

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

SENT
6-9-05

June 7, 2005

Mr. Andrew and Mrs. Jean Hall
791 66th Ave.
Oakland, CA 94607

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

Dear Mr. and Mrs. Hall:

Subject: Toxics Case No. RO0002537, Case Closure, Hall Property, 1455 5th St.,
Oakland, CA 94607

This letter confirms the completion of site investigation and remedial action for the soil and groundwater investigation at the above referenced site. No further action is required at this site. We are transmitting the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported releases at the subject site. This letter is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions. The subject Toxics case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site.

- Total petroleum hydrocarbons as motor oil (TPH_{mo}) up to 130 parts per million (ppm), toluene up to 0.072 ppm, ethyl benzene up to 0.031 ppm, xylenes up to 0.19 ppm and lead up to 85 ppm remain in soil at this site.
- Total petroleum hydrocarbons as gasoline (TPH_{gas}) up to 57 ppb, toluene up to 1.4 ppb, ethyl benzene up to 2.7 ppb and xylenes up to 16 ppb remain in groundwater at this site.

If you have any questions, please call Barney Chan at (510) 567-6765. Thank you.

Sincerely,

Donna L. Drogos, P.E.
LOP and Toxics Program Manager

cc: Ms. Cherie McCaulou, SFRWQCB
Mr. Leroy Griffin, City of Oakland FD, 1605 MLK Jr. Way, Oakland,
CA 94612 (w/enc)
Files, (w/original enc), D. Drogos (w/enc), R. Garcia-LaGrille (w/enc)

**CASE CLOSURE SUMMARY
TOXICS PROGRAM**

I. AGENCY INFORMATION

Date: 4/28/05

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6765
Responsible Staff Person: Barney Chan	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Hall Property		
Site Facility Address: 1455 5 th St., Oakland, CA 94607		
RB Case No.: ---	Local Case No.: ----	LOP Case No.: RO0002537
URF Filing Date: ---	SWEEPS No.: ---	APN: 004-0075-008-02
Responsible Parties	Addresses	Phone Numbers
Andrew & Jean Hall	791 66 th Ave., Oakland, CA 94621	-----

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
NA	NA	NA	NA	NA
Piping- NA				

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: ----	
Monitoring wells installed? No	Number: ---	Proper screen interval? ----
Highest GW Depth Below Ground Surface: 10.5' bgs	Lowest Depth: 12' bgs	Flow Direction: south-southwest *
Most Sensitive Current Use: Potential drinking water source.		

* No wells installed at site, gradient estimated to be south-southwest based upon site specific data from RO 454, 800 Center St. located approximately 1500' north of site. Groundwater depths are from 1/05 borings.

Summary of Production Wells in Vicinity: No drinking or irrigation wells within ¼ mi radius of site	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? Yes No	Nearest SW Name: Alameda estuary located ~ 2700' south of site
Off-Site Beneficial Use Impacts (Addresses/Locations): None Identified	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	---	---	---
Piping	---	---	---
Free Product	---	---	---
Soil	349.54 tons	Disposed at ECDC, East Carbon, UT	11/06/03
Groundwater	---	---	---

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	<1.0	<1.0	57	57
TPH (Diesel)	10	10	<50	<50
Oil & Grease	<50	<50	<5,000	<5,000
TPH (motor oil)	130	130	<250	<250
Benzene	<0.005	<0.005	<0.5	<0.5
Toluene	0.072	0.072	1.4	1.4
Ethyl Benzene	0.031	0.031	2.7	2.7
Xylenes	0.19	0.19	16	16
Lead	10,000	85	<0.5	<0.5
Heavy Metals	*	*	**	**
MTBE (if not analyzed, explain below)	<0.005	<0.005	<0.5	<0.5
Volatile Organic Compounds (EPA 8240)	ND	ND	***	***
Semi-volatile Compounds (EPA 8270)	ND	ND	ND	ND
Organo pesticides	ND	ND	NA	NA

* 4.7 ppm As, 8 ppm Hg, <0.5ppm Cd, 69 ppm Cr, 56 ppm Ni, 29 ppm Zn
 ** 5.1 ppb Co, <0.25 ppb Cd, <0.5 ppb Cr, 11 ppb Ni, <5 ppb Zn
 *** 22 ppb Acetone

Site History and Description of Corrective Actions:

The subject site is a vacant property, approximately 5,000 square feet in size, on which two wooden structures, a concrete pad and areas of dirt formerly existed. The site lies within a mixed residential/commercial area, just south of the 5th Street BART station. See Attachment 1. A Phase I investigation was performed on the site. The property was first developed with two houses within a residential district in the late 1800s. The houses were demolished in the 1930s. The property was then used as a vehicle service facility and/or machine shop from the 1930s through 2001. One shop building was built in 1955 and one in the 1980s and both demolished in 2003. No USTs or fuel storage has been documented at the site. Environmental assessments have identified the metals mercury, arsenic and lead in surface soils at the site. The site has been mostly unpaved during its history. The consultant has suggested that vehicle maintenance or possibly atmospheric fallout maybe the sources of the detected metals. The surrounding properties have been light industrial, automotive and residential. BART has been located to the north of the site since 1969.

On July 26, 2001 two borings (SS-1 and SS-2) were advanced at the site to an approximate depth of 2 ½'. Fill material containing glass and brick was reported in the shallow soil of both borings. Soil samples were obtained from depths of ½' to 1' and from 2-2 ½' and were analyzed for TPHg, BTEX, MTBE, TPHd, organochlorine pesticides and total arsenic, lead, mercury and cadmium. None of the samples reported detectable quantities of TPHg, BTEX, MTBE or pesticides. TPHd was reported at 6.5 ppm and arsenic, lead and mercury were reported in the shallow sample from SS-1 at 4.7, 410, and 8 ppm, respectively. In the 2-2.5' samples in SS-1, arsenic was <1.0 ppm, lead was 2.7 ppm and mercury 0.081 ppm. The report failed to provide a site map or copies of the laboratory analytical results and is considered incomplete, however, the lead concentration in shallow soils exceeded regulatory levels. See Attachment 2.

On January 4, 2002, five borings (B-1 through B-5) were drilled at the site. Two of the borings were located within the existing buildings, two were located in grassy dirt areas and one was within the concrete surfaced area. Soil samples were collected at depths of 1 and 2' bgs. The samples were analyzed for TPHd, TPHmo, TPHg, BTEX, MTBE and lead. TPHd up to 10 ppm, TPHmo up to 130 ppm, toluene up to 0.072 ppm, xylenes up to 0.19 ppm and lead up to 1800 ppm was detected. Three of the shallow soil samples detected lead above the residential ESL (Environmental Screening Level) of 200 ppm. However, all sample results in the 2' samples were < 200 ppm lead. See Attachments 3 & 4.

On March 18, 2003, fifteen borings (B-6 through B-20) were advanced equally spaced at this site, in an attempt to define the lateral and vertical extent of the lead impacted soils. Soil samples were collected at 1' intervals to a depth of 4'. Samples were analyzed for total lead starting with the shallowest depth until the concentration was found to be below the ESL. Results indicated that high concentrations of lead exist over the majority of the site. The lead concentration diminished significantly at two feet except for two areas, B-6 and B-14, where contamination extended to depths of 3-4'. See Attachment 5.

On November 6, 2003, after the existing buildings had been demolished and the concrete pad had been removed, excavation of the lead impacted areas was performed based upon prior sample results. Approximately 70% of the site was excavated to depths ranging from 1.5' to 4'. A total of 349.54 tons of soil was excavated and disposed at ECDC Environmental in East Carbon, Utah. A total of eight confirmation soil samples were collected after the excavation was complete. Seven of the eight samples were < 5 ppm lead, while the other sample detected 85 ppm lead. See Attachments 6 & 7.

On January 31, 2005, to evaluate potential impact to groundwater and investigate the areas of the site, which were previously lacking information, four borings (BH-A through BH-D) were drilled at the site. Since there was no evidence of contamination in the borings, soil samples from the capillary fringe were selected for sampling and analysis. Grab groundwater samples were then taken after further advancing the boring approximately 2-4'. All samples were analyzed for CAM metals, TPH as gasoline, as diesel, as motor oil, oil and grease, volatile organic compounds and semi-volatile organic compounds. Soil samples were ND for TPHg,d,mo, oil and grease, VOCs and semi-VOCs. The only CAM metal exceeding the ESL for deep soil, residential exposure and groundwater is a potential drinking water source was chromium, reported at 69 ppm, ESL=58 ppm. The background level for chromium is 100 ppm, LBNL (2002). Groundwater samples were ND for TPHd, TPHmo, semi-volatiles, 57 ppb TPHg and 1.4, 2.7, 16 ppb TEX. Acetone, a common laboratory solvent, was reported at concentrations ranging from 6-22 ppb (ESL=700ppb). The only metals exceeding the ESL for residential land use where groundwater is considered a drinking water source were cobalt (range from 2.7-5.4 ppb, ESL=3.0 ppb) and nickel (range from 4.7-11 ppb, ESL=8.2 ppb). Given that the concentrations of these metals in soil are much less than LBNL background levels, this groundwater contamination is not likely from soil. Soil boring logs indicate that the lithology typically consists of a shallow (1-2') layer of gravelly silt then silty sand to the extent of the boring. Groundwater was encountered from 10-12' bgs. See Attachment 8.

In conclusion, the subject site is a vacant property, approximately 5,000 square feet in size, on which two wooden structures, a concrete pad and areas of dirt formerly existed. The site lies within a mixed residential/commercial area. The property was used as a vehicle service facility and/or machine shop from the 1930s through 2001. It appears that this is a possible source of metals, primarily lead, found at the site. The lead impacted soils have been excavated to below residential ESL (200 ppm). The other parameters associated with automotive activity have also been analyzed as well as shallow groundwater beneath the site. Background or ND concentrations of these COCs were reported in soil and groundwater.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: None		
Should corrective action be reviewed if land use changes? No		
Monitoring Wells Decommissioned: NA	Number Decommissioned: --	Number Retained: ---
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

<p>Considerations and/or Variances:</p> <ul style="list-style-type: none"> The metals, arsenic and mercury, reported at the site were not analyzed in post excavation samples (7/01). As shown in samples SS-1 and SS-2, these metal concentrations decreased to below ESLs at a depth of 2-2.5' bgs. Since the majority of the site (~70%) was excavated to minimally 1.5' and to 4' in one area, it appears that the concentrations of arsenic and mercury have also been excavated to below ESLs. Mercury ESL = 2.5 ppm, Arsenic ESL = 5.5 ppm. The July 2001 report, as previously mentioned, did not include a site map or copies of the laboratory analytical results. Only lead was run on samples taken after over-excavation, therefore, the concentrations in the after column reflect the initial concentrations in all analytes with the exception of arsenic and mercury. From the 1/31/05 investigation, soil samples from 10-11.5'bgs from four locations were analyzed for CAM metals. Arsenic concentrations ranged from 2.3-3.5 ppm and mercury concentrations were <0.05 ppm. The only metal exceeding the ESL for residential, deep soil where groundwater is a potential drinking water source was chromium, detected at 69 ppm, which is less than the LBNL background concentration, 100 ppm. The CAM metals were run on the four grab groundwater samples from the (1/31/05) borings. The only metals exceeding the ESL for residential land use where groundwater is considered a drinking water source were cobalt (range from 2.7-5.4 ppb, ESL=3.0 ppb) and nickel (range from 4.7-11ppb, ESL=8.2 ppb). <p>Conclusion:</p> <p>Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the current commercial/residential land use based upon the information available in our files to date. The lead contaminated soil has been excavated and disposed. Confirmation soil samples demonstrate that no residual soil samples exceeding the ESL for lead remain at the site. ACEH staff recommend closure for this site.</p>
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VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barney Chan	Title: Hazardous Materials Specialist
Signature: <i>Barney Chan</i>	Date: 5/2/05
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: <i>Donna L. Drogos</i>	Date: 04/29/05

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: <i>Cherie McCaulon</i>	Title: <i>ENGINEERING GEOLOGIST</i>
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 5/10/05
Signature: <i>Cherie McCaulon</i>	Date: 5/11/05

Attachments:

1. Site Vicinity Map
2. Analytical Results for SS-1 and SS-2
3. Borings B-1 through B-5 Analytical Results
4. Boring Location Map
5. Borings B-6 through B-20 Locations and Analytical Results
6. Confirmation Soil Sampling Map
7. Confirmation Soil Sample Results
8. Soil Boring Map, Soil and Groundwater Analytical Results, Boring Logs (7 pages)

This document and the related CASE CLOSURE LETTER shall be retained by the lead agency as part of the official site file.

Re: 1455-5th ST. Oakland

Post-It® Fax Note	7671	Date	<i>5/11/05</i>	# of pages	<i>1</i>
To	<i>Barney Chan</i>	From	<i>Cherie McCaulon</i>		
Co./Dept.	<i>ACEH</i>	Co.	<i>Water Board</i>		
Phone #	<i>510-567-6765</i>	Phone #	<i>510-622-2342</i>		
Fax #	<i>510-332-9335</i>	Fax #	<i>510-622-2464</i>		

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barney Chan	Title: Hazardous Materials Specialist
Signature: <i>Barney Chan</i>	Date: 5/2/05
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: <i>Donna L. Drogos</i>	Date: 04/29/05

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

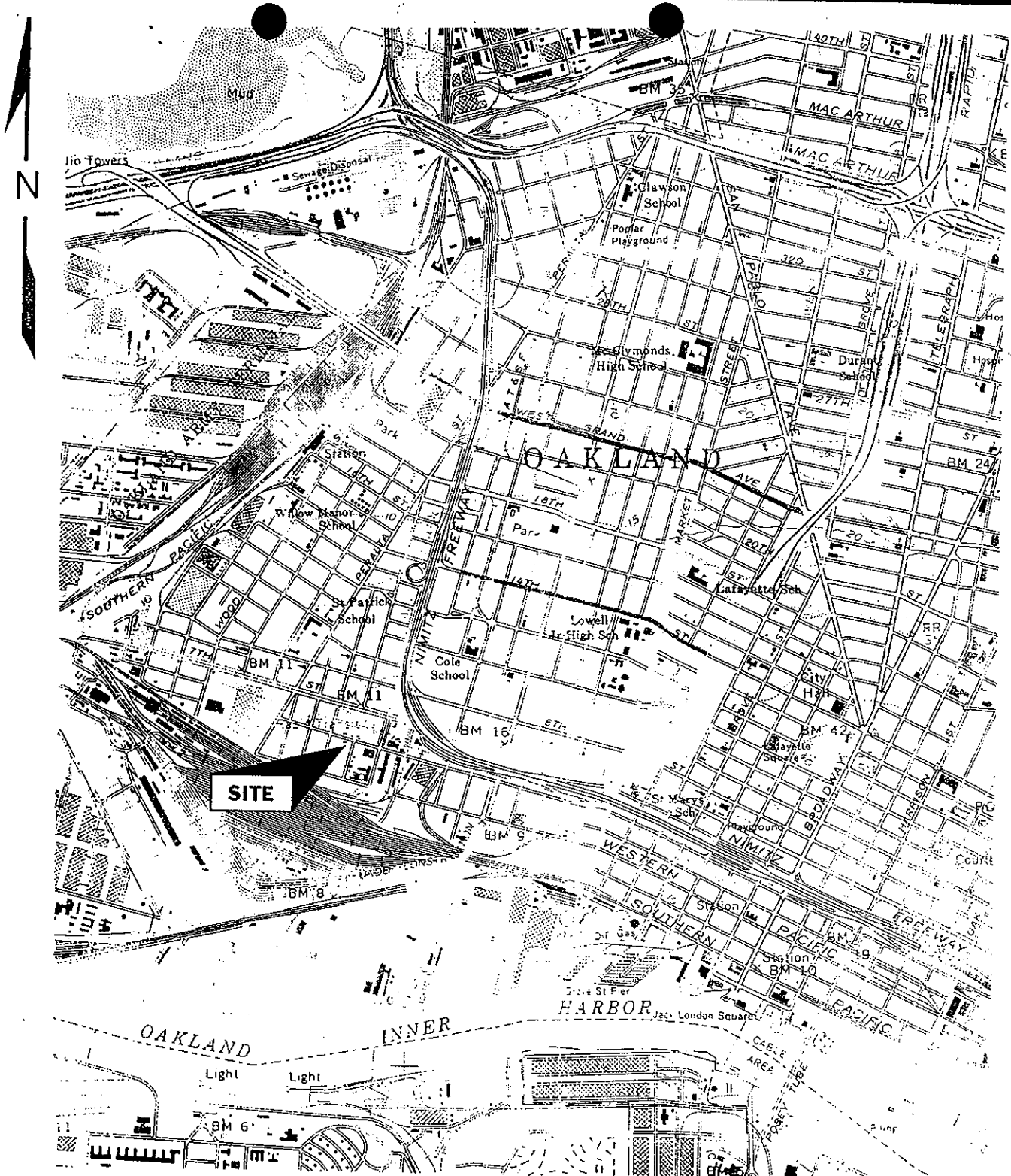
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SITE

SITE LOCATION MAP

1455 5th Street
Oakland, CA 94621

Scale: 1 inch = 2,000 feet

Aqua S

ATTACHMENT 1

ether (MTBE) (EPA Test Method 8015/8020); total petroleum hydrocarbons in the diesel range (TPHd) (EPA Test Method 8015M); organochlorine pesticides (EPA Test Method 8081); and total arsenic, lead, mercury, and cadmium (EPA Method 6000/7471). These analyses were selected to help evaluate soil quality on the site.

None of the samples contained detectable concentrations of total petroleum hydrocarbons as gasoline, BTEX, MTBE, or pesticides. Only one sample (SS-1@0.5'-1.0') contained a detectable concentration of total petroleum hydrocarbon as diesel at 6.5 parts per million (ppm). Analytical results for metals are presented in Table 1. Copies of the analytical reports and chain of custody documentation are attached.

Table 1. Analytical Results of Selected Soil Samples
(concentrations in parts per million)

Boring Number	Arsenic	Lead	Mercury	Cadmium
SS-1@0.5'-1.0'	4.7	410	8.0	<0.5
SS-1@2.0'-2.5'	<1.0	2.7	0.081	<0.5
SS-2@0.5'-1.0'	<1.0	3.0	<0.05	<0.5
SS-2@2.0'-2.5'	<1.0	2.8	<0.05	<0.5
Residential PRG*	0.39	400	23	37

< Indicates that the compound was not detected at or above the stated laboratory reporting limit

* Preliminary Remediation Goal-EPA Region 9.

NE: Not established

CONCLUSIONS AND RECOMMENDATIONS

Metal concentrations detected in on-site soil appeared to be consistent with typical background concentrations, with the exception of lead and mercury in sample SS-1@0.5'-1.0'. Naturally occurring lead and mercury concentrations are generally less than 500 ppm and less than 1 ppm, respectively. In addition, the concentrations of arsenic and lead detected in sample SS-1@0.5'-1.0' exceed the Preliminary Remediation Goals (PRGs) (USEPA 1996) for a residential site; arsenic, however, appears typical of background levels. The PRGs are risk-based concentrations developed by EPA Region 9; PRGs are for use as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing initial cleanup goals, and in estimation of potential health risks.

The source of the contamination revealed in sample SS-1@0.5'-1.0' is unknown; it appears, however, that the sample was collected from a fill material, containing bits of glass and brick. Therefore, it is possible that the elevated concentration of lead detected in sample SS-1@0.5'-1.0' is lead-based paint contamination. Based on our experience with lead-based paint-impacted soil, soil samples demonstrating total lead concentrations of greater than 100 ppm may exceed the soluble threshold limit concentration (STLC), or California's hazardous waste criteria of 5 ppm, and therefore may be considered a hazardous waste. Depending on its extent, soil containing greater than 100 ppm total lead may require

ATTACHMENT 2

ATTACHMENT 3

Summary of Soil Sample Analysis
All Results are in Parts Per Million
1455 5th Street
Oakland, California

Boring ID	Sample Depth (in.)	Diesel	Motor Oil	Gasoline	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	Lead
B-1	12	<1.0	<50	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1.7
	24	--	--	--	--	--	--	--	--	1.9
B-2	12	3.2	<50	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1,600
	24	--	--	--	--	--	--	--	--	38
B-3	12	3.6	<50	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	390
	24	--	--	--	--	--	--	--	--	2.2
B-4	12	10	130	<1.0	<0.0050	0.072	0.031	0.19	<0.0050	1,800
	24	--	--	--	--	--	--	--	--	4.5
B-5	12	<1.0	<50	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	13
	24	--	--	--	--	--	--	--	--	1.8
RBSL		500	500	400	0.18	0.4	24	10	10	200

Notes:

Concentrations above laboratory detection limits are in **bold**.

"--" indicates the sample was not analyzed for that parameter.

Non-Detectable concentrations are noted by the less than symbol (<) followed by the laboratory detection limit.

RBSL = Risk Based Screening Levels (RBSL) presented in the "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

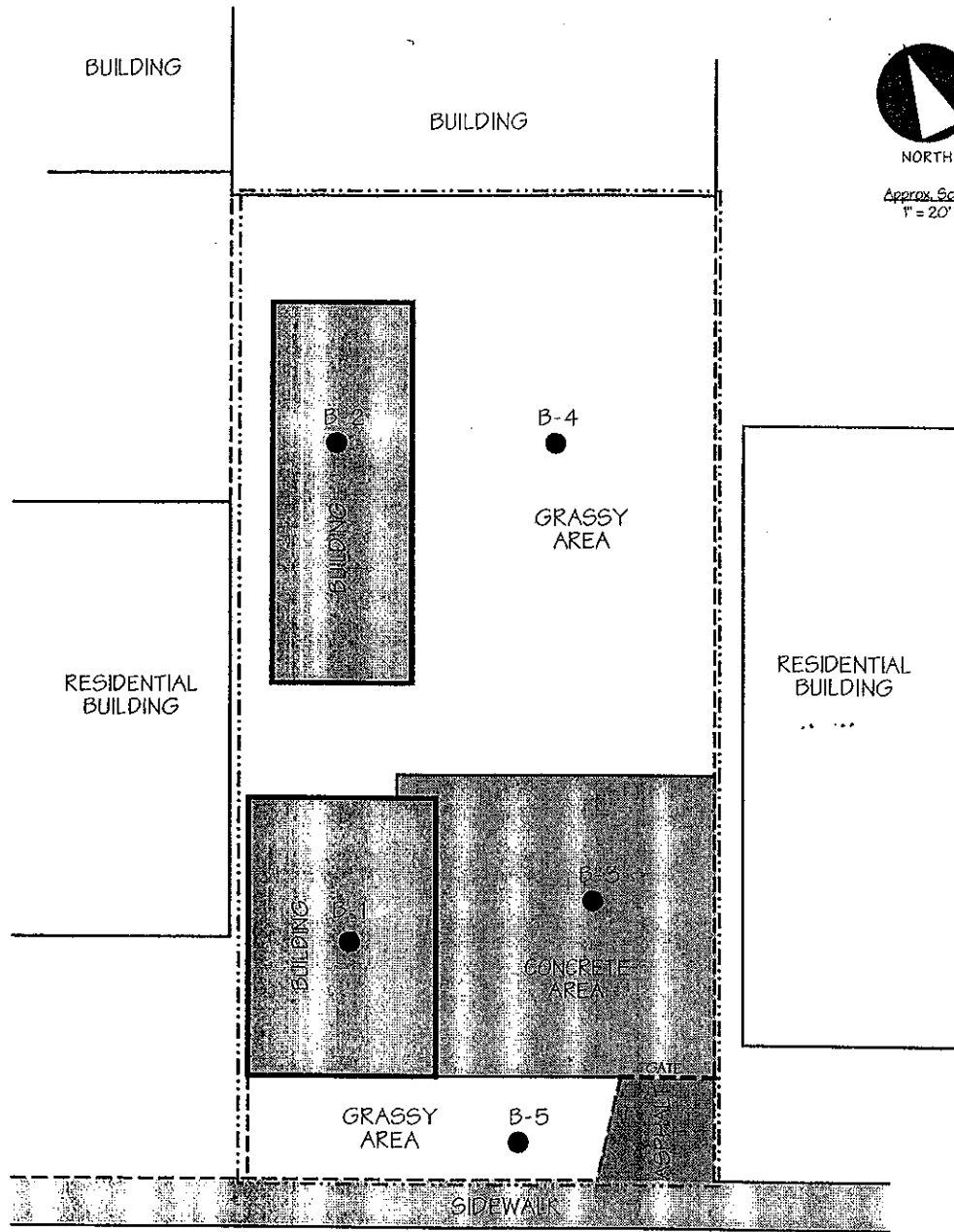
BUILDING

BUILDING



NORTH

Approx. Scale
1" = 20'



RESIDENTIAL BUILDING

RESIDENTIAL BUILDING

GRASSY AREA

B-5

SIDEWALK

5TH STREET

LEGEND

APPOX. PROPERTY BOUNDARY

APPOX. BORING LOCATION

FENCE

BORING LOCATION MAP

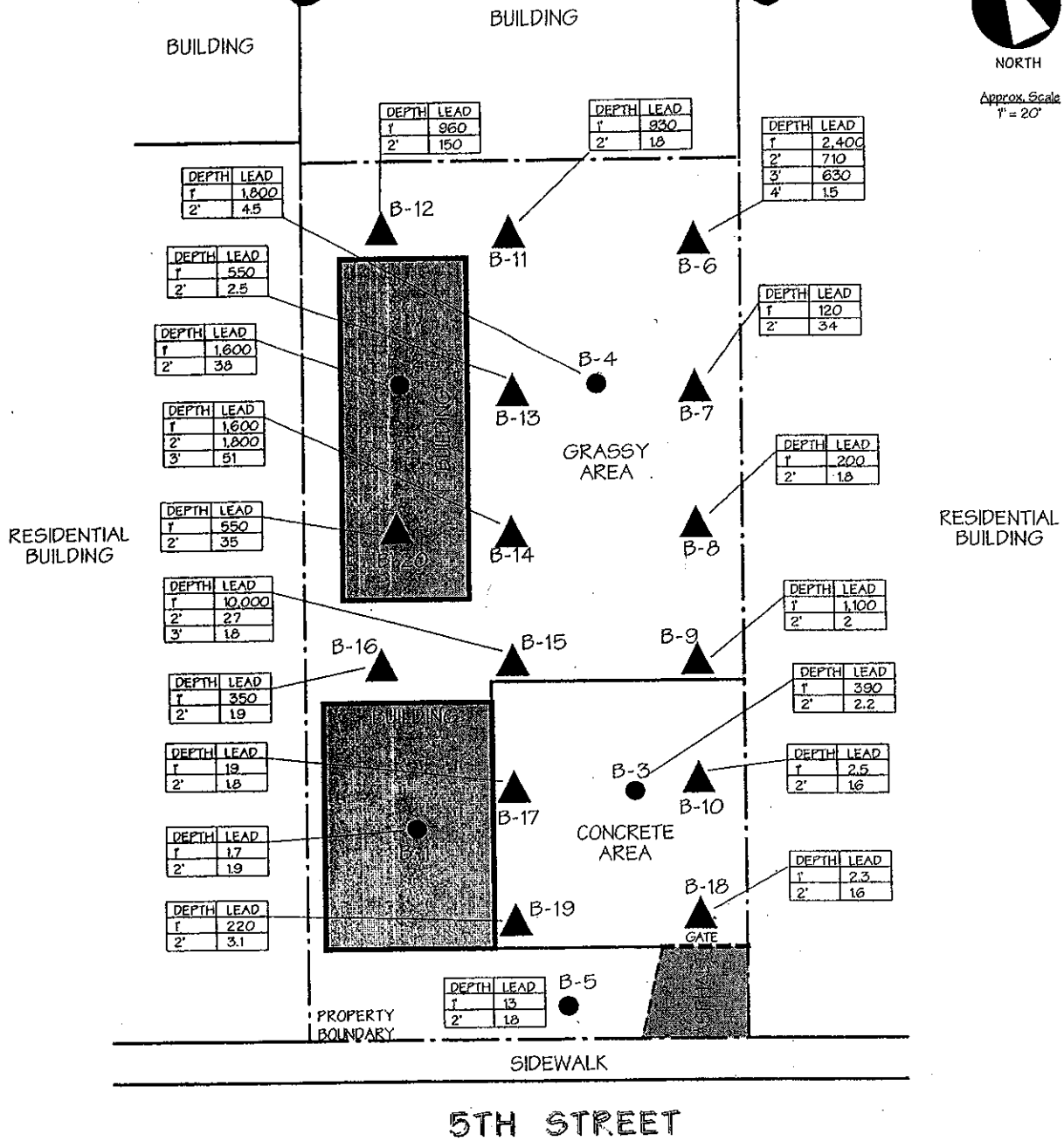
VACANT PROPERTY
1455 5TH STREET
OAKLAND, CA

ATTACHMENT 4



NORTH

Approx. Scale
1" = 20'



LEGEND

- B-1 PREVIOUS BORING LOCATION
- B-20 CURRENT BORING LOCATION

SOIL BORING LOCATION MAP

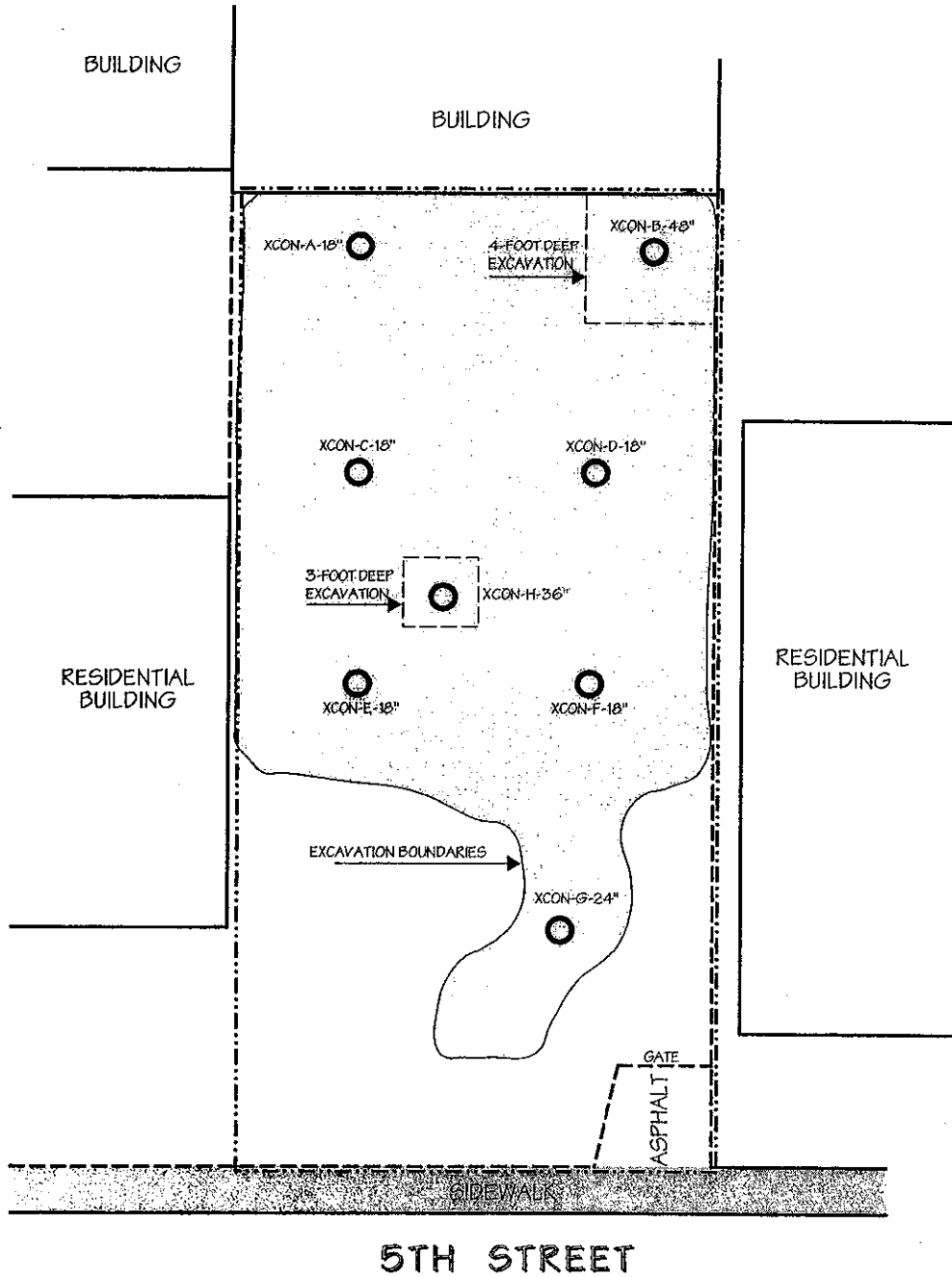
VACANT PROPERTY
1455 5TH STREET
OAKLAND, CA

ATTACHMENT 5



NORTH

Approx. Scale
1" = 20'



LEGEND

XCON-H-36"



CONFIRMATION
SOIL SAMPLE LOCATION

**CONFIRMATION
SOIL SAMPLING MAP**

VACANT PROPERTY
1455 5TH STREET
OAKLAND, CA

ATTACHMENT 6

ATTACHMENT 7

Confirmation Soil Samples Results
Total Lead Concentrations In Soil
Hall Property
1455 5th Street, Oakland, California
All Results in Parts Per Million

SAMPLE IDENTIFICATION	TOTAL LEAD
XCON-A-18"	< 5.0
XCON-B-48"	< 5.0
XCON-C-18"	85
XCON-D-18"	< 5.0
XCON-E-18"	< 5.0
XCON-F-18"	< 5.0
XCON-G-24"	< 5.0
XCON-H-36"	< 5.0
EPA Method	6010

BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-A

Name: Hall Property	Project Location: 1455 5th Street, Oakland, CA	Page 1 of 1
Driller: Vironex	Type of Rig: Geoprobe	Size of Drill: 2.0" Diameter
Logged By: Robert Kitay, R.G.	Date Drilled: January 31, 2005	Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA	Total Depth of Well Completed: NA
Depth of Water First Encountered: 12'	Well Screen Type and Diameter: NA
Static Depth of Water in Well: 12'	Well Screen Slot Size: NA
Total Depth of Boring: 16'	Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY
			Interval	Blow Counts	OVM (ppmv)	Water Level		
0	<p>Portland Cement</p>						0	Gravelly SILT (ML); dark grey; medium stiff; damp; 60% silt; 25% subangular gravel to 1" diameter; 15% clay; low plasticity; low estimated K; no odor
2.5							2.5	Silty CLAY (CH); dark brown; medium stiff; damp; 80% clay; 20% silt; high plasticity; very low estimated K; no odor
5							5	Silty SAND (SM); dark brown; loose; damp; 90% fine sand; 10% silt; non-plastic; medium estimated K; no odor
6							6	moist at 6'
10							10	groundwater at 12'
15							15	End of Boring at 16'
20							20	
25							25	
30							30	

BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-B

Name: Hall Property

Project Location: 1455 5th Street, Oakland, CA

Operator: Vironex

Type of Rig: Geoprobe

Size of Drill: 2.0" Diameter

Logged By: Robert Kitay, R.G.

Date Drilled: January 31, 2005

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 12'

Total Depth of Well Completed: NA







Well Screen Type and Diameter: NA

Static Depth of Water in Well: 12'

Well Screen Slot Size: NA

Total Depth of Boring: 16'

Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY
			Interval	Blow Counts	OVM (ppmv)	Water Level		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
0	 <p style="text-align: center;">Portland Cement</p>						0	Gravelly SILT (ML); dark grey; medium stiff; damp; 60% silt; 25% subangular gravel to 1" diameter; 15% clay; low plasticity; low estimated K; no odor
5							5	Silty SAND (SM); dark yellow brown; loose; damp; 85-90% fine sand; 10-15% silt; non-plastic; medium estimated K; no odor moist at 6'
10					12'		10	groundwater at 12'
15							15	End of Boring at 16'
20							20	
25							25	
30							30	

BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-C

Name: Hall Property

Project Location: 1455 5th Street, Oakland, CA

Page 1 of 1

Operator: Vironex

Type of Rig: Geoprobe

Size of Drill: 2.0" Diameter

Logged By: Robert Kitay, R.G.

Date Drilled: January 31, 2005

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Total Depth of Well Completed: NA

Depth of Water First Encountered: 10.5'

Well Screen Type and Diameter: NA

Static Depth of Water in Well: 10.5'

Well Screen Slot Size: NA

Total Depth of Boring: 12'

Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY
			Interval	Blow Counts	OMV (ppmv)	Water Level		Graphic Log
0							0	Silty SAND (SM); dark yellow brown; loose; damp; 85-90% fine sand; 10-15% silt; non-plastic; medium estimated K; no odor
5							5	
10	Portland Cement						10	groundwater at 10.5'
15							15	
20							20	
25							25	
30							30	End of Boring at 12'

BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-D

Name: Hall Property

Project Location: 1455 5th Street, Oakland, CA

Page 1 of 1

Operator: Vironex

Type of Rig: Geoprobe

Size of Drill: 2.0" Diameter

Logged By: Robert Kitay, R.G.

Date Drilled: January 31, 2005

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 10.5'

Total Depth of Well Completed: NA






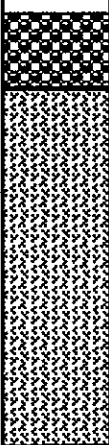
Well Screen Type and Diameter: NA

Static Depth of Water in Well: 10.5'

Well Screen Slot Size: NA

Total Depth of Boring: 12'

Type and Size of Soil Sampler: 2.0" I.D. Macro Sampler

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA					Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
			Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log		
0	 <p>Portland Cement</p>						0	Gravelly SILT (ML); dark grey; medium stiff; damp; 60% silt; 30% subangular gravel to 1" diameter; 10% clay; non-plastic; low estimated K; no odor	
5							Silty SAND (SM); dark yellow brown; loose; damp; 85-90% fine sand; 10-15% silt; non-plastic; medium estimated K; no odor moist at 6'		
10							groundwater at 10.5'		
15							15	End of Boring at 12'	
20							20		
25							25		
30							30		