ENVIRONMENTAL CONSULTING

SENANCE SECTION

TRANSMITTAL

TO: Mr. Andrew Clark-Clough

City of Oakland, Environmental Services

1333 Broadway, Suite 330

Oakland, Ca 94612

Date: 1 November 1996

Project No: 92404-D1

SUBJECT: June 1996 Semi-Annual Groundwater Monitoring Report,

2662 Fruitvale Avenue, Oakland, CA

4457

ENCLOSED:

COMMENTS:

. X.	No, of copies	Description:	
	!	Bound Report - dated 12 August 1996	
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cc:Barney Chan, Alameda Co. Dept. of Env. Health (w/enclosure)	

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ENVIRONMENTAL CONSULTING

12 August 1996 92404-D1 COPY

Mr. Andrew Clark-Clough City of Oakland Environmental Services 1333 Broadway Suite 330 Oakland, CA 94612

Subject: June 1996 Semi-Annual Groundwater Monitoring Report, 2662 Fruitvale Avenue,

Oakland, California

Dear Andrew:

This report documents the June 1996 groundwater monitoring event performed by BASELINE Environmental Consulting at the City of Oakland's property located at 2662 Fruitvale Avenue in Oakland, California (Figure 1). BASELINE has been performing groundwater monitoring of the site since August 1993. The purpose of the groundwater monitoring is to identify any changes in shallow groundwater quality at the site.

Background

A Phase I site assessment conducted at the site indicated that a service station, which included an auto repair facility, was present on the site from the 1940s to the 1980s. In 1983, the City of Oakland purchased the site from Texaco. The site was subsequently rented for use as a produce stand and Christmas tree sales lot.

In January and August 1993, BASELINE performed soil and groundwater investigations at the site. The results of these investigations identified the presence of petroleum hydrocarbons at varying concentrations in the soil throughout the site. The groundwater investigation, which included installation of three monitoring wells (MW-F1, MW-F2, and MW-F3), indicated that groundwater quality beneath the site was not significantly impacted. Following the completion of these investigations, the City of Oakland demolished the structures on-site.

In September 1994, BASELINE installed a fourth monitoring well, MW-F4, and five soil borings on-site, and two well points, HP-F1 and HP-F3, off-site. Petroleum hydrocarbons were detected in the groundwater samples from MW-F4, HP-F1, and HP-F3. Oil and grease were detected in soil samples collected in the vicinity of a former sump location. An off-site well, MW-13, installed by others to investigate a release of petroleum hydrocarbons at 2681

Mr. Andrew Clark-Clough 12 August 1996 Page 2

Fruitvale Avenue, was monitored. Approximately 0.5 foot of floating product was identified by BASELINE in this well following purging of the well.

To assess the extent of gasoline contaminants in groundwater downgradient of the site and downgradient of MW-13, two additional monitoring wells were installed in April and June 1995. Well MW-F5 was installed in April 1995 and well MW-F6 was installed in June 1995 along Fruitvale Avenue south of Davis Street. The results of groundwater sampling performed in June 1995 indicated 0.10 mg/L of TPH as gasoline in a sample collected from MW-F5; all other TPH and BTEX results were below detection limits for both wells. Floating product was detected again in MW-13. These results indicated that the limits of groundwater contamination at the site had been identified. Following the June 1995 sampling episode, groundwater sampling was changed to semi-annual from quarterly.

Groundwater Sampling Activities, June 1996

Groundwater samples were collected from monitoring wells MW-F2, MW-F3, MW-F4, and off-site wells, MW-F5, MW-F6, and MW-13, on 27 June 1996 (Figure 2). Prior to sampling activities, the presence of floating product was checked and water levels were measured in each of the wells using a dual-interface probe. The probe was decontaminated by washing in a trisodium phosphate solution and rinsing in deionized water after use in each well. Approximately 1/3-inch of product was detected in MW-13. Floating product was not detected in any other wells.

Approximately three to four well volumes were slowly purged from each well using a double-diaphragm pump and new disposable polyethylene tubing. The temperature, pH, and electrical conductivity of the groundwater were monitored during purging until they appeared to have stabilized. All decontamination rinsate and purge water were stored on-site in a sealed drum pending laboratory analysis.

After the water levels recovered to at least 90 percent of the original level, groundwater samples were collected from each well using a new disposable PVC bailer. The sample bottles were labeled, placed in a cooler containing ice, and transported using chain-of-custody procedures to Chromalab, Inc., a California certified laboratory. The groundwater samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX). Groundwater sampling forms documenting the June 1996 sampling activities are included as Attachment A.

Analytical Results

TPH as gasoline and BTEX were not identified in the groundwater samples collected from off-site monitoring wells MW-F5 and MW-F6. Low concentrations of TPH as gasoline were detected in the samples from MW-F2 (0.064 mg/L) and MW-F3 (0.088 mg/L). TPH as

Mr. Andrew Clark-Clough 12 August 1996 Page 3

gasoline was also detected in samples from MW-F4 (6.2 mg/L) and MW-13 (18 mg/L). Low but detectable levels of benzene were identified in samples from MW-F2 (0.0012 mg/L) and MW-F3 (0.002 mg/L). The samples from MW-F4 and MW-13 contained BTEX. The analytical results are summarized in Table 1; the laboratory report for the July 1996 sampling event is included in Attachment B.

Groundwater Flow Direction and Gradient

The depth to groundwater measurements collected in monitoring wells MW-F1 through MW-F6 and MW-13 during this groundwater monitoring event ranged from 9.75 to 11.51 feet below ground surface. The direction of groundwater at the site was calculated to be toward the west to northwest (N85W), with a gradient magnitude of 0.03 ft/ft. Groundwater elevation data and calculated flow direction are summarized in Table 2 and shown on Figure 3.

Conclusions

- The groundwater quality at the southwestern corner of the site has been impacted by a release of gasoline. Gasoline and BTEX concentrations in all the samples have decreased or remained at levels not reported above the laboratory reporting limit, except in the sample from MW-F2.
- The sample from MW-F2 contained reportable concentrations of gasoline and benzene during this sampling event; during the last groundwater monitoring event (December 1995), gasoline and BTEX were not identified above the laboratory reporting limits. The samples collected from this well between August 1993 and December 1995 did not contain benzene above the laboratory reporting limits.
- Floating product continues to be present in the off-site well MW-13, downgradient of the project site. The detection of floating product confirms the presence of a thin layer of non-aqueous phase liquid on the groundwater at the location of this well.
- The westward groundwater flow direction calculated during this monitoring event is consistent with the groundwater flow directions from previous monitoring events (S47W to N87W).

Recommendations

 Semi-annual groundwater monitoring should be continued at MW-F2 through MW-F6 and MW-13 to monitor changes in groundwater quality and the thickness of floating

Mr. Andrew Clark-Clough 12 August 1996 Page 4

product in MW-13. The next groundwater monitoring event should be conducted in December 1996.

- In response to a request made by Mr. Barney Chan of the Alameda County Department of Environmental Health (ACDEH), the appropriateness of placement of oxygen releasing compounds (ORCs) in Monitoring Wells MW-13 and MW-F4 will be evaluated. Following development of the installation strategy for the ORCs, a work plan should be submitted to ACDEH and the San Francisco Regional Water Quality Control Board for review and approval.
- Copies of this report should be submitted to Mr. Barney Chan of the Alameda County
 Department of Environmental Health and Mr. Richard Hiett of the San Francisco Bay
 Regional Water Quality Control Board.

Leudelieger

Civil Engineer

Rhodora Del Rosario

Should you have any questions regarding this report or need further information, please do not hesitate to contact us at your convenience.

Sincerely,

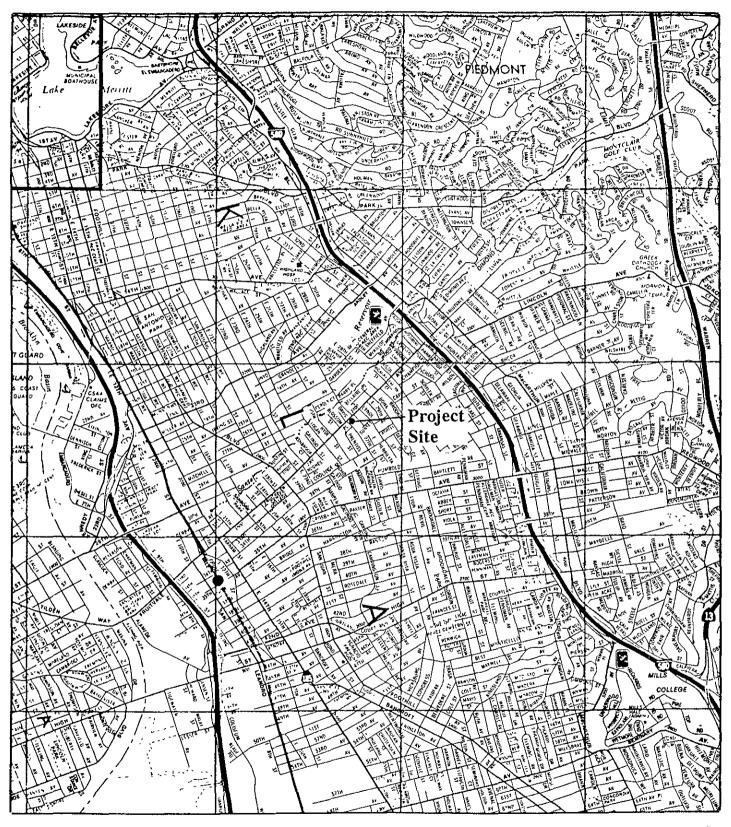
Kevin O'Dea

Senior Engineering Geologist Cert. Eng. Geologist No. 1702

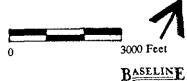
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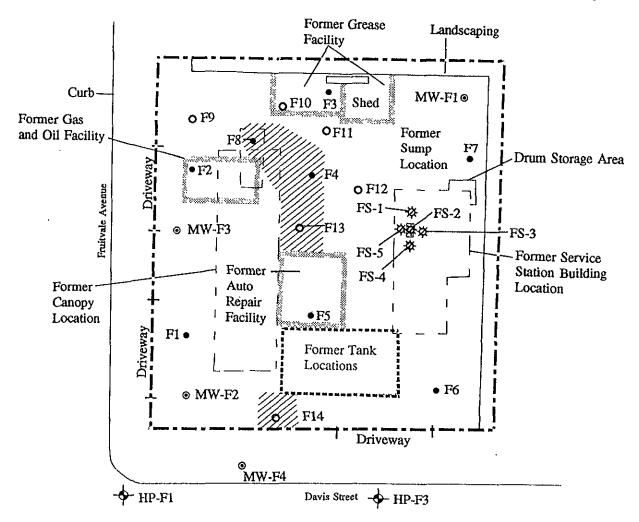
REGIONAL LOCATION

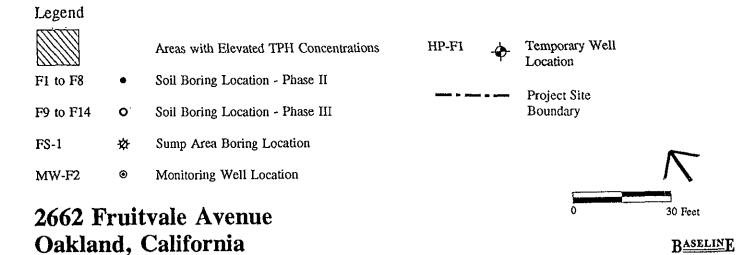
Figure 1



2662 Fruitvale Avenue Oakland, California







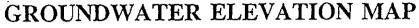
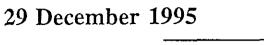
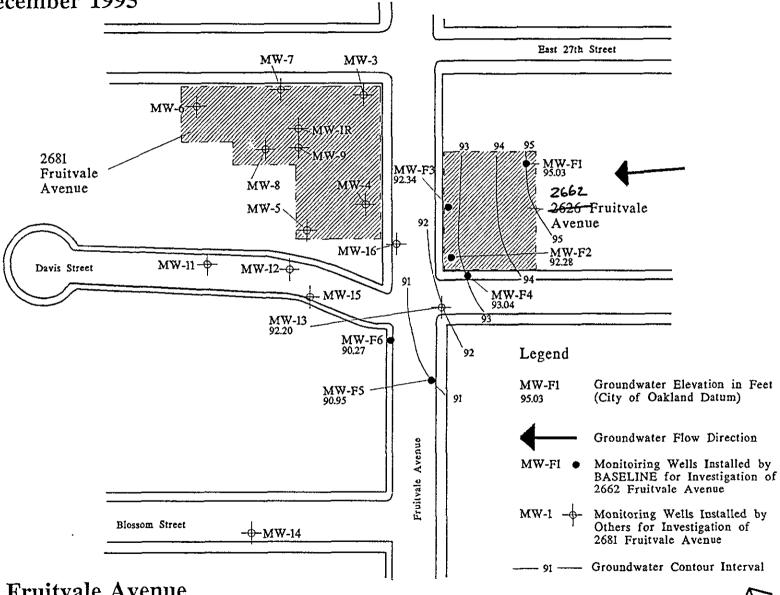


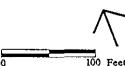
Figure 3





2662 Fruitvale Avenue Oakland, California

Source: Base Map - Modified from Groundwater Technology, Inc., 1993, Site Plan Map.



BASELINF.

TABLE I

SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER
2662 Fruitvale Avenue, Oakland, California

(mg/L)

Sample Location	Sample Date	TPH as Gasoline ⁱ	TPH as Motor Oil ²	Benzene³	Toluene ³	Ethyl- benzene ³	Xylenes ³
Monitoring Wells		-					
MW-F1	08-16-93	< 0.05	<0.5	< 0.002	< 0.002	< 0.002	< 0.002
	06-29-94	< 0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	09-09-94	< 0.9		< 0.0009	< 0.0009	< 0.0009	< 0.0009
	12-21-94	< 0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	06-30-95	<0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	12-29-95	<0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
MW-F2	08-16-93	< 0.05	<0.5	< 0.002	< 0.002	< 0.002	< 0.002
	06-29-94	< 0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	09-09-94	<0.9		< 0.0009	< 0.0009	< 0.0009	< 0.0009
	12-21-94	0.096		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	06-30-95	0.34		< 0.0005	< 0.0005	< 0.0005	0.0005
	12-29-95	< 0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	06-27-96	0.064		0.0012	<0.0005	< 0.0005	<0.0005
MW-F3	08-16-93	<0.1	<0.5	< 0.002	< 0.002	< 0.002	< 0.002
· · · · ·	06-29-94	< 0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	09-09-94	< 0.9		< 0.0009	< 0.0009	< 0.0009	< 0.0009
	12-21-94	0.13		< 0.0005	0.0013	< 0.0005	< 0.0005
	06-30-95	0.11		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	12-29-95	0.35		0.0008	< 0.0005	0.0012	0.0007
	06-27-96	0.088		0.002	< 0.0005	< 0.0005	< 0.0005
MW-F4	09-09-94	3.4-3.5		0.029/0.028	0.0030/0.0028	0.038/0.033	0.094/0.099
	12-21-94	37		0.66	< 0.1	2.3	5.9
	06-30-95	9.2		0.18	0.019	0.76	1.0
	r-12-29-95	38		0.61	0.14	4.3	5.8
	06-27-96	6.2		0.081	0.0095	0.52	0.29

[12/9/ 27 ,390

Table 1 - Summary of Analytical Results, Groundwater - continued

Sample	Sample	TPH as	TPH as			Ethyl-	
Location	Date	Gasoline ¹	Motor Oil ²	Benzene ³	Toluene ³	benzene ³	Xylenes ³
MW-F5	06-30-95	0.10		<0.0005	<0.0005	<0.0005	<0.0005
	12-29-95	< 0.05		< 0.0005	< 0.0005	< 0.0005	0.0007
	06-27-96	<0.05	~~	< 0.0005	< 0.0005	< 0.0005	V
MW-F6	06-30-95	< 0.05	<u>~-</u>	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	12-29-95	< 0.05		< 0.0005	< 0.0005	< 0.0005	< 0.0005
	06-27-96	< 0.05		<0.0005	< 0.0005	< 0.0005	<0.0005
MW-13	12-21-94	3.3		0.33	< 0.013	0.024	0.24
	06-30-95	22		0.85	< 0.0005	1.2	1.6
	12-29-95	22		0.97	0.078	1.8	2.4
	06-27-96	18		0.63	0.026	1.1	1.0
Soil Borings ⁴		16		. 67	.040		
F1 ⁵	1-20-93	13	<0.5	0.61	< 0.018	0.83	0.046
F2 ^{5,6}	1-20-93	6.8	< 0.5	0.011	< 0.002	0.016	< 0.002
F5	1-20-93	< 0.05					
F7	1-20-93	< 0.05	<0.5				
Hydropunch							
HP-FI	9-09-94	26		0.46	0.16	1.5	4.4
HP-F3	9-09-94	0.21		0.0009	0.0007	0.0049	0.02

Notes: $\langle x.x \rangle = Compound not identified above reporting limits.$

 $\mathbf{x}.\mathbf{x} = \text{Bold values indicate compound identified above reporting limits.}$

x.x/x.x = Analytical testing results for duplicate samples.

-- = Compound not analyzed.

TPH = Total petroleum hydrocarbons.

Sample locations are shown on Figures 2 and 3.

Laboratory reports for July 1996 groundwater analyses are included in Attachment B.

- ¹ Test Method = EPA 5030/8015.
- 2 Test Method = EPA 3510/8015.
- Test Method = EPA 602 or 624.
- ⁴ Water collected from open boreholes in January 1993.
- Sample also analyzed for Title 26 metals; all metal concentrations less than STLC.
- ⁶ Sample contained trans-1,3-dichloropropene.

TABLE 2

GROUNDWATER ELEVATION AND GRADIENT DETERMINATION DATA 2662 Fruitvale Avenue, Oakland, CA

		тос	Depth to	Groundwater	Groundwat	er Gradient
Monitoring Well	Date	Elevation (feet) ¹	Groundwater (feet)	Elevation (feet) ^t	Direction	Magnitude
MW-F1	08/16/93	104.41	11.13	93.28	S88W	0.025
	06/29/94		10.38	93.53	N87W	0.026
	09/09/94		11.56	92.85	S82W	0.03
	12/21/94		8.96	95.45	\$47W	0.028
	06/30/95		10.49	93.92	S86W	0.025
	12/29/95		9.38	95.03	N79W	0.027
	06/27/96		10.69	93.72	N85W	0.03
MW-F2	08/16/93	102.22	12.15	90.07		
	06/29/94		11.74	90.48		
	09/09/94		12.21	90.01		
	12/21/94		10.34 ⁴	91.88		
	06/30/95		11.32	90.90		
	12/29/95		9.94	92.28		
	06/27/96		11.51	90.71		
MW-F3	08/16/93	102.42	11.99	90.43		
	06/29/94		11.40	91.02		
	09/09/94		12.39	90.03		
	12/21/94		9.32	93.10		ŀ
	06/30/95	-	11.14	91.28		
	12/29/95		10.08	92.34		
	06/27/96		11.31	91.11		
MW-F4	09/09/94	101.56	11.21	90.35		
Ш	12/21/94		8.00	93.56		
	06/30/95		10.08	91.48		
	12/29/95		8.52	93.04		
	06/27/96		9.75	91.81		
MW-F5	06/30/95	100.32	11.09	89.23		
	12/29/95		9.37	90.95		
	06/27/96		11.33	88.99		
MW-F6	06/30/95	100.11	10.96	89.15		
	12/29/95		9.84	90.27		
	06/27/96		10.98	89.13		
MW-13 ²	09/09/943	101.20	12.27	88.93		
	12/21/94 ^{4,5}		9.32	91.88		
	06/30/956		11.32	89.88		
	12/29/95		9.00	92.20		
	06/27/96 ⁸		11.49	89.71		

Note: See Figure 3 for groundwater flow direction and contours.

- Elevations are presented as feet above City of Oakland datum (which is three feet below mean sea level datum).
- ² Monitoring well installed by Resna for investigation of 2681 Fruitvale Avenue.
- Approximately 0.04 feet of hydrocarbon product detected by dual interface probe.
- 4 Groundwater level had not completely stabilized prior to measurement.
- Approximately 0.25 inch free product measured in bailer prior to purging.
- Hydrocarbon sheen observed on dual interface probe when removed from the well; hydrocarbon not detected by probe.
- Groundwater level approximate hydrocarbon/water level not detected by probe measurement not used in groundwater flow calculations.
- 8 Approximately 1/3-inch of free product measured in bailer prior to purging.

ATTACHMENT A
GROUNDWATER SAMPLING FORMS

Project no.:	92404-D0		Well no.:	MW-F2	Date: 6/27/96		
Project name:	Fruitvale Av	enue	Depth of well fi	rom TOC (feet):	19.88		
Location: 2662 Fruitvale Avenue		le Avenue	Well diameter (inch):	2		
	Oakland, CA		Screened interv	al from TOC (feet):	8.5-19.88		
Recorded by:	WKS		TOC elevation	(feet):	102.22 (City of Oakland datur		
•		rizzle (AM) to sunny (PM)	Water level from	n TOC (feet):	11.51 Time: 7:20		
Precip in past		<u> </u>	Product level fr	om TOC (feet):	None Time: 7:20		
5 days (inch):	Trace		Water level mea	asurement device:	Dual interface probe		
VOLUME OF	[(19.88 ft	D BE REMOVED BEFOR) - (11.51 ft)] × (0.08 Water level Well radi	$3 \text{ ft})^2 \times 3.14 \times$	7.0	gallons in one well volume gallons in 5 well volumes total gallons removed		
CALIBRATIC	N:				_		
		<u>Time</u>	Temp (°C)	<u>pH</u>	EC (µmho/cm)		
	on Standard: fore Purging:	7:51	17.4	7.00 7.00	1,000 900		
	fter Purging:	11:47	18.1	6.84	900		
FIELD MEAS	SUREMENTS	S:					
•				Cumulative			
	Temp		EC	Gallons			
<u>Time</u>	(<u>° C)</u>	<u>рН</u>	(umho/cm)	Removed	<u>Appearance</u>		
9:14	18.0	6.35	420	1	Clear		
9:20	18.5	6.38	420	2.5	Clear		
9:31	18.1	6.41	420	5	Clear		
		rior to sampling (feet):	11.74		Time: 12:55 PM		
Appearance of	_	Clear None			Time: 1:00 PM Time:		
Duplicate/blan Purge method:		Double diaphragm pump			11110,		
Sampling equi		Disposable PVC bailer		VOC attachment:	***		
Sampling equi	_	3 40-ml VOAs					
Sample analys		TPH as gasoline, BTXE		Laboratory:	Chromalab		
Decontaminati		TSP and water, DI water r	inse	Rinsate disposal:	MW-F1 to F6 and MW-13		

Project no.:	92404-D0		Well no.:	MW-F3	D	ate: <u>6/27/96</u>
Project name:	Fruitvale Av	enue	Depth of well	from TOC (feet):	24.45	
Location:	2662 Fruitva	le Avenue	Well diameter	(inch):	2	
	Oakland, CA		Screened inter	val from TOC (feet):	8.5-24.45	
Recorded by:	WKS		TOC elevation	n (feet):	102.42 (City of	Oakland datum)
Weather: Ov	vercast with di	rizzle (AM) to sunny (PM)	Water level fr	om TOC (feet):	11.31T	ime: 7:22
Precip in past			Product level:	from TOC (feet):	None T	ime: 7:22
5 days (inch):			Water level m	easurement device:	Dual interface p	robe
VOLUME OF	TWATED TO	BE REMOVED BEFOR	DE CAMPI INC		<u></u>	
VOLUME OF)-(11.31 ft)]×(0.08			1 gallons in one w	ell volume
	Well depth				6 gallons in 5 well	
					7 total gallons ren	
CALIBRATION	ON.					
GALIBHATI	ON:		Temp		EC	
		<u>Time</u>	(° C)	<u>pH</u>	(umho/cm)	
N	tion Standard:	7:51	17.4	7.00 7.00	1,000 900	
14	efore Purging: After Purging:	7:51 11:47	17.4	6.84	900	
1	11101 1 01551	24117				
E1E1 D 14E 4	OUDERACTIC	٦.				
FIELD MEAS	SUREMENT	5:		Cumulative		
	Temp		EC	Gallons		
<u>Time</u>	(° C)	<u>pH</u>	(umho/cm)	Removed	App	<u>bearance</u> %
	10.5	C 44	400	1		lear
9:41 9:46	18.7 18.8	6.44 6.31	480 490	1 2.5		lear lear
9:51	18.9	6.31	490	5		lear
9:57	18.8	6.36	490	7		lear
777	٠	ing to compline (feet):	12.2	o	т	ime: 12:45 PM
Appearance o		ior to sampling (feet): Clear	12.2	0		ime: 12:50 PM
Duplicate/blas	_	None	<u> </u>			ime:
Purge method		Double diaphragm pump				<u> </u>
Sampling equ		Disposable PVC bailer		VOC attachment:		
Sampling equ	-	3 40-ml VOAs		– 		
Sample analys		TPH as gasoline, BTXE		Laboratory:	Chromalab	
Decontaminat		TSP and water, DI water i	inse	Rinsate disposal:	MW-F1 to F6 as	nd MW-13

roject no.:	92404-D0		Well no.:	/IW-F4		Date: <u>6/27/96</u>
-	Fruitvale Ave	nue	Depth of well fro	om TOC (feet):	16.84	
Location:	2662 Fruitval		Well diameter (in	nch):	2	
Location.	Oakland, CA		Screened interva	l from TOC (feet):	8.5-16.84	
			TOC elevation (101.56 (City	of Oakland datum)
Recorded by:		le (AM) to supply (PM)	Water level from		9.75	Time: 7:24
		zzle (AM) to sunny (PM)	Product level fro		None	Time: 7:24
Precip in past				surement device:	Dual interfa	ce probe
5 days (inch):	Trace		water level mea	surement device.	Dan Later	
VOLUME O	F WATER TO	BE REMOVED BEFOR	E SAMPLING:			11 1
	[(16.84 ft)	$[-(9.75 \text{ ft})] \times (0.083)$	$ft)^2 \times 3.14 \times 7$			ne well volume
	Well depth	Water level Well radi	ius		/ gallons in 5 4 total gallon	well volumes
					- wai ganon	3 LOHIO V CU
CALIBRATI	ION:					
VALIDHALI			Temp	T.I	EC (umho/cm	1
		<u>Time</u>	(° C)	<u>рН</u> 7.00	1,000	,L
	ation Standard:	7:51	17.4	7.00	900	
	Sefore Purging: After Purging:	11:47	18.1	6.84	900	
	Alter Furging.					
FIELD MEA	SUREMENTS	S:				
				Cumulative		
	Temp		EC	Gallons		A min company
<u>Time</u>	(°C)	р <u>Н</u>	(umho/cm)	Removed		Appearance
G 54	17.8	6.21	440	0.3	Clear, petro	oleum odor
7:54 7:57	17.6	6.15	440	1		oleum odor
8:10	19.4	6.07	460	2	• •	oleum odor
8:23	19.1	6.22	460	4	Clear, petr	oleum odor
00						
ı						
Water layel	after nurging n	rior to sampling (feet):	11.21			Time: 1:05 PM
Appearance		Clear				Time: 1:10 PM
	lank number:	None				Time:
Purge metho		Double diaphragm pump				
Sampling ed		Disposable PVC bailer		VOC attachment:		
Sample con		3 40-ml VOAs	-		C1 1 1	
Sample ana	lyses:	TPH as gasoline, BTXE	<u></u>	_Laboratory:	Chromala	o F6 and MW-13
Dagamamir	nation method:	TSP and water, DI water	rinse	_Rinsate disposal:	IATAA - L T ((TO and MIM-12

Project no.:	92404-D0		Well no.:	MW-F5	Date: 6/27/96		
Project name:	Fruitvale Av	enue	Depth of well f	rom TOC (feet):	24.01		
Location: 2662 Fruitva Oakland, CA		le Avenue	Well diameter ((inch):	2		
		\	Screened interv	ral from TOC (feet):	8,5-24.01		
Recorded by: WKS			TOC elevation	(feet):	100.32 (City of Oakland datum)		
•		rizzle (AM) to sunny (PM)	Water level from	m TOC (feet):	11.33 Time: 7:26		
Precip in past			Product level fr	om TOC (feet):	None Time: 7:26		
5 days (inch):				asurement device:	Dual interface probe		
VOLUME OF	WATER TO	BE REMOVED BEFOR	E SAMPLING:	· · · · · · · · · · · · · · · · · · ·			
	[(24.01 ft	(0.08)	$(3 \text{ ft})^2 \times 3.14 \times $	7.48 = 2.	0 gallons in one well volume		
	Well depth	Water level Well radi	us		0 gallons in 5 well volumes		
					7 total gallons removed		
CALIBRATIO	ON:						
		m'	Temp	* *	EC		
Calibras	ion Standard:	<u>Time</u>	(<u>° C)</u>	<u>pH</u> 7.00	<u>(µmho/cm)</u> 1,000		
	non Stanuaru: efore Purging:	7:51	17,4	7.00	900		
	After Purging:	11:47	18.1	6.84	900		
FIELD MEAS	SUREMENT	S:		Cumulative			
	Tomo		EC	Gallons			
<u>Time</u>	Temp (<u>° C)</u>	<u>pH</u>	(umho/cm)	Removed	<u>Appearance</u>		
IIIIO	151	<u>p.s.</u>	(barano, evil)		- 1 <u>-</u>		
8:36	18.1	6.35	400	0.5	Clear to very slightly turbid		
8:43	18.3	6.23	410	2.5	Clear		
8:50	18.3	6.24	410	4	Clear		
8:57	18.2	6.24	400	6	Clear		
9:02	18.4	6.23	400	7	Clear		
Water level at	fter purging p	rior to sampling (feet):	11.39		Time: 12:35 PM		
Appearance o	-	Clear			Time: 12:40 PM		
Duplicate/blas		None			Time:		
Purge method	l:	Double diaphragm pump					
Sampling equ	_	Disposable PVC bailer		VOC attachment:			
Sample conta		3 40-ml VOAs	·		C1 1.1		
Sample analys		TPH as gasoline, BTXE	 	Laboratory:	Chromalab		
Decontaminat	tion method:	TSP and water, DI water r	inse	Rinsate disposal:	MW-F1 to F6 and MW-13		

Project no.:	92404-D0		Well no.:	MW-F6	Date: <u>6/27/96</u>	
Project name:	Fruitvale Av	enue	Depth of well from TOC (feet):		21	
Location: 2662 Fruitval- Oakland, CA		le Avenue	Well diameter (inch):	2	
			Screened interv	al from TOC (feet):	9.0-21.0	
Recorded by:	Recorded by: WKS			(feet):	100.11 (City of Oakland datum)	
•		rizzle (AM) to sunny (PM)	Water level from	n TOC (feet):	10.98 Time: 7:29	
Precip in past			Product level fr	•	None Time: 7:29	
5 days (inch):	Trace			surement device:	Dual interface probe	
• •	[(21.00 fl	D BE REMOVED BEFOR () - (10.98 ft)] × (0.08 Water level Well radi	$3 \text{ ft})^2 \times 3.14 \times$	8.1	6 gallons in one well volume 1 gallons in 5 well volumes 5 total gallons removed	
CALIBRATIO	N:			•	_	
	on Standard:	<u>Time</u>	Temp (°C)	<u>рН</u> 7.00	EC <u>(µmho/cm)</u> 1,000	
	fore Purging:	7:51	17.4	7.00	900	
	fter Purging:	11:47	18.1	6.84	900	
FIELD MEAS	UREMENT	S:				
				Cumulative		
	Temp		EC	Gallons		
<u>Time</u>	(°C)	<u>pH</u>	(umho/cm)	Removed	<u>Appearance</u>	
10;35	18.7	6.58	400	1	Clear	
10:39	18.7	6.57	400	2	Clear	
10:44	18.2	6.58	400	3.5	Clear	
10:49	18.7	6.57	400	5	Clear	
10:53	18.7	6.57	400	6.5	Clear	
Water level aft	er purging p	ior to sampling (feet):	10.99		Time: 12:25 PM	
Appearance of		Clear			Time: 12:30 PM	
Duplicate/blan	-	None			Time:	
Purge method:		Double diaphragm pump				
Sampling equip		Disposable PVC bailer		VOC attachment:		
Sample contain	_	3 40-ml VOAs				
Sample analyse		TPH as gasoline, BTXE		Laboratory:	Chromalab	
Decontaminati		TSP and water, DI water ri	inse	Rinsate disposal:	MW-F1 to F6 and MW-13	

Project no.:	92404-D0		Well no.:	MW-13 (Chevron)	Date: <u>6/27/96</u>
Project name:	Fruitvale Av	enue	Depth of well f	rom TOC (feet):	24.13 (Soft bottom detected)
ocation: 2662 Fruitvale Avenue		le Avenue	Well diameter ((inch):	2
	Oakland, CA		Screened interv	al from TOC (feet):	8.5-24.5
Recorded by:			TOC elevation	(feet):	101.24 (City of Oakland datum)
-		rizzle (AM) to sunny (PM)	Water level fro	•	11.49 Time: 7:33
	occasi with the	izzic (Ain) to suitaly (1 in)	Product level fr	` ,	Present* Time: 7:33
Precip in past				asurement device:	Disposable PVC bailer
5 days (inch):	Trace		water level me	asurement device.	Disposable I v C baller
VOLUME OF	WATER TO	BE REMOVED BEFOR	E SAMPLING:		
	- '	$) - (11.49 \text{ ft})] \times (0.08)$			gallons in one well volume
	Well depth	Water level Well radi	us		2 gallons in 5 well volumes
				•	7 total gallons removed
CALIBRATIO	ON:				
		_,	Temp		EC
6.17	· Ct 44.	<u>Time</u>	(<u>° C)</u>	<u>pH</u> 7.00	<u>(μmho/cm)</u> 1,000
	ion Standard: fore Purging:	7:51	17.4	7.00	900
	After Purging:	11:47	18.1	6.84	900
FIELD MEAS	SUREMENTS	S:			
				Cumulative	
	Temp	***	EC	Gallons	A mm gamama a
<u>Time</u>	(<u>° C)</u>	<u>pH</u>	(µmho/cm)	Removed	<u>Appearance</u>
11:12	19.8	6.31	500	1.5	Clear, strong petroleum odor, shee
11:18	18.9	6.28	550	3	Clear, strong petroleum odor, shee
11:23	19.0	6.24	550	5	Clear, strong petroleum odor, shee
11:25	19.1	6.25	550	6	Clear, strong petroleum odor, shee
11:27	19.0	6.24	550	7	Clear, strong petroleum odor, shee
* 1	Trace of petro	leum product evident on pr	obe; 1/3-inch pro	oduct encountered in	bailer before purging.
Motor laval -f	Yar muraina m	ior to sampling (feet):	11.54		Time: 1:15 PM
Appearance of		Clear	11.34	······································	Time: 1:20 PM
Appearance of Duplicate/blar		None			Time:
Purge method		Double diaphragm pump			
Sampling equi		Disposable PVC bailer		VOC attachment:	
Sampling equi	-	3 40-ml VOAs		•	
Sample analys		TPH as gasoline, BTXE		Laboratory:	Chromalab
	ion method:	TSP and water, DI water ri		Rinsate disposal:	MW-F1 to F6 and MW-13

ATTACHMENT B

LABORATORY REPORTS

Environmental Services (SDB)

July 8, 1996

Submission #: 9606924

BASELINE ENVIRONMENTAL/EMRYVL

Atten: Rhodora Del Rosario

Project: FRUITVALE AVE

Project#: 92404-D0

Received: June 28, 1996

re: 2 samples for Gasoline and BTEX compounds analysis.

Method: EPA 5030/8015M/8020

Matrix: WATER

Sampled: June 27, 1996

Run#: 2064

Analyzed: July 5, 1996

Spl# CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)	
90256 MW-F2 90257 MW-F3	64 88	1.2	N.D. N.D.	N.D. N.D.	N.D. N.D.	
Reporting Limits Blank Result Blank Spike Result (%	50 N.D. s) 107	0.50 N.D. 102	0.50 N.D. 101	0.50 N.D. 103	0.50 N.D. 106	

June Zhao Chemist

Environmental Services (SDB)

July 8, 1996

Submission #: 9606924

BASELINE ENVIRONMENTAL/EMRYVL

Atten: Rhodora Del Rosario

Project: FRUITVALE AVE

Project#: 92404-DO

Received: June 28, 1996

re: 1 sample for Gasoline and BTEX compounds analysis.

Method: EPA 5030/8015M/8020

Matrix: WATER

Sampled: June 27, 1996

Run#: 2064

Analyzed: July 5, 1996

Spl# CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (uq/L)	
90258 MW-F4	6200	81	9.5	520	290	
Reporting Limits Blank Result	500 N.D.	5.0 N.D.	5.0 N.D.	5.0 N.D.	5.0 N.D.	
Blank Spike Result (%) 107	102	101	103	106	

June Zhao Chemist

Environmental Services (SDB)

July 8, 1996

Submission #: 9606924

BASELINE ENVIRONMENTAL/EMRYVL

Atten: Rhodora Del Rosario

Project: FRUITVALE AVE Project#: 92404-DO

Received: June 28, 1996

re: 2 samples for Gasoline and BTEX compounds analysis.

Method: EPA 5030/8015M/8020

Matrix: WATER

Sampled: June 27, 1996 Run#: 2064 Analyzed: July 5, 1996

Spl# CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
90259 MW-F5	N.D.	N.D.	N.D.	N.D.	N.D.
90260 MW-F6	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits	50	0.50	0.50	0.50	0.50
Blank Result	N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%) 107	102	101	103	106

June Zhao Chemist

Environmental Services (SDB)

July 8, 1996

Submission #: 9606924

BASELINE ENVIRONMENTAL/EMRYVL

Atten: Rhodora Del Rosario

Project: FRUITVALE AVE

Project#: 92404-DO

Received: June 28, 1996

re: 1 sample for Gasoline and BTEX compounds analysis.

Method: EPA 5030/8015M/8020

Matrix: WATER

Sampled: June 27, 1996

Run#: 2064

Analyzed: July 5, 1996

Spl# CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)	
90261 MW-13	18000	630	26	1100	1000	
Reporting Limits	500	5.0	5.0	5.0	5.0	
Blank Result Blank Spike Result (%	N.D.) 107	N.D. 102	N.D. 101	N.D. 103	N.D. 106	

Tune 7hao

June Zhao Chemist

CHROMALAB, INC. SAMPLE RECEIPT CHECKLIST

Client Name BASEZINE	Date/Time Received 4/28/94 0835
Project FRUTVALE AVE.	Received by M Om Cate Time
Reference/Subm # 28546/9406924	Carrier name
Checklish completed 7/1/9(by: Signature / Date	Logged in by A Colos (90) Matrix 12 Initials / Date
Shipping container in good condition?	NA Yes No
Custody seals present on shipping contai	ner? Intact Broken Yes No
Custody seals on sample bottles?	Intact Broken Yes No
Chain of custody present?	YesNo
Chain of custody signed when relinquishe	d and received? Yes No
Chain of custody agrees with sample labe	els? YesNo
Samples in proper container/bottle?	Yes_/_No
Samples intact?	YesNo
Sufficient sample volume for indicated t	est? YesNo
VOA vials have zero headspace?	NAYes_VNo
Trip Blank received?	NAYesNo
All samples received within holding time Container temperature? 5.8°C	Yes No
pH upon receiptpH adjusted	Check performed by:NA
Any NO response must be detailed in the applicable, they should be marked NA.	
Client contacted?	Date contacted?
Person contacted?	Contacted by?
Regarding?	
comments: Sample 10'S a	sted on coc as:
MW-FZ, F3, F4, F5	- labeled MW-2,3
4, 45	and t
Corrective Action:	

SMPLRECD.CK

BASELINE 5900 Hollis Street, Suite Emeryville, CA 94608 (510) 420-8686									Turn-around Time Lab BASELINE Contact Pers					Stemdard Mr. Chomakib Rhodora fel Rosanio				
Project No. 92404-00	Project Nam	Project Name and Location FruitVale AVE; 2662 FruitVale AW, Oaklan				Analysis					$\overline{}$	L D	UE:	HT:	: 9606924 REP: NV : BASE : 07/08/96 : 28546			
Samplers: (Signature)	Mille	1/1	ath-	_	•	1000	See 18			etas,			1	1	1	. 1	1	1
Sample ID No. Station	Date	Time	Media	Depth	No. of Contain- ers	TEH CLOSING SOIEK (TPH with BAREK	Oil & Grease	Motor Oil	PNAS	Tide 22 Metals	Page Lead						Remarks/ Composite	Detec- tion Limits
MW-FZ	6127196	131.56	GW		3	У												
MN-F3	6/27/96	12.50	GW	_	3	<u> </u>				_	<u> </u>			<u> </u>				
MN-F4	6/27/94	13.10	GW		3	X			<u> </u>					ļ	ļ	<u> </u>		
MN- F5	6/27/94	12.40	GW		3	X			_	 -					<u> </u>			ļ
MW- FG	6/27/94	12:30	GW		3	· X	-		+	-					 	-		
MW-13 MW-F1	6/27/96	15:20	GN		3 3	X				-								
				ļ														
				<u> </u>				-	+						<u> </u>			
		 	<u> </u>	-				}-		-			<u> </u>		├-	}		
Relinquished by: (Signature) Date / Time Received by: (2194 16:00		(Signature)			4	Date / Time 6/27/91 1600				Conditions of Samples Upon Arrival at Laboratory:								
Relinquished by: (Signature) Date / Time Rec			eived by: (Signature) Wirrie Dak			ن	Date / Time 6/28/96				Remarks: + please include chromalograms for Gasolme analysis.							
Relinquished by: (Sig	nature)	1	Date / Ti	me	Received by: ((Signature)				Date		l'ime		and.	!stan	rdare	ds	*-*