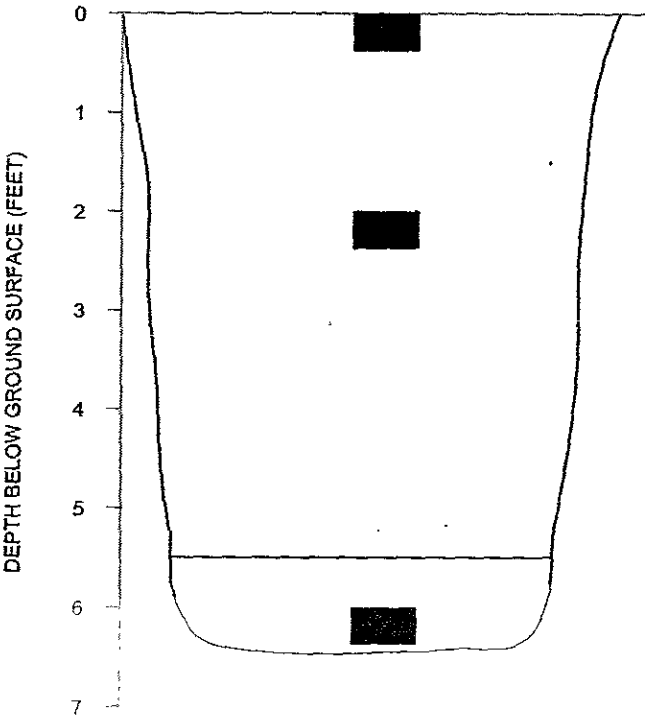
Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY	DATE	TEST PIT
CFY	9/13/00	TP-5 & TP-6
JOB NUMBER	FILE NUMBER	
272 054	A272.054.04	

TP-3



TP-4



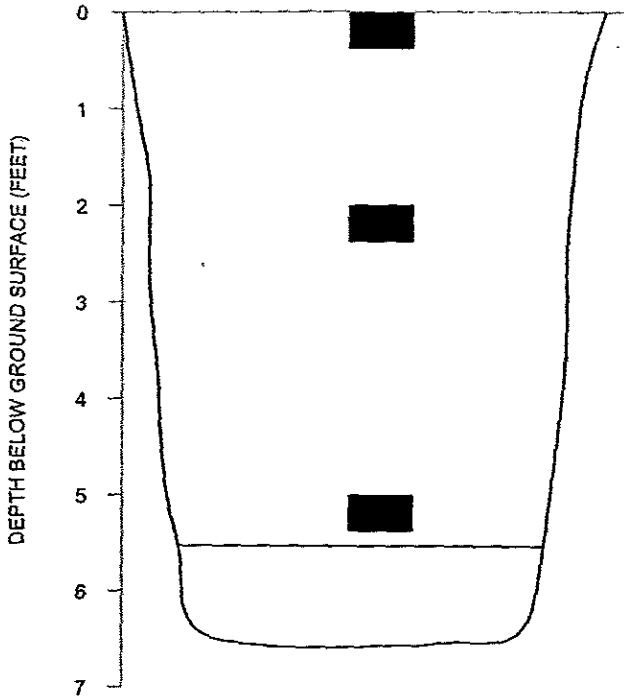
TEST PIT LOGS

MLK JR. WAY BETWEEN 11TH AND 12TH STREETS
OAKLAND, CALIFORNIA

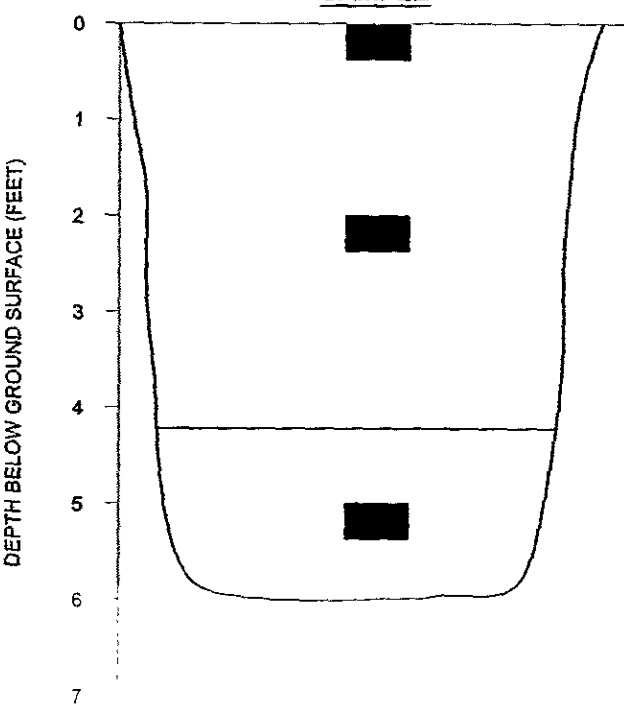
Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY	DATE	TEST PIT
CFY	9/13/00	TP-3 & TP-4
JOB NUMBER	FILE NUMBER	
272.054	A272.054.04	

TP-1



TP-2



TEST PIT LOGS

MLK. JR. WAY BETWEEN 11TH AND 12TH STREETS
OAKLAND, CALIFORNIA

Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY	DATE	TEST PIT
CFY	9/13/00	TP-1 & TP-2
JOB NUMBER	FILE NUMBER	
272.054	A272 054.04	

City of Oakland
Survey of Background Metal Concentration Studies

Some naturally-occurring concentrations of metals in Oakland soils are higher than the thresholds calculated by risk-based models. In such cases, there is unlikely to be any real reduction in risk realized from remediation to the risk-based threshold since the observed concentrations are likely to represent ambient conditions. In Oakland, this is especially true of arsenic. The following table contains the results from background metal concentration studies conducted in locations that are relevant to Oakland's geology.

Background Metal Concentrations
(ppm in soil)

Source	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
Lawrence Berkeley National Laboratories[1]	5.5	19.1	1.0	2.7	99.6	69.4	16.1	0.4	119.8	5.6	1.8	27.1	106.1
-Colluvian &Fill	5.9	14.0	0.9	1.5	91.4	59.6	14.7	0.3	120.2	5.6	1.7	42.5	91.5
-Great Valley Group	6.3	31.0	1.0	3.2	59.0	99.7	21.5	0.6	69.7	4.8	2.2	8.7	135.9
-Moraga Formation	6.1	9.3	0.8	2.6	142.2	54.1	8.9	0.3	100.4	4.7	2.0	38.9	84.7
-Orinda Formation	5.2	17.8	1.1	3.3	95.2	66.9	14.8	0.3	144.3	7.0	1.9	19.8	98.3
-San Pablo Group	7.1	15.7	0.8	2.9	78.6	40.9	10.3	0.4	125.9	4.9	1.5	10.9	97.7
San Leandro, Ca[2]	<3-<15	1.8-5.9	<0.25-<1.30	<0.25-<1.30	24.8-43.0	11.8-68.0	3.3-10.4	<0.10	2.93-43.60	<0.25-<2.50	<0.50-<2.50	<0.50-<5.00	9.3-61.3
Union City, Ca[3]	5.0	6.92-9.34	0.5-0.81	0.5-1.30	46.5-112	28.2-60.1	19.8-148	0.1-0.36	32.4-60.6	0.5	0.5	5.0	97.1-474
Western U.S.[4]	--	1-50	--	0.1-0.7	1-1,000	2-100	20-100	0.01-0.3	5-500	--	--	--	10-300

Sources:

[1] Lawrence Berkeley National Laboratory Environmental Restoration Program, 1995. 500 samples were taken from 71 locations representing 5 geologic units at LBNL: Colluvian & Fill, Great Valley group, Moraga formation, Orinda formation and San Pablo group. Concentrations listed are Upper 95% Confidence Limits of data from 71 monitoring well borings.

[2] Chemical Testing on Background Soil Samples: Roberts Landing Development Site, San Leandro, CA, 1994.

[3] Site Wide Remedial Investigation: Pacific States Steel Corp. Union City, CA, 1992.

[4] USEPA (found in Remedial Investigation Report, Hercules Properties, Inc., 1991).

TABLE 2
ANALYTES DETECTED IN SOIL AND GROUNDWATER SAMPLES
PRESERVATION PARK 3 SITE, OAKLAND, CALIFORNIA

Sample ID	Boring ID	Analyte	Matrix	Depth (feet bgs)	Result	Units
9850N001	SB2	Lead	Soil	9.5 - 10.0	2.9	mg/kg
		Percent moisture	Soil	9.5 - 10.0	9.8	%mst
9850N002	SB2	Ethylbenzene	Soil	16.5 - 17.0	0.01	mg/kg
		Lead	Soil	16.5 - 17.0	78.6	mg/kg
		Percent moisture	Soil	16.5 - 17.0	8.1	%mst
		Xylene	Soil	16.5 - 17.0	0.03	mg/kg
9850N003	SB2	Benzene	Soil	23.5 - 24.0	1.9	mg/kg
		Ethylbenzene	Soil	23.5 - 24.0	14.0	mg/kg
		Lead	Soil	23.5 - 24.0	2.3	mg/kg
		Percent moisture	Soil	23.5 - 24.0	17.9	%mst
		Toluene	Soil	23.5 - 24.0	24.0	mg/kg
		TPH extractables	Soil	23.5 - 24.0	4.6	mg/kg
		TPH purgeables	Soil	23.5 - 24.0	190.0	mg/kg
		Xylene	Soil	23.5 - 24.0	89.0	mg/kg
9850N004	SB4	Organic carbon, total	Soil	0.0 - 4.0	762.0	mg/kg
9850N005	SB5	Organic carbon, total	Soil	0.0 - 4.0	860.0	mg/kg
9850N006	SB6	Organic carbon, total	Soil	0.0 - 4.0	1,300.0	mg/kg
9850N007	SB1	Benzene	Soil	9.5 - 10.0	0.021	mg/kg
		Ethylbenzene	Soil	9.5 - 10.0	2.9	mg/kg
		Lead	Soil	9.5 - 10.0	6.6	mg/kg
		Percent moisture	Soil	9.5 - 10.0	10.5	%mst
		Toluene	Soil	9.5 - 10.0	0.96	mg/kg
		TPH extractables	Soil	9.5 - 10.0	480.0	mg/kg
		TPH purgeables	Soil	9.5 - 10.0	1,000.0	mg/kg
		Xylene	Soil	9.5 - 10.0	12.8	mg/kg
9850N008	SB1	Ethylbenzene	Soil	16.5 - 17.0	0.12	mg/kg
		Lead	Soil	16.5 - 17.0	27.4	mg/kg
		Percent moisture	Soil	16.5 - 17.0	10.7	%mst
		Toluene	Soil	16.5 - 17.0	0.03	mg/kg
		TPH extractables	Soil	16.5 - 17.0	53.0	mg/kg
		TPH purgeables	Soil	16.5 - 17.0	38.0	mg/kg
		Xylene	Soil	16.5 - 17.0	1.0	mg/kg
9850N009	SB1	Benzene	Soil	23.5 - 24.0	3.2	mg/kg
		Ethylbenzene	Soil	23.5 - 24.0	19.0	mg/kg
		Lead	Soil	23.5 - 24.0	4.9	mg/kg
		Organic lead	Soil	23.5 - 24.0	0.53	mg/kg
		Percent moisture	Soil	23.5 - 24.0	14.8	%mst
		Toluene	Soil	23.5 - 24.0	26.0	mg/kg
		TPH extractables	Soil	23.5 - 24.0	1,400.0	mg/kg
		TPH purgeables	Soil	23.5 - 24.0	1,800.0	mg/kg
		Xylene	Soil	23.5 - 24.0	156.0	mg/kg
9850N017	SB3	Lead	Soil	9.0 - 10.0	2.4	mg/kg
		Percent moisture	Soil	9.0 - 10.0	10.2	%mst

* Pb in soil ↑ to 78 ppm; in H_2O 40 ppb to 430 ppb (detected in all 3 water samples)

* Benzene in soil ↑ 3.9 ppm (23 to 24 ft bgs) water ↑ 350 ppb

TABLE 2
ANALYTES DETECTED IN SOIL AND GROUNDWATER SAMPLES
PRESERVATION PARK 3 SITE, OAKLAND, CALIFORNIA

Sample ID	Boring ID	Analyte	Matrix	Depth (feet bgs)	Result	Units
9850N018 duplicate	SB3	Lead	Soil	16.5 - 17.0	2.8	mg/kg
		Percent moisture	Soil	16.5 - 17.0	14.7	%mst
9850N019	SB3	Lead	Soil	16.0 - 16.5	2.3	mg/kg
		Percent moisture	Soil	16.0 - 16.5	13.4	%mst
9850N020	SB3	Lead	Soil	23.5 - 24.0	0.88	mg/kg
		Percent moisture	Soil	23.5 - 24.0	17.3	%mst
		TPH extractables	Soil	23.5 - 24.0	29.0	mg/kg
9850N010	SB1	Benzene	Water	36.0 - 40.0	0.35	mg/L
		Ethylbenzene	Water	36.0 - 40.0	0.64	mg/L
		Lead	Water	36.0 - 40.0	0.43	mg/L
		Toluene	Water	36.0 - 40.0	1.8	mg/L
		TPH extractables	Water	36.0 - 40.0	17.0	mg/L
		TPH purgeables	Water	36.0 - 40.0	33.0	mg/L
		Xylene	Water	36.0 - 40.0	4.7	mg/L
9850N013	SB2	1,2,4-Trimethylbenzene	Water	36.0 - 40.0	0.0056	mg/L
		1,2-Dichloroethane	Water	36.0 - 40.0	0.0014	mg/L
		1,3,5-Trimethylbenzene	Water	36.0 - 40.0	0.0017	mg/L
		Benzene	Water	36.0 - 40.0	0.02	mg/L
		Ethylbenzene	Water	36.0 - 40.0	0.0031	mg/L
		Isopropylbenzene	Water	36.0 - 40.0	0.18	mg/L
		Naphthalene	Water	36.0 - 40.0	0.0014	mg/L
		Toluene	Water	36.0 - 40.0	.026	mg/L
		TPH extractables	Water	36.0 - 40.0	0.09	mg/L
		TPH purgeables	Water	36.0 - 40.0	0.11	mg/L
		Xylene	Water	36.0 - 40.0	0.02	mg/L
9850N015	SB3	Lead	Water	36.0 - 40.0	0.04	mg/L

Notes:

mg/kg	Milligram per kilogram
%mst	Percent moisutre
mg/L	Milligram per liter
TPH	Total petroleum hydrocarbons
bgs	below ground surface

TABLE 3
SOIL CONTAMINANT CONCENTRATIONS THAT EXCEED MERRITT SAND RISK-BASED SCREENING LEVELS AND SITE-SPECIFIC TARGET LEVELS AND TOTAL PETROLEUM HYDROCARBON SOIL CONTAMINANT CONCENTRATIONS
PRESERVATION PARK 3 SITE, OAKLAND, CALIFORNIA
(Residential Land Use)

Sample ID	Boring ID	Analyte	Concentration Detected	RBSL and SSTL Criteria for Surficial Soil (Ingestion/Dermal)	RBSL and SSTL Criteria for Subsurface Soil (Inhalation of Outdoor Air)	RBSL and SSTL Criteria for Subsurface Soil (Inhalation of Indoor Air)	RBSL and SSTL Criteria for Subsurface Soil (Leachate to Groundwater Ingestion)
9850N003	SB2 (23.5 to 24 feet bgs)	Benzene	1.90 mg/kg	C: 37 mg/kg H: 99 mg/kg	C: 3.9 mg/kg H: 16.0 mg/kg	C: 0.68 mg/kg H: 2.3 mg/kg	C & H: 0.01 mg/kg
		Toluene	24.00 mg/kg	C: None Established H: 11,000 mg/kg	C: None Established H: SAT	C: None Established H: 350 mg/kg	C & H: 4.20 mg/kg
		TPH Extractables	4.60 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	190.00 mg/kg	None Established	None Established	None Established	None Established
		Xylene	79.00 mg/kg	C: None Established H: 60,000 mg/kg	C: None Established H: SAT	C: None Established H: SAT	C & H: 64.0 mg/kg
9850N007	SB1 (9.5 to 10 feet bgs)	Benzene	2.10 mg/kg	C: 150 mg/kg H: 920 mg/kg	C: 15.00 mg/kg H: 91.00 mg/kg	C: 11.00 mg/kg H: 65.00 mg/kg	**C & H: 0.01 mg/kg**
		TPH Extractables	480.00 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	1,000.00 mg/kg	None Established	None Established	None Established	None Established
9850N008	SB1 (16.5 to 17 feet bgs)	TPH Extractables	53.00 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	38.00 mg/kg	None Established	None Established	None Established	None Established
9850N009	SB1 (23.5 to 24 feet bgs)	Benzene	3.2 mg/kg	C: 37 mg/kg H: 99 mg/kg	C: 3.9 mg/kg H: 16.0 mg/kg	**C: 0.68 mg/kg** H: 2.3 mg/kg	**C & H: 0.01 mg/kg**
		Toluene	26.00 mg/kg	C: None Established H: 11,000 mg/kg	C: None Established H: SAT	C: None Established H: 350 mg/kg	**C & H: 4.20 mg/kg**
		TPH Extractable	1,400.00 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	1,800.00 mg/kg	None Established	None Established	None Established	None Established
		Xylene	156.00 mg/kg	C: None Established H: 60,000 mg/kg	C: None Established H: SAT	C: None Established H: SAT	**C & H: 64.0 mg/kg**
9850N020	SB3 (23.5 to 24 feet bgs)	TPH Extractables	29.00 mg/kg	None Established	None Established	None Established	None Established

Notes:
C Carcinogenic
H Hazard
mg/kg Milligrams per kilogram
RBSL Risk-based screening level
SAT Saturation
SSTL Site-specific target levels

Bold indicates analyte was above the screening levels

Source: RBSLs and SSTLs taken from the City of Oakland 1999.

TABLE 4
SOIL CONTAMINANT CONCENTRATIONS THAT EXCEED MERRITT SAND RISK-BASED SCREENING LEVELS AND SITE-SPECIFIC TARGET LEVELS AND TOTAL PETROLEUM HYDROCARBON SOIL CONTAMINANT CONCENTRATIONS
PRESERVATION PARK 3 SITE, OAKLAND, CALIFORNIA
(Commercial/Industrial Land Use)

Sample ID	Boring ID	Analyte	Concentration Detected	RBSL and SSTL Criteria for Surficial Soil (Ingestion/Dermal)	RBSL and SSTL Criteria for Subsurface Soil (Inhalation of Outdoor Air)	RBSL and SSTL Criteria for Subsurface Soil (Inhalation of Indoor Air)	RBSL and SSTL Criteria for Subsurface Soil (Leachate to Groundwater Ingestion)
9850N003	SB2 (23.5 to 24 feet bgs)	Benzene	1.90 mg/kg	C: 150 mg/kg H: 920 mg/kg	C: 15.00 mg/kg H: 91.00 mg/kg	C: 11.00 mg/kg H: 65.00 mg/kg	**C & H: 0.01 mg/kg**
		Toluene	24.00 mg/kg	C: None Established H: 94,000 mg/kg	C: None Established H: SAT	C: None Established H: SAT	**C & H: 4.20 mg/kg**
		TPH Extractables	4.60 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	190.00 mg/kg	None Established	None Established	None Established	None Established
		Xylene	89.00 mg/kg	C: None Established H: 380,000 mg/kg	C: None Established H: SAT	C: None Established H: SAT	**C & H: 64.0 mg/kg**
9850N007	SB1 (9.5 to 10 feet bgs)	Benzene	2.10 mg/kg	C: 150 mg/kg H: 920 mg/kg	C: 15.00 mg/kg H: 91.00 mg/kg	C: 11.00 mg/kg H: 65.00 mg/kg	**C & H: 0.01 mg/kg**
		TPH Extractables	480.00 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	1,000.00 mg/kg	None Established	None Established	None Established	None Established
9850N008	SB1 (16.5 to 17 feet bgs)	TPH Extractables	53.00 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	38.00 mg/kg	None Established	None Established	None Established	None Established
9850N009	SB1 (23.5 to 24 feet bgs)	Benzene	3.2 mg/kg	C: 150 mg/kg H: 920 mg/kg	C: 15.00 mg/kg H: 91.00 mg/kg	C: 11.00 mg/kg H: 65.00 mg/kg	**C & H: 0.01 mg/kg**
		Toluene	26.00 mg/kg	H: 94,000 mg/kg	C: None Established H: SAT	C: None Established H: SAT	**C & H: 4.20 mg/kg**
		TPH Extractable	1,400.00 mg/kg	None Established	None Established	None Established	None Established
		TPH Purgeables	1,800.00 mg/kg	None Established	None Established	None Established	None Established
		Xylene	156.00 mg/kg	C: None Established H: 380,000 mg/kg	C: None Established H: SAT	C: None Established H: SAT	**C & H: 64.0 mg/kg**
9850N020	SB3 (23.5 to 24 feet bgs)	TPH Extractables	29.00 mg/kg	None Established	None Established	None Established	None Established

Notes:

C Carcinogenic
H Hazard
mg/kg Milligrams per kilogram
RBSL Risk-based screening level
SAT Saturation
SSTL Site-specific target levels

Bold indicates analyte was above the screening levels

Source: RBSLs and SSTLs taken from the City of Oakland 1999.

TABLE 5

GROUNDWATER CONTAMINANT CONCENTRATIONS THAT EXCEED MERRITT SAND RISK-BASED SCREENING LEVELS AND SITE-SPECIFIC TARGET LEVELS AND TOTAL PETROLEUM HYDROCARBON GROUNDWATER CONTAMINANT CONCENTRATIONS

PRESERVATION PARK 3 SITE, OAKLAND, CALIFORNIA

(Residential Land Use)

Sample ID	Boring ID	Analyte	Concentration Detected	RBSL and SSTL Criteria for Ingestion of Groundwater	RBSL and SSTL Criteria for Groundwater (Inhalation of Indoor Air)	RBSL and SSTL Criteria for Groundwater (Inhalation of Outdoor Air)
9850N010	SB-1	Benzene	0.25 mg/L	**C & H: 0.001 mg/L**	C: 1.4 mg/L H: 4.6 mg/L	C: 180 mg/L H: 720 mg/L
		Ethylbenzene	0.64 mg/L	C & H: 0.70 mg/L	C: None Established H: SOL	C: None Established H: SOL
		Toluene	1.80 mg/L	**C & H: 0.15 mg/L**	C: None Established H: 280 mg/L	C: None Established H: SOL
		TPH Extractables	17.00 mg/L	None Established	None Established	None Established
		TPH Purgeables	33.00 mg/L	None Established	None Established	None Established
		Xylene	4.70 mg/L	**C & H: 1.8 mg/L**	C: None Established H: SOL	C: None Established H: SOL
9850N013	SB-2	Benzene	0.02 mg/L	**C & H: 0.001 mg/L**	C: 1.4 mg/L H: 4.6 mg/L	C: 180 mg/L H: 720 mg/L
		TPH Extractables	0.09 mg/L	None Established	None Established	None Established
		TPH Purgeables	0.11 mg/L	None Established	None Established	None Established

Notes:

C	Carcinogenic	H	Hazard
mg/L	Milligrams per liter	RBSL	Risk-based screening levels
SSTL	Site-specific target levels	SOL	Solubility

Bold indicates analyte was above the screening levels

Source: RBSLs and SSTLs taken from City of Oakland 1999.

TABLE 6
GROUNDWATER CONTAMINANT CONCENTRATIONS THAT EXCEED MERRITT SAND RISK-BASED SCREENING LEVELS AND SITE-SPECIFIC TARGET LEVELS AND TOTAL PETROLEUM HYDROCARBON GROUNDWATER CONTAMINANT CONCENTRATIONS
PRESERVATION PARK 3 SITE, OAKLAND, CALIFORNIA
(Commercial/Industrial Land Use)

Sample ID	Boring ID	Analyte	Concentration Detected	RBSL and SSTL Criteria for Ingestion of Groundwater	RBSL and SSTL Criteria for Groundwater (Inhalation of Indoor Air)	RBSL and SSTL Criteria for Groundwater (Inhalation of Outdoor Air)
9850N010	SB-1	Benzene	0.35 mg/L	**C & H: 0.001 mg/L**	C: 22 mg/L H: 130 mg/L	C: 690 mg/L H: SOL
		Ethylbenzene	0.64 mg/L	C & H: 0.70 mg/L	C: None Established H: SOL	C: None Established H: SOL
		Toluene	1.80 mg/L	**C & H: 0.15 mg/L**	C: None Established H: SOL	C: None Established H: SOL
		TPH Extractables	17.00 mg/L	None Established	None Established	None Established
		TPH Purgeables	33.00 mg/L	None Established	None Established	None Established
		Xylene	4.70 mg/L	**C & H: 1.8 mg/L**	C: None Established H: SOL	C: None Established H: SOL
9850N013	SB-2	Benzene	0.02 mg/L	**C & H: 0.001 mg/L**	C: 22 mg/L H: 130 mg/L	C: 690 mg/L H: SOL
		TPH Extractables	0.09 mg/L	None Established	None Established	None Established
		TPH Purgeables	0.11 mg/L	None Established	None Established	None Established

Notes:

C Carcinogenic
H Hazard
mg/L Milligrams per liter
RBSL Risk-based screening levels
SSTL Site-specifi target levels
SOL Solubility
Bold indicates analyte was above the screening levels

Source: RBSLs and SSTLs taken from City of Oakland 1999.

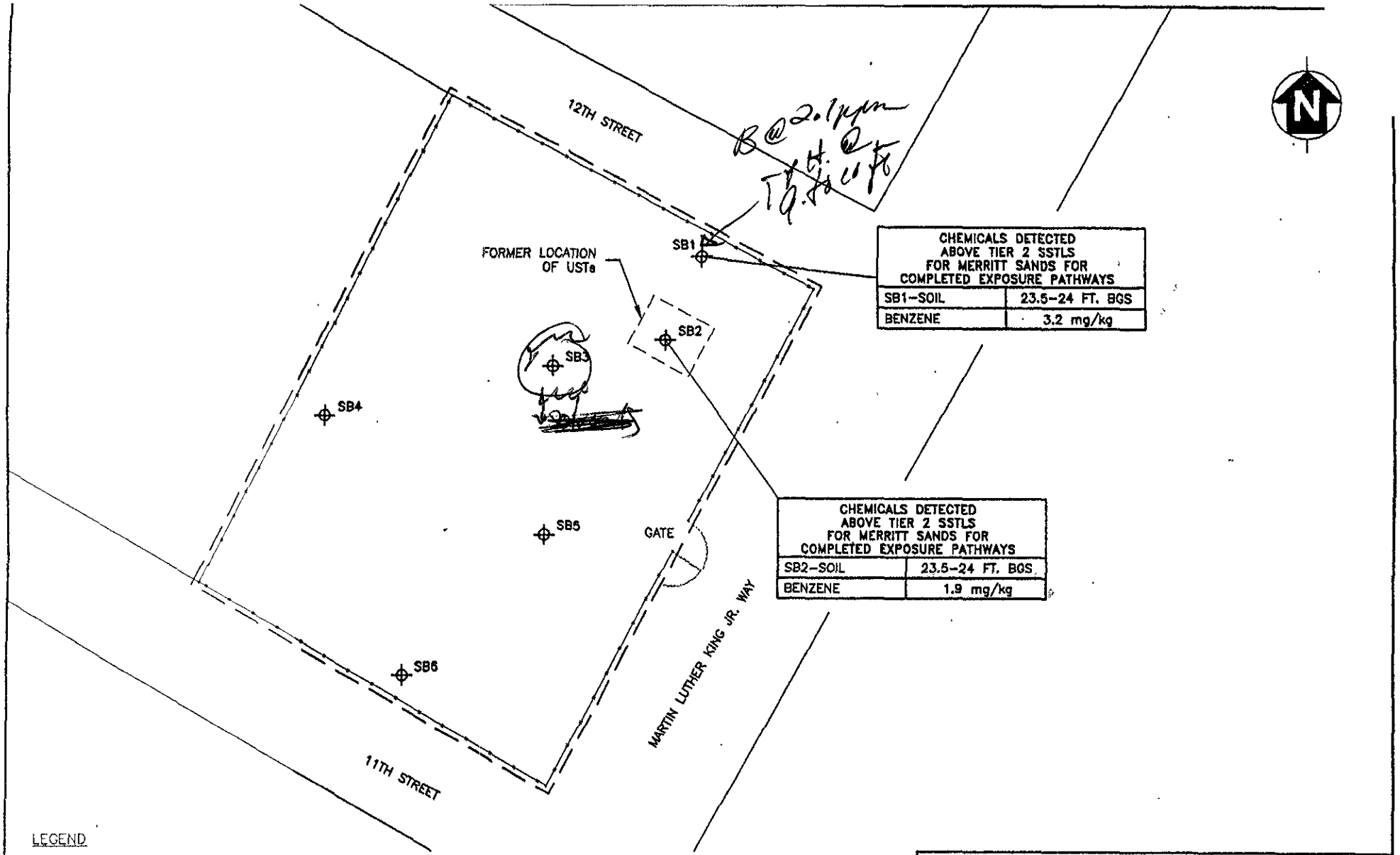


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Figure 1

Preservation Park 3
Oakland, California

TABLE 1
ANALYTICAL METHODS FOR SOIL AND GROUNDWATER SAMPLES

Constituent	Parameter	Method Number	Reference	Detection Technique	Extraction Technique
BTEX	Aromatic volatile organic compound	EPA 8021B	SW-846	GC/PID	Purge and trap
MTBE	Aromatic volatile organic compound	CLP	OLM03.1	GC/MS	Purge and trap
TPH-gasoline	TPH-purgeable	EPA 8015B	CA LUFT & SW-846	GC/FID	Purge and trap
TPH-diesel	TPH-extractable	EPA 8015B	CA LUFT & SW-846	GC/FID	Soil: sonication Water: liquid-liquid
Semivolatile organic compounds	Semivolatile organic compounds	CLP	OLM03.1	GC/MS	Soil: sonication and GPC Water: liquid-liquid
Volatile organic compounds	Volatile organic compounds	CLP	OLM03.1	GC/MS	Purge and trap
Total organic carbon	Total organic carbon	SMEWW 5310B	SMEWW	Oxidation/IR	Not applicable

Notes:

BTEX	Benzene, toluene, ethylbenzene, xylenes
CA LUFT	State of California 1989
CLP	Contract Laboratory Program
EPA	U.S. Environmental Protection Agency
FID	Flame ionization detector
GC	Gas chromatography
GPC	Gel permeation chromatography
MS	Mass spectroscopy
MTBE	Methyl tertiary-butyl ether
OLM03.1	EPA 1994
PID	Photoionization detector
SMEWW	American Public Health Association 1992
SW-846	EPA 1996
TPH	Total petroleum hydrocarbons

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LOG OF BORING SB01

Sample ID	Sample Time	Drive Interval	Recovered Interval	Depth (ft)	Sample Interval	Graphic Log	USCS Code	MATERIALS DESCRIPTION
				1–5			SM	Well-graded FILL: SILTY SAND: very dark grayish brown (10YR 3/2); damp; loose; subangular, medium sand; with some fine gravel and miscellaneous debris.
				5–9			SP	Poorly graded SAND: yellowish brown (10YR 5/4); damp; medium dense; subangular, medium sand
07		6	6	9–10	☒		SM	Poorly graded SILTY SAND: olive gray (5Y 5/2); damp; dense; subangular, medium sand; slight hydrocarbon odor
				10–16				Poorly graded SILTY SAND: mottled olive gray (5Y 5/2) with dark yellowish brown (10YR 4/4); damp; dense; subangular, medium sand; hydrocarbon odor present
08		6	6	16–17	☒			
				17–21			SC	Poorly graded CLAYEY SAND: brown (10YR 4/3); damp; dense; subangular, medium sand; hydrocarbon odor present
				21–22			SM	Poorly graded SILTY SAND: grayish brown (2.5Y 5/2); wet; dense; subangular, medium sand; hydrocarbon odor present
09		6	6	23–24	☒			Saturated from 24 feet
				24–35				Total Depth of Boring = 28 Feet Groundwater Screened from 36 to 40 Feet

▼ Water Table

☒ Lab Sample

PROJECT Oakland Redevelopment Project
LOCATION Preservation Park
JOB NUMBER 0R0981403SR
LOGGED BY Roy Glenn
DATE DRILLED 12/07/98
DRILLER Fast Tek
DRILL METHOD Geoprobe

SAMPLING METHOD
GROUND ELEVATION NA
TOC ELEVATION NA
BORING DIAMETER 2.25 Inches
TOTAL DEPTH OF HOLE 28 Feet bgs
WATER LEVEL 21.5 Feet bgs
WELL INSTALLED? (Y/N) N

Tt Tetra Tech EM Inc.

LOG OF BORING SB02

Sample ID	Sample Time	Drive Interval	Recovered Interval	Depth (ft)	Sample Interval	Graphic Log	USCS Code	MATERIALS DESCRIPTION
				1–5			SM	FILL: Well-graded SILTY SAND; grayish brown (10YR 3/2); damp; loose; subangular, medium sand; with some fine gravel
				6–9			SP	Poorly graded SAND: yellowish brown (10YR 5/4); damp; medium dense; subangular, medium sand
01		5	6	10	☒			
				11–16			SM	Poorly graded SILTY SAND: mottled olive gray (5Y 5/2) with dark yellowish brown (10YR 4/4); damp; dense; subangular, medium sand; hydrocarbon odor present at 12 feet
02		6	6	17	☒			
				18–21			SC	Poorly graded CLAYEY SAND: brown (10YR 4/3); damp; dense; subangular, medium sand; hydrocarbon odor present throughout soil
				22–23			SM	Poorly graded SILTY SAND: grayish brown (2.5Y 5/2); wet; dense; subangular, medium sand
03		6	6	24	☒			Saturated below 24 feet; extreme hydrocarbon odor at 24 feet
				25–30				
				31–35				Total Depth of Boring = 30 Feet Groundwater Screened from 36 to 40 Feet

▼ Water Table

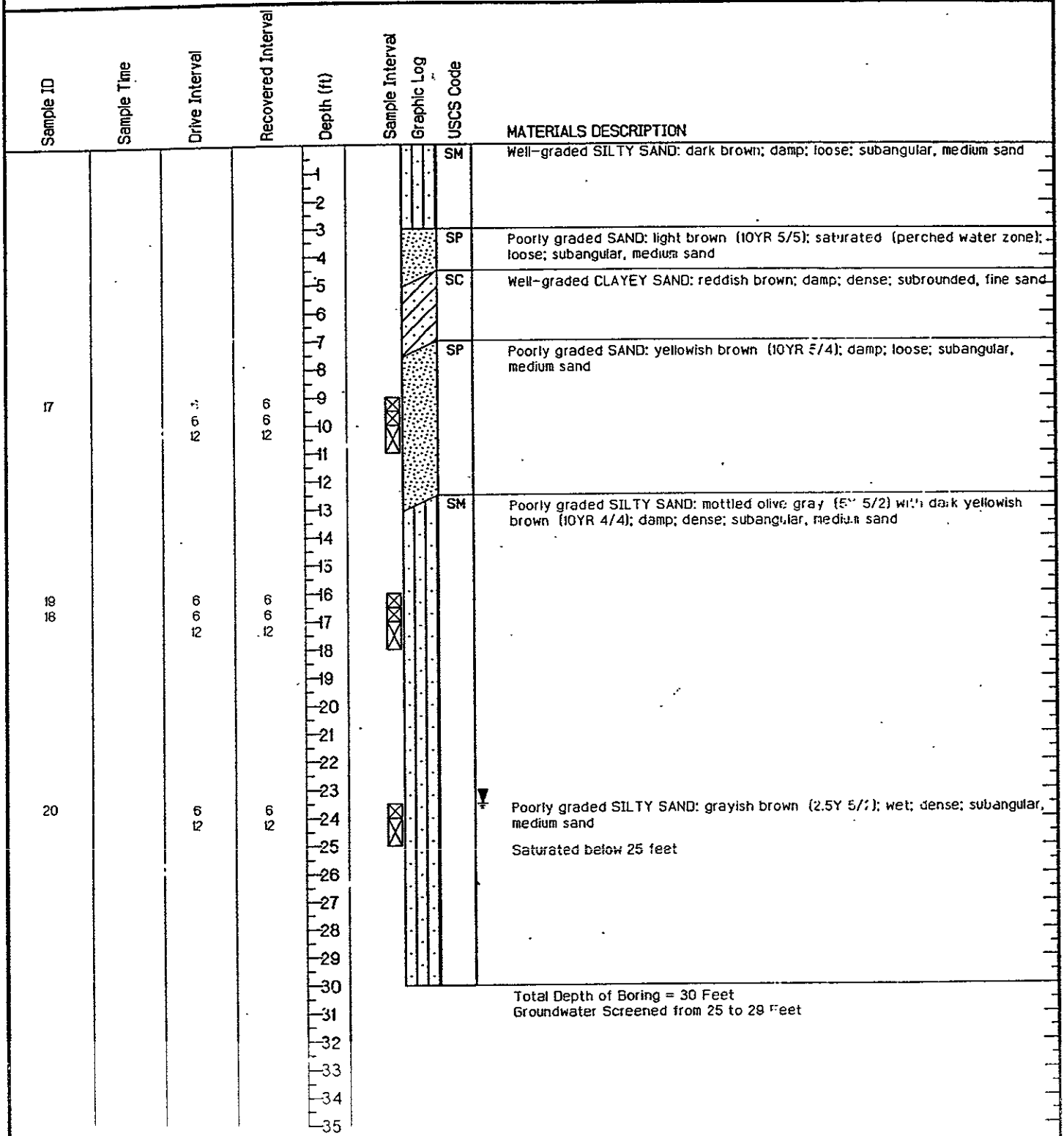
☒ Lab Sample

PROJECT Oakland Redevelopment Project
LOCATION Preservation Park
JOB NUMBER 0R098403SR
LOGGED BY Roy Glenn
DATE DRILLED 12/07/98
DRILLER Fast Tek
DRILL METHOD Geoprobe

SAMPLING METHOD
GROUND ELEVATION NA
TOC ELEVATION NA
BORING DIAMETER 2.25 Inches
TOTAL DEPTH OF HOLE 30 Feet bgs
WATER LEVEL 22 Feet bgs
WELL INSTALLED? (Y/N) N

Tt Tetra Tech EM Inc.

LOG OF BORING SB03



Water Table

Lab Sample

PROJECT Oakland Redevelopment Project
LOCATION Preservation Park
JOB NUMBER 0R0961403SR
LOGGED BY Roy Glenn
DATE DRILLED 12/09/98
DRILLER Fast Tek
DRILL METHOD Geoprobe

SAMPLING METHOD
GROUND ELEVATION NA
TOC ELEVATION NA
BORING DIAMETER 2.25 Inches
TOTAL DEPTH OF HOLE 30 Feet bgs
WATER LEVEL 23.5 Feet bgs
WELL INSTALLED? (Y/N) N

Tt Tetra Tech EM Inc.

LOG OF BORING SB04

Sample ID	Sample Time	Drive Interval	Recovered Interval	Depth (ft)	Sample Interval	Graphic Log	USCS Code	MATERIALS DESCRIPTION
4		6	6	1–35	☒		SM	FILL: Well-graded SILTY SAND; very dark grayish brown (10YR 3/3); damp; loose; subangular, medium sand; with some fine gravel

Total Depth of Boring = 5 Feet

▼ Water Table

☒ Lab Sample

PROJECT Oakland Redevelopment Project
LOCATION Preservation Park
JOB NUMBER 0R0981403SR
LOGGED BY Roy Glenn
DATE DRILLED 12/07/98
DRILLER Fast Tek
DRILL METHOD Geoprobe

SAMPLING METHOD
GROUND ELEVATION NA
TOC ELEVATION NA
BORING DIAMETER 2.25 Inches
TOTAL DEPTH OF HOLE 5 Feet bgs
WATER LEVEL None Encountered
WELL INSTALLED? (Y/N) N

Tt Tetra Tech EM Inc.

LOG OF BORING SB05

Sample ID	Sample Time	Drive Interval	Recovered Interval	Depth (ft)	Sample Interval	Graphic Log	USCS Code	MATERIALS DESCRIPTION
5		12	12	1–35	☒		SM	FILL: Well-graded SILTY SAND; very dark grayish brown (10YR 3/2); damp; loose; subangular, medium sand, with some fine gravel
								Total Depth of Boring = 5 Feet

▼ Water Table

☒ Lab Sample

PROJECT Oakland Redevelopment Project
LOCATION Preservation Park
JOB NUMBER 0R0981403SR
LOGGED BY Roy Glenn
DATE DRILLED 12/07/98
DRILLER East Tek
DRILL METHOD Geoprobe

SAMPLING METHOD
GROUND ELEVATION NA
TOC ELEVATION NA
BORING DIAMETER 2.25 Inches
TOTAL DEPTH OF HOLE 5 Feet bgs
WATER LEVEL None Encountered
WELL INSTALLED? (Y/N) N

Tt Tetra Tech EM Inc.

LOG OF BORING SB0

Sample ID	Sample Time	Drive Interval	Recovered Interval	Depth (ft)	Sample Interval	Graphic Log	USCS Code	MATERIALS DESCRIPTION
6		12	12	1–35	☒		SM	FILL: Well-graded SILTY SAND; very dark grayish brown (10YR 3/2); damp; loose; subangular, medium sand; with some fine gravel

Total Depth of Boring ~ 5 Feet

▼ Water Table

☒ Lab Sample

PROJECT Oakland Redevelopment Project
LOCATION Preservation Park
JOB NUMBER 0R0981403SR
LOGGED BY Roy Glenn
DATE DRILLED 12/07/98
DRILLER Fast Tek
DRILL METHOD Geoprobe

SAMPLING METHOD
GROUND ELEVATION NA
TOC ELEVATION NA
BORING DIAMETER 2.5 Inches
TOTAL DEPTH OF HOLE 5 Feet bgs
WATER LEVEL None Encountered
WELL INSTALLED? (Y/N) N