CO-1477

R.T. Hicks Consultants, Ltd.

Memo

JUL 23 2002

To: Mike Carey

From: Cale Swanson

CC:

Date: 09/12/2001

Re: 1350 Powell Subsurface Investigations

1.0 Executive Summary

R.T. Hicks Consultants, Ltd., (Hicks Consultants) performed a subsurface site investigation for the property located at 1350 Powell Street in the city of Emeryville, CA. The property is approximately 22,500 square feet. The assessor's parcel number is 049-1328-002-01.

Hicks Consultants performed an Phase I ESA dated August, 2001. In that document we found several Recognized Environmental Conditions (RECs). Due to the RECs associated with the property LMA, LLC directed Hicks Consultants to conduct a Phase II ESA for 1350 Powell Street.

This document is for the sole use of LMA, LLC, 1981 Broadway Suite 415, Walnut Creek, California. The lender for LMA, LLC may rely upon this memo and the Phase I ESA as required.

We followed ASTM Standard Guide 1903-97 for the investigation.

The data developed during the course of this investigation permit us to conclude:

1. Long-chain (heavy) hydrocarbons exist in the soil beneath the location of the former above ground storage tanks.

2. Gasoline and diesel constituents exist in the soil and groundwater at the location of the former below ground storage tanks and down gradient from the former below ground storage tanks.

3. There is no near surface saturated gravel zone as found at 1300 Powell Street.

4. The extent to which hydrocarbon constituents are present in the soil is much greater than anticipated and will probably require further field study and sampling.

2.0 Introduction

Hicks Consultants performed an Phase I ESA dated August 2001. In that document we found several Recognized Environmental Conditions (RECs). Due to the RECs associated with the property LMA, LLC directed Hicks Consultants to conduct a Phase II ESA for 1350 Powell Street.

Conducting a site investigation can reduce but not eliminate uncertainty regarding the potential of recognized environmental conditions at or near the 1350 Powell Street property in Emeryville, California. This report is not a comprehensive site characterization and the reader should not consider it as such. We have based the opinions presented in this report on findings derived from the Phase I ESA and the sampling program conducted at the property.

3.0 Property Description

The subject property encompasses assessor's parcel number is 049-1328-002-01 in the City of Emeryville, CA. The property subject to this inquiry is approximately 22,500 square feet. A description of the site and historical use information is included in Hicks Consultants Phase I dated August 2001. The August 2001 Phase I present information on previous investigations.

4.0 Scope of Site Investigation

4.1 Objectives of Site Investigation

We identified three goals for the Site Investigation.

1. Determine if soil beneath the property contains petroleum hydrocarbons in sufficient concentration to warrant special handling/disposal if this material requires excavation for site development. Provide an opinion regarding the cost of any hydrocarbon-impaired soil disposal.
2. Determine presence and extent of any near surface saturated gravel zone.
3. Determine if groundwater exists between 0-12 feet below grade. Attempt to discern if water is present in different layers (e.g. shallow gravel zone and deeper sandy zone).
4. If groundwater is present, estimate seepage rate into borehole. Provide an opinion regarding seepage rate into proposed subsurface parking structure.

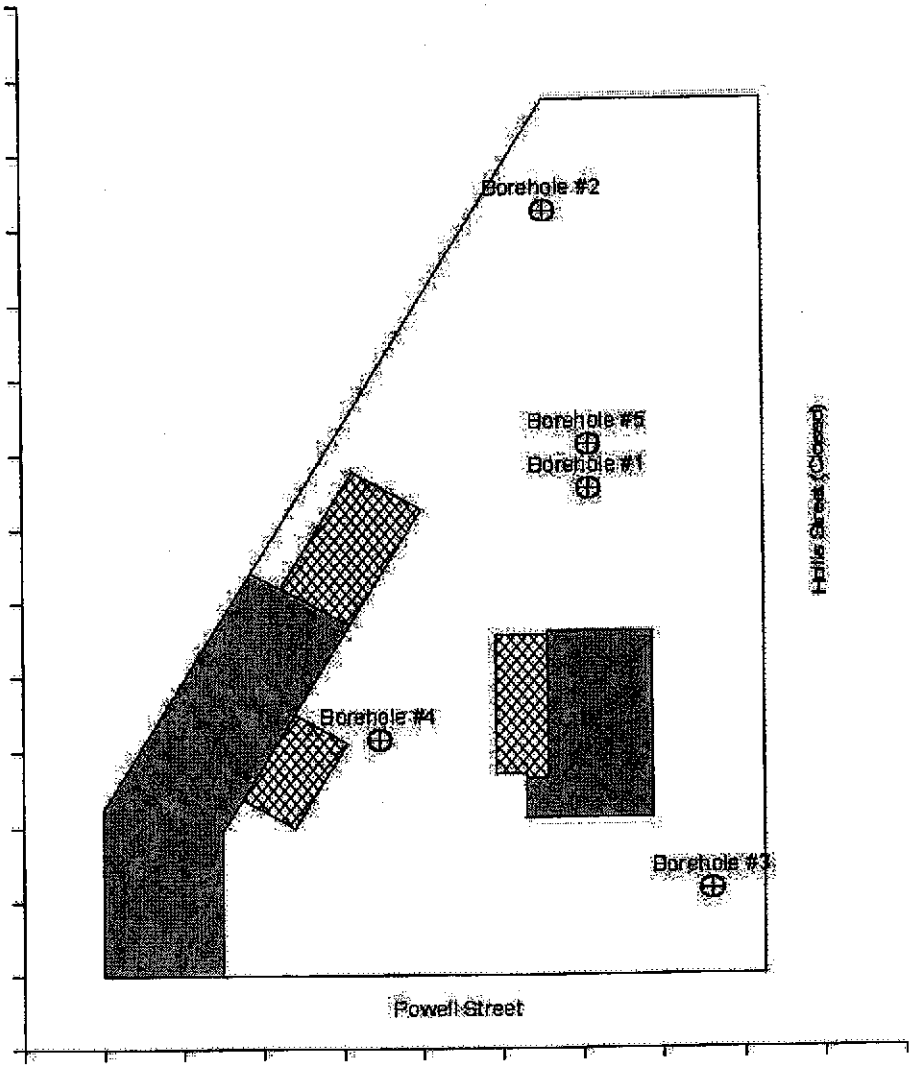
5. If groundwater is present, determine chemical quality of groundwater in each water-bearing zone. Provide an opinion regarding the cost of groundwater disposal during construction and after completion of a parking structure.
6. If groundwater is present and field evaluation suggests water quality impairment (from on-site or off site sources), determine direction of groundwater flow. Provide an opinion regarding the source of water quality impairment (on site or off site).

4.2 *Site Investigation*

A number of geoprobe pushes (boreholes) were to be used to observe subsurface lithology and to obtain soil samples from four or five locations around the property.

Temporary standpipes were to be installed in four or five locations on the property to measure depth to groundwater and to observe groundwater flow direction and aquifer seepage rates.

Water samples were to be taken from the standpipes and analyzed for total extractable petroleum hydrocarbons, BTEX plus naphthalene, and California metals.



4.3 *Sampling and Laboratory Methodology*

Cale Swanson of Hicks Consultants supervised 5 geoprobe pushes and examined the soil lithology for each borehole. Mr. Swanson obtained two composite soil samples from each push. One composite sample from 0 feet to 2.5 feet and one composite from 2.5 to 12 feet was taken from Borehole #1. One composite sample from 0 feet to 6 feet and one composite sample from 6 feet to 12 feet was taken at each of the 4 remaining geoprobe pushes.

Mr. Swanson also supervised the installation of four temporary standpipes. Some groundwater samples were taken but sample numbers were limited due to the slow seepage into the standpipes. Enough samples were taken to analyze for total extractable petroleum hydrocarbons, and BTEX plus naphthalene from Boreholes #1, #2, and #3. One sample for California metals was obtained from Borehole #1. Samples were attempted from Borehole #4 but the bailer returned single phase petroleum hydrocarbons.

Incorrect observation - bailer had water + 1" product

5.0 Evaluation of Sampling Results

5.1 *Analytical Results of Soil Total Extractable Petroleum Hydrocarbons, BTEX and Naphthalene*

Borehole #1: Composite 0 - 2.5 ft			
Diesel	78	mg/kg	H,Y
Motor Oil	99	mg/kg	L
Gasoline	ND	mg/kg	
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	ND	ug/kg	

Borehole #1: Composite 4 - 12 ft.			
Diesel	1400	mg/kg	
Motor Oil	55	mg/kg	L,Y
Gasoline	750	mg/kg	
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	1200	ug/kg	

Borehole #2: Composite 0 - 6 ft			
Diesel	2200	mg/kg	
Motor Oil	200	mg/kg	L,Y
Gasoline	46	mg/kg	
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	ND	ug/kg	

Borehole #2: Composite 6 - 12 ft			
Diesel	500	mg/kg	
Motor Oil	29	mg/kg	L,Y
Gasoline	8.3	mg/kg	
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	ND	ug/kg	

Borehole #3: Composite 0 - 6 ft			
Diesel	30	mg/kg	H,Y
Motor Oil	36	mg/kg	L
Gasoline	ND	mg/kg	
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	ND	ug/kg	

Borehole #3: Composite 6 - 12 ft			
Diesel	46	mg/kg	
Motor Oil	6.3	mg/kg	L,Y
Gasoline	ND	mg/kg	
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	ND	ug/kg	

Borehole #4: Composite 0 - 6 ft			
Diesel	1600	mg/kg	
Motor Oil	ND	mg/kg	
Gasoline	230	mg/kg	H,Y
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	320	ug/kg	
m, p-Xylenes	700	ug/kg	
o-Xylenes	270	ug/kg	
Napthalene	1500	ug/kg	

Borehole #4: Composite 6 - 12 ft			
Diesel	1600	mg/kg	
Motor Oil	ND	mg/kg	
Gasoline	250	mg/kg	H,Y
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	140	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	3000	ug/kg	

Borehole #5: Composite 0 - 6 ft			
Diesel	4300	mg/kg	
Motor Oil	220	mg/kg	L,Y
Gasoline	67	mg/kg	H,Y
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	320	ug/kg	

Borehole #5: Composite 6 - 12 ft			
Diesel	2400	mg/kg	
Motor Oil	110	mg/kg	L,Y
Gasoline	17	mg/kg	
MTBE	ND	ug/kg	
Benzene	ND	ug/kg	
Toluene	ND	ug/kg	
Ethylbenzene	ND	ug/kg	
m, p-Xylenes	ND	ug/kg	
o-Xylenes	ND	ug/kg	
Napthalene	42	ug/kg	

H = Heavier hydrocarbons contributed to the quantitiation
L = Lighter hydrocarbons contributed to the quantitation
Y = Sample exhibits fuel patter which does not resemble standard

5.2 *Analytical Results of Soil Metals*

Borehole #2: Composite 0 - 12 ft		
Antimony	ND	mg/kg
Arsenic	4.5	mg/kg
Barium	230	mg/kg
Beryllium	0.44	mg/kg
Cadmium	2.2	mg/kg
Chromium	77	mg/kg
Cobalt	9.8	mg/kg
Copper	18	mg/kg
Lead	6.9	mg/kg
Mercury	0.044	mg/kg
Molybdenum	1.3	mg/kg
Nickel	66	mg/kg
Selenium	ND	mg/kg
Silver	ND	mg/kg
Thallium	1.4	mg/kg
Vanadium	28	mg/kg
Zinc	42	mg/kg

Borehole #4: Composite 0 - 12 ft		
Antimony	ND	mg/kg
Arsenic	4.9	mg/kg
Barium	160	mg/kg
Beryllium	0.49	mg/kg
Cadmium	2.1	mg/kg
Chromium	31	mg/kg
Cobalt	9.6	mg/kg
Copper	19	mg/kg
Lead	6.5	mg/kg
Mercury	0.047	mg/kg
Molybdenum	ND	mg/kg
Nickel	43	mg/kg
Selenium	ND	mg/kg
Silver	ND	mg/kg
Thallium	0.49	mg/kg
Vanadium	31	mg/kg
Zinc	34	mg/kg

Borehole #5: Composite 0 - 12 ft		
Antimony	ND	mg/kg
Arsenic	3	mg/kg
Barium	120	mg/kg
Beryllium	0.4	mg/kg
Cadmium	2.1	mg/kg
Chromium	37	mg/kg
Cobalt	11	mg/kg
Copper	18	mg/kg
Lead	4.8	mg/kg
Mercury	0.037	mg/kg
Molybdenum	ND	mg/kg
Nickel	51	mg/kg
Selenium	ND	mg/kg
Silver	ND	mg/kg
Thallium	0.26	mg/kg
Vanadium	27	mg/kg
Zinc	48	mg/kg

5.3 Analytical Results of Groundwater

Borehole #1			
Gasoline	5400	ug/L	H,Y
MTBE	ND	ug/L	
Benzene	ND	ug/L	
Toluene	ND	ug/L	
Ethylbenzene	ND	ug/L	
m, p-Xylenes	ND	ug/L	
o-Xylenes	ND	ug/L	
Napthalene	27	ug/L	
Antimony	ND	ug/L	
Arsenic	20	ug/L	
Barium	670	ug/L	
Beryllium	ND	ug/L	
Cadmium	ND	ug/L	
Chromium	ND	ug/L	
Cobalt	ND	ug/L	
Copper	23	ug/L	
Lead	4.6	ug/L	
Mercury	ND	ug/L	
Molybdenum	32	ug/L	
Nickel	83	ug/L	
Selenium	ND	ug/L	
Silver	ND	ug/L	
Thallium	15	ug/L	
Vanadium	ND	ug/L	
Zinc	42	ug/L	

Borehole #2			
Gasoline	3700	ug/L	H,Y
MTBE	5.6	ug/L	
Benzene	ND	ug/L	
Toluene	ND	ug/L	
Ethylbenzene	ND	ug/L	
m, p-Xylenes	ND	ug/L	
o-Xylenes	ND	ug/L	
Napthalene	ND	ug/L	

Borehole #3			
Gasoline	130	ug/L	Y
MTBE	ND	ug/L	
Benzene	ND	ug/L	
Toluene	ND	ug/L	
Ethylbenzene	ND	ug/L	
m, p-Xylenes	ND	ug/L	
o-Xylenes	ND	ug/L	
Napthalene	ND	ug/L	

H = Heavier hydrocarbons contributed to the quantitiation
Y = Sample exhibits fuel patter which does not resemble standard

5.4 Evaluation of Results

Long-chain (heavy) hydrocarbons exist in the soil beneath the location of the former above ground storage tanks.

Gasoline and diesel constituents exist in the soil and groundwater at the location of the former below ground storage tanks and down gradient from the former below ground storage tanks.

There is no near surface saturated gravel zone as found at 1300 Powell Street.

6.0 Conclusions

The data developed during the course of this investigation permit us to conclude:

1. Long-chain (heavy) hydrocarbons exist in the soil beneath the location of the former above ground storage tanks.

2. Gasoline and diesel constituents exist in the soil and groundwater at the location of the former below ground storage tanks and down gradient from the former below ground storage tanks.

3. There is no near surface saturated gravel zone as found at 1300 Powell Street.

4. The extent to which hydrocarbon constituents are present in the soil is much greater than anticipated and will probably require further field study and sampling.

1350 Powell - Analyses of Water from Geoprobe Borings

	Boring No.	1	2	3	4A	4A	4B	6	7	9	11
	Sample Date	8/7/2001	8/7/2001	8/7/2001	9/21/2001	9/27/2001	9/27/2001	9/27/2001	9/27/2001	9/27/2001	
mg/l	Motor Oil				ND						
mg/l	Kerosine				ND						
mg/l	Diesel				4473						
mg/l	Gasoline	5400 HY	3700 H Y	130 Y	66000						
ug/L	MTBE	ND	5.6	ND		ND	ND	ND	ND	ND	
ug/L	Benzene	ND	ND	ND		200	350	ND	ND	ND	
ug/L	Toluene	ND	ND	ND		53	97	ND	ND	ND	
ug/L	Ethylbenzene	ND	ND	ND		12	32	ND	ND	ND	
ug/L	m, p-Xylenes	ND	ND	ND		21	44	ND	ND	ND	
ug/L	o-Xylenes	ND	ND	ND		8.4	20	ND	ND	ND	
ug/L	Napthalene	27	ND	ND		59	150	ND	ND	ND	
ug/L	Acenaphthene					ND					
ug/L	Acenaphthylene					ND					
ug/L	Anthracene					ND					
ug/L	Benzo(a)anthracene					ND					
ug/L	Benzo(a)pyrene					ND					
ug/L	Benzo(b)fluoranthene					ND					
ug/L	Benzo(g,h,i)perylene					ND					
ug/L	Benzo(k)fluoranthene					ND					
ug/L	Chrysene					ND					
ug/L	Dibenz(a,h)anthracene					ND					
ug/L	Fluorene					ND					
ug/L	Fluoranthene					ND					
ug/L	Indeno(1,2,3-cd)pyrene					ND					
ug/L	Naphthalene					ND					
ug/L	Phenanthrene					ND					
ug/L	Pyrene					ND					
ug/L	Antimony	ND				ND		ND			
ug/L	Arsenic	20				86		ND			
ug/L	Barium	670				1100		400			
ug/L	Beryllium	ND				ND		ND			
ug/L	Cadmium	ND				ND		ND			
ug/L	Chromium	ND				ND		ND			
ug/L	Cobalt	ND				ND		ND			
ug/L	Copper	23				ND		ND			
ug/L	Lead	4.6				ND		ND			
ug/L	Mercury	ND				ND		ND			
ug/L	Molybdenum	32				42		ND			
ug/L	Nickel	83				ND		20			
ug/L	Selenium	ND				ND		ND			
ug/L	Silver	ND				ND		ND			
ug/L	Thallium	15				15		ND			
ug/L	Vanadium	ND				ND		ND			
ug/L	Zinc	42				ND		ND			

H = Heavier hydrocarbons contributed to the quantitiation

Y = Sample exhibits fuel pattern which does not resemble standard

1350 Powell - Water Level Elevations

Standpipe or Well	2	3	4A	Well 4B	4C	6	7	8	9	10	Well 11	12
TOC by ALTA Elevation	20.65	20.7	19.9	19.9	19.9	16.45	20	19.5	20.3	20.5	21.3	19.4
Date	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep	29-Sep
Depth to NAPL			6.4									
Depth to Water	7.21	7.4	6.45	7.91	dry	7.84	8.7	dry	6.2	dry	rising	dry
Corrected Water Elevation	13.44	13.3	13.45	11.99		8.61	11.3		14.1			

Powell - Analyses of Core Samples for Selected Hydrocarbons

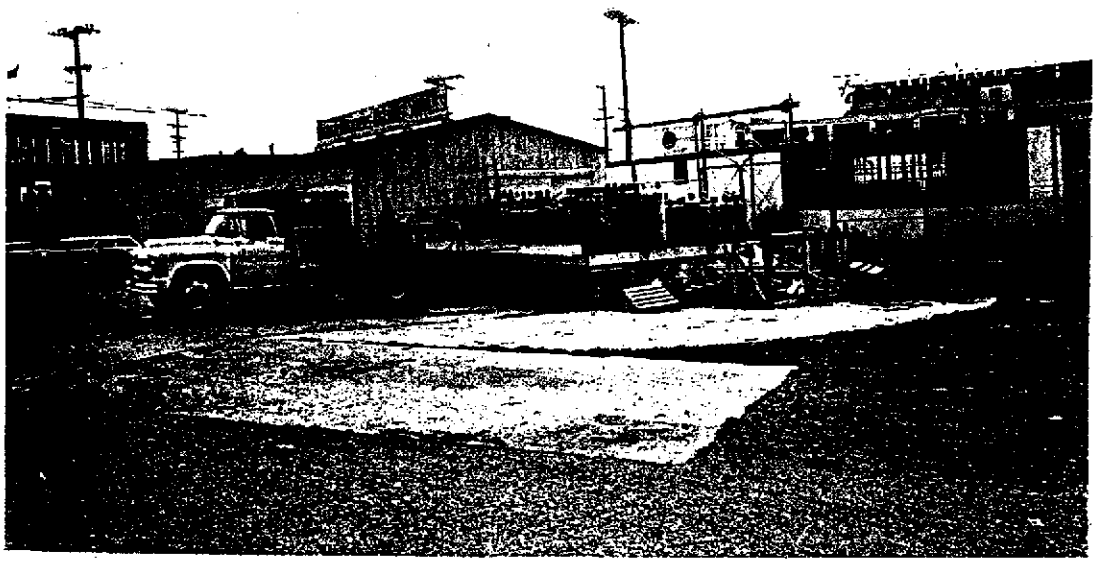
		TPH									
Date	Boring Depth	Diesel	Motor Oil	Gasoline	MTBE	Benzene	Toluene	Ethylbenzene	m, p-Xylenes	o-Xylenes	Naphthalene
8/7/2001	1 0-2.5	78	99	ND	ND	ND	ND	ND	ND	ND	ND
8/7/2001	1 4-12	1400	55	750	ND	ND	ND	ND	ND	ND	1200
8/7/2001	2 0-6	2200	200	46	ND	ND	ND	ND	ND	ND	ND
8/7/2001	2 6-12	500	29	8.3	ND	ND	ND	ND	ND	ND	ND
8/7/2001	3 0-12	320	59	ND	ND	ND	ND	ND	ND	ND	ND
8/7/2001	3 0-6	30	36	ND	ND	ND	ND	ND	ND	ND	ND
8/7/2001	3 6-12	46	6.3	ND	ND	ND	ND	ND	ND	ND	ND
8/7/2001	4 0-6	1600	ND	230	ND	ND	ND	320	700	270	1500
8/7/2001	4 6-12	1600	ND	250	ND	ND	ND	140	ND	ND	3000
8/7/2001	5 0-6	4300	220	67	ND	ND	ND	ND	ND	ND	320
8/7/2001	5 6-12	2400	110	17	ND	ND	ND	ND	ND	ND	42
9/27/2001	6 11.5-13	ND			ND	ND	ND	ND	ND	ND	ND
9/27/2001	6 12-16	21			ND	ND	ND	ND	ND	ND	ND
9/27/2001	6 4-10	970			ND	ND	ND	ND	ND	ND	14
9/27/2001	8 0-5	13			ND	ND	ND	ND	ND	ND	ND
9/27/2001	8 5.25-7	2800			ND	ND	ND	ND	ND	ND	15
9/27/2001	9 7-13	210			ND	ND	ND	ND	ND	ND	ND
9/27/2001	10 0-10	170			ND	ND	ND	ND	ND	ND	32
9/27/2001	12 9-10	16			ND	ND	ND	ND	ND	ND	ND
RBSL		**500**	**500**	**400**	**100**	**180**	**8400**	**24000**	**1000**	**1000**	**1700 (4900)**

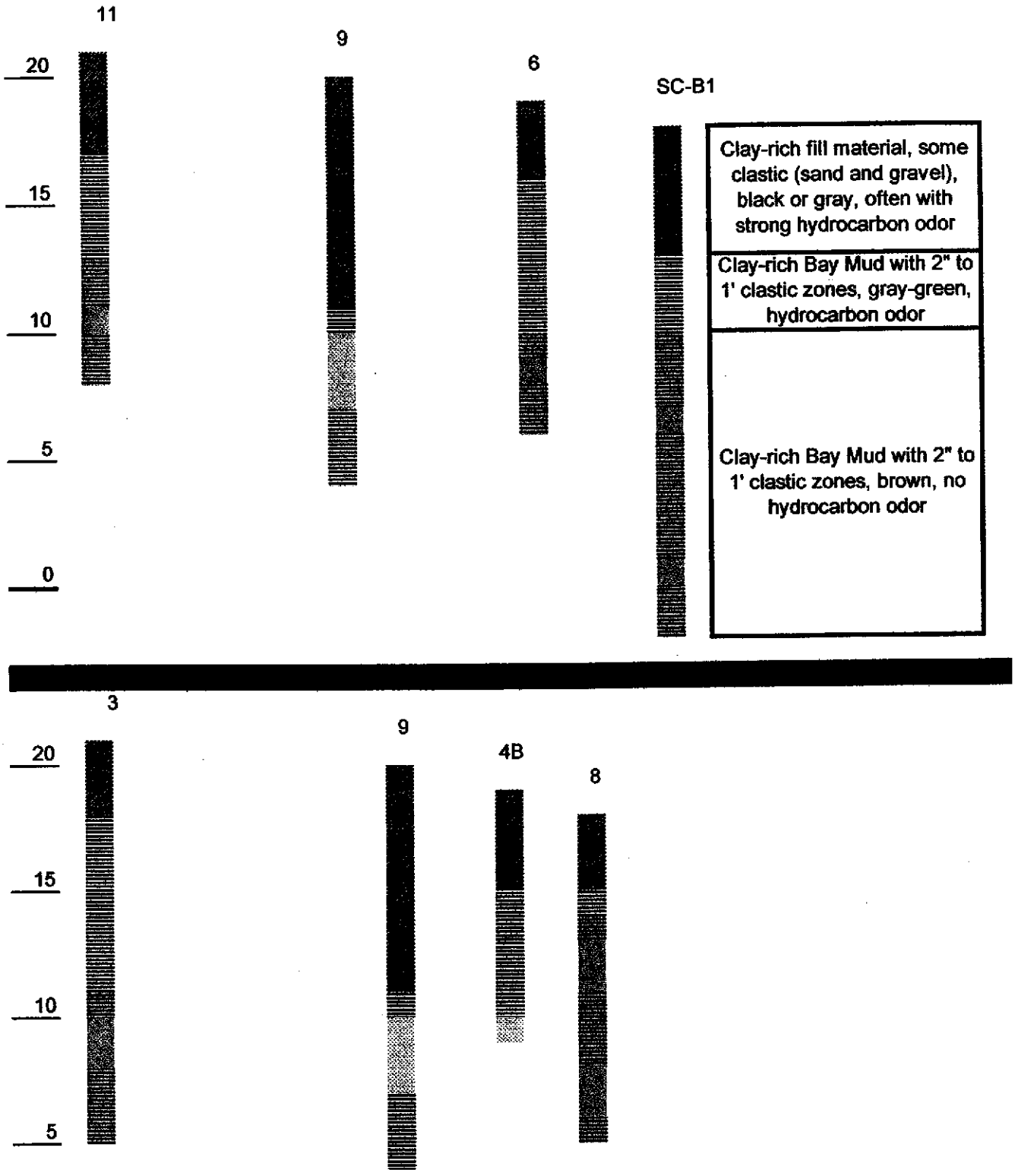
1350 Powell - Analyses of Core Samples

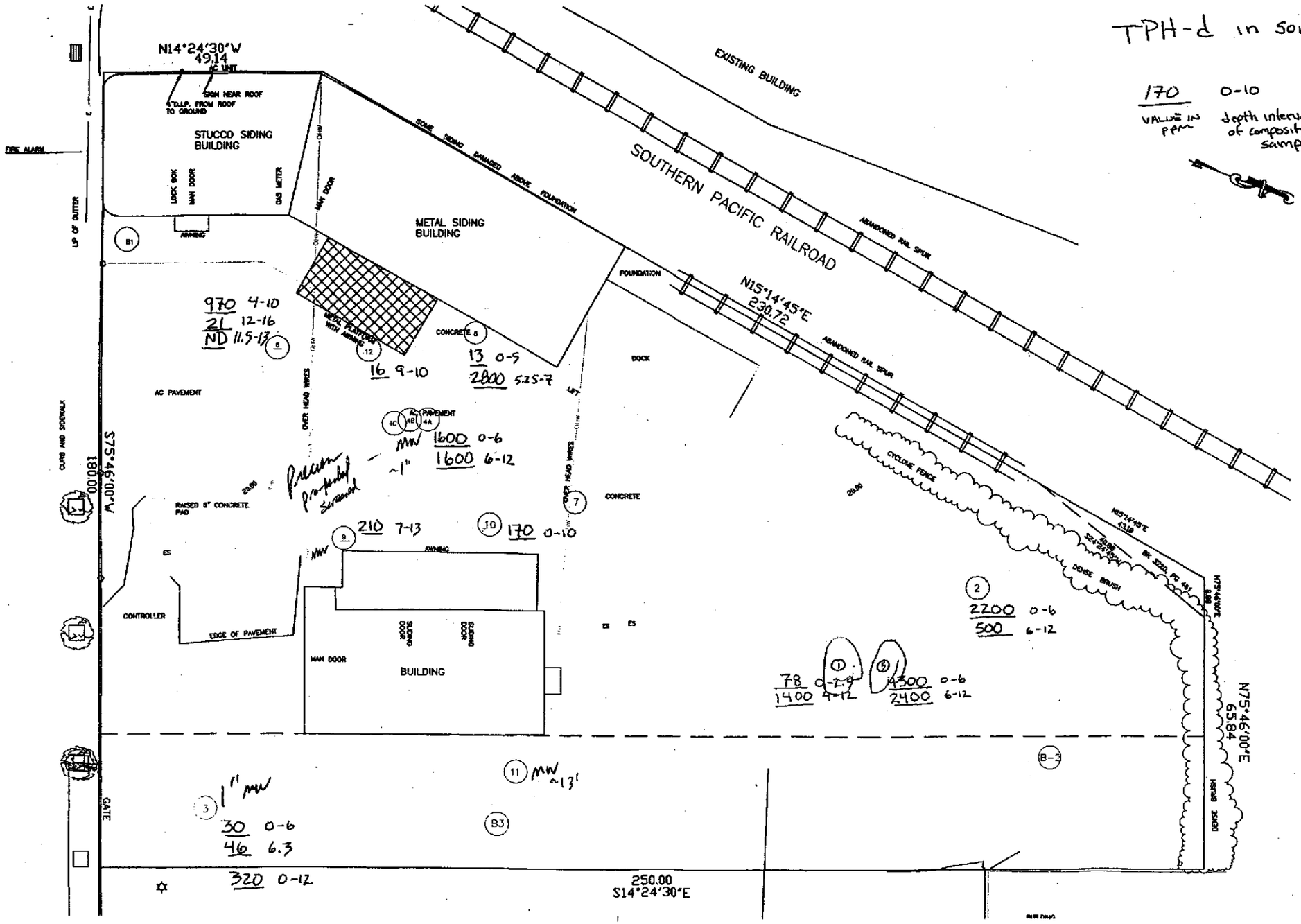
			Boring number (depth)		
		RBSL	2 (0 - 12 ft)	4 (0-12)	5 (0-12)
mg/kg	Antimony	6.3	ND	ND	ND
mg/kg	Arsenic	0.39	4.5	4.9	3
mg/kg	Barium	750	230	160	120
mg/kg	Beryllium	4	0.44	0.49	0.4
mg/kg	Cadmium	7.4	2.2	2.1	2.1
mg/kg	Chromium	9.8	77	31	37
mg/kg	Cobalt	40	9.8	9.6	11
mg/kg	Copper	225	18	19	18
mg/kg	Lead	200	6.9	6.5	4.8
mg/kg	Mercury	4.7	0.044	0.047	0.037
mg/kg	Molybdenum	40	1.3	ND	ND
mg/kg	Nickel	150	66	43	51
mg/kg	Selenium	10	ND	ND	ND
mg/kg	Silver	20	ND	ND	ND
mg/kg	Thallium	1.1	1.4	0.49	0.26
mg/kg	Vanadium	110	28	31	27
mg/kg	Zinc	600	42	34	48

BUILDING #1 SALESROOM AND OFFICE

BUILDING #2 AND LOADING DOCK #3




11
9
6
SC-B1
20
15
10
5
0
Clay-rich fill material, some clastic (sand and gravel), black or gray, often with strong hydrocarbon odor
Clay-rich Bay Mud with 2" to 1' clastic zones, gray-green, hydrocarbon odor
Clay-rich Bay Mud with 2" to 1' clastic zones, brown, no hydrocarbon odor
3
9
4B
8
20
15
10
5


TPH-d in Soils
170 0-10
VALUE IN PPM
depth interval of composite sample
POWELL STREET
N14°24'30"W
49.14
AC UNIT
SIGN NEAR ROOF
6"D.L.P. FROM ROOF TO GROUND
STUCCO SIDING BUILDING
LOCK BOX
MAN DOOR
GAS METER
AWNING
EXISTING BUILDING
SOME SIDING DAMAGED ABOVE FOUNDATION
SOUTHERN PACIFIC RAILROAD
ABANDONED RAIL SPUR
METAL SIDING BUILDING
FOUNDATION
N15°14'45"E
230.72
ABANDONED RAIL SPUR
970 4-10
21 12-16
ND 11.5-13
METAL PLATFORM WITH AWNING
CONCRETE
13 0-5
2800 5.25-7
16 9-10
DOCK
AC PAVEMENT
OVER HEAD WIRES
1600 0-6
1600 6-12
~1'
CYCLONE FENCE
DENSE BRUSH
RAISED 8" CONCRETE PAD
CONCRETE
210 7-13
170 0-10
AWNING
CONTROLLER
EDGE OF PAVEMENT
MAN DOOR
BUILDING
2200 0-6
500 6-12
78 0-2.9
1400 4-12
4300 0-6
2400 6-12
S75°46'00"W
180.00
N75°46'00"E
65.84
1' MW
30 0-6
46 6.3
11 MW ~13'
320 0-12
GATE
250.00
S14°24'30"E