

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

June 22, 2009

Virgil, Melvin, Margaret Bolin, etal
1129 Ptarmigan Dr., #1
Walnut Creek, CA 94595-4167

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

Subject: Subject: Fuel Leak Case, RO0000130 and Geotracker Global ID T0600100198, Bolins Service Garage, 6335 San Pablo Avenue, Oakland, CA 94608

Dear Ladies and Gentlemen:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

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

- Residual pollution remaining in soil beneath the site includes TPH as gasoline at concentrations of up to 470 ppm.
- Maximum concentrations of up to 140 ppb TPHg, 4.8 ppb benzene and 110 ppb MTBE remain in groundwater beneath the site.

If you have any questions, please call Barbara at (510) 639-1287. Thank you.

Sincerely,

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

Enclosures:

1. Remedial Action Completion Certificate
2. Case Closure Summary

cc:

Ms. Cherie McCaulou (w/enc)
SF- Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Closure Unit (w/enc)
State Water Resources Control Board
UST Cleanup Fund
P.O. Box 944212
Sacramento, CA 94244-2120

Barbara Jakub (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)



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

June 19, 2009

Virgil, Melvin, Margaret Bolin, etal
1129 Ptarmigan Dr., #1
Walnut Creek, CA 94595-4167

REMEDIAL ACTION COMPLETION CERTIFICATE

Subject: Subject: Fuel Leak Case, RO0000130, Bolins Service Garage, 6335 San Pablo Avenue, Oakland, CA 94608

Dear Ladies and Gentlemen:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Ariu Levi
Director
Alameda County Environmental Health

**CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

I. AGENCY INFORMATION

Date: May 28, 2009

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 639-1287
Responsible Staff Person: Barbara Jakub	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Bolin's Service Garage		
Site Facility Address: 6335 San Pablo Avenue, Oakland, CA 94608		
RB Case No.: 01-0212	Local Case No.: 1685	LOP Case No.: RO0000130
URF Filing Date: 5/5/1988	Geotracker ID: T0600100198	APN: 16-1455-9
Responsible Parties	Addresses	Phone Numbers
Virgil, Melvin, Margaret Bolin, etal	1129 Ptarmigan Dr., #1, Walnut Creek, CA 94595-4167	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1,000	gasoline	removed	1988
2	500	gasoline	removed	1988
Piping			Removed (except under building.- closed in place)	1988

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Product piping release		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 1	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 6 ft bgs	Lowest Depth: 27 ft bgs	Flow Direction: West
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity: No production wells were identified within ¼-mile of this facility.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: San Francisco Bay approximately 3,700 feet west.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	1- 1,000 gallon gasoline 2- 550 gallon gasoline	Cleaned and recycled	1988
Piping	~40 feet	Removed disposal location unreported.	1988
Free Product	None reported	----	----
Soil	55 yd ³	Off-site treatment and disposal/Bay Soil Remediation, 20 Recycling Lane, Richmond, CA.	2/2/01
Groundwater	None reported	----	----

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

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	>2,400	470	284	140
TPH (Diesel)	Not analyzed	Not analyzed	Not analyzed	Not analyzed
Oil and Grease	Not analyzed	Not analyzed	Not analyzed	Not analyzed
Benzene	1.1	1.1	284.37	4.8
Toluene	2.680	2.680	9.43	<0.5
Ethylbenzene	1.954	1.954	<0.5	2.2
Xylenes	14.221	14.221	508.8	2.2
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	11.45*	11.45**	5.5 [†]	<5.0 [‡]
MTBE	12 ^a	12 ^b	110	110 ^d
Other (8240/8270)	NA	NA	NA	NA

* 11.45 ppm Pb, Cd, Cr, Ni and Zn not analyzed.

** 11.45 ppm Pb, Cd, Cr, Ni and Zn not analyzed.

† 5.5 ppb Pb, Cd, Cr, Ni and Zn not analyzed.

‡ <5.0 ppb Pb, Cd, Cr, Ni and Zn not analyzed.

a 12 ppm MTBE, and <0.051 ppm TAME, ETBE, DIPE, TBA, EDB, and EDC. EtOH NA

b 12 ppm MTBE, and <0.051 ppm TAME, ETBE, DIPE, TBA, EDB, and EDC. EtOH NA

c 110 ppb MTBE, 220 ppb TBA, 0.6 DIPE, 26 ppb EDC, <0.5 ppb TAME, ETBE, and EDB. EtOH NA

d 110 ppb MTBE, 220 ppb TBA, 0.6 DIPE, 26 ppb EDC, <0.5 ppb TAME, ETBE, and EDB. EtOH NA

NA = Not Analyzed

Site History and Description of Corrective Actions:

An auto repair shop was formally operated at the site for 30 years by the Bolin family. The site is currently occupied and operated as an auto smog shop by a tenant of the Bolin family. During the Bolin's family use of the property the site operated two underground fuel storage tanks (USTs), one 1,000-gallon and one 550-gallon gasoline UST that were used in support of the auto shop operation and not for resale of gasoline.

April 1988 – Two USTs (One-1,000 gallon and one- 550 gallon) were removed from the property under County permit.

1. 1,000-gallon UST: Two soil samples collected and analyzed for TPHg from 10 feet below grade (bgs). Soil samples collected beneath the USTs in April 1988 contained >2,400 mg/kg total petroleum hydrocarbons as gasoline (TPHg). The other sample also collected from 10 ft bgs, was <10 ppm TPHg.
2. 550-gallon UST: Two samples were also collected and analyzed from 10 feet below ground surface (bgs) beneath this tank. Both samples were below the detection limit for TPHg. BTEX analysis was not performed during this sampling event nor was a water sample collected and analyzed.
3. Limited soil removal and groundwater pumping was conducted (as reported by SEISCO, 2001).

In July 1999, ten soil samples and one groundwater sample were collected from beneath the USTs to analyze for BTEX compounds that had not been analyzed for in the first sample event.

1. 1,000-gallon UST: one monitoring well was installed approximately 10 feet downgradient of the former 1000-gallon UST excavation (SEISCO, 1999). The groundwater sample collected from the well detected 284.3 µg/L benzene, 9.43 µg/L toluene, 508.8 µg/L xylenes and 50.37 µg/L MTBE. Soil samples collected were below the detection limit for BTEX.
2. 550 -gallon UST: Soil samples were collected from beneath the UST, along the product piping runs and dispenser piping and from below the dispenser. The maximum concentrations were 0.301 ppm benzene collected from 4 feet bgs beneath the dispenser. No TPHg analysis was performed.

In January 2001, 55 cubic yards of contaminated soil were excavated and removed from both tank areas and the product piping areas at the 550 gallon tank. No maps of the excavated areas were prepared.

1. 1,000-gallon UST: excavation confirmation samples (D-1-5.0 and PT1-5.0), collected from 5 feet bgs, reported no TPHg, BTEX, or MTBE. Lead was detected in both samples at a maximum concentration of 11.45 mg/kg. Another groundwater sample collected from MW-1 contained 63 µg/L TPHg, 4.8 µg/L benzene and <5.0 µg/L MTBE. The groundwater monitoring well MW-1 was decommissioned by grouting under an Alameda County Public Works permit.
2. 550-gallon UST: four soil samples associated with the fuel dispenser and piping in the eastern area of the property were analyzed. These samples (D2-5.0, D3-8.0, PT2-4.0, and PT4-3.0 with respective depths of 5, 8, 4 and 3 feet bgs) contained up to 210 mg/kg TPH-gasoline, 0.38 -1.1 mg/kg benzene and 12 mg/kg MTBE.

January 20, 2009 an SWI was performed at the site to evaluate the source area and the lateral and vertical extent of contamination in the area of the 550-gallon tank and product piping. TVHg was detected in sample B-4 from 8 feet bgs at a concentration of 470 mg/kg. The maximum benzene concentration in soil (0.61 mg/kg) was detected in sample B3 from 11.5 feet bgs. Concentrations of benzene above this sample were close to the detection limit at 0.006 mg/kg. No benzene was detected in groundwater. However, 140 µg/L TVHg was detected in groundwater. No fuel oxygenates or lead scavengers were detected in soil or groundwater during this investigation.


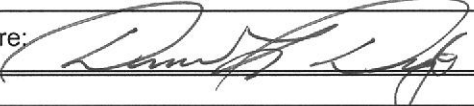
IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
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		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: yes	Number Decommissioned: 1	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

<p>Considerations and/or Variances: Area excavated not presented on map.</p> <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 based upon the information available in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site.</p>

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barbara J. Jakub, P.G.	Title: Hazardous Materials Specialist
Signature: 	Date: 5/29/09
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 05/29/09

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: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature:	Date:

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
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.		
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List Enforcement Actions Taken: None		
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VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barbara J. Jakub, P.G.	Title: Hazardous Materials Specialist
Signature: <i>Barbara J. Jakub</i>	Date: 5/29/09
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: <i>Donna L. Drogos</i>	Date: 05/29/09

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: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature: <i>Cherie McCaulou</i>	Date: 6/19/09

* LOP agency to update all required fields in GeoTracker database.

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: January 18, 2001	Date of Well Decommissioning Report: 2/5/01	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 1	Number Retained: 0
Reason Wells Retained: Not applicable		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: <i>Barbara J. Jones</i>		Date: <i>5/29/09</i>

Attachments:

1. Site Vicinity Map (1 pp)
2. Site Plan (2 pp)
3. Soil Analytical Data from 1988 and 1999 Excavations (4 pp)
4. Soil and Groundwater Analytical Data (2 pp)
5. Boring Logs (5 pp)

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



SITE LOCATION ON AERIAL PHOTO

6335 San Pablo Ave.
Oakland, CA

By: MJC

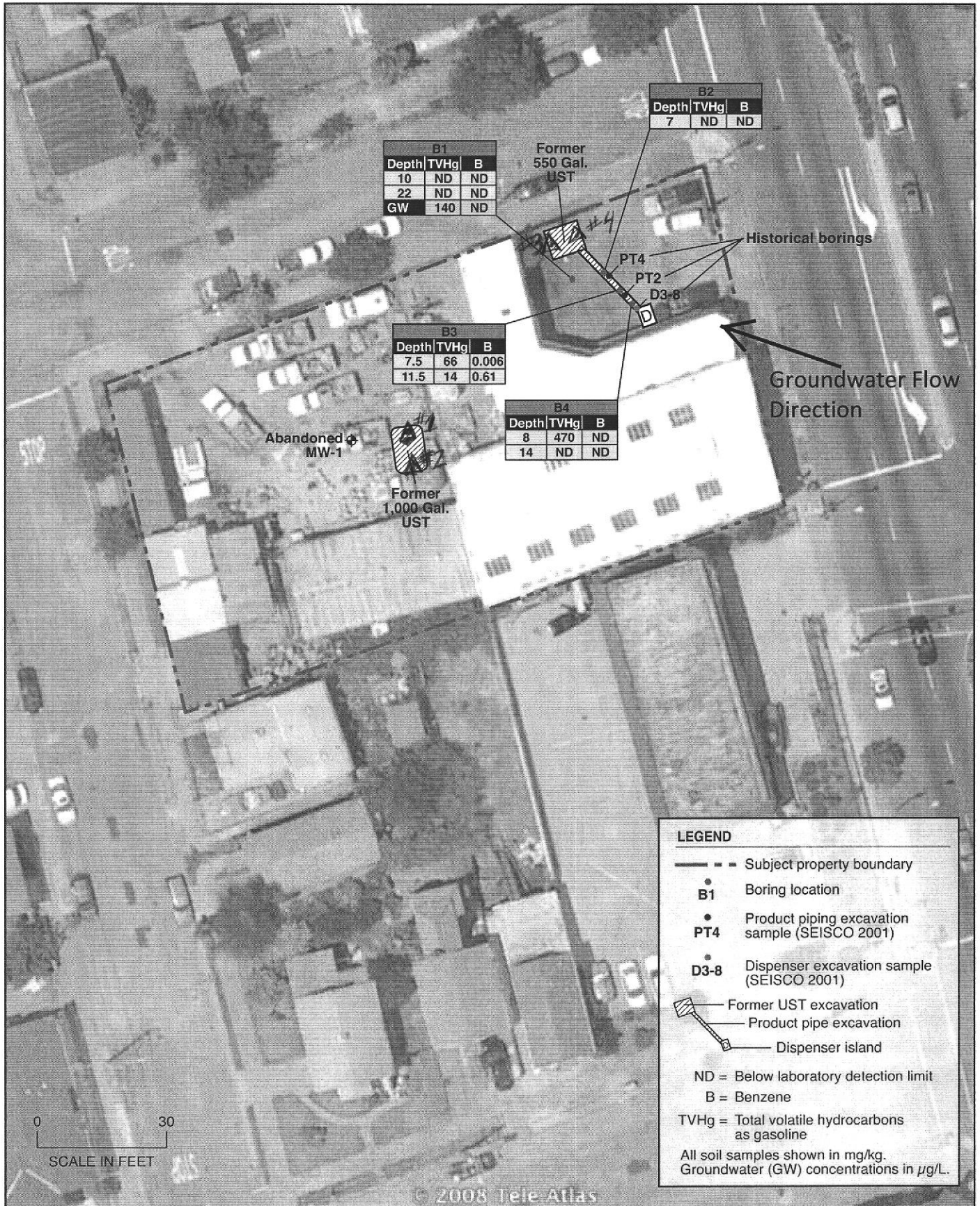
NOVEMBER 2008

Figure 1



2008-48-01

ATTACHMENT 1



2008-48-07



ANALYTICAL RESULTS OF CONTAMINANTS DETECTED ABOVE ESLS

6335 San Pablo Ave.
Oakland, CA

By: MJC

JANUARY 2009

Figure 2



△ Initial TPH sample collection (1988)
pg. 3

**1988 and 1999 Excavation and Post Excavation Confirmation Soil Samples
TPHg, BTEX, MTBE and Lead Analytical Results
6355 San Pablo Avenue, Oakland, California**

Sample ID	Sample Depth (feet bgs)	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Total Lead
April 1988 Excavation Soil Samples (mg/kg)								
1	10.0	<10	--	--	--	--	--	--
2	10.0	>2,400	--	--	--	--	--	--
3	8.0	<10	--	--	--	--	--	--
4	8.0	<10	--	--	--	--	--	--
July 1999 Post Excavation Confirmation Soil Samples (µg/L) from soil extract*								
1A	4.0	--	3.2	1.94	1.54	5.51	<5.0	<1.0
1B	4.0	--	301	2,680	1,954	14,221	446.35	7.1
2	8.0	--	27.2	3.66	19.54	45.41	3.13	<1.0
3	5.0	--	17.2	3.0	2.1	11.8	<5.0	<1.0
4	8.0	--	0.5	3.8	<0.5	25.9	1.6	1.8
5	8.0	--	<0.5	<0.5	<0.5	<0.5	<5.0	2.3
6	4.0	--	<0.5	<0.5	<0.5	<0.5	<5.0	3.64
7	4.0	--	<0.5	<0.5	<0.5	<0.5	<5.0	11.45
8	11.8	--	<0.5	<0.5	<0.5	<0.5	<5.0	4.55
9	11.8	--	<0.5	<0.5	<0.5	<0.5	<5.0	6.4

Notes:

ESLs = Water Board (2008) Environmental Screening Levels for commercial/industrial sites where groundwater *is not* a potential drinking water resource.

Samples in **bold-face type** exceed the ESL criterion where groundwater *is not* a drinking water resource.

TPH = total petroleum hydrocarbons as gasoline

MTBE = methyl tertiary-butyl ether

bgs = below ground surface

* Divide µg/L by 1000 to convert to mg/kg for comparison to Soil ESLs assuming 1 gram of soil was initially extracted per method requirements.

Soil ESLs (mg/kg)	180	0.27	9.3	4.7	11	8.4	750
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ATTACHMENT 3

pg. 4

**January 2001 and January 2009
Soil and Groundwater Analytical Results
6355 San Pablo Avenue, Oakland, California**

over-
excavation
sample
1000-g. Tank

Sample ID	Sample Depth (feet bgs)	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Total Lead
January 2001 Post Excavation Confirmation Soil Samples (mg/kg)								
D1-5.0	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	10
D2-5.0	5	120	0.38	0.51	1.4	8.3	<0.005	7.1
D3-8.0	8	14	1	1.3	0.41	1.9	<0.005	6.5
PT1-5.0	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	7.2
PT2-4.0	4	20	0.53	0.069	0.39	1.3	12	7
PT3-4.5	4.5	<1.0	<0.05	<0.005	<0.005	<0.005	6.1	7
PT4-3.0	3	210	1.1	0.29	1.2	5.2	<0.005	7.1
T1	6.5	4.3	0.008	0.03	0.0063	0.028	<0.005	20
January 2009 Site Investigation Soil Samples (mg/kg)								
B1-10	10	<0.98	<0.0049	<0.0049	<0.0049	<0.0049	0.0081	NA
B1-22	22	<0.93	<0.0048	<0.0048	<0.0048	<0.0048	0.0095	NA
B2-7	7	<1.1	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA
B3-7.5	7.5	66	0.006	0.027	0.04	0.233	<0.0049	NA
B3-11.5	11.5	14	0.61	0.44	0.059	0.26	<0.051	NA
B4-8	8	470	<0.051	<0.051	1.8	9.31	<0.051	NA
B4-14	14	<0.99	<0.0047	<0.0047	<0.0047	<0.0047	0.0069	NA
Soil ESLs		180	0.27	9.3	4.7	11	8.4	750
July 1999 MW-1 Groundwater Sample (µg/L)								
10		NA	284.3	9.43	<0.5	508.8	50.37	5.5
January 2001 MW-1 Groundwater Sample (µg/L)								
MW-1		63	4.8	<0.5	2.2	2.2	<1.0	<5.0
January 2009 Boring Grab-Groundwater Sample (µg/L)								
B1-GW		140	<0.5	<0.5	0.6	<0.5	110	NA
Groundwater ESLs		210	46	130	43	100	1,800	2.5

Notes:

ESLs = Water Board Environmental Screening Levels for commercial/industrial sites where groundwater *is not* a potential drinking water resource.

Samples in **bold-face type** exceed the ESL criterion where groundwater *is not* a drinking water resource.

MTBE = methyl tertiary-butyl ether

TPHg = total petroleum hydrocarbons as gasoline

bgs = below ground surface

NA – Not analyzed

Monitoring well MW-1 screened 4-16 feet bgs; destroyed in January 2001

Table 2
Lead Scavengers and Fuel Oxygenates,
Soil and Groundwater Sample Analytical Results – January 20, 2009
6335, Oakland, California

Sample I.D.	Sample Depth (feet bgs)	EDC	EDB	ETBE	DIPE	TAME	TBA
January 2009 Site Investigation Soil Samples (mg/kg)							
B1-10	10	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
B1-22	22	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
B2-7	7.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
B3-7.5	7.5	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
B3-11.5	11.5	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051
B4-8	8.0	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051
B4-14	14	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
Soil ESLs		0.0045 / 0.48	0.00034 / 0.044	NLP	NLP	NLP	0.075 / 110
January 2009 Site excavation Groundwater Sample (µg/L)							
B1-GW		26	<0.5	<0.5	0.6	<0.5	220
Groundwater ESLs		0.38 / 690	0.0097 / 510	NLP	NLP	NLP	12 / 18,000

Notes:
 ESLs = Water Board Environmental Screening Levels for commercial sites where groundwater *is/is not* considered a potential drinking water resource. (Water Board, 2008).
 Sample concentrations in **bold-face** type exceed the ESL criterion where groundwater *is not* considered a potential drinking water resource.
 EDB = ethylene dibromide (1,2-dibromoethane)
 EDC = ethylene dichloride (1,2-dichloroethane).
 ETBE = ethyl tertiary-butyl ether
 DIPE = isopropyl ether
 TAME = tertiary-amyl methyl ether
 TBA = tertiary-butyl alcohol
 NLP = no level published

Different ESLs are published for commercial/industrial vs. residential land use, for sites where groundwater is a potential drinking water resource vs. is not a drinking water resource, and the type of receiving water body. A Water Board-published map (Figure 19 in the East Bay Plains Beneficial Use Study, San Francisco Bay, 1999) shows the subject property to be within the Zone B designated as where “groundwater is unlikely to be used as a drinking water source”. In our professional opinion, the appropriate ESLs for the subject site are based on the following:

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

BORING NUMBER B1 Page 1 of 1

PROJECT Bolin's Garage OWNER Mr. Virgil Bolin
 LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48
 TOTAL DEPTH 30 ft. bgs BOREHOLE DIA. 2.25 inch
 SURFACE ELEV. not known WATER FIRST ENCOUNTERED 28 feet bgs
 DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400
 DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0			5" concrete	
2		6.2	CL, olive gray silty clay, med. plastic, damp	
4			ML, clayey coarse, sandy silt, olive gray, moist	
6		4.0	CL, reddish brown clay, soft, sl. plastic, moist, interbedded, layers of reddish brown silt	
8				
10	B1-10	80	slight fuel odor from 9-10 feet	
12				
14		7.2	CL, reddish brown silty clay, w/streaks of gray, soft, plastic, moist	
16			(could not extract sample from sampler between 16 and 20 feet; clay seen on both ends)	
18				
20		5.1		
22	B1-22	6.5		
24			ML, reddish brown clayey silt, coarse sand, moist to wet, soft, med. plastic	
26			CL, reddish brown coarse sandy clay, moist to wet, soft, med. plastic	B1-10
28		3.2	▼ First encountered groundwater	Grab groundwater sample collected. Temporary screen set at 25-30' bgs.
30			CL, reddish brown clay, firm	
			Bottom of boring	

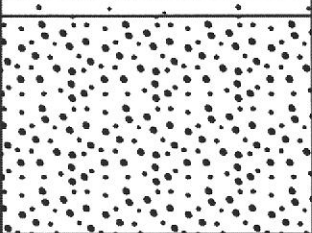
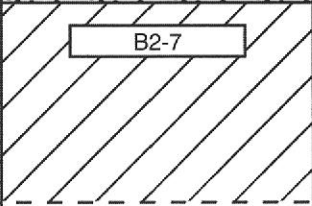
Notes:
 PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv)
 Continuous core sampling—100% core recovery unless specified otherwise

2008-48-03

▼ First encountered groundwater

BORING NUMBER B2 Page 1 of 1

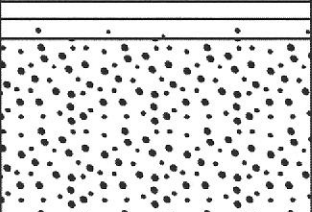
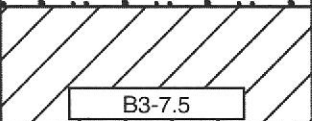
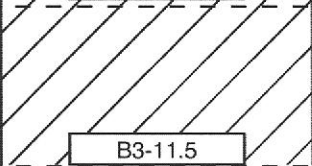
PROJECT Bolin's Garage OWNER Mr. Virgil Bolin
 LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48
 TOTAL DEPTH 11 ft. bgs BOREHOLE DIA. 2.25 inch
 SURFACE ELEV. not known WATER FIRST ENCOUNTERED not encountered
 DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400
 DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0		22	6" concrete with underlying sandy pea gravel fill, damp, loose	Hole collapsed because of fill, could not advance deeper than 12 feet Notes: PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv) Continuous core sampling—100% core recovery unless specified otherwise Soil sample collected for laboratory analysis. <div style="border: 1px solid black; padding: 2px; display: inline-block;">B2-7</div>
2			(bottom of fill)	
4		6.0	CL, grayish brown clay, med. plastic, slight fuel odor	
6				
8				
10			Bottom of boring	
12				
14				
16				
18				
20				
22				
24				
26				
28				
30				

2008-48-04

BORING NUMBER B3 Page 1 of 1

PROJECT Bolin's Garage OWNER Mr. Virgil Bolin
 LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48
 TOTAL DEPTH 12 ft. bgs BOREHOLE DIA. 2.25 inch
 SURFACE ELEV. not known WATER FIRST ENCOUNTERED not encountered
 DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400
 DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0			6" concrete with underlying sandy pea gravel fill	
2			(bottom of fill)	
6		132	CL, discolored blue green silty clay, fuel odor, med. plastic	
8			CL, becomes reddish brown, damp	
10		8		
12			Bottom of boring	
14				
16				
18				
20				
22				
24				
26				
28				
30				

Notes:
 PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv)

Continuous core sampling—100% core recovery unless specified otherwise

Soil sample collected for laboratory analysis.

B3-7.5

2008-48-06

▽ First encountered groundwater

▼ Equilibrated groundwater level

BORING NUMBER B4 Page 1 of 1

PROJECT Bolin's Garage OWNER Mr. Virgil Bolin

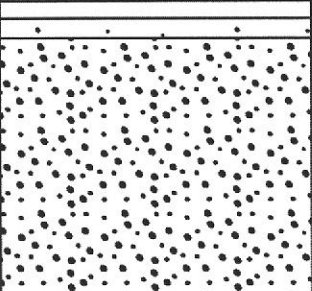
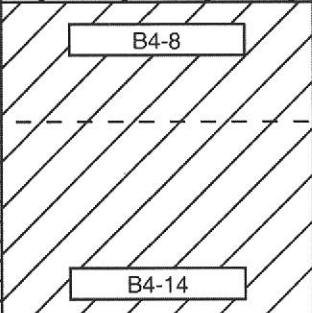
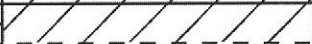
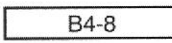
LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48

TOTAL DEPTH 16 ft. bgs BOREHOLE DIA. 2.25 inch

SURFACE ELEV. not known WATER FIRST ENCOUNTERED not encountered

DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400

DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0			6" concrete with underlying pea gravel and sand fill, damp, loose	
2			(bottom of fill)	
8		185	CL, discolored blue gray clay, fuel odor, plastic, slight fuel odor	
10		120	CL, reddish brown clay with gray streaks, slight fuel odor	
14		6.5		
16			ML, clayey silt with coarse sand	
18			Bottom of boring	Notes: PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv) Continuous core sampling—100% core recovery unless specified otherwise Soil sample collected for laboratory analysis.
20				
22				
24				
26				
28				
30				

2008-48-06

▽ First encountered groundwater

▼ Equilibrated groundwater level