

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

REMEDIAL ACTION COMPLETION CERTIFICATION

**StID 3066 - 5865 Broadway Terrace, Oakland, CA
(3 underground storage tanks removed on October 7, 1998)**

February 16, 2001

Mr. Mike Gilmore
Carolyn McElhinney Trust
123 Scenic Drive
Orinda, CA 94563

Dear Mr. Gilmore:

This letter confirms the completion of site investigation and corrective 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 tanks 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 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,

A handwritten signature in black ink that reads "Mee Ling Tung". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Mee Ling Tung, Director

cc: Chuck Headlee, RWQCB
Allan Patton, SWRCB
Leroy Griffin, OFD
files-ec (carservices6)

ALAMEDA COUNTY
HEALTH CARE SERVICES

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StID 3066

February 16, 2001

Mr. Mike Gilmore
Carolyn McElhinney Trust
123 Scenic Drive
Orinda, CA 94563

Re: Fuel Leak Site Case Closure for 5865 Broadway Terrace, Oakland, CA

Dear Mr. Gilmore:

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 Protection Division 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:

- up to 310ppm TPH as gasoline, and 0.70ppm benzene exists in soil beneath the site;
- a site safety plan is required for the protection of construction workers in the event excavation/trenching is proposed in the vicinity of residual soil contamination.

If you have any questions, please contact me at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enclosures: 1. Case Closure Letter 2. Case Closure Summary

c: Leroy Griffin, Oakland Fire Department
files (carservices7)

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank	3 USTs	Disposed by Erickson, in Richmond, CA	10/7/98
Soil	788 tons	Disposed at Kelly Canyon L.F. in Pittsburg, CA	5/22 - 6/28/00
Groundwater	625 gallons	Disposed at Alviso Oil in Alviso, CA	5/23/00

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>Before¹</u>	<u>After²</u>	<u>Before³</u>	<u>After⁴</u>
TPH (Gas)	3,800	310	2,200	ND
Benzene	2	0.70	7.3	<0.5
Toluene	ND	1.2	7.9	<0.5
Ethylbenzene	11	0.46	41	<0.5
Xylenes	16	1.3	100	<0.5
MTBE	11	4.0	160	72
Heavy Metals TOG	with geogenic levels ND			

- NOTE:**
- 1 soil concentration from tank pit at time of UST removal, 10/98
 - 2 soil concentration after tank pit overexcavation, 6/00
 - 3 grab groundwater collected after overexcavation and after 625 gallons was purged from pit, 5/00
 - 4 grab groundwater collected from soil boring advanced downgradient of tank pit, 4/99

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____

Does corrective action protect public health for current land use? **YES**

Site management requirements: **A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**

Should corrective action be reviewed if land use changes? **YES**

Monitoring wells Decommissioned: **NA**

Number Decommissioned: **0** Number Retained: **0**

List enforcement actions taken: **NA**

List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Eva Chu

Title: Haz Mat Specialist

Signature: 

Date: 1/5/01

Reviewed by

Name: Barney Chan


Title: Haz Mat Specialist

Signature: 

Date: 1/3/01

Name: Thomas Peacock

Title: Supervisor

Signature: 

Date: 1-4-01

VI. RWQCB NOTIFICATION

Date Submitted to RB: 1/5/01

RB Response: *concur*

RWQCB Staff Name: Chuck Headlee

Title: AEG

Signature: 

Date: 2/8/01

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site currently consists of a gasoline service station with an auto repair facility. A new 20,000-gallon UST (split into two compartments of 12,000 and 8,000 gallons) for the storage of gasoline was installed in May 2000. New dispensers also installed. (See Figs 1 and 2)

In October 1998 the first generation dispenser islands, product piping and three USTs (1-7.5K and 1-3K gallon gasoline UST and a 250-gallon waste oil tank) were removed from the site. Soil samples collected beneath the USTs contained up to 3,800ppm TPHg, 2ppm benzene, and 11ppm MTBE. A four into one composite sample of the stockpiled soil contained up to 1,100ppm TPHg. The stockpiled soil was reused to backfill the excavation. (See Fig 3, Table 1)

In April 1999, five direct push borings (AEI-1 through AEI-5) were advanced to delineate the extent of soil and possible groundwater contamination at the site. Borings AEI-1 and AEI-2 were advanced to a depth of 6' bgs adjacent to the former dispensers. Soil samples collected at 3 feet bgs did not contain petroleum hydrocarbon constituents. Borings AEI-4 and AEI-5 were advanced to 15' and 11.5' bgs, respectively, when refusal was encountered. Groundwater was not encountered in AEI-4 or AEI-5. Soil from boring AEI-4 contained up to 10ppm TPHg, 9.2ppm TPHd, 0.93ppm MTBE and 0.18ppm benzene at 10 feet bgs. The hydrocarbon concentrations decreased at 15 feet bgs. Boring AEI-5 did not contain analytes sought at 5 feet bgs, except for 6.8ppm TPHd. Boring AEI-3 was advanced to 16' bgs. Groundwater was initially encountered at 13 feet bgs. Soil from 5 feet and 10 feet bgs did not contain

hydrocarbon constituents. However, groundwater contained 72ppb MTBE and 11ppb TAME. (See Fig 3 and Tables 2 and 3)

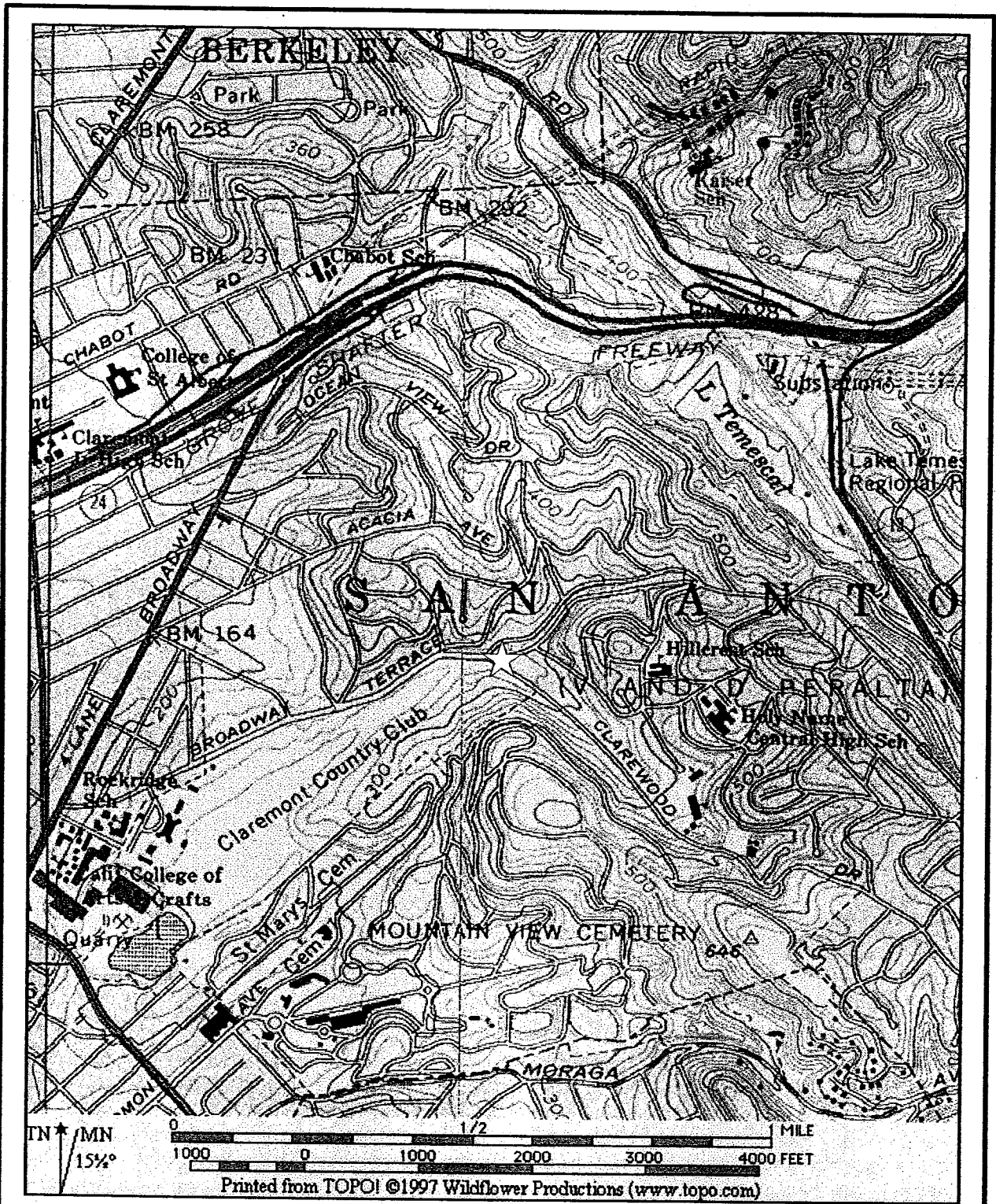
Overexcavation of the former tank pit was performed in May 2000. Approximately 5 feet more of the west wall was removed (to accommodate the installation of a 20K, two-compartment UST). A soil sample was taken from the west wall at 14 feet bgs. Black, silty clay with moderate hydrocarbon odor was noted. A grab groundwater sample was also collected after 625 gallons were purged and groundwater allowed to recharge. Approximately 788 tons of contaminated soil was off-hauled and disposed at Keller Canyon Landfill. (See Fig 5)

The soil sample collected at 14 feet bgs from the west wall contained 310ppm TPHg, 2.8ppm MTBE (Method 8260), 0.13ppm TAME and 0.70ppm benzene. The grab water sample contained 2,200ppb TPHg, 160ppb MTBE, and 7.3ppb benzene. (See Tables 4 and 5)

Based on analytical results of soil samples collected from the tank excavation and soil borings advanced in April 1999, it appears that the extent of soil contamination is limited to the immediate vicinity of the tank pit. Bedrock is encountered at the site at various depths, beginning at ~12 to 15 feet bgs at the former tank pit (see Boring Logs). Perched groundwater has been impacted by MTBE. However, the levels do not exceed the RWQCB's RBSL of 1800ppb. A well and conduit survey did not identify any potential sensitive receptors within 1000 feet of the site. A man-made channel/storm drain located within 200 feet of the site is at approximately 8 feet bgs. Unless there is significant seasonal water table fluctuations at the site, the channel should not act as a preferential pathway for contaminants to migrate from the site. Permanent groundwater monitoring wells are not warranted at the site.

In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved hydrocarbon plume is not migrating;
- no preferential pathways exist at the site;
- no water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment.



HK2, Inc./SEMCO
 70 Chemical Way
 Redwood City, CA 94063

★ **SITE LOCATION**

SITE LOCATION
 C.A.R. Service
 5865 Broadway Terrace
 Oakland, California

FIGURE 1

FN:98-0225ustrpt.F1 DRWG:BAW/12.98

BROADWAY TERRACE

BUS SHELTER

DISPENSERS

VENT PIPES

AUTO SHOP

CANOPY

PRODUCT LINES

OFFICE

CANOPY FOOTINGS

20,000-GALLON DOUBLE-WALLED UST
TANK IS SPLIT 12,000 / 8,000

PLANTER BOX

SUBJECT PROPERTY BOUNDARY

CLARWOOD DRIVE



AEI Consultants

3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SCALE: 1" = 20'

DRAWN BY: J. ORMEROD

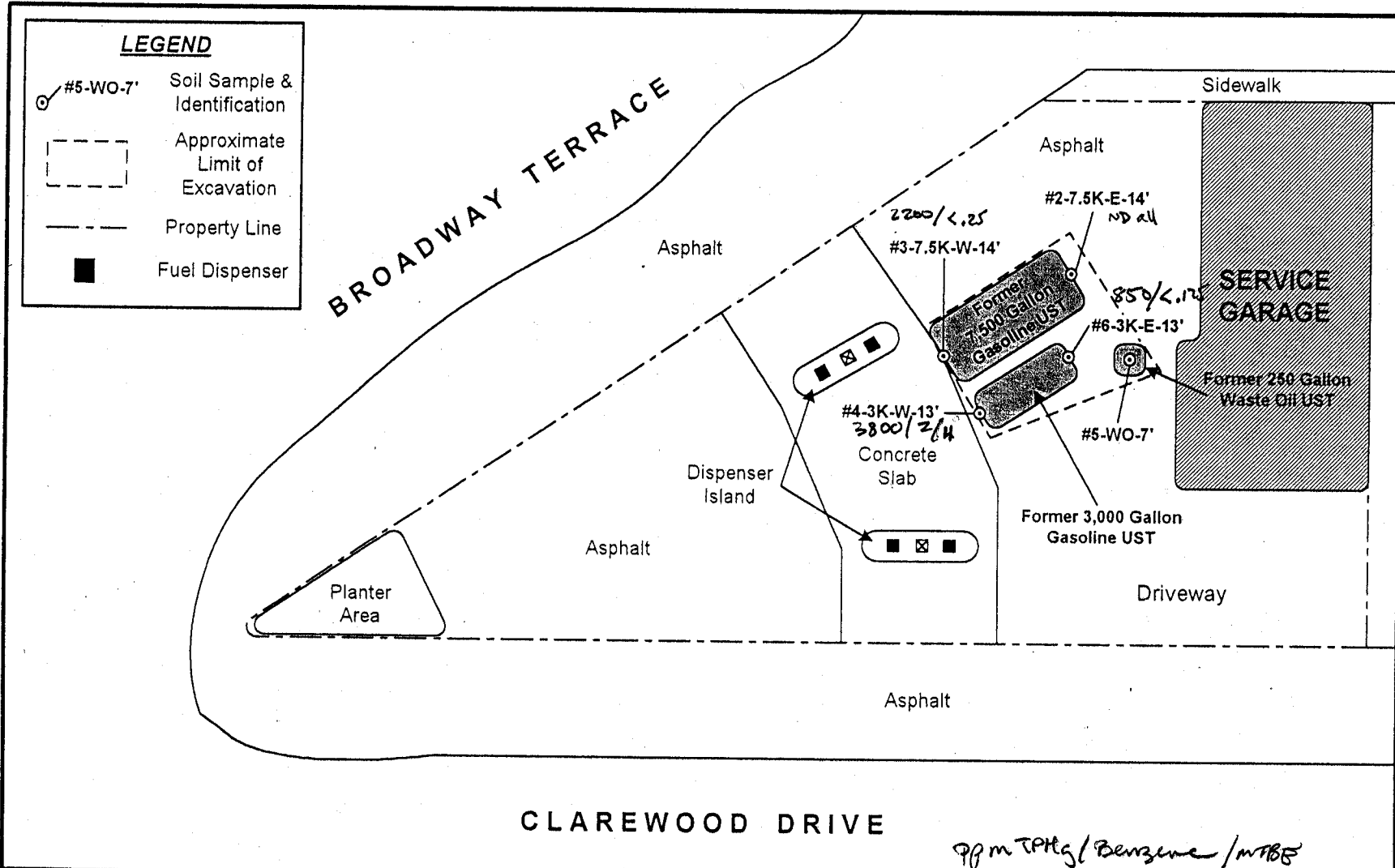
DATE: 10/11/00

SITE MAP

5865 BROADWAY TERRACE
OAKLAND, CALIFORNIA

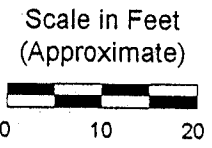
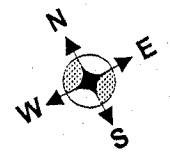
DRAWING NUMBER:

FIGURE 2



ppm TPHg / Benzene / MTBE

HK2, Inc./SEMCO
 70 Chemical Way
 Redwood City, CA 94063



SITE PLAN
 C.A.R. Service
 5865 Broadway Terrace
 Oakland, California

FN:98-0225ustrpt.F2 DRWG:BAW/12.98

FIGURE 13

Table 1



North State Environmental
 Chemical Waste Disposal • Tracking • Consulting

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 98-1289
 Client: Semco
 Project: 5865 Broadway Terrace

Date Reported: 10/23/98

Gasoline, BTEX and MTBE by Methods 8015M and 8020
 Total Cd, Cr, Ni, Pb and Zn by AA Spectroscopy
 Total Extractable Petroleum Hydrocarbons by SM 5520 E & F

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 98-1289-01 Client ID: #1-SP				10/07/98	SOIL COMP.
Gasoline	8015M	1100	mg/Kg		10/14/98
Benzene	8020	ND<0.125	mg/Kg		
Ethylbenzene	8020	4	mg/Kg		
MTBE	8020	*2	mg/Kg		
Toluene	8020	2	mg/Kg		
Xylenes	8020	47	mg/Kg		
Lead	7420	20	mg/Kg		10/14/98
Sample: 98-1289-02 Client ID: #2-7.5K-E-14'				10/07/98	SOIL
Gasoline	8015M	ND			10/14/98
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	*ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Lead	7420	12	mg/Kg		10/14/98
Sample: 98-1289-03 Client ID: #3-7.5K-W-14'				10/07/98	SOIL
Gasoline	8015M	2200	mg/Kg		10/14/98
Benzene	8020	ND<0.25	mg/Kg		
Ethylbenzene	8020	11	mg/Kg		
MTBE	8020	*ND<0.25	mg/Kg		
Toluene	8020	ND<0.25	mg/Kg		

Page 1

*Confirmed by GC/MS method 8260.
 1000 Redwood Ave. South San Francisco, California 94083 • 650-588-2838 FAX 650-1950

CO-2

001-28-98 11:30A



C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 98-1289
Client: Semco
Project: 5865 Broadway Terrace

Date Reported: 10/23/98

Gasoline, BTEX and MTBE by Methods 8015M and 8020
Total Cd, Cr, Ni, Pb and Zn by AA Spectroscopy
Total Extractable Petroleum Hydrocarbons by SM 5520 E & F

analyte	Method	Result	Unit	Date Sampled	Date Analyzed
sample: 98-1289-03 Client ID: #3-7.5K-W-14'					
				10/07/98	SOIL
xylenes	8020	16	mg/Kg		
lead	7420	3	mg/Kg		10/14/98
sample: 98-1289-04 Client ID: #4-3K-W-13'					
				10/07/98	SOIL
gasoline	8015M	3800	mg/Kg		10/14/98
benzene	8020	2	mg/Kg		
thylbenzene	8020	ND<0.25	mg/Kg		
TBE	8020	*11	mg/Kg		
toluene	8020	ND<0.25	mg/Kg		
xylenes	8020	ND<0.5	mg/Kg		
lead	7420	3	mg/Kg		10/14/98
sample: 98-1289-05 Client ID: #5-WO-7'					
				10/07/98	SOIL
cadmium	7130	ND			10/14/98
chromium	7190	47	mg/Kg		
lead	7420	15	mg/Kg		
nickel	7520	63	mg/Kg		
inc	7950	71	mg/Kg		
gasoline	8015M	2	mg/Kg		10/14/98
benzene	8020	ND			
thylbenzene	8020	0.017	mg/Kg		
TBE	8020	*ND			
toluene	8020	0.005	mg/Kg		

*Confirmed by GC/MS method 8260.

cont. table 1



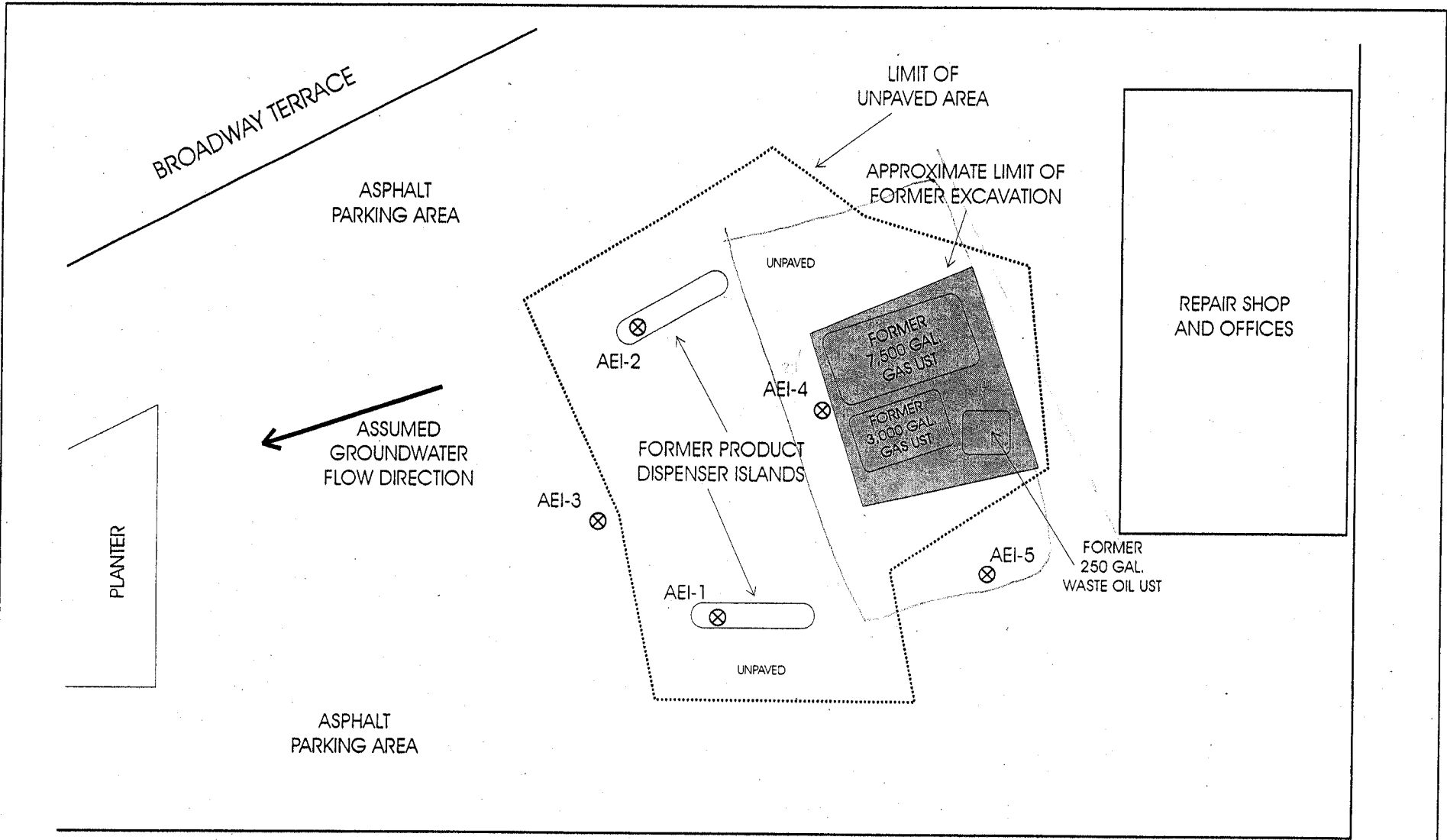
North State Environmental
Chemical Waste Disposal - Trucking - Consulting

C E R T I F I C A T E O F A N A L Y S I S

Number: 98-1289
Client: Semco
Address: 5865 Broadway Terrace
Date Reported: 10/23/98

Gasoline, BTEX and MTBE by Methods 8015M and 8020
Total Cd, Cr, Ni, Pb and Zn by AA Spectroscopy
Total Extractable Petroleum Hydrocarbons by SM 5520 E & F

Sample	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 98-1289-05 Client ID: #5-WO-7'					
Gasolines	8020	ND		10/07/98	SOIL
MTBE	5520F	ND			10/12/98
Sample: 98-1289-06 Client ID: #6-3K-E-13'					
Gasoline	8015M	850	mg/Kg	10/07/98	SOIL
Benzene B	8020	ND<0.125	mg/Kg		10/14/98
Toluene	8020	1	mg/Kg		
MTBE	8020	*ND<0.12	mg/Kg		
Xylenes T	8020	ND<0.125	mg/Kg		
Xylenes X	8020	ND<0.25	mg/Kg		
Other	7420	3	mg/Kg		10/14/98



ALL ENVIRONMENTAL, INC.
 901 MORAGA ROAD, SUITE C, LAFAYETTE, CA

SITE PLAN

5865 BROADWAY TERRACE
 OAKLAND, CALIFORNIA

FIGURE 04

⊗ SOIL BORING LOCATIONS
 AND IDENTIFICATION
 AEI-1

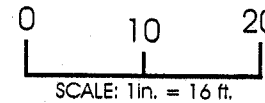


Table ~~1~~ 2
 Soil Sample Analytical Results
 April 5, 1999

Sample ID	TPH as gasoline mg/kg	TPH as diesel mg/kg	Fuel Oxygenates by EPA 8260					Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	PAHs* mg/kg
			DIPE $\mu\text{g/kg}$	ETBE $\mu\text{g/kg}$	MTBE $\mu\text{g/kg}$	TAME $\mu\text{g/kg}$	t-Butanol $\mu\text{g/kg}$					
AEI-1 3'	<1.0	<1.0	-	-	<50	-	-	<0.005	<0.005	<0.005	<0.005	-
AEI-2 3'	<1.0	<1.0	-	-	<50	-	-	<0.005	<0.005	<0.005	<0.005	-
AEI-3 5'	<1.0	<1.0	-	-	<50	-	-	<0.005	<0.005	<0.005	<0.005	-
AEI-3 10'	<1.0	<1.0	-	-	<50	-	-	<0.005	<0.005	<0.005	<0.005	-
AEI-4 10'	19	9.2	<50	<50	930	<50	<250	0.18	0.076	0.15	0.45	<0.33
AEI-4 15'	<1.0	<1.0	-	-	130	-	-	<0.005	0.011	<0.005	0.007	-
AEI-5 5'	<1.0	6.8	-	-	<50	-	-	<0.005	<0.005	<0.005	<0.005	-
AEI-5 9'	<1.0	<1.0	-	-	<50	-	-	<0.005	<0.005	<0.005	<0.005	-
MDL	1.0	1.0	50	50	50	50	250	0.005	0.005	0.005	0.005	0.33

MDL = Method Detection Limit

ND = Not detected above the Method Detection Limit (unless otherwise noted)

$\mu\text{g/kg}$ = micrograms per kilogram (ppb)

mg/kg = milligrams per kilogram (ppm)

- Not Analyzed

* - All Polynuclear Aromatic Hydrocarbons (PAH) by EPA method 8270 were not detected above the MDL

Table 3
Groundwater Sample Analytical Results
April 5, 1999

Sample ID	TPH as gasoline µg/L	Fuel Oxygenates by EPA 8260					Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	VOCs* µg/L
		DIPE µg/L	ETBE µg/L	MTBE µg/L	TAME µg/L	t-Butanol µg/L					
AEI-3 W	<50	<1.0	<1.0	72	11	<5.0	<0.5	<0.5	<0.5	<0.5	<1.0
MDL	50	1.0	1.0	1.0	1.0	5.0	0.5	0.5	0.5	0.5	1.0

MDL = Method Detection Limit

ND = Not detected above the Method Detection Limit (unless otherwise noted)

µg/L = micrograms per liter (ppb)

mg/L = milligrams per liter (ppm)

* - All Volatile Organic Compounds (VOC) analyzed by EPA method 8260 were not detected above the MDL

BROADWAY TERRACE

BUS SHELTER

Sidewall 14'	
TPH(g)	310
MTBE	4.0
Benzene	0.70
LEAD	8.2

STKP 5-8	
TPH(g)	160
MTBE	0.96
Benzene	0.17
LEAD	17

STKP 1-4	
TPH(g)	14
MTBE	<0.05
Benzene	<0.005
LEAD	22

SHORING

AUTO SHOP

OFFICE

STOCKPILED SOIL

EXCAVATION BOUNDARY

PLANTER BOX

SUBJECT PROPERTY BOUNDARY

CLARWOOD DRIVE

KEY

- SOIL SAMPLE LOCATION
- TPH(g) TOTAL PETROLEUM HYDROCARBON AS GASOLINE
- MTBE METHYL TERTIARY BUTYL ETHER
- LEAD TOTAL LEAD

SOIL SAMPLE RESULTS IN mg/kg



AEI Consultants

3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SCALE: 1" = 20'

DRAWN BY: J. ORMEROD

DATE: 10/11/00

SAMPLE LOCATION MAP

5865 BROADWAY TERRACE
OAKLAND, CALIFORNIA

DRAWING NUMBER:

FIGURE 05

TABLE 4 - Soil Sample Analyses

	Sidewall 14'	STKP 1-4	STKP 5-8
TPH-GASOLINE (mg/kg)	310	14	160
MTBE (mg/kg)	4.0	<0.05	0.96
Di-isopropyl Ether (µg/kg)	<100	NA	NA
Ethyl tert-Butyl Ether (µg/kg)	<100	NA	NA
Methyl-tert Butyl Ether (µg/kg)	2800	NA	NA
tert-Amyl Methyl Ether (µg/kg)	130	NA	NA
tert-Butanol (µg/kg)	<500	NA	NA
BENZENE (mg/kg)	0.70	<0.005	0.17
TOLUENE (mg/kg)	1.2	0.057	0.86
ETHYL BENZENE (mg/kg)	0.46	0.10	0.26
TOTAL XYLENES (mg/kg)	1.3	0.36	0.40
TOTAL LEAD (mg/kg)	8.2	22	17

mg/kg = milligrams per kilogram (parts per million)
 µg/kg = micrograms per kilogram (parts per billion)
 NA = not analyzed

AEI Consultants
 Job # 3616
 October 11, 2000
 Page 4

TABLE 5 - Groundwater Sample Analyses

	GW 14'
TPH-GASOLINE (µg/L)	2200
MTBE (µg/L)	160
BENZENE (µg/L)	7.3
TOLUENE (µg/L)	7.9
ETHYL BENZENE (µg/L)	41
TOTAL XYLENES (µg/L)	100

µg/L = micrograms per liter (ppb)
 mg/L = milligrams per liter (ppm)

Project No: 3177

Sheet: 1 of 1

Project Name: Broadway Terrace

Log of Borehole: AEI-1

Client: Mike Gilmore

Location: South Dispenser

Depth ft m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
1							Discrete sampling	
2		SAND Fine sand with minor silt and gravel	AEI-1 3'	SS	NA	60	Slight product odor PID = 0.0 ppm	
3		Clay increasing	AEI-1 5'	SS	NA	60	PID = 3 ppm	
4		End of Borehole						
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Drill Date 4/5/99

Reviewed by: JPD

Drill Method: Direct Push

Logged by: PJM

Total Depth: 6

Depth to Water: NA

All Environmental, Inc.
901 Moraga Road, Suite C
Lafayette, CA 94549
(800) 801-3224

Project No: 3177



Sheet: 1 of 1

Project Name: Broadway Terrace

Log of Borehole: AEI-2

Client: Mike Gilmore

Location: North Dispenser

Depth ft m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
1							Discrete sampling	
2							No product odor	
3		SAND Fine silty sand with minor silt and gravel up to 1 cm	AEI-2 3'	SS	NA	60	PID = 5 ppm	
4								
5		Minor clay	AEI-2 5'	SS	NA	90	PID = 0 ppm	
6		End of Borehole						
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Drill Date 4/5/99
 Drill Method: Direct Push
 Total Depth: 6
 Depth to Water: NA

Reviewed by: JPD
 Logged by: PJM

All Environmental, Inc.
 901 Moraga Road, Suite C
 Lafayette, CA 94549
 (800) 801-3224

Project No: 3177

Sheet: 1 of 1

Project Name: Broadway Terrace

Log of Borehole: AEI-3

Client: Mike Gilmore

Location: West of excavation

Depth ft m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0 0		Ground Surface PEA GRAVEL AND SAND FILL					Continuous coring PID = 8 ppm PID = 6 ppm No product odor PID = 6 ppm Static Water Level at 10 feet bgs No product odor Initial Water Level	
1 1		SAND Silty sand with minor clay and gravel up to 1 cm						
2 2								
3 3								
4 4								
5 5			AEI-3 5'	SS	NA	-		
6 6		CLAY Clay with silt and sand and 10% gravels up to 3 cm, damp						
7 7								
8 8								
9 9								
10 10			AEI-3 10'	SS	NA	-		
11 11								
12 12								
13 13		Saturated	AEI-3 13'	SS	NA	-		
14 14								
15 15		SILT Silt with sand and clasts up to 1.5 cm, saturated						
16 16								
17 17		End of Borehole						
18 18								
19 19								
20 20								

Drill Date 4/5/99
 Drill Method: Direct Push
 Total Depth: 16
 Depth to Water: 13

Reviewed by: JPD
 Logged by: PJM

All Environmental, Inc.
 901 Moraga Road, Suite C
 Lafayette, CA 94549
 (800) 801-3224

Project No: 3177






Sheet: 1 of 1

Project Name: Broadway Terrace

Log of Borehole: AEI-4

Client: Mike Gilmore

Location: Near former USTs

Depth ft m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
0		PEA GRAVEL AND SAND FILL						Continuous coring
1		SAND						PID Malfunction
1		Sand with silt and angular clasts up to 2 cm						
2		SAND and CLAY	AEI-4 5'	SS	NA	-		Strong Hydrocarbon Odor
2		Interbedded sand and clay with angular clasts up to 2 cm						
3		SAND and CLAY	AEI-4 10'	SS	NA	-		Strong Hydrocarbon Odor
3		Interbedded sand and clay with angular clasts up to 2 cm						
4		SAND and CLAY	AEI-4 15'	SS	NA	-		Strong Hydrocarbon Odor No Groundwater Generated Refusal Encountered
4		Interbedded sand and clay with angular clasts up to 2 cm						
5		End of Borehole						

Drill Date 4/5/99

Reviewed by: JPD

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Drill Method: Direct Push

Logged by: PJM

Total Depth: 15

Depth to Water: NA

Project No: 3177

Sheet: 1 of 1

Project Name: Broadway Terrace

Log of Borehole: AEI-5

Client: Mike Gilmore

Location: South of Excavation

Depth ft m	Soil Symbol	Subsurface Description	Sample Data				Well Data	Remarks
			Sample Label	Type	Blow Counts/	Recovery		
0		Ground Surface						
1		ASPHALT and FILL					Continuous coring	
2		SAND Coarse sand with clay and coarse gravel up to 3 cm, loose					PID Malfunction	
3								
4								
5								
6			AEI-5 5'	SS	NA	-	No Hydrocarbon Odor	
7								
8								
9		Sand decreasing					No Hydrocarbon Odor	
10		Clay increasing	AEI-5 9'	SS	NA	-		
11		CLAY Sandy clay with angular clasts, wet					Wet sample, no significant water generated	
12		End of Borehole					Refusal Encountered	
13								
14								
15								
16								
17								
18								
19								
20								

Drill Date 4/5/99

Reviewed by: JPD

Drill Method: Direct Push

Logged by: PJM

Total Depth: 11.5

Depth to Water: NA

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