

If Workers Compensation insurance will not cover the liability of Licensee in states that require participation in state workers' compensation fund, Licensee shall comply with the laws of such states. If Licensee is self-insured, evidence of state approval must be provided along with evidence of excess workers compensation coverage. Coverage shall include liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

The policy shall also contain the following endorsement which shall be indicated on the certificate of insurance:

- Alternate Employer Endorsement

- D. **Umbrella or Excess Policies** In the event Licensee utilizes Umbrella or excess policies, these policies shall "follow form" and afford no less coverage than the primary policy.
- E. **Railroad Protective Liability** insurance naming only the Railroad as the insured with a combined single limit of \$2,000,000 per occurrence with a \$6,000,000 aggregate. The policy shall be broad form coverage for "Physical Damage to Property" (ISO Form CG 00 35 07 98 or equivalent). A binder stating the policy is in place must be submitted to the Railroad until the original policy is forwarded to the Railroad.

Other Requirements

- F. Punitive damage exclusion must be deleted, **which deletion shall be indicated on the certificate of insurance.**
- G. Licensee agrees to waive its right of recovery, and its insurers, through policy endorsement, agree to waive their right of subrogation against Railroad. Licensee further waives its right of recovery, and its insurers also waive their right of subrogation against Railroad for loss of its owned or leased property or property under its care, custody and control. Licensee's insurance shall be primary with respect to any insurance carried by Railroad. All waivers of subrogation **shall be indicated on the certificate of insurance.**
- H. All policy(ies) required above (excluding Workers Compensation) shall provide severability of interests and shall name Railroad as an additional insured. **Severability of interest and naming Railroad as additional insured shall be indicated on the certificate of insurance.**
- I. Prior to commencing the Work, Licensee shall furnish to Railroad original certificate(s) of insurance evidencing the required coverage, endorsements, and amendments. The certificate(s) shall contain a provision that obligates the insurance company(ies) issuing such policy(ies) to notify Railroad in writing of any cancellation or material alteration. **Upon request from Railroad, a certified duplicate original of any required policy shall be furnished.**
- J. Any insurance policy shall be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.
- K. Licensee **WARRANTS** that this Agreement has been thoroughly reviewed by Licensee's insurance agent(s)/broker(s), who have been instructed by Licensee to procure the insurance coverage required by this Agreement and acknowledges that Licensee's insurance coverage will be primary.

- L. If Licensee fails to procure and maintain insurance as required, Railroad may elect to do so at the cost of Licensee plus a 25% administration fee.

- M. The fact that insurance is obtained by Licensee or Railroad on behalf of Licensee shall not be deemed to release or diminish the liability of Licensee, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad shall not be limited by the amount of the required insurance coverage.

Alexander, Jeriann

From: Fiedler, Geoff [GFiedler@ci.berkeley.ca.us]
Sent: Tuesday, August 01, 2006 8:54 AM
To: Alexander, Jeriann; Al-Hadithy, Nabil; Claude Jemison
Cc: Pleva, Melissa
Subject: RE: Peerless Electric

Thank You -

Fugro left a message yesterday evening suggesting that all of their work would be shallow, hand auger borings, along the SPCC right-of-way. I will contact them today to confirm. We generally don't permit hand auger borings shallower than 5 feet, but we would like to have an application and site plan, with boring locations indicated.

If possible, can we please arrange to be copied with the reports and work plans on Berkeley projects? We have a library available to the public and we also interact with the planning department on CEQA and EIR studies. It would be helpful to have current information on DTSC projects in Berkeley. The City may also have relevant institutional knowledge that could be helpful for these projects.

Thank you for the note.

Geoff

-----Original Message-----

From: Alexander, Jeriann [mailto:JAlexander@Fugro.com]
Sent: Monday, July 31, 2006 12:52 PM
To: Fiedler, Geoff; Al-Hadithy, Nabil; Claude Jemison
Cc: Pleva, Melissa
Subject: RE: Peerless Electric

Fugro just sent a confirming letter out to the DTSC regarding the schedule. The need to obtain the city permit is noted in the approved Work Plan and the confirming letter.

Jeriann

-----Original Message-----

From: Fiedler, Geoff [mailto:GFiedler@ci.berkeley.ca.us]
Sent: Friday, July 28, 2006 12:07 PM
To: Al-Hadithy, Nabil; Claude Jemison
Subject: RE: Peerless Electric

Please remind the RP or consultant of the requirement to obtain permits from the City of Berkeley. I don't believe we would bill or inspect for borings in the RR ROW, since this is not city-owned, but we would like a permit under any circumstances.

-----Original Message-----

From: Al-Hadithy, Nabil
Sent: Friday, July 28, 2006 11:23 AM
To: 'Claude Jemison'
Cc: Fiedler, Geoff
Subject: RE: Peerless Electric

Please keep us in the loop. We need to update our landuse as you progress.

We got an offer from the RR to test soils only on their ROW. They refused to

allow gw to be tested. Not sure it was very meaningful.

-----Original Message-----

From: Claude Jemison [mailto:CJemison@dtsc.ca.gov]
Sent: Thursday, July 27, 2006 5:47 PM
To: Al-Hadithy, Nabil
Subject: Re: Peerless Electric

Peerless Electric will be conducting soil and groundwater investigation along the right of way as soon as consultant gain Union Pacific consent. The fieldwork will probably start sometime in September.

>>> "Al-Hadithy, Nabil" <NAL-Hadithy@ci.berkeley.ca.us> 7/27/2006 9:35 AM >>>
Hi Claude

You seem busy with Berkeley sites.

Another site is Peerless Lighting. 2220 4th St.

The status says Active. Can you please tell me what has happened since 2004? Thanks.

> -----Original Message-----

> From: Al-Hadithy, Nabil
> Sent: Thursday, July 27, 2006 9:33 AM
> To: 'cjemison@dtsc.ca.gov'
> Cc: Fiedler, Geoff
> Subject: Dover Sales - 707 Park Way

> Hi Claude

> Toxics Management is the Certified Unified Program Agency (Ch 6.11 Div 20, Cal HSC)

> We have been reviewing and moving to closure on this site for past dozen years.

> On your web site, it says CERTIFIED AS OF 1/1/1984 . What does this mean? Are you also actively involved on this case?

> Thanks

> Nabil Al-Hadithy, PhD
> Toxics Management Division
> City of Berkeley
> 2118 Milvia Street
> Berkeley CA 94704
> Tel: 510 981 7460
> Fax: 510 981 7470

**FACSIMILE TRANSMITTAL SHEET****August 8, 2006**

TO/COMPANY: Geoff Fieldler City of Berkeley Toxics Management	FACSIMILE No.: 510-981-7470	CITY/STATE/COUNTRY:
FROM: Melissa L. Pleva	PHONE: 510-267-4459	E-MAIL: <u>MPLEVA@FUGRO.COM</u>
SUBJECT: Permit application & Field Meeting 2220 Fourth Street Berkeley, California		PROJECT No.: 698.004
TRANSMITTED BY: MLP	TRANSMITTAL FAX: 510-268-0137	TOTAL PAGES, INCLUDING COVER: 3

Geoff,

Attached is the application for soil borings you requested. We will hand auger 8 borings to <5 feet within the UP right-of-way. We have a site meeting scheduled with a UP representative and the utility companies on Tuesday August 15th at 9:00. We will meet where Bancroft Way intersects the railroad tracks.

If you have any questions or need any additional information please call me at 510-267-4459.

Thanks.

Fugro West

A handwritten signature in cursive script that reads "Melissa L. Pleva".

Melissa L. Pleva
Project Engineer & Geologist

THIS FACSIMILE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. IF THE READER OF THIS FACSIMILE IS NOT THE INTENDED RECIPIENT OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THIS FACSIMILE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL FACSIMILE TO US AT THE ADDRESS BELOW VIA THE U.S. POSTAL SERVICE. THANK YOU.



Department of Planning and Development
 TOXICS MANAGEMENT DIVISION
 A Certified Unified Program Agency

For TMD Use Only	
Permit No.:	_____
Total Permit Fee:	_____
Approved by:	_____
Date Approved:	_____
(Permit expires 90 days from approval date)	

**APPLICATION FOR
 Well Construction, Installation, Destruction Or Modification
 Soil Boring /Probe/Grab and Ground Water Sampling**

Name of Facility:	former Peerless Lighting facility (currently vacant)	
Address:	2220 Fourth Street Berkeley, California	
Telephone (Business):	(Emergency):	(805) 652-2602

Property Owner:	Herst Ventures
Owner Address:	P.O. Box 2556 Berkeley, California 94720

Supervising Geological/Engineering Co.:	Fugro West, Inc. (Fugro)		
Address:	P.O. Box 2556 Berkeley, California 94720		
Contractor Lic. No.:	N/A	Type:	Expires:
Local Contact Person:	Melissa L. Pleva	Tel.:	(510) 267-4459 Fax: (510) 268-0137

Drilling Co.:	N/A - hand auger only Fugro West, Inc		
Address:	1000 Broadway, Suite 200 Oakland, CA 94501		
Local Contact Person:	Melissa Pleva	Tel.:	510-267-4459 Fax: 510-268-0137
License No.:	N/A	Type:	Expiration Date:

Type of Work	Well Specifications
<input type="checkbox"/> Install _____ Monitor Wells	Well Excavation Diameter _____
<input type="checkbox"/> Destroy _____ Monitor Wells	Well Casing Diameter _____
<input checked="" type="checkbox"/> Drill <input checked="" type="checkbox"/> Temporary Soil Borings (<5ft)	Gauge of Casing _____
<input type="checkbox"/> Drill _____ Temporary GW Sampling Points	Well Depth _____
<input type="checkbox"/> Modify _____ Wells by installing pumps/vacuums in wells for remediation systems	Type of Grout _____
	Other _____

- Provide a scaled plan identifying the proposed drilling locations, property boundaries, streets, structures, pollution source areas, buried and overhead utility lines.
- Call the Toxics Management Division (TMD) and schedule an inspection of the grout sealing of boreholes or wells. Notification should be provided a minimum of two (2) working days in advance of first scheduled day of drilling.
- Inform TMD of any contamination found. Please forward report to TMD within 60 days of completion.

I certify that I have prepared this application and that the work will be done in accordance with the provisions of the laws of the State of California, the ordinances and the rules and regulations of the City of Berkeley.

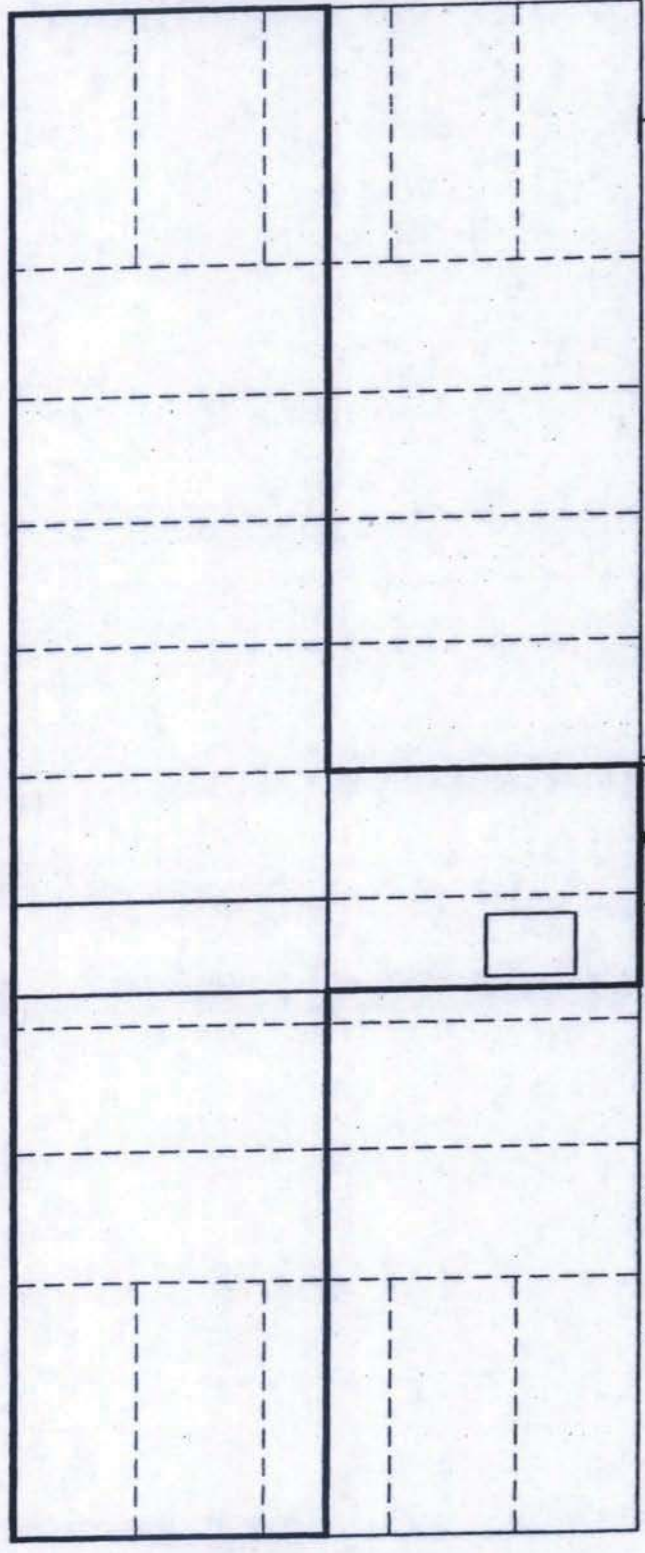
Signed Melissa Pleva Date 8/8/06

FEES: First Well/Each add'l. - \$376/\$112 First Soil Boring/Each add'l. - \$188/\$112



December 2006
Project Number 668,004

4th STREET



BANCROFT WAY

ALLSTON WAY

LEGEND

PROPOSED SOIL SAMPLING LOCATION

PROPOSED SOIL & GROUNDWATER SAMPLING LOCATION



NOTE: BEFORE YOU BEGIN ANY WORK, SEE AGREEMENT FOR FIBER OPTIC PROVISION

EXHIBIT "A"
UNION PACIFIC RAILROAD COMPANY
BERKELEY, CA
M.P. 5.9 - Martinez Subdivision
License to HERST VENTURES
REAL ESTATE DEPARTMENT

AMERICAN SOIL
AND STONE PRODUCTS

FORMER
TRIANGLE PAINT
PROPERTY

Alexander, Jeriann

From: Fiedler, Geoff [GFiedler@ci.berkeley.ca.us]
Sent: Thursday, August 24, 2006 8:35 AM
To: Pleva, Melissa; Claude Jemison (E-mail); doug@herstventures.com;
andrea.sumits@hklaw.com
Cc: Alexander, Jeriann; Al-Hadithy, Nabil
Subject: RE: UP field sampling Berkeley

Thank you for this notification.

I don't plan on being there but can be available if there is a need.

Geoff

-----Original Message-----

From: Pleva, Melissa [mailto:MPleva@Fugro.com]
Sent: Wednesday, August 23, 2006 5:51 PM
To: Claude Jemison (E-mail); Fiedler, Geoff; doug@herstventures.com;
andrea.sumits@hklaw.com
Cc: Alexander, Jeriann
Subject: UP field sampling Berkeley

We have scheduled the soil and groundwater sampling to be conducted within the UP right-of-way adjacent to the former Peerless Lighting facility for Tuesday August 29th through Thursday August 31st. We will begin working at 9:00 am and finish each day at 3:00. 1 hour is needed at the start (8:00 to 9:00) and end (3:00 to 4:00) of each day for the UP flagman set up and take down activities. I will locate and measure the water levels in the site wells on Monday August 28th. If you have any questions or require any additional information please contact me.

Melissa L. Pleva
Project Engineer & Geologist
Fugro West, Inc.
1000 Broadway, Suite 200
Oakland, CA 94607
www.fugrowest.com
phone: (510)268-0461
direct line : (510) 267-4459
fax: (510) 268-0137
cell: (510) 610-5416

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**APPENDIX C
LOGS OF BORINGS
WELL SAMPLING FORMS**

MAJOR DIVISIONS			GROUP NAMES		GENERAL NOTES Classification of Soils in general accordance with ASTM D2487 or D2488 (based on the Unified Soil Classification System) Geologic Formation noted in bold font at the top of interpreted interval Sloped line in break column indicates transitional boundary Blow counts for modified California Liner Sampler shown in () Length of sample symbol approximates recovery length SAMPLER DRIVING RESISTANCE Number of blows with * hammer, falling * to drive sampler * after seating sampler *, for example, Blows/ft Description 25 25 blows drove sampler 12" after initial 6" of seating 50/7" 50 blows drove sampler 7" after initial 6" of seating Ref/3" 50 blows drove sampler 3" during initial 6" seating interval (Ref=Refusal) STRENGTH TEST METHOD U = Unconfined Compression Q = Unconsolidated Undrained Triaxial T = Torvane P = Pocket Penetrometer M = Miniature Vane F = Field Vane OTHER TESTS k = Permeability El = Expansion Index Consol = Consolidation OVM = Organic Vapor Gs = Specific Gravity Meter MA = Particle Size Analysis WATER LEVEL SYMBOLS Initial or perched water level Final ground water level Seepages encountered	
COARSE-GRAINED SOILS More than 50% retained on the No. 200 sieve	GRAVELS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	Clean gravels less than 5% fines	GW			Well-Graded Gravel
			GP			Poorly Graded Gravel
		Gravels with more than 12% fines	GM			Silty Gravel
			GC			Clayey Gravel
	SANDS MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	Clean sand less than 5% fines	SW			Well-Graded Sand
			SP			Poorly Graded Sand
		Sands with more than 12% fines	SM			Silty Sand
			SC			Clayey Sand
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve	SILTS AND CLAYS Liquid Limit Less than 50%	ML		Silt		
		CL		Lean Clay		
		OL		Organic Silt		
		SILTS AND CLAYS Liquid Limit Greater than 50%	MH		Elastic Silt	
	CH			Fat Clay		
	OH			Organic Clay		
	HIGHLY ORGANIC SOILS		PT		Peat or Highly Organic Soils	
		FILL		Debris or Mixed Fill		
		AC		Asphalt Concrete Pavement with Aggregate Base		

SAMPLER TYPE AND RECOVERY

Samplers and sampler dimensions (unless otherwise noted in report text) are as follows:

1 SPT Sampler, driven 1 3/8" ID, 2" OD	7 Lexan Sampler
2 MOD CA Liner Sampler 2 3/8" ID, 3" OD	8 Pitcher Sample
3 CA Liner Sampler 1 7/8" ID, 2.5" OD	9 Vibracore Sample
4 Thin-walled Tube, pushed 2 7/8" ID, 3" OD	10 No Sample Recovered
5 Bulk Bag Sample (from cuttings)	11 Rock Core
6 Hand Auger Sample	12 Direct Push
	13 Environmental Sample

Retained samples listed in sample No. column

SOIL STRUCTURE

Fissured: Containing shrinkage or relief cracks, often filled with fine sand or silt, usually more or less vertical.

Pocket: Inclusion of material of different texture that is smaller than the diameter of the sample.

Parting: Inclusion less than 1/8 inch thick extending through the sample.

Seam: Inclusion 1/8 inch to 3 inches thick extending through the sample.

Layer: Inclusion greater than 3 inches thick extending through the sample.

Laminated: Soil sample composed of alternating partings or seams of different soil types.

Interlayered: Soil sample composed of alternating layers of different soil type.

Intermixed: Soil sample composed of pockets of different soil type, and layered or laminated structure is not evident.

CONSISTENCY (1)			RELATIVE DENSITY (1)		INCREASING VISUAL MOISTURE CONTENT Dry ↓ Moist ↓ Wet
Clays	Blows/Foot SPT	Undrained Shear Strength (ksf)	Sands and Gravels	Blows/Foot SPT	
Very Soft	0 - 2	0 - 0.25	Very Loose	0 - 4	↓ Dry ↓ Moist ↓ Wet
Soft	2 - 4	0.25 - 0.5	Loose	4 - 10	
Firm	4 - 8	0.5 - 1	Medium Dense	10 - 30	
Stiff	8 - 15	1 - 2	Dense	30 - 50	
Very Stiff	15 - 30	2 - 4	Very Dense	Over 50	
Hard	Over 30	Over 4			

Information on each boring log is a compilation of subsurface conditions and soil or rock classifications obtained from the field as well as from laboratory testing of samples. Strata have been interpreted by commonly accepted procedures. The stratum lines on the logs may be transitional and approximate in nature. Water level measurements refer only to those observed at the time and places indicated, and can vary with time, geologic condition, or construction activity.

(1) Terzaghi and Peck 1967

TERMS AND SYMBOLS USED ON BORING LOGS



DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVM/PIID (ppm)	LOCATION: SURFACE EL: ft +/- (rel. datum)	MATERIAL DESCRIPTION	OTHER TESTS
		1					Silty GRAVEL (GM): very dense, brown, moist, fine and coarse, sub-rounded to sub-angular, some sand (fine- to coarse-grained)	
		2					Sandy CLAY (CL): stiff, medium brown, moist, fine- to medium-grained	
5		3					CLAY (CL): stiff to very stiff, light brown, moist, some sand (fine- to coarse-grained)	
10		4						

BORING DEPTH: 15.0 ft
 DEPTH TO WATER: 13.9 ft

DRILLING METHOD: 3-in. dia. Hand Auger

COMPLETION DATE:
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLED BY: CES
 LOGGED BY: M Pleva

LOG OF HA-1
 2220 Fourth Street
 Berkeley, California



DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVMPID (ppm)	LOCATION: SURFACE EL: ft +/- (rel. datum)	MATERIAL DESCRIPTION	OTHER TESTS
		1			0.3		Silty GRAVEL (GM): very dense, brown, moist, fine and coarse, sub-rounded to sub-angular, some sand (fine- to coarse-grained)	
		2			0		Sandy CLAY (CL): stiff, brown, moist, fine- to coarse-grained, trace gravel (fine, sub-angular to sub-rounded)	
5		3					refusal at 5.5 feet	
10								

BORING DEPTH: 5.5 ft
 DEPTH TO WATER: Not Encountered

DRILLING METHOD: 3-in. dia. Hand Auger

COMPLETION DATE:
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLED BY: CES
 LOGGED BY: M Pleva

LOG OF HA-2
 2220 Fourth Street
 Berkeley, California



DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVM/PIID (ppm)	LOCATION:	OTHER TESTS
						SURFACE EL: ft +/- (rel. datum)	
MATERIAL DESCRIPTION							
		1			1	Silty GRAVEL (GM): very dense, brown, dry to moist, fine and coarse, sub-rounded to sub-angular, some sand (fine- to coarse-grained)	
					0		
		2			0	Sandy CLAY (CL): stiff to very stiff, medium brown, moist, fine- to medium-grained	
5		3				refusal at 5.5 feet	
10							

BORING DEPTH: 5.0 ft
 DEPTH TO WATER: Not Encountered

DRILLING METHOD: 3-in. dia. Hand Auger

COMPLETION DATE:
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLED BY: CES
 LOGGED BY: M Pleva

LOG OF HA-3
 2220 Fourth Street
 Berkeley, California



DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVMPID (ppm)	LOCATION: SURFACE EL: ft +/- (rel. datum)	MATERIAL DESCRIPTION	OTHER TESTS
		1			0.6		Silty GRAVEL (GM): very dense, brown, dry to moist, fine and coarse, sub-rounded to sub-angular, some sand (fine- to coarse-grained)	
		2			0.8			
					0		Sandy CLAY (CL): stiff, brown, moist, fine- to medium-grained	
5		3					refusal at 5.5 feet	
10								

BORING DEPTH: 5.5 ft
 DEPTH TO WATER: Not Encountered

DRILLING METHOD: 3-in. dia. Hand Auger

COMPLETION DATE:
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLED BY: CES
 LOGGED BY: M Pleva

LOG OF HA-4
 2220 Fourth Street
 Berkeley, California



DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVM/PIID (ppm)	LOCATION:	OTHER TESTS
						SURFACE EL: ft +/- (rel. datum)	
MATERIAL DESCRIPTION							
	●●●●●●●●●●	1	[Symbol]		0	Gravel (GP): very dense, brown, dry to moist, fine and coarse, sub-rounded to sub-angular, some sand (fine- to coarse-grained)	
	[Symbol]	2	[Symbol]		0	Silty CLAY (ML): very stiff, medium brown, moist, trace sand (fine- to medium-grained), trace gravel (fine, sub-rounded to sub-angular)	
					0	refusal at 3.8 feet	
5							
10							

BORING DEPTH: 3.8 ft
 DEPTH TO WATER: Not Encountered

DRILLING METHOD: 3-in. dia. Hand Auger

COMPLETION DATE:
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLED BY: CES
 LOGGED BY: M Pleva

LOG OF HA-6
 2220 Fourth Street
 Berkeley, California



DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVM/IPID (ppm)	LOCATION:	OTHER TESTS
						SURFACE EL: ft +/- (rel. datum)	
MATERIAL DESCRIPTION							
		1			0	Clayey SILT with Gravel (ML): very dense, brown, dry to moist, fine and coarse, sub-angular to sub-rounded, concrete, glass	
		2			0.5	refusal at 2 feet	
5							
10							

BORING DEPTH: 2.0 ft
 DEPTH TO WATER: Not Encountered

DRILLING METHOD: 3-in. dia. Hand Auger

COMPLETION DATE:
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLED BY: CES
 LOGGED BY: M Pleva

LOG OF HA-8
 2220 Fourth Street
 Berkeley, California



WELL SAMPLING FORM

PROJECT NAME: Former Peerless Lighting Facility 2220 Fourth Street
PROJECT NO.: 698.004
SAMPLED BY: Melissa L. Pleva
DATE: 8/29/06
WEATHER: overcast, 65°

WELL NO.: M-1
WELL CASING DIAMETER: 2
TOC ELEVATION:

TOTAL DEPTH OF CASING (BTC): 20 FEET
DEPTH TO GROUNDWATER (BTC): 12.15 FEET
FEET OF WATER IN WELL: 7.85 FEET
CALCULATED PURGE VOLUME: 3.8 gallons
FREE PRODUCT:
PURGE METHOD: bailer

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

Table with 8 columns: GALLONS REMOVED, TIME, Temp, pH, CONDUCTIVITY (µS/CM), TDS (g/L), ORP (mV), DO (mg/l), COMMENTS. Includes data for Downhole (Pre-Purge) samples at 1.5, 3.0, and 4.0 gallons removed.

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTC): 12.2' TIME SAMPLED: 1205

SAMPLING METHOD: Bailer

CONTAINERS / PRESERVATIVE: 40 ML (none), LITER (none), Poly, OTHER

ANALYSES: (Note if any samples are field filtered)
TEHd, TEHmo (8015 w/ Silica gel)
TVHg, BTEX, MTBE (8015/8020)
VOCs (8260)
HVOCs (8260)
Title 22 Metals (6010/9000)
Pesticides (8080)
PCBs (8080)
Sulfate (300.0)
Nitrate (300.0)
Fe 2+ - Field Filtered

MISC FIELD OBSERVATION:



WELL SAMPLING FORM

PROJECT NAME: Former Peerless Lighting Facility 2220 Fourth Street
 PROJECT NO.: 698.004
 SAMPLED BY: Mejissa L. Pleva
 DATE: 8/29/06
 WEATHER: Overcast, 60°

WELL NO.: M-2
 WELL CASING DIAMETER: 2"
 TOC ELEVATION: _____

TOTAL DEPTH OF CASING (BTCC): ~30 FEET
 DEPTH TO GROUNDWATER (BTCC): 11.91 FEET
 FEET OF WATER IN WELL: 18.09 FEET

CALCULATED PURGE VOLUME: 8.85 gallons
 (feet of water * casing dia² * .0408 * # of Volumes)
 FREE PRODUCT: none
 PURGE METHOD: bailer

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER _____

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	1448	17.1	9.36	841				
2.5	1452	17.2	8.22	867				water sudsy
6.0	1512	17.1	8.57	844				"
9.0	1623	17.0	8.70	843				"

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTCC): 11.85 TIME SAMPLED: 1206

SAMPLING METHOD: Bailer

CONTAINERS / PRESERVATIVE: none / 3 / none
 40 ML / LITER
Poly / OTHER

ANALYSES: (Note if any samples are field filtered)

- TEHd, ~~FEHmo~~ (8015 w/ Silica gel)
- TVHg, BTEX, MTBE (8015/8020)
- VOCs (8260)
- HVOCs (8260)
- Title 22 Metals (6010/9000)
- Pesticides (8080)
- PCBs (8080)
- Sulfate (300.0)
- Nitrate (300.0)
- Fe²⁺ - Field Filtered

pentachlorophenol
 chlordane

MISC FIELD OBSERVATION: _____



WELL SAMPLING FORM

PROJECT NAME: Former Peerless Lighting Facility 2220 Fourth Street
 PROJECT NO.: 698.004
 SAMPLED BY: Melissa L. Pleva
 DATE: 8/31/06
 WEATHER: Sunny, breezy, 70s

WELL NO.: 182 S-7
 WELL CASING DIAMETER: 21
 TOC ELEVATION: _____

TOTAL DEPTH OF CASING (BTOC): 16.1 FEET
 DEPTH TO GROUNDWATER (BTOC): 11.0 FEET
 FEET OF WATER IN WELL: 6.1 FEET

CALCULATED PURGE VOLUME: 0.74 gallons
 (feet of water * casing dia² * .0408 * # of Volumes)
 FREE PRODUCT: Shew
 PURGE METHOD: bailer

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER _____

FIELD MEASUREMENTS

Liters		TIME	Temp	pH	CONDUCTIVITY (µS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
GALLONS REMOVED	Downhole (Pre-Purge)								
0.25 L		1608	18.2	8.74	1323				turbid, gray, hydrocarbon odor single shew
0.50 L		1613	19.0	8.75	1332				

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): _____ TIME SAMPLED: _____

SAMPLING METHOD: Bailer

CONTAINERS / PRESERVATIVE: 40 ML / none LITER / none
Poly / OTHER

ANALYSES: (Note if any samples are field filtered)

_____ TEHd, TEHmo (8015 w/ Silica gel)	_____ Pesticides (8080)	_____
_____ TVHg, BTEX, MTBE (8015/8020)	_____ PCBs (8080)	_____
_____ VOCs (8260)	_____ Sulfate (300.0)	_____
_____ HVOCs (8260)	_____ Nitrate (300.0)	_____
_____ Title 22 Metals (6010/9000)	_____ Fe ²⁺ - Field Filtered	_____

MISC FIELD OBSERVATION: Purged dry @ 0.6 liters

Note: this well was initially found unprotected. no metal plate & no well cap on Monday Aug 27, 2006



WELL SAMPLING FORM

PROJECT NAME: Former Peerless Lighting Facility 2220 Fourth Street
PROJECT NO.: 698.004
SAMPLED BY: Melissa L. Pleva
DATE: 8/29/06
WEATHER: Overcast, 65°

WELL NO.: S-8
WELL CASING DIAMETER: 1"
TOC ELEVATION:

TOTAL DEPTH OF CASING (BTCC): 16.5 FEET
CALCULATED PURGE VOLUME: 0.5 gallons
DEPTH TO GROUNDWATER (BTCC): 11.95 FEET
FREE PRODUCT: none
FEET OF WATER IN WELL: 4.55 FEET
PURGE METHOD: bailer

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

Table with columns: GALLONS REMOVED, TIME, Temp, pH, CONDUCTIVITY (µS/CM), TDS (g/L), ORP (mV), DO (mg/l), COMMENTS. Includes handwritten entries for 0.1 gal and 0.2 gal samples.

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTCC): 12.28 TIME SAMPLED: 12:28

SAMPLING METHOD: Bailer

CONTAINERS / PRESERVATIVE: 40 ML none, LITER none, Poly, OTHER

- ANALYSES: (Note if any samples are field filtered)
TEHd, TEHmo (8015 w/ Silica gel)
TVHg, BTEX, MTBE (8015/8020)
VOCs (8260)
HVOcs (8260)
Title 22 Metals (6010/9000)
Pesticides (8080)
PCBs (8080)
Sulfate (300.0)
Nitrate (300.0)
Fe 2+ - Field Filtered

MISC FIELD OBSERVATION: purged dry @ 0.2 gallons



WELL SAMPLING FORM

PROJECT NAME: Former Peerless Lighting Facility 2220 Fourth Street
PROJECT NO.: 698.004
SAMPLED BY: Melissa L. Pleva
DATE: 8/31/06
WEATHER: Sunny, Driest 70°

WELL NO.: S-10
WELL CASING DIAMETER: 11
TOC ELEVATION:

TOTAL DEPTH OF CASING (BTOC): 14.25 FEET
DEPTH TO GROUNDWATER (BTOC): 11.5 FEET
FEET OF WATER IN WELL: 2.75 FEET

CALCULATED PURGE VOLUME: 0.33 gallons
FREE PRODUCT:
PURGE METHOD: bailer

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

Table with columns: Gallons Removed, TIME, Temp, pH, CONDUCTIVITY (µS/CM), TDS (g/L), ORP (mV), DO (mg/l), COMMENTS. Includes handwritten entry: 0.25 liters @ 1550, 180, 8.88, 1001.

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): TIME SAMPLED:

SAMPLING METHOD: Bailer

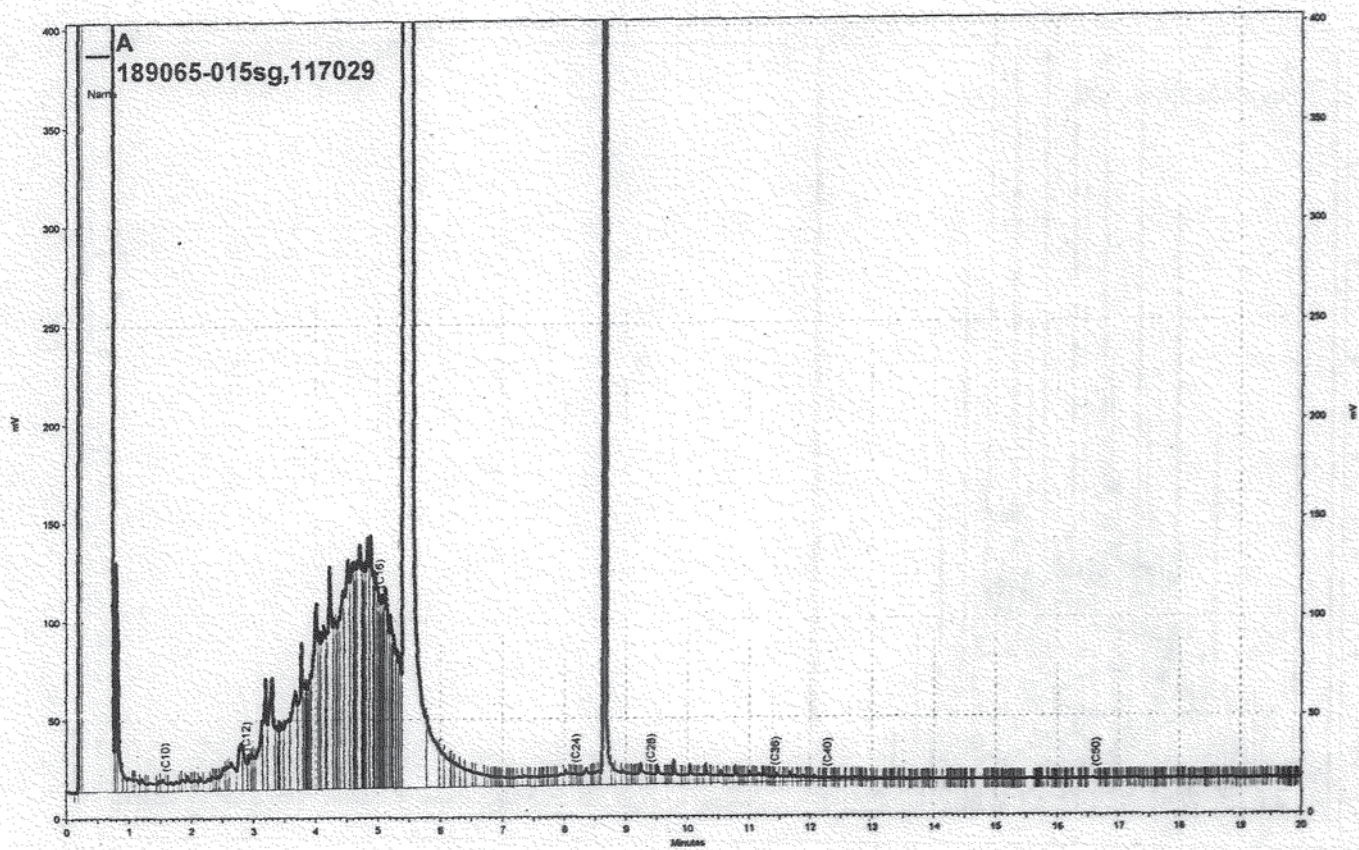
CONTAINERS / PRESERVATIVE: 40 ML, LITER, Poly, OTHER

- ANALYSES: (Note if any samples are field filtered)
TEHd, TEHmo (8015 w/ Silica gel)
TVHg, BTEX, MTBE (8015/8020)
VOCs (8260)
HVOCs (8260)
Title 22 Metals (6010/9000)
Pesticides (8080)
PCBs (8080)
Sulfate (300.0)
Nitrate (300.0)
Fe 2+ - Field Filtered

MISC FIELD OBSERVATION: Punged dry @ 0.25 liters

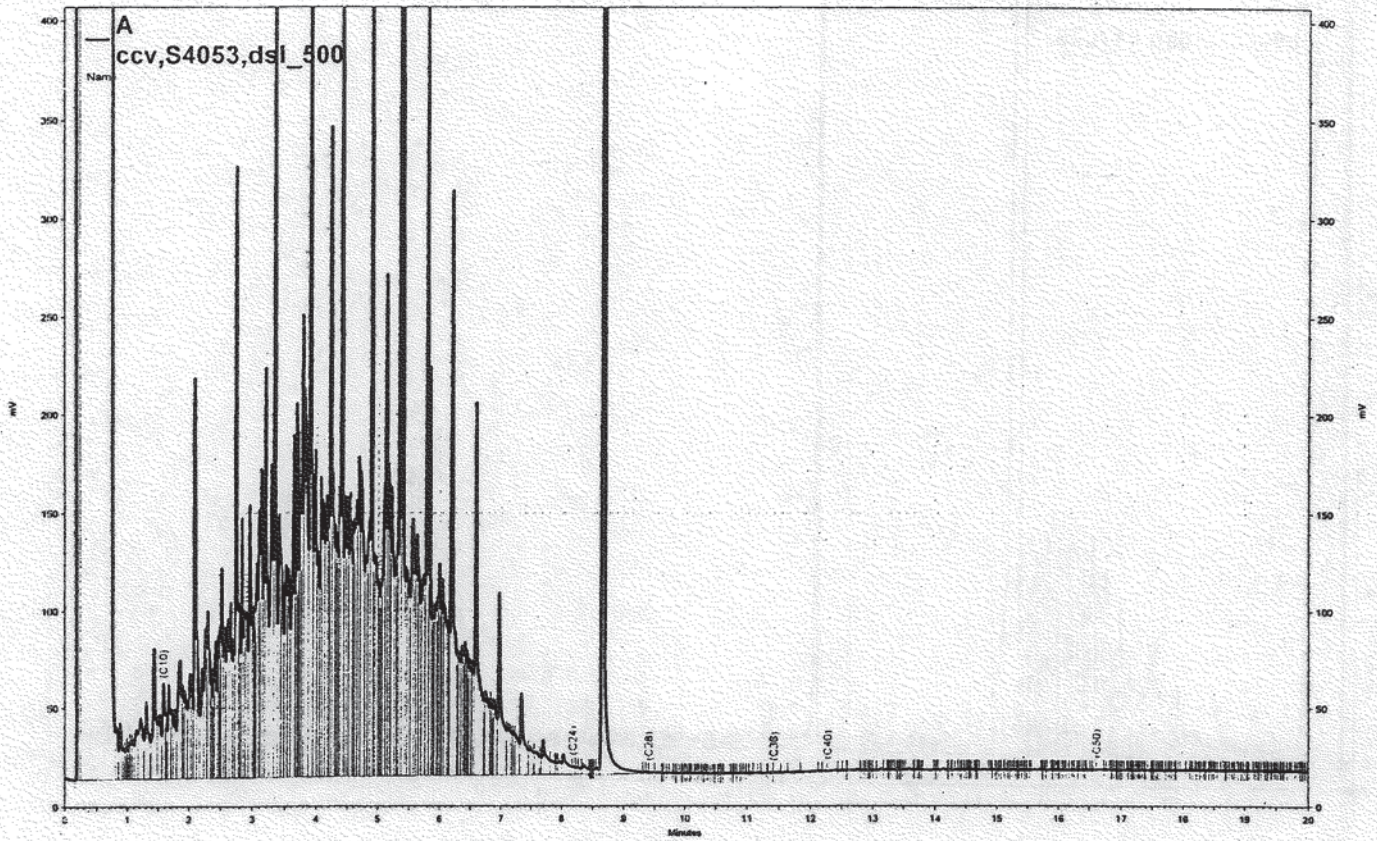
**APPENDIX D
CHEMICAL LABORATORY REPORTS AND
CHAIN-OF-CUSTODY DOCUMENTATION**





\\Lims\gdrive\ezchrom\Projects\GC11A\Data\248a025, A

M-2



\\Lims\gdrive\ezchrom\Projects\GC11A\Data\248a003, A

Diesel

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	189065	Location:	Frmr. Peerless Lighting 2220 4th St.
Client:	Fugro West Inc.	Prep:	EPA 3520C
Project#:	698.004	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	117029
Units:	ug/L	Prepared:	09/01/06
Diln Fac:	1.000	Analyzed:	09/05/06

Type:	BS	Cleanup Method:	EPA 3630C
Lab ID:	QC354464		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,912	76	61-133

Surrogate	%REC	Limits
Hexacosane	89	65-130

Type:	BSD	Cleanup Method:	EPA 3630C
Lab ID:	QC354465		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,736	69	61-133	10	31

Surrogate	%REC	Limits
Hexacosane	82	65-130

Total Extractable Hydrocarbons

Lab #:	189065	Location:	Frmr. Peerless Lighting 2220 4th St.
Client:	Fugro West Inc.	Prep:	SHAKER TABLE
Project#:	698.004	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	08/30/06

Field ID:	HA-1-1	Sampled:	08/29/06
Type:	SAMPLE	Prepared:	09/02/06
Lab ID:	189065-001	Analyzed:	09/05/06
Diln Fac:	1.000	Cleanup Method:	EPA 3630C
Batch#:	117050		

Analyte	Result	RL
Diesel C10-C24	98 H Y	0.99

Surrogate	%REC	Limits
Hexacosane	85	48-130

Field ID:	HA-1-2	Sampled:	08/29/06
Type:	SAMPLE	Prepared:	09/02/06
Lab ID:	189065-002	Analyzed:	09/05/06
Diln Fac:	1.000	Cleanup Method:	EPA 3630C
Batch#:	117050		

Analyte	Result	RL
Diesel C10-C24	6.3 H Y	1.0

Surrogate	%REC	Limits
Hexacosane	92	48-130

Field ID:	HA-1-3	Sampled:	08/29/06
Type:	SAMPLE	Prepared:	09/02/06
Lab ID:	189065-003	Analyzed:	09/05/06
Diln Fac:	1.000	Cleanup Method:	EPA 3630C
Batch#:	117050		

Analyte	Result	RL
Diesel C10-C24	ND	0.99

Surrogate	%REC	Limits
Hexacosane	85	48-130

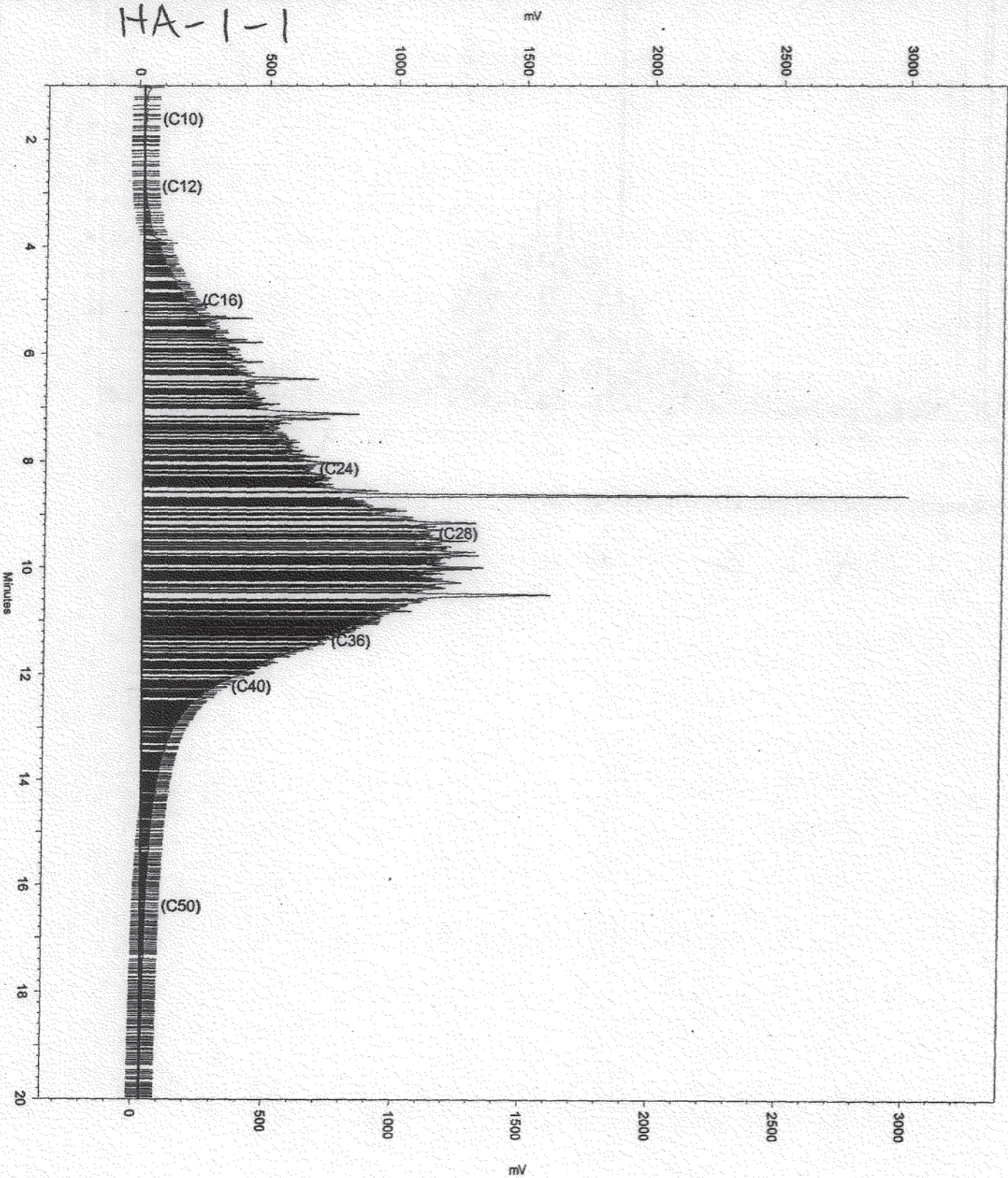
Field ID:	HA-2-1	Sampled:	08/29/06
Type:	SAMPLE	Prepared:	09/01/06
Lab ID:	189065-004	Analyzed:	09/06/06
Diln Fac:	10.00	Cleanup Method:	EPA 3630C
Batch#:	117017		

Analyte	Result	RL
Diesel C10-C24	61 H Y	10

Surrogate	%REC	Limits
Hexacosane	DO	48-130

H= Heavier hydrocarbons contributed to the quantitation
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Sample Name: 189065-001sg,117050
Data File: \\Lims\gdrive\ezchrom\Projects\GC17A\Data\248a022
Sequence File: \\Lims\gdrive\ezchrom\Projects\GC17A\Sequence\248.seq
Software Version 3.1.7
Method Name: \\Lims\gdrive\ezchrom\Projects\GC17A\Method\ateh244.met
Run Date: 9/5/2006 6:55:48 PM
Analysis Date: 9/6/2006 6:30:10 AM
Instrument: GC17A Vial: 22 Operator: Teh 3. Analyst (lims2k3\teh3)
Sample Amount: 1 Dilution Factor: 1 PDF: 1



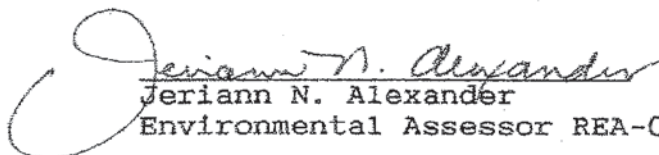
705 BANCROFT WAY
(SUBSURFACE CONSULTANTS, INC, 1992)

PRELIMINARY ENVIRONMENTAL
ASSESSMENT
705 BANCROFT WAY
BERKELEY, CALIFORNIA
SCI 698.001

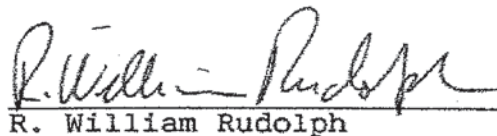
Prepared for:

Mr. Richard Kraber
Chief Operating Officer
Peerless Lighting Corporation
2246 Fifth Street
Berkeley, California 94702-0556

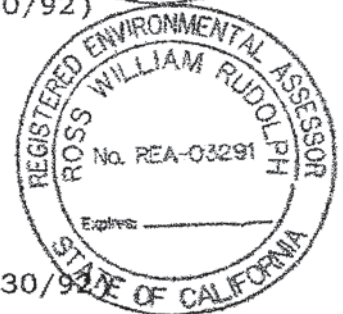
by:


Jeriann N. Alexander
Environmental Assessor REA-03130 (expires 6/30/92)




R. William Rudolph

Geotechnical Engineer 741 (expires 12/31/92)
Environmental Assessor REA-03291 (expires 06/30/92)



Subsurface Consultants, Inc.
171 - 12th Street, Suite 201
Oakland, California 94607
(415) 268-0461

January 6, 1992

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EXECUTIVE SUMMARY

The property at 705 Bancroft Way in Berkeley, California is currently owned and occupied by Delicor Inc., a vending machine sales and service company. In November 1991, Miller Environmental Company, Inc. (MEC) was retained by Delicor to perform a Phase I Assessment of the property for a real estate transaction. The assessment revealed that foundry activities had been performed at the site prior to Delicors' occupancy.

Peerless Lighting Corporation retained Subsurface Consultants, Inc. (SCI) to review MEC's assessment and perform additional research and studies as necessary to characterize environmental conditions existing at the site. SCI's assessment included (1) research of historical uses of the site and nearby properties, (2) performing a detailed site reconnaissance, (3) drilling and sampling 18 test borings, and (4) analyzing selected soil and groundwater samples for contaminants.

The results of SCI's assessment indicates that the site has been occupied by at least three different companies which conducted foundry type activities from the early 1920's to the late 1950's. Studies to date have confirmed the presence of foundry sand and debris overlying the north half of the property and along the western property line. The foundry sand and debris layer which varies in thickness from 1 to 3 feet, contains elevated concentrations of arsenic, chromium, copper, lead, zinc, and oil and grease. Elevated concentrations of oil and grease have also

been identified near previous air compressor locations. In addition, groundwater from a test boring situated near the northwest corner of the property contains significant concentration of petroleum hydrocarbons.

Groundwater in the area has been impacted at contiguous properties by trichlorethene (TCE), 1,1,1-trichloroethane (TCA) and pentachlorophenol (PCP). The TCE appears to be a regional problem and the TCA and PCP are believed to related to point source releases on the property to the north. These compounds were not detected in the grab groundwater sample obtained from the site.

As shown herein the property has several environmental conditions which should be remediated and/or mitigated. Based on the limited studies we have identified the following environmental concerns.

1. The layer of foundry sand and debris contains heavy metals exceeding hazardous waste criteria and hence will likely require remediation. While the layer is relatively thin, it is widespread as it extends beneath existing structures. The remediation method(s) employed should take into consideration the future use of the property and will likely require the existing structures to be removed.
2. The oil and grease contamination near the two previous compressor areas exist in concentrations which will likely require remediation. Although the contamination is believed to be relatively localized additional investigation should be performed to define the lateral and vertical extent.
3. Petroleum hydrocarbons exist in the groundwater beneath the site. The source of these contaminants is unknown. In addition, contamination sources are known to have impacted groundwater at adjacent sites. A groundwater investigation should be conducted to (1) evaluate the source of petroleum hydrocarbons, (2) assess the impacts of on-site contamination, and (3) evaluate water quality in the area.

1.0 INTRODUCTION

This report records the results of an environmental assessment conducted by Subsurface Consultants, Inc. (SCI) for the property at 705 Bancroft Way in Berkeley, California. The site occupies the southwest corner of the city block surrounded by Bancroft Way, Allston Way, Fourth Street and a Southern Pacific Railroad right-of-way as shown on the Site Plan, Plate 1.

Miller Environmental Company Inc. (MEC) was retained by the current property owner, Delicor Inc., to perform a Phase I assessment at the site. The purpose of the MEC assessment was to evaluate the potential of environmental contamination existing at the site. MEC's research revealed that foundry activities were performed at the site from the 1930's through the 1950's.

Peerless retained SCI to review MEC's report and perform additional research and studies as necessary to characterize environmental conditions which may exist. As outlined in the proposal dated November 6, 1991, the scope of services for SCI's assessment was to include the following phases:

Phase I - Historic Use Research

Research the historical use of the site and neighboring properties, conduct a detailed site reconnaissance and draw conclusions regarding the likelihood of on-site and off-site sources of contamination impacting the site.

Phase II - Sampling and Analytical Testing

Sample and analyze samples from test borings drilled in areas of environmental concern to check for contamination.

2.0 SITE CONDITIONS

2.1 Geology

The site is located on a broad alluvial plain bordered by the Berkeley Hills on the east and San Francisco Bay on the west. According to a geologic map by Radbruch¹, the site is underlain by the Temescal formation, an alluvial fan deposit comprised of inter-fingered lenses of clayey gravel, sandy silty clay, and sand-clay-silt mixtures. The 1856 bay shoreline, as shown by the U.S. Coast and Geodetic Survey², extended parallel to the west side of the current railroad right-of-way.

2.2 Surface Conditions

The relatively level, nearly rectangular site measures about 130 by 300 feet in plan and comprises just less than 1 acre. It is bordered by Bancroft Way to the south, a Southern Pacific Railroad right-a-way (formally Third Street) to the west and commercial/light industrial developments to the north and east. The site is currently occupied by the five structures shown on Plate 1. The buildings are currently used for office space, warehousing of food and machine parts, truck repair, vending machine repair, and truck parking.

¹ "Areal and Engineering Geology of the Oakland West Quadrangle, California", USGS Map I-239

² Unpublished U.S. Coast and Geodetic Survey planetable sheets, Numbers XXIV and XXV, U.S. Coast Survey, San Francisco Bay, California, 1856.

Adjacent to the south side of the cold food warehouse building is a steam cleaning station currently used by Delicor. Reportedly, vending machines and trucks are cleaned in the station. Water from the station is collected in a sump. It is unclear whether the sump discharges to the sanitary or storm water sewer.

A concrete pad was observed adjacent to the east side of the main warehouse. The pad is believed to be the foundation for a previous air compressor. Inside the warehouse are several air line ports.

A retaining wall extends along the west side of the property, with the adjacent neighboring ground surface about 3 to 4 feet lower than the subject property. The northern portion of the wall is composed of galvanized steel, the remaining wall consists of wood. The galvanized wall is badly corroded in an area approximately 110 feet south of the northwest corner of the property. Materials exposed in the corroded area appear to be foundry sands and wastes, and miscellaneous debris. The corroded area is shown on Plate 1.

3.0 SITE USAGE HISTORY

3.1 General

Our understanding of the past use of the site and neighboring parcels is based upon information obtained from the following sources:

1. Sanborn Fire Insurance maps,
2. Historical telephone directories,
3. Building plans and permits,
4. Phone interview with Mr. Fred Stadelhofer, a previous property owner,
5. Fire department records,
6. Historic Atlas Map of Alameda County,
7. Regulatory agency files, and
8. Aerial photographs³.

3.2 705 Bancroft Way

The site is situated in an area which has been developed since the late 1800's. Historic uses are graphically summarized on Plate 2 and described in the following paragraphs. Copies of pertinent reference materials are presented in Appendix B.

The Historic Atlas Map of Alameda County (Thompson & West, 1878) indicates that the property was originally part of the Berkeley L. T. I. Association Tract. The tract extended from

³ Pacific Aerial Surveys photographs reviewed are summarized in Appendix A.

Bancroft to beyond University to the north, and from the shoreline to about San Pablo Avenue to the east. The site in particular was bordered on the west by the Northern Railway right-of-way. The shoreline in 1878 was shown to be situated near the present eastern side of the Berkeley Aquatic Park.

The earliest information regarding past site uses was obtained from historic phone directories and Sanborn Fire Insurance Maps. The 1911 Sanborn map shows that the central portion of the site was occupied by the Century Mercantile Company and a Southern Pacific Railroad Depot was situated near the southwest corner of the site. Historic phone directories indicate that the mercantile was on-site from about 1908 through 1917.

In about 1925, the Oakland Furnace and Foundry Company occupied the subject property and the neighboring property to the east. A 1929 Sanborn map shows that the mercantile and depot structures were removed and two new buildings were constructed. The main new structure extended across the central portion of the properties and housed a foundry and a pattern storage area. The second structure was a small warehouse situated in the southwest corner of the subject property. The foundry, which apparently had an earthen floor was present on the subject property. It is unclear when Oakland Furnace and Foundry Company ceased operation. Based on aerial photograph review, structures present in 1947 were oriented in similar patterns as presented in the 1929 map.

In about 1949, Armco Drainage and Metal Products company occupied the property. The main Oakland Furnace and Foundry

structure was removed and a new foundry building was constructed across the northern 1/3 of the site. The foundry had an earthen floor. A dust collector and a compressor house were located just outside the south side of the structure. It appears that foundry patterns were stored in the small structure which had been a warehouse for the Oakland Furnace and Foundry Company. Another smaller storage building also existed just to the east of the pattern warehouse. Armco remained at the site through the 1950's.

Near the end of the 1950's the property was purchased by the Stadelhofer family of Berkeley. The Stadelhofer family used the site as income property through the 1970's. Reportedly, tenants used the property for newspaper storage, automobile restoration, pump repair, and printing. Improvements to the property made during the Stadelhofer ownership included surfacing the main structure (which had housed the Armco foundry) with concrete, constructing the current office, truck repair and cold storage warehouse buildings, and paving access ways.

In the late 1970's Coffee System Inc. (CSI), now known as Delicor, purchased the property from the Stadelhofer family. A 5000 gallon underground storage tank was installed at the site in 1984. The tank stored unleaded gasoline used to fuel CSI delivery trucks. The tank was permitted and it's installation was inspected by the Berkeley Fire Department. The tank was removed on September 26, 1991. Soil samples obtained from below the tank contained non-detectable concentrations of fuel constituents. Soil excavated from the tank area was disposed of at an appropriate landfill and

the excavation was backfilled with clean imported soil. The City of Berkeley has recommended site closure status for the tank area.

3.3 Surrounding Neighborhood

The surrounding neighborhood has been utilized by a mix of residential, commercial, retail and light industrial developments. According to Sanborn maps, and current observations, non-residential uses that have occurred within the area include an elevator company, iron works, nurseries, paint manufactures, a soap factory, warehouses , a creamery, and electric light manufacturing.

4.0 ENVIRONMENTAL CONCERNS

Based on a review of a Phase I Assessment performed by MEC and our own research during the Historic Use Research phase of our assessment several on-site and off-premises environmental concerns were revealed. These concerns are addressed in the following sections.

4.1 On-Site

Current and past uses of the site raise a number of environmental concerns. The concerns are summarized below.

1. Near surface soils in the areas of the previous foundries may contain heavy metals, petroleum hydrocarbons, oil and grease and solvents.
2. Soils near the existing and previous compressor pads may contain oil and grease.

An investigation program was developed to check for the existence and extent of soil contamination associated with the previous foundries. The program is described in more detail in Section 5.0.

4.2 Off-Premises

Based on a review of environmental cases compiled by the San Francisco Regional Water Quality Control Board (RWQCB), the California Department of Health Services (DHS) and the Federal Environmental Protection Agency (EPA), there are 16 documented environmental cases within about 2000 feet of the site. The addresses of these cases and their locations are shown on the Environmental Case Plan, Plate 3.

The site adjacent to the north has had documented releases requiring agency oversight. A brief summary of information contained in the agency file is described below.

747 Bancroft Way and 2220 Fourth Street

In 1983, Brown and Caldwell (B&C) performed an investigation to identify the presence or absence of priority pollutant pesticides in subsurface soils at the site. Elevated levels of aldrin, heptachlor, and chlordane were detected in the soil. IT Corporation removed contaminated soil and the area was backfilled with the approval of the DOHS. At the request of the RWQCB, a groundwater investigation was implemented by B&C. B&C installed four wells which they monitored from 1985 through 1987. Although no pesticides were detected in the water samples, various organic priority pollutants, including 1,2-Dichloroethane (DCA), trans-1,2-Dichloroethene (DCE), trichloroethene (TCE), pentachlorophenol (PCP), chloroform and chloroethane were detected.

In 1988, the Mark Group (MG) performed a groundwater investigation at the site. Six wells were sampled during the MG investigation. The same organic priority pollutants were detected as when B&C performed the investigation. MG concluded that the presence of TCE was representative of a regional problem. The presence of the other organics were attributed to local point source releases.

Documents also indicate that an empty, unused underground storage tank was removed from the 2220 Fourth Street property in

1987. Samples obtained below the tank contained total fuel hydrocarbons at or below the detection limit.

5.0 FIELD EXPLORATION

Based on the environmental concerns identified during this study, an investigation program was developed to preliminarily assess soil and groundwater quality. In general, subsurface conditions were investigated by drilling and sampling 18 test borings. Numerous soil samples were retained from the borings. In addition, a grab groundwater sample was obtained from within one of the borings. Boring locations are shown on Plate 1.

Test Borings B-2 thru B-4 and B-10 thru B-13 were drilled using 4.0-inch-diameter, trailer mounted, solid flight auger equipment. Due to limited access the remaining borings were drilled utilizing a portable "Minute Man" rig equipped with 3-inch-diameter solid flight augers. At the completion of drilling, all the borings except B-5, B-9 and B-14 were backfilled with cement grout and capped with either concrete or asphalt as appropriate to match existing conditions. These borings were also backfilled with cement grout and capped following collection of a grab groundwater sample from B-9 and groundwater depth data.

Our engineer observed drilling operations and prepared logs of the soils encountered. The Logs of Test Borings are presented on Plates 4 through 12. The soils are classified in accordance with the Unified Soil Classification System described on Plate 13. Undisturbed soil samples were obtained from the test borings at frequent intervals. The samples were retained in brass sample liners. Teflon sheets were placed over the liner ends prior to capping, taping and labeling. The samples were refrigerated until delivery to the analytical laboratory. The samples were accompanied by Chain-of-Custody forms, copies of which are presented in Appendix C. Drilling and sampling equipment was steam cleaned prior to each use. Soil cuttings generated during drilling and steam cleaning water were placed in DOT approved 55-gallon drums and left on site for later disposal by others.

Soil from each sampling interval were placed in plastic "Ziplock" bags and screened for organic vapors using an organic vapor meter (OVM-580A). No organic vapors were encountered in any of the samples.

6.0 SUBSURFACE CONDITIONS

6.1 Soil Conditions

Based upon the results of our field exploration, it appears that a majority of the site is blanketed by a thin layer of fill. The fill consists of fine-grained sand and miscellaneous debris. The sand contains varying quantities of gravel and rock fragments, and its' color varies from light brown to black. The debris consists of metal fragments, slag, wire, and glass. Given the history of the site and the consistency of the fill, we judge the fill is previous foundry sand and wastes.

The foundry fill, which appears to vary from 1 to 3 feet thick, is underlain by interbedded alluvial deposits of the Temescal Formation. The upper few feet of alluvium consists of silty clays. Medium dense clayey sands were encountered beneath the clays in some of the borings.

6.2 Groundwater Conditions

Test borings B-5, B-9 and B-14 were left open after drilling to check the depth to groundwater. Two days after drilling, groundwater had risen to a depth of about 11 feet below the groundsurface in boring B-9. Boring B-14 was moist at the bottom one day after drilling and boring B-5 was dry two days after drilling. Based on data generated by others at adjacent properties, groundwater appeared to be stabilized at a depth of about 11 feet in 1988. The reported groundwater gradient was toward the north-north west.

A hydrocarbon odor was observed while obtaining the grab groundwater sample from boring B-9. However no free product nor sheen was noted on the sample.

7.0 ANALYTICAL TESTING

Selected soil samples and a grab groundwater sample were analyzed by Curtis & Tompkins, LTD, a State of California Department of Health Services (DHS) certified analytical laboratory for the tests performed. The analytical test reports are presented in Appendix C. The analytical test results are summarized in Tables 1 and 2.

The testing program implemented during the assessment included screening selected samples for total petroleum hydrocarbons, total oil and grease, total metals, and semi-volatile and volatile organics. Specific test methods utilized are summarized below.

1. Total petroleum hydrocarbons, as diesel (TPH), sample preparation and analysis using EPA methods 3550 (sonication) and 8015 (modified, gas chromatograph coupled to a flame ionization detector), and
2. Purgeable Aromatic Hydrocarbons, sample preparation and analysis using EPA methods 5030 and 8020 (gas chromatograph coupled to a flame ionization detector).
3. Purgeable halocarbons, sample preparation and analysis using EPA methods 5030 and 8010 (gas chromatograph and electrolytic conductivity detector),
4. Semi-volatile organics and PCB's, sample preparation and analysis using EPA methods 3550 and 8270 (gas chromatograph with mass spectroscope).
5. Total and soluble metals, analysis using EPA methods, and

6. Total oil and grease, analysis using SMWW17:5520.

Based on the results of the initial analyses, it became apparent that some of the samples obtained elevated concentration of several heavy metals including arsenic, copper, lead, silver, and zinc. Selected samples were subsequently analyzed for soluble metal concentrations.

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 General

Based upon the results of this investigation, we conclude that there are several on-site environmental concerns that will require further study and subsequent remediation. These concerns include (1) foundry wastes containing heavy metals exceeding hazardous waste concentrations, (2) oil and grease contamination in excess of regulatory limits near previous compressors, and (3) petroleum hydrocarbon contamination in groundwater beneath the site. Our findings regarding these concerns are addressed in the following sections.

8.2 Foundry Wastes

Foundry wastes blanket the north and western portions of the site. These materials contain widely varying concentrations of heavy metals as well as oil and grease. Concentrations of arsenic, copper, lead and zinc within these materials are well above those detected in apparently uncontaminated on-site samples. In addition, numerous samples exceed California hazardous wastes

criteria. Highlighted in Table 1 are samples which exceed either the Total Threshold Limit Concentration (TTLC) or the Soluble Threshold Limit Concentration (STLC) criteria as defined in the CAC Title 26. It appears that the most prevalent contaminant exceeding regulatory criteria is soluble lead.

8.3 Compressor Areas

8.3.1 Oil and Grease

Shallow soil samples from Borings B-5, B-6 and B-13 which were situated near previous air compressor locations contained concentrations of 660, 1100 and 12,000 parts per million (ppm) of hydrocarbon oil and grease, respectively. Regulatory guidelines for hydrocarbon contamination require remediation of concentrations in excess of 1000 ppm. Where concentrations over 100 ppm exist, a groundwater investigation is required. Depending on the results of the groundwater investigation and the risk of future groundwater impacts, hydrocarbon clean up levels significantly less than 1000 ppm may be required. At this time, the extent of hydrocarbon contamination is not defined.

8.3.2 Lead

The shallow soil sample from boring B-5 situated adjacent to the existing compressor pad contained total lead in excess of lead's TTLC hazardous waste criteria. The extent of lead contamination in this area is unknown.

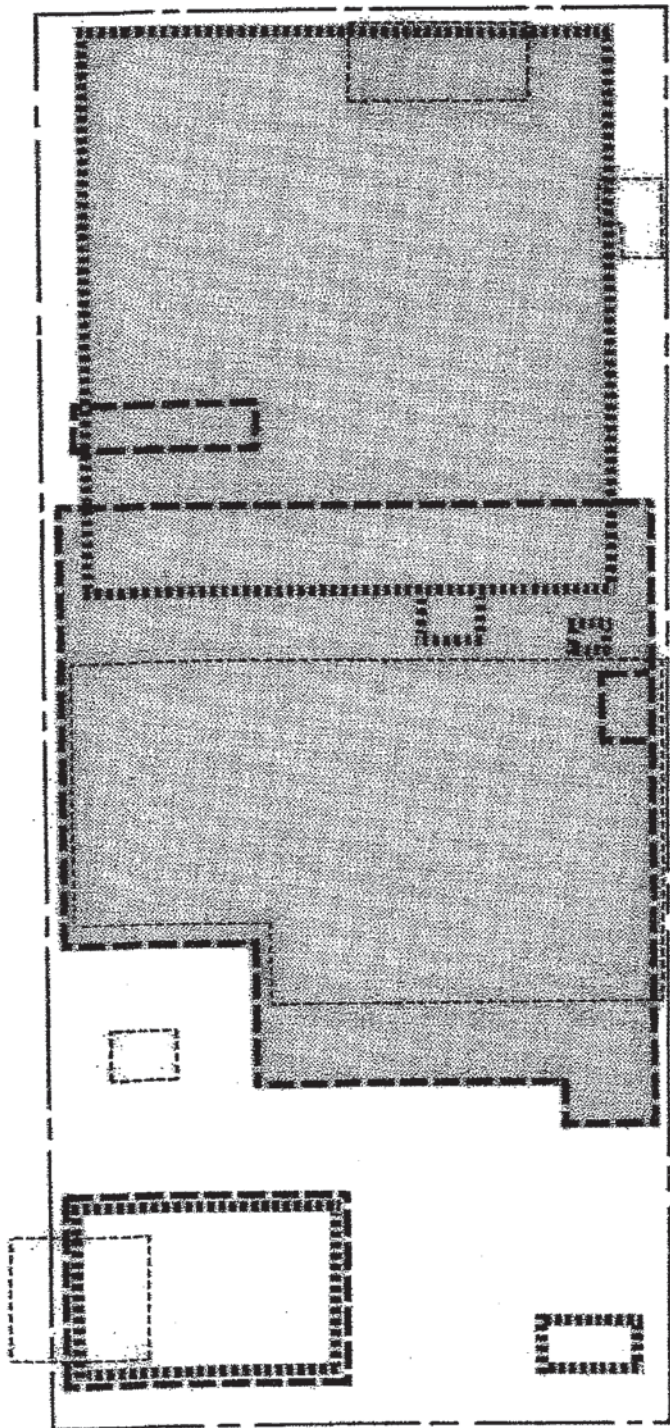
8.4 Groundwater Contamination

8.4.1 On-Site Contamination

The results of the analysis of the grab groundwater sample indicate that significant concentrations of gasoline, diesel and toluene exist in groundwater beneath the previous Armco Foundry area. To date, the source and/or extent of groundwater contamination is unknown. Review of the groundwater data from adjacent sites does not indicate a significant currently identified off-site source. Hence, we conclude that an on-site source of groundwater contamination, which has not been identified by the limited studies to date, could exist. Additional investigation is required to assess the groundwater contamination issues.

8.4.2 Off-Site Contamination

Several significant off-site contaminant sources were identified during our investigation. The impact of these sources on groundwater quality at the site should be evaluated during future groundwater studies.



- 1911
CENTURY MERCANTILE COMPANY
- . - . - . 1929
OAKLAND FURNACE AND FOUNDRY
- 1949
ARMCO
- PREVIOUS FOUNDRY OPERATIONS

BANCROFT WAY

HISTORIC USES SITE PLAN

705 BANCROFT WAY - BERKELEY, CA

PLATE

Subsurface Consultants

JOB NUMBER
698.001

DATE
12/19/91

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[Signature]

2

9.0 LIMITATIONS

This study was intended to provide a preliminary means of evaluating the risk of soil and groundwater contamination, based upon the previous known uses of the site, limited subsurface investigation and analytical testing. If areas of contamination exist on other portions of the property, away from the areas investigated, it is probable that they would not have been detected by the analyses. In addition, if chemicals that were not tested for exist at the site, they would not have been detected during this study.

List of Attached Plates:

Plate 1 - Site Plan
Plate 2 - Environmental Case Plan
Plate 3 - Historic Use Site Plan
Plates 4 through 12 - Logs of Test Borings
Plate 13 - Unified Soil Classification System

Appendix:

Appendix A Aerial Photograph Review List
Appendix B Reference Material
Appendix C Analytical Test Reports
Chain-of-Custody Forms

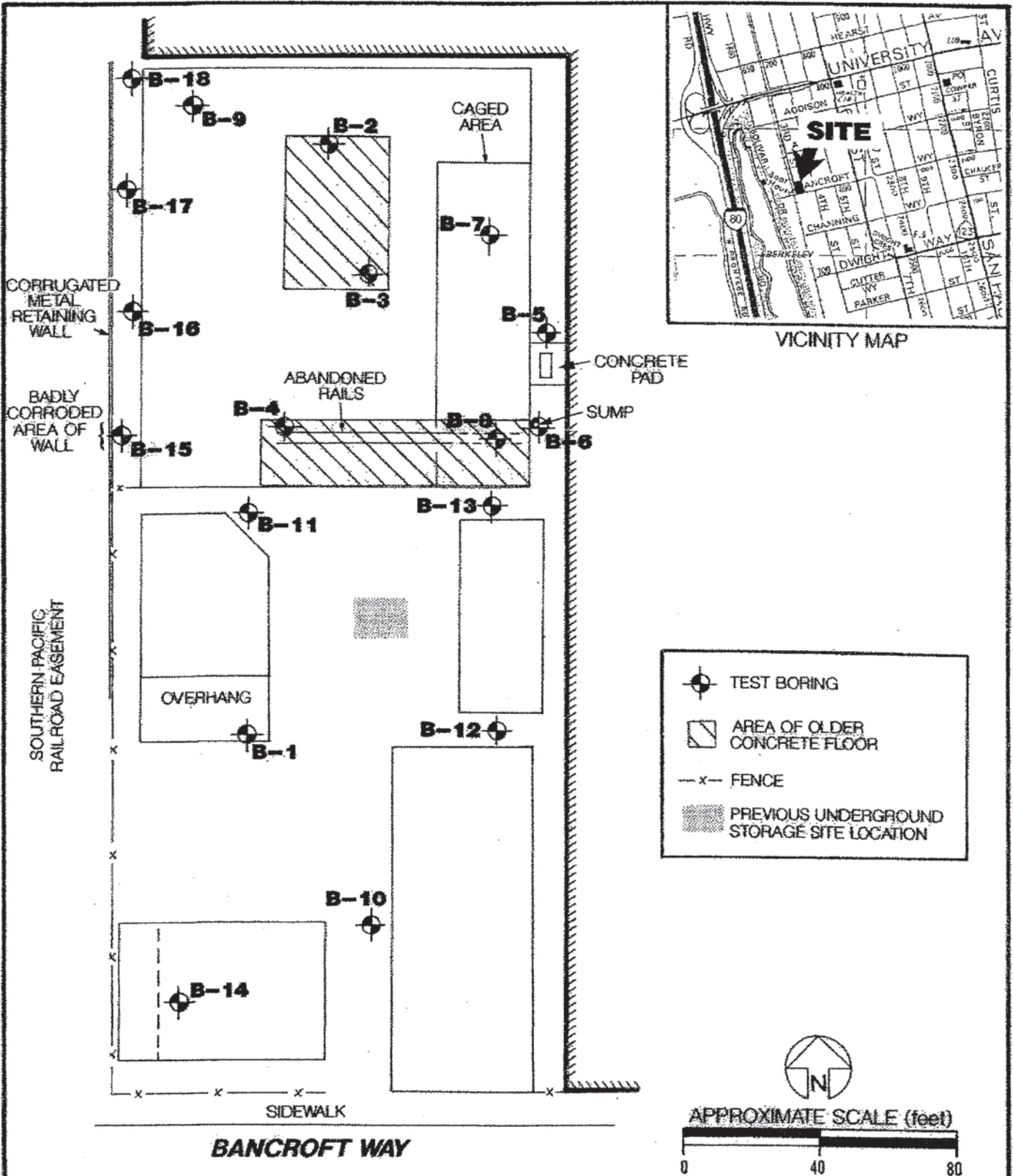
List of Tables:

Table 1 Contaminants In Soil
Table 2 Contaminants in Grab Groundwater Sample

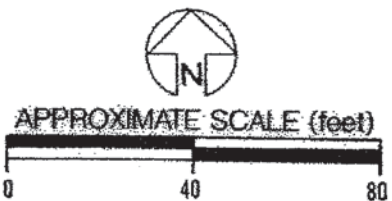
Distribution:

5 copies: Mr. Richard Kraber
Chief Operating Officer
Peerless Lighting Corporation
2246 Fifth Street
Berkeley, California 94702-0556

JNA:RWR:JPB:ddh



- TEST BORING
- AREA OF OLDER CONCRETE FLOOR
- FENCE
- PREVIOUS UNDERGROUND STORAGE SITE LOCATION

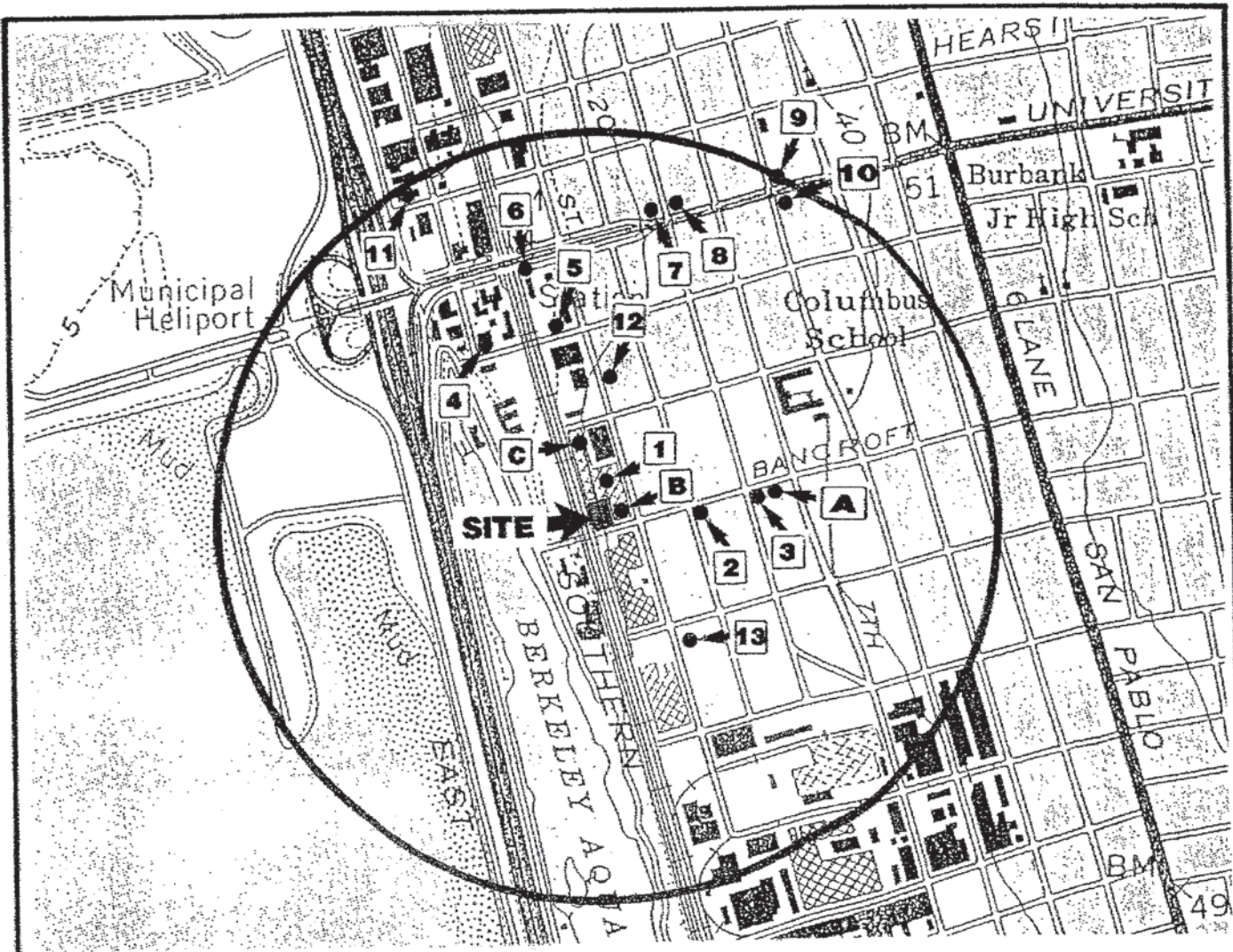


SITE PLAN

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705 BANCROFT WAY -- BERKELEY, CA
 JOB NUMBER 698.001 DATE 12/5/91 APPROVED

PLATE
1



RWQCB FUEL LEAK SITES

- 1 - PEERLESS LIGHTING
2220 4th Street
- 2 - BERKELEY PUMP
Bancroft Way at 5th Street
- 3 - TRANSAMERICA DELAVAL
829 Bancroft Way
- 4 - BLOCK PROPERTY
651 Addison Street
- 5 - NUMANO SAKE
708 Addison Street
- 6 - BERKELEY WAREHOUSE'S DRAVAGE
636 University Avenue
- 7 - TEXACO
833 University Avenue
- 8 - UNOCAL
849 University Avenue

- 9 - UNIVERSITY ASSOCIATES
901-921 University Avenue
- 10 - SUPER-7
950 University Avenue
- 11 - DE CANION IMPORT TILE
611 Hearst Avenue
- 12 - SIERRA DESIGN
2039 4th Street
- 13 - TRUST SECURITY MANAGEMENT
2321 4th Street

RWQCB TOXIC CASE SITES

- A - IMO DELAVAL BERKELEY
MACHINE SHOP
827 Bancroft Way
- B - PEERLESS ELECTRIC COMPANY
747 Bancroft Way
- C - TRIANGLE PAINT FACTORY
2222 Third Street

ENVIRONMENTAL CASE PLAN

705 BANCROFT WAY - BERKELEY, CA

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DATE
12/18/91

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PLATE

3

LOG OF TEST BORING B-1

EQUIPMENT 3" Solid Flight Auger

DATE DRILLED 11/25/91

ELEVATION --

LABORATORY TESTS

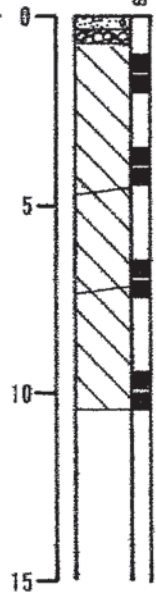
MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



CONCRETE SLAB - 5" thick
 BASE ROCK
 DARK GRAY SILTY CLAY (CL)
 medium stiff, moist, with some
 glass and metal fragments
 GRAY BROWN SILTY CLAY (CL)
 medium stiff, moist, with
 abundant calcite
 BROWN SILTY CLAY (CL)
 stiff, moist, with some small
 rock fragments and sand pockets

GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING

Boring backfilled with cement

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

HAMMER WEIGHT: 140 pounds
 HAMMER DROP: 30 inches

LOG OF TEST BORING B-2

EQUIPMENT 4" Solid Flight Auger

DATE DRILLED 11/25/91

ELEVATION --

LABORATORY TESTS

MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



CONCRETE SLAB - 4" thick
 BLACK SILTY SAND (SM)
 loose, moist, with glass and
 metal fragments
 6 inch layer of red clayey sand
 GRAY BROWN SILTY CLAY (CL)
 soft, moist

GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING

Boring backfilled with cement

HAMMER WEIGHT: 140 pounds
 HAMMER DROP: 30 inches

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JOB NUMBER
698.001

DATE
12/18/91

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PLATE

4

LOG OF TEST BORING B-3

EQUIPMENT 4" Solid Flight Auger
 DATE DRILLED 11/25/91

LABORATORY TESTS

MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT

ELEVATION --



CONCRETE SLAB - 5" thick
 DARK BROWN CLAYEY SAND (SC)
 Toose, moist, with metal and
 glass fragments
 9
 10
 DARK GRAY SILTY CLAY (CL)
 medium stiff, moist, with some
 rock fragments
 36
 BROWN SILTY CLAY (CL)
 stiff, moist, with some sand
 GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING
 Boring backfilled with cement

HAMMER WEIGHT: 140 pounds
 HAMMER DROP: 30 inches

LOG OF TEST BORING B-4

EQUIPMENT 4" Solid Flight Auger
 DATE DRILLED 11/25/91

LABORATORY TESTS

MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT

ELEVATION --



CONCRETE SLAB - 5" thick
 BLACK SILTY SAND (SP)
 medium dense, moist
 14
 11
 DARK GRAY SILTY CLAY (CL)
 medium stiff, moist
 GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING
 Boring backfilled with cement

HAMMER WEIGHT: 140 pounds
 HAMMER DROP: 30 inches

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705 BANCROFT WAY - BERKELEY, CA

PLATE

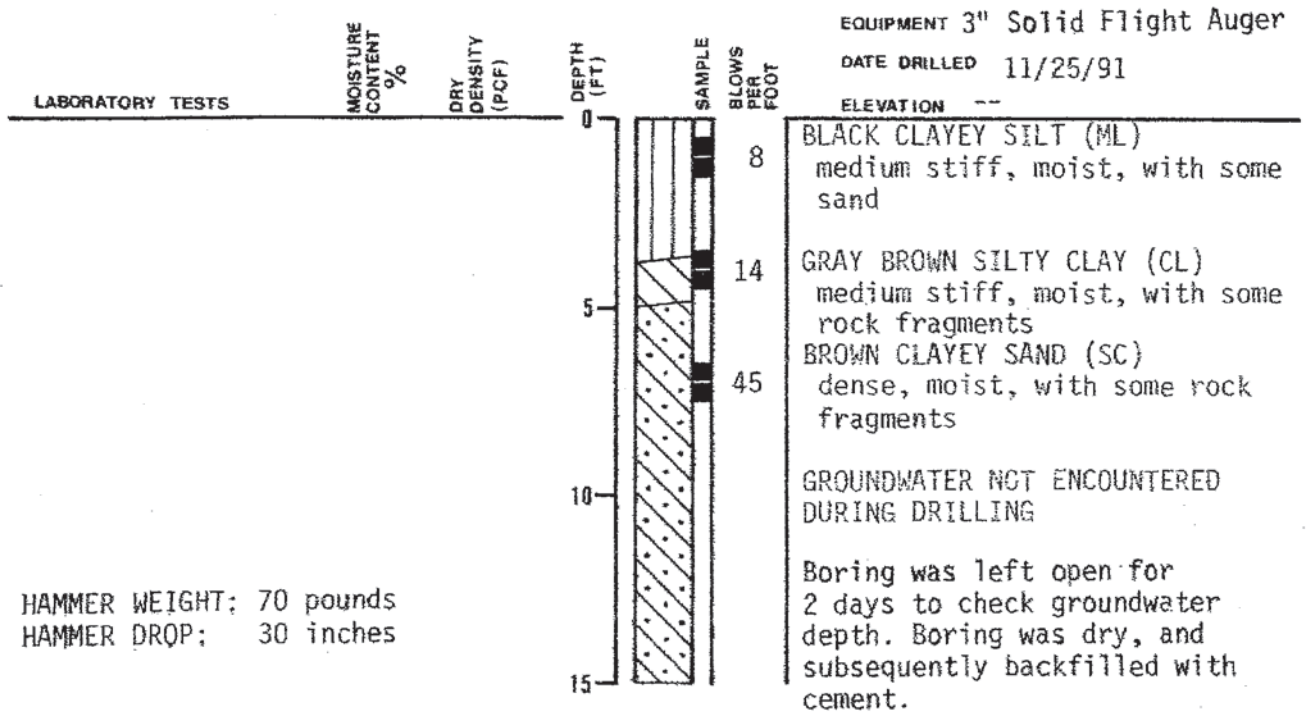
JOB NUMBER
698.001

DATE
12/18/91

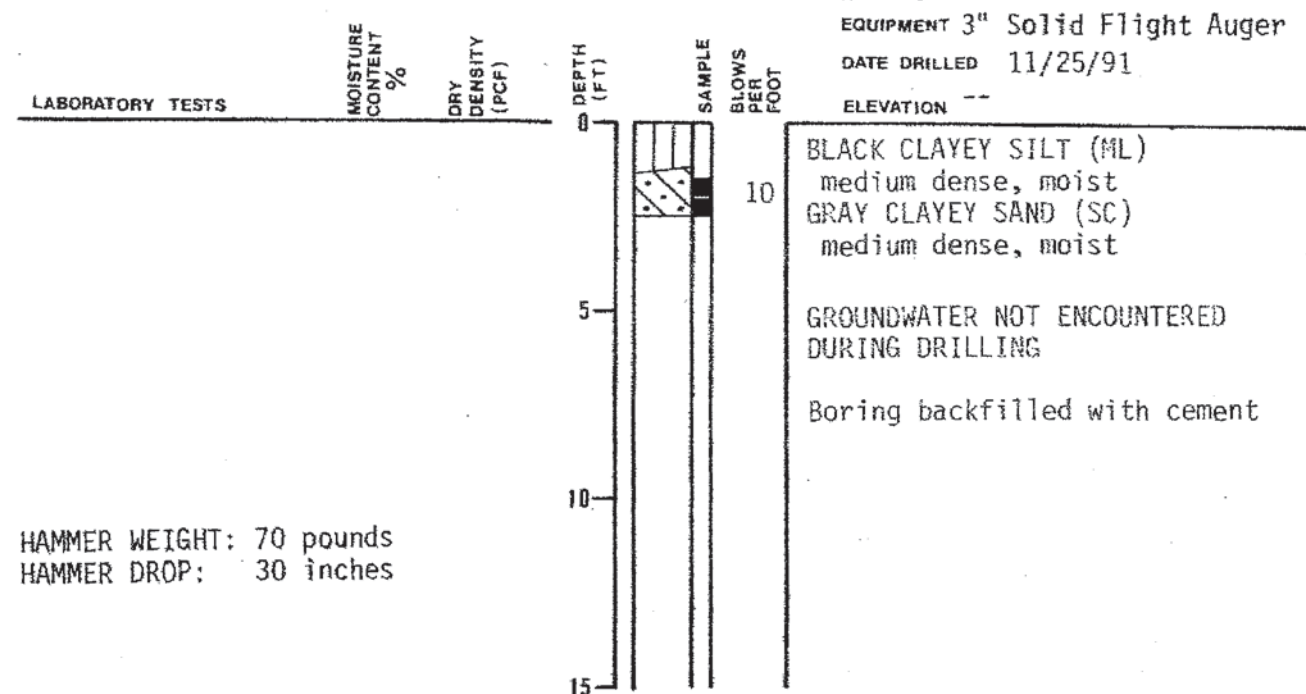
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5

LOG OF TEST BORING B-5



LOG OF TEST BORING B-6



LOG OF TEST BORING B-7

EQUIPMENT 3" Solid Flight Auger

DATE DRILLED 11/25/91

ELEVATION --

LABORATORY TESTS

MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



CONCRETE SLAB - 5" thick
 BLACK SILTY SAND (SM)
 loose, moist, with metal and
 glass fragments
 25
 GRAY BROWN SILTY CLAY (CL)
 medium stiff, moist
 BROWN SILTY CLAY (CL)
 stiff, moist, with some sand and
 rock fragments

GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING

Boring backfilled with cement

HAMMER WEIGHT: 70 pounds
 HAMMER DROP: 30 inches

LOG OF TEST BORING B-8

EQUIPMENT 3" Solid Flight Auger

DATE DRILLED 11/25/91

ELEVATION --

LABORATORY TESTS

MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



CONCRETE SLAB - 5 1/2" thick
 CONCRETE SLAB - 5 1/2" thick
 BLACK SILTY SAND (SM)
 loose, moist, with metal and
 glass fragments
 16
 DARK GRAY SILTY CLAY (CL).
 medium stiff, moist

GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING

Boring backfilled with cement

HAMMER WEIGHT: 70 pounds
 HAMMER DROP: 30 inches

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PLATE

JOB NUMBER
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DATE
12/18/91

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LOG OF TEST BORING B-9

EQUIPMENT 3" Solid Flight Auger

DATE DRILLED 11/25/91

ELEVATION --

LABORATORY TESTS

MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



CONCRETE SLAB - 6" thick
BLACK SILTY SAND (SM)
Loose, moist
GRAY SILTY CLAY (CL)
medium stiff, moist
BROWN SILTY CLAY (CL)
stiff, moist, with some rocks

GROUNDWATER LEVEL 11/27/91
BROWN CLAYEY SAND (SC)
dense, moist

GROUNDWATER NOT ENCOUNTERED
DURING DRILLING

HAMMER WEIGHT: 70 pounds
HAMMER DROP: 30 inches

Boring backfilled with cement
after allowing to stabilize

LOG OF TEST BORING B-10

EQUIPMENT 4" Solid Flight Auger

DATE DRILLED 11/26/91

ELEVATION --

LABORATORY TESTS

MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



CONCRETE SLAB - 6" thick
BASE ROCK
DARK GRAY SILTY CLAY (CL)
medium stiff, moist, with some
small rocks
LIGHT GRAY BROWN SILTY CLAY (CL)
stiff, moist, with calcite

GROUNDWATER NOT ENCOUNTERED
DURING DRILLING

Boring backfilled with cement

HAMMER WEIGHT: 140 pounds
HAMMER DROP: 30 inches

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705 BANCROFT WAY - BERKELEY, CA

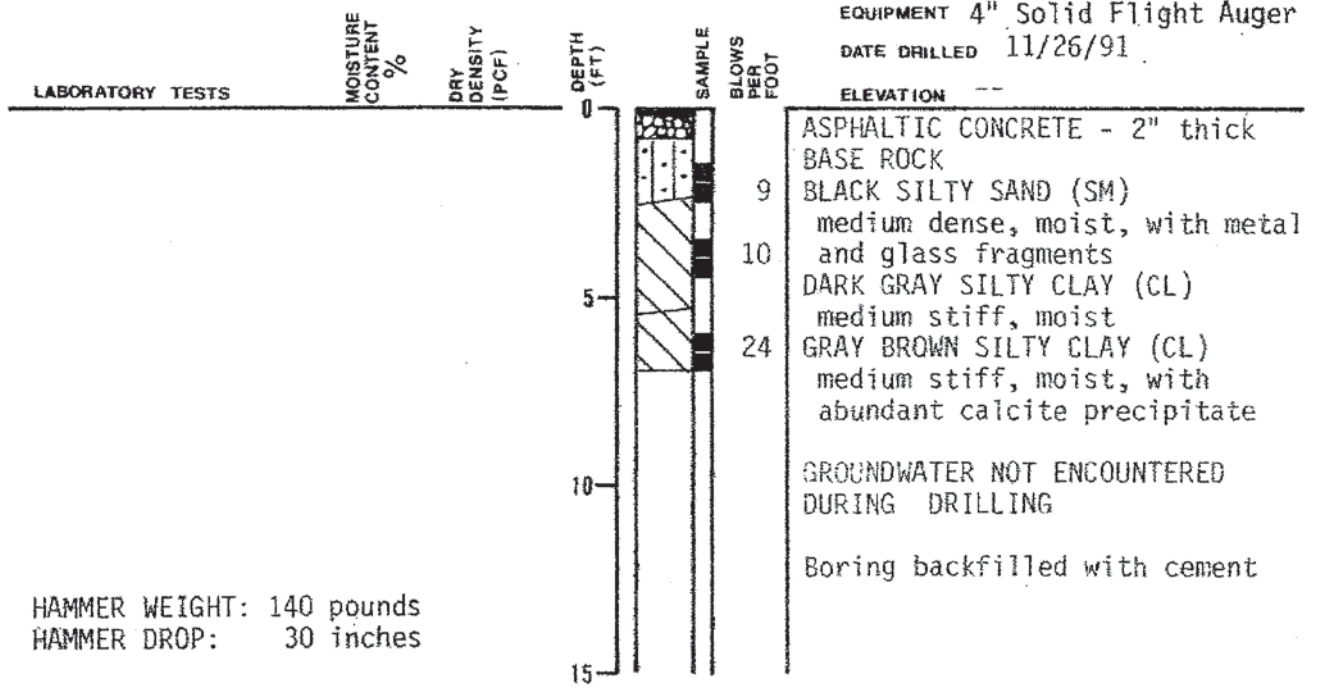
JOB NUMBER
698.001

DATE
12/18/91

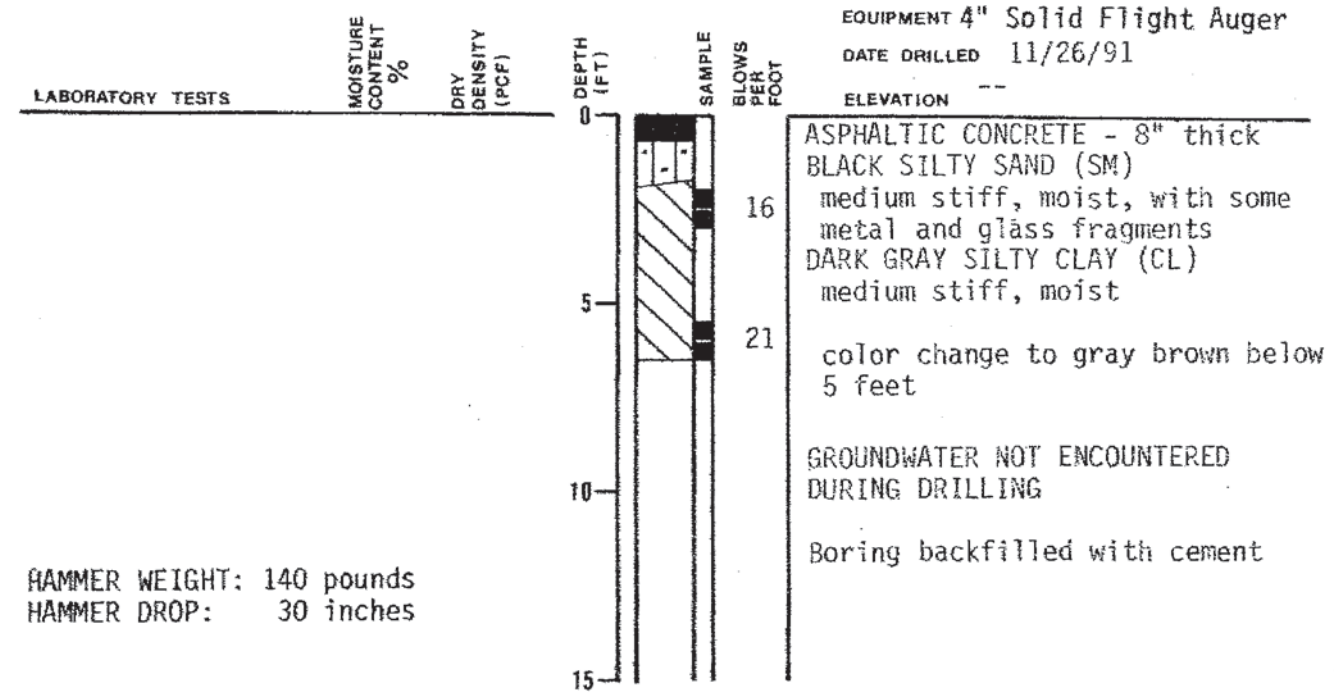
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PLATE
8

LOG OF TEST BORING B-11



LOG OF TEST BORING B-12



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PLATE

JOB NUMBER
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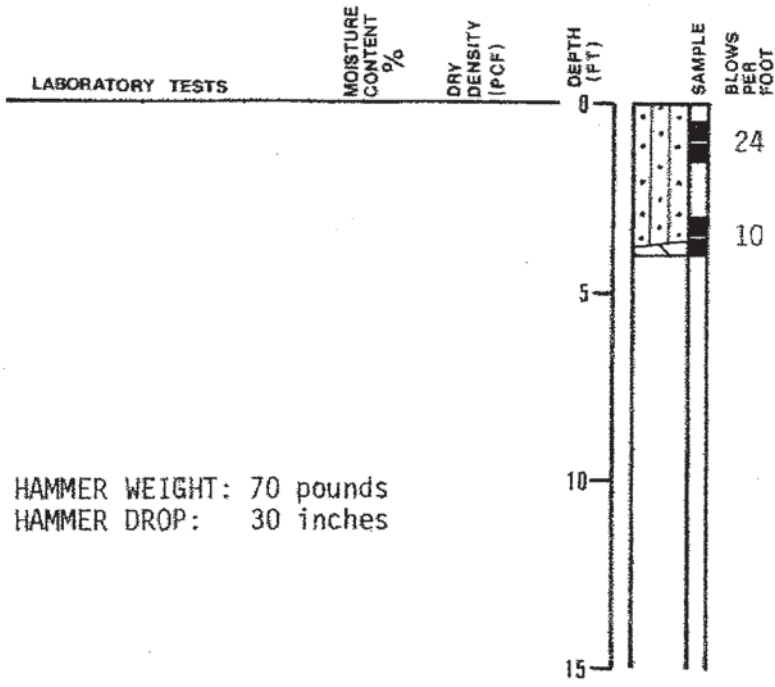
DATE
12/18/91

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9

LOG OF TEST BORING B-15

EQUIPMENT 3" Solid Flight Auger
 DATE DRILLED 11/26/91



ELEVATION --

24 MOTTLED BLACK AND BROWN SILTY SAND (SM)
 medium dense, moist, with some rock and metal fragments (fill)

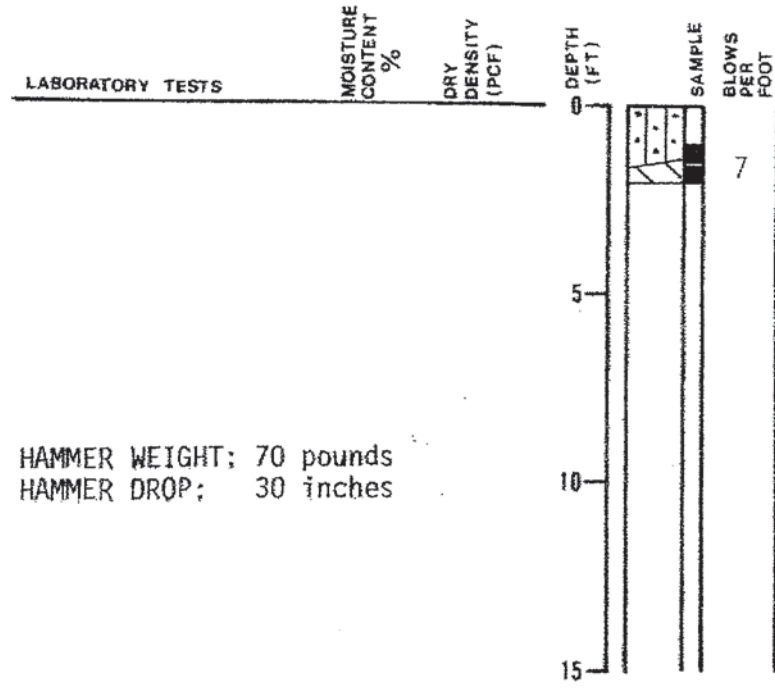
10 DARK GRAY SILTY CLAY (CL)
 medium stiff, moist

GROUNDWATER NOT ENCOUNTERED DURING DRILLING

Boring backfilled with cement

LOG OF TEST BORING B-16

EQUIPMENT 3" Solid Flight Auger
 DATE DRILLED 11/26/91



ELEVATION --

7 BLACK SILTY SAND (SM)
 loose, moist, with metal fragments

MOTTLED GRAY BROWN SILTY CLAY (CL)
 soft, moist

GROUNDWATER NOT ENCOUNTERED DURING DRILLING

Boring backfilled with cement

LOG OF TEST BORING B-13

EQUIPMENT 4" Solid Flight Auger
 DATE DRILLED 11/26/91
 ELEVATION --

LABORATORY TESTS

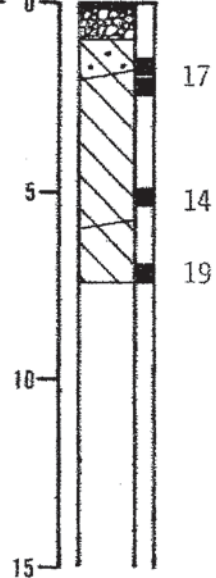
MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



ASPHALTIC CONCRETE - 2" thick
 BASE ROCK
 17 BLACK CLAYEY SAND (SC)
 medium dense, moist
 14 DARK GRAY SILTY CLAY (CL)
 medium stiff, moist, with some
 small rocks
 19 BROWN SILTY CLAY (CL)
 medium stiff, moist

 GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING

 Boring backfilled with cement

HAMMER WEIGHT: 140 pounds
 HAMMER DROP: 30 inches

LOG OF TEST BORING B-14

EQUIPMENT 3" Solid Flight Auger
 DATE DRILLED 11/26/91
 ELEVATION --

LABORATORY TESTS

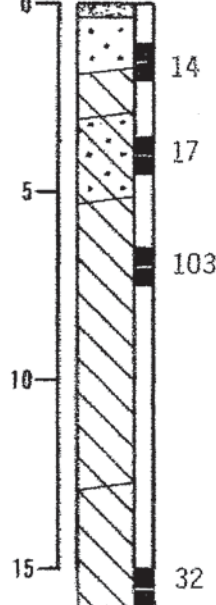
MOISTURE
CONTENT
%

DRY
DENSITY
(PCF)

DEPTH
(FT)

SAMPLE

BLOWS
PER
FOOT



CONCRETE SLAB - 4" thick
 BLACK AND BROWN SAND (SP)
 14 loose, moist
 17 DARK GRAY SILTY CLAY (CL)
 stiff, moist
 BLACK CLAYEY SAND (SC)

 103 BROWN SILTY CLAY (CL)
 very stiff, moist, with some
 sand and small rocks

 RED BROWN SILTY CLAY (CL)
 medium stiff, moist
 GROUNDWATER NOT ENCOUNTERED
 DURING DRILLING (nor 2 days later)

HAMMER WEIGHT: 70 pounds
 HAMMER DROP: 30 inches

Boring backfilled with
 cement.

Subsurface Consultants

705 BANCROFT WAY - BERKELEY, CA

PLATE

JOB NUMBER

DATE

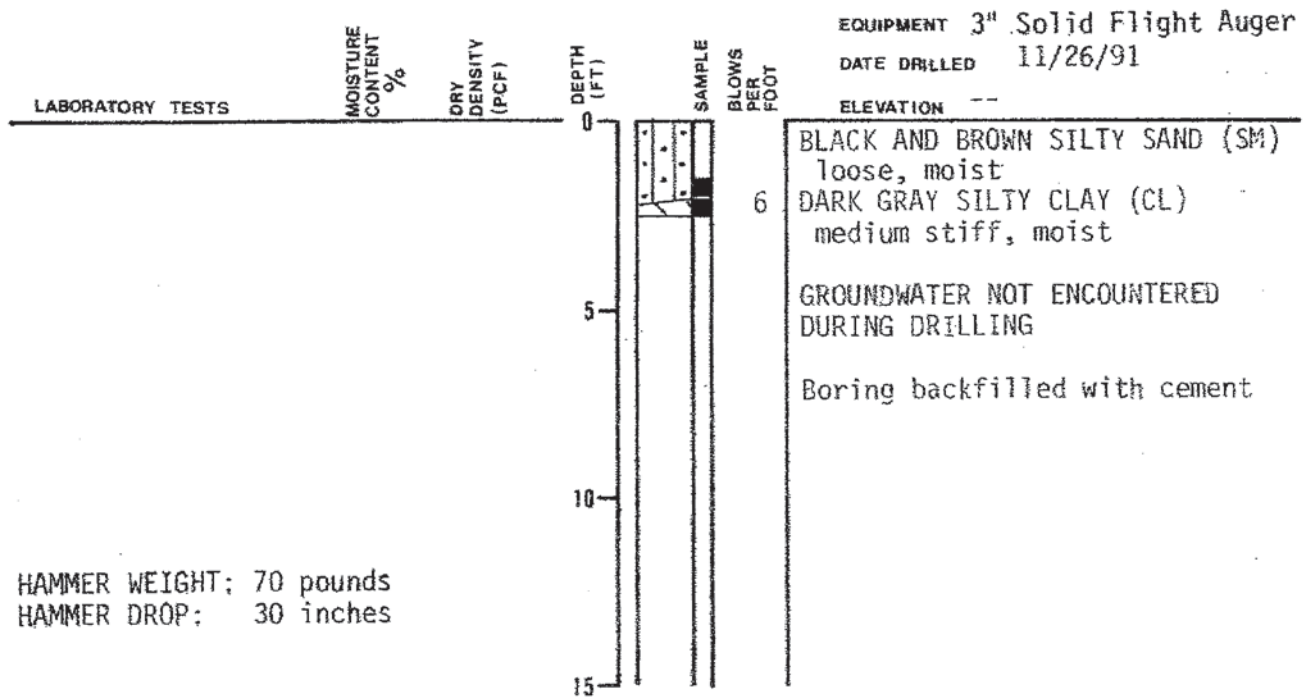
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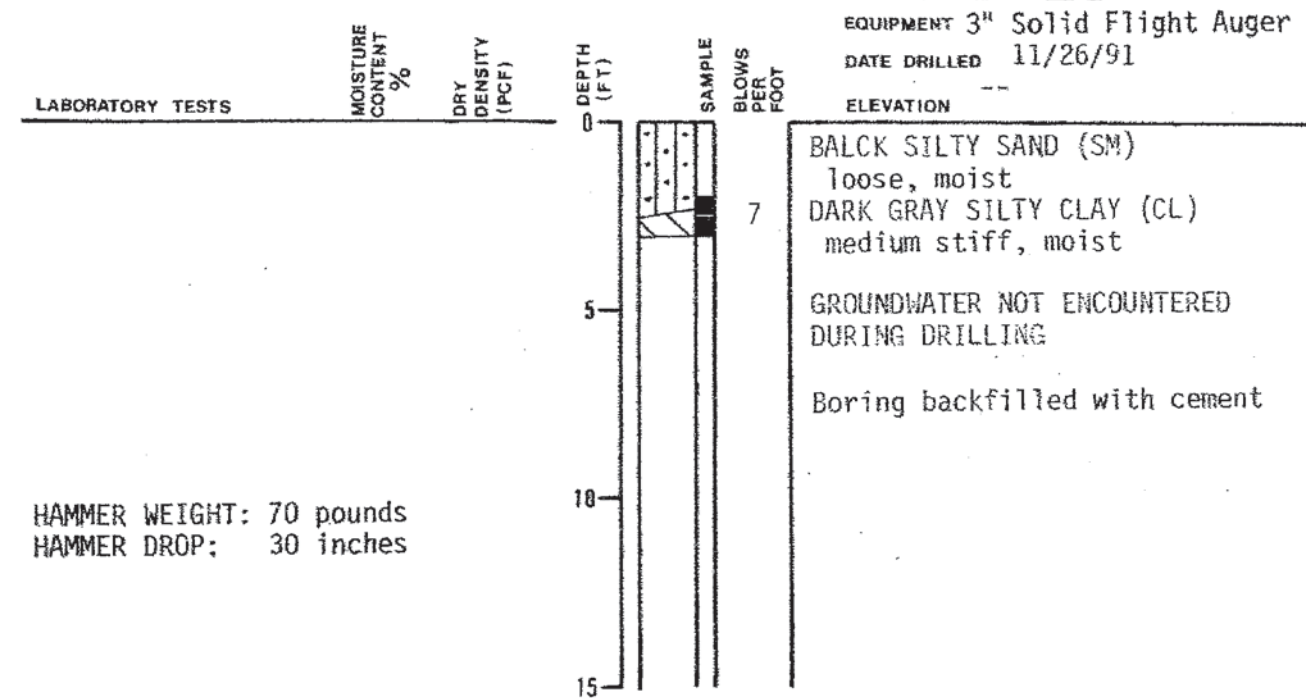
12/18/91

10

LOG OF TEST BORING B-17



LOG OF TEST BORING B-18



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JOB NUMBER
698.001

DATE
12/18/91

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PLATE
12

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 size	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

Subsurface Consultants

705 BANCROFT WAY - BERKELEY, CA

JOB NUMBER
698.001

DATE
12/19/91

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PLATE

13

Tables

Table 1.
Contaminants in Soil
(In PPM Unless Otherwise Noted)

	B-101.5'	B-104'	B-201.5'	B-204.0'	B-201.0'	B-303.0'	B-401.0'	B-501.0'	B-504.0'	B-501.5'	B-701.5'	B-704.0'	B-802.0'	Regulatory Criteria PTTC
Total Metals														
Antimony	<3.0	<2.5	6.4	<2.5	<3.0	<3.0	<3.0	17.1	<3.0	<3.0	<3.0	<2.5	<3.0	500
Arsenic	<2.5	40.5	40.5	<2.5	<2.5	<2.5	<2.5	3.7	<2.5	<2.5	<2.5	<2.5	<2.5	500
Barium	298	125	125	137	51.4	51.4	431	431	96.0	71.8	267	171	10000	
Beryllium	0.54	0.17	0.17	0.5	0.15	0.15	0.27	0.27	0.47	0.14	0.65	0.55	75	
Cadmium	0.55	1.7	1.7	<0.32	0.36	0.36	8.2	8.2	<0.25	<0.25	0.56	<0.25	100	
Chromium (total)	35.0	38.1	38.1	25.0	32.0	32.0	24.2	24.2	27.6	21.1	32.7	34.8	2500	
Chromium (Hexavalent)													500	
Cobalt	18.5	26.3	26.3	15.8	5.1	5.1	7.2	7.2	9.7	7.5	9.2	15.1	8000	
Copper	23.0	267	267	22.5	20.1	20.1	322	322	17.5	76.4	40.5	22.4	2500	
Lead	3.4	258	258	12.3	48.8	48.8	1750	1750	6.4	155	163	<3.0	1000	
Mercury	<0.1	<0.1	<0.1	<0.1	0.16	0.16	<0.1	<0.1	<0.1	<0.1	1.0	<0.1	20	
Molybdenum	<0.7	1.7	1.7	0.59	1.0	1.0	3.6	3.6	<0.7	<0.7	<0.7	<0.7	3500	
Nickel	<2.5	74.4	74.4	23.2	29.9	16.0	30.0	30.0	22.5	36.0	27.5	26.1	2000	
Selenium	<0.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	100	
Silver	<0.5	<2.5	<2.5	<2.5	<2.5	<2.5	1.2	1.2	<0.5	<0.5	<0.5	<0.5	500	
Thallium	<2.5	31.9	31.9	<2.5	20.1	20.1	16.1	16.1	<2.5	<2.5	33.7	29.3	700	
Vanadium	30.0	355	355	27.4	115	115	3600	3600	16.8	17.0	29.7	29.3	2400	
Zinc	30.0	355	355	27.4	115	115	3600	3600	32.3	116	165	29.8	5000	
Soluble Metals														STLC
Arsenic	<0.5													5
Copper	13.2						33.8							25
Lead	3.0				1.57		63			16				5
Silver														5
Zinc	8.68						255							250
Total Oil and Grease	<50	<50	90	<50	<50	<50	76	660	<50	1100	<50	<50	<50	RWQCB 1000
Total Extractable Hydrocarbons	2.0	1.3	5.1		1.3	26	64	64	1.0	100	30		2.4	1000
Semi-Volatile Organics														
PCBs														
PNAS														
Dinitrofluene														
Others														
Purgeable Halocarbons														
Methylene Chloride	ND	ND	ND	10ppb	ND	ND	ND	ND	ND	5.6ppb	ND	ND	ND	
Freon	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Others	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Volatile Aromatic Hydrocarbons														
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Others	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

*PTTC = Total Threshold Limit Concentration
 *STLC = Soluble Threshold Limit Concentration
 *RWQCB = Regional Water Quality Control Board

Table 1.
Contaminants in Soil
(In PPM Unless Otherwise Noted)

	B-901.5'	B-903.0'	H-1001.5'	B-1102.0'	B-1104.0'	B-1202.5'	B-1301.5'	B-1304.5'	B-1401.0'	B-1404.0'	B-1500.5'	B-1503.5'	B-1703.0'	Regulatory Criteria
	TTLC													
Total Metals														
Antimony	<3.0	<2.5	<3.0	<3.0	<3.0	<3.0	<3.0	3.7	<3.0	<3.0	<3.0	<2.5	4.3	500
Arsenic	5.3	6.7	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	7.2	<2.5	<2.5	<2.5	5.1	500
Barium	122	93.3	163	65.9	244	244	163	190	106	95.5	92.1	92.1	58.7	10000
Beryllium	0.23	0.30	0.59	0.26	0.85	0.27	0.62	0.28	0.33	0.57	<1.0	<1.0	0.19	75
Cadmium	1.3	0.48	1.5	1.5	0.28	<0.25	<0.25	0.28	0.33	<0.25	9.6	9.6	1.5	100
Cromium (total)	19.7	31.2	29.0	30.0	28.5	33.7	11.8	31.8	24.7	28.3	17.3	34.6	17.3	2500
Chromium (Hexavalent)											<0.06			500
Cobalt	11.3	24.3	7.6	7.6	13.4	10.8	7.3	16.7	19.4	10.4	33.9		4.2	8000
Copper	3700	17.1	52.1	84.3	19.9	24.2	9.2	24.6	43.7	21.1	285	27.3	78.5	2500
Lead	331	<3.0	63.2	701	5.0	9.5	11.8	4.5	75.6	<3.0	110	46	266	1000
Mercury	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.27	<0.1	<0.1	<0.1	<0.1	20
Molybdenum	<0.7	1.8	2.1	2.1	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	15.2		2.0	3500
Nickel	25.9	21.9	85.1	85.1	30.0	28.1	12.7	33.3	28.0	27.7	62.9		15.9	2000
Selenium	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5		<2.5	100
Silver	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	38.7		0.62	500
Thallium	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5		<2.5	700
Vanadium	26.8	25.7	17.0	17.0	21.2	27.6	16.1	28.6	26.8	25.8	39.6		8.4	2400
Zinc	507	41.9	87.7	227	24.2	43.1	35.9	30.4	106	25.7	894	291	452	5000
Soluble Metals														STTC
Arsenic	388													5
Copper	6.3	2	0.94						4.4		3.01			25
Lead											0.44			5
Silver	35.8										5.88			250
Zinc														
Total Oil and Grease	60	66	<50	66	<50	450	12000	<56	110	<50	<50	310	<50	RMQCB 1000
Total Extractable Hydrocarbons	10		4.0	6.7	1.9	2.8	150	2.0	27	7.8	24		7.5	1000
Semi-Volatile Organics														
PCBS	ND						ND							
PNAS	ND						ND				3.8ppb			
Dinitroloene	150ppb						ND				ND			
Others	ND						ND				ND			
Purgeable Halocarbons														
Methylene Chloride	170ppb						35ppb							
Freon	ND						ND							
Others	ND						ND							
Volatile Aromatic Hydrocarbons														
Toluene	100ppb						57ppb							
Xylene	14ppb						7.0ppb							
Others	ND						ND							

*TTIC = Total Threshold Limit Concentration
 *STTC = Soluble Threshold Limit Concentration
 *RWQCB = Regional Water Quality Control Board

Table 2.
Contaminants in Grab Groundwater Sample

	<u>Concentration (ppb)</u>
Total Extractable Hydrocarbons	54000 (diesel range)
Total Volatile Hydrocarbons	650 (gasoline range)
Purgeable Halocarbons	ND
Volatile Aromatic Hydrocarbons	
Ethylbenzene	17
Xylenes	260
Others	ND
Phenolic Compounds	ND
Title 26 Metals	
Barium	162
Others	ND

Appendix A
Aerial Photograph Review List

Pacific Aerial Surveys Photographs

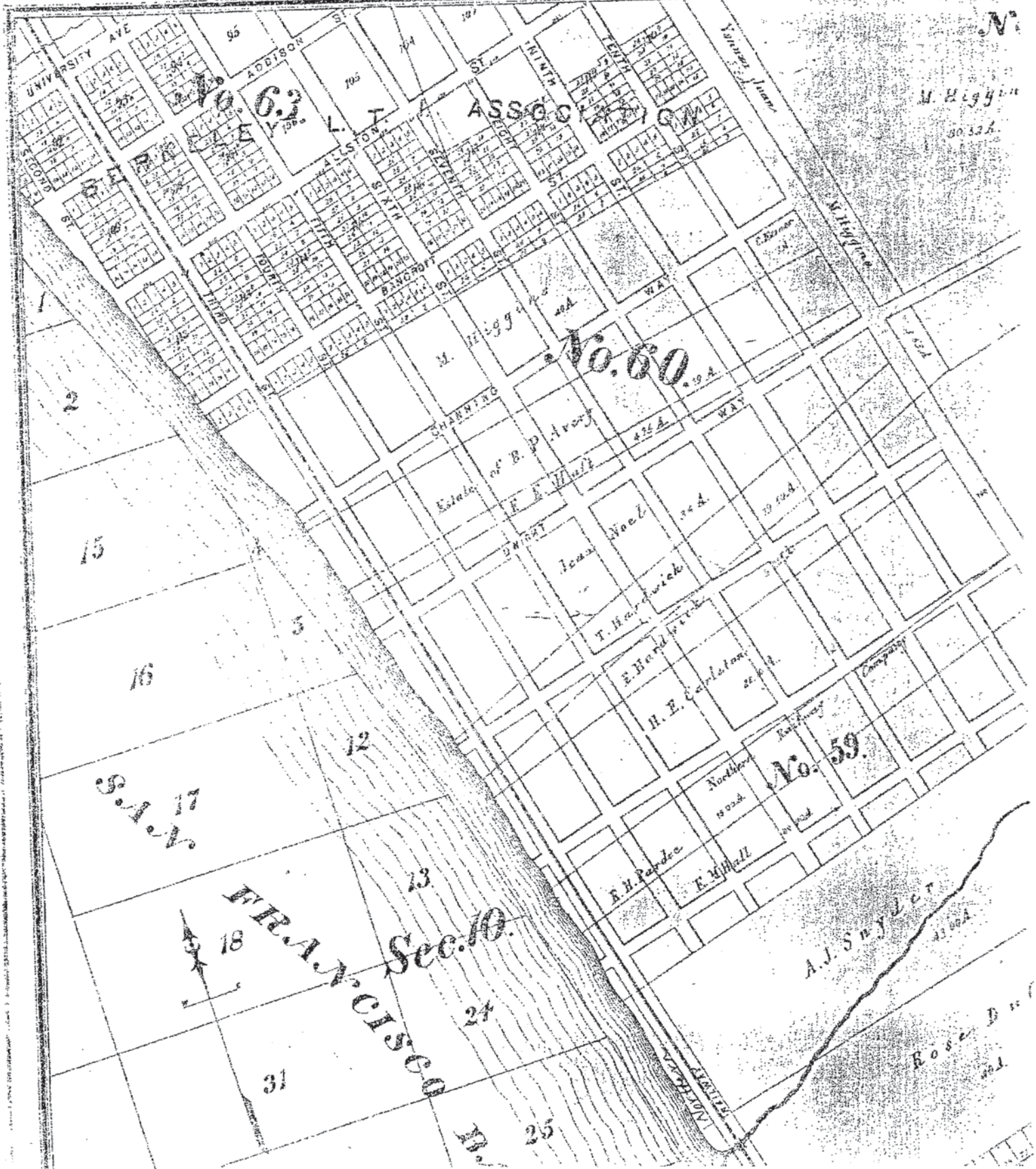
AV11-05-11/12	(1947)
AV28-11-31/32	(1949)
AV119-08-22/23	(1953)
AV253-07-17/18	(1957)
AV337-07-19/20	(1959)
AV550-08-19/20	(1963)
AV710-08-25/26	(1966)
AV902-06-15/16	(1969)
AV1100-05-15/16	(1973)
AV1377-06-15/16	(1977)
AV2040-07-14/15	(1981)
AV3268-06-16/17	(1988)
AV3845-06-16/17	(1990)

Appendix B
Reference Materials

1878

Alameda County Atlas SEE PA

MAP NUMBER FOURTEEN.



No. 63

ASSOC

No. 60

No. 59

SAN FRANCISCO

A. J. Snyder

Rose Duff

M. Higgins

M. Higgins

Estate of B. P. Arroy

John Noel

T. Hardwick

E. Hardwick

H. E. Conlinton

E. H. Pardee

E. McCall

15

16

S.F.

18

31

N. 25

24

13

12

5

2

N.

SEE PA



20
2" W. PIPE

2" W. PIPE

BANCROFT WAY

2" W. PIPE

2" W. PIPE

2" W. PIPE

100'
17
2" W. PIPE

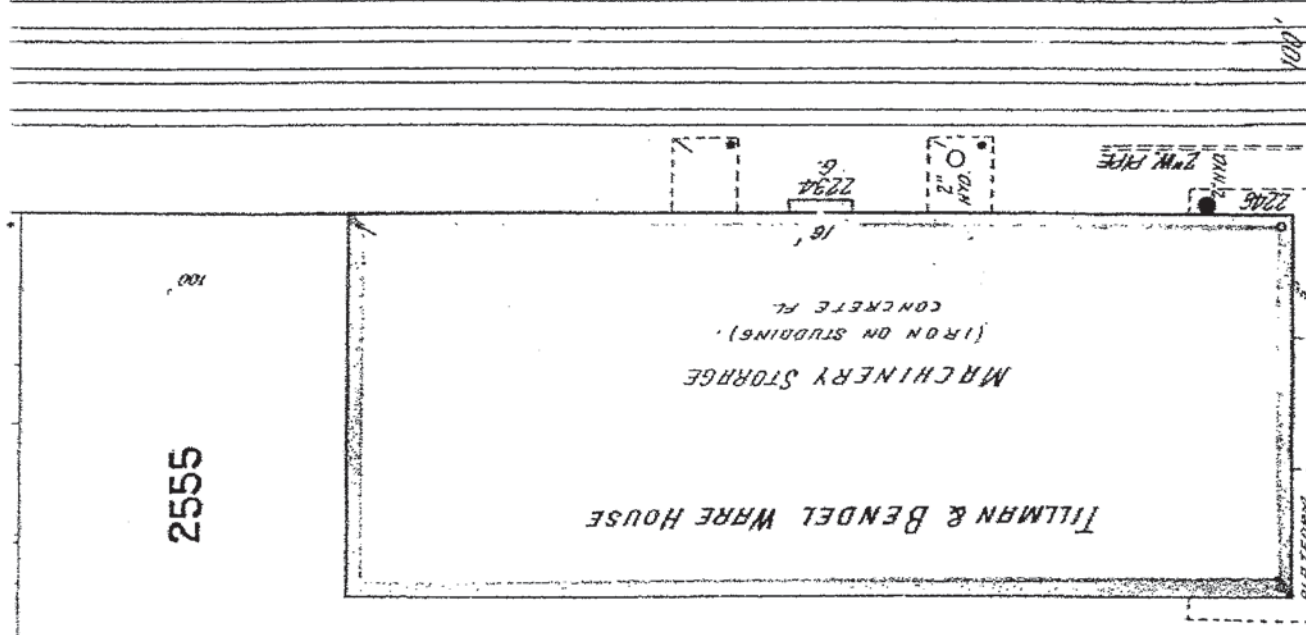
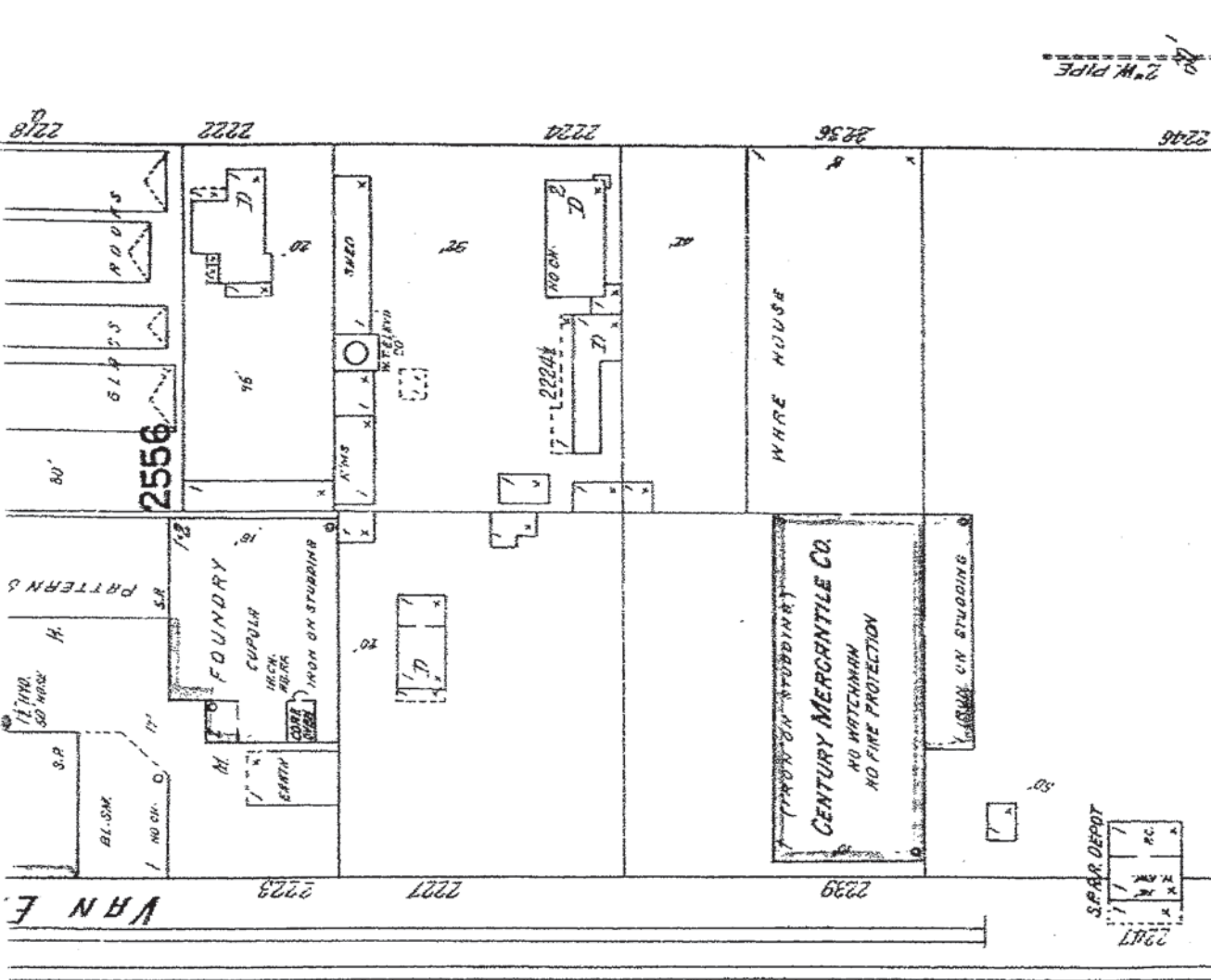
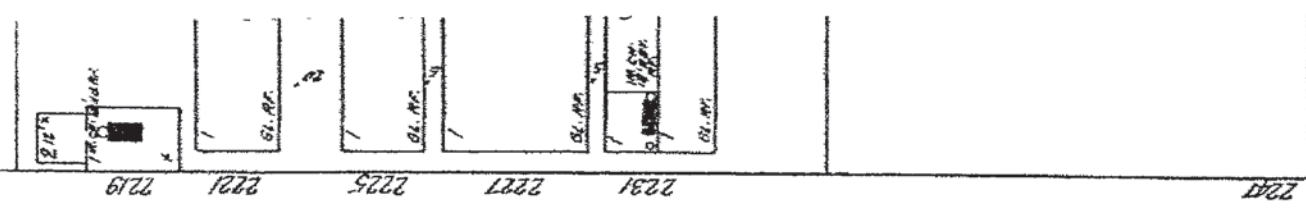
2" W. PIPE

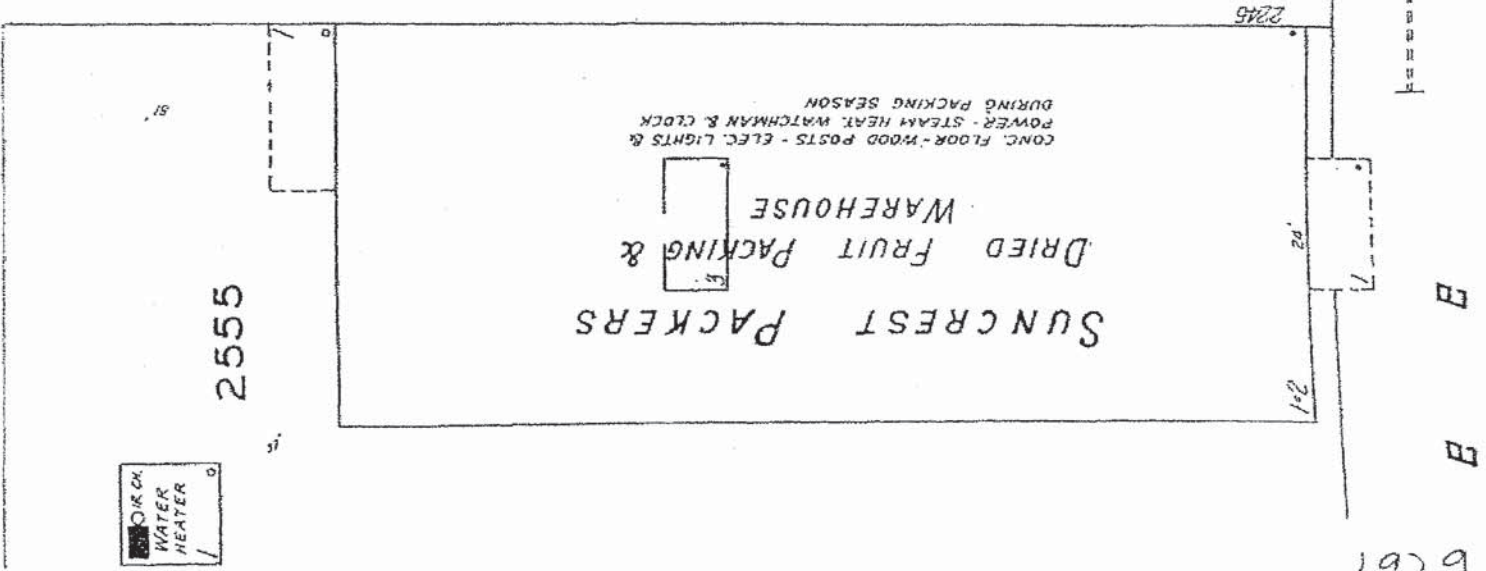
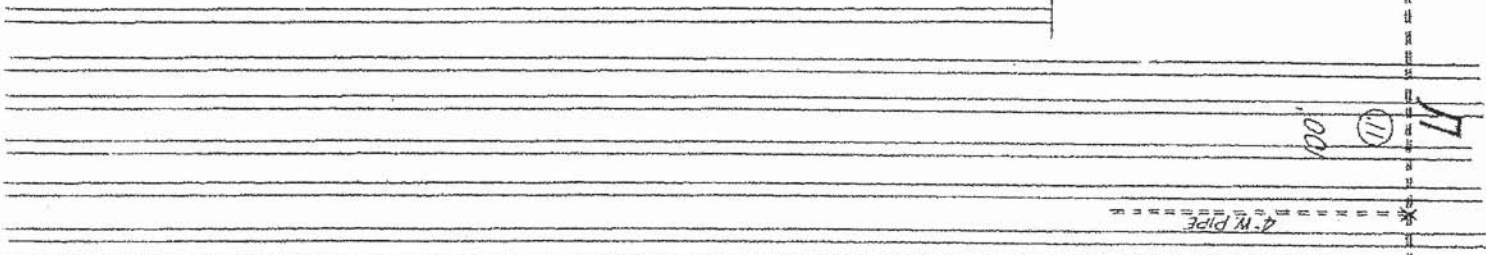
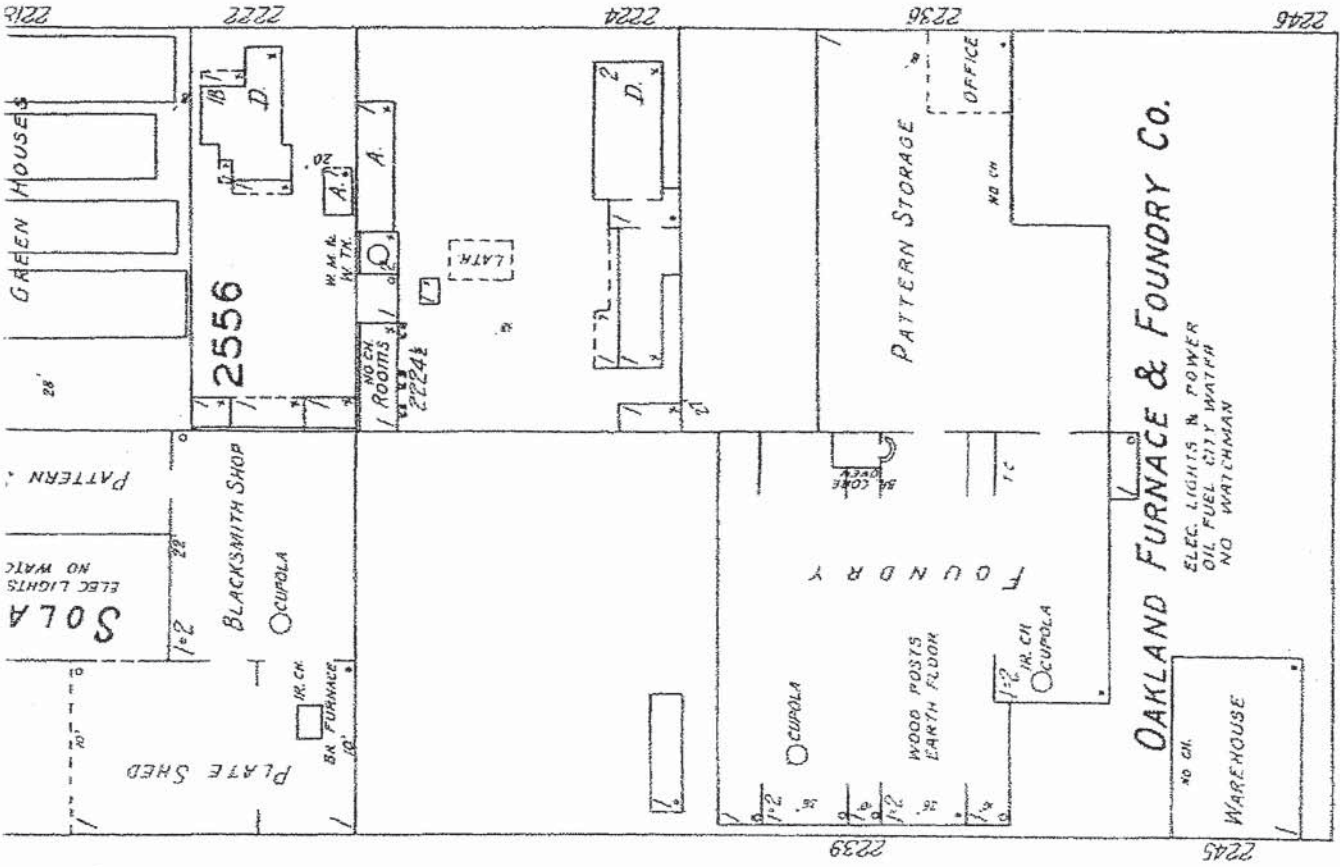
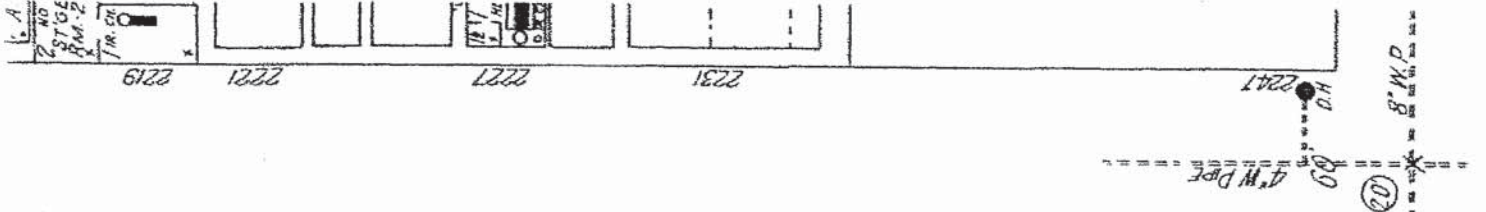
2" W. PIPE

2" W. PIPE

2" W. PIPE

1161





1926

	B-1@1.5'	B-1@4'	B-2@1.5'	B-2@4.0'	B-3@1.0'
Total Metals					
Antimony	--	<3.0	6.4	--	<3.0
Arsenic	--	<2.5	40.5	<2.5	<2.5
Barium	--	298	125	--	60.5
Beryllium	--	0.54	0.17	--	<0.1
Cadmium	--	0.65	1.7	--	0.32
Chromium (total)	--	35.0	38.1	32.0	29.0
Chromium (Hexavalant)	--	--	--	--	--
Cobalt	--	18.5	26.3	--	9.6
Copper	--	23.0	267	16.5	22.5
Lead	--	3.4	258	<3.0	51.4
Mercury	--	<0.1	<0.1	--	<0.1
Molybdenum	--	<0.7	1.7	--	0.68
Nickel	--	74.4	44.2	--	25.2
Selenium	--	<2.5	<2.5	--	<2.5
Silver	--	<0.5	<0.5	--	<0.5
Thallium	--	<2.5	<2.5	--	<2.5
Vanadium	--	31.9	55.0	--	24.8
Zinc	--	30.0	355	27.4	79.7
Soluble Metals					
Arsenic	--	--	<0.5	--	--
Copper	--	--	13.2	--	--
Lead	--	--	3.0	--	0.19
Silver	--	--	--	--	--
Zinc	--	--	8.68	--	--
Total Oil and Grease	<50	<50	90	<50	<50
Total Extractable Hydrocarbons	2.0	1.3	6.1	--	20
Semi-Volatile Organics					
PCBs	--	--	--	--	ND
PNAs	--	--	--	--	13
Dinitroluene	--	--	--	--	ND
Others	--	--	--	--	ND
Purgeable Halocarbons					
Methylene Chloride	--	ND	--	--	10ppb
Freon	--	ND	--	--	ND
Others	--	ND	--	--	ND
Volatile Aromatic Hydrocarbons					
Toluene	--	ND	--	--	ND
Xylene	--	ND	--	--	13ppb
Others	--	ND	--	--	ND

*TTLC = Total Threshold Limit Concentration

*STLC = Soluble Threshold Limit Concentration

*RWQCB = Regional Water Quality Control Board

Table 1.
 Contaminants In Soil
 (In PPM Unless Otherwise Noted)

3-3@3.0'	B-4@1.0'	B-5@1.0'	B-5@4.0'	B-6@1.5'	B-7@1.5'	B-7@4.0'
<3.0	<3.0	17.1	<3.0	<3.0	<3.0	--
<2.5	<2.5	3.7	<2.5	<2.5	<2.5	<2.5
137	51.4	431	96.0	71.8	267	--
0.5	0.15	0.27	0.47	0.14	0.65	--
<0.25	0.36	8.2	<0.25	<.25	0.56	--
32.0	20.2	24.2	27.6	21.1	32.7	34.8
--	--	--	--	--	--	--
15.8	5.1	7.2	9.7	7.5	9.2	--
23.0	20.1	322	17.5	76.4	40.5	15.1
12.3	48.8	1750	6.4	155	163	<3.0
<0.1	0.16	<0.1	<0.1	<0.1	1.0	--
0.69	1.0	3.6	<0.7	<0.7	<0.7	--
29.9	16.0	30.0	22.5	36.0	27.5	--
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--
<0.5	<0.5	1.2	<0.5	<0.5	<0.5	--
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--
30.3	20.1	16.1	16.8	17.0	33.7	--
27.6	115	3600	32.3	116	165	29.8
--	--	--	--	--	--	--
--	--	33.8	--	--	--	--
--	1.57	63	--	16	15	--
--	--	--	--	--	--	--
--	--	255	--	--	--	--
<50	76	660	<50	1100	<50	<50
1.3	26	84	1.0	100	30	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	ND	--	--
--	--	--	--	5.6ppb	--	--
--	--	--	--	ND	--	--
--	--	--	--	ND	--	--
--	--	--	--	ND	--	--
--	--	--	--	ND	--	--

B-8@2.0' Regulatory
Criteria
TTL

<3.0	500
<2.5	500
171	10000
0.56	75
<0.25	100
32.3	2500
--	500
9.1	8000
22.4	2500
6.0	1000
<0.1	20
<0.7	3500
26.1	2000
<2.5	100
<0.5	500
<2.5	700
29.3	2400
111	5000

STLC

--	5
--	25
--	5
--	5
--	250

RWQCB

<50	1000
2.4	1000

--
--
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--

	<u>B-9@1.5'</u>	<u>B-9@3.0'</u>	<u>B-10@1.5'</u>	<u>B-11@2.0'</u>	<u>B-11@4.0'</u>
Total Metals					
Antimony	<3.0	--	<3.0	<3.0	<3.0
Arsenic	5.3	<2.5	6.7	<2.5	<2.5
Barium	122	--	93.3	65.9	163
Beryllium	0.23	--	0.30	0.26	0.59
Cadmium	1.3	--	0.48	1.5	0.28
Chromium (total)	19.7	31.2	29.0	30.0	28.5
Chromium (Hexavalant)	--	--	--	--	--
Cobalt	11.3	--	24.3	7.6	13.4
Copper	3700	17.1	52.1	84.3	19.9
Lead	331	<3.0	63.2	701	5.0
Mercury	0.13	--	<0.1	<0.1	<0.1
Molybdenum	<0.7	--	1.8	2.1	<0.7
Nickel	25.9	--	21.9	85.1	30.0
Selenium	<2.5	--	<2.5	<2.5	<2.5
Silver	<0.5	--	<0.5	<0.5	<0.5
Thallium	<2.5	--	<2.5	<2.5	<2.5
Vanadium	26.8	--	25.7	17.0	21.2
Zinc	507	41.9	87.7	227	24.2
Soluble Metals					
Arsenic	--	--	--	--	--
Copper	388	--	--	--	--
Lead	6.3	--	2	0.94	--
Silver	--	--	--	--	--
Zinc	35.8	--	--	--	--
Total Oil and Grease	60	66	<50	66	<50
Total Extractable Hydrocarbons	10	--	4.0	6.7	1.9
Semi-Volatile Organics					
PCBs	ND	--	--	--	--
PNAs	ND	--	--	--	--
Dinitroluene	150ppb	--	--	--	--
Others	ND	--	--	--	--
Purgeable Halocarbons					
Methylene Chloride	170ppb	--	--	--	--
Freon	ND	--	--	--	--
Others	ND	--	--	--	--
Volatile Aromatic Hydrocarbons					
Toluene	100ppb	--	--	--	--
Xylene	14ppb	--	--	--	--
Others	ND	--	--	--	--

*TTLC = Total Threshold Limit Concentration

*STLC = Soluble Threshold Limit Concentration

*RWQCB = Regional Water Quality Control Board

Table 1.
 Contaminants In Soil
 (In PPM Unless Otherwise Noted)

B-12@2.5'	B-13@1.5'	B-13@4.5'	B-14@1.0'	B-14@4.0'	B-15@0.5'	B-15@3.5'
<3.0	<3.0	3.7	<3.0	<3.0	<3.0	--
<2.5	<2.5	<2.5	7.2	<2.5	9.3	<2.5
244	48.9	190	106	95.5	92.1	--
0.65	0.27	0.62	0.23	0.57	<1.0	--
<0.25	<0.25	0.28	0.33	<0.25	5.6	--
33.7	11.8	31.8	24.7	28.3	120	34.6
--	--	--	--	--	<0.06	--
10.8	7.3	16.7	19.4	10.4	33.9	--
24.2	9.2	24.6	43.7	21.1	285	27.3
9.5	11.8	4.5	75.6	<3.0	110	46
<0.1	<0.1	<0.1	0.27	<0.1	<0.1	--
<0.7	<0.7	<0.7	<0.7	<0.7	15.2	--
28.1	12.7	33.3	28.0	27.7	62.9	--
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--
<0.5	<0.5	<0.5	<0.5	<0.5	58.7	--
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--
27.6	16.1	28.6	26.8	25.8	39.6	--
43.1	35.9	30.4	106	25.7	894	291
--	--	--	--	--	--	--
--	--	--	--	--	3.01	--
--	--	--	4.4	--	0.4	--
--	--	--	--	--	0.44	--
--	--	--	--	--	5.88	--
<50	12000	<56	110	<50	<50	310
2.8	150	2.0	27	7.8	24	--
--	ND	--	--	--	ND	--
--	ND	--	--	--	3.8ppb	--
--	ND	--	--	--	ND	--
--	ND	--	--	--	ND	--
--	35ppb	--	--	--	--	--
--	ND	--	--	--	--	--
--	ND	--	--	--	--	--
--	57ppb	--	--	--	--	--
--	7.0ppb	--	--	--	--	--
--	ND	--	--	--	--	--

3-17@2.0' Regulatory
Criteria
TTLC

4.3	500
5.1	500
58.7	10000
0.19	75
1.5	100
17.3	2500
--	500
4.2	8000
78.5	2500
266	1000
<0.1	20
2.0	3500
15.9	2000
<2.5	100
0.62	500
<2.5	700
8.4	2400
452	5000

STLC

--	5
--	25
34	5
--	5
--	250

RWQCB

<50	1000
-----	------

7.5 1000

--
--
--
--

--
--
--

--
--
--

2213 FOURTH STREET
(CURTIS & TOMPKINS, LTD., 2015)



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Analytical Laboratories, Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 264142
ANALYTICAL REPORT**

Fugro West Inc.
1000 Broadway
Oakland, CA 94607

Project : 04.B0698004
Location : Peerless Lighting
Level : II

Sample ID
SP-1

Lab ID
264142-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Isabelle Choy
Project Manager
isabelle.choy@ctberk.com

Date: 01/27/2015

CASE NARRATIVE

Laboratory number: 264142
Client: Fugro West Inc.
Project: 04.B0698004
Location: Peerless Lighting
Request Date: 01/23/15
Samples Received: 01/23/15

This data package contains sample and QC results for one soil sample, requested for the above referenced project on 01/23/15. The sample was received on ice and intact, directly from the field.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

High surrogate recoveries were observed for 1,2-dichloroethane-d4 in SP-1 (lab # 264142-001) and the method blank/LCS/MS/MSD for batch 219700.

Methylene chloride was detected between the MDL and the RL in SP-1 (lab # 264142-001); this analyte is a common laboratory contaminant. No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A) Soil:

Zinc was detected between the MDL and the RL in the method blank for batch 219770; this analyte was detected in the sample at a level at least 10 times that of the blank. No other analytical problems were encountered.

Metals (EPA 6010B) WET Leachate:

No analytical problems were encountered.

264142

FF-02 CHAIN OF CUSTODY

PROJECT NAME: Peerless Lighting Sampling

PROJECT NO.: 04.B0698004

LAB: C&T

PROJECT CONTACT: Jeriann Alexander

TURNAROUND: 48 HOUR

SAMPLED BY: K. Emery (SCA Environmental)

ANALYSIS REQUESTED	
<input checked="" type="checkbox"/>	TPHg
<input checked="" type="checkbox"/>	TPHd/TPHmo with silica gel cleanup
<input checked="" type="checkbox"/>	VOCs (8260)
<input checked="" type="checkbox"/>	CAM 17 Metals
<input checked="" type="checkbox"/>	Soluble Cr & Pb (WET Method)
<input type="checkbox"/>	EDF Reporting

LABORATORY I.D. NUMBER	FIELD SAMPLE I.D.	MATRIX			CONTAINERS				PRESERVATIVE				SAMPLING DATE				NOTES					
		WATER	SOIL	AIR	VOA	LITER	PINT	TUBE	X glass jar	HCL	H ₂ SO ₄	HNO ₃	ICE	OTHER	NONE	MONTH		DAY	YEAR	TIME		
	SP-1	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				0	1	2	3	1	5	1110

CHAIN OF CUSTODY RECORD			
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
<i>K. Emery (SCA)</i>	1/23/15 11:46	<i>John Blawie</i>	1/23/15 11:46
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME

COMMENTS & NOTES: EMAIL RESULTS TO jalexander@fugro.com



FUGRO CONSULTANTS, INC.
 1000 Broadway, Suite 440
 Oakland, California 94607
 Tel: 510.268.0461 Fax: 510.268.0545

Approved by David Gardner, AC 71 Manager, Fugro West, Inc. 1/31/09
 Note: If this is a printed copy, please check the online QMS to ensure that it is the latest version.

COOLER RECEIPT CHECKLIST



Login # 264142 Date Received 1/23/15 Number of coolers 0
Client FUGRO CONSULTANTS Project 04.B0698004

Date Opened 01/23/15 By (print) BL (sign) [Signature]
Date Logged in 5/27/15 By (print) BL (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
Type of ice used: Wet, Blue/Gel, None, Temp(°C)

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Total Volatile Hydrocarbons			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8015B
Field ID:	SP-1	Batch#:	219739
Matrix:	Soil	Sampled:	01/23/15
Units:	mg/Kg	Received:	01/23/15
Basis:	as received	Analyzed:	01/23/15
Diln Fac:	1.000		

Type: SAMPLE Lab ID: 264142-001

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	1.0	0.077

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	78-138

Type: BLANK Lab ID: QC774565

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	0.20	0.015

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	94	78-138

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC774564	Batch#:	219739
Matrix:	Soil	Analyzed:	01/23/15
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.019	102	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	78-138

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	264129-001	Batch#:	219739
Matrix:	Soil	Sampled:	01/22/15
Units:	mg/Kg	Received:	01/22/15
Basis:	as received	Analyzed:	01/23/15

Type: MS Lab ID: QC774566

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.07656	10.31	9.327	90	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	78-138

Type: MSD Lab ID: QC774567

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	4.902	4.391	90	50-120	1	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	78-138

RPD= Relative Percent Difference

Total Extractable Hydrocarbons			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 3550B
Project#:	04.B0698004	Analysis:	EPA 8015B
Field ID:	SP-1	Batch#:	219782
Matrix:	Soil	Sampled:	01/23/15
Units:	mg/Kg	Received:	01/23/15
Basis:	as received	Prepared:	01/26/15
Diln Fac:	1.000	Analyzed:	01/27/15

Type: SAMPLE Cleanup Method: EPA 3630C
 Lab ID: 264142-001

Analyte	Result	RL	MDL
Diesel C10-C24	18 Y	1.0	0.31
Motor Oil C24-C36	180	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	93	59-140

Type: BLANK Cleanup Method: EPA 3630C
 Lab ID: QC774723

Analyte	Result	RL	MDL
Diesel C10-C24	ND	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	78	59-140

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 3550B
Project#:	04.B0698004	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC774724	Batch#:	219782
Matrix:	Soil	Prepared:	01/26/15
Units:	mg/Kg	Analyzed:	01/27/15

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.55	41.31	83	58-137

Surrogate	%REC	Limits
o-Terphenyl	84	59-140

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 3550B
Project#:	04.B0698004	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	219782
MSS Lab ID:	264138-001	Sampled:	01/22/15
Matrix:	Soil	Received:	01/23/15
Units:	mg/Kg	Prepared:	01/26/15
Basis:	as received	Analyzed:	01/27/15
Diln Fac:	1.000		

Type: MS Lab ID: QC774725

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	1.886	49.98	52.59	101	46-154

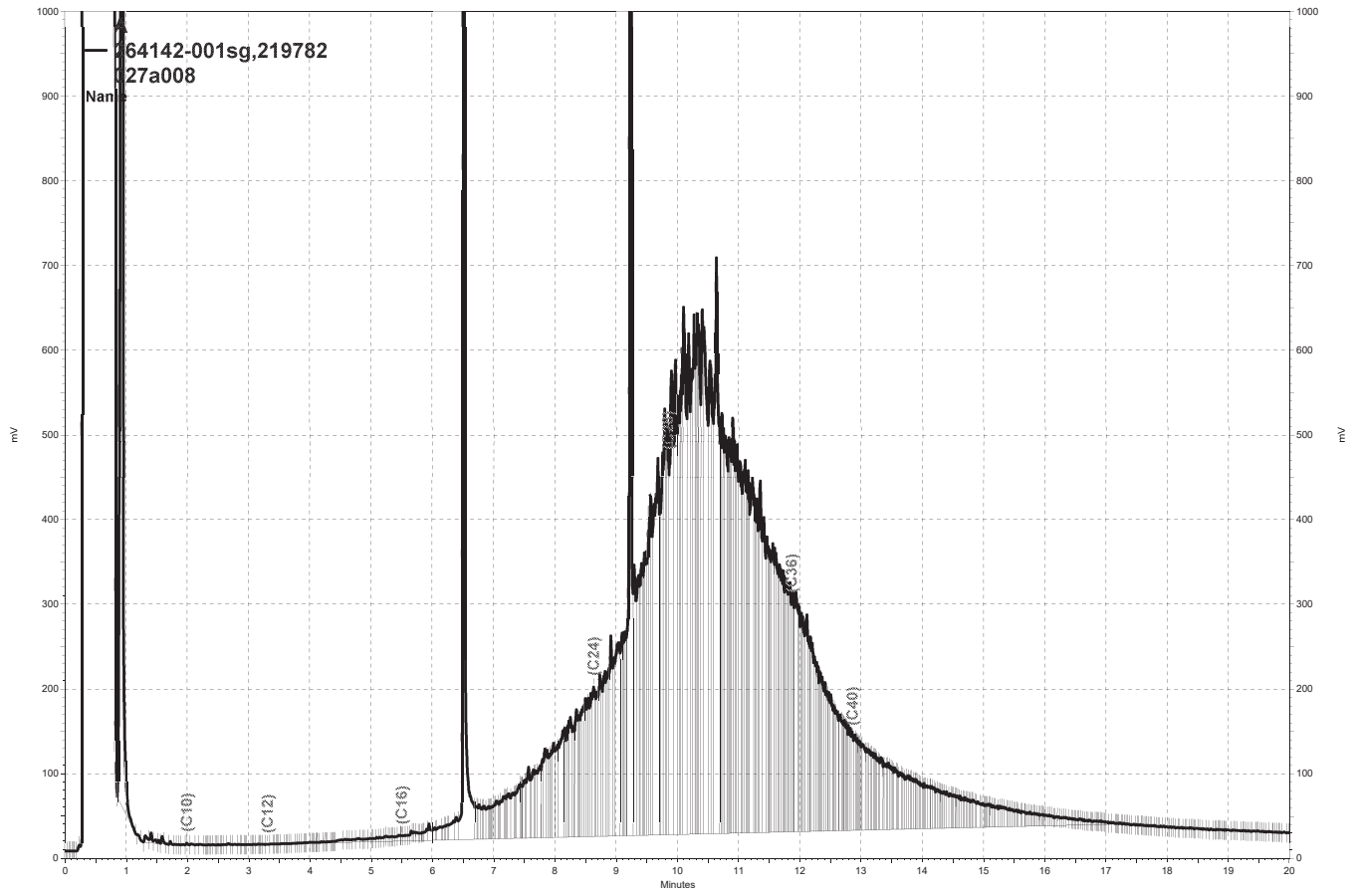
Surrogate	%REC	Limits
o-Terphenyl	96	59-140

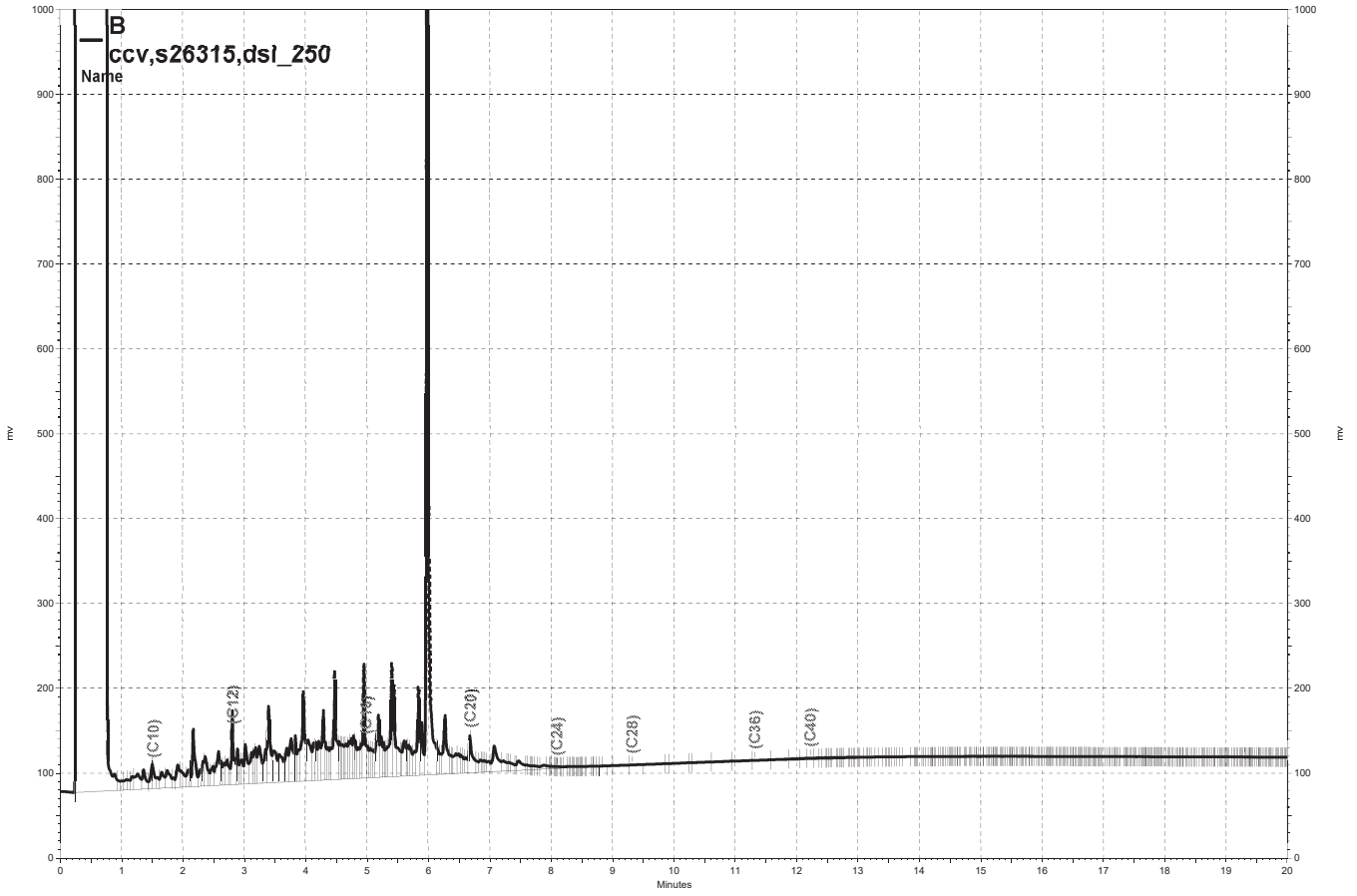
Type: MSD Lab ID: QC774726

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.78	53.27	103	46-154	2	50

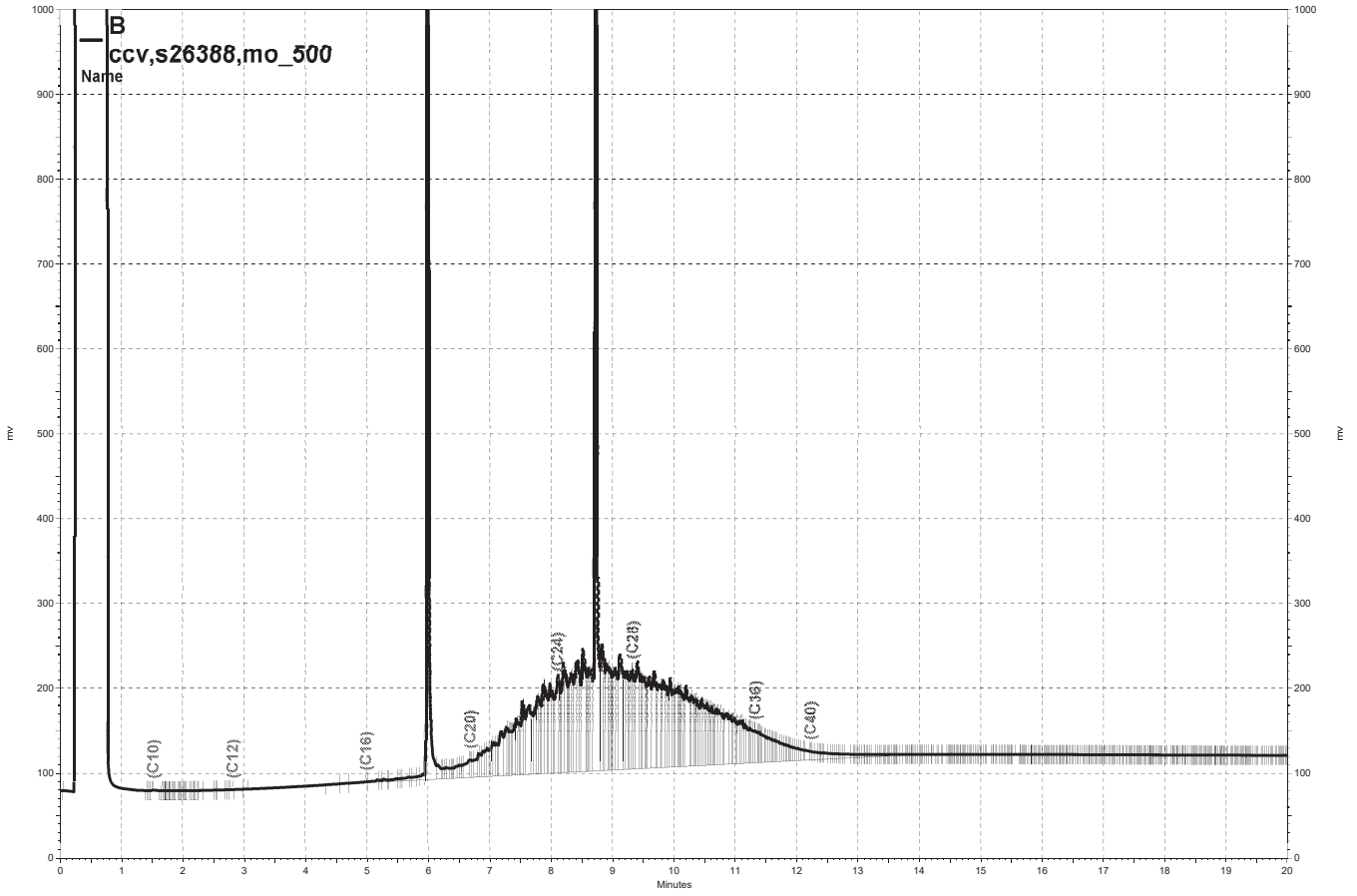
Surrogate	%REC	Limits
o-Terphenyl	103	59-140

RPD= Relative Percent Difference





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Purgeable Organics by GC/MS

Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8260B
Field ID:	SP-1	Diln Fac:	0.9363
Lab ID:	264142-001	Batch#:	219700
Matrix:	Soil	Sampled:	01/23/15
Units:	ug/Kg	Received:	01/23/15
Basis:	as received	Analyzed:	01/23/15

Analyte	Result	RL	MDL
Freon 12	ND	9.4	0.6
Chloromethane	ND	9.4	0.5
Vinyl Chloride	ND	9.4	0.4
Bromomethane	ND	9.4	0.3
Chloroethane	ND	9.4	0.4
Trichlorofluoromethane	ND	4.7	0.3
Acetone	3.3 J	19	0.8
Freon 113	ND	4.7	0.5
1,1-Dichloroethene	ND	4.7	0.6
Methylene Chloride	1.4 J	19	1.0
Carbon Disulfide	ND	4.7	0.6
MTBE	ND	4.7	0.5
trans-1,2-Dichloroethene	ND	4.7	0.6
Vinyl Acetate	ND	47	0.5
1,1-Dichloroethane	ND	4.7	0.7
2-Butanone	ND	9.4	0.6
cis-1,2-Dichloroethene	ND	4.7	0.5
2,2-Dichloropropane	ND	4.7	0.6
Chloroform	ND	4.7	0.6
Bromochloromethane	ND	4.7	0.1
1,1,1-Trichloroethane	ND	4.7	0.6
1,1-Dichloropropene	ND	4.7	0.6
Carbon Tetrachloride	ND	4.7	0.6
1,2-Dichloroethane	ND	4.7	0.6
Benzene	ND	4.7	0.7
Trichloroethene	ND	4.7	0.7
1,2-Dichloropropane	ND	4.7	0.5
Bromodichloromethane	ND	4.7	0.5
Dibromomethane	ND	4.7	0.2
4-Methyl-2-Pentanone	ND	9.4	0.6
cis-1,3-Dichloropropene	ND	4.7	0.4
Toluene	ND	4.7	0.7
trans-1,3-Dichloropropene	ND	4.7	0.4
1,1,2-Trichloroethane	ND	4.7	0.5
2-Hexanone	ND	9.4	0.6
1,3-Dichloropropane	ND	4.7	0.5
Tetrachloroethene	ND	4.7	0.6
Dibromochloromethane	ND	4.7	0.5
1,2-Dibromoethane	ND	4.7	0.5
Chlorobenzene	ND	4.7	0.6
1,1,1,2-Tetrachloroethane	ND	4.7	0.5
Ethylbenzene	ND	4.7	0.7
m,p-Xylenes	ND	4.7	1.3
o-Xylene	ND	4.7	0.6
Styrene	ND	4.7	0.5
Bromoform	ND	4.7	0.2
Isopropylbenzene	ND	4.7	0.6
1,1,2,2-Tetrachloroethane	ND	4.7	0.5
1,2,3-Trichloropropane	ND	4.7	0.6
Propylbenzene	ND	4.7	0.6
Bromobenzene	ND	4.7	0.2

*= Value outside of QC limits; see narrative

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8260B
Field ID:	SP-1	Diln Fac:	0.9363
Lab ID:	264142-001	Batch#:	219700
Matrix:	Soil	Sampled:	01/23/15
Units:	ug/Kg	Received:	01/23/15
Basis:	as received	Analyzed:	01/23/15

Analyte	Result	RL	MDL
1,3,5-Trimethylbenzene	ND	4.7	0.6
2-Chlorotoluene	ND	4.7	0.6
4-Chlorotoluene	ND	4.7	0.6
tert-Butylbenzene	ND	4.7	0.7
1,2,4-Trimethylbenzene	ND	4.7	0.6
sec-Butylbenzene	ND	4.7	0.6
para-Isopropyl Toluene	ND	4.7	0.6
1,3-Dichlorobenzene	ND	4.7	0.5
1,4-Dichlorobenzene	ND	4.7	0.4
n-Butylbenzene	ND	4.7	0.6
1,2-Dichlorobenzene	ND	4.7	0.4
1,2-Dibromo-3-Chloropropane	ND	4.7	0.7
1,2,4-Trichlorobenzene	ND	4.7	0.1
Hexachlorobutadiene	ND	4.7	0.6
Naphthalene	ND	4.7	0.9
1,2,3-Trichlorobenzene	ND	4.7	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	129	78-134
1,2-Dichloroethane-d4	147 *	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	94	78-123

*= Value outside of QC limits; see narrative

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC774409	Batch#:	219700
Matrix:	Soil	Analyzed:	01/23/15
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	26.41	106	70-134
Benzene	25.00	24.38	98	80-123
Trichloroethene	25.00	27.15	109	80-128
Toluene	25.00	23.49	94	80-120
Chlorobenzene	25.00	25.52	102	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	113	78-134
1,2-Dichloroethane-d4	141 *	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	92	78-123

*= Value outside of QC limits; see narrative

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC774410	Batch#:	219700
Matrix:	Soil	Analyzed:	01/23/15
Units:	ug/Kg		

Analyte	Result	RL	MDL
Freon 12	ND	10	0.6
Chloromethane	ND	10	0.5
Vinyl Chloride	ND	10	0.4
Bromomethane	ND	10	0.4
Chloroethane	ND	10	0.4
Trichlorofluoromethane	ND	5.0	0.3
Acetone	ND	20	0.8
Freon 113	ND	5.0	0.5
1,1-Dichloroethene	ND	5.0	0.6
Methylene Chloride	ND	20	1.1
Carbon Disulfide	ND	5.0	0.7
MTBE	ND	5.0	0.5
trans-1,2-Dichloroethene	ND	5.0	0.7
Vinyl Acetate	ND	50	0.5
1,1-Dichloroethane	ND	5.0	0.8
2-Butanone	ND	10	0.7
cis-1,2-Dichloroethene	ND	5.0	0.6
2,2-Dichloropropane	ND	5.0	0.6
Chloroform	ND	5.0	0.7
Bromochloromethane	ND	5.0	0.1
1,1,1-Trichloroethane	ND	5.0	0.7
1,1-Dichloropropene	ND	5.0	0.7
Carbon Tetrachloride	ND	5.0	0.6
1,2-Dichloroethane	ND	5.0	0.6
Benzene	ND	5.0	0.7
Trichloroethene	ND	5.0	0.7
1,2-Dichloropropane	ND	5.0	0.6
Bromodichloromethane	ND	5.0	0.5
Dibromomethane	ND	5.0	0.2
4-Methyl-2-Pentanone	ND	10	0.6
cis-1,3-Dichloropropene	ND	5.0	0.4
Toluene	ND	5.0	0.8
trans-1,3-Dichloropropene	ND	5.0	0.4
1,1,2-Trichloroethane	ND	5.0	0.5
2-Hexanone	ND	10	0.6
1,3-Dichloropropane	ND	5.0	0.5
Tetrachloroethene	ND	5.0	0.6
Dibromochloromethane	ND	5.0	0.5
1,2-Dibromoethane	ND	5.0	0.5
Chlorobenzene	ND	5.0	0.6
1,1,1,2-Tetrachloroethane	ND	5.0	0.5
Ethylbenzene	ND	5.0	0.7
m,p-Xylenes	ND	5.0	1.4
o-Xylene	ND	5.0	0.6
Styrene	ND	5.0	0.5
Bromoform	ND	5.0	0.2
Isopropylbenzene	ND	5.0	0.6
1,1,2,2-Tetrachloroethane	ND	5.0	0.5
1,2,3-Trichloropropane	ND	5.0	0.6
Propylbenzene	ND	5.0	0.7
Bromobenzene	ND	5.0	0.2
1,3,5-Trimethylbenzene	ND	5.0	0.6

*= Value outside of QC limits; see narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC774410	Batch#:	219700
Matrix:	Soil	Analyzed:	01/23/15
Units:	ug/Kg		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	5.0	0.7
4-Chlorotoluene	ND	5.0	0.6
tert-Butylbenzene	ND	5.0	0.7
1,2,4-Trimethylbenzene	ND	5.0	0.6
sec-Butylbenzene	ND	5.0	0.6
para-Isopropyl Toluene	ND	5.0	0.6
1,3-Dichlorobenzene	ND	5.0	0.5
1,4-Dichlorobenzene	ND	5.0	0.5
n-Butylbenzene	ND	5.0	0.6
1,2-Dichlorobenzene	ND	5.0	0.5
1,2-Dibromo-3-Chloropropane	ND	5.0	0.8
1,2,4-Trichlorobenzene	ND	5.0	0.2
Hexachlorobutadiene	ND	5.0	0.6
Naphthalene	ND	5.0	1.0
1,2,3-Trichlorobenzene	ND	5.0	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	122	78-134
1,2-Dichloroethane-d4	140 *	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	89	78-123

*= Value outside of QC limits; see narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	04.B0698004	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	219700
MSS Lab ID:	264092-007	Sampled:	01/20/15
Matrix:	Soil	Received:	01/21/15
Units:	ug/Kg	Analyzed:	01/23/15
Basis:	as received		

Type: MS Diln Fac: 0.9634
 Lab ID: QC774457

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5927	48.17	42.03	87	56-133
Benzene	<0.6906	48.17	41.83	87	57-120
Trichloroethene	<0.7193	48.17	45.38	94	49-145
Toluene	<0.7564	48.17	37.59	78	51-120
Chlorobenzene	<0.6201	48.17	41.40	86	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	117	78-134
1,2-Dichloroethane-d4	148 *	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	92	78-123

Type: MSD Diln Fac: 0.9766
 Lab ID: QC774458

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	48.83	43.43	89	56-133	2	46
Benzene	48.83	43.37	89	57-120	2	44
Trichloroethene	48.83	46.09	94	49-145	0	46
Toluene	48.83	39.50	81	51-120	4	47
Chlorobenzene	48.83	43.20	88	47-120	3	50

Surrogate	%REC	Limits
Dibromofluoromethane	116	78-134
1,2-Dichloroethane-d4	142 *	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	93	78-123

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

California Title 22 Metals

Lab #:	264142	Project#:	04.B0698004
Client:	Fugro West Inc.	Location:	Peerless Lighting
Field ID:	SP-1	Diln Fac:	1.000
Lab ID:	264142-001	Sampled:	01/23/15
Matrix:	Soil	Received:	01/23/15
Units:	mg/Kg	Prepared:	01/26/15
Basis:	as received	Analyzed:	01/26/15

Analyte	Result	RL	MDL	Batch#	Prep	Analysis
Antimony	ND	0.48	0.14	219770	EPA 3050B	EPA 6010B
Arsenic	6.1	0.24	0.069	219770	EPA 3050B	EPA 6010B
Barium	140	0.24	0.051	219770	EPA 3050B	EPA 6010B
Beryllium	0.42	0.095	0.012	219770	EPA 3050B	EPA 6010B
Cadmium	0.89	0.24	0.024	219770	EPA 3050B	EPA 6010B
Chromium	39	0.24	0.060	219770	EPA 3050B	EPA 6010B
Cobalt	10	0.24	0.029	219770	EPA 3050B	EPA 6010B
Copper	24	0.24	0.079	219770	EPA 3050B	EPA 6010B
Lead	56	0.24	0.066	219770	EPA 3050B	EPA 6010B
Mercury	0.18	0.016	0.0011	219778	METHOD	EPA 7471A
Molybdenum	0.16 J	0.24	0.047	219770	EPA 3050B	EPA 6010B
Nickel	39	0.24	0.063	219770	EPA 3050B	EPA 6010B
Selenium	ND	0.48	0.15	219770	EPA 3050B	EPA 6010B
Silver	ND	0.24	0.038	219770	EPA 3050B	EPA 6010B
Thallium	ND	0.48	0.13	219770	EPA 3050B	EPA 6010B
Vanadium	36	0.24	0.054	219770	EPA 3050B	EPA 6010B
Zinc	120	0.95	0.053	219770	EPA 3050B	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 3050B
Project#:	04.B0698004	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC774671	Batch#:	219770
Matrix:	Soil	Prepared:	01/26/15
Units:	mg/Kg	Analyzed:	01/26/15

Analyte	Result	RL	MDL
Antimony	ND	0.50	0.15
Arsenic	ND	0.25	0.073
Barium	ND	0.25	0.054
Beryllium	ND	0.10	0.012
Cadmium	ND	0.25	0.026
Chromium	ND	0.25	0.063
Cobalt	ND	0.25	0.030
Copper	ND	0.25	0.083
Lead	ND	0.25	0.070
Molybdenum	ND	0.25	0.049
Nickel	ND	0.25	0.066
Selenium	ND	0.50	0.16
Silver	ND	0.25	0.040
Thallium	ND	0.50	0.14
Vanadium	ND	0.25	0.057
Zinc	0.69 J	1.0	0.056

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 3050B
Project#:	04.B0698004	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	219770
Units:	mg/Kg	Prepared:	01/26/15
Diln Fac:	5.000	Analyzed:	01/26/15

Type: BS Lab ID: QC774672

Analyte	Spiked	Result	%REC	Limits
Antimony	50.00	47.30	95	80-120
Arsenic	50.00	49.17	98	80-120
Barium	50.00	48.92	98	80-120
Beryllium	50.00	50.88	102	80-120
Cadmium	50.00	50.87	102	80-120
Chromium	50.00	49.28	99	80-120
Cobalt	50.00	47.10	94	80-120
Copper	50.00	47.44	95	80-120
Lead	50.00	47.33	95	80-120
Molybdenum	50.00	48.48	97	80-120
Nickel	50.00	48.57	97	80-120
Selenium	50.00	48.63	97	80-120
Silver	50.00	48.01	96	80-120
Thallium	50.00	48.23	96	80-120
Vanadium	50.00	51.07	102	80-120
Zinc	50.00	49.43	99	80-120

Type: BSD Lab ID: QC774673

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	50.00	46.55	93	80-120	2	20
Arsenic	50.00	48.69	97	80-120	1	20
Barium	50.00	48.85	98	80-120	0	20
Beryllium	50.00	48.45	97	80-120	5	20
Cadmium	50.00	50.83	102	80-120	0	20
Chromium	50.00	49.05	98	80-120	0	20
Cobalt	50.00	46.90	94	80-120	0	20
Copper	50.00	47.01	94	80-120	1	20
Lead	50.00	47.05	94	80-120	1	20
Molybdenum	50.00	48.04	96	80-120	1	20
Nickel	50.00	48.37	97	80-120	0	20
Selenium	50.00	48.05	96	80-120	1	20
Silver	50.00	47.61	95	80-120	1	20
Thallium	50.00	47.89	96	80-120	1	20
Vanadium	50.00	50.62	101	80-120	1	20
Zinc	50.00	49.28	99	80-120	0	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	EPA 3050B
Project#:	04.B0698004	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	219770
MSS Lab ID:	264091-002	Sampled:	01/21/15
Matrix:	Soil	Received:	01/21/15
Units:	mg/Kg	Prepared:	01/26/15
Basis:	as received	Analyzed:	01/26/15
Diln Fac:	5.000		

Type: MS Lab ID: QC774674

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<0.1466	47.17	17.27	37	15-120
Arsenic	2.119	47.17	44.63	90	69-120
Barium	88.69	47.17	140.7	110	35-154
Beryllium	0.3711	47.17	46.04	97	75-120
Cadmium	0.7834	47.17	45.78	95	71-120
Chromium	24.55	47.17	74.63	106	57-133
Cobalt	8.792	47.17	52.48	93	56-125
Copper	14.35	47.17	61.93	101	54-144
Lead	3.759	47.17	47.14	92	53-125
Molybdenum	0.06035	47.17	41.02	87	66-120
Nickel	18.36	47.17	65.38	100	44-141
Selenium	<0.1566	47.17	40.09	85	61-120
Silver	<0.03909	47.17	44.02	93	69-120
Thallium	<0.1377	47.17	42.25	90	59-120
Vanadium	50.12	47.17	98.52	103	52-144
Zinc	34.05	47.17	84.99	108	45-145

Type: MSD Lab ID: QC774675

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	48.08	17.27	36	15-120	2	41
Arsenic	48.08	42.40	84	69-120	7	35
Barium	48.08	115.9	57	35-154	20	36
Beryllium	48.08	44.12	91	75-120	6	20
Cadmium	48.08	44.49	91	71-120	5	25
Chromium	48.08	74.30	103	57-133	2	33
Cobalt	48.08	50.51	87	56-125	5	36
Copper	48.08	58.51	92	54-144	7	38
Lead	48.08	45.26	86	53-125	6	42
Molybdenum	48.08	40.00	83	66-120	4	20
Nickel	48.08	61.87	90	44-141	7	39
Selenium	48.08	38.80	81	61-120	5	33
Silver	48.08	42.01	87	69-120	7	22
Thallium	48.08	41.31	86	59-120	4	27
Vanadium	48.08	85.37	73	52-144	15	29
Zinc	48.08	78.35	92	45-145	9	39

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	METHOD
Project#:	04.B0698004	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	219778
Lab ID:	QC774704	Prepared:	01/26/15
Matrix:	Soil	Analyzed:	01/26/15
Units:	mg/Kg		

Result	RL	MDL
ND	0.017	0.0011

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	METHOD
Project#:	04.B0698004	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	219778
Matrix:	Soil	Prepared:	01/26/15
Units:	mg/Kg	Analyzed:	01/26/15
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC774705	0.2083	0.2028	97	80-120		
BSD	QC774706	0.2083	0.2079	100	80-120	2	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	METHOD
Project#:	04.B0698004	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	219778
MSS Lab ID:	264067-001	Sampled:	01/20/15
Matrix:	Soil	Received:	01/20/15
Units:	mg/Kg	Prepared:	01/26/15
Basis:	as received	Analyzed:	01/26/15

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC774707	0.1693	0.2016	0.3690	99	69-142		
MSD	QC774708		0.2049	0.3691	97	69-142	1	36

RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	WET
Project#:	04.B0698004	Analysis:	EPA 6010B
Matrix:	WET Leachate	Batch#:	219796
Units:	mg/L	Prepared:	01/26/15
Diln Fac:	1.000	Analyzed:	01/27/15

Type: BS Lab ID: QC774776

Analyte	Spiked	Result	%REC	Limits
Chromium	0.1000	0.09516	95	80-120
Lead	0.1000	0.09190	92	80-120

Type: BSD Lab ID: QC774777

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chromium	0.1000	0.09399	94	80-120	1	20
Lead	0.1000	0.09216	92	80-120	0	20

RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report			
Lab #:	264142	Location:	Peerless Lighting
Client:	Fugro West Inc.	Prep:	WET
Project#:	04.B0698004	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	219796
MSS Lab ID:	264095-001	Sampled:	01/21/15
Matrix:	WET Leachate	Received:	01/21/15
Units:	mg/L	Prepared:	01/26/15
Diln Fac:	10.00	Analyzed:	01/27/15

Type: MS Lab ID: QC774778

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chromium	0.03729	0.5000	0.5319	99	80-120
Lead	0.1611	0.5000	0.6208	92	67-120

Type: MSD Lab ID: QC774779

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chromium	0.5000	0.5230	97	80-120	2	20
Lead	0.5000	0.6235	92	67-120	0	23

RPD= Relative Percent Difference



FUGRO

1777 Botelho Drive, Suite 262
Walnut Creek, California 94596
T +1 925 949 7100
F +1 925 949 7070

Fugro Project No. 04.B0698004

Document No. 04.B0698004-L-001(Rev.00)

July 16, 2018

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Attention: Mr. John Jang

Re: Supplemental Site Information Report and Soil and Groundwater Management Plan, 2220 Fourth Street, Berkeley, California

Dear Mr. Jang,

Fugro USA Land, Inc. (Fugro) is pleased to provide you with this Supplemental Site Information Report which summarizes background information for the property located at 2220 Fourth Street, in Berkeley, California (Site, Figures 1 and 2). Herst Ventures, Inc. (Herst Ventures), the owner of the Site, has conducted voluntary sampling and analysis, and site inspection efforts since 1981 to evaluate soil and groundwater quality as they contemplate various redevelopment/property repurposing scenarios. The purpose of this document is to present an overview of general site conditions, a summary of environmental investigations and inspections completed to date, and to provide case background information as requested in your email dated March 10, 2016. Additionally, a Soil and Groundwater Management Plan (SGMP) is presented, which has been utilized by the property owner to mitigate risks posed to onsite workers should they encounter soil and groundwater during routine property repair and maintenance until such time that redevelopment of the Site occurs.

As this document will summarize, both the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) and the Department of Toxic Substances Control (DTSC) have been involved in oversight of investigation and cleanup activities related to the Site. The Site has been recorded under the following property/owner names: "Peerless Lighting", "Peerless Electric", and "Peerless Electric Company." Previous DTSC project managers include Mr. Claude Jemison and Mr. Thomas Price.

SITE DESCRIPTION

The Site is situated at an elevation of approximately 20 feet above mean sea level and is located in an area of West Berkeley with a known history of commercial and industrial businesses extending back to the early 1900s. The Site is completely occupied by a high one-story warehouse with a concrete slab covering the entire building footprint. The warehouse-type building is located on the west side of Fourth Street and is bordered to the north and south by other



warehouse space also owned by Herst Ventures. The Site is bordered to the west by the Union Pacific Railroad right-of-way (UPRR ROW) which comprises two main, high traffic rail lines and several old railroad sidings. A change in grade of about 4 to 6 feet exists between the location of the main rail lines and the floor slab of the current warehouse¹; the floor slab is elevated above the rail lines. The change in grade is accommodated by a narrow slope or embankment which extends from the west side of the building down to the location of a utility raceway located at the same grade as the main rail lines. The embankment is covered with vegetation. There is a 2 to 3-foot wide gap between the south side of the existing building at 2220 Fourth Street and the adjacent structure to the south. Soil is exposed at the ground surface along portions of the gap. Roof and surface drainage has been observed by Fugro and Herst Ventures staff to flow along the ground surface between the two buildings, to a point of discharge at the railroad ROW. At the point of discharge at the top of the embankment, the flow path is surfaced with concrete. The location of the railroad right-of-way and the unpaved gap in relation to the current warehouse building is shown on Figure 2.

Businesses occupying properties in the immediate vicinity of the Site have included metal fabrication, machine shops, foundries, laboratories, and paint manufacturing. These businesses have documented use of heavy metals, hydrocarbon fuels, oils, lubricants, degreasing agents, cutting fluids, solvents, acids, bases, and dye/pigment/paint intermediates. Environmental studies conducted in the Site vicinity have confirmed that releases of solvents, metals, and petroleum hydrocarbon compounds have locally impacted soils at points of release and as a result shallow groundwater has become impacted.

OPERATIONAL HISTORY

Prior to the Site being purchased in 1981 by a predecessor of Herst Ventures (Herst Lighting Corp., d.b.a. Peerless Electric Company), the 2220 Fourth Street parcel was used by a variety of pest control businesses from 1952 to 1981. These companies included Able Termite Control Company, Able Termite Control, Inc., Terminix Norcal, and its successor Terminix International. A warehouse with a reported partially paved floor area surrounded by unpaved areas was located on the west side of the property, and a parking lot was located on the east side of the property. The pest control businesses reportedly stored, mixed, and repackaged termite control chemicals including aqueous pentachlorophenol (PCP) in a hydrocarbon matrix, and aqueous chlordane in a hydrocarbon matrix.

In 1981, Peerless Electric Company ("Peerless") acquired the 2220 Fourth Street parcel and surrounding property from Terminix. Peerless became aware of contamination after it purchased the Site due to unpleasant odors and stains observed in the unpaved area of the former termite control warehouse where chemicals had been stored. At the request of the DTSC, several phases of soil and groundwater investigation were voluntarily conducted both onsite and within the immediately adjacent railroad right-of-way.

The current warehouse building was constructed following the completion of a removal action at the Site in 1984 which resulted in the removal of the former termite control company warehouse building. As-built drawings for the current warehouse structure dated August 15, 1988 (MBT Associates) show that the new structure was to be founded on a system of concrete piers and grade beams. In addition, import fill materials were to be used to raise site grades to provide a layer of non-expansive soil below the new slab. The drawings suggest that 20-inch diameter, 15 to 20-

¹ Site was redeveloped in 1989 following completion of a removal action in 1984, and included the construction of a new reinforced concrete slab-on-grade floor. Information related to the As-Built construction of the new warehouse building was obtained from *Supplemental Site Data Report, 2220 Fourth Street, Berkeley, California*, by Fugro West, Inc., dated August 3, 2007.



foot deep piers were to be extended at various locations around the perimeter of the new structure to provide foundation support. City building inspection records indicate that pier holes were completed in early 1989 and the warehouse structure was finished and occupied. Foundation details do not show the construction of a formal cut-off between the 2 to 3-foot unpaved gap located to the south and the building foundation, other than the presence of pier caps and the grade beams. The grade beams are shown to extend about 3 feet below the top of the new floor slab and may act to retard shallow seepage which may occur from the open alley areas to the south. The presence of the floor slab constructed in 1989 acts as a cap over the Site and provides modest control of groundwater level changes over time, as it acts to impede groundwater infiltration. Both of these conditions would tend to create a more stable local groundwater regime below the structure.

SUMMARY OF ENVIRONMENTAL INVESTIGATIONS

A brief summary of available environmental reports documenting the various investigations completed at and in the vicinity of the Site is presented below:

Report of Subsurface Soil Investigation, by Brown and Caldwell, dated July 28, 1983 (obtained from Preliminary Assessment, Peerless Electric, by DTSC, dated December 24, 2003²)

In 1983, Peerless Electric retained Brown and Caldwell to conduct an initial investigation to evaluate concentrations of pesticides in shallow subsurface soil in the area of the former termite control business practices. Soil samples were taken from the ground surface to a maximum depth of 3 feet below ground surface (bgs). Results of the investigation identified concentrations of organochlorine pesticides including Aldrin, Lindane, Chlordane, DDD, and Dieldrin, with concentrations of dieldrin (up to 1.1 milligrams per kilogram [mg/kg]) and chlordane (up to 3.8 mg/kg). Groundwater samples were also collected from the Site which identified concentrations of Chlordane (400 micrograms per liter [$\mu\text{g/L}$]), Lindane (10 $\mu\text{g/L}$), and heptachlor (15 $\mu\text{g/L}$). The approximate soil sampling locations are not known.

Voluntary Removal Action (obtained from Preliminary Assessment, Peerless Electric, by DTSC, dated December 24, 2003²)

In 1984, voluntary remedial efforts were undertaken under the supervision of the City of Berkeley Department of Health Services to remove pesticide contaminated source area soils within the unpaved area of the former warehouse building. A letter dated December 28, 1984 from the City of Berkeley Department of Health Services was included in the DTSC's 2003 Preliminary Assessment Report. In this letter, the City stated that they had reviewed the test results submitted by Brown and Caldwell on the second set of post clean-up samples taken at the Site, and the City recommended that Peerless proceed with the backfilling process. The letter further stated that the City *"recognizes the one chlordane reading above TTLC but because of the size of the area involved and the planned usage, backfilling can be completed. Peerless Electric should be aware of the ongoing groundwater monitoring being conducted by the Regional Water Quality Control Board. If, at some time in the future, a contamination problem develops indicating chlordane as a contaminant the Board could request removal of the backfill and the remaining hot spot."*

The excavation area was backfilled with imported soil, and the impacted soils were transported offsite as hazardous waste to a permitted landfill. Following the removal action, the Site was redeveloped and the existing Site building was completed in 1989. The remediated area (primary area of mixing of termite control compounds) was completely

² Information for activities completed in 1983/1984 was obtained from *Additional Site Study Report, Pentachlorophenol and Chlordane Concentrations, 2220 Fourth Street, Berkeley, California*, by Fugro West, Inc., dated February 27, 2007.



covered by a layer of import fill materials and the new reinforced concrete slab-on-grade floor. The approximate location of the excavation area is shown on Figure 2.

Groundwater Investigation Report – Peerless Electric Company, Berkeley, California, by Brown and Caldwell, dated August 8, 1985

In 1985, under the supervision of the SFRWQCB, four groundwater monitoring wells (W-1 through W-4) were installed within the former termite control business warehouse to investigate the extent of pesticide impacts to groundwater. No soil samples were collected for analysis. Groundwater analysis confirmed the presence of pesticides and identified the presence of chlorinated solvents. Analyses detected trans-1,2-dichloroethene (trans-1,2-DCE, 11 µg/L), 1,2-dichloroethane (1,2-DCE, 7.0 µg/L), trichloroethene (TCE, 1,400 µg/L), PCP (1,500 µg/L), and total petroleum hydrocarbons in the C14-C24 range (TPH, 5,000 µg/L) in the groundwater samples analyzed. The approximate location of wells W-1 through W-4 is shown on Figure 2.

Analytical Results Letter to the City of Berkeley Environmental Health Division – Peerless Lighting, Berkeley, California by Tank Excavators, dated July 1, 1987

In 1987, an approximately 100-gallon, empty (unused) underground storage tank (UST) was removed from the parking lot adjacent to the warehouse. Excavation of soils at the location of the suspected UST was conducted during 1987. Two soil samples were collected from the base of the excavation with 10 mg/kg of TPH identified in one of the two samples tested. No hydrocarbons were detected in the other sample analyzed. Excavated soil was stockpiled onsite and sampled and had an initial TPH concentration of 1,800 mg/kg. The stockpiled soil was allowed to aerate onsite prior to use as backfill of the excavation pit. A confirmation sample was subsequently collected from the aerated soil, with a concentration of 14 mg/kg of TPH.

Analytical Results Letter – Peerless Lighting Corporation, Berkeley, California by Polymatrix Associates, dated 1987³

Soil samples were reportedly collected from three areas (PC, PN, and PS) within the railroad embankment immediately west of the former warehouse in areas that were distinguished by a mounding of soil and/or surface staining. The exact locations of these samples are not known. Samples were apparently collected from the soil surface and from a depth of 3.5 feet. A total of five grab soil samples were collected and composited into four composite samples. Concentrations of PCP were reported as high as 460 mg/kg in the surface composite sample and at 21 mg/kg in the composite sample from a depth of 3.5 feet. A more detailed soil investigation was performed in this area in 1994 (see below). The location of area PC is shown on Figure 2. It is believed that areas PN and PS are located in the vicinity of borings SB-1 through SB-3 as shown on Figure 2.

Site Characterization Report for 2220 Fourth Street, Berkeley, California, by The Mark Group, dated October 11, 1988

In 1988, six additional groundwater monitoring wells were installed at and in the vicinity of the Site: four within the current warehouse (M-1 through M-4) and two hydraulically upgradient, east and southeast of the warehouse along Fourth Street (M-5 and M-6, respectively). Soil samples were collected from three of the borings (M-1, M-2, and M-4) and analyzed for PCP and volatile organic compounds (VOCs). Analysis of these soil samples indicated the presence

³ Additional information pertaining to this study is provided in the "Phase I Soil Investigation Report, Southern Pacific Transportation Company, Right-of-Way West of 2220 Fourth Street, Berkeley, California", by Industrial Compliance, dated January 30, 1995.



of 1,1,1-TCA (up to 2.0 micrograms per kilogram [$\mu\text{g}/\text{kg}$]), trichlorofluoromethane ($2.0 \mu\text{g}/\text{kg}$), TCE (up to $14 \mu\text{g}/\text{kg}$), and PCP (up to $2,200 \mu\text{g}/\text{kg}$). For groundwater, select VOCs including chloroform ($1.3 \mu\text{g}/\text{L}$), 1,1-dichloroethane (1,1-DCA, $0.8 \mu\text{g}/\text{L}$), 1,2-dichloroethane (1,2-DCA, up to $5.2 \mu\text{g}/\text{L}$), 1,1-dichloroethene (1,1-DCE, $68 \mu\text{g}/\text{L}$), trans-1,2-DCE ($0.6 \mu\text{g}/\text{L}$), 1,1,1-trichloroethane (1,1,1-TCA, $115 \mu\text{g}/\text{L}$), TCE ($82 \mu\text{g}/\text{L}$), and PCP (up to $1,740 \mu\text{g}/\text{L}$) were detected within the onsite monitoring wells. Concentrations of TCE (up to $102 \mu\text{g}/\text{L}$), trans-1,2-DCE (up to $10 \mu\text{g}/\text{L}$), and vinyl chloride (up to $46 \mu\text{g}/\text{L}$) were detected in the two offsite wells. The approximate locations of wells M-1 through M-6 is shown on Figure 2.

Groundwater Monitoring Report for Peerless Lighting, 2220 Fourth Street, Berkeley, California, by Subsurface Consultants, Inc.⁴, dated October 29, 1993

In 1993, the four onsite (M-1 through M-4) and two offsite (M-5 and M-6) groundwater monitoring wells were sampled and water quality analysis conducted by Subsurface Consultants, Inc. Select VOCs were detected in each of the six wells sampled during this event including TCE ($300 \mu\text{g}/\text{L}$), 1,1-DCE (up to $160 \mu\text{g}/\text{L}$), 1,2-DCA ($10 \mu\text{g}/\text{L}$), trans-1, 2-DCE (up to $13 \mu\text{g}/\text{L}$), 1,1,1-TCA (up to $300 \mu\text{g}/\text{L}$), methyl isobutyl ketone (MIBK, $200 \mu\text{g}/\text{L}$), benzene ($011 \mu\text{g}/\text{L}$), and vinyl chloride ($2.4 \mu\text{g}/\text{L}$). Total volatile petroleum hydrocarbons (TVH) were also detected in all but well M-2 at concentrations ranging from 100 to $320 \mu\text{g}/\text{L}$. Analyses only detected PCP in wells M-1 ($5,000 \mu\text{g}/\text{L}$) and M-2 ($1,900 \mu\text{g}/\text{L}$).

VOCs were detected in both the upgradient and onsite wells. This coupled with the fact that there was no documented use of these compounds onsite, and the known use and release of VOCs and their cleanup efforts in the Site vicinity, led to the conclusion that their presence was indicative of a regional plume associated with an offsite source.

Results of Soil Sampling Adjacent to 2220 Fourth Street, Berkeley, California, by Levine Fricke, dated April 27, 1994

In March 1994, the SFRWQCB requested that Southern Pacific Transportation Company (SPTCo, now UPRR) determine the vertical and lateral extent of contamination resulting from releases onto the SPTCo property. Levin Fricke completed three soil borings (SB-1 through SB-3) and collected soil samples from the railroad right-of-way on the west side of Site. Soil samples were collected from the ground surface to a maximum depth of 7.0 feet bgs. Low concentrations of TPH as diesel and motor oil (TPHd, TPHmo), ethylbenzene, and xylenes were detected within some of the soil samples analyzed. Analyses also detected PCP (up to $110 \text{ mg}/\text{kg}$) in six out of nine samples, and ranging to depths of 6.5 feet bgs. The approximate location of borings SB-1 through SB-3 is shown on Figure 2.

Soil and Groundwater Investigation, Borings 7, 8, 9, and 10 and October 1994 Groundwater Monitoring Event, 2220 Fourth Street, Berkeley, California, by Subsurface Consultants, Inc., dated November 23, 1994

In October 1994, the SFRWQCB and the City of Berkeley requested additional subsurface investigation at the Site. Three borings were drilled along the west side of the warehouse, and the fourth boring was completed within the approximate location of the previously unpaved portion of the former termite control business warehouse. Following the completion of drilling, these borings were converted to piezometers (S-7 through S-10) to facilitate the monitoring of water depth and collection of grab groundwater samples. In addition, groundwater samples were also collected from wells M-1 through M-5, at and in the vicinity of the Site. The approximate location of piezometers S-7 through S-10 is shown on Figure 2.

⁴ Subsurface Consultants, Inc. is a wholly owned subsidiary of Fugro USA Land, Inc.



For soil, analyses detected total extractable hydrocarbons up to 6,100 mg/kg, with elevated concentrations detected within and adjacent to the former termite control business warehouse. PCP was detected up to 130,000 µg/kg, with the highest concentrations detected adjacent to the former termite control business warehouse at a depth of 6.0 feet bgs. Dieldrin (up to 2,800 µg/kg) and chlordane (up to 28,000 µg/kg) were also detected in select samples analyzed. Various VOCs were also detected including BTEX, MIBK, and 1,1,1-TCA within one of the borings completed west of the warehouse.

For groundwater, analyses detected elevated concentrations of PCP (up to 52,000 µg/L) and total extractable petroleum hydrocarbons (up to 1,700,000 µg/L). Concentrations of select pesticides including dieldrin heptachlor epoxide, and chlordane were also detected in groundwater from borings completed west of the warehouse. Further, a variety of VOCs including 1,1-DCE, cis- and trans-1,2-DCE, BTEX, TCE, 1,1,1-TCA, MIBK, and 1,2-DCA were also detected in some of the groundwater samples analyzed.

Phase I Soil Investigation Report, Right-of-Way West of 2220 Fourth Street, Berkeley, California, by Industrial Compliance (Work Completed for Union Pacific), dated January 30, 1995

In December 1994, a soil investigation was completed on behalf of SPTCo, and included the completion of 13 soil borings (B-1 through B-13) to verify sample results from previous investigations and to assess the lateral and vertical extent of impacted soil on the SPTCo right of way. Soil samples were collected from the ground surface to maximum depth of 6 feet bgs. Analyses detected chlordane (up to 570 mg/kg) and PCP (up to 190 mg/kg). TPH concentrations were also detected in the shallow soil with concentrations ranging up to 2,006 mg/kg (C6 to C10 range), up to 9,548 mg/kg (C11 to C14 range), up to 1,923 mg/kg (C11 to C20 range), and up to 648 mg/kg (C21 to C30 range). No groundwater samples were collected or analyzed during this investigation. The approximate location of borings B-1 through B-13 is shown on Figure 2.

Scope of Work to Determine Current Pentachlorophenol and Chlordane Impacts to Soil and Groundwater, 2220 Fourth Street, Berkeley, California, by Fugro West, Inc.⁵, dated November 4, 2005

In 2005, Fugro and Herst Ventures presented to the DTSC a summary of investigation results from studies conducted through March 1995. These studies show that levels of PCP and chlordane in soil at concentrations exceeding California Human Health Screening Levels (CHHSLs) existed beneath the concrete floor slab within the warehouse on the west side of the Site (former unpaved portion of the Site), and were present within the embankment area immediately adjacent to the west side of the existing warehouse building. Similarly, levels of PCP and chlordane at concentrations in excess of Maximum Contaminant Levels (MCL) were located below the west side of the existing warehouse structure.

Levels of various VOCs including the solvents 1,1,1-TCA, 1,1-DCA, and other cleaning, cutting, and painting solvents have been shown to exist throughout this commercial and industrial area. These solvents have not been detected in Site soils at concentrations that would suggest the presence of a source area at the Site.

Based on discussions with the DTSC in September 2005, the DTSC requested soil and groundwater samples be collected from borings located adjacent to and exterior to the existing structure, from borings located between the

⁵ Fugro West Inc. is a wholly owned subsidiary of Fugro USA Land, Inc.



building and the main rail line, and from borings located on the west side of the railroad right-of-way. Fugro prepared a workplan for DTSC review and approval, which proposed the completion of 8 borings for soil and groundwater sample collection, and the collection of groundwater samples from existing onsite and offsite wells and piezometers. Fugro also began negotiations with UPRR to gain right-of-entry agreements to the ROW area west of the warehouse. Due to UPRR permitting issues and site constraints, this work was not completed until late 2006.

Additional Site Study Report, Pentachlorophenol and Chlordane Concentrations, 2220 Fourth Street, Berkeley, California, by Fugro West, Inc., dated February 27, 2007

In 2006, Fugro completed the Additional Site Study in accordance with Fugro's 2005 Workplan. A total of 8 borings (HA-1 through HA-8) were completed at the Site, with seven of the borings completed to a maximum depth of 7.5 feet bgs, as most borings met refusal at depths between 2.5 and 5.5 feet bgs. Fugro was able to complete boring HA-1 to a depth of 14.5 feet bgs to facilitate collection of a grab groundwater sample. A groundwater monitoring event was also conducted during this study. The event comprised measuring the depth to groundwater, and purging and sampling upon sufficient recharge, two existing groundwater monitoring wells (M-1 and M-2) and three existing piezometers (S-7, S-8 and S-10), all located within the footprint of the existing warehouse structure. The approximate location of borings HA-1 through HA-8 is shown on Figure 2.

A total of 25 soil samples were submitted for analysis. No PCP was detected above the laboratory reporting limits in any of the samples tested during this study for the railroad right-of-way. Detected concentrations of chlordane ranged from 2.4 µg/kg to 4,300 µg/kg within the railroad right-of-way. Most of the detected chlordane concentrations were below respective commercial/industrial screening criteria. Nineteen of the 25 samples analyzed possessed TPHd concentrations ranging from 1.6 mg/kg to 170 mg/kg. The detected concentrations are below the respective ESLs established by the RWQCB. No definitive correlation could be determined between the presence of the PCP and chlordane and these detected TPHd concentrations in soil. Chemical concentrations detected in soil during this investigation are shown on Figure 3.

For groundwater, PCP was not detected in the one groundwater sample collected and analyzed from the railroad right-of-way. PCP was detected in each groundwater sample tested from the selected wells and piezometers located within the existing Site building footprint. Detected concentrations of PCP ranged from 3,100 µg/L (M-1) to 11,000 µg/L (S-8). The concentrations of PCP have been detected at the well and piezometer locations in a mixture comprised of PCP, chlordane and petroleum hydrocarbons. The range of concentrations is similar to past studies. Chlordane was not detected within the grab groundwater sample location located on the west side of the railroad right-of-way. Chlordane was also not detected in groundwater samples from wells M-1 and M-2, and piezometer S-8. Chlordane was detected in the groundwater samples from piezometer S-7 (9.4 µg/L) and piezometer S-10 (1.9 µg/L). Detected TPHd concentrations in the groundwater ranged from 56 µg/L to 39,000 µg/L. Review of the laboratory chromatographs and discussions with the laboratory manager indicated that the relatively low TPHd concentration detected in the downgradient sampling location possessed a heavier petroleum fraction and did not have the same indicators (peaks) as the samples obtained from the wells and the piezometers. This strongly suggested that the source of the impacts at the downgradient sample location and the source of the impacts observed at the wells and piezometers were different. Historic chemical concentrations detected in groundwater for select analytes including, 1,1,1-TCA, 1,1-DCA, PCP, and Chlordane are shown on Figure 4.



Based on the results of the investigation, Fugro recommended the exposed soil in the embankment area on the west side of the existing structure be covered by a thin layer of concrete as a further measure of protection.

Supplemental Data Report, 2220 Fourth Street, Berkeley, California, by Fugro West, Inc., dated August 3, 2007

On May 7, 2007 representatives of Herst Ventures and Fugro met with the DTSC to discuss the findings of the 2006 study. Fugro indicated at the meeting that, in their opinion, the data and findings from the August 2006 study coupled with the data from various previous site studies strongly suggest that site conditions are stable. At the conclusion of the meeting, the DTSC requested that the supplemental data Fugro presented at the meeting be submitted in a formal report to the DTSC for their further consideration. Accordingly, Fugro submitted to the DTSC the Supplemental Data Report which presented site-specific data including information related to topography, foundation and concrete slab construction, and the observed presence of the UPRR ROW acting as a groundwater recharge zone, as rationale in support of the conclusion that existing improvements are controlling the contaminant plume associated with releases from the former termite control business.

Activities between 2008-2018

In January 2008, Ms. Karen Toth with the DTSC notified Fugro that the DTSC had reviewed Fugro's Additional Site Study Report and the Supplemental Data Report and agreed with Fugro's recommendation that the exposed soil along the embankment be capped as an interim remedial measure, until such time that the Site could be remediated along with Site redevelopment plans. The DTSC placed no time limit on the completion of the work. The DTSC also indicated that they would be developing a Land Use Covenant (LUC) for the Site which would likely cite the need for a site-specific Soil and Groundwater Management Plan when future redevelopment occurs.

In July 2008, Mr. Thomas Price with the DTSC prepared a draft Voluntary Cleanup Agreement (VCA) for signature such that once the VCA was recorded, a LUC to restrict future usage of the Site would be prepared. The VCA was not formalized as the Site owner had begun new plans to redevelop the Site which were under review by the City of Berkeley. Redevelopment plans included installing a Fire Access Way west of the Site at the request of the City of Berkeley, which would have completely encapsulated or removed the exposed embankment area. However, the redevelopment project was disbanded after several years of negotiating, and no additional activities regarding the embankment area have been undertaken.

Since 2008, Fugro has completed annual inspections at the Site to confirm that Site uses and surficial conditions have remained unchanged. During Fugro's October 2017 inspection, Site conditions were observed to remain substantially unchanged; no redevelopment has occurred, the areas overlying the former termite control business warehouse area are still in warehousing use, and access to the embankment areas are restricted. Fugro has also provided consultation to Site ownership regarding restricting any contact with Site soils and groundwater by untrained personnel. Photographs obtained during the last inspection are presented in Appendix A. Fugro's next Site inspection is scheduled for October 2018.

SUMMARY OF POTENTIAL HUMAN HEALTH RISKS

Several phases of soil and groundwater investigations have been voluntarily conducted both onsite and in the immediately adjacent railroad right-of-way. Investigations conducted at the Site by Herst Ventures and UPRR support the finding that impacts to soil and groundwater due to releases of termite control compounds occurring from past



operations at the Site are localized to subsurface materials covered with structurally reinforced concrete slabs and thickened foundation systems, or are located within and below the immediately adjacent embankment, which resides in a land/public use restricted area owned by the UPRR.

The existing physical barriers and institutional controls effectively limit routine human contact with the impacted soils and groundwater. Concentrations of PCP and chlordane in the embankment soil have been observed to decrease since testing was first conducted by UPRR in the mid-1990s. Therefore, in their present state, residual impacted soils do not appear to be posing a significant risk to human health and the environment. The concentrations of PCP, TPHd, and chlordane mixture in groundwater have not significantly changed over the past 20 years. While the concentrations detected do exceed MCL's, the local groundwater is brackish and not considered a useable drinking water source. It is Fugro's opinion that existing Site and subsurface conditions are effectively limiting the mobility of the groundwater plume below the Site. Additionally, the concrete floor slab and foundation system, which were constructed in 1989, are acting to limit infiltration of surface water, which in turn serves to normalize or stabilize groundwater fluctuations below the structure. These circumstances, when viewed in conjunction with the chemical data, strongly supports the finding that the plume is stable. The closest potential receptor at potential risk would be an aquatic receptor located more than 500 feet to the west. However, since the plume has not shown any significant migration over the past 20 years, the risk of exposure to an aquatic receptor is low.

RECOMMENDATIONS

Although redevelopment of the Site is not currently planned, Fugro prepared the SGMP presented in Appendix B to document the mitigation processes already in place to manage potential exposures during any onsite activities, including but not limited to landscaping, utility maintenance, tenant improvements, etc. until such time that redevelopment is slated to occur.

CLOSING

The information presented herein was meant to provide a brief overview of general site conditions, including environmental investigations completed to date, to provide case background information. Fugro will continue to conduct annual inspections at the Site to confirm that conditions continue to remain unchanged. As previously requested, all available historic environmental reports were uploaded to Geotracker. A copy of this letter report will also be uploaded to Geotracker. If you should have any questions regarding the information presented in this report, please call the undersigned at (925) 949-7100.

Sincerely,

Fugro USA Land, Inc.

A handwritten signature in black ink that reads "Karen Tonkovich".

Karen A. Emery-Tonkovich, P.G.

Associate Geologist

Copies Submitted: One electronic copy



A handwritten signature in black ink that reads "Jeriann Alexander".

Jeriann Alexander, P.E. REA

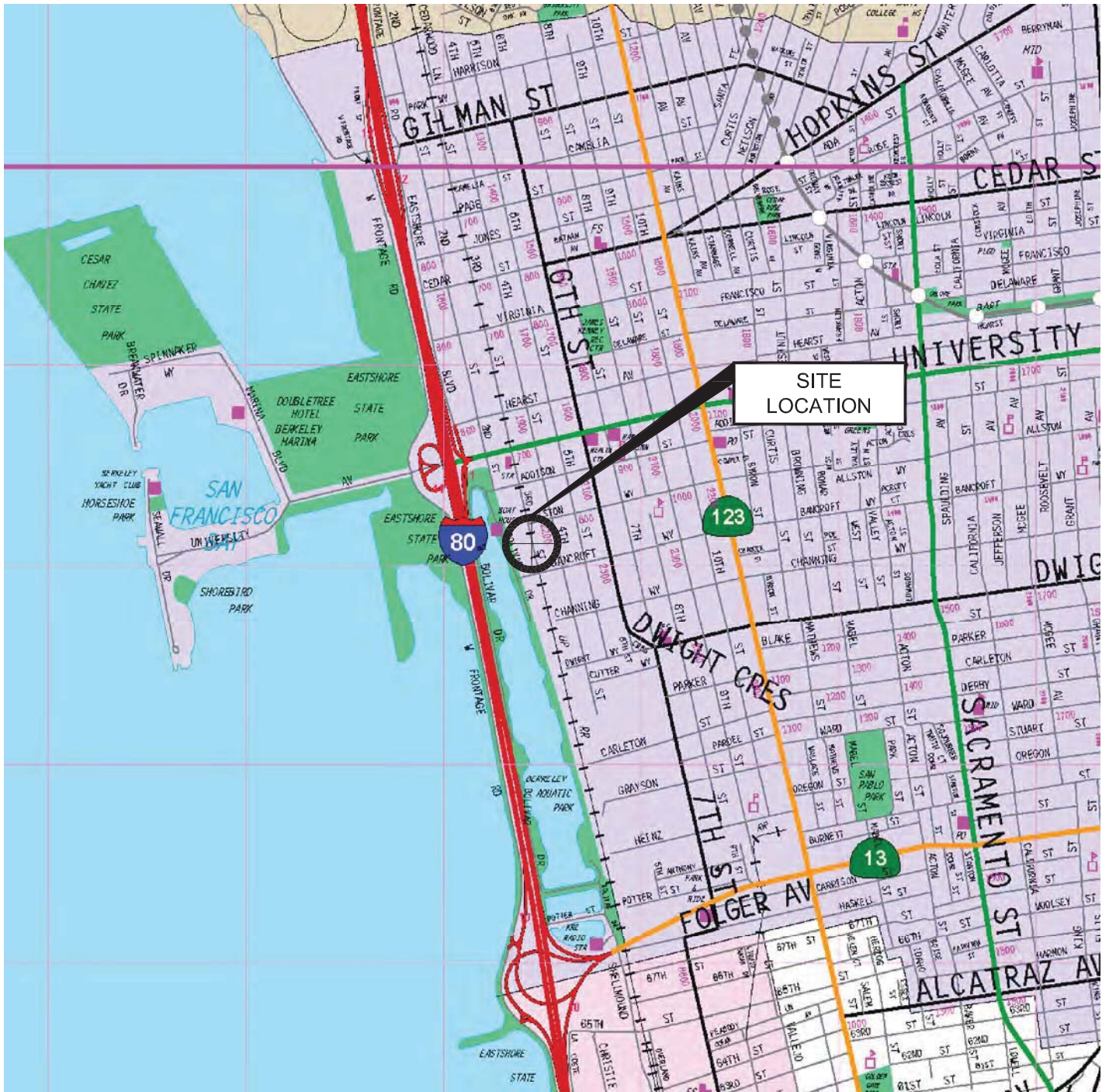
Principal Engineer



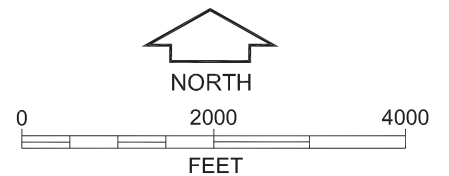


FIGURES

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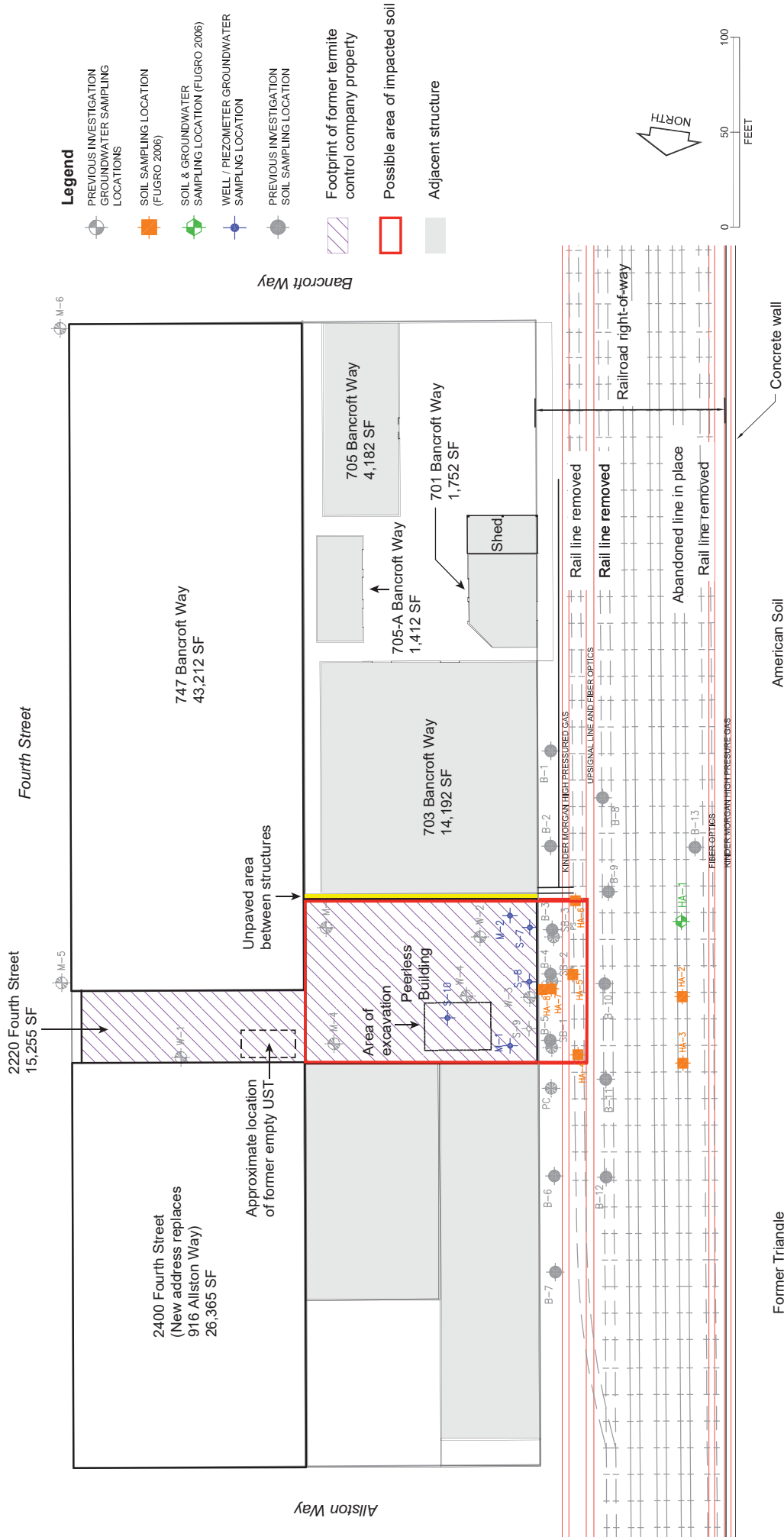
SOURCE: This Vicinity Map was based on 2006 Street Guide, Bay Area Counties, The Thomas Guide.



VICINITY MAP
2220 4th Street
Berkeley, California

FIGURE 1



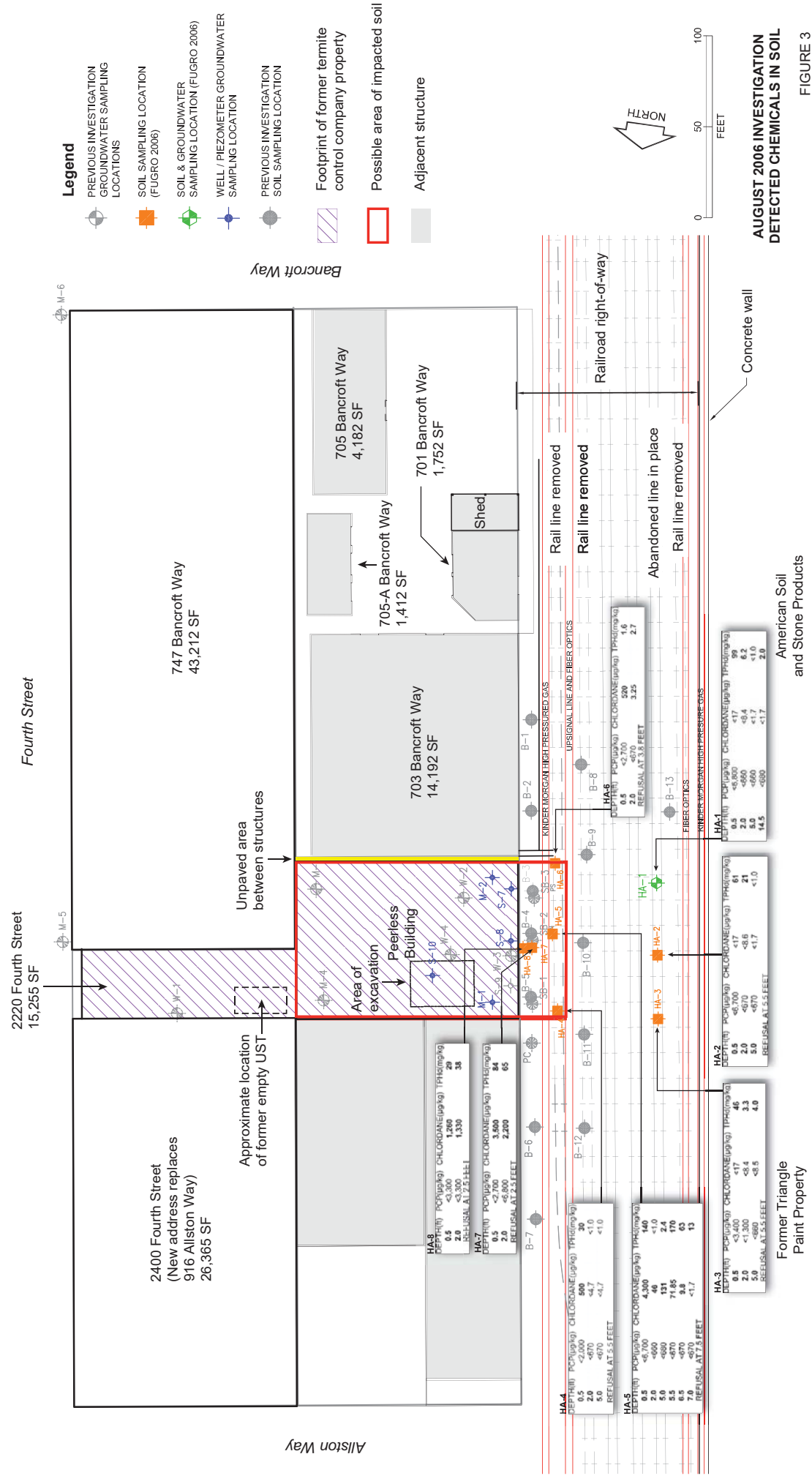


SITE PLAN
 FIGURE 2

Former Triangle
 Paint Property



HERST VENTURES INC.
 PEERLESS LIGHTING
 2220 FOURTH STREET, BERKELEY



AUGUST 2006 INVESTIGATION DETECTED CHEMICALS IN SOIL

FIGURE 3

Fugro Document No. 698.004



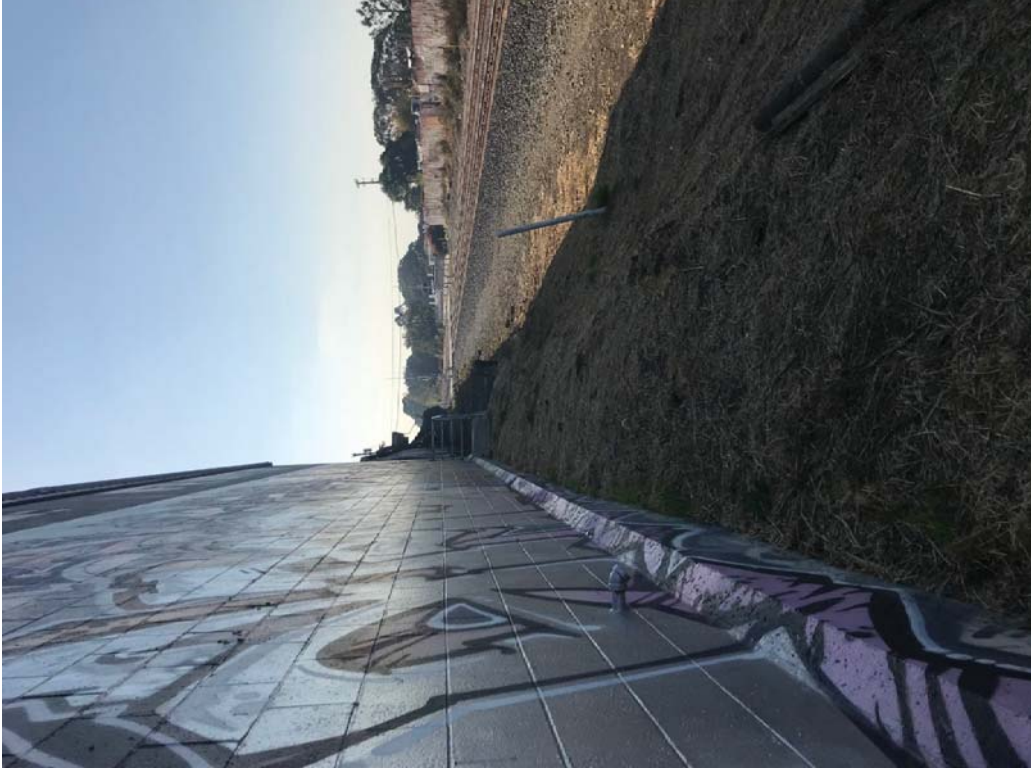
APPENDIX A
OCTOBER 2017 SITE VISIT PHOTOGRAPHS

SITE RECONNAISSANCE – OCTOBER 31, 2017

View looking northeast at the soil embankment along the rear west wall of the 2220 Fourth Street building.



View taken from the top of the soil embankment looking south along the west wall of the 2220 Fourth Street building.



SITE RECONNAISSANCE – OCTOBER 31, 2017

View of interior monitoring well/piezometer location (small rectangular cap in center of photo) located within western part of the 2220 Fourth Street building.



View of interior monitoring well/piezometer location within western part of the 2220 Fourth Street building.



SITE RECONNAISSANCE – OCTOBER 31, 2017

View of typical interior floor detail, showing concrete floors covering the entirety of the 2220 Fourth Street building footprint.



View of typical interior floor detail, showing concrete floors covering the entirety of the 2220 Fourth Street building footprint.





APPENDIX B
SOIL AND GROUNDWATER MANAGEMENT PLAN



SOIL AND GROUNDWATER MANAGEMENT PLAN

This SGMP is intended for use in conjunction for any potential onsite activities where subsurface soil and/or groundwater may be disturbed within the area outlined in red on the attached Plate (herein referred to as Area of Possible Impact). This SGMP is intended to supplement, not supersede, any required construction permits, including a Storm Water Pollution Protection Plan (SWPPP), a site-specific Health and Safety Plan (HASP), Fugitive Dust Control Plan (DCP), or others that may be required to complete any subsurface work.

Based on the previous investigations conducted at the Site, soil and groundwater within the Area of Possible Impact are known or likely to be contaminated. Work within this area requires that any Contractor or maintenance/repair workers have awareness training regarding the potential contaminants of concern and routes of potential exposure. Contractors are required to have a CLSB Class A & Hazardous Waste Licenses.

The following describes the soil and groundwater management practices that Contractors or onsite workers will be required to incorporate into their planning and project implementation.

Work Plans

All subsurface disturbance activities within the Area of Possible Impact are to be described in a work plan submitted to an environmental professional (Fugro) for review prior to any work. The environmental professional will review the work plan to ensure that steps are in place to mitigate construction and maintenance worker exposure and for appropriate management of potentially impacted materials. The work plans are to include at a minimum a task list and a Health and Safety Plan.

Specific Training for Soil or Groundwater Removal Activities

Any Contractor working within the Area of Possible Impact must have current Hazardous Waste Operations and Emergency Response (HAZWOPER; 29 CFR 1910.120) training.

Permits and Notifications

If required and/or appropriate for the scope of planned work, Contractors will obtain all permits and make all notifications to perform all aspects of work. This may include obtaining permits from the City of Berkeley and other agencies as required. Notifications should also be made to various agencies as required, including but not limited to the City of Berkeley and possibly the designated regulatory authority.

Contractors will also be required to notify Underground Service Alert (USA) a minimum of 48-hours prior to the start of any intrusive activities.

Proposition 65 requires that any person in the course of doing business provide clear and reasonable warning to individuals before knowingly and intentionally exposing them to any chemicals listed as subject to Proposition 65. PCP and chlordane are listed under Proposition 65. In its current state, impacted soils below the building footprint within the Area of Possible Impact shown on the attached Plate are capped by the current slab and foundation system. However, should work at the Site include any work within the Area of Possible Impact (below the existing slab or foundation system or any disturbance of the soil embankment west of the building), subsurface work would likely



encounter PCP and/or chlordane impacted soils and groundwater. As a result, any Contractor working in this area is required to provide posted signage providing a warning under Proposition 65.

Work notifications and permits will require a commitment by any Contractor to implement standard dust control methods, to minimize tracking soil offsite, to contain disturbed soil and groundwater, and to mitigate storm water and waste discharges to storm drains and drainages, during any subsurface activities.

Storm Water Pollution Prevention

Best Management Practices (BMPs) should be used during all intrusive activities to prevent sediment and contaminants from leaving the Site and entering City streets or storm drains. Sediment and erosion protection controls should be the primary methods for minimizing discharges of sediments from the Site. Sediment and erosion protection controls include the following:

- Placing straw bale barriers around entrances to storm drains and catch basins within work areas.
- Protecting or closing storm drains located within work areas
- Constructing berms or erecting silt fences at entrances to the Site, perimeters of work areas, soil stockpiles, or as needed to divert runoff from contacting exposed soil.
- All storm water runoff in the immediate vicinity will be diverted around or contained within the work area.
- Covering soil stockpiles, as described further below.

Soil Excavation and Handling

Any Contractor performing soil excavation, trenching, handling of soils within the Area of Possible Impact including trenching, work extending below the existing building foundations, or work within the soil embankment located west of the existing building, stockpiling, and/or loading and offsite disposal of materials, is subject to the provisions specified in this SGMP and all applicable local, state, and federal statutes, regulations, and guidelines.

As previously discussed, known contaminated soil is present within the Area of Possible Impact shown on the attached Plate. As a result, any soil excavated during Site/tenant improvement activities within this area should be stockpiled and tested in accordance with this SGMP to determine the appropriate management of the materials. Please note that under no circumstances will soil or import fill containing contaminants of concern be allowed to be used at the Site.

In the event that excavation activities encounter unanticipated conditions including but not limited to underground storage tanks (USTs), visibly impacted soils, and/or other contaminated materials, work must stop and the Site owner and the environmental professional (Fugro) must be contacted to evaluate any risks posed.

Soil Reuse

Excess soil from outside the Area of Possible Impact shown on the attached Plate may be reused if capped below concrete slabs or foundation materials and following review and approval of the laboratory test results suggesting that the materials do not contain contaminants of concern above regulatory thresholds.



Dust Control

Control of dust shall be necessary during any intrusive construction/maintenance activities which disturb soils at this Site. Activities that have a potential to generate particulates and require mitigative measures to control fugitive dust include grading, soil excavation/re-working, soil management control, utility trenching activities, stockpiling, site vehicular traffic, and wind erosion. Dust control measures during earthwork activities shall include the following:

- Vehicle speeds will be limited to 5 miles per hour at the site.
- Excavation activities will be controlled to minimize generation of dust.
- Areas to be excavated will be thoroughly wetted before starting soil excavation and loading activities.
- Drop heights will be kept to a minimum while loading transport vehicles.
- All stockpiles that are not being actively handled will be covered with weighted plastic sheeting or tarps.
- Trucks and transport vehicles will be covered when hauling soil or other loose material.
- Daily sweeping with brooms will be conducted if visible soil is observed on paved onsite access routes or parking areas.
- Daily, or more frequent if needed, sweeping with a street sweeper will be conducted if visible soil material is carried onto public streets.
- Water will be misted or lightly sprayed, as needed, using a watering truck and/or hoses to prevent formation of dust while excavating soil, transferring soil on-site, and loading or decontaminating transportation vehicles.
- In the event that wind speeds result in visible dust emissions or exceedances of dust action levels that cannot be controlled by the methods describe above, soil moving activities will be halted until wind speeds decrease and no visible emissions are observed.
- Cover soil stockpiles, as described below
- Tarpaulins or other effective covers shall be used for trucks carrying soils that travel on public streets.

Soil Stockpile Handling and Management

Temporary stockpiling of excavated soils may be required prior to offsite disposal. Contractors will be required to create a separate stockpile if visibly contaminated and/or odorous soil are encountered, such soils shall be segregated and stockpiled separately from non-visibly impacted soil. Please note that the Contractor is required to segregate and stockpile soils excavated from within the Area of Possible Impact from those soils excavated from areas outside of the Area of Possible Impact.

Plastic sheeting (minimum thickness of 10 mils) shall be placed under each stockpile to prevent migration. Each stockpile will be completely covered with plastic sheeting (minimum thickness of 10 mils) when not in use or at any time required to prevent migration of dust offsite. The cover must overlap a minimum of 2 feet and be sufficiently weighted/secured using stakes, hay bales, or other methods to prevent the cover from blowing away or billowing, and such that no portion of the soil is exposed to the atmosphere.

Prior to sheeting, stockpiled soils shall be adequately wetted with water once daily at a minimum or sufficiently to keep piles visibly wet and control fugitive emissions.



Stockpiles will be covered at the end of each work shift regardless of precipitation. If construction work is to be performed during the rainy season, then all stockpiles are to be surrounded by hay bales and/or silt traps to minimize sediment runoff.

Waste Characterization Sampling and Testing

The Contractor will coordinate with the environmental professional (Fugro) to evaluate excess or surplus soil for offsite disposal and reuse. Fugro will collect a minimum of one four-point composite sample from each stockpile (up to 500 cubic yards) requiring disposal. Each four-point composite will be comprised of four individual (discrete) samples that will be collected at random locations within four equal areas of the stockpile to provide equal representation of soil volume.

The discrete soil samples will be collected using hand sampling equipment and transferred to laboratory-provided sterile containers with Teflon lids. All samples will be labelled with a unique sample identification, date/time of sample collection, sampler's initials, and project number.

Samples will be placed on ice and transported under proper chain-of-custody protocols to a California-certified laboratory for compositing and analysis. Samples will be analyzed for the following:

- Total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPHg, TPHd, and TPHmo) using EPA Method 8015M with silica gel clean-up
- Volatile Organic Compounds (VOCs) using EPA Method 8260B
- Semi-volatile Organic Compounds (SVOCs) using EPA Method 8270C SIM
- Organochlorine pesticides using EPA Method 8081
- 17 Title 22 Metals using EPA Method 6010/7471

If the results of the 17 Title 22 metals analyses performed indicate that additional sample analyses are required to determine if the soils would be classified as hazardous for disposal, the following additional leachate tests will be performed.

- If the concentration of any metal (in mg/kg) is greater than 10 times the respective California Soluble Threshold Limit Concentration (STLC) value (in mg/L), the sample will be analyzed for soluble metals using the Waste Extraction Test (WET) method to determine if the soil is considered a California Hazardous, non-RCRA Hazardous Waste.
- If the concentration of any metal (in mg/kg) is at or greater than 20 times the respective USEPA's Toxicity Characteristic Leaching Procedure (TCLP) threshold (in mg/L), the sample will be analyzed for soluble metals using TCLP test methods to determine if the soil is considered a RCRA Hazardous Waste.

Wash water collected and drummed as part of any equipment decontamination activities (see below) will also be disposed of offsite. Samples will be collected by Fugro and analyzed for the following:

- TPHg, TPHd, and TPHmo using EPA Method 8015M with silica gel clean-up
- VOCs using EPA Method 8260B



- SVOCs using EPA Method 8270C SIM
- Organochlorine pesticides using EPA Method 8081
- 17 Title 22 Metals using EPA Method 6010/7471

Fugro will forward the analytical laboratory reports to the Contractor as soon as they are received. The Contractor will then utilize the analytical testing results to complete a waste profile for submission to the selected receiving facility for approval. The Contractor working at the Site will be required to contact the selected receiving facility and determine if additional sampling and/or analytical test methods beyond what is stated herein will be required. The Contractor will be required to forward this information to Fugro prior to sample collection.

Transportation and Disposal

Offhaul of surplus soil and/or waste water will be completed in compliance with California Department of Transportation (DOT), and other applicable federal, state, and local regulations. The Contractor will perform all load-out activities to minimize fugitive dust and soil erosion. A state-approved manifest system shall be used so that wastes can be tracked from generation to ultimate disposal. The manifests shall comply with all provisions of the appropriate transportation and disposal regulations.

Appropriate vehicles and operating practices shall be used to prevent spillage or leakage of materials from occurring onsite or in route to/from construction zone. Trucks shall be properly lined and shall be securely covered prior to exiting. All transport vehicles shall be thoroughly decontaminated and inspected before leaving the Site. Decontamination methods will include vacuuming and brushing to remove loose soils on vehicle tires and exteriors. Decontamination procedures including collection of wash waters, if any, will be performed in accordance with the requirements of this SGMP.

All vehicles leaving the work area(s) shall be inspected to check that no soil adheres to its wheels or undercarriage. Any such material must be removed at the work area before the truck is allowed to exit. Designated roadways that the vehicles take to and from the Site shall be regularly inspected to ensure that no leakage or tracking of mud has occurred. Any soil or mud visible from leaking or tracking along the designated roadways shall be cleaned immediately by the Contractor and the Contractor will implement additional procedures as necessary to prevent a recurrence.

Imported Fill

Any fill material/soil that may be imported to the Site will be subject to the requirements below for the project and require the approval of Owner and Fugro prior to import use. The Contractor must identify to Herst Ventures and Fugro the fill source and provide copies of analytical testing a minimum of two weeks prior to import use. Samples will be collected in accordance with the following frequencies (DTSC, 2001)¹:

Volume of Import	Samples per Soil Volume
Up to 1000 CY	One (1) sample per 250 Cubic Yard (CY)
1000 to 5000 CY	Four (4) samples for first 1000 CY and One (1) sample per each additional 500 CY
>5000 CY	Twelve (12) samples for first 5000 CY and One (1) sample per each additional 1000 CY

¹ Information Advisory Clean Imported Fill Material, Department of Toxic Substances Control. October 2001 (DTSC, 2001).



The analyses shall include the following:

- TPHg, TPHd, and TPHmo by EPA Method 8015M with silica gel clean-up
- VOCs by EPA Method 8260
- SVOCs by EPA Method 8270C, with detection limits less than ESLs
- 17 Title 22 Metals by Method 6010
- PCBs by EPA Method 8082
- Organochlorine Pesticides by EPA Method 8081

The analytical results will be compared to the SFRWQCB's Tier 1 ESLs. To compare metals results with those typical of naturally-occurring values, the Kearney Foundation of Soil Science, Division of Agriculture and Natural Resources, University of California, Kearney Foundation Special Report - Background Concentrations of Trace and Major Elements in California Soils, dated March 1996, will also be reviewed.

Dewatering

Given the shallow depth to water at the Site, Contractors may be required to periodically dewater deep excavations. If required, the Contractor shall periodically pump groundwater from the open excavations into a Baker tank or other water storage container, as needed. The Contractor will be required to profile the water for offsite disposal or for discharge to the sanitary sewer. If discharged to the sanitary sewer, the Contractor will be required to obtain a Discharge Permit from the City of Berkeley. The Contractor will be required to comply with all terms and conditions of the Discharge Permit, including but not limited to sampling and testing of the groundwater prior to discharge. It should be noted that the groundwater may need to be treated through filters, including but not limited to, granular activated carbon (GAC) filters prior to discharge.

Decontamination Measures

All contractor equipment including, but not limited to earthwork equipment and transportation vehicles, that come into contact with soils and groundwater within the Area of Possible Impact will be decontaminated prior to leaving the Site. Decontamination methods shall consist of scraping, brushing, and/or vacuuming to remove dirt on vehicle exteriors and wheels. If dry methods are not adequate, steam cleaning, high pressure washing, and cleaning solutions should be used. Wash waters should be collected, sampled, and disposed in accordance with provisions set forth in this SGMP under Waste Characterization Sampling and Testing.

CONTINGENCY PLANNING

In the event of an unforeseen situation during subsurface intrusive activities, the Contractor working at the Site will notify Herst Ventures immediately. In addition, the following contingency measures shall be implemented at the Site in the event that an unforeseen environmental condition occurs during Site excavation or maintenance activities.

Notifications of Unforeseen Environmental Conditions

In the event of an unforeseen environmental situation (e.g., visual or olfactory identification of unknown contamination, and/or identification of buried objects including underground storage tank, drums, etc.) at the site during contractor activities, the Contractor will immediately suspend all work activities in the immediate area and notify Herst Ventures



and Fugro. The Contractor will also implement access control measures adequate to provide necessary Site protection to onsite workers and the public during the evaluation phase.

Visual and olfactory identification of an unknown condition include, but is not limited to the following:

- Observance of oily, shiny, and/or opalescent soil, or soil that is saturated with free-phase petroleum product,
- Significantly stained or discolored soil that may indicate a potential source of contamination,
- Observance of groundwater sheen, or droplets of free-phase product on the groundwater surface,
- Soil and/or groundwater that has a significant chemical or hydrocarbon-type odor,
- Any other indicators that contamination may be present.

Fugro will evaluate the situation and direct the Contractor on the appropriate response actions required to address the situation. If necessary, Fugro will notify the SFRWQCB of the situation and proposed response actions proposed and or taken.

Assessment of Suspect Soil or Groundwater

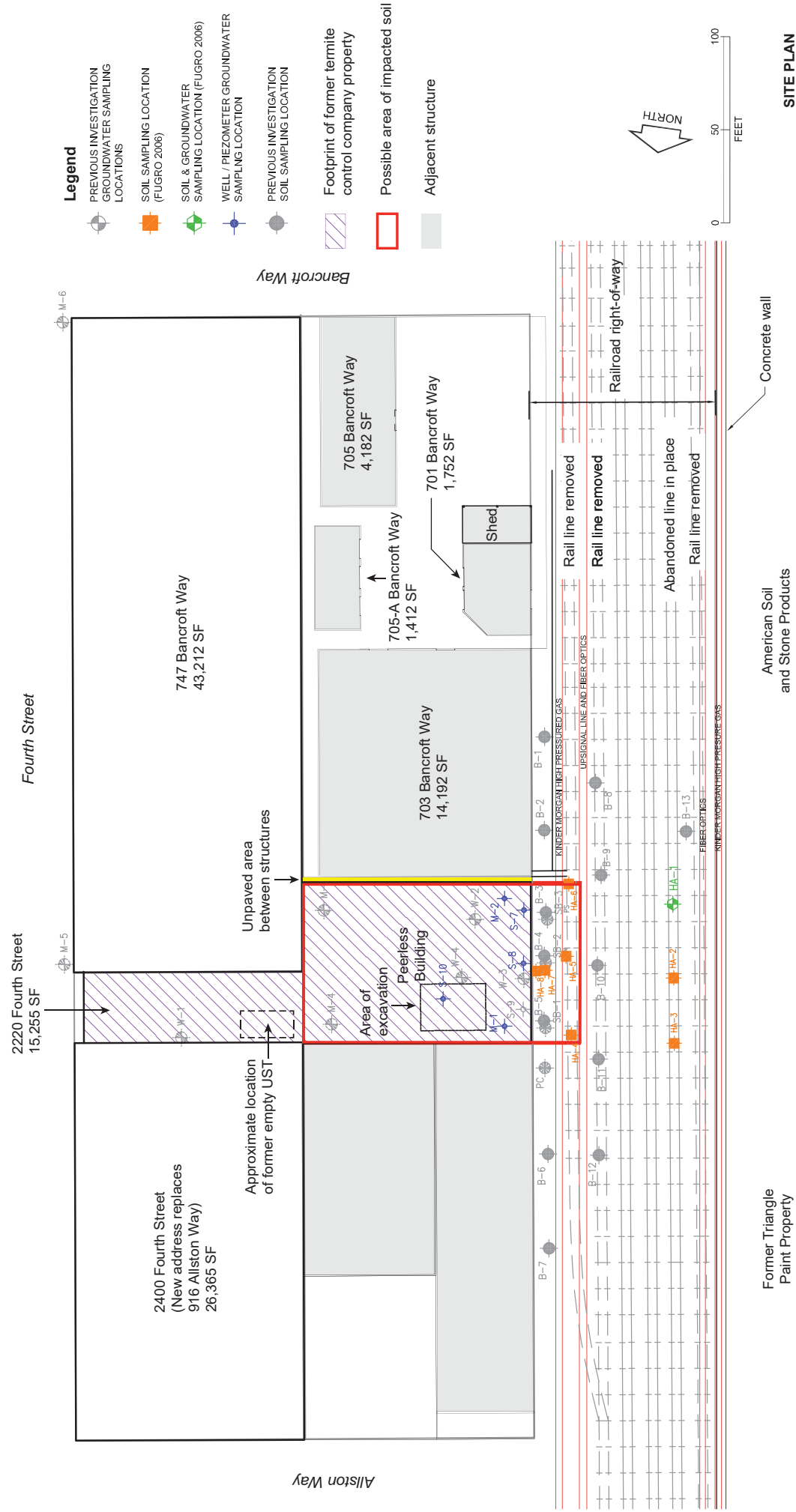
Fugro will conduct a preliminary assessment to determine if the suspect soil or water are a risk to human health and/or the environment as well as delineate the extent, if any, of contamination identified. Fugro will conduct air sampling around the perimeter of the secured area using a photoionization detector (PID) to measure VOCs in the breathing zone and a lower explosive limit (LEL)/O₂ meter to measure concentrations of combustible gasses and available oxygen. If the air sampling suggests a risk to workers at the Site, the site access control barriers will be relocated to provide adequate protection to Site personnel. If field observations and/or sampling indicate that the conditions represent a significant risk, Fugro will notify the SFRWQCB of the conditions and proposed remedial steps to remediate the area for the continuation of construction activities. If the conditions are considered de minimis and do not pose a threat to human health or the environment and would not be subject to an enforcement action by the SFRWQCB or other lead agency, Fugro will release the area to the Contractor for continued work activities.

Waste Profiling and Disposal

Soils or groundwater slated for off-haul as part of the contingency work process will be evaluated using data collected during the sampling phase. A waste profile will be submitted to the proposed receiving facility for acceptance of the waste. If the materials are classified as hazardous, an EPA identification number will be obtained prior to off-haul and disposal. Transportation of the waste will be conducted by a licensed waste hauler in compliance with California DOT, and other applicable federal, state, and local regulations, and in accordance with provisions included in this SGMP.



FIGURE



SITE PLAN

FIGURE 1

Former Triangle
 Paint Property

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LESS THAN 15% FINES	GW		WELL-GRADED GRAVELS WITH OR WITHOUT SAND
			GP		POORLY-GRADED GRAVELS WITH OR WITHOUT SAND
		GRAVELS WITH 15% OR MORE FINES	GM		SILTY GRAVELS WITH OR WITHOUT SAND
			GC		CLAYEY GRAVELS WITH OR WITHOUT SAND
	SANDS MORE THAN HALF COARSE FRACTION IS FINER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 15% FINES	SW		WELL-GRADED SANDS WITH OR WITHOUT GRAVEL
			SP		POORLY-GRADED SANDS WITH OR WITHOUT GRAVEL
		SANDS WITH 15% OR MORE FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OL		ORGANIC SILTS OR CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CH		INORGANIC CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OH		ORGANIC SILTS OR CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
HIGHLY ORGANIC SOILS		PT		PEAT AND OTHER HIGHLY ORGANIC SOILS	

ABBREVIATION KEY

- PID (PPM) - Photo Ionization Detector readings in parts per million from field headspace sample screening.
- BLOWS/6" - Blows required to drive sampler 6 inches as indicated on the logs using sample drive hammer weight of 140 pounds falling 30 inches.
- 2.5YR 6/2 - Soil Color according to Munsell Soil Color Charts (1994 Revised Edition)
- feet MSL - feet above Mean Seal Level
- feet BGS - feet below ground surface

SYMBOLS KEY

- No Soil Sample Recovered
- Partial Soil Sample Recovered
- Undisturbed Soil Sample Recovered
- Soil Sample Submitted for Laboratory Analysis
- Hydropunch Sample
- First Encountered Groundwater Level
- Piezometric Groundwater level



PES Environmental, Inc.
Engineering & Environmental Services

Unified Soil Classification System Chart
5th and Bancroft (East Block)
Berkeley, CA

PLATE

B-0



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
0				VERY DARK GRAYISH BROWN SILTY SAND (SM) (2.5Y 3/2), moist, very fine- to coarse-grained sand, sub angular to sub rounded gravel to 0.25 inch diameter (5% gravel, 75% sand, 20% fines)
0				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, very stiff (~3 tsf), very fine- to medium-grained sand, (0% gravel, 5% sand, 95% fines)
0		5		
0				Color change to dark gray (5Y 4/1) at 6 feet bgs.
0				Increase in sand to (0% gravel, 10% sand, 90% fines), color change to dark grayish brown (2.5Y 4/2) at 6.75 feet bgs.
0				DARK GRAYISH BROWN CLAY WITH SAND (CL) (2.5Y 4/2), moist, hard (>4.0 tsf), very fine- to medium-grained sand, (0% gravel, 15% sand, 85% fines) Increase in sand to (0% gravel, 25% sand, 75% fines) at 8.5 feet bgs.
0		10		
0				DARK GREENISH GRAY SANDY CLAY (CL) (10Y 4/1), moist, very stiff (~3.25 tsf), very fine- to fine-grained sand, (0% gravel, 30% sand, 70% fines) Increase in sand to (0% gravel, 35% sand, 65% fines) at 12.25 feet bgs.
0				OLIVE GRAY CLAY WITH SAND (CL) (5Y 4/2), moist, hard (>4.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel to 0.25 inch diameter, (5% gravel, 20% sand, 75% fines)
0		15		
0				DARK GREENISH GRAY CLAYEY SAND WITH GRAVEL (SC) (10Y 4/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel to 1 inch diameter, (10% gravel, 65% sand, 25% fines) Wet at 17 feet bgs.
0				DARK OLIVE GRAY SILTY SAND (SM) (5Y 3/2), wet, very fine- to coarse-grained sand, subangular to subrounded gravel to 0.75 inch diameter, (10% gravel, 65% sand, 25% fines) Color change to Brown (10YR 4/3), increase in sand to (10% gravel, 70% sand, 20% fines) at 18.25 feet bgs.
0.2		20		
0				BROWN SILTY SAND WITH GRAVEL (SM) (10YR 4/3), wet, very fine- to coarse-grained sand, subangular to subrounded gravel to 1 inch diameter, (15% gravel, 65% sand, 20% fines)
0				BROWN CLAYEY SAND WITH GRAVEL (SC) (10YR 4/3), wet, very fine- to coarse-grained sand, subangular to subrounded gravel to 1 inch diameter, (15% gravel, 65% sand, 20% fines)
0				BROWN CLAYEY SAND (SC) (10YR 4/3), wet, very fine- to coarse-grained sand, subangular to subrounded gravel to 0.75 inch diameter, (10% gravel, 70% sand, 20% fines)
0		25		
0				BROWN WELL GRADED SAND (SW) (10YR 4/3), wet, very fine- to coarse-grained sand, (0% gravel, 95% sand, 5% fines)
0				DARK YELLOWISH BROWN CLAY (CL) (10YR 4/4), moist, very stiff (~2.75 tsf), very fine- to medium-grained sand, (0% gravel, 10% sand, 90% fines)
0				Bottom of boring at 27 feet bgs. Grab groundwater samples GW1 and GW1-DUP collected from boring. Boring backfilled with neat cement grout.
		30		

LOG OF BORING/WELL_881_SKB-EB_V1.GPJ PES ENV.GDT_8/8/19

PROJECT	5th and Bancroft (East Block)	DIAMETER OF HOLE	2.25 inches
LOCATION	Berkeley, CA	TOTAL DEPTH OF HOLE	27 feet
JOB NUMBER	881.108.01	DRILL RIG	TEG - Powerprobe 9635
LOGGED BY	CNP	DATE STARTED	4/23/19
REVIEWED BY	DRAFT	DATE COMPLETED	4/23/19

PLATE

B-1



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
0				VERY DARK GRAY SANDY SILT (ML) (2.5Y 3/1), moist, stiff (~1.75 tsf), very fine- to coarse-grained sand, (0% gravel, 30% sand, 70% fines)
0				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, very stiff (~3 tsf), very fine- to medium-grained sand, (0% gravel, 5% sand, 95% fines)
0		5		Color change to dark gray (5Y 4/1) at 5.5 feet bgs.
0				DARK GRAY CLAY WITH SAND (CL) (5Y 4/1), moist, very fine- to medium-grained sand, hard (>4.0 tsf), (0% gravel, 15% sand, 85% fines)
0		10		Increase in very fine- to medium-grained sand to (0% gravel, 25% sand, 75% fines)
0		15		DARK GREENISH GRAY CLAYEY SAND WITH GRAVEL (SC) (10Y 4/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel to 1 inch diameter, (10% gravel, 65% sand, 25% fines)
0.1				BROWN SANDY CLAY (CL) (10YR 4/3), wet, very fine- to coarse-grained sand, (0% gravel, 30% sand, 70% fines)
0				BROWN CLAYEY SAND (SC) (10YR 4/3), wet very fine- to coarse-grained sand, subangular to subrounded gravel to 0.75 inch, (5% gravel, 55% sand, 40% fines)
0				BROWN SANDY CLAY (CL) (10YR 4/3), moist, very fine- to coarse-grained sand, hard (>4.0 tsf), subangular to subrounded gravel to 0.5 inch diameter, (5% gravel, 25% sand, 70% fines)
0		20		
0				DARK YELLOWISH BROWN CLAY (CL) (10YR 4/4), moist, hard (>4.0 tsf), very fine- to medium-grained sand, (0% gravel, 10% sand, 90% fines)
0				DARK YELLOWISH BROWN SANDY CLAY (CL) (10YR 4/3), moist, stiff (~1.5 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel to 0.75 inch diameter, (10% gravel, 30% sand, 60% fines)
0		25		
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, very stiff (~3.25 tsf), very fine- to coarse-grained sand, (0% gravel, 20% sand, 80% fines)
0		30		Bottom of boring at 27 feet bgs. Grab groundwater sample GW2 collected from boring. Boring backfilled with neat cement grout.

LOG OF BORING/WELL 881_SKB-EB_V1.GPJ PES_ENV.GDT 8/8/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

5th and Bancroft (East Block)
Berkeley, CA
881.108.01
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
27 feet
TEG - Powerprobe 9635
4/23/19
4/23/19

PLATE

B-2



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
0				BLACK CLAY (CL) (2.5Y 2/1), moist, very stiff (~2.5 tsf), very fine- to fine-grained sand, (0% gravel, 5% sand, 95% fines)
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/7), moist, stiff (~1.75 tsf), very fine- to medium-grained sand, (0% gravel, 15% sand, 20% fines)
0				Increase in sand to (0% gravel, 25% sand, 75% fines) at 3.25 feet bgs.
0		5		
0				Increase in subangular to subrounded gravel to 0.25 inch diameter, (trace% gravel, 25% sand, 75% fines) at 6 feet bgs.
0				
0				
0		10		BROWN CLAYEY SAND (SC) (10YR 4/3), moist, very fine- to coarse-grained sand, subangular to subrounded gravel to 1 inch diameter, (10% gravel, 65% sand, 25% fines) Color change to dark brown (10YR 3/3) at 10 feet bgs. Wet at 10.25 feet bgs.
0				Increase in fines to (10% gravel, 55% sand, 35% fines) at 11 feet bgs.
0				
0				
0		15		DARK YELLOWISH BROWN CLAYEY SAND WITH GRAVEL (SC) (10YR 4/4), wet, very fine- to coarse-grained sand, subangular to subrounded gravel to 0.75 inch diameter, (20% gravel, 55% sand, 25% fines)
0				Increase in fines to (15% gravel, 45% sand, 40% fines), moist at 15 feet bgs.
0				Decrease in fines to (20% gravel, 60% sand, 20% fines), wet at 16.5 feet bgs.
0				
0		20		Bottom of boring at 20 feet bgs. Grab groundwater sample GW3 collected from boring. Boring backfilled with neat cement grout.
		25		

LOG OF BORING/WELL: 881_SKB-EB_V1.GPJ PES_ENV.GDT 8/8/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

5th and Bancroft (East Block)
Berkeley, CA
881.108.01
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
20 feet
TEG - Powerprobe 9635
4/24/19
4/24/19

PLATE

B-3



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
0.5				CONCRETE
				BLACK CLAYEY SAND (SC) (2.5Y 2.5/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (trace gravel, 55% sand, 45% fines)
0.3				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, very stiff (~2.5 tsf), very fine-grained sand, (0% gravel, 5% sand, 95% fines)
0		5		DARK OLIVE GRAY CLAY WITH SAND (CL) (5Y 3/2), moist, very stiff (~3.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.25-inch diameter, (trace gravel, 15% sand, 85% fines)
0				Increase in sand to (0% gravel, 20% sand, 80% fines) at 8.5 feet bgs
0		10		DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, hard (>4.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (trace gravel, 30% sand, 70% fines)
0				Increase in subangular to subrounded gravel up to 0.25-inch diameter to (trace gravel, 25% sand, 75% fines), color change to DARK YELLOWISH BROWN (10YR 4/4) at 15.5 feet bgs
0		20		DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, hard (>4.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (trace gravel, 30% sand, 70% fines)
0				Increase in subangular to subrounded gravel up to 0.75-inch diameter to (5% gravel, 40% sand, 55% fines) at 25 feet bgs
0		25		DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, hard (>4.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (trace gravel, 30% sand, 70% fines)
0				Increase in subangular to subrounded gravel up to 0.75-inch diameter to (5% gravel, 40% sand, 55% fines) at 25 feet bgs
0				Decrease in sand to (5% gravel, 30% sand, 65% fines) at 27 feet bgs
0				Bottom of boring at 28 feet bgs. Grab groundwater sample GW4 collected from boring. Boring backfilled with neat cement grout.
0		30		

LOG OF BORING/WELL_881_SKB-EB_V1.GPJ PES ENV.GDT 8/8/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

5th and Bancroft (East Block)
Berkeley, CA
881.108.01
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
28 feet
ECA - Geoprobe
7/10/19
7/10/19

PLATE

B-4



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
0				BLACK CLAYEY SAND (SC) (2.5Y 2.5/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 55% sand, 40% fines)
0				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, very stiff (~2.5 tsf), very fine-grained sand, (0% gravel, 5% sand, 95% fines)
0				DARK GRAYISH BROWN CLAY WITH SAND (CL) (2.5Y 4/2), moist, very stiff (~3.75 tsf), very fine- to medium-grained sand, subangular to subrounded gravel up to 0.75-inch diameter, (trace gravel, 15% sand, 85% fines)
0				DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 55% sand, 40% fines) Increase in subangular to subrounded gravel up to 1.25-inch diameter to (10% gravel, 70% sand, 20% fines) at 7 feet bgs
0				DARK YELLOWISH BROWN CLAYEY SAND WITH GRAVEL (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1.25-inch diameter, (20% gravel, 65% sand, 15% fines) Color change to DARK GREENISH GRAY (5GY 4/1) at 10.5 feet bgs
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, very stiff (~3.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.25-inch diameter, (trace gravel, 15% sand, 85% fines)
0				DARK GRAYISH BROWN SANDY CLAY (CL) (2.5Y 4/2), wet, stiff (~1.25 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 1-inch diameter, (10% gravel, 25% sand, 65% fines)
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, very stiff (~3.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.25-inch diameter, (trace gravel, 15% sand, 85% fines)
				Bottom of boring at 19 feet bgs. Grab groundwater sample GW5 collected from boring. Boring backfilled with neat cement grout.

LOG OF BORING/WELL 881_SKB-EB_V1.GPJ PES_ENV.GDT 8/9/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

5th and Bancroft (East Block)
Berkeley, CA
881.108.01
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
19 feet
ECA - Geoprobe
7/10/19
7/10/19

PLATE

B-5



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
0				CONCRETE
0				BLACK CLAYEY SAND (SC) (2.5Y 2.5/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 55% sand, 40% fines)
0.2				VERY DARK GRAYISH BROWN CLAY (CL) (2.5Y 3/2), moist, very stiff (~2.5 tsf), very fine-grained sand, (0% gravel, 5% sand, 95% fines)
0				BLACK SANDY SILT (ML) (2.5Y 2.5/1), moist, very stiff (~2.5 tsf), very fine- to medium-grained sand, subangular to subrounded gravel up to 1-inch diameter, (5% gravel, 25% sand, 70% fines)
0		5		VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, very stiff (~2.5 tsf), very fine-grained sand, (0% gravel, 5% sand, 95% fines)
0				VERY DARK GREENISH GRAY CLAY WITH SAND (CL) (10Y 3/1), moist, hard (>4.0 tsf), very fine- to medium-grained sand, subangular to subrounded gravel up to 0.25-inch diameter, (trace gravel, 20% sand, 80% fines)
0				VERY DARK GREENISH GRAY CLAYEY SAND WITH GRAVEL (SC) (10Y 3/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (15% gravel, 70% sand, 15% fines)
0.5				DARK GREENISH GRAY CLAY WITH SAND (CL) (10Y 4/1), moist, hard (>4.0 tsf), very fine- to fine-grained sand, (0% gravel, 15% sand, 85% fines)
0				▽
0				Increase in subangular to subrounded gravel up to 0.5-inch diameter, very fine- to medium-grained sand, (5% gravel, 20% sand, 75% fines)
0		15		DARK YELLOWISH BROWN CLAY (CL) (10YR 4/4), moist, hard (> 4.0 tsf), very fine- to fine-grained sand, (0% gravel, 10% sand, 90% fines)
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, very stiff (~3.0 tsf), very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.25-inch diameter, (trace gravel, 15% sand, 85% fines)
0				Increase in sand to (trace gravel, 20% sand, 80% fines) at 20 feet bgs
0		20		
0				
0		25		
0				
0				Bottom of boring at 28 feet bgs. Grab groundwater sample GW6 collected from boring. Boring backfilled with neat cement grout.
0		30		

LOG OF BORING/WELL_881_SKB-EB_V1.GPJ PES_ENV.GDT 8/8/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

5th and Bancroft (East Block)
Berkeley, CA
881.108.01
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
28 feet
ECA - Geoprobe
7/10/19
7/10/19

PLATE

B-6

NI W WOFA51 881 I 6c c S1V/KI KLI LYSVR5 88119

%F/UA RISH HUYI					5QKWF- YF%LI
WUFAI LG/AFWLR I UHI %UAL 5OFY OF-T H WUFAI LA 5OFY YU. D00 I HSL	VAFSL-I %UAL 5OFY OF-T WUFAI L TAFW6HUY H - FAVLA 5OFY YU. t I HSL	W LFY VAFSL-I s H5O-LI I 5OFY 1PJ THYLI	Vs		s L-- Q/AFRLR VAFSL-I s H5O UA s H5OUN5 I FYR
			VK		KUUA-Q/AFRLR VAFSL-I s H5O UA s H5OUN5 I FYR
		VAFSL-I s H5O 1PJ UA %UAL THYLI	V%		I H5Q VAFSL-I s H5O UA s H5OUN5 I FYR
			VW		W FQLQ VAFSL-I s H5O UA s H5OUN5 I FYR
	I FYRI %UAL 5OFY OF-T WUFAI L TAFW6HUY H THYLA 5OFY YU. t I HSL I HSL	W LFY I FYRI s H5O-LI I 5OFY 1PJ THYLI	I s		s L-- Q/AFRLR I FYRI s H5O UA s H5OUN5 VAFSL-
			I K		KUUA-Q/AFRLR I FYRI s H5O UA s H5OUN5 VAFSL-
		I FYRI s H5O 1PJ UA %UAL THYLI	I %		I H5Q I FYRI s H5O UA s H5OUN5 VAFSL-
			I W		W FQLQ I FYRI s H5O UA s H5OUN5 VAFSL-
THYLG/AFWLR I UHI %UAL 5OFY OF-T H THYLA 5OFY YU. D00 I HSL	I H5I FYR W FQI - H5NHR - H5 POJ UA - LI I		%-		H5UAVFYHWI H5I UT - Us 5U %LRH% K-FI 5H5Qs H5O UA s H5OUN5 I FYR UA VAFSL-
			W-		H5UAVFYHW W FQI UT - Us 5U %LRH% K-FI 5H5Qs H5O UA s H5OUN5 I FYR UA VAFSL-
			U-		UAVFYHWI H5I UA W FQI UT - Us 5U %LRH% K-FI 5H5Qs H5O UA s H5OUN5 I FYR UA VAFSL-
	I H5I FYR W FQI - H5NHR - H5 VALF5LA 5OFY POJ		%O		H5UAVFYHWI H5I UT O W O K-FI 5H5Qs H5O UA s H5OUN5 I FYR UA VAFSL-
			WO		H5UAVFYHW W FQI UT O W O K-FI 5H5Qs H5O UA s H5OUN5 I FYR UA VAFSL-
			UO		UAVFYHWI H5I UA W FQI UT O W O K-FI 5H5Qs H5O UA s H5OUN5 I FYR UA VAFSL-
O W O - QUAVFYHWI UHI			K5		KLF5 FYR U5OLA O W O - QUAVFYHWI UHI

FccALSHF5HUY 6LQ

I Q%cU- I 6LQ

- PID (PPM) - Photo Ionization Detector readings in parts per million from field headspace sample screening.
- BLOWS/6" - Blows required to drive sampler 6 inches as indicated on the logs using sample drive hammer weight of 140 pounds falling 30 inches.
- 2.5YR 6/2 - Soil Color according to Munsell Soil Color Charts (1994 Revised Edition)
- (5, 10, 85) - (gravel%, sand%, fines%)
- feet MSL - feet above Mean Seal Level
- feet BGS - feet below ground surface

- Yf I f rj l np v) Al r f ul d B
- Kndm I f rj l np v) Al r f ul d B
- Ndbk B I f rj l np v) Al r f ul d B
- I f rj l np v) I bwp rth B (f o- nwf onf q Fdn), krlk
- O, Bf vbdra I np v)
- TrdkhL drf bdh d B V f bdBz nht o- l ul)
- Kth2f p l ton V f bdBz nht o) ul)



PES Environmental, Inc.
Engineering & Environmental Services

Unified Soil Classification System Chart
t h a ndB c ndr d (h E s I khc j f rey
c l ael) , CWF

K- F5L

B-0



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
0				DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.75-inch diameter, (5, 70, 25) Increase in gravel to (10, 75, 15) at 1.5 ft bgs
0.1				
0		5		Increase in fines to (5, 75, 20) at 4.5 ft bgs
				Some ash and brick debris at 5.5 ft bgs
0.1				YELLOWISH BROWN SANDY CLAY (CL) (10YR 5/4), moist, hard, very fine- to medium-grained sand, (0, 30, 70)
				BROWN CLAYEY SAND (SC) (10YR 4/3), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.75-inch diameter, (5, 75, 20)
0.1				Increase in subangular to subrounded gravel to (10, 65, 25)
		10		YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 5/4), moist, very stiff, very fine- to fine-grained sand, (0, 25, 75)
0				YELLOWISH BROWN CLAYEY SAND (CL) (10YR 5/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1-inch diameter, (10, 70, 20)
0				DARK YELLOWISH BROWN CLAY (CL) (10YR 4/4), moist, very fine- to fine-grained sand, hard, (0, 10, 90)
		15		
0				DARK YELLOWISH BROWN CLAYEY SAND WITH GRAVEL (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1-inch diameter, (15, 65, 20)
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/6), moist, stiff, very fine- to fine-grained sand, (0, 10, 90) Continue with hydropunch to 28 ft bgs.
		20		
		25		
		30		Bottom of boring at 28 ft bgs with hydropunch. GW level = 14.09' @ 15:30 Collected GW sample GW2
		35		Note: Clays are expansive.

LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV/GDT 8/9/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

4th and Bancroft (West Block)
Berkeley, CA
881.108.01.012
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
28 feet
PowerProbe 9500 PTO
6/18/19
6/18/19

PLATE

B-02



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
0		0		CONCRETE
		0.9		VERY DARK GREENISH GRAY CLAY (CL) (10Y 3/1), moist, very stiff, very fine-grained sand, (0, 5, 95)
		5		VERY DARK GREENISH GRAY CLAYEY SAND (SC) (10Y 3/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.75-inch diameter, (5, 75, 20)
		10		DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, hard, very fine- to medium-grained sand, (0, 15, 85)
		15		Color change to brown (10YR 4/3) at 8 ft bgs
		20		BROWN CLAY (CL) (10YR 4/3), moist, hard, very fine- to fine-grained sand, (0, 10, 90)
		20		BROWN CLAY WITH SAND (CL) (10YR 4/3), moist, stiff, very fine- to fine-grained sand, (0, 20, 80)
		28		Continue with hydropunch to 28 ft bgs.
		30		Bottom of boring at 28 ft bgs with hydropunch.
		30		GW level = 18.06' @ 07:20 (06/19/2019) GW level = 17.07' @ 07:20 (06/20/2019) Collected GW sample GW3
		35		Note: Clays are expansive.

LOG OF BORING/WELL: 881_SKB-WB_V1.GPJ PES_ENV.GDT 8/9/19

PROJECT	4th and Bancroft (West Block)	DIAMETER OF HOLE	2.25 inches
LOCATION	Berkeley, CA	TOTAL DEPTH OF HOLE	28 feet
JOB NUMBER	881.108.01.012	DRILL RIG	PowerProbe 9500 PTO
LOGGED BY	CNP	DATE STARTED	6/18/19
REVIEWED BY	DRAFT	DATE COMPLETED	6/18/19

PLATE

B-03



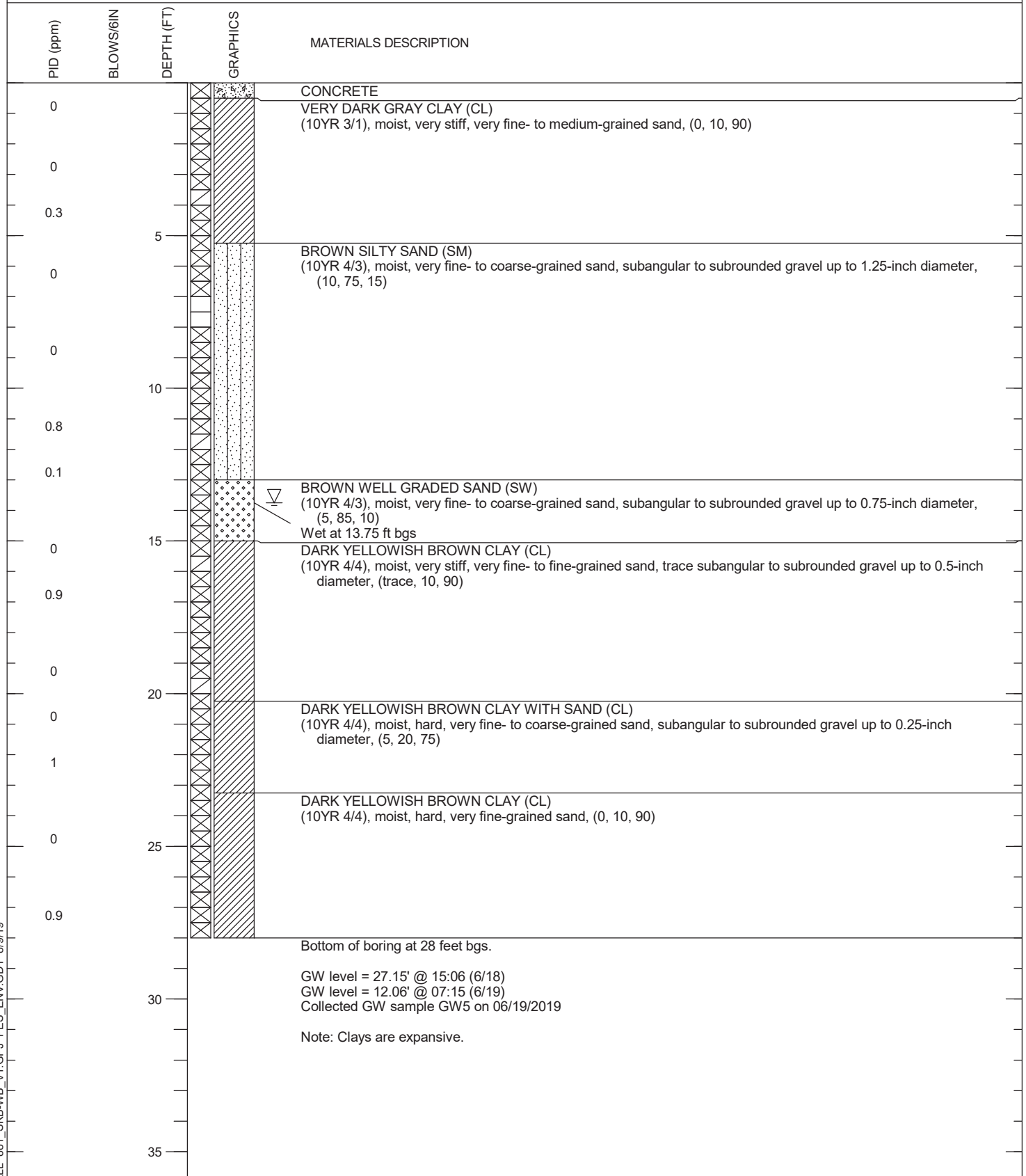
PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
0				CONCRETE
0.3				VERY DARK GREENISH GRAY CLAY WITH SAND (CL) (10Y 3/1), moist, hard, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5, 20, 75)
0.3		5		LIGHT OLIVE BROWN CLAY (CL) (2.5Y 5/3), moist, hard, very fine-grained sand, (0, 5, 95)
0				LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y 5/3), moist, hard, very fine- to fine-grained sand, (0, 25, 75)
0				DARK YELLOWISH BROWN CLAYEY SAND WITH GRAVEL (SC) (10YR 4/6), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1.25-inch diameter, (15, 70, 15)
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (2.5Y 4/4), moist, hard, very fine- to fine-grained sand, (0, 15, 85)
0.1		15		Increase in subangular to subrounded gravel up to 0.25-inch diameter to (5, 20, 75) at 14 ft bgs
0				Decrease in subangular to subrounded gravel to (0, 15, 85) at 16 ft bgs
0				Increase in subangular to subrounded gravel to (5, 20, 75) at 17.5 ft bgs
		20		YELLOWISH BROWN SANDY CLAY (CL) (10YR 5/4), moist, stiff, very fine- to fine-grained sand, (0, 30, 70) Increase in subangular to subrounded gravel up to 0.25-inch diameter to (5, 35, 60) at 19 ft bgs
				Bottom of boring at 20 feet bgs.
				GW level = 18.71' @ 12:50 GW level = 11.82' @ 15:40 Collected GW sample GW4
				Note: Clays are expansive.
		25		

LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV.GDT 8/9/19

PROJECT	4th and Bancroft (West Block)	DIAMETER OF HOLE	2.25 inches
LOCATION	Berkeley, CA	TOTAL DEPTH OF HOLE	20 feet
JOB NUMBER	881.108.01.012	DRILL RIG	PowerProbe 9500 PTO
LOGGED BY	CNP	DATE STARTED	6/18/19
REVIEWED BY	DRAFT	DATE COMPLETED	6/18/19

PLATE

B-04



LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV.GDT 8/9/19

PROJECT	4th and Bancroft (West Block)	DIAMETER OF HOLE	2.25 inches
LOCATION	Berkeley, CA	TOTAL DEPTH OF HOLE	28 feet
JOB NUMBER	881.108.01.012	DRILL RIG	PowerProbe 9500 PTO
LOGGED BY	CNP	DATE STARTED	6/18/19
REVIEWED BY	DRAFT	DATE COMPLETED	6/18/19

PLATE

B-05



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
0.3				CONCRETE
				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, very stiff, very fine- to medium-grained sand, some rootlets present, (0, 10, 90)
0				Color change to very dark grayish brown (2.5Y 3/2) at 4 ft bgs
		5		DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, very stiff, very fine- to medium-grained sand, (0, 15, 85)
0.1				DARK YELLOWISH BROWN SILT WITH SAND (ML) (10YR 4/4), moist, hard, very fine- to medium-grained sand, trace subangular to subrounded gravel up to 0.5-inch diameter, (trace, 15, 85)
				Color change to light olive brown (2.5Y 5/3) at 6.5 ft bgs
0				DARK YELLOWISH BROWN SANDY CLAY (CL) (10YR 4/4), moist, hard, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1-inch diameter, (5, 35, 60)
0				LIGHT OLIVE BROWN CLAYEY SAND (SC) (2.5Y 5/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1-inch diameter, (10, 70, 20)
0				BROWN CLAY (CL) (10YR 5/3), moist, very stiff, very fine- to fine-grained sand, (0, 5, 95)
		15		Increase in very fine to medium grained sand to (0, 10, 90), color change to brown (10YR 4/3) at 14.5 ft bgs
0				YELLOWISH BROWN SANDY CLAY (CL) (10YR 5/4), moist, stiff, very fine- to medium-grained sand, (0, 35, 65)
0		20		▽
0				Increase in subangular to subrounded gravel up to 0.75-inch diameter to (5, 35, 60) at 22.5 ft bgs
				YELLOWISH BROWN CLAYEY SAND WITH GRAVEL (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1.25-inch diameter, (20, 60, 20)
		25		Bottom of boring at 24 feet bgs - refusal. GW level = 20.10' (06/19/2019) GW level = 12.61' @ 07:05 (06/20/2019) Collected GW sample GW6 on 06/20/2019
				Note: Clays are expansive.
		30		

LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV.GDT 8/9/19

PROJECT	4th and Bancroft (West Block)	DIAMETER OF HOLE	2.25 inches
LOCATION	Berkeley, CA	TOTAL DEPTH OF HOLE	24 feet
JOB NUMBER	881.108.01.012	DRILL RIG	PowerProbe 9500 PTO
LOGGED BY	CNP	DATE STARTED	6/19/19
REVIEWED BY	DRAFT	DATE COMPLETED	6/19/19

PLATE

B-06



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
0				VERY DARK GREENISH GRAY CLAY (CL) (10Y 3/1), moist, very stiff, very fine-grained sand, (0, 5, 95)
0				DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, hard, very fine- to medium-grained sand, (0, 25, 75)
0		5		DARK YELLOWISH BROWN SANDY CLAY (CL) (10YR 4/4), moist, very fine- to medium-grained sand, subangular to subrounded gravel up to 0.75-inch diameter, (5, 30, 65)
0				GREENISH GRAY CLAYEY SAND (SC) (10Y 5/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5, 70, 25)
0				DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to fine-grained sand, (0, 80, 20) Increase in subangular to subrounded gravel up to 1.25-inch diameter, very fine to coarse grained sand to (10, 75, 15) at 8 ft bgs
0		10		Increase in fines to (10, 70, 20) at 10 ft bgs
0				▽
0		15		DARK YELLOWISH BROWN CLAYEY SAND WITH GRAVEL (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (15, 65, 20) Decrease in fines to (15, 70, 15) at 16 ft bgs
		20		Refusal at 19 feet bgs. Hydropunch used from 19 to 28 ft bgs. Boring collapsed back to 19 ft, only able to set temporary well screen to 19 ft bgs.
		25		
		30		Bottom of boring at 28 ft bgs with hydropunch. GW level = 18.31' Collected GW sample GW7 @ 10:30
		35		Note: Clays are expansive.

LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV/GDT 8/9/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

4th and Bancroft (West Block)
Berkeley, CA
881.108.01.012
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
28 feet
PowerProbe 9500 PTO
6/19/19
6/19/19

PLATE

B-07



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE (No Recovery)
0		5		VERY DARK GRAY CLAY (CL) (10YR 3/1), moist, very stiff, very fine- to fine-grained sand, (0, 10, 90) Color change to dark greenish gray (10Y 4/1) at 4.5 ft bgs
0				DARK GREENISH GRAY CLAYEY SAND (SC) (10Y 4/1), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 1-inch diameter, (10, 75, 15) Some plastic debris present at 6.5 ft bgs
0				DARK GRAYISH BROWN CLAY (CL) (2.5Y 4/2), moist, hard, very fine- to fine-grained sand, (0, 10, 90) Color change to dark greenish gray (10Y 4/1) at 8.5 ft bgs
0		10		OLIVE GRAY SANDY CLAY (CL) (5Y 4/2), moist, hard, very fine- to fine-grained sand, (0, 30, 70)
0				BROWN CLAY (CL) (10YR 4/3), moist, hard, very fine- to fine-grained sand, (0, 10, 90)
0		15		YELLOWISH BROWN SANDY CLAY (CL) (10YR 5/4), moist, stiff, very fine- to medium-grained sand, (0, 35, 65)
0				Increase in subangular to subrounded gravel up to 0.25-inch diameter to (trace, 35, 65) at 18.5 ft bgs
0		20		DARK YELLOWISH BROWN CLAY WITH SAND (CL) (10YR 4/4), moist, hard, very fine- to coarse-grained sand, trace subangular to subrounded gravel up to 0.5-inch diameter, (trace, 15, 85)
0				Increase in sand to (trace, 25, 75) at 22.5 ft bgs
				Refusal at 23 feet bgs. Hydropunch used from 23-28 ft bgs. Hole collapsed to 24 ft bgs. Attempted to use hydropunch again to 28 ft bgs, refusal encountered at 26 ft bgs.
		25		Refusal at 26 ft bgs.
				GW level = 12.51' @ 07:10 (06/20/2019)
		30		

LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV/GDT 8/9/19

PROJECT
LOCATION
JOB NUMBER
LOGGED BY
REVIEWED BY

4th and Bancroft (West Block)
Berkeley, CA
881.108.01.012
CNP
DRAFT

DIAMETER OF HOLE
TOTAL DEPTH OF HOLE
DRILL RIG
DATE STARTED
DATE COMPLETED

2.25 inches
26 feet
PowerProbe 9500 PTO
6/19/19
6/19/19

PLATE

B-08



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				VERY DARK GRAY POORLY GRADED SAND (SP) (2.5Y 3/1), moist, very fine- to fine-grained sand, trace subangular to subrounded gravel up to 1-inch diameter, (trace, 90, 10)
				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, stiff, very fine-grained sand, (0, 5, 95)
		5		LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y5/3), moist, hard, very fine- to medium-grained sand, (0, 15, 85)
				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, stiff, very fine-grained sand, (0, 5, 95)
				LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y5/3), moist, hard, very fine- to medium-grained sand, (0, 15, 85)
				VERY DARK GRAY CLAY (CL) (2.5Y 3/1), moist, stiff, very fine-grained sand, (0, 5, 95) Color change to dark yellowish brown (10YR 4/4), very fine to medium grained sand at 9 ft bgs
		10		DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5, 75, 20) Increase in subangular to subrounded gravel up to 0.75-inch diameter, (10, 75, 15) at 10.5 ft bgs
		15		BROWN CLAY WITH SAND (CL) (10YR 4/3), moist, hard, very fine- to coarse-grained sand, (0, 15, 85)
				DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.75-inch diameter, (10, 50, 40)
		20		DARK YELLOWISH BROWN SANDY CLAY (CL) (10YR 4/4), moist, stiff, very fine- to medium-grained sand, (0, 35, 65)
		25		Refusal at 23 feet bgs. Hydropunch used from 23-30 ft bgs.
		30		Bottom of boring at 30 ft bgs with hydropunch. GW level = 12.53' (06/20/2019) Collected GW sample GW9 @ 08:50 on 06/20/2019 Note: Clays are expansive.
		35		

LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV/GDT 8/9/19

PROJECT	4th and Bancroft (West Block)	DIAMETER OF HOLE	2.25 inches
LOCATION	Berkeley, CA	TOTAL DEPTH OF HOLE	30 feet
JOB NUMBER	881.108.01.012	DRILL RIG	PowerProbe 9500 PTO
LOGGED BY	CNP	DATE STARTED	6/19/19
REVIEWED BY	DRAFT	DATE COMPLETED	6/19/19

PLATE

B-09



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
				VERY DARK GRAY POORLY GRADED SAND (SP) (2.5Y 3/1), moist, very fine- to fine-grained sand, (0% gravel, 90% sand, 10% fines)
				BLACK CLAY (CL) (2.5Y 2/1), moist, very stiff (~3.25 tsf), very fine- to fine-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 5% sand, 90% fines)
		5		LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y 3/1), moist, stiff (~2.0 tsf), very fine- to fine-grained sand, (0% gravel, 15% sand, 85% fines)
				DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 75% sand, 20% fines)
				LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y 3/1), moist, stiff (~2.0 tsf), very fine- to fine-grained sand, (0% gravel, 15% sand, 85% fines)
		10		Hydrocarbon odor at 9.5 feet bgs. <i>Sample ID: SB-1-9.5</i>
				Bottom of boring at 10 feet bgs. Boring backfilled with neat cement grout.
		15		

LOG OF BORING/WELL_881_SKB-WB_V1.GPJ PES_ENV/GDT 8/9/19

PROJECT 4th and Bancroft (West Block)
 LOCATION Berkeley, CA
 JOB NUMBER 881.108.01.012
 LOGGED BY AA
 REVIEWED BY DRAFT

DIAMETER OF HOLE 2.25 inches
 TOTAL DEPTH OF HOLE 10 feet
 DRILL RIG ECA - Geoprobe 54LT
 DATE STARTED 7/20/19
 DATE COMPLETED 7/20/19

PLATE
B-10



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
				VERY DARK GRAY POORLY GRADED SAND (SP) (2.5Y 3/1), moist, very fine- to fine-grained sand, (0% gravel, 90% sand, 10% fines)
				BLACK CLAY (CL) (2.5Y 2/1), moist, very stiff (~3.25 tsf), very fine- to fine-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 5% sand, 90% fines)
				Concrete debris at 3 feet bgs
		5		LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y 3/1), moist, stiff (~2.0 tsf), very fine- to fine-grained sand, (0% gravel, 15% sand, 85% fines)
				DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 75% sand, 20% fines)
				DARK GREENISH GRAY CLAY (CL) (10Y 4/1), moist, hard (>4.0 tsf), very fine- to fine-grained sand, (0% gravel, 10% sand, 90% fines)
		10		Hydrocarbon odor at 9.5 feet bgs <i>Sample ID: SB-2-9.5</i>
				Bottom of boring at 10 feet bgs. Boring backfilled with neat cement grout.
		15		

LOG OF BORING/WELL 881_SKB-WB_V1.GPJ PES_ENV/GDT 8/9/19

PROJECT 4th and Bancroft (West Block)
 LOCATION Berkeley, CA
 JOB NUMBER 881.108.01.012
 LOGGED BY AA
 REVIEWED BY DRAFT

DIAMETER OF HOLE 2.25 inches
 TOTAL DEPTH OF HOLE 10 feet
 DRILL RIG ECA - Geoprobe 54LT
 DATE STARTED 7/20/19
 DATE COMPLETED 7/20/19

PLATE

B-11



PID (ppm)	BLOWS/6IN	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE
				VERY DARK GRAY POORLY GRADED SAND (SP) (2.5Y 3/1), moist, very fine- to fine-grained sand, (0% gravel, 90% sand, 10% fines)
				BLACK CLAY (CL) (2.5Y 2/1), moist, very stiff (~3.25 tsf), very fine- to fine-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 5% sand, 90% fines)
				LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y 3/1), moist, stiff (~2.0 tsf), very fine- to fine-grained sand, (0% gravel, 15% sand, 85% fines)
		5		<i>Sample ID: SB-3-5</i>
				DARK YELLOWISH BROWN CLAYEY SAND (SC) (10YR 4/4), moist, very fine- to coarse-grained sand, subangular to subrounded gravel up to 0.5-inch diameter, (5% gravel, 75% sand, 20% fines)
				LIGHT OLIVE BROWN CLAY WITH SAND (CL) (2.5Y 3/1), moist, stiff (~2.0 tsf), very fine- to fine-grained sand, (0% gravel, 15% sand, 85% fines)
		10		Bottom of boring at 10 feet bgs. Boring backfilled with neat cement grout.
		15		

LOG OF BORING/WELL_881_SKB-WB_V1.GPJ PES_ENV/GDT 8/9/19

PROJECT 4th and Bancroft (West Block)
 LOCATION Berkeley, CA
 JOB NUMBER 881.108.01.012
 LOGGED BY AA
 REVIEWED BY DRAFT

DIAMETER OF HOLE 2.25 inches
 TOTAL DEPTH OF HOLE 10 feet
 DRILL RIG ECA - Geoprobe 54LT
 DATE STARTED 7/20/19
 DATE COMPLETED 7/20/19

PLATE

B-12

**Table 1. Summary of Laboratory Analytical Results for Grab Groundwater Samples
2213-2231 Fourth Street and 2212-2246 Fifth Street
Berkeley, California**

Sample Location ID	Sample Depth (ft bgs)	Sample Date	GW1	GW1-DUP	GW2	GW3	TB1	GW4	GW5	GW6	TB2
			4/23/2019	4/23/2019	4/24/2019	4/24/2019	4/18/2019	7/12/2019	7/10/2019	7/12/2019	7/10/2019
			Units	Units	Units	Units	Units	Units	Units	Units	Units
Class	Analyte	ESL - Tier 1 ⁽¹⁾									
VOCs	Dichlorodifluoromethane	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Chloromethane	188	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Vinyl Chloride	0.0086	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	8.73	<0.500	<0.500
VOCs	Bromomethane	7.5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Chloroethane	16	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Trichlorofluoromethane	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,1-Dichloroethene	3.2	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	1.16	<0.500
VOCs	Trichlorotrifluoroethane	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Methylene Chloride	5.0	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
VOCs	Trans-1,2-Dichloroethene	10	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,1-Dichloroethane	5.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	2.08	1.06	<0.500
VOCs	cis-1,2-Dichloroethene	6.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	52.6	1.43	<0.500
VOCs	2,2-Dichloropropane	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Bromochloromethane	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Chloroform	0.81	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,1,1-Trichloroethane	62	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Carbon Tetrachloride	0.061	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,1-Dichloropropene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Benzene	0.42	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,2-Dichloroethane	0.50	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	2.50	<0.500	<0.500
VOCs	Trichloroethene	1.2	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.860	<0.500
VOCs	1,2-Dichloropropane	2.3	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Dibromomethane	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Bromodichloromethane	0.87	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	trans-1,3-Dichloropropene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Toluene	40	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.590	<0.500	<0.500
VOCs	cis-1,3-Dichloropropene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,1,2-Trichloroethane	5.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Tetrachloroethene	0.64	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,3-Dichloropropane	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Dibromochloromethane	34	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,2-Dibromoethane	0.050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Chlorobenzene	25	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,1,1,2-Tetrachloroethane	0.57	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Ethylbenzene	3.5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Xylene (M+P)	20	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.510	<0.500	<0.500
VOCs	Xylene(O)	20	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Styrene	10	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Bromoform	80	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Isopropylbenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,1,2,2-Tetrachloroethane	1.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Bromobenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,2,3-Trichloropropane	0.0050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	N-Propylbenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	2-Chlorotoluene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,3,5-Trimethylbenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	4-Chlorotoluene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	Tert-Butylbenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,2,4-Trimethylbenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	sec-Butylbenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,3-Dichlorobenzene	65	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	4-Isopropyl Toluene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,4-Dichlorobenzene	2.6	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	N-Butylbenzene	ne	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,2-Dichlorobenzene	14	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,2-Dibromo-3-Chloropropane	0.028	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOCs	1,2,4-Trichlorobenzene	5.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
VOCs	Hexachlorobutadiene	0.14	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
VOCs	Naphthalene	0.17	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
VOCs	1,2,3-Trichlorobenzene	ne	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
TPH	Gasoline Range Organics (C6-C10)	100	<50	<50	<50	<50	--	<50	<50	<50	--
TPH	Diesel Range Organics (C12-C23)	100	<55.6	<62.5	<76.9	<64.1	--	<52.1	<54.9	<51.5	--
TPH	Heavy Range Organics (C24-C34)	100	<55.6	<62.5	<76.9	<64.1	--	<52.1	<54.9	<51.5	--

Notes

(1) - San Francisco Regional Water Quality Control Board Environmental Screening Levels - Tier 1 (RWQCB, July 2019, Rev. 2)

Green Shading = Result is greater than RWQCB Environmental Screening Level - Tier 1

ft bgs - Feet below ground surface/building foundation slab

ne - Screening Level is not established

VOCs - Volatile Organic Compounds

TPH - Total Petroleum Hydrocarbons

TB - Trip Blank sample

DUP - Duplicate Sample

< - Not detected at or above the respective laboratory method reporting limit

Results reported in micrograms per Liter (µg/L); detections in bold font

Table 3. Summary of Laboratory Analytical Results for Indoor Air Samples
2213-2231 Fourth Street and 2212-2246 Fifth Street
Berkeley, California

Analyte	CAS	MRL	ESL-C ⁽¹⁾	ESL-R ⁽¹⁾	Sample Location ID	Sample Type											
						IA1	IA2	IA3	IA4	IA5	AA	IA6	IA6-DUP	IA7	IA8	AA2	AA3
						Interior	Interior	Interior	Interior	Interior	Ambient	Interior	Duplicate	Interior	Interior	Ambient	Ambient
						4/18/2019	4/18/2019	4/18/2019	4/18/2019	4/18/2019	4/18/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019	7/17/2019
						ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³
Dichlorodifluoromethane	75-71-8	0.0495	ne	ne	ESL-C ⁽¹⁾	0.980	3.34	2.92	2.37	1.46	3.24	2.55	2.72	1.15	1.55	1.51	2.75
Chloromethane	74-87-3	0.0413	94	3.9E+02	ne	0.322	1.11	0.998	0.804	0.527	1.93	0.826	1.00	0.374	0.515	0.567	0.938
Dichlorotetrafluoroethane	76-14-2	0.0699	ne	ne	ne	<0.0699	0.140	0.122	0.0953	0.0809	0.130	0.130	0.151	<0.0699	<0.0699	0.103	0.150
Vinyl Chloride	75-01-4	0.00895	0.0095	0.16	ne	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895	<0.00895
Bromomethane	74-83-9	0.0388	5.2	22	ne	<0.0388	0.0743	<0.0388	<0.0388	<0.0388	<0.0388	0.0433	0.0657	<0.0388	<0.0388	<0.0388	<0.0388
Chloroethane	75-00-3	0.0264	1.0E+04	4.4E+04	ne	<0.0264	0.0372	0.0824	0.0347	<0.0264	0.384	<0.0264	<0.0264	<0.0264	<0.0264	<0.0264	<0.0264
Trichlorofluoromethane	75-69-4	0.0562	ne	ne	ne	0.580	1.90	1.67	1.42	0.807	1.78	1.37	1.41	0.803	0.803	0.796	1.45
1,1-Dichloroethane	75-35-4	0.0397	73	3.1E+02	ne	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397
Trichlorofluoroethane	76-13-1	0.383	ne	ne	ne	<0.383	0.612	0.546	0.447	<0.383	0.602	0.558	0.641	<0.383	<0.383	<0.383	0.656
Methylene Chloride	75-09-2	1.04	1.0	12	ne	1.37	1.74	1.49	1.36	<1.04	1.53	1.28	1.54	<1.04	<1.04	<1.04	1.290
trans-1,2-Dichloroethane	156-60-5	0.0396	83	3.5E+02	ne	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396	<0.0396
1,1-Dichloroethane	75-34-3	0.0405	1.8	7.7	ne	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405
cis-1,2-Dichloroethane	156-59-2	0.0397	8.3	35	ne	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397
Chloroform	67-66-3	0.0488	0.12	0.53	ne	0.0915	0.220	0.254	0.228	0.0942	0.189	0.103	0.119	0.0568	0.0782	0.194	0.123
1,1,1-Trichloroethane	71-55-6	0.0546	1.0E+03	4.4E+03	ne	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546
1,2-Dichloroethane	107-06-2	0.0405	0.11	0.47	ne	0.0516	0.129	0.119	0.111	0.0693	0.128	0.061	0.0583	<0.0405	<0.0405	<0.0405	0.0625
Benzene	71-43-2	0.160	0.097	0.42	ne	0.167	0.515	0.413	0.358	0.167	0.482	0.170	0.195	<0.16	<0.16	<0.16	0.167
Carbon Tetrachloride	56-23-5	0.0629	0.468	2.04	ne	0.176	0.563	0.562	0.453	0.285	0.472	0.459	0.199	0.212	0.287	0.285	0.517
1,2-Dichloropropane	78-87-5	0.0462	0.28	1.2	ne	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462	<0.0462
Trichloroethene	79-01-6	0.0537	0.48	3.0	ne	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537
cis-1,3-Dichloropropene	10061-02-6	0.0454	ne	ne	ne	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454
trans-1,3-Dichloropropene	10061-01-5	0.0454	ne	ne	ne	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454
Toluene	108-88-3	0.188	3.1E+02	1.3E+03	ne	0.584	1.54	2.02	1.10	0.445	1.33	0.487	0.685	0.271	0.391	0.231	0.524
1,1,2-Trichloroethane	79-00-5	0.0546	0.18	0.77	ne	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546	<0.0546
1,2-Dibromoethane	106-93-4	0.0768	0.0047	0.020	ne	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768	<0.0768
Tetrachloroethene	127-18-4	0.0678	0.46	2.0	ne	<0.0678	<0.0678	<0.0678	<0.0678	<0.0678	<0.0678	0.28	0.379	0.367	0.245	1.07	0.339
Chlorobenzene	108-90-7	0.0460	52	2.2E+02	ne	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460	<0.0460
Ethylbenzene	100-41-4	0.0434	1.1	4.9	ne	0.138	0.479	0.296	0.298	0.205	0.276	0.132	0.158	0.0662	0.0933	0.0500	0.117
Xylene (M+P)	1330-20-7	0.0668	1.0E+02	4.4E+02	ne	0.384	1.33	0.69	0.926	0.550	0.902	0.402	0.475	0.286	0.246	0.143	0.288
Styrene	100-42-5	0.0426	9.4E+02	3.9E+03	ne	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426
Xylene (O)	95-47-6	0.0434	ne	ne	ne	0.137	0.515	0.241	0.312	0.156	0.293	0.174	0.176	0.0809	0.0984	0.077	0.212
1,1,2,2-Tetrachloroethane	79-34-5	0.0687	0.048	0.21	ne	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687	<0.0687
1,3,5-Trimethylbenzene	108-67-8	0.0492	ne	ne	ne	<0.0492	0.141	<0.0492	0.152	<0.0492	0.230	<0.0492	<0.0492	<0.0492	<0.0492	<0.0492	<0.0492
1,2,4-Trimethylbenzene	95-63-6	0.0492	ne	ne	ne	0.133	0.366	0.118	0.479	0.102	0.733	0.179	0.219	0.0849	0.0569	0.0865	0.103
1,3-Dichlorobenzene	541-73-1	0.0601	ne	ne	ne	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601
1,4-Dichlorobenzene	106-46-7	0.0601	0.26	1.1	ne	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601
1,2-Dichlorobenzene	95-50-1	0.0601	2.1E+02	8.8E+02	ne	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601
1,2,4-Trichlorobenzene	120-82-1	0.0742	2.1	8.8	ne	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742	<0.0742
Hexachlorobutadiene	87-68-3	0.107	0.13	0.56	ne	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107
Naphthalene	91-20-3	0.0786	0.083	0.36	ne	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786	<0.0786

NOTES

(1) - San Francisco Regional Water Quality Control Board Environmental Screening Levels for Residential (ESL-R) and Commercial (ESL-C) Properties, (RWQCB, July 2019, Rev. 2)

ne - Screening Level is not established

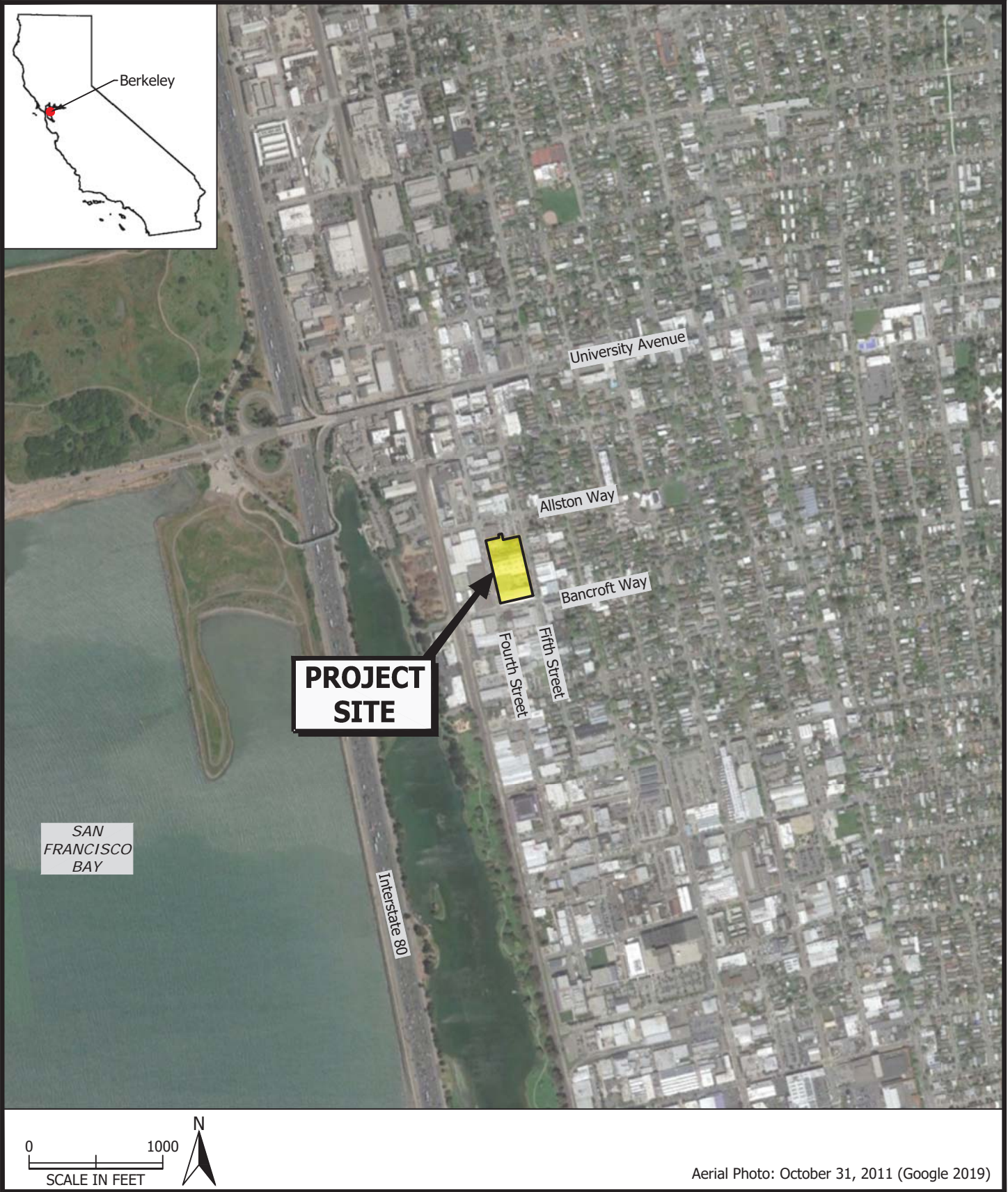
Green Shading = Results is greater than Environmental Screening Level for Commercial Properties

< - Not detected at or above the respective laboratory method reporting limit

Ambient Air Sample Locations: AA, AA2, and AA3

Results reported in micrograms per cubic meter (ug/m³), detections in bold font

Sample Location "AA" is an ambient air sampling location collected from the roof top (upwind side of building)



**PROJECT
SITE**

SAN
FRANCISCO
BAY

Interstate 80

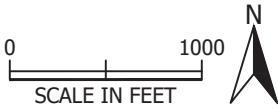
University Avenue

Allston Way

Bancroft Way

Fourth Street

Fifth Street



Aerial Photo: October 31, 2011 (Google 2019)



PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Limited Phase II Investigation
Bancroft Way, Fourth and Fifth Streets
Berkeley, California

PLATE

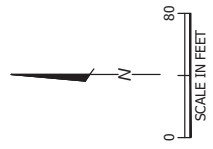
1



- Explanation**
- Approximate Property Boundary
 - ⑦ Tenant ID
 - GW1 Grab Groundwater Sample
 - SSV8 Soil Sub-Slab Gas Sample
 - SV4 5-foot Soil Gas Sample
 - IA2 Indoor Air Sample
 - AA (Roof) Ambient Air Sample
 - MW-11 Offsite Verifito Groundwater Monitoring Well

ID	Address	Tenant
5	2221 Fourth Street	Jason Michael Axelrod
6	2216 Fifth Street	Keen Builders
7	2222 Fifth Street	Ironies
8D	2213 Fourth Street	Wine.com
9	2212 Fifth Street	Vacant
10	2231 Fourth Street	Vacant
11	2246 Fifth Street	Vacant

Tenant IDs correlate with the Tenant IDs shown in PES' Draft Phase I ESA (PES, 2019)



Aerial Photograph: May 10, 2018 (Google 2019)



Site Plan and Sample Locations
 Limited Phase II Investigation
 Fourth and Fifth Streets
 Berkeley, California

Explanation

- Approximate Property Boundary
- GW1 Grab Groundwater Sample
- SSV8 Soil Sub-Slab Gas Sample
- SV4 5-foot Soil Gas Sample
- IA2 Indoor Air Sample
- AA (Roof) Ambient Air Sample
- MW-11 Offsite Veriflo Groundwater Monitoring Well

0.590 Vapor concentrations reported in micrograms per liter (µg/L)

<0.05 Not detected at or above the laboratory method reporting limit

2.50 Shaded results are greater than the July 2019 RWQCB Environmental Screening Level (ESL) - Tier 1

Abbrev.	Analyte	ESL (µg/L)
VC	Vinyl Chloride	0.0086
11DCE	1,1-Dichloroethene	3.2
11DCA	1,1-Dichloroethane	5.0
12DCE	cis-1,2-Dichloroethene	6.0
12DCA	1,2-Dichloroethane	0.50
TCE	Trichloroethene	1.2
T	Toluene	40
X	Xylene (M+P)	20

Aerial Photograph: May 10, 2018 (Google 2019)

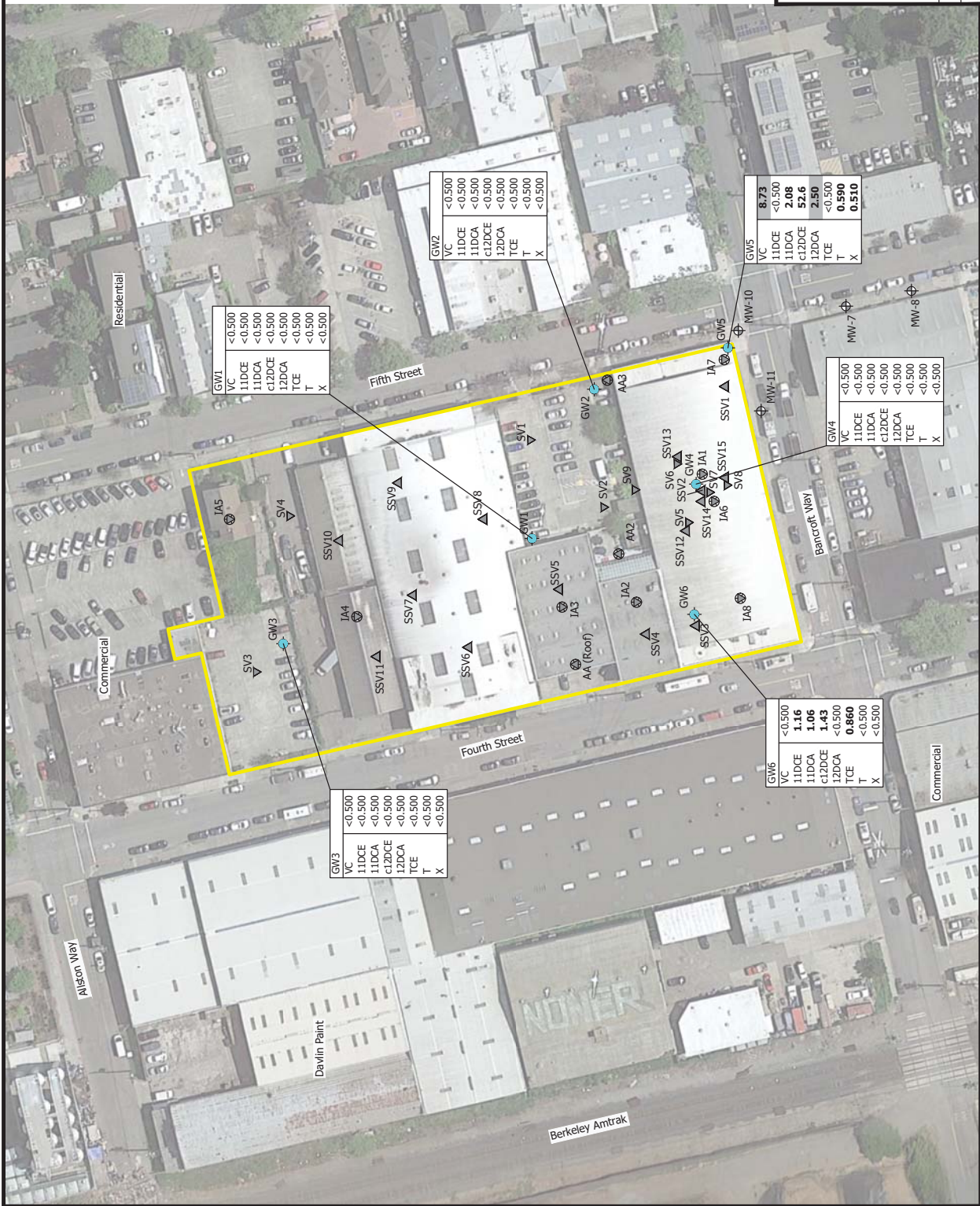
PES Environmental, Inc.
Engineering & Environmental Services

Groundwater Results
Limited Phase II Investigation
Fourth and Fifth Streets
Berkeley, California

PLATE **3**

JOB NUMBER 881.108.01.008 DRAWING NUMBER 881.108.01.008_SVR_1-4 DATE 4/19

REVIEWED BY **DRAFT**



GW1	<0.500
VC	<0.500
11DCE	<0.500
11DCA	<0.500
12DCE	<0.500
12DCA	<0.500
TCE	<0.500
T	<0.500
X	<0.500

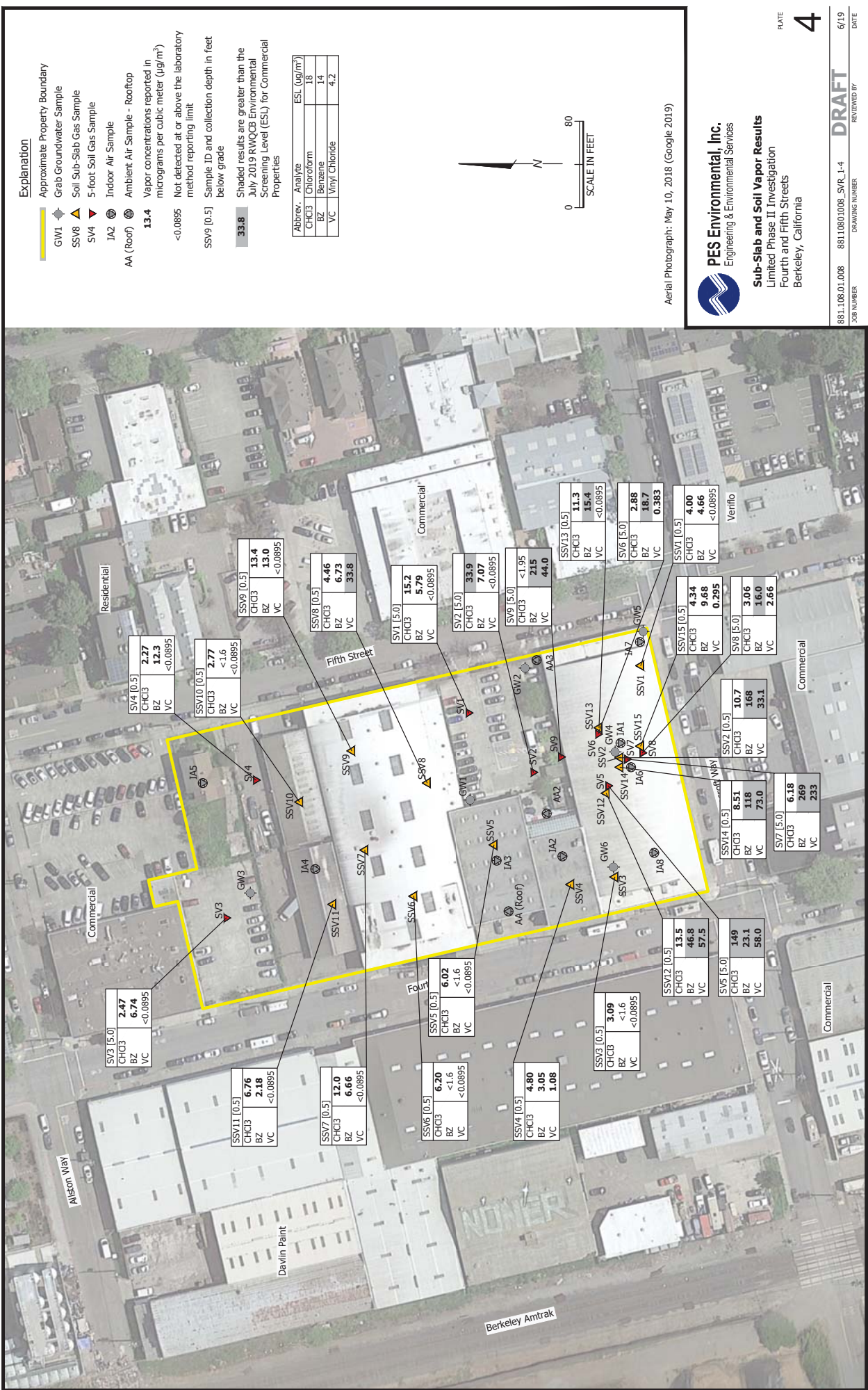
GW2	<0.500
VC	<0.500
11DCE	<0.500
11DCA	<0.500
12DCE	<0.500
12DCA	<0.500
TCE	<0.500
T	<0.500
X	<0.500

GW5	8.73
VC	<0.500
11DCE	2.08
11DCA	52.6
12DCE	2.50
12DCA	<0.500
TCE	0.590
T	0.510
X	<0.500

GW4	<0.500
VC	<0.500
11DCE	<0.500
11DCA	<0.500
12DCE	<0.500
12DCA	<0.500
TCE	<0.500
T	<0.500
X	<0.500

GW6	<0.500
VC	1.16
11DCE	1.06
11DCA	1.43
12DCE	<0.500
12DCA	0.860
TCE	<0.500
T	<0.500
X	<0.500

GW3	<0.500
VC	<0.500
11DCE	<0.500
11DCA	<0.500
12DCE	<0.500
12DCA	<0.500
TCE	<0.500
T	<0.500
X	<0.500

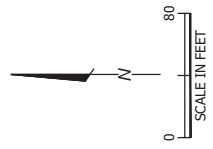


Explanation

- Approximate Property Boundary
- GW1 Grab Groundwater Sample
- SSV8 Soil Sub-Slab Gas Sample
- SV4 5-foot Soil Gas Sample
- IA2 Indoor Air Sample
- AA (Roof) Ambient Air Sample - Rooftop
- 13.4 Vapor concentrations reported in micrograms per cubic meter (µg/m³)
- <0.0895 Not detected at or above the laboratory method reporting limit
- SSV9 [0.5] Sample ID and collection depth in feet below grade

Shaded results are greater than the July 2019 RWQCB Environmental Screening Level (ESL) for Commercial Properties

Abbrev.	Analyte	ESL (µg/m³)
CHCl3	Chloroform	18
BZ	Benzene	14
VC	Vinyl Chloride	4.2



Aerial Photograph: May 10, 2018 (Google 2019)

PES Environmental, Inc.
 Engineering & Environmental Services

Sub-Slab and Soil Vapor Results
 Limited Phase II Investigation
 Fourth and Fifth Streets
 Berkeley, California

**Preliminary Schedule Projections - Environmental Remediation
4th & Bancroft Portfolio
Berkeley, California**

East Block Parcels (2213-2231 Fourth Street and 2212-2246 Fifth Street)

<p>1. Remediation Plan Preparation Assumptions: Perform short-duration SVE pilot study. Enter Voluntary Cleanup Agreement with California RWQCB. Regulatory document: Removal Action Workplan (RAW) for benzene in soil vapor.</p>	3 months
<p>2. Regulatory Agency Review Process Assumptions: 3 to 6 month RAW review by RWQCB staff; respond to RWQCB comments. Includes Fact Sheet and mandatory 30-day public review/comment. No public meeting required.</p>	6 months
<p>3. Remediation Implementation Assumptions: SVE remediation of target VOCs in soil vapor at 2246 Fifth St. Install up to three vapor extraction wells and six vapor probes. Includes up to 6 months of SVE operation and adjustment; 12 months of quarterly rebound monitoring; 1 month for reporting; 2 months for RWQCB review. RWQCB issues No Further Action.</p>	21 months
<p>4. Ongoing O&M Assumptions: SVE achieves remedial goal for commercial use; no ongoing O&M required.</p>	N/A

West Block Parcels (701-747 Bancroft Way and 2200-2220 Fourth Street)

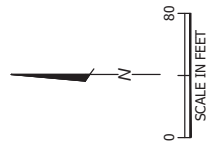
<p>1. Remediation Plan Preparation Assumptions: Additional investigation performed in southwest to further assess benzene source. Focused feasibility evaluation of remedial technologies. Enter Voluntary Cleanup Agreement with California RWQCB. Regulatory document: RAW for benzene in soil vapor at southwest corner, chlorinated solvents in soil vapor across center of property, and organochlorine pesticides in soil. Prepare SVE design documents.</p>	6 months
<p>2. Regulatory Agency Review Process Assumptions: 6 to 9 month RAW review period by RWQCB staff; respond to RWQCB comments. Includes Fact Sheet and mandatory 30-day public review/comment. No public meeting required. BAAQMD permit review for SVE occurs simultaneously with RWQCB RAW review.</p>	9 months
<p>3. Remediation Implementation Assumptions: SVE achieves remedial goal for commercial use; no ongoing O&M required. No groundwater treatment and long-term monitoring required (if needed increases remediation time and cost). Includes up to 20 months of SVE operation and adjustment; 12 months of quarterly rebound monitoring; 2 months for reporting; 2 months for RWQCB review.</p>	36 months
<p>4. Ongoing O&M Assumptions: Negotiate and execute Land Use Covenant with RWQCB. Ongoing monitoring obligations associated with institutional controls for organochlorine pesticides. Annual inspection of pesticide area to confirm maintenance of building slab, with 5-year review to confirm that selected remedy continues to be appropriate for site use.</p>	30 years



- Explanation**
- Approximate Property Boundary
 - ⑦ Tenant ID
 - GW1 Grab Groundwater Sample
 - SSV8 Soil Sub-Slab Gas Sample
 - SV4 5-foot Soil Gas Sample
 - IA2 Indoor Air Sample
 - AA (Roof) Ambient Air Sample
 - MW-11 Offsite Verifito Groundwater Monitoring Well

ID	Address	Tenant
5	2221 Fourth Street	Jason Michael Axelrod
6	2216 Fifth Street	Keen Builders
7	2222 Fifth Street	Ironies
8D	2213 Fourth Street	Wine.com
9	2212 Fifth Street	Vacant
10	2231 Fourth Street	Vacant
11	2246 Fifth Street	Vacant

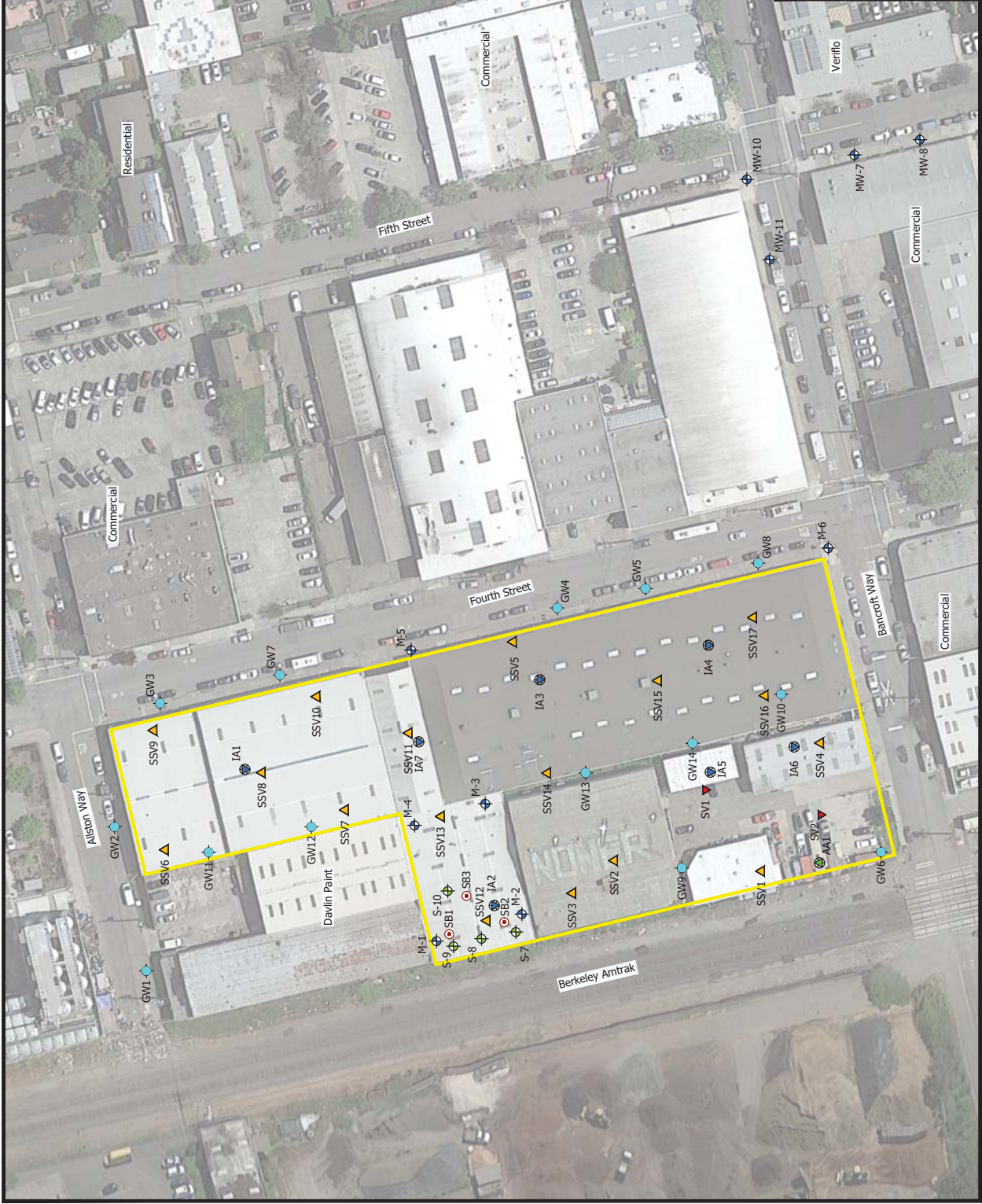
Tenant IDs correlate with the Tenant IDs shown in PES' Draft Phase I ESA (PES, 2019)



Aerial Photograph: May 10, 2018 (Google 2019)



Site Plan and Sample Locations
 Limited Phase II Investigation
 Fourth and Fifth Streets
 Berkeley, California



Explanation

- Approximate Property Boundary
- ⊕ Groundwater Monitoring Well
- ⊕ Groundwater Piezometer
- ⊕ Grab Groundwater Sample
- ⊕ Soil Boring
- ▲ 5-foot Soil Gas Sample
- ▼ Indoor Air Sample
- ⊕ Ambient Air Sample



Notes:
 The original version of this figure includes color-designated features.
 A black and white copy of the figure may not accurately represent
 the information originally presented.



Site Plan
 Limited Phase II Investigation
 Bancroft Way, Fourth Street
 Berkeley, California

DATE

2

881.108.01.017 DRAWING NUMBER
 881.108.01.017_WBPH11_1-6 REVIEWED BY
 8/19 DATE