INNOVATIVE TECHNICAL SOLUTIONS, Inc.

94304

October 31, 1999

Project No.: 97-037

Mr. Joseph Cotton
City of Oakland
Environmental Services
1333 Broadway, Suite 330
Oakland, CA 94612

Results of Semi-Annual Groundwater Monitoring on June 29, 1999
2662 Fruitvale Avenue
Oakland, California

Dear Mr. Cotton:

Innovative Technical Solutions, Inc. (ITSI) is pleased to provide the results of semi-annual groundwater monitoring performed on June 29, 1999 at the property located at 2662 Fruitvale Avenue in Oakland. The semi-annual groundwater monitoring included the monitoring and sampling of seven monitoring wells, MW-F1, MW-F2, MW-F3, MW-F4, MW-F5, MW-F6, and MW-13. Figure 1 shows the site layout and approximate location of the monitoring wells sampled as part of this semi-annual groundwater monitoring event.

The purpose of this groundwater monitoring program is to identify changes in shallow groundwater quality at the site over time, including an evaluation of groundwater conditions that may serve as indicators of intrinsic bioremediation of petroleum hydrocarbons occurring beneath the site. On October 31, 1998, oxygen-releasing compounds (ORC) were placed in the saturated zone along the downgradient property line to enhance natural biodegradation of the petroleum hydrocarbons, and a petroleum hydrocarbon-absorbent sock was placed in MW-13 to recover available free product during this monitoring event. These events were documented in the *Completion Report, Treatment of Groundwater Impacted with Petroleum Hydrocarbons Using Enhanced Natural Bioremediation*, (Innovative Technical Solutions, Inc., December 28, 1998).

SCOPE OF WORK

Prior to sampling, the presence of floating product was evaluated in each of the monitoring wells using an oil/water interface probe. Water levels were then measured in each of the wells to 0.01 foot using a water level meter. Depth to water measurements and thickness of floating product, if

1330 Broadway, Suite 1625, Oakland, CA 94612 (510) 286-8888 (510) 286-8889 fax

Oakland
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1993

CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA, SUITE 5301 • OAKLAND, CALIFORNIA 94612

Public Works Agency
Environmental Services

(510) 238-6688
FAX (510) 238-7286
TDD (510) 238-7644

November 15, 1999

4457

Mr. Barney Chan
Alameda County Health Care Services Agency
Environmental Health Services-Local Oversight Program (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Results of Semi-Annual Groundwater Monitoring Program -June 29, 1999
2662 Fruitvale Avenue, Oakland, CA

Dear Mr. Barney:

The City of Oakland Environmental Services Division is pleased to present this report describing semi-annual groundwater monitoring results for June 29, 1999 at the above referenced site.

Should you have questions or require additional information, please contact me at (510) 238-6259.

Sincerely,

Joseph A. Cotton
Environmental Program Specialist

present, were recorded on Monitoring Well Purge and Sample Forms. Copies of the Monitoring Well Purge and Sample Forms are included in Appendix A.

After depth to water measurements were recorded, the monitoring wells were purged using a peristaltic pump. Approximately three casing volumes of water were removed, until pH, conductivity, and temperature readings stabilized. Field parameters were recorded on the Monitoring Well Purge and Sample Forms.

Groundwater samples from each monitoring well were collected using the peristaltic pump and transferred into laboratory provided sample containers with appropriate preservatives. Samples were labeled, placed on ice in an insulated cooler, and transported under chain-of-custody procedures to Chromalab, Inc., a California-certified laboratory.

Groundwater samples were analyzed for the following:

- TPH as gasoline (TPHg) by modified EPA Method 8015.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020A.
- Nitrate, sulfate, and total and soluble iron.

RESULTS

Groundwater elevations and the presence and thickness of floating product are summarized in Table 1 and shown in Figure 1. Results of groundwater sample analyses are summarized in Table 2 and shown in Figures 2 and 3. Copies of the analytical results and chain-of-custody form are included in Appendix B.

Depth to groundwater ranged from approximately 10 to 11 feet below ground surface (bgs). Groundwater flow direction was generally towards the west-southwest, at a gradient ranging from approximately 0.01 to 0.025 feet per foot. The groundwater flow direction is generally consistent with groundwater flow directions from previous monitoring events, with minor variation to the overall flow direction in the area where the ORC was placed, possibly showing the effect of the ORC slurry.

Floating product was not observed in the seven wells sampled during the June 29, 1999 sampling event. Although floating product had been observed in monitoring well MW-13, at a thickness of approximately 0.02 feet, during two sampling events in June 1997 and March 1998, floating

product was not observed in MW-13 during the December 1998 and June 29, 1999 sampling event. As noted above, a petroleum hydrocarbon-absorbent sock was placed in MW-13 to remove available free product from the surface of the groundwater. This petroleum hydrocarbon-absorbent sock was replaced during the June 29, 1999 sampling event.

Petroleum Hydrocarbons

TPHg was detected in samples from two monitoring wells, MW-F4 and MW-13, at concentrations of 10 and 7 milligrams per liter (mg/L), respectively. TPHg was not detected (at a detection limit of 0.05 mg/L) in the other five monitoring wells sampled.

Aromatic hydrocarbons (benzene, toluene, ethylbenzene, and xylenes) were not detected in samples collected from the seven monitoring wells at concentrations above the detection limit (0.0005 mg/L), except as noted below:

- Benzene was detected in samples collected from two monitoring wells, MW-F4 and MW-13, at concentrations of 0.23 and 0.24 mg/L, respectively. Benzene concentrations detected in MW-F4 and MW-13 exceed the Maximum Contaminant Level (MCL) for benzene of 0.001 mg/L. MCLs are drinking water standards established by California Code of Regulations (CCR) Title 26.
- Toluene was detected in samples collected from two monitoring wells, MW-F4 and MW-13, at concentrations of 0.032 and 0.13 mg/L, respectively.
- Ethylbenzene was detected in samples collected from two monitoring wells, MW-F4 and MW-13, at concentrations of 1.8 and 0.44 mg/L, respectively. The ethylbenzene concentration detected in MW-F4 exceeds the MCL for ethylbenzene of 0.7 mg/L.
- Xylenes were detected in samples collected from two monitoring wells, MW-F4 and MW-13, at concentrations of 0.30 and 0.11 mg/L, respectively.

Intrinsic Bioremediation Indicator Compounds

Soluble iron, representing ferrous iron (Fe^{2+}), was detected in three of the seven wells sampled, MW-F4, MW-F6 and MW-13, at concentrations up to 1.3 mg/L.

Nitrate was detected in three of the seven monitoring wells sampled, at concentrations ranging from 3 to 30 mg/L. Sulfate was detected in six of the seven wells sampled, at concentrations ranging from 9 to 54 mg/L. The lowest concentrations of nitrate and sulfate were reported in samples from wells within or adjacent to the area of petroleum hydrocarbon-affected groundwater.

Dissolved oxygen, as monitored in the field during purging of the monitoring wells, was relatively high in MW-F1, MW-F2, MW-F4, and MW-F6 (approximately 2 to 3 mg/L), and ranged from 0.68 to 0.80 mg/L in the remaining three wells monitored. ORP ranged from a low of 9 mV in

MW-F5 to a high of 228 mV in MW-F1. ORP measurements ranged around 50-60 mV in MW-F4 and MW-13.

DISCUSSION

No floating product was observed in monitoring well MW-13 during the June 29, 1999 sampling event. Floating product was reported in MW-13 during previous monitoring events. As noted above, a petroleum hydrocarbon absorbent sock was installed in MW-13 to remove floating product from the groundwater surface.

Concentrations of TPHg and BTEX were reported in MW-F4 and MW-13, located in the southwest corner of the site and offsite to the southwest, respectively. These results are consistent with the data collected during previous monitoring events, and show a general decrease from the previous sampling event.

The extent of the plume appears relatively limited. TPHg and BTEX were not reported in MW-F5 and MW-F6, which are located downgradient of MW-13. Previous sporadic detection of TPHg (June 1995), benzene (June 1997), and xylenes (December 1996) indicate that MW-F5 is located near the downgradient margin of the plume. Continued water quality monitoring of MW-F5 and MW-F6 should be performed to evaluate potential changes in water quality in these downgradient wells.

Intrinsic bioremediation indicator parameters are generally supportive of active biodegradation occurring in groundwater beneath the site. Typically, the electron receptors nitrate and sulfate are lowest in the wells with the highest concentrations of TPHg (MW-F4 and MW-13), and soluble (ferrous) iron, an indicator of the reduction of ferric iron, tends to be highest in these same wells. The depletion of nitrate and sulfate and the enhancement of soluble iron are all indicators of anaerobic biodegradation processes. No significant changes in these trends have been observed since the introduction of ORC, with the exception of an apparent decrease in the soluble iron concentrations at the site. A decrease in the soluble iron concentrations could indicate a change from primarily anaerobic iron reduction to aerobic biodegradation processes due to increased availability of dissolved oxygen in the groundwater.

RECOMMENDATIONS

Based on the results of this semi-annual monitoring and sampling event, the following activities are recommended:

- Continued semi-annual water quality monitoring of MW-F1 through MW-F6 and MW-13 to monitor the extent of the groundwater plume and the effects of intrinsic bioremediation on the plume.
- Continued evaluation of intrinsic bioremediation parameters to assess the effectiveness of ORC emplacement.

Please call me if you have any questions or need additional information.

Sincerely,

for

Kenneth R. Leonard, R.G.
Senior Geologist

REGISTERED GEOLOGIST
JEFFREY D. HESS
No. 4776
Exp. 4/2000
STATE OF CALIFORNIA

Jeffrey D. Hess, R.G.
Project Director

cc: Kevin O'Dea
Baseline Environmental Consulting

TABLE 1
GROUNDWATER ELEVATIONS
2662 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

Monitoring Well ID	Casing Elevation[1] (feet)	Date Measured	Product Thickness (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Note
MW-F1	104.41	08/16/93	-	11.13	93.28	1
		06/29/94	-	10.38	93.53	1
		09/09/94	-	11.56	92.85	1
		12/21/94	-	8.96	95.45	1
		06/30/95	-	10.49	93.92	1
		12/29/95	-	9.38	95.03	1
		06/27/96	-	10.69	93.72	1
		12/13/96	-	8.55	95.86	1
		6/26/97	-	11.23	93.18	
		3/11/98	-	8.73	95.68	
		12/11/98	-	9.38	95.03	
		6/29/99	-	10.87	93.54	
MW-F2	102.22	08/16/93	-	12.15	90.07	1
		06/29/94	-	11.74	90.48	1
		09/09/94	-	12.21	90.01	1
		12/21/94	-	10.34	91.88	1
		06/30/95	-	11.32	90.90	1
		12/29/95	-	9.94	92.28	1
		06/27/96	-	11.51	90.71	1
		12/13/96	-	8.62	93.60	1
		6/26/97	-	11.96	90.26	
		3/11/98	-	7.70	94.52	
		12/11/98	-	10.40	91.82	
		6/29/99	-	11.42	90.80	
MW-F3	102.42	08/16/93	-	11.99	90.43	1
		06/29/94	-	11.40	91.02	1
		09/09/94	-	12.39	90.03	1
		12/21/94	-	9.32	93.10	1
		06/30/95	-	11.14	91.28	1
		12/29/95	-	10.08	92.34	1
		06/27/96	-	11.31	91.11	1
		12/13/96	-	8.76	93.66	1
		6/26/97	-	11 85	90.57	
		3/11/98	-	8.82	93.6	
		12/11/98	-	9.61	92.81	
		6/29/99	-	11.25	91.17	

TABLE 1 (Continued)
GROUNDWATER ELEVATIONS
2662 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

Monitoring Well ID	Casing Elevation[1] (feet)	Date Measured	Product Thickness (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Note
MW-F4	101.56	09/09/94	-	11.21	90.35	1
		12/21/94	-	8.00	93.56	1
		06/30/95	-	10.08	91.48	1
		12/29/95	-	8.52	93.04	1
		06/27/96	-	9.75	91.81	1
		12/13/96	-	6.61	94.95	1
		6/26/97	-	10.94	90.62	
		3/11/98	-	8.40[2]	-	
		12/11/98	-	9.40	92.16	
		6/29/99	-	10.36	91.20	
MW-F5	100.32	06/30/95	-	11.09	89.23	1
		12/29/95	-	9.37	90.95	1
		06/27/96	-	11.33	88.99	1
		12/13/96	-	8.72	91.60	1
		6/26/97	-	11.61	88.71	
		3/11/98	-	8.79	91.53	
		12/11/98	-	9.62	90.70	
		6/29/99	-	11.07	89.25	
MW-F6	100.11	06/30/95	-	10.96	89.15	1
		12/29/95	-	9.84	90.27	1
		06/27/96	-	10.98	89.13	1
		12/13/96	-	8.44	91.67	1
		6/26/97	-	11.35	88.76	
		3/11/98	-	8.60	91.51	
		12/11/98	-	10.12	89.99	
		6/29/99	-	10.96	89.15	
MW-13	101.20	09/09/94	-	12.27	88.93	1
		12/21/94	-	9.32	91.88	1
		06/30/95	-	11.32	89.88	1
		12/29/95	-	9.00	92.20	1
		06/27/96	-	11.49	89.71	1
		12/13/96	-	8.28	92.92	1
		6/26/97	0.02	11.76	89.45[3]	
		3/11/98	0.02	8.11	93.11[3]	
		12/11/98	-	9.30	91.90	
		6/29/99	-	11.08	90.12	

[1] From Table 3, Groundwater Elevation and Gradient Determination Data, February 7, 1997, BASELINE.
[2] Depth to groundwater not stabilized.
[3] Groundwater elevation calculated assuming a specific gravity of 0.75 for product.

TABLE 2
SUMMARY OF LABORATORY RESULTS FOR GROUNDWATER SAMPLES
2662 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

Monitoring Well ID	Date Sampled	TPHg (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylenes (mg/L)	Total Iron (mg/L)	Soluble Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Note
MW-F1	08/16/93	<0.05	<0.002	<0.002	<0.002	<0.002	-	-	-	-	1
	06/29/94	<0.05	<0.0005	<0 0005	<0.0005	<0.0005	-	-	-	-	1
	09/09/94	<0.9	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	1
	12/21/94	<0.05	<0.0005	<0 0005	<0.0005	<0.0005	-	-	-	-	1
	06/30/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/29/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/13/96	-	-	-	-	-	-	<0.10	**8.5**	**38**	1
	6/26/97	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	**0.1**	<0.10	**7.7**	**38**	
	3/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	**0.90**	<0.10	**11**	**38**	
	12/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	**7.1**	**38**	
	6/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	**30**	**35**	
MW-F2	08/16/93	<0.05	<0.002	<0.002	<0.002	<0.002	-	-	-	-	1
	06/29/94	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	09/09/94	<0.9	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	1
	12/21/94	**0.096**	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	06/30/95	**0.34**	<0.0005	<0.0005	<0.0005	**0.0005**	-	-	-	-	1
	12/29/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	06/27/96	**0.064**	**0.0012**	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/13/96	**0.06**	<0.0005	<0.0005	<0.0005	<0.0005	-	**0.24**	**0.20**	**8**	1
	6/26/97	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	**0.1**	<0.10	<0.05	**7.4**	
	3/11/98	**0.20**	**0.00088**	<0.0005	<0.0005	<0.0005	**4.8**	**0.18**	<0.05	**7.1**	
	12/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	**0.25**	<0.10	<0.05	**7.8**	
	6/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	<1.0	<1.0	
MW-F3	08/16/93	<0.1	<0.002	<0.002	<0.002	<0.002	-	-	-	-	1
	06/29/94	<0 05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	09/09/94	<0.9	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	1
	12/21/94	**0.13**	<0.0005	**0.0013**	<0.0005	<0.0005	-	-	-	-	1
	06/30/95	**0.11**	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/29/95	**0.35**	**0.0008**	<0.0005	**0.0012**	**0.0007**	-	-	-	-	1
	06/27/96	**0.088**	**0.002**	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/13/96	**0.18**	<0.0005	<0.0005	<0.0005	<0.0005	–	**0.11**	**0.69**	**23**	1
	6/26/97	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	**0.46**	**0.16**	**0.70**	**23**	
	3/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	**0.11**	**0.20**	**2.5**	**28**	
	12/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	**0.31**	**0.12**	**0.97**	**30**	
	6/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	**3**	**38**	

DO ORP

3.6 182

76 57

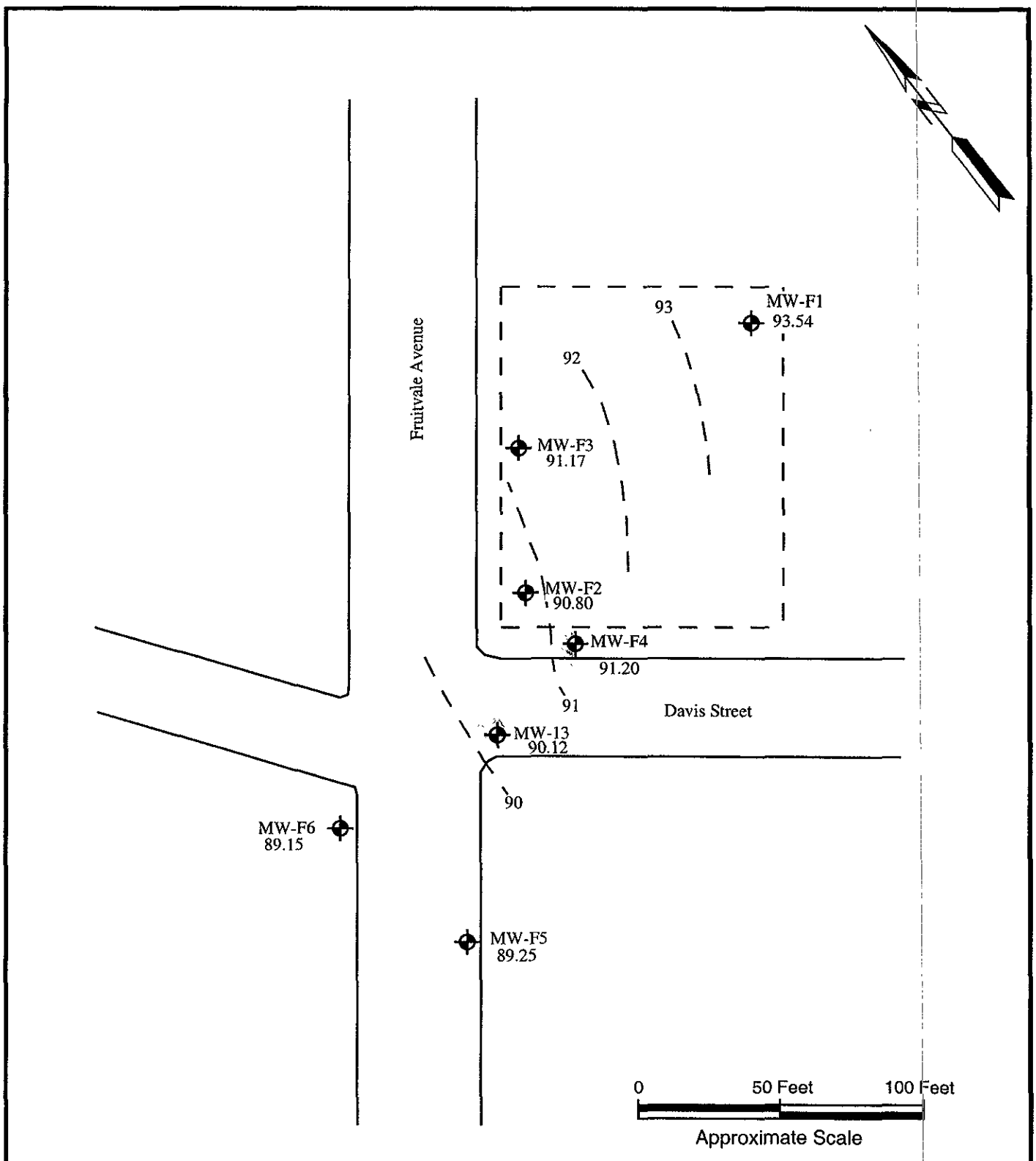
TABLE 2 (Continued)
SUMMARY OF LABORATORY RESULTS FOR GROUNDWATER SAMPLES
2662 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

Monitoring Well ID	Date Sampled	TPHg (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylenes (mg/L)	Total Iron (mg/L)	Soluble Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Note
MW-F4	9/9/94*	3.5	0.029	0.0030	0.038	0.099	-	-	-	-	1
	12/21/94	37	0.66	28	2.3	5.9	-	-	-	-	1
	06/30/95	9.2	0.18	<0.1	0.76	1.0	-	-	-	-	1
	12/29/95	38	0.61	0.019	4.3	5.8	-	-	-	-	1
	06/27/96	6.2	0.081	0.14	0.52	0.29	-	-	-	-	1
	12/13/96	27	0.39	0.05	3.2	3.7	-	6.6	<0.05	<2	1
	6/26/97	6.2	0.16	0.018	0.71	0.32	2.4	3.1	<0.05	0.2	
	3/11/98	9.5	0.062	0.030	1.0	0.80	1.2	3.0	<0.05	<0.1	
	12/11/98	12	0.340	0.051	2.0	0.620	5.7	5.9	<0.05	1.5	
	6/29/99	10	0.230	0.032	1.8	0.30	0.93	0.90	<1.0	9	
MW-F5	06/30/95	0.10	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/29/95	<0.05	<0.0005	<0.0005	<0.0005	0.0007	-	-	-	-	1
	06/27/96	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/13/96	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	6.6	45	1
	6/26/97	<0.05	0.0032	0.0064	0.00073	0.0042	0.21	<0.1	6.1	45	
	3/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	6.1	45	
	12/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.58	0.19	6.0	41	
	6/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	23	50	
MW-F6	06/30/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/29/95	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	6/27/96	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	1
	12/13/96	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.10	0.44	39	1
	6/26/97	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.22	0.18	<0.05	47	
	3/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	0.14	49	
	12/11/98	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.24	0.11	0.06	43	
	6/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	0.93	<1.0	54	
MW-13	12/21/94	3.3	0.33	<0.013	0.024	0.24	-	-	-	-	1
	06/30/95	22	0.85	<0.0005	1.2	1.6	-	-	-	-	1
	12/29/95	22	0.97	0.078	1.8	2.4	-	-	-	-	1
	06/27/96	18	0.63	0.026	1.1	1.0	-	-	-	-	1
	12/13/96	16	0.67	0.04	1.2	1.0	--	6.8	<0.05	<2	1
	6/26/97*	11	0.42	0.037	0.64	0.26	7.7	6.9	<0.05	0.3	
	3/11/98*	13	0.30	<0.025	0.89	0.51	4.3	6.7	<0.05	2.3	
	12/11/98	12	0.47	0.048	1.1	0.48	6.6	7.0	<0.05	16	
	6/29/99	7	0.24	0.13	0.44	0.11	1.3	1.3	<1.0	11	
MCL	--	--	0.001	0.150	0.700	1.75	--	--	--	--	

Note: Bold indicates detected concentrations. Shaded indicates concentrations exceeding MCLs.
1 Historical laboratory data provided by Baseline Environmental Consulting.
* Higher concentration reported for either the sample or field duplicate sample (QC/1)

ITSI

97-037/F1-Wells



Legend

- Approximate Location of Monitoring Wells
- 90.80 Groundwater Elevations
- Lines of Equal Groundwater Elevations

Source: Modified from Figure 3, Groundwater Elevation Contour Map, 13 December 1996, BASELINE

FIGURE 1

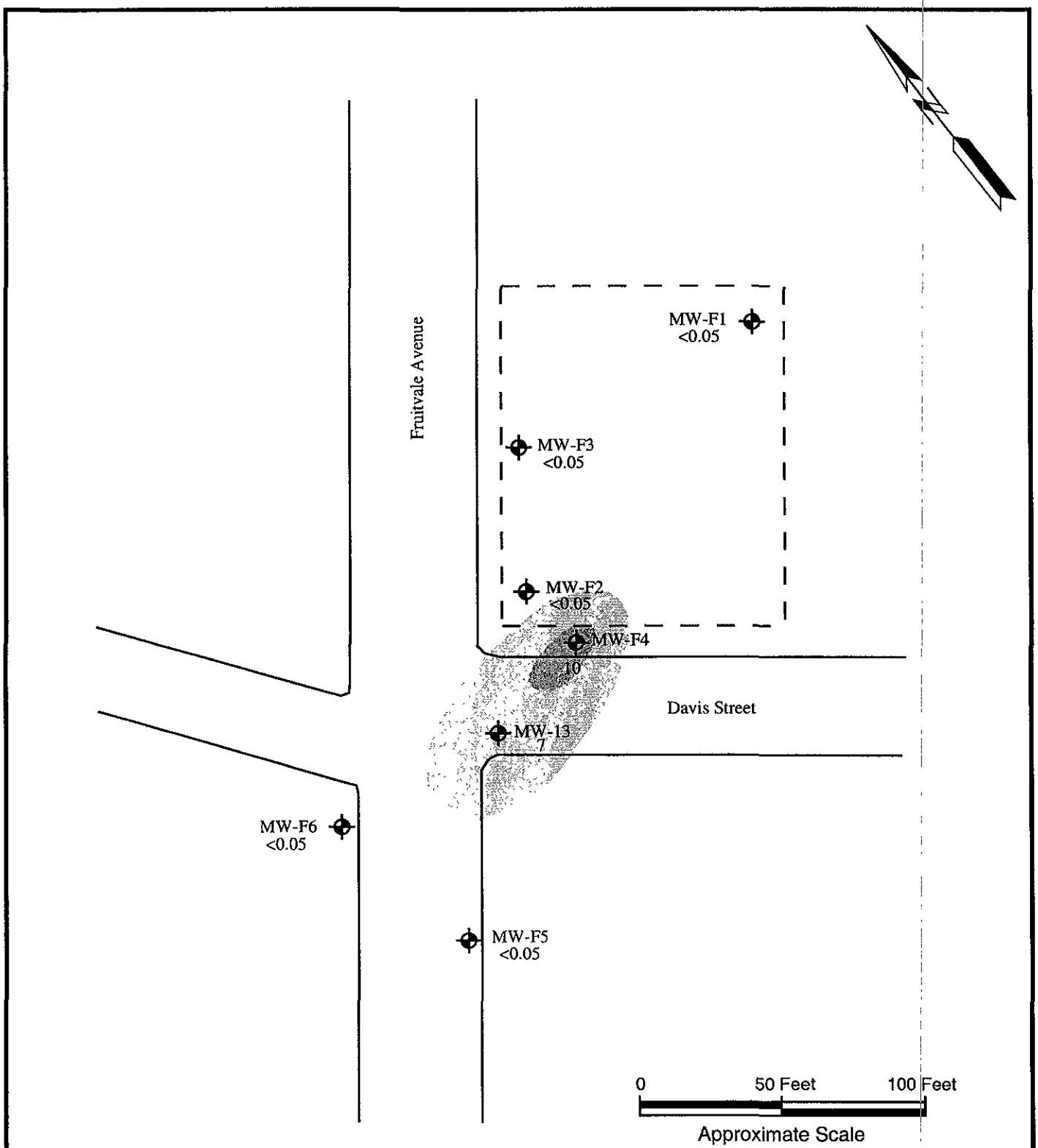
GROUNDWATER ELEVATIONS MEASURED ON JUNE 29, 1999

2662 Fruitvale Avenue
Oakland, California

CITY OF OAKLAND

ITSI
INNOVATIVE TECHNICAL SOLUTIONS, INC.

97-037/F-2-TPHg



Legend

- Approximate Location of Monitoring Wells
- 13 Concentration of TPHg in mg/L
- TPHg ≥ 0.1 mg/L
- TPHg ≥ 1 mg/L
- TPHg ≥ 10 mg/L

Source: Modified from Figure 3, Groundwater Elevation Contour Map, 13 December 1996, BASELINE.

FIGURE 2

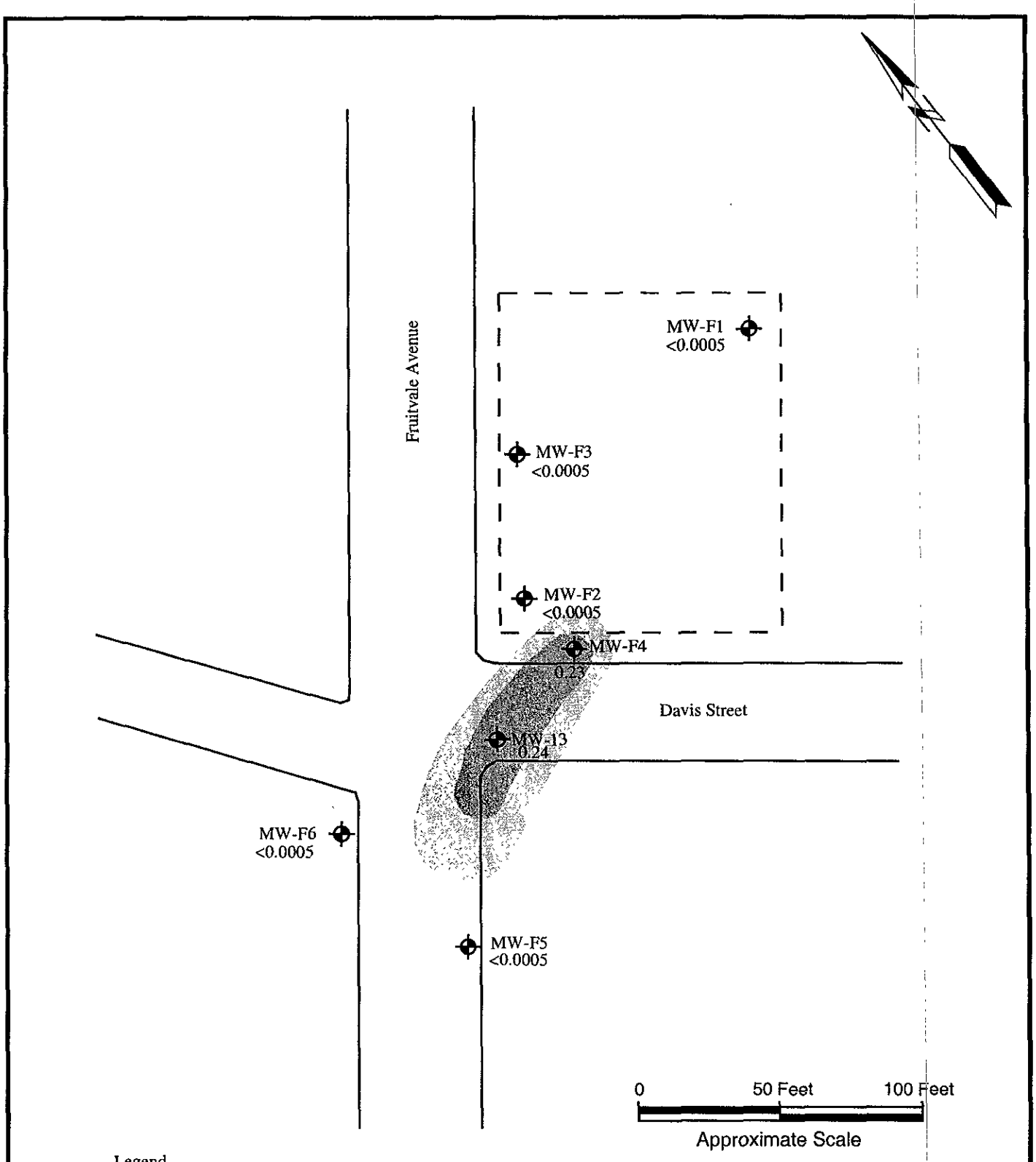
LABORATORY RESULTS FOR TPHg FOR SAMPLES COLLECTED ON JUNE 29, 1999

2662 Fruitvale Avenue
Oakland, California

CITY OF OAKLAND

ITSI
INNOVATIVE TECHNICAL SOLUTIONS, INC.

97-037/F 3-Benzene



Legend

- Approximate Location of Monitoring Wells
- 0.23 Concentration of benzene in mg/L
- Benzene ≥ 0.001 mg/L
- Benzene ≥ 0.01 mg/L
- Benzene ≥ 0.1 mg/L

Source: Modified from Figure 3, Groundwater Elevation Contour Map, 13 December 1996, BASELINE

FIGURE 3

LABORATORY RESULTS FOR BENZENE FOR SAMPLES COLLECTED ON JUNE 29, 1999

2662 Fruitvale Avenue
Oakland, California

CITY OF OAKLAND

ITSI
INNOVATIVE TECHNICAL SOLUTIONS, INC.

APPENDIX A

COPIES OF MONITORING WELL PURGE AND SAMPLE FORMS

INNOVATIVE TECHNICAL SOLUTIONS, Inc.
ITSI
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(925) 256-8898 (Tel), (925) 256-8998 (Fax)

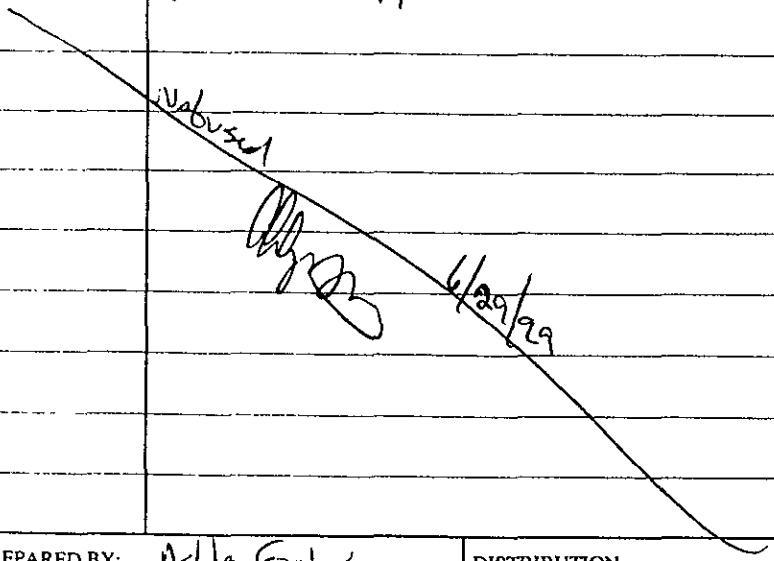
PROJECT NAME: Fruitvale
PROJECT NUMBER: 97-037
SITE LOCATION: Fruitvale Av., Oakland, CA

DAILY ACTIVITY REPORT

DATE: 6/29/99
PAGE 1 OF 1

TIME	DESCRIPTION OF FIELD ACTIVITIES AND EVENTS
0645	A. Foster (ITSI) onsite, organize equipment and supplies, ~~open sore wells~~ of
0700	D. Sterling (ITSI) on site- locate wells, prepare for sampling/purging, buy ice, check calibration on instruments. DO sensor programed to 200' elevation and a salinity of 5ppt.
0830	Setup at MW-F1, purge, a sample
1025	Setup at MW-F3, purge, a sample - Take photograph #1
1200	set up at MW-F2, purge, sample - take photograph #2 + 3
1330	Set up at MW-F5, purge, sample and take photos 4 + 5 + 6
1455	Set up at MW-F6, purge, sample
1600	Setup at MW-F4, purge, sample - collect duplicate call it MW-F8 @ 1700
1730	Setup at MW-13, purge, sample.
1435	QC samples, decon equipment, label waste drum (left onsite), secured gates. D. Sterling will take samples to ChromaLab 1st thing in the Am.
1930	personnel offsite.

REFERENCE SKETCH



PREPARED BY: Ashley Foster
DATE: 6/29/99
CHECKED BY*:
DATE:
PREPARERS SIGNATURE:

DISTRIBUTION:

REVIEWERS SIGNATURE:

* *Not appropriate for a field activity report when only one responsible person is in the field.*

MONITORING WELL WATER LEVEL MEASUREMENT FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

MEASURED BY: Ashley Foster DATE: 6/29/99

Monitoring Well I.D.	Depth to Water/DTB (feet)	Time
MW-F3	11.25 / 24.06	0941
MW-F2	11.42 / 19.97	1038
MW-F6	10.96 / 21.11	1059
MW-F5	11.07 / 24.11	1126
MW-F4	10.36 / 16.93	
MW-13	11.08 / 23.84	

MONITORING WELL
PURGE AND SAMPLE FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

WELL NO.: MW-f1 TESTED BY: AF + BS DATE: 6/29/99

Measuring Point Description: TOC @ red mark Static Water Level (ft.): ~~10.85~~ at 10.87

Total Well Depth (ft.): 24.94 Sample Method: peri pump & tubing

Water Level Measurement Method: solinist interface meter Time Sampled: 0956

Purge Method: peristaltic pump + new disposable tubing Sample Depth (ft.): >10.87

Time Start Purge: 0846 Field Filtering: soluble Fe only

Time End Purge: 0952 Field Preservation: 4C, Fe HNO3, TPHg/Btex HCl

Comments: no product in well.

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		2.25
	24.94		10.87		14.07		0.16	0.64	1.44		3 well vol = 6.75

Time	0905	0927	0950				
Volume Purged (gals)	2.25	~~4.5~~ 2.25	2.25				
Cumulative Volume Purged (gals)	2.25	4.5	6.75				
Cumulative Number of Casing Volumes	1	2	3				
Purge Rate (gpm)	0.12	0.11	0.11				
Temperature (F°) or (C°)	65.5	67.3	67.6				
pH	6.89	7.23	7.07				
Specific Conductivity (µmhos/cm)	4.50	4.78	4.82				
Dissolved Oxygen (mg/L)	2.27	2.86	2.84				
Turbidity/Color (NTU)	N/A	N/A	N/A				
Odor	None	→	→				
Dewatered?	None	→	→				
ORP (mV)	210	211	228				

ITSI

MONITORING WELL
PURGE AND SAMPLE FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

WELL NO.: MW E2 TESTED BY: AF/DS DATE: 6/29/99

Measuring Point Description: red mrk@TOC Static Water Level (ft.): 11.42

Total Well Depth (ft.): 19.97 Sample Method: peri. pump + tubing

Water Level Measurement Method: solinist interface meter Time Sampled: 1305

Purge Method: peristaltic pump + new tubing Sample Depth (ft.): >11.42

Time Start Purge: 1205 Field Filtering: soluble Fe only

Time End Purge: 1301 Field Preservation: HC, HNO_3, HCl (Fe) (TPHg/BTEX)

Comments: no product

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	19.97		11.42		8.55		0.16	0.64	1.44		1.37 4.10

Time	1218	1239	1300				
Volume Purged (gals)	1.37	~~2.74~~ 1.37 gal	1.37				
Cumulative Volume Purged (gals)	1.37	2.74	4.10				
Cumulative Number of Casing Volumes	1	2	3				
Purge Rate (gpm)	0.059	0.08	0.075				
Temperature (F°) or (C°)	79.7	81.7	81.1				
pH	6.92	6.98	7.10				
Specific Conductivity (µmhos/cm)	0.51	0.52	046				
Dissolved Oxygen (mg/L)	10.22	0.67	3.57				
~~Turbidity/Color~~ (~~NTU~~) ORP(mV)	~~9.25~~ 168	190	182				
Odor	None	→	→				
Dewatered?	NO	→	→				

ITSI

MONITORING WELL
PURGE AND SAMPLE FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

WELL NO.: MW-F3 TESTED BY: OJ + DS DATE: 6/29/19

Measuring Point Description: redmark, toc

Total Well Depth (ft.): 24.06

Water Level Measurement Method: Solinist interface meter

Purge Method: peristaltic pump and new tubing

Time Start Purge: 1027

Time End Purge: 1135

Static Water Level (ft.): 11.25

Sample Method: peristaltic pump and tubing

Time Sampled: 1134

Sample Depth (ft.): >11.25

Field Filtering: Soluable Fe

Field Preservation: 4C, HNO3, HCl

Comments: No product in well

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in) 2	4	6	=	Casing Volume (gal)
	24.06	-	11.25	=	12.81	x	0.16	0.64	1.44	=	2.05 6.14 (3 wellvols.

Time	1027 1044 OK	1109	1134				
Volume Purged (gals)	2.05	~~4.1~~ 2.05	2.05				
Cumulative Volume Purged (gals)	2.05	4.1	6.15				
Cumulative Number of Casing Volumes	1	2	3				
Purge Rate (gpm)	0.12	0.098	0.092				
Temperature (F°) or (C°)	70.3	80.	84.5				
pH	7.25	7.04	6.84				
Specific Conductivity (µmhos/cm)	5.65	7.0	6.9				
Dissolved Oxygen (mg/L)	0.54	.77	.76				
~~Turbidity/Color (NTU)~~ ORP (mV)	82	55 88	57				
Odor	None	None	None				
Dewatered?	No	NO	NO				

ITSI

MONITORING WELL
PURGE AND SAMPLE FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

WELL NO.: MW F4 TESTED BY: AF/DS DATE: 6/29/99

Measuring Point Description: blackmark@TOC Static Water Level (ft.): 10.36

Total Well Depth (ft.): 16.93 Sample Method: peri pump + tubing

Water Level Measurement Method: solinist interface probe Time Sampled: 1650

Purge Method: peristaltic pump + new tubing Sample Depth (ft.): >10.36

Time Start Purge: 1613 Field Filtering: soluble Fe only (Fe) (TPHg, BTEX)

Time End Purge: 1650 Field Preservation: 4C, HNO3, HCl

Comments: No product

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in) 2	4	6	=	Casing Volume (gal)
	16.93	-	10.36	=	6.57	x	0.16	0.64	1.44	=	1.05 / 3.15 (3 Vols.)

Time	1621	1634	1650				
Volume Purged (gals)	1.05	~~2.10~~ 1.05 (N)	~~3.15~~ 1.05 (A)				
Cumulative Volume Purged (gals)	1.05	2.10	3.15				
Cumulative Number of Casing Volumes	1	2	3				
Purge Rate (gpm)	0.13	0.10	0.093				
Temperature (F°) or (C°)	76.6	77.5	75.3				
pH	6.90	6.73	6.74				
Specific Conductivity (µmhos/cm)	0.63	0.70	0.70				
Dissolved Oxygen (mg/L)	2.66	3.29	2.60				
~~Turbidity/Color~~ (NTU) ORP (mV)	50	47	52				
Odor	None	→	→				
Dewatered?	NO	→	→				

ITSI

MONITORING WELL
PURGE AND SAMPLE FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

WELL NO.: MW F5 TESTED BY: AF/DS DATE: 6/29/99

Measuring Point Description: red mark on TOC Static Water Level (ft.): 11.07

Total Well Depth (ft.): 24.11 Sample Method: peri pump + tubing

Water Level Measurement Method: Solinist interface meter Time Sampled: 1437

Purge Method: peristaltic pump + new tubing Sample Depth (ft.): > 11.07

Time Start Purge: 1334 Field Filtering: soluble Fe

Time End Purge: 1437 Field Preservation: 4C, HNO3 (Fe), HCl (TPHg/BTEX)

Comments: No product

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	24.11		11.07		13.04		0.16	0.64	1.44		2.09 / 6.26

Time	1351	1412	1437				
Volume Purged (gals)	2.09	~~5.18~~ 2.09	2.09				
Cumulative Volume Purged (gals)	2.09	4.18	6.27				
Cumulative Number of Casing Volumes	1	2	3				
Purge Rate (gpm)	0.12	0.11	0.10				
Temperature (F°) or (C°)	75.8	74.6	~~12.4~~ 73.3				
pH	7.20	7.30	7.35				
Specific Conductivity (µmhos/cm)	0.50	0.54	0.54				
Dissolved Oxygen (mg/L)	0.53	0.69	0.68				
~~Turbidity/Color~~ (NTU) ORP (mV)	7	9	9				
Odor	None	→	→				
Dewatered?	No	→	→				

ITSI

MONITORING WELL
PURGE AND SAMPLE FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

WELL NO.: MW-F6 TESTED BY: AF/DS DATE: 6/29/99

Measuring Point Description: red mark @ TOC Static Water Level (ft.): 10.96

Total Well Depth (ft.): 21.11 Sample Method: peri. pump & tubing

Water Level Measurement Method: solinist interface probe Time Sampled: 1546

Purge Method: peristaltic pump and tubing Sample Depth (ft.): >10.96

Time Start Purge: 1500 Field Filtering: soluble Fe only

Time End Purge: 1544 Field Preservation: 4C, HNO_3 (Fe), HCl (TPH, BTEX)

Comments: No product

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in) 2	4	6	=	Casing Volume (gal)
	21.11		10.96		10.15		0.16	0.64	1.44		1.62 / 4.87

Time	1512	1529	1544				
Volume Purged (gals)	1.62	1.62	1.62				
Cumulative Volume Purged (gals)	1.62	3.24	4.87				
Cumulative Number of Casing Volumes	1	2	3				
Purge Rate (gpm)	0.14	0.11	0.11				
Temperature (F°) or (C°)	79.5	73.4	78.1				
pH	~~7.45~~ 7.2	7.48	7.49				
Specific Conductivity (µmhos/cm)	0.45	0.46	0.53				
Dissolved Oxygen (mg/L)	2.15	1.90	1.90				
~~Turbidity/Color~~ (~~NTU~~) ORP (mV)	169	156	222				
Odor	None	→	→				
Dewatered?	no	→	→				

ITSI

MONITORING WELL
PURGE AND SAMPLE FORM

PROJECT NAME: Fruitvale PROJECT NO.: 97-037

WELL NO.: MW-13 TESTED BY: AF/DS DATE: 6/29/99

Measuring Point Description: black notch @ TOC Static Water Level (ft.): 11.08

Total Well Depth (ft.): 23.24 Sample Method: peri. pump + tubing

Water Level Measurement Method: solinist interface probe Time Sampled: 1830

Purge Method: peristaltic pump and new tubing Sample Depth (ft.): 11.08

Time Start Purge: 1738 Field Filtering: soluble fe only

Time End Purge: 1830 Field Preservation: 4C, HNO3 (Fe), HCl (TPH/BTEX)

Comments: No product!

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	23.24		11.08		12.16		0.16	0.64	1.44		1.95 / 5.85

Time	1753	1813	1830				
Volume Purged (gals)	1.95	3.90 1.95	1.95				
Cumulative Volume Purged (gals)	1.95	3.90	5.85				
Cumulative Number of Casing Volumes	1	2	3				
Purge Rate (gpm)	0.14	0.11	0.11				
Temperature (F°) or (C°)	74.1	75.3	75.4				
pH	6.60	6.39	6.45				
Specific Conductivity (µmhos/cm)	0.69	0.66	0.69				
Dissolved Oxygen (mg/L)	2.86	0.67	0.80				
~~Turbidity/Color~~ (NTU) ORP (mV)	50	114	60				
Odor	None	→	→				
Dewatered?	No	→	→				

ITSI

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

ITSI
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(510) 256-8898 (Tel), (510) 256-8998 (Fax)

PROJECT NAME: Fruitvale
PROJECT NUMBER: 97-037
SITE LOCATION: Fruitvale Ave, Oakland, CA

CHAIN OF CUSTODY

DATE: 6/29/99
PAGE: 1 of 3

SAMPLE I.D.	SAMPLE DEPTH	DATE 1999	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS: TPH as Gas/BTEX - 8015	ANALYSIS: Soluable Iron	ANALYSIS: Total Iron	ANALYSIS: Sulfate & Nitrate	SPECIAL INSTRUCTIONS/COMMENTS	TOTAL NUMBER OF ANALYSES
MW-F1	>10.41	6/99	0956	3	40mL VOA	H_2O	1					1
↓	↓	↓	↓	2	250mL plastic			1	1			2
↓	↓	↓	↓	1	1L amber					1		1
MW-F3	11.25 5 11.25	↓	1134	3	40mL VOA		1					1
↓	↓	↓	↓	2	250mL plastic			1	1			2
↓	↓	↓	↓	1	1L amber					1		1
MW-F2	>11.15	↓	1305	3	40mL VOA		1					1
↓	↓	↓	↓	2	250mL plastic			1	1			2
↓	↓	↓	↓	1	1L amber					1		1
MW-F5	>11.07	↓	1437	3	40mL VOA		1					1
↓	↓	↓	↓	2	250mL plastic			1	1			2
↓	↓	↓	↓	1	1L Plastic					1		1
TOTAL NUMBER OF CONTAINERS					TOTAL TESTS		4	4	4	4		16

SAMPLED BY: Ashley Foster + Doug Sterling
SIGNATURE: [signature]

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: Douglas Sterling [signature]
Printed Name Signature
ITSI 6/30/99 0800
Company Date and Time

RECEIVED BY: Kenneth Livings [signature]
Printed Name Signature
C/C 6/30/99 0800
Company Date and Time

RELINQUISHED BY: _____
Printed Name Signature
Company Date and Time

RECEIVED BY: _____
Printed Name Signature
Company Date and Time

RELINQUISHED BY: _____
Printed Name Signature
Company Date and Time

RECEIVED BY: _____
Printed Name Signature
Company Date and Time

SEND RESULTS TO: Jeff Hess / Ashley Foster ITSI address above

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

ITSI
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(510) 256-8898 (Tel), (510) 256-8998 (Fax)

CHAIN OF CUSTODY

PROJECT NAME: Fruitvale
PROJECT NUMBER: 97-037
SITE LOCATION: Fruitvale Ave, Oakland, CA

DATE: 6/29/99
PAGE: 1 of 3

SAMPLE I.D.	SAMPLE DEPTH	DATE 1999	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS: TPH as Gas/BTEX - 8015	ANALYSIS: Soluable Iron	ANALYSIS: Total Iron	ANALYSIS: Sulfate & Nitrate	SPECIAL INSTRUCTIONS/COMMENTS	TOTAL NUMBER OF ANALYSES
MW-F6	>10.96	6/29	1546	3	40ml VOA	H_2O	1					1
				2	250ml plastic			1	1			2
				1	1L plastic					1		1
MW-F4	>10.36		1650	3	40ml VOA		1					1
				2	250ml plastic			1	1			2
				1	1L plastic					1		1
MW-F8	>10.36		1700	3	40ml VOA		1					1
				2	250ml plastic			1	1			2
				1	1L plastic					1		1
MW-B	>			3	40ml VOA		1					1
				2	250ml plastic			1	1			2
				1	1L plastic					1		1
TOTAL NUMBER OF CONTAINERS					TOTAL TESTS		4	4	4	4		16

SAMPLED BY: Ashley Foster + Doug Sterling
SIGNATURE:

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: Douglas Sterling (Printed Name) Doug Sterling (Signature)
ITSI (Company) 6/30/99 800 (Date and Time)

RECEIVED BY: (Printed Name) (Signature)
EL (Company) 6/30/99 0900 (Date and Time)

RELINQUISHED BY: (Printed Name) (Signature)
(Company) (Date and Time)

RECEIVED BY: (Printed Name) (Signature)
(Company) (Date and Time)

RELINQUISHED BY: (Printed Name) (Signature)
(Company) (Date and Time)

RECEIVED BY: (Printed Name) (Signature)
(Company) (Date and Time)

SEND RESULTS TO: Jeff Hess / Ashley Foster ITSI address above

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

ITSI
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(510) 256-8898 (Tel), (510) 256-8998 (Fax)

PROJECT NAME: Fruitvale
PROJECT NUMBER: 97-237
SITE LOCATION: Fruitvale, Ave Oakland, CA

CHAIN OF CUSTODY

DATE: 6/29/99
PAGE: 3 of 3

SAMPLE I.D.	SAMPLE DEPTH	DATE	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS: TPH as Gas/BTEX - 8015	ANALYSIS: Soluable Iron	ANALYSIS: Total Iron	ANALYSIS: Sulfate & Nitrate	SPECIAL INSTRUCTIONS/COMMENTS	TOTAL NUMBER OF ANALYSES
trip blank	N/A	N/A	N/A	2	40ml VOA	H2O	1					1
Not used												
TOTAL NUMBER OF CONTAINERS					TOTAL TESTS		1					1

6/29/99

SAMPLED BY: Chromalab prep.
SIGNATURE:

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: Douglas Sterling (Printed Name) (Signature)
ITSI (Company) 6/30/99 800 (Date and Time)

RECEIVED BY: Ken Wright (Printed Name) (Signature)
C/L (Company) 6/30/99 - 0800 (Date and Time)

RELINQUISHED BY: (Printed Name) (Signature)
(Company) (Date and Time)

RECEIVED BY: (Printed Name) (Signature)
(Company) (Date and Time)

RELINQUISHED BY: (Printed Name) (Signature)
(Company) (Date and Time)

RECEIVED BY: (Printed Name) (Signature)
(Company) (Date and Time)

SEND RESULTS TO: Jeff Hess / Ashley Foster ITSI address above.

APPENDIX B

COPIES OF LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORM FOR GROUNDWATER SAMPLES

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

Date: July 8, 1999

RECEIVED

JUL 14 1999

Innovative Technical Solutions, Inc
2855 Mitchell Drive, Suite 111
Walnut Creek, CA 94598-1627

Attn.: Mr. Jeff Hess

Project: 97-037
Fruitvale

Site: Fruitvale Ave.
Oakland, CA

Dear Jeff.

Attached is our report for your samples received on Wednesday June 30, 1999.
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after July 30, 1999 unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919.

Sincerely,

Gary Cook

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

Metals

Innovative Technical Solutions, Inc

2855 Mitchell Drive, Suite 111
Walnut Creek, CA 94598-1627

Attn: Jeff Hess

Phone: (925) 256-8898 Fax: (925) 256-8998

Project #: 97-037

Project: Fruitvale

Site: Fruitvale Ave.
Oakland, CA

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-F1	Water	06/29/1999 09:56	1
MW-F3	Water	06/29/1999 11:34	2
MW-F2	Water	06/29/1999 13:05	3
MW-F5	Water	06/29/1999 14:37	4
MW-F6	Water	06/29/1999 15:46	5
MW-F4	Water	06/29/1999 16:50	6
MW-F8	Water	06/29/1999 17:00	7
MW-13	Water	06/29/1999	8

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-F1**	Lab Sample ID:	**1999-06-0440-001**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 09:56	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 16:20	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-F3**	Lab Sample ID:	**1999-06-0440-002**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 11:34	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 18:14	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-F2**	Lab Sample ID:	**1999-06-0440-003**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 13:05	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 18:17	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-F5**	Lab Sample ID:	**1999-06-0440-004**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 14:37	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 18:21	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-F6**	Lab Sample ID:	**1999-06-0440-005**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 15:46	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 18:25	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-F4**	Lab Sample ID:	**1999-06-0440-006**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 16:50	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	0.93	0.10	mg/L	1.00	07/01/1999 18:37	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-F8**	Lab Sample ID:	**1999-06-0440-007**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 17:00	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	0.90	0.10	mg/L	1.00	07/01/1999 18:41	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Metals

Sample ID:	**MW-13**	Lab Sample ID:	**1999-06-0440-008**
Project:	97-037 *Fruitvale*	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	1.3	0.10	mg/L	1.00	07/01/1999 18:44	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Batch QC Report

Metals

Method Blank | **Water** | **QC Batch # 1999/07/01-01.15**

MB: 1999/07/01-01.15-060

Date Extracted: 07/01/1999 10:26

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Iron	ND	0.10	mg/L	07/01/1999 15:29	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn: Jeff Hess

Test Method: 6010A
Prep Method: 3010A

Batch QC Report

Metals

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/07/01-01.15**

LCS: 1999/07/01-01.15-061 Extracted: 07/01/1999 10:26 Analyzed: 07/01/1999 15:32
LCSD: 1999/07/01-01.15-062 Extracted: 07/01/1999 10:26 Analyzed: 07/01/1999 15:35

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Iron	4.60	4.75	5.00	5.00	92.0	95.0	3.2	80-120	20		

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

Gas/BTEX

Innovative Technical Solutions, Inc

2855 Mitchell Drive, Suite 111
Walnut Creek, CA 94598-1627

Attn: Jeff Hess

Phone: (925) 256-8898 Fax: (925) 256-8998

Project #: 97-037

Project: Fruitvale

Site: Fruitvale Ave.
Oakland, CA

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-F1	Water	06/29/1999 09:56	1
MW-F3	Water	06/29/1999 11:34	2
MW-F2	Water	06/29/1999 13:05	3
MW-F5	Water	06/29/1999 14:37	4
MW-F6	Water	06/29/1999 15:46	5
MW-F4	Water	06/29/1999 16:50	6
MW-F8	Water	06/29/1999 17:00	7
MW-13	Water	06/29/1999	8
TRIP BLANK	Water	06/29/1999	9

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: ***Innovative Technical Solutions, Inc***

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-F1**	Lab Sample ID:	**1999-06-0440-001**
Project:	97-037 Fruitvale	Received:	*06/30/1999 08:00*
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/06/1999 22:29
Sampled:	06/29/1999 09:56	QC-Batch:	1999/07/06-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/06/1999 22:29	
Benzene	ND	0.50	ug/L	1.00	07/06/1999 22:29	
Toluene	ND	0.50	ug/L	1.00	07/06/1999 22:29	
Ethyl benzene	ND	0.50	ug/L	1.00	07/06/1999 22:29	
Xylene(s)	ND	0.50	ug/L	1.00	07/06/1999 22:29	
Surrogate(s)						
Trifluorotoluene	81.3	58-124	%	1.00	07/06/1999 22:29	
4-Bromofluorobenzene-FID	67.7	50-150	%	1.00	07/06/1999 22:29	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-F3**	Lab Sample ID:	**1999-06-0440-002**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/06/1999 23:02
Sampled:	06/29/1999 11:34	QC-Batch:	1999/07/06-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/06/1999 23:02	
Benzene	ND	0.50	ug/L	1.00	07/06/1999 23:02	
Toluene	ND	0.50	ug/L	1.00	07/06/1999 23:02	
Ethyl benzene	ND	0.50	ug/L	1.00	07/06/1999 23:02	
Xylene(s)	ND	0.50	ug/L	1.00	07/06/1999 23:02	
Surrogate(s)						
Trifluorotoluene	81.3	58-124	%	1.00	07/06/1999 23:02	
4-Bromofluorobenzene-FID	74.9	50-150	%	1.00	07/06/1999 23:02	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-F2**	Lab Sample ID:	**1999-06-0440-003**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/06/1999 23:35
Sampled:	06/29/1999 13:05	QC-Batch:	1999/07/06-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/06/1999 23:35	
Benzene	ND	0.50	ug/L	1.00	07/06/1999 23:35	
Toluene	ND	0.50	ug/L	1.00	07/06/1999 23:35	
Ethyl benzene	ND	0.50	ug/L	1.00	07/06/1999 23:35	
Xylene(s)	ND	0.50	ug/L	1.00	07/06/1999 23:35	
Surrogate(s)						
Trifluorotoluene	84.4	58-124	%	1.00	07/06/1999 23:35	
4-Bromofluorobenzene-FID	79.6	50-150	%	1.00	07/06/1999 23:35	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-F5**	Lab Sample ID:	**1999-06-0440-004**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/07/1999 00:07
Sampled:	06/29/1999 14:37	QC-Batch:	1999/07/06-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/07/1999 00:07	
Benzene	ND	0.50	ug/L	1.00	07/07/1999 00:07	
Toluene	ND	0.50	ug/L	1.00	07/07/1999 00:07	
Ethyl benzene	ND	0.50	ug/L	1.00	07/07/1999 00:07	
Xylene(s)	ND	0.50	ug/L	1.00	07/07/1999 00:07	
Surrogate(s)						
Trifluorotoluene	88.3	58-124	%	1.00	07/07/1999 00:07	
4-Bromofluorobenzene-FID	81.1	50-150	%	1.00	07/07/1999 00:07	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-F6**	Lab Sample ID:	**1999-06-0440-005**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/07/1999 00:40
Sampled:	06/29/1999 15:46	QC-Batch:	1999/07/06-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/07/1999 00:40	
Benzene	ND	0.50	ug/L	1.00	07/07/1999 00:40	
Toluene	ND	0.50	ug/L	1.00	07/07/1999 00:40	
Ethyl benzene	ND	0.50	ug/L	1.00	07/07/1999 00:40	
Xylene(s)	ND	0.50	ug/L	1.00	07/07/1999 00:40	
Surrogate(s)						
Trifluorotoluene	94.0	58-124	%	1.00	07/07/1999 00:40	
4-Bromofluorobenzene-FID	84.8	50-150	%	1.00	07/07/1999 00:40	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-F4**	Lab Sample ID:	**1999-06-0440-006**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/07/1999 21:20
Sampled:	06/29/1999 16:50	QC-Batch:	1999/07/07-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	10000	2500	ug/L	50.00	07/07/1999 21:20	g
Benzene	230	25	ug/L	50.00	07/07/1999 21:20	
Toluene	32	25	ug/L	50.00	07/07/1999 21:20	
Ethyl benzene	1800	25	ug/L	50.00	07/07/1999 21:20	
Xylene(s)	300	25	ug/L	50.00	07/07/1999 21:20	
Surrogate(s)						
Trifluorotoluene	90.7	58-124	%	1.00	07/07/1999 21:20	
4-Bromofluorobenzene-FID	92.2	50-150	%	1.00	07/07/1999 21:20	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-F8**	Lab Sample ID:	**1999-06-0440-007**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/07/1999 14:23
Sampled:	06/29/1999 17:00	QC-Batch:	1999/07/07-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	10000	1000	ug/L	20.00	07/07/1999 14:23	g
Benzene	210	10	ug/L	20.00	07/07/1999 14:23	
Toluene	27	10	ug/L	20.00	07/07/1999 14:23	
Ethyl benzene	1600	10	ug/L	20.00	07/07/1999 14:23	
Xylene(s)	150	10	ug/L	20.00	07/07/1999 14:23	
Surrogate(s)						
Trifluorotoluene	100.3	58-124	%	1.00	07/07/1999 14:23	
4-Bromofluorobenzene-FID	97.0	50-150	%	1.00	07/07/1999 14:23	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**MW-13**	Lab Sample ID:	**1999-06-0440-008**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/07/1999 21:47
Sampled:	06/29/1999	QC-Batch:	1999/07/07-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	7000	2500	ug/L	50.00	07/07/1999 21:47	g
Benzene	240	25	ug/L	50.00	07/07/1999 21:47	
Toluene	130	25	ug/L	50.00	07/07/1999 21:47	
Ethyl benzene	440	25	ug/L	50.00	07/07/1999 21:47	
Xylene(s)	110	25	ug/L	50.00	07/07/1999 21:47	
Surrogate(s)						
Trifluorotoluene	64.6	58-124	%	1.00	07/07/1999 21:47	
4-Bromofluorobenzene-FID	68.5	50-150	%	1.00	07/07/1999 21:47	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**TRIP BLANK**	Lab Sample ID:	**1999-06-0440-009**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/06/1999 15:29
Sampled:	06/29/1999	QC-Batch:	1999/07/06-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/06/1999 15:29	
Benzene	ND	0.50	ug/L	1.00	07/06/1999 15:29	
Toluene	ND	0.50	ug/L	1.00	07/06/1999 15:29	
Ethyl benzene	ND	0.50	ug/L	1.00	07/06/1999 15:29	
Xylene(s)	ND	0.50	ug/L	1.00	07/06/1999 15:29	
Surrogate(s)						
Trifluorotoluene	107.8	58-124	%	1.00	07/06/1999 15:29	
4-Bromofluorobenzene-FID	85.3	50-150	%	1.00	07/06/1999 15:29	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report
Gas/BTEX

Method Blank | **Water** | **QC Batch # 1999/07/06-01.05**

MB: 1999/07/06-01.05-001

Date Extracted: 07/06/1999 07:48

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/06/1999 07:48	
Benzene	ND	0.5	ug/L	07/06/1999 07:48	
Toluene	ND	0.5	ug/L	07/06/1999 07:48	
Ethyl benzene	ND	0.5	ug/L	07/06/1999 07:48	
Xylene(s)	ND	0.5	ug/L	07/06/1999 07:48	
Surrogate(s)					
Trifluorotoluene	104.0	58-124	%	07/06/1999 07:48	
4-Bromofluorobenzene-FID	68.4	50-150	%	07/06/1999 07:48	

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report
Gas/BTEX

Method Blank | **Water** | **QC Batch # 1999/07/07-01.03**

MB: 1999/07/07-01.03-001

Date Extracted: 07/07/1999 06:04

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/07/1999 06:04	
Benzene	ND	0.5	ug/L	07/07/1999 06:04	
Toluene	ND	0.5	ug/L	07/07/1999 06:04	
Ethyl benzene	ND	0.5	ug/L	07/07/1999 06:04	
Xylene(s)	ND	0.5	ug/L	07/07/1999 06:04	
Surrogate(s)					
Trifluorotoluene	84.2	58-124	%	07/07/1999 06:04	
4-Bromofluorobenzene-FID	81.8	50-150	%	07/07/1999 06:04	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn: Jeff Hess

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/07/06-01.05**

LCS: 1999/07/06-01.05-002 Extracted: 07/06/1999 08:20 Analyzed: 07/06/1999 08:20

LCSD: 1999/07/06-01.05-003 Extracted: 07/06/1999 09:24 Analyzed: 07/06/1999 09:24

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	433	453	500	500	86.6	90.6	4.5	75-125	20		
Benzene	85.7	84.6	100.0	100.0	85.7	84.6	1.3	77-123	20		
Toluene	89.1	87.9	100.0	100.0	89.1	87.9	1.4	78-122	20		
Ethyl benzene	88.0	91.9	100.0	100.0	88.0	91.9	4.3	70-130	20		
Xylene(s)	263	273	300	300	87.7	91.0	3.7	75-125	20		
Surrogate(s)											
Trifluorotoluene	490	472	500	500	98.0	94.4		58-124			
4-Bromofluorobenzene-FI	328	332	500	500	65.6	66.4		50-150			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn: Jeff Hess

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/07/07-01.03**

LCS: 1999/07/07-01.03-002 Extracted: 07/07/1999 08:17 Analyzed: 07/07/1999 08:17

LCSD: 1999/07/07-01.03-003 Extracted: 07/07/1999 07:50 Analyzed: 07/07/1999 07:50

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	420	462	500	500	84.0	92.4	9.5	75-125	20		
Benzene	91.4	89.9	100.0	100.0	91.4	89.9	1.7	77-123	20		
Toluene	90.2	88.1	100.0	100.0	90.2	88.1	2.4	78-122	20		
Ethyl benzene	90.0	88.7	100.0	100.0	90.0	88.7	1.5	70-130	20		
Xylene(s)	256	250	300	300	85.3	83.3	2.4	75-125	20		
Surrogate(s)											
Trifluorotoluene	385	377	500	500	77.0	75.4		58-124			
4-Bromofluorobenzene-FI	449	483	500	500	89.8	96.6		50-150			

To: **Innovative Technical Solutions, Inc**

Attn:Jeff Hess

Test Method: 8020
8015M

Prep Method: 5030

Legend & Notes

Gas/BTEX

Analyte Flags

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

Soluble Metals

Innovative Technical Solutions, Inc

2855 Mitchell Drive, Suite 111
Walnut Creek, CA 94598-1627

Attn: Jeff Hess

Phone: (925) 256-8898 Fax: (925) 256-8998

Project #: 97-037

Project: Fruitvale

Site: Fruitvale Ave.
Oakland, CA

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-F1	Water	06/29/1999 09:56	1
MW-F3	Water	06/29/1999 11:34	2
MW-F2	Water	06/29/1999 13:05	3
MW-F5	Water	06/29/1999 14:37	4
MW-F6	Water	06/29/1999 15:46	5
MW-F4	Water	06/29/1999 16:50	6
MW-F8	Water	06/29/1999 17:00	7
MW-13	Water	06/29/1999	8

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-F1**	Lab Sample ID:	**1999-06-0440-001**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 09:56	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 18:02	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-F3**	Lab Sample ID:	**1999-06-0440-002**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 11:34	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 18:14	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-F2**	Lab Sample ID:	**1999-06-0440-003**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 13:05	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999 18:17	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-F5**	Lab Sample ID:	**1999-06-0440-004**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999
Sampled:	06/29/1999 14:37	QC-Batch:	1999/07/01-04.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/01/1999	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-F6**	Lab Sample ID:	**1999-06-0440-005**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 15:46	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	0.93	0.10	mg/L	1.00	07/01/1999 18:37	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-F4**	Lab Sample ID:	**1999-06-0440-006**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999 16:50	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	0.90	0.10	mg/L	1.00	07/01/1999 18:41	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-F8**	Lab Sample ID:	**1999-06-0440-007**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999
Sampled:	06/29/1999 17:00	QC-Batch:	1999/07/01-04.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	0.90	0.10	mg/L	1.00	07/01/1999	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Soluble Metals

Sample ID:	**MW-13**	Lab Sample ID:	**1999-06-0440-008**
Project:	97-037 Fruitvale	Received:	06/30/1999 08:00
Site:	Fruitvale Ave. Oakland, CA	Extracted:	07/01/1999 10:26
Sampled:	06/29/1999	QC-Batch:	1999/07/01-01.15
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	1.3	0.10	mg/L	1.00	07/01/1999 18:44	

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 6010A
Prep Method: 3005A

Batch QC Report
Soluble Metals

Method Blank | **Water** | **QC Batch # 1999/07/01-04.15**

MB: 1999/07/01-04.15-092

Date Extracted: 07/01/1999 12:41

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Iron	ND	0.10	mg/L	07/01/1999 17:51	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-06-0440

To: **Innovative Technical Solutions, Inc**

Attn: Jeff Hess

Test Method: 6010A

Prep Method: 3005A

Batch QC Report

Soluble Metals

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/07/01-04.15**

LCS: 1999/07/01-04.15-093 Extracted: 07/01/1999 12:41 Analyzed: 07/01/1999 17:55

LCSD: 1999/07/01-04.15-094 Extracted: 07/01/1999 12:41 Analyzed: 07/01/1999 17:59

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Iron	4.71	4.66	5.00	5.00	94.2	93.2	1.1	80-120	20		

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # K182-14

Date: 7/06/99

ChromaLab
4220 Quarry Lane
Pleasanton CA 94566

Project: Fruitvale, 97-037 1999-06-0440

PO#

Date Rec'd: 7/01/99
Date Started: 7/01/99
Date Completed: 7/02/99

Date Sampled: 6/29/99
Time:
Sampler:

Per Lab. transcription error! 8/26/99 lsu

Sample ID	Lab ID	MDL	Method	Analyte	Results	Units
MW-F1	K33647	1.0	375.4	Sulfate	~~235~~	mg/L
		1.0	352.1	Nitrate (NO3)	30	mg/L
MW-F3	K33648	1.0	375.4	Sulfate	38	mg/L
		1.0	352.1	Nitrate (NO3)	3	mg/L
MW-F2	K33649	1.0	375.4	Sulfate	ND	mg/L
		1.0	352.1	Nitrate (NO3)	ND	mg/L
MW-F5	K33650	1.0	375.4	Sulfate	50	mg/L
		1.0	352.1	Nitrate (NO3)	23	mg/L
MW-F6	K33651	1.0	375.4	Sulfate	54	mg/L
		1.0	352.1	Nitrate (NO3)	ND	mg/L
MW-F4	K33652	1.0	375.4	Sulfate	9	mg/L
		1.0	352.1	Nitrate (NO3)	ND	mg/L
MW-F8	K33653	1.0	375.4	Sulfate	9	mg/L
		1.0	352.1	Nitrate (NO3)	ND	mg/L
MW-13	K33654	1.0	375.4	Sulfate	11	mg/L
		1.0	352.1	Nitrate (NO3)	ND	mg/L

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

Report# K182-14

QC REPORT

ChromaLab
1220 Quarry Lane
Pleasanton CA 94566

Dates Analyzed 6/30/99

Analyte	Batch #	Method	Original	Duplicate	MS % Recovery	MSD % Recovery	RPD	RPD	Blank
Sulfate	I01883	300			105.7	96.1		9.5	ND
Nitrate (NO3)	I01961	300	30	30			0.0		ND

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

Chain of Custody 1999-06-0440-1

Date Shipped: 07/01/1999

K182-14
page 1 of 2

From:

ChromaLab, Inc. (CL)
1220 Quarry Lane
Pleasanton, CA 94566-4756

Project Manager: Gary Cook
Phone: (925) 484-1919 Ext: 105
Fax: (925) 484-1096
Email:

To:

GeoAnalytical Labs
1031 Kansas Avenue, Suite C
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916
Contact: Ramiro Salgado
Phone: (209) 572-0900

CL Submission #: **1999-06-0440**
CL PO #:

Project #: 97-037
Project Name: Fruitvale

Client Sample ID / Analysis	CL#	Sampled	Matrix / Method	Due
MW-F1	001	06/29/1999 09:56	Water	
Subcontract - Sulfate		K33647	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F3	002	06/29/1999 11:34	Water	
Subcontract - Sulfate		K33648	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F2	003	06/29/1999 13:05	Water	
Subcontract - Sulfate		K33649	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F5	004	06/29/1999 14:37	Water	
Subcontract - Sulfate		K33650	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F6	005	06/29/1999 15:46	Water	
Subcontract - Sulfate		K33651	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F4	006	06/29/1999 16:50	Water	
Subcontract - Sulfate		K33652	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F8	007	06/29/1999 17:00	Water	
Subcontract - Sulfate		K33653	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Denise Harrington Time: 1405	Signature Time	Signature Time
Printed Name: D. Harrington Date: 7/1/99	Printed Name Date	Printed Name Date
Company: Chromalab	Company	Company

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: 3.
Signature: Richard Chrum Time: 1405	Signature Time	Signature Time
Printed Name: Rich Chrum Date: 7-1-99	Printed Name Date	Printed Name Date
Company: Geo	Company	Company

Chain of Custody 1999-06-0440-1

Date Shipped: 07/01/1999

K182-14
page 2 of 2

From:

ChromaLab, Inc. (CL)
1220 Quarry Lane
Pleasanton, CA 94566-4756

Project Manager: Gary Cook
Phone: (925) 484-1919 Ext: 105
Fax: (925) 484-1096
Email:

To:

GeoAnalytical Labs
1031 Kansas Avenue, Suite C
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916
Contact: Ramiro Salgado
Phone: (209) 572-0900

CL Submission #: **1999-06-0440**
CL PO #:

Project #: 97-037
Project Name: Fruitvale

Client Sample ID / Analysis	CL#	Sampled	Matrix / Method	Due
MW-B 13.05W	008	06/29/1999	Water	
Subcontract - Sulfate		K33654	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Denise Harrington Time: 1405	Signature Time	Signature Time
Printed Name: D. Harrington Date: 7/1/99	Printed Name Date	Printed Name Date
Company: Chromalab	Company	Company
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: 3.**
Signature: Richard Chrun Time: 1405	Signature Time	Signature Time
Printed Name: Richard Chrun Date: 7-1-99	Printed Name Date	Printed Name Date
Company: Geo	Company	Company

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

ITSI
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(510) 256-8898 (Tel), (510) 256-8998 (Fax)

99-06-0440

PROJECT NAME: Fruitvale
PROJECT NUMBER: 97-037
SITE LOCATION: Fruitvale Ave, Oakland, CA

CHAIN OF CUSTODY

DATE: 6/29/99
PAGE: 2 of 3

SAMPLE I.D.	SAMPLE DEPTH	DATE 1999	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS: TPH as Gas/BTEX - 8015	ANALYSIS: Soluable Iron	ANALYSIS: Total Iron	ANALYSIS: Sulfate & Nitrate	SPECIAL INSTRUCTIONS/COMMENTS	TOTAL NUMBER OF ANALYSES
MW-F6	>10.96	6/29	1546	3	40ml VOA	H_2O	1					1
↓	↓		↓	2	250ml plastic	↓		1	1			2
				1	1L plastic					1		1
MW-F4	>10.36		1650	3	40ml VOA		1					1
↓	↓		↓	2	250ml plastic			1	1			2
				1	1L plastic					1		1
MW-F8	>10.36		1700	3	40ml VOA		1					1
↓	↓		↓	2	250ml plastic			1	1			2
				1	1L plastic					1		1
MW-B	>			3	40ml VOA		1					1
↓		↓		2	250ml plastic			1	1			2
				1	1L plastic					1		1
TOTAL NUMBER OF CONTAINERS					TOTAL TESTS		4	4	4	4		16

SAMPLED BY: Ashley Foster + Doug Sterling
SIGNATURE:

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: Douglas Sterling — Printed Name / Signature
ITSI — Company
6/30/99 800 — Date and Time

RECEIVED BY: — Printed Name / Signature
CL — Company
6/30/99 0900 — Date and Time

RELINQUISHED BY: — Printed Name / Signature
Company / Date and Time

RECEIVED BY: — Printed Name / Signature
Company / Date and Time

RELINQUISHED BY: — Printed Name / Signature
Company / Date and Time

RECEIVED BY: — Printed Name / Signature
Company / Date and Time

SEND RESULTS TO: Jeff Hess / Ashley Foster ITSI address above

INNOVATIVE TECHNICAL SOLUTIONS, Inc.
ITSI
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(510) 256-8898 (Tel), (510) 256-8998 (Fax)

99-06-0440

46711

PROJECT NAME: Fruitvale
PROJECT NUMBER: 97-037
SITE LOCATION: Fruitvale Ave, Oakland, CA

CHAIN OF CUSTODY

DATE: 6/29/99
PAGE: 1 of 3

SAMPLE I.D.	SAMPLE DEPTH	DATE 1999	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS: TPH as Gas/BTEX - 8015	Soluable Iron	Total Iron	Sulfate & Nitrate	SPECIAL INSTRUCTIONS/COMMENTS	TOTAL NUMBER OF ANALYSES
MW-F1	>10.41'	6/89	0956	3	40ml VOA	H_2O	1					1
↓	↓	↓	↓	2	250ml plastic			1	1			2
↓	↓	↓	↓	1	1 Liter					1		1
MW-F3	>11.25 >11.35		1134	3	40ml VOA		1					1
↓	↓	↓	↓	2	250ml plastic			1	1			2
↓	↓	↓	↓	1	1 Liter					1		1
MW-F2	>11.45		1305	3	40ml VOA		1					1
↓	↓	↓	↓	2	250ml plastic			1	1			2
↓	↓	↓	↓	1	1L amber					1		1
MW-F5	>11.09		1437	3	40ml VOA		1					1
↓		↓	↓	2	250ml plastic			1	1			2
				1	1L Plastic					1		1
TOTAL NUMBER OF CONTAINERS					TOTAL TESTS		4	4	4	4		16

SAMPLED BY: Ashley Foster + Doug Sterling
SIGNATURE: [signature]

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: Douglas Sterling [signature]
Printed Name Signature
ITSI 6/30/99 0800
Company Date and Time

RECEIVED BY: Kenneth Wong [signature]
Printed Name Signature
C/C 6/30/99 0800
Company Date and Time

RELINQUISHED BY: _____
Printed Name Signature
Company Date and Time

RECEIVED BY: _____
Printed Name Signature
Company Date and Time

RELINQUISHED BY: _____
Printed Name Signature
Company Date and Time

RECEIVED BY: _____
Printed Name Signature
Company Date and Time

SEND RESULTS TO: Jeff Hess / Ashley Foster ITSI address above

INNOVATIVE TECHNICAL SOLUTIONS, Inc.

ITSI
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(510) 256-8898 (Tel), (510) 256-8998 (Fax)

99-06-0440

PROJECT NAME: Fruitvale
PROJECT NUMBER: 97-237
SITE LOCATION: Fruitvale, Ave Oakland, CA

CHAIN OF CUSTODY

DATE: 6/29/99
PAGE: 3 of 3

SAMPLE I.D.	SAMPLE DEPTH	DATE	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS: TPH as Gas/BTEX - 8015	Soluable Iron	Total Iron	Sulfate & Nitrate	SPECIAL INSTRUCTIONS/COMMENTS	TOTAL NUMBER OF ANALYSES
trip blank	N/A	N/A	N/A	2	40mL VOA	H20	1					1
TOTAL NUMBER OF CONTAINERS					TOTAL TESTS		1					1

Not used

6/29/99

SAMPLED BY: Chromalab prep.
SIGNATURE:

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: Douglas Sterling
Printed Name Signature
ITSI 6/30/99 800
Company Date and Time

RECEIVED BY: Ken Wright
Printed Name Signature
C/L 6/30/99 - 0800
Company Date and Time

RELINQUISHED BY:
Printed Name Signature
Company Date and Time

RECEIVED BY:
Printed Name Signature
Company Date and Time

RELINQUISHED BY:
Printed Name Signature
Company Date and Time

RECEIVED BY:
Printed Name Signature
Company Date and Time

SEND RESULTS TO: Jeff Hess / Ashley Foster ITSI address above.

CHROMALAB, INC.

Environmental Services (SDB)

REVISED

RECEIVED
SEP 03 1999

August 30, 1999

Innovative Technical Solutions, Inc.
Attn: Jeff Hess
2855 Mitchell Drive, Suite 111
Walnut Creek, Ca 94598-1627

Dear Jeff:

Enclosed are the hard copy subcontract report(s) for ChromaLab's submission number 1999-06-4440. Your project number 97-037/ Fruitvale. You were mailed the fax copies with your original data package because the subcontract copies were not yet available.

These are for your records only.

We apologize for any inconvenience.

If you have any questions or need more information, please do not hesitate to give me a call.

Sincerely,

Tina Totorica

Tina Totorica
Administrative Assistant

Enclosures

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

GeoAnalytical Laboratories, Inc.

REVISED

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # K182-14

Date: 7/06/99

ChromaLab
1220 Quarry Lane
Pleasanton CA 94566

Project: Fruitvale, 97-037 1999-06-0440

PO#

Date Rec'd: 7/01/99
Date Started: 7/01/99
Date Completed: 7/02/99

Date Sampled: 6/29/99
Time:
Sampler:

Sample ID	Lab ID	PQL	MDL	Method	Analyte	Results	Units
MW-F1	K33647		1.0	375.4	Sulfate	35	mg/L
			1.0	352.1	Nitrate (NO3)	30	mg/L
MW-F3	K33648		1.0	375.4	Sulfate	38	mg/L
			1.0	352.1	Nitrate (NO3)	3	mg/L
MW-F2	K33649		1.0	375.4	Sulfate	ND	mg/L
			1.0	352.1	Nitrate (NO3)	ND	mg/L
MW-F5	K33650		1.0	375.4	Sulfate	50	mg/L
			1.0	352.1	Nitrate (NO3)	23	mg/L
MW-F6	K33651		1.0	375.4	Sulfate	54	mg/L
			1.0	352.1	Nitrate (NO3)	ND	mg/L
MW-F4	K33652		1.0	375.4	Sulfate	9	mg/L
			1.0	352.1	Nitrate (NO3)	ND	mg/L

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

Chain of Custody 1999-06-0440-1

Date Shipped: 07/01/1999

K1852-14
Page 2 of 2

From:

ChromaLab, Inc. (CL)
1220 Quarry Lane
Pleasanton, CA 94566-4756

Project Manager: Gary Cook
Phone: (925) 484-1919 Ext: 105
Fax: (925) 484-1096
Email:

To:

GeoAnalytical Labs
1031 Kansas Avenue, Suite C
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916
Contact: Ramiro Salgado
Phone: (209) 572-0900

CL Submission #: **1999-06-0440**
CL PO #:

Project #: 97-037
Project Name: Fruitvale

Client Sample ID	CL#	Sampled	Matrix	
Analysis			Method	Due
MW-B 13 DSH	008	06/29/1999	Water	
Subcontract - Sulfate		K33654	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Denise Harrington Time: 1405	Signature: Time:	Signature: Time:
Printed Name: D. Harrington Date: 7/1/99	Printed Name: Date:	Printed Name: Date:
Company: Chromalab	Company:	Company:
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: 3.**
Signature: Richard Chrun Time: 1405	Signature: Time:	Signature: Time:
Printed Name: Richard Chrun Date: 7-1-99	Printed Name: Date:	Printed Name: Date:
Company: Geo	Company:	Company:

REVISED

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # K182-14

Date: 7/06/99

ChromaLab
1220 Quarry Lane
Pleasanton CA 94566

Project: Fruitvale, 97-037 1999-06-0440

PO#

Date Rec'd: 7/01/99
Date Started: 7/01/99
Date Completed: 7/02/99

Date Sampled: 6/29/99
Time:
Sampler:

Sample ID	Lab ID	PQL	MDL	Method	Analyte	Results	Units
MW-F8	K33653		1.0	375.4	Sulfate	9	mg/L
			1.0	352.1	Nitrate (NO3)	ND	mg/L
MW-13	K33654		1.0	375.4	Sulfate	11	mg/L
			1.0	352.1	Nitrate (NO3)	ND	mg/L

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

Chain of Custody 1999-06-0440-1

REVISED

Date Shipped: 07/01/1999

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From:

ChromaLab, Inc. (CL)
1220 Quarry Lane
Pleasanton, CA 94566-4756

Project Manager: Gary Cook
Phone: (925) 484-1919 Ext: 105
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Email:

To:

GeoAnalytical Labs
1031 Kansas Avenue, Suite C
Modesto, CA 95351

Phone: (209) 572-0900
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Contact: Ramiro Salgado
Phone: (209) 572-0900

CL Submission #: **1999-06-0440**
CL PO #:

Project #: 97-037
Project Name: Fruitvale

Client Sample ID / Analysis	CL#	Sampled	Matrix / Method	Due
MW-F1	001	06/29/1999 09:56	Water	
Subcontract - Sulfate		K33647	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F3	002	06/29/1999 11:34	Water	
Subcontract - Sulfate		K33648	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F2	003	06/29/1999 13:05	Water	
Subcontract - Sulfate		K33649	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F5	004	06/29/1999 14:37	Water	
Subcontract - Sulfate		K33650	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F6	005	06/29/1999 15:46	Water	
Subcontract - Sulfate		K33651	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F4	006	06/29/1999 16:50	Water	
Subcontract - Sulfate		K33652	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00
MW-F8	007	06/29/1999 17:00	Water	
Subcontract - Sulfate		K33653	300/375.4	07/09/1999 17:00
Subcontract - Nitrate			300/352.1	07/09/1999 17:00

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Denise Harrington Time: 1405	Signature: Time:	Signature: Time:
Printed Name: D. Harrington Date: 7/1/99	Printed Name: Date:	Printed Name: Date:
Company: Chromalab	Company:	Company:
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: 3.**
Signature: Richard Chrun Time: 1405	Signature: Time:	Signature: Time:
Printed Name: Rich Chrun Date: 7-1-99	Printed Name: Date:	Printed Name: Date:
Company: Geo	Company:	Company: