

August 11, 2000

Project No: 97-037

Mr. Joseph Cotton
City of Oakland Environmental Services
250 Frank H. Ogawa Plaza, Suite 5301
Oakland, CA 94612

Results of Semi-Annual Groundwater Monitoring on June 27, 2000
2662 Fruitvale Avenue
Oakland, California

Dear Mr. Cotton:

Innovative Technical Solutions, Inc. (ITSI) is pleased to provide the results of the semi-annual groundwater monitoring performed on June 27, 2000, for the property located at 2662 Fruitvale Avenue in Oakland.

Figure 1 shows the site layout and approximate location of the monitoring wells sampled as part of this semi-annual groundwater monitoring event. The semi-annual groundwater monitoring included the monitoring of seven monitoring wells, MW-F1 through MW-F6 and MW-13, and sampling of five monitoring wells, MW-F2, MW-F4, MW-F5, MW-F6, and MW-13. Monitoring wells MW-F1 and MW-F3 were removed from the semi-annual monitoring program as suggested in the November 18, 1999, letter from Alameda County. Monitoring well MW-F2 was retained to provide an upgradient "background" water sample.

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).



CITY OF OAKLAND



DAIZIEL BUILDING • 250 FRANK H. OGAWA PLAZA, SUITE 5301 • OAKLAND, CALIFORNIA 94612-2034

Public Works Agency
Environmental Services

FAX (510) 238-7286
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August 15, 2000

Mr. Barney Chan
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: Results of Semi-Annual Groundwater Monitoring on June 27, 2000
2662 Fruitvale Avenue Oakland, California

Dear Mr. Chan:

Enclosed is a copy of the subject report, prepared by our consultant, Innovative Technical Solutions, Inc., for the property located at 2662 Fruitvale Avenue in Oakland.

Groundwater quality results are consistent with data collected from the previous monitoring events. Free- floating product was not observed in any of the wells. We plan to start hydrogen peroxide addition to wells MW-F4 and MW-13 in September 2000. Prior to these activities, a work plan will be submitted to you for review, comment, and approval.

Please call me at 238-6259, if you have any questions or require additional information.

Sincerely,

Joseph A. Cotton
Environmental Program Specialist

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PROTECTION
ENVIRONMENTAL

SCOPE OF WORK

Prior to groundwater sample collection, the depth to groundwater was measured in each of the groundwater monitoring wells. The groundwater monitoring wells were checked for the presence of floating product using disposable bailers. Product was not observed in the groundwater monitoring wells. Depth to water levels were measured in each of the monitoring wells using a water level meter accurate to 0.01 foot. Depth to water measurements were recorded on a Monitoring Well Water Level Measurement Form for each monitoring well. A copy of the Monitoring Well Water Level Measurement Form is included in Appendix A.

Subsequent to depth to water measurements, the monitoring wells were purged using clean disposable bailers. The water column in each groundwater monitoring well was used for the calculation of three well casing water volumes to estimate the approximate amount of water to be removed for stabilization. Water was removed from the monitoring wells by hand bailing until at least three volumes were removed. The field parameters of pH, conductivity, temperature, ORP (mV), and dissolved oxygen were observed during purging activities for indications of aquifer and groundwater stabilization. The field parameters were recorded on Monitoring Well Purge and Sample Forms. Copies of the Monitoring Well Purge and Sample Forms are included in Appendix A.

Groundwater samples were collected from each monitoring well using the disposable bailers. Disposable bailers were dedicated for use only once at each monitoring well and then discarded. Groundwater for sample collection was transferred from the dedicated bailers into preserved laboratory-provided sample containers. Groundwater samples containers were then 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 constituents:

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

RESULTS

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

Depth to groundwater ranged from approximately 9 to 10 feet below ground surface (bgs). Groundwater flow direction was generally towards the west-southwest, at a gradient of approximately 0.02 feet per foot. The groundwater flow direction as measured on June 27, 2000 is generally consistent with groundwater flow directions from previous monitoring events. Minor variation to the overall flow direction in the area where the ORC was placed may possibly show the effect of the ORC slurry.

Floating product was not observed in the seven groundwater monitoring wells monitored during this monitoring and 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 this sampling event. The absorbent sock removed from monitoring well MW-13 during this event exhibited a slight black staining at the surface water interface and a slight petroleum hydrocarbon odor was noted.

Petroleum Hydrocarbons

TPHg was detected in groundwater samples collected from two monitoring wells, MW-F4 and MW-13, at concentrations of 10 and 6.1 milligrams per liter (mg/L), respectively. TPHg was reportedly not detected (at a detection limit of 0.05 mg/L) in the groundwater samples collected from monitoring wells MW-F2, MW-F5 and MW-F6.

BTEX compounds were detected in two monitoring wells, MW-F4 and MW-13, as discussed below:

- Benzene was detected in groundwater samples collected from MW-F4 and MW-13 at concentrations of 0.08 and 0.11 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.
- Ethylbenzene was detected in groundwater samples collected from MW-F4 and MW-13 at concentrations of 1.1 and 0.27 mg/L, respectively. The ethylbenzene concentration detected in MW-F4 exceeds the MCL for ethylbenzene of 0.7 mg/L.
- Xylenes were detected in groundwater samples collected from MW-F4 and MW-13 at concentrations of 0.32 and 0.038 mg/L, respectively.

BTEX compounds were reportedly not detected (at a detection limit of 0.0005 mg/L) in groundwater samples collected from the remaining three monitoring wells sampled.

Intrinsic Bioremediation Indicator Compounds

Table A below provides the results of bioremediation indicator parameters, including laboratory and field measurements for the June 27, 2000 groundwater monitoring and sampling event.

Table A: Bioremediation Indicator Parameters

Monitoring Well ID	Total Iron (mg/L)	Soluble Iron (mg/L) Fe^{2+}	Nitrate (mg/L)	Sulfate (mg/L)	Dissolved Oxygen	ORP
MW-F2	53	<0.10	<1.0	2	10.74	130
MW-F4	160	<0.10	<1.0	<1.0	10.63	-57
MW-F5	60	<0.10	20	37	10.14	157
MW-F6	10	<0.10	<1.0	9	10.96	141
MW-13	15	<0.10	1.0	2	10.91	-48

As shown above, soluble iron, representing ferrous iron (Fe^{2+}), was not detected in the groundwater monitoring wells sampled this event.

Nitrate was detected in two of the five monitoring wells sampled, MW-F5 and MW-F6, at concentrations of 20 mg/L and 1.0 mg/L, respectively. Sulfate was detected in four of the five wells sampled, at concentrations ranging from 2 to 37 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 the five monitoring wells at approximately 10 mg/L. ORP measurements ranged from -57 to -48 mV in monitoring wells MW-F4 and MW-13, within the area of petroleum hydrocarbon-affected groundwater. ORP ranged from a low of 130 mV in monitoring well MW-F2 to a high of 157 mV in monitoring well MW-F5, outside the area of petroleum hydrocarbon-affected groundwater.

DISCUSSION

Free floating product was not observed in monitoring well MW-13 or the other monitoring wells during the January 2000 sampling event. As noted above, a petroleum hydrocarbon absorbent sock was replaced in MW-13 to remove floating product from the groundwater surface, and is routinely replaced during each monitoring event.

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 up-gradient monitoring well MW-F2. 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 1995) indicate 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 indicative of active biodegradation occurring in groundwater beneath the site, although the low ORP values in the monitoring wells within the petroleum hydrocarbon-affected groundwater suggests an oxygen depleted environment which would not readily support continued aerobic degradation. The significant difference in ORP between wells within and outside the petroleum hydrocarbon-affected groundwater, with no significant difference for DO, suggests the dissolved oxygen readings may not reflect in-situ conditions.

Since the introduction of ORC, several trends have been observed which support the effectiveness of the ORC in reducing overall TPHg and benzene concentrations in the affected groundwater. Prior to introduction of the ORC, seasonal water level fluctuations significantly affected TPHg concentrations, especially in monitoring well MW^F4 close to the apparent source area. Since the introduction of the ORC, the historic peaks in TPHg concentrations previously observed during the higher groundwater elevations in the winter have been moderated. This is apparent in Figure 4A

and 4B showing graphs of the historical concentrations of TPHg and benzene in monitoring wells MW-4 and MW-13.

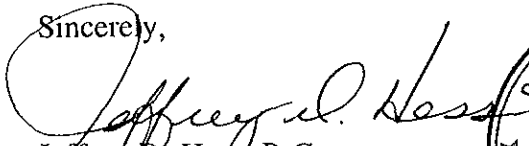
RECOMMENDATIONS

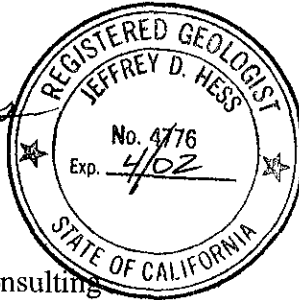
Based on the results of this semi-annual monitoring and sampling event, the following activities are recommended:

- Continued semi-annual water quality monitoring of MW-F2, MW-F4, MW-F5, MW-F6 and MW-13 to monitor the extent of the hydrocarbon plume and the effects of intrinsic bioremediation on the plume.
- Continued evaluation of intrinsic bioremediation parameters to assess the effectiveness of ORC emplacement.
- Application of discrete doses of 1-3% medical-grade hydrogen peroxide in monitoring wells MW-F4 and MW-13 to encourage both the chemical oxidation of the TPHg and benzene, and continued biodegradation of these chemicals.

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

Sincerely,


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
		06/26/97	-	11.23	93.18	
		03/11/98	-	8.73	95.68	
		12/11/98	-	9.38	95.03	
		06/29/99	-	10.87	93.54	
		01/21/00	-	9.42	94.99	
		06/27/00	-	9.92	94.49	
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
		06/26/97	-	11.96	90.26	
		03/11/98	-	7.70	94.52	
		12/11/98	-	10.40	91.82	
		06/29/99	-	11.42	90.80	
		01/21/00	-	10.32	91.9	
		06/27/00	-	10.47	91.75	
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
		06/26/97	-	11.85	90.57	
		03/11/98	-	8.82	93.6	
		12/11/98	-	9.61	92.81	
		06/29/99	-	11.25	91.17	
		06/27/00	-	10.28	92.14	

**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
		06/26/97	-	10.94	90.62	
		03/11/98	-	8.40 ²	-	
		12/11/98	-	9.40	92.16	
		06/29/99	-	10.36	91.20	
		01/21/00	-	8.11	93.45	
		06/27/00	-	9.43	92.13	
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
		06/26/97	-	11.61	88.71	
		03/11/98	-	8.79	91.53	
		12/11/98	-	9.62	90.70	
		06/29/99	-	11.07	89.25	
		01/21/00	-	9.39	90.93	
		06/27/00	-	10.29	90.03	
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
		06/26/97	-	11.35	88.76	
		03/11/98	-	8.60	91.51	
		12/11/98	-	10.12	89.99	
		06/29/99	-	10.96	89.15	
		01/21/00	-	9.37	90.74	
		06/27/00	-	10.12	89.99	

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

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
		06/26/97	0.02	11.76	89.45 ³	
		03/11/98	0.02	8.11	93.11 ³	
		12/11/98	-	9.30	91.90	
		06/29/99	-	11.08	90.12	
		06/27/00	-	10.48	90.72	
		01/21/00	-	9.22	91.98	
		06/27/00	-	10.48	90.72	

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
	06/26/97	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.1	<0.10	7.7	38	
	03/11/98	<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	
	06/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	30	35	
No longer part of semi-annual monitoring program											
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
	06/26/97	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.1	<0.10	<0.05	7.4	
	03/11/98	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	
	06/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	<1.0	<1.0	
	01/21/00	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	<0.2	9	
	06/27/00	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	53	<0.10	<1.0	2	
No longer part of semi-annual monitoring program											
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		
No longer part of semi-annual monitoring program											

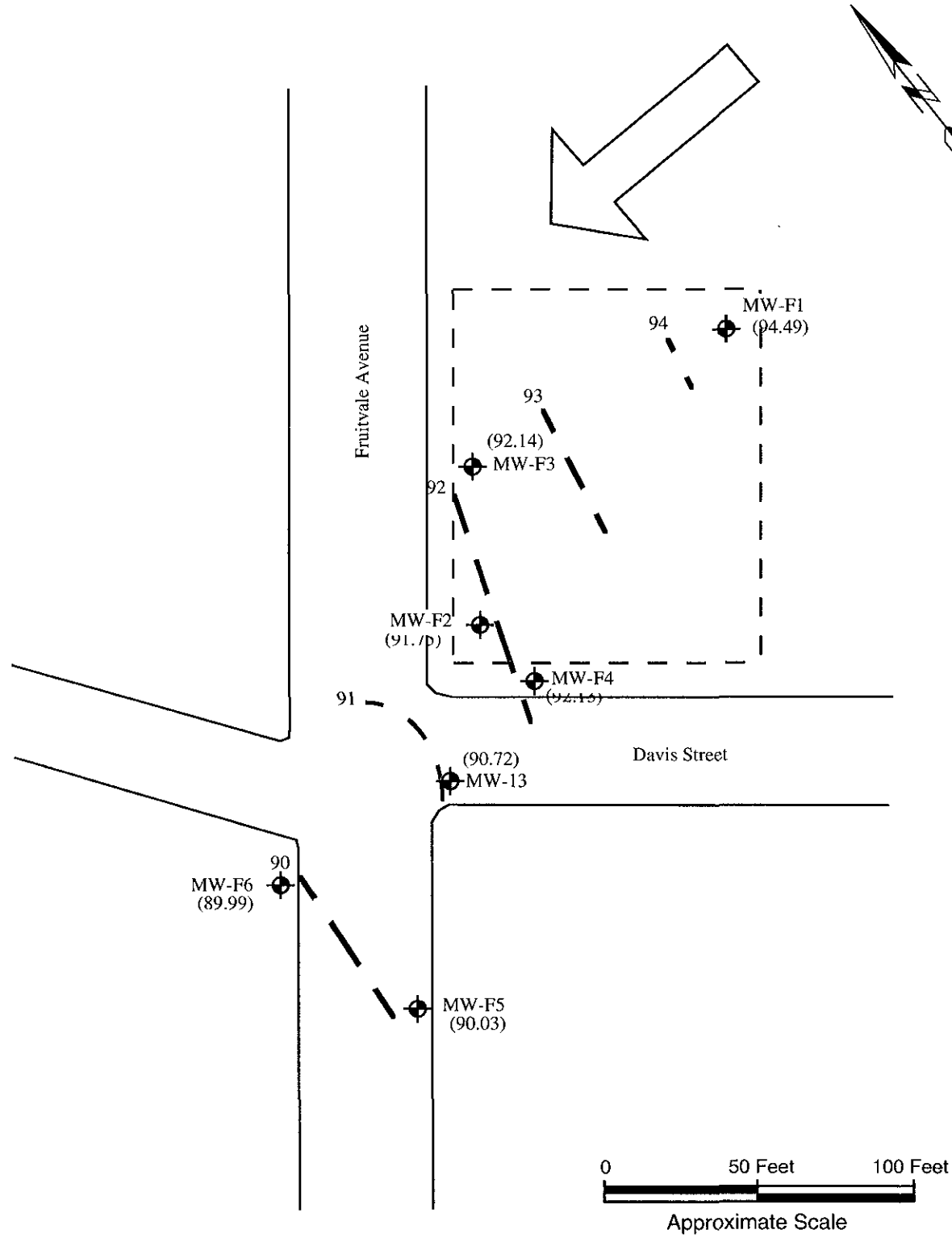
TABLE 2 (Continued)
SUMMARY OF LABORATORY RESULTS FOR GROUNDWATER SAMPLES
2662 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

Monitoring Well ID	Date Sampled	TPHg (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Total Iron (mg/L)	Soluble Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Note
MW-F4	09/9/94*	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
	06/26/97	6.2	0.16	0.018	0.71	0.32	2.4	3.1	<0.05	0.2	
	03/11/98	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	
	06/29/99	10	0.230	0.032	1.8	0.30	0.93	0.90	<1.0	9	
	01/21/00	7.9	0.033	<0.005	1.0	0.25	13	2.7	<0.2	<1.0	
06/27/00	10	0.08	<0.025	1.1	0.32	160	<0.10	<1.0	<1.0		
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
	06/26/97	<0.05	0.0032	0.0064	0.00073	0.0042	0.21	<0.1	6.1	45	
	03/11/98	<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	
	06/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	<0.10	23	50	
	01/21/00	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.14	<0.10	5.2	42	
	06/27/00	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	60	<0.10	20	37	
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
	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	0.44	39	1
	06/26/97	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.22	0.18	<0.05	47	
	03/11/98	<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	
	06/29/99	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	0.93	<1.0	54	
	01/21/00	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.11	<0.10	0.5	42	
	06/27/00	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	10	<0.10	<1.0	9	

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)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Total Iron (mg/L)	Soluble Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Note
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	
	06/29/99	7	0.24	0.13	0.44	0.11	1.3	1.3	<1.0	11	
	01/21/00	7.3	0.035	<0.005	0.62	0.22	7.3	6.9	<0.2	<1.0	
	06/27/00	6.1	0.11	<0.025	0.27	0.038	15	<0.10	1	2	
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)



- Legend**
- Approximate Location of Monitoring Wells
 - 90 74 Groundwater Elevations
 - Lines of Equal Groundwater Elevations

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

FIGURE 1

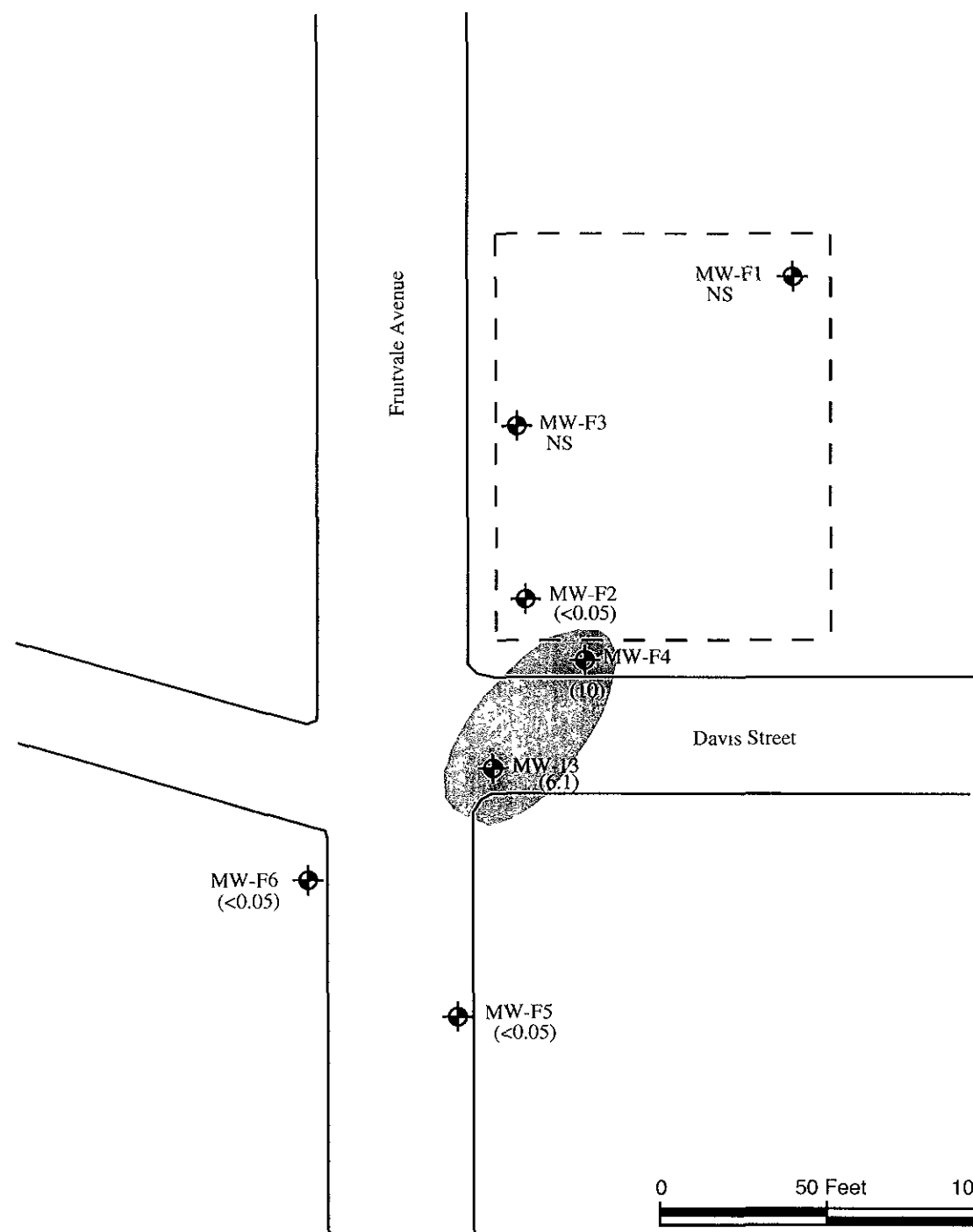
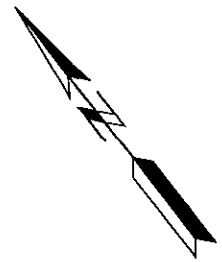
GROUNDWATER ELEVATIONS MEASURED ON JUNE 27, 2000

2662 Fruitvale Avenue
Oakland, California

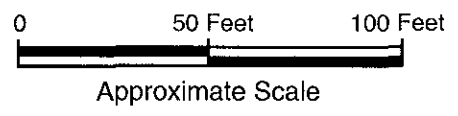


CITY OF OAKLAND

INNOVATIVE TECHNICAL SOLUTIONS, INC.



- Legend**
- Approximate Location of Monitoring Wells
 - 7.3 Concentration of TPHg in mg/L
 - TPHg ≥ 0.1 mg/L
 - TPHg ≥ 1 mg/L
 - NS Not Sampled



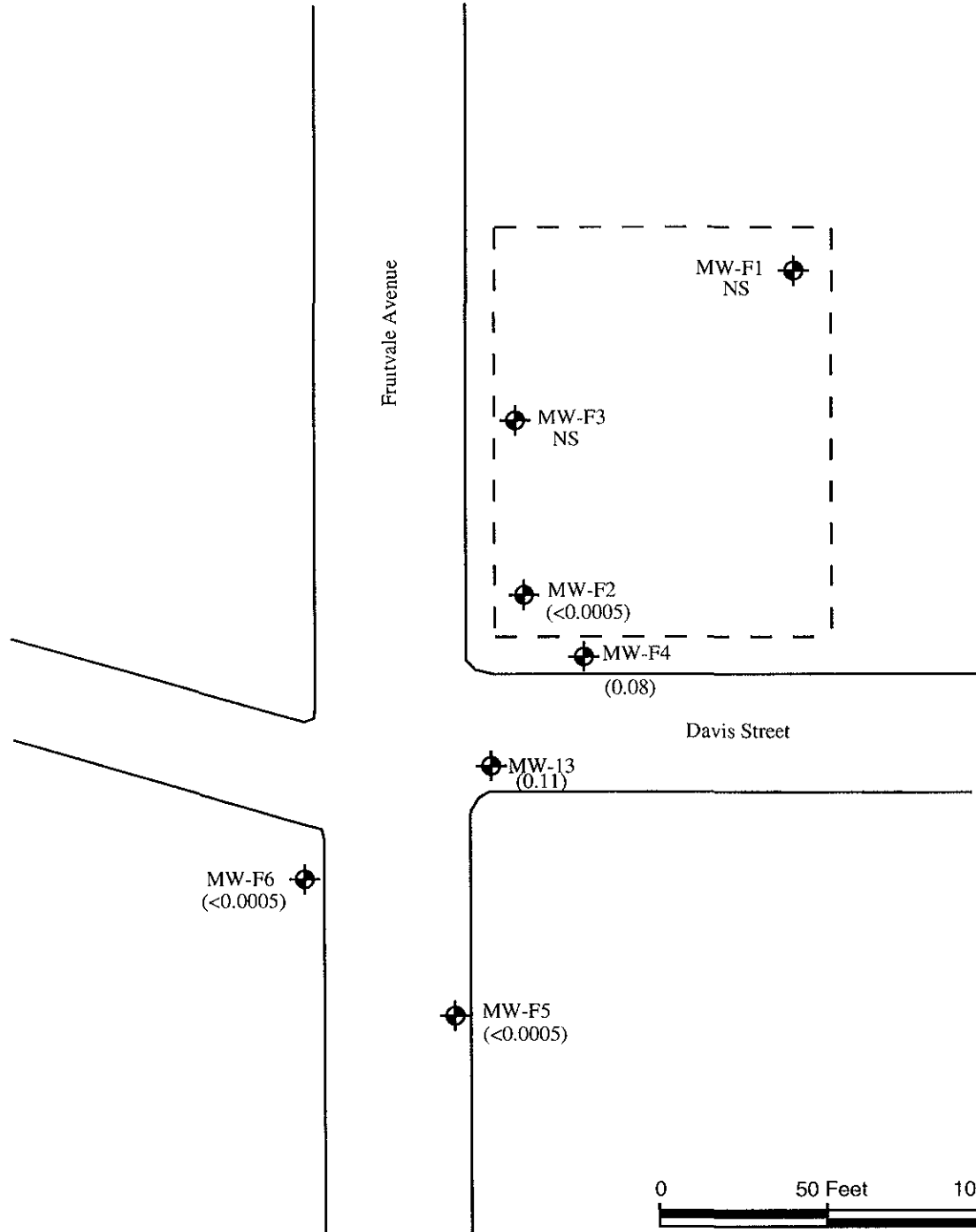
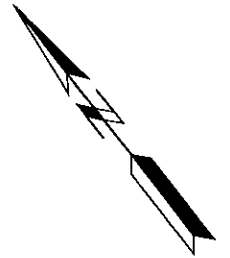
Source Modified from Figure 3, Groundwater Elevation Contour Map, 13 December 1996, BASELINE

FIGURE 2
LABORATORY RESULTS FOR
TPHg FOR SAMPLES COLLECTED ON
JUNE 27, 20000

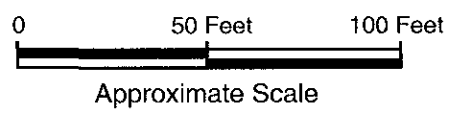
2662 Fruitvale Avenue
 Oakland, California

CITY OF OAKLAND
INNOVATIVE TECHNICAL SOLUTIONS, INC.





- Legend**
- Approximate Location of Monitoring Wells
 - 0.035 Concentration of benzene in mg/L
 - Benzene ≥ 0.001 mg/L
 - Benzene ≥ 0.01 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 27, 2000

2662 Fruitvale Avenue
 Oakland, California

CITY OF OAKLAND
INNOVATIVE TECHNICAL SOLUTIONS, INC.

Figure 4a: Graph of Historical Concentrations of TPHg in MW-F4 and MW-13

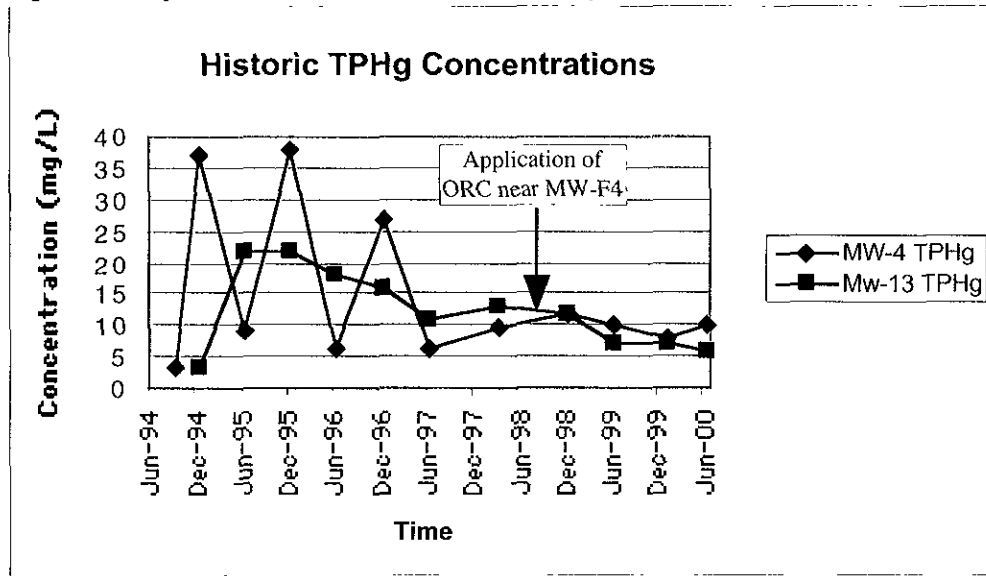


Figure 4b: Graph of Historical Concentrations of Benzene in MW-F4 and MW-13

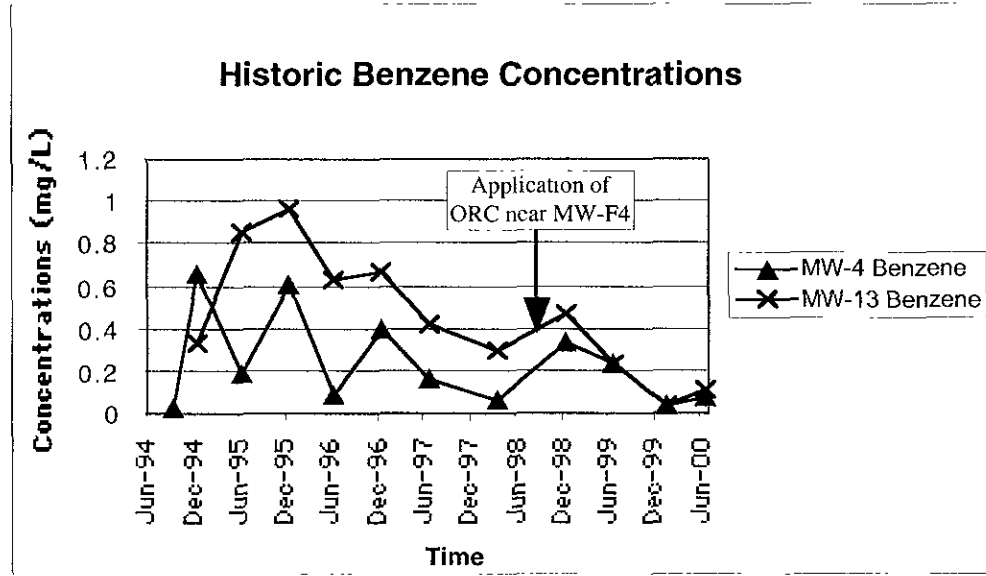


FIGURE 4

GRAPHS OF HISTORICAL CONCENTRATION TRENDS FOR TPHg AND BENZENE

2662 Fruitvale Avenue
Oakland, California



CITY OF OAKLAND

INNOVATIVE TECHNICAL SOLUTIONS, INC.

APPENDIX A
COPIES OF MONITORING WELL PURGE AND SAMPLE FORMS

PROJECT NAME: 2662 Fruitvale

PROJECT NUMBER: 97-037

SITE LOCATION: Oakland, CA

DAILY ACTIVITY REPORT

DATE: 6/27/00

PAGE 1 OF 2

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

Meet w/ Mark Sorensen at ITSI Walnut Creek, CA. Stop at OHS + get rope + ice. Leave for site. Arrive site.

Keys for site do not fit gate. There is a lock for the fence gate on a chain (not attached to fence) (This chain was not long enough to attach to the fence). The lock was secured through the fence. A unknown lock is securing the gate. Entry was possible by removing the bolt securing the latch with the lock. Bolt cutters needed to remove the lock that is securing the chain link fence.

Monitor wells for depth to water using Solinst water probe.

Wells MW-F6 needs 5/16" Allen wrench

MW-13 needs 9/16" wrench (really tight)

2" compression caps on all seven wells need replaced. They are just too old + the rubber does not tighten down. Most bolts on well boxes are missing.

MW-F1 needs sanitary concrete seal filled in or replaced.

Every well has dedicated tubing + filters except MW-F3-13. F2. These tubing + filters are coiled inside the well boxes.

Set up barrel at east side of site. Has @ 25 gallons labeled 6-27-00

Site is generally clean of trash + weeds. Site was secure upon arrival.

Order MW-F5, MW-F2, MW-F6, MW-F4 + MW-13. Wells MW-F3 + MW-F1 were not part of the Quarterly sampling program.

Samples were analyzed for TPH-g, BTEX, total Fe, Soluble Fe, Nitrate, Sulfates

Parameters monitored during purging were Ph, Temp, Cond, DO, ORP, Turbidity.

Well MW-F2 → the ORP measurements were re-taken after purging because of mis-setting the parameters of the ORP meter. These readings are recorded on the MW purge + sampling form.

The sock was replaced in MW-13. Close site.

~~Return~~ Return samples to lab for analysis. Return to office.

PREPARED BY: Tina Walker

CHECKED BY*:

DATE: 6/27/00

DATE:

PREPARERS SIGNATURE:

REVIEWERS SIGNATURE:

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

PROJECT NAME: 2002 Fruitvale
PROJECT NUMBER: 97-037
SITE LOCATION: Oakland, CA

DAILY ACTIVITY REPORT

DATE: 6/27/00
PAGE 2 OF 2

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

Honiba water checker 0-10 Cal solution
 auto calibration PH. 3.80 4.0
 cond 4.46 4.49
 turb 0 0.0 NTU
 D.O. 8.14 mg/L lot # 1778 exp. 10/31/00
 Temp 24.6°C

ORP meter - cal solution read mV - 228 @ 23.7°C
 solution labeled 231 mV 25°C
 237.5 mV 20°C

lot # 35 FC-13 exp date → none solution Ag/Ag CL

PREPARED BY: Tia Watcher
DATE: 6/27/00
PREPARERS SIGNATURE: _____

CHECKED BY*: _____
DATE: _____

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: 2662 Fruitvale

PROJECT NO.: 97-037

MEASURED BY: M. Sorensen, T. Watchers

DATE: 6-27-00

1) dedicated tubing
 & filter.
 2
 3
 4

Monitoring Well I.D.	Depth to Water (feet)	Total Well Depth (feet)	Time
MW-F1	9.92	Sanitary seal needs repair (concrete)	10:51
MW-F2	10.47	Need 3 - $\frac{9}{16}$ " bolts	10:54
MW-F3	10.28	Need one $\frac{9}{16}$ " bolt	10:52
MW-F4	9.43	Needs padlock	11:03
MW-F5	10.29	Need $\frac{9}{16}$ " socket (hex)	10:56
MW-F6	10.12	Has bolts that require $\frac{5}{16}$ " allen wrench	10:59
MW-13	10.48	Strong odor; need 3 - $\frac{9}{16}$ " bolts & padlock	11:06

Note: 1) Need new expandable well caps on all wells

- 2) MW-F1 needs 3 $\frac{9}{16}$ " bolts
- 3) * : use dedicated tubing & filter

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 2662 Fruitvale Ave. PROJECT NO.: 97-037
 WELL NO.: MW-F2 TESTED BY: TW & MS DATE: 6-27-00

Measuring Point Description: mark on TOC Static Water Level (ft.): 10.47
 Total Well Depth (ft.): 19.95 Sample Method: bailer
 Water Level Measurement Method: solinst interface probe Time Sampled: 1:30
 Purge Method: bailers Sample Depth (ft.): ~15'
 Time Start Purge: 1:15 Field Filtering: no
 Time End Purge: 1:25 Field Preservation: HCl (VOCs), H₂SO₄ (500 ml plastic), HNO₃ (250 ml plastic)
 Comments: _____

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal)
				2	4	6	
	19.95	10.47	9.48	x 2	x 4	x 6	= 1.52
				0.16	0.64	1.44	3 vols = 4.6
Time	1:20	1:22	1:25				1:15 (Initial)
Volume Purged (gals)	1.52	1.52	1.52				0
Cumulative Volume Purged (gals)	1.52	3.04	4.56				0
Cumulative Number of Casing Volumes	1	2	3				0
Purge Rate (gpm)							
Temperature (F° or C°)	20.2	19.9	19.8				20.7
pH	6.20	6.26	6.33				6.22
Specific Conductivity (µmhos/cm)	0.423	0.431	0.434				0.428
Dissolved Oxygen (mg/L)	10.38	10.69	10.74				10.03
Turbidity/Color (NTU)	78	84	468				7
Odor	none	none	none				none
Dewatered?	no	no	no				no

ORP (mV) → 5.10 4.90 4.95 5.04
 M.S. M.S. M.S. M.S.
 → 32-61-74-90-109-121-130-130
 21.70C = 21.0 - 20.5 - 20.5 - 20.1 temp
 0 gals 0.5 gals 1.0 gals 1.5 gals 2 gals

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 2662 Fruitvale Ave. PROJECT NO.: 97-037
 WELL NO.: MW-F4 TESTED BY: TW & MS DATE: 6-27-00

Measuring Point Description: mark on TOC Static Water Level (ft.): 9.43
 Total Well Depth (ft.): 16.91 Sample Method: bailer
 Water Level Measurement Method: salinist interface probe Time Sampled: 2:45
 Purge Method: bailer Sample Depth (ft.): ~13
 Time Start Purge: ~~2:38~~ 2:34 ^{M.S.} Field Filtering: none
 Time End Purge: 2:43 Field Preservation: HCl (VOCs), H₂SO₄ (1-5000
 Comments: odor; beginning to dewater, 3rd volume plastic), HNO₃ (250ml plastic)

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal)
				2	4	6	
				0.16	0.64	1.44	
	16.91	9.43	7.48				1.20 3 vols = 3.6
Time	2:38	2:41	2:43				2:34
Volume Purged (gals)	1.2	2.4 ^{1.2 M.S.}	3.6 ^{1.2 M.S.}				0
Cumulative Volume Purged (gals)	1.2	2.4	3.6				0
Cumulative Number of Casing Volumes	1	2	3				0
Purge Rate (gpm)							
Temperature (F° or C°)	21.1	20.8	20.5				23.0
pH	6.48	6.57	6.48				6.38
Specific Conductivity (umhos/cm)	0.580	0.594	0.598				0.572
Dissolved Oxygen (mg/L)	10.83	10.78	10.63				10.07
Turbidity/Color (NTU)	33	32	194				9
Odor	yes	yes	yes				Yes; also skreen
Dewatered?	no	no	no				no

M.S.

ORP (mV) -57 -46 -57 -57

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 2662 Fruitvale Ave. PROJECT NO.: 97-037
 WELL NO.: MW-F5 TESTED BY: TW & MS DATE: 6-27-00

Measuring Point Description: mark on TOC Static Water Level (ft.): 10.29
 Total Well Depth (ft.): 24.40 Sample Method: bailer
 Water Level Measurement Method: solinst interface probe Time Sampled: 12:48
 Purge Method: bailer Sample Depth (ft.): ~ 17'
 Time Start Purge: 12:30 Field Filtering: none
 Time End Purge: 12:43 Field Preservation: HCL (VOCs), H₂SO₄ (500 ml plastic), HNO₃ (250 ml plastic)
 Comments: needs 9/16" wrench to open

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) (3 vols = 6.78)
							2	4	6		
							0.16	0.64	1.44		
	24.40		10.29		14.11						2.26

Time	12:35	12:40	12:43				Initial reading at 12:30:
Volume Purged (gals)	2.26	2.26	2.26				0
Cumulative Volume Purged (gals)	2.26	4.52	6.78				0
Cumulative Number of Casing Volumes	1	2	3				0
Purge Rate (gpm)							
Temperature (F°) or (C°)	20.6	20.4	20.4				21.4
pH	6.19	6.20	6.21				6.11
Specific Conductivity (µmhos/cm)	0.414	.451	.452				0.367
Dissolved Oxygen (mg/L)	9.94	10.07	10.14				9.01
Turbidity/Color (NTU)	999	999	999				1
Odor	none	none	none				none
Dewatered?	no	no	no				no

ORP (mV) 161 155 157

M.S.

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 2662 Fruitvale Ave. PROJECT NO.: 97-037
 WELL NO.: MW-F6 TESTED BY: TW, MS DATE: 6-27-2000

Measuring Point Description: mark on TOC Static Water Level (ft.): 10.12
 Total Well Depth (ft.): 21.15 Sample Method: bailer
 Water Level Measurement Method: solinst interface probe Time Sampled: 2:10
 Purge Method: bailer Sample Depth (ft.): ~16
 Time Start Purge: 1:50 Field Filtering: none
 Time End Purge: 2:07 Field Preservation: HCl (VOCs), H₂SO₄ (500 mL plastic), HNO₃ (250 mL plastic)
 Comments: _____

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal)
				2	4	6	
	21.15	10.12	11.03	x 0.16	0.64	1.44	= 1.76 (3 vols = 5.29)
Time	1:50	1:53	1:56	1:59	2:02	2:05	2:07
Volume Purged (gals)	0	1.76	1.76	1.76	1.8	1.0	1.0
Cumulative Volume Purged (gals)	0	1.76	3.52	5.28	7.08	8.08	9.08
Cumulative Number of Casing Volumes	0	1	2	3	4	4.6	5.1
Purge Rate (gpm)							
Temperature (F° or C°)	22.0	20.7	20.2	20.0	20.2	20.0	19.8
pH	7.00	6.64	6.79	6.93	6.95	6.75	6.70
Specific Conductivity (µmhos/cm)	0.463	0.432	0.452	0.466	0.472	0.469	0.463
Dissolved Oxygen (mg/L)	10.34	10.98	11.18	11.15	10.91	10.91	10.96
Turbidity/Color (NTU)	16	43	110	173	288	239	250
Odor	none	none	none	none	none	none	none
Dewatered?	no	no	no	no	no	no	no

ORP (mV) ~~5.02~~ ~~4.81~~ ^{MS} ~~4.65~~ ~~4.53~~ 158 144 141

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 2662 Fruitvale Ave. PROJECT NO.: 97-037
 WELL NO.: MW-13 TESTED BY: TW, MS DATE: 6-27-00

Measuring Point Description: mark on TOC Static Water Level (ft.): 10.48
 Total Well Depth (ft.): 23.25 Sample Method: bailer
 Water Level Measurement Method: solinst interface probe Time Sampled: 1530
 Purge Method: bailer Sample Depth (ft.): ~17
 Time Start Purge: 1514 Field Filtering: none
 Time End Purge: 1524 Field Preservation: HCl (VOCs), H₂SO₄ (500 mL plastic), HNO₃ (250 mL plastic)
 Comments: sheen & odor; duplicate collected & labelled "duplicate"

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal) (3 vols. = 6.12)
				2	4	6	
	23.25	10.48	12.77	0.16	0.64	1.44	2.04
Time	1514	1517	1520	1524			
Volume Purged (gals)	0	2.04	2.04	2.04			
Cumulative Volume Purged (gals)	0	2.04	4.08	6.12			
Cumulative Number of Casing Volumes	0	1	2	3			
Purge Rate (gpm)							
Temperature (F° or C°)	22.4	20.6	20.3	20.1			
pH	7.01	6.48	6.44	6.45			
Specific Conductivity (µmhos/cm)	0.353	0.678	0.701	0.705			
Dissolved Oxygen (mg/L)	10.22	10.91	10.80	10.94			
Turbidity/Color (NTU)	47	138	124	128			
Odor	yes	yes	yes	yes			
Dewatered?	no	no	no	no			

ORP (mV) -31 -33 -32 -48

APPENDIX B

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

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

Date: July 6, 2000

Innovative Technical Solutions, Inc

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

Attn.: Mr. Jeff Hess

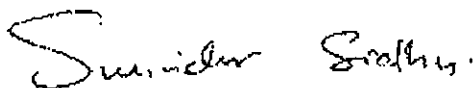
Project: 97-037

Dear Jeff,

Attached is our report for your samples received on Tuesday June 27, 2000
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 27, 2000
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. You can also contact me via email.
My email address is: ssidhu@chromalab.com .

Sincerely,



Surinder Sidhu

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

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 #:

Project 97-037

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-F5	Water	06/27/2000 12:48	1
MW-F2	Water	06/27/2000 13:30	2
MW-F6	Water	06/27/2000 14:10	3
MW-F4	Water	06/27/2000 14:45	4
MW-13	Water	06/27/2000 15:30	5
DUPLICATE	Water	06/27/2000	6

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**Test Method: 8020
8015M

Attn.: Jeff Hess

Prep Method: 5030

Gas/BTEX

Sample ID: MW-F5	Lab Sample ID: 2000-06-0538-001
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 12:48	Extracted: 06/29/2000 20:45
Matrix: Water	QC-Batch: 2000/06/29-01.05

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/29/2000 20:45	
Benzene	ND	0.50	ug/L	1.00	06/29/2000 20:45	
Toluene	ND	0.50	ug/L	1.00	06/29/2000 20:45	
Ethyl benzene	ND	0.50	ug/L	1.00	06/29/2000 20:45	
Xylene(s)	ND	0.50	ug/L	1.00	06/29/2000 20:45	
Surrogate(s)						
Trifluorotoluene	79.1	58-124	%	1.00	06/29/2000 20:45	
4-Bromofluorobenzene-FID	79.1	50-150	%	1.00	06/29/2000 20:45	

1220 Quarry Lane * Pleasanton, CA 94566-4756
 Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**Test Method: 8020
8015M

Attn.: Jeff Hess

Prep Method: 5030

Gas/BTEX

Sample ID: MW-F2	Lab Sample ID: 2000-06-0538-002
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 13:30	Extracted: 06/29/2000 21:17
Matrix: Water	QC-Batch: 2000/06/29-01.05

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/29/2000 21:17	
Benzene	ND	0.50	ug/L	1.00	06/29/2000 21:17	
Toluene	ND	0.50	ug/L	1.00	06/29/2000 21:17	
Ethyl benzene	ND	0.50	ug/L	1.00	06/29/2000 21:17	
Xylene(s)	ND	0.50	ug/L	1.00	06/29/2000 21:17	
Surrogate(s)						
Trifluorotoluene	83.7	58-124	%	1.00	06/29/2000 21:17	
4-Bromofluorobenzene-FID	81.6	50-150	%	1.00	06/29/2000 21:17	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**Test Method: 8020
8015M

Attn.: Jeff Hess

Prep Method: 5030

Gas/BTEX

Sample ID: MW-F6	Lab Sample ID: 2000-06-0538-003
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 14:10	Extracted: 06/29/2000 21:48
Matrix: Water	QC-Batch: 2000/06/29-01.05

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/29/2000 21:48	
Benzene	ND	0.50	ug/L	1.00	06/29/2000 21:48	
Toluene	ND	0.50	ug/L	1.00	06/29/2000 21:48	
Ethyl benzene	ND	0.50	ug/L	1.00	06/29/2000 21:48	
Xylene(s)	ND	0.50	ug/L	1.00	06/29/2000 21:48	
Surrogate(s)						
Trifluorotoluene	83.3	58-124	%	1.00	06/29/2000 21:48	
4-Bromofluorobenzene-FID	78.8	50-150	%	1.00	06/29/2000 21:48	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**Test Method: 8020
8015M

Attn.: Jeff Hess

Prep Method: 5030

Gas/BTEX

Sample ID: MW-F4	Lab Sample ID: 2000-06-0538-004
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 14:45	Extracted: 06/30/2000 00:26
Matrix: Water	QC-Batch: 2000/06/29-01.05

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	10000	2500	ug/L	50.00	06/30/2000 00:26	
Benzene	80	25	ug/L	50.00	06/30/2000 00:26	
Toluene	ND	25	ug/L	50.00	06/30/2000 00:26	
Ethyl benzene	1100	25	ug/L	50.00	06/30/2000 00:26	
Xylene(s)	320	25	ug/L	50.00	06/30/2000 00:26	
Surrogate(s)						
Trifluorotoluene	94.7	58-124	%	1.00	06/30/2000 00:26	
4-Bromofluorobenzene-FID	83.8	50-150	%	1.00	06/30/2000 00:26	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**Test Method: 8020
8015M

Attn.: Jeff Hess

Prep Method: 5030

Gas/BTEX

Sample ID: MW-13	Lab Sample ID: 2000-06-0538-005
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 15:30	Extracted: 06/30/2000 00:58
Matrix: Water	QC-Batch: 2000/06/29-01.05

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	6100	2500	ug/L	50.00	06/30/2000 00:58	
Benzene	110	25	ug/L	50.00	06/30/2000 00:58	
Toluene	ND	25	ug/L	50.00	06/30/2000 00:58	
Ethyl benzene	270	25	ug/L	50.00	06/30/2000 00:58	
Xylene(s)	38	25	ug/L	50.00	06/30/2000 00:58	
Surrogate(s)						
Trifluorotoluene	93.2	58-124	%	1.00	06/30/2000 00:58	
4-Bromofluorobenzene-FID	81.9	50-150	%	1.00	06/30/2000 00:58	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**Test Method: 8020
8015M

Attn.: Jeff Hess

Prep Method: 5030

Gas/BTEX

Sample ID: DUPLICATE	Lab Sample ID: 2000-06-0538-006
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000	Extracted: 06/30/2000 01:29
Matrix: Water	QC-Batch: 2000/06/29-01.05

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	5000	2500	ug/L	50.00	06/30/2000 01:29	
Benzene	74	25	ug/L	50.00	06/30/2000 01:29	
Toluene	ND	25	ug/L	50.00	06/30/2000 01:29	
Ethyl benzene	230	25	ug/L	50.00	06/30/2000 01:29	
Xylene(s)	32	25	ug/L	50.00	06/30/2000 01:29	
Surrogate(s)						
Trifluorotoluene	93.4	58-124	%	1.00	06/30/2000 01:29	
4-Bromofluorobenzene-FID	81.6	50-150	%	1.00	06/30/2000 01:29	

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**

Test Method: 8020

Attn.: Jeff Hess

8015M

Prep Method: 5030

Batch QC Report
Gas/BTEX**Method Blank****Water****QC Batch # 2000/06/29-01.05**

MB: 2000/06/29-01.05-001

Date Extracted: 06/29/2000 17:36

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	06/29/2000 17:36	
Benzene	ND	0.5	ug/L	06/29/2000 17:36	
Toluene	ND	0.5	ug/L	06/29/2000 17:36	
Ethyl benzene	ND	0.5	ug/L	06/29/2000 17:36	
Xylene(s)	ND	0.5	ug/L	06/29/2000 17:36	
Surrogate(s)					
Trifluorotoluene	80.2	58-124	%	06/29/2000 17:36	
4-Bromofluorobenzene-FID	78.0	50-150	%	06/29/2000 17:36	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**Test Method: 8020
8015M

Attn: Jeff Hess

Prep Method: 5030

Batch QC Report

Gas/BTEX

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2000/06/29-01.05	
LCS:	2000/06/29-01.05-002	Extracted:	06/29/2000 18:07	Analyzed:	06/29/2000 18:07
LCSD:	2000/06/29-01.05-003	Extracted:	06/29/2000 19:42	Analyzed:	06/29/2000 19:42

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	473	532	500	500	94.6	106.4	11.7	75-125	20		
Benzene	96.6	93.4	100.0	100.0	96.6	93.4	3.4	77-123	20		
Toluene	93.9	89.7	100.0	100.0	93.9	89.7	4.6	78-122	20		
Ethyl benzene	97.3	92.6	100.0	100.0	97.3	92.6	5.0	70-130	20		
Xylene(s)	282	271	300	300	94.0	90.3	4.0	75-125	20		
Surrogate(s)											
Trifluorotoluene	436	419	500	500	87.2	83.8		58-124			
4-Bromofluorobenzene-Fl	412	433	500	500	82.4	86.6		50-150			

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

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 #:

Project 97-037

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-F5	Water	06/27/2000 12:48	1
MW-F2	Water	06/27/2000 13:30	2
MW-F6	Water	06/27/2000 14:10	3
MW-F4	Water	06/27/2000 14:45	4
MW-13	Water	06/27/2000 15:30	5

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3010A

Metals

Sample ID: MW-F5	Lab Sample ID: 2000-06-0538-001
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 12:48	Extracted: 06/29/2000 07:13
Matrix: Water	QC-Batch: 2000/06/29-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	60	0.10	mg/L	1.00	06/29/2000 12:22	

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3010A

Metals

Sample ID: MW-F2	Lab Sample ID: 2000-06-0538-002
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 13:30	Extracted: 06/29/2000 07:13
Matrix: Water	QC-Batch: 2000/06/29-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	53	0.10	mg/L	1.00	06/29/2000 12:25	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

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

Test Method: 6010B
 Prep Method: 3010A

Metals

Sample ID: MW-F6	Lab Sample ID: 2000-06-0538-003
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 14:10	Extracted: 06/29/2000 07:13
Matrix: Water	QC-Batch: 2000/06/29-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	10	0.10	mg/L	1.00	06/29/2000 12:44	

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3010A

Metals

Sample ID: MW-F4	Lab Sample ID: 2000-06-0538-004
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 14:45	Extracted: 06/29/2000 07:13
Matrix: Water	QC-Batch: 2000/06/29-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	160	0.10	mg/L	1.00	06/29/2000 12:48	

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**

Test Method: 6010B

Attn.: Jeff Hess

Prep Method: 3010A

Metals

Sample ID: MW-13	Lab Sample ID: 2000-06-0538-005
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 15:30	Extracted: 06/29/2000 07:13
Matrix: Water	QC-Batch: 2000/06/29-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	15	0.10	mg/L	1.00	06/29/2000 12:51	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3010A**Batch QC Report**
Metals

Method Blank	Water	QC Batch # 2000/06/29-01.15
MB: 2000/06/29-01.15-029		Date Extracted: 06/29/2000 07:13

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Iron	ND	0.10	mg/L	06/29/2000 11:19	

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**

Test Method: 6010B

Attn: Jeff Hess

Prep Method: 3010A

Batch QC Report

Metals

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2000/06/29-01.15	
LCS:	2000/06/29-01.15-030	Extracted:	06/29/2000 07:13	Analyzed:	06/29/2000 11:23
LCSD:	2000/06/29-01.15-031	Extracted:	06/29/2000 07:13	Analyzed:	06/29/2000 11:27

Compound	Conc. [mg/L]		Exp. Conc. [mg/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Iron	4.93	4.83	5.00	5.00	98.6	96.6	2.0	80-120	20		

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

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 #:

Project 97-037

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-F5	Water	06/27/2000 12:48	1
MW-F2	Water	06/27/2000 13:30	2
MW-F6	Water	06/27/2000 14:10	3
MW-F4	Water	06/27/2000 14:45	4
MW-13	Water	06/27/2000 15:30	5

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Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID: MW-F5	Lab Sample ID: 2000-06-0538-001
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 12:48	Extracted: 07/03/2000 08:43
Matrix: Water	QC-Batch: 2000/07/03-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/03/2000 12:19	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID:	MW-F2	Lab Sample ID:	2000-06-0538-002
Project:	97-037	Received:	06/27/2000 17:05
Sampled:	06/27/2000 13:30	Extracted:	07/03/2000 08:43
Matrix:	Water	QC-Batch:	2000/07/03-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/03/2000 12:23	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID:	MW-F6	Lab Sample ID:	2000-06-0538-003
Project:	97-037	Received:	06/27/2000 17:05
Sampled:	06/27/2000 14:10	Extracted:	07/03/2000 08:43
Matrix:	Water	QC-Batch:	2000/07/03-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/03/2000 12:26	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3005A

Soluble Metals

Sample ID: MW-F4	Lab Sample ID: 2000-06-0538-004
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 14:45	Extracted: 07/03/2000 08:43
Matrix: Water	QC-Batch: 2000/07/03-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/03/2000 12:30	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

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

Test Method: 6010B
 Prep Method: 3005A

Soluble Metals

Sample ID: MW-13	Lab Sample ID: 2000-06-0538-005
Project: 97-037	Received: 06/27/2000 17:05
Sampled: 06/27/2000 15:30	Extracted: 07/03/2000 08:43
Matrix: Water	QC-Batch: 2000/07/03-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Iron	ND	0.10	mg/L	1.00	07/03/2000 12:34	

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CHROMALAB, INC.

Submission #: 2000-06-0538

Environmental Services (SDB)

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff HessTest Method: 6010B
Prep Method: 3005A**Batch QC Report**
Soluble Metals

Method Blank	Water	QC Batch # 2000/07/03-01.15
MB: 2000/07/03-01.15-032		Date Extracted: 07/03/2000 08:43

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Iron	ND	0.10	mg/L	07/03/2000 12:07	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0538

To: **Innovative Technical Solutions, Inc**

Test Method: 6010B

Attn: Jeff Hess

Prep Method: 3005A

Batch QC Report

Soluble Metals

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2000/07/03-01.15	
LCS:	2000/07/03-01.15-033	Extracted:	07/03/2000 08:43	Analyzed:	07/03/2000 12:11
LCSD:	2000/07/03-01.15-034	Extracted:	07/03/2000 08:43	Analyzed:	07/03/2000 12:15

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery [%]			RPD		Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	Recovery	RPD	LCS	LCSD		
Iron	4.81	4.86	5.00	5.00	96.2	97.2	1.0	80-120	20				

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GeoAnalytical Laboratories, Inc.

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

CERTIFICATE OF ANALYSIS

Date: 7/11/00

Report # L180-12

Chromalab
1220 Quarry Lane
Pleasanton

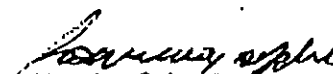
Project: 2000-06-0538

CA 94566-4756 POW

Date Rec'd: 6/28/00
Date Started: 6/28/00
Date Completed: 7/05/00

Date Sampled: 6/28/00
Time:
Sampler:

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
MW-F5	L35916	1.0	300.0	Nitrate (NO3)	20	mg/L ✓
		1.0	300.0	Sulfate	37	mg/L
MW-F2	L35917	1.0	300.0	Nitrate (NO3)	ND	mg/L ✓
		1.0	300.0	Sulfate	2	mg/L
MW-F6	L35918	1.0	300.0	Nitrate (NO3)	ND	mg/L ✓
		1.0	300.0	Sulfate	9	mg/L
MW-F4	L35919	1.0	300.0	Nitrate (NO3)	ND	mg/L ✓
		1.0	300.0	Sulfate	ND	mg/L
MW-13	L35920	1.0	300.0	Nitrate (NO3)	1	mg/L
		1.0	300.0	Sulfate	2	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# L180-12

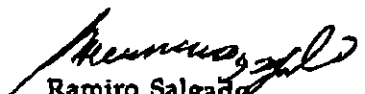
QC REPORT

Dates Analyzed 6/28/00-7/5/00

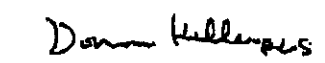
Chromalab
1220 Quarry Lane
Pleasanton

CA 94566-4756

Analyte	Batch #	Method	MS % Recovery	MSD % Recovery	RPD	Blank
Nitrate (NO3)	105373	300.0	94.0	94.0	0.0	ND
Sulfate	105374	300.0	90.0	90.0	0.0	ND


Ramiro Salgado
Chemist

Certification # 1157


Donna Keller
Laboratory Director

CHROMALAB, INC.

1220 Quarry Lane • Pleasanton, California 94566-4756

(925) 484-1919 • Fax (925) 484-1096

Chain of Custody

Environmental Services (SDB) (DOHS 1094)

DATE 6/27/00 PAGE 1 OF 3

PROJ. MGR Jeff Hess
 COMPANY ITSC
 ADDRESS 2855 Mitchell Drive
Site 111, Walnut Ch, CA 94598

SAMPLERS (SIGNATURE) J. Watch (PHONE NO.) 925-256-8898
 (FAX NO.)

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH (EPA 8015, 8020) <input checked="" type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	PURGEABLE AROMATICS BTEX (EPA 8020)	TPH-Diesel (EPA 8015M)	TEPH (EPA 8015M) <input type="checkbox"/> Diesel <input type="checkbox"/> M.O. <input type="checkbox"/> Other	PURGEABLE HALOCARBONS (HYOCs) (EPA 8010)	VOLATILE ORGANICS (VOCs) (EPA 8260)	SEMI-VOLATILES (EPA 8270)	Oil & Grease <input type="checkbox"/> Petrol <input type="checkbox"/> Total <input type="checkbox"/> 1664	<u>minutes</u> 353.2	<input type="checkbox"/> PESTICIDES (EPA 8080) <input type="checkbox"/> PCB'S (EPA 8080)	PNA's by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	<input type="checkbox"/> Spec. Cond. <input type="checkbox"/> TSS <input type="checkbox"/> TDS	LUFT METALS: Cd, Cr, Pb, Ni, Zn	CAM 17 METALS (EPA 6010/7470/7471)	TOTAL LEAD	<input type="checkbox"/> W.A.T. (STLC) <input type="checkbox"/> TCLP	<input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24 hr. hold time for H2O)	Total Fe	Soluble Fe	Sulfate	NUMBER OF CONTAINERS		
MW-F5	6/27/00	1248	water	HCL	X3																						3
J	J	J	J	H2SO4								X															1
J	J	J	J	HNO3																		X				1	
MW-F5	6/27/00	1248	water	-																			X			1	
MW-F2	6/27/00	1330	water	HCL	X																					3	
J	J	J	J	H2SO4								X														1	
J	J	J	J	HNO3																		X				1	
MW-F2	6/27/00	1330	water	-																			X			1	

PROJECT INFORMATION					SAMPLE RECEIPT					RELINQUISHED BY 1			RELINQUISHED BY 2			RELINQUISHED BY 3		
PROJECT NAME <u>97-037</u>		TOTAL NO. OF CONTAINERS			RELINQUISHED BY (SIGNATURE) <u>J. Watch</u> 17:05					RELINQUISHED BY (SIGNATURE)			RELINQUISHED BY (SIGNATURE)					
PROJECT NUMBER		HEAD SPACE			RELINQUISHED BY (PRINTED NAME) <u>Tim Cuthbert</u> 06/27/00					RELINQUISHED BY (PRINTED NAME)			RELINQUISHED BY (PRINTED NAME)					
P.O. #		TEMPERATURE			RELINQUISHED BY (COMPANY) <u>ITSC</u>					RELINQUISHED BY (COMPANY)			RELINQUISHED BY (COMPANY)					
TAT <u>STANDARD 5-DAY</u>		CONFORMS TO RECORD			RECEIVED BY (SIGNATURE)					RECEIVED BY (SIGNATURE)			RECEIVED BY (SIGNATURE)					
24		48			RECEIVED BY (PRINTED NAME)					RECEIVED BY (PRINTED NAME)			RECEIVED BY (PRINTED NAME)					
72		OTHER			RECEIVED BY (DATE)					RECEIVED BY (DATE)			RECEIVED BY (DATE)					
SPECIAL INSTRUCTIONS/COMMENTS: Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Electronic Report								RECEIVED BY (LABORATORY)			RECEIVED BY (LABORATORY)			RECEIVED BY (LABORATORY)				
								RECEIVED BY (LABORATORY) SIGNATURE <u>M. Karas</u> 17:05			RECEIVED BY (LABORATORY) SIGNATURE <u>CRISTINA</u> 06/27/00			RECEIVED BY (LABORATORY) SIGNATURE				
								RECEIVED BY (LABORATORY) (DATE)			RECEIVED BY (LABORATORY) (DATE)			RECEIVED BY (LABORATORY) (DATE)				

CHROMALAB, INC.

1220 Quarry Lane • Pleasanton, California 94566-4756

(925) 484-1919 • Fax (925) 484-1096

Reference #: V 3029

Chain of Custody

Environmental Services (SDB) (DOHS 1094)

DATE 6/27/00 PAGE 2 OF 3

PROJ. MGR <u>Jeff Huss</u> COMPANY <u>ITSE</u> ADDRESS <u>2955 Mitchell Drive, Suite 111</u> <u>Walnut Creek, CA 94595</u>					ANALYSIS REPORT															
					TPH (EPA 8015, 8020) <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX DMTPBE	PURGEABLE AROMATICS BTEX (EPA 8020)	TPH-Diesel (EPA 8015M)	TEPH (EPA 8015M) <input type="checkbox"/> Diesel <input type="checkbox"/> M.O. <input type="checkbox"/> Other	PURGEABLE HALOCARBONS (HVOCs) (EPA 8010)	VOLATILE ORGANICS (VOCs) (EPA 8260)	SEMIVOLATILES (EPA 8270)	Oil & Grease <input type="checkbox"/> Petrol <input type="checkbox"/> Total <input type="checkbox"/> 1664	<u>Antifreeze</u> 353.2	<input type="checkbox"/> PESTICIDES (EPA 8080) <input type="checkbox"/> PCB'S (EPA 8090)	PNA's by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	Spec. Cond. <input type="checkbox"/> TSS <input type="checkbox"/> TDS	LUFT METALS: Cd, Cr, Pb, Ni, Zn	CAM 17 METALS (EPA 8210/7470/7471)	TOTAL LEAD	<input type="checkbox"/> W.E.T. (STLC) <input type="checkbox"/> TCLP
SAMPLERS (SIGNATURE) <u>J. Cutch</u> (PHONE NO.) <u>925-256-8992</u> (FAX NO.)																				
SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.																
<u>mw-F2</u>	<u>6/27/00</u>	<u>1330</u>	<u>water</u>	<u>-</u>																
<u>mw-F3</u>	<u>6/27/00</u>	<u>1410</u>	<u>water</u>	<u>HCL</u>	<u>X</u>															
<u>mw-F3</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>H2SO4</u>				<u>X</u>												
<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>HNO3</u>													<u>X</u>	<u>X</u>		
<u>mw-F6</u>	<u>6/27/00</u>	<u>1410</u>	<u>water</u>	<u>-</u>															<u>X</u>	<u>X</u>
<u>mw-F4</u>	<u>6/27/00</u>	<u>1445</u>	<u>water</u>	<u>HCL</u>	<u>X</u>															
<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>H2SO4</u>				<u>X</u>												
<u>mw-F4</u>	<u>6/27/00</u>	<u>1445</u>	<u>water</u>	<u>HNO3</u>													<u>X</u>			

PROJECT INFORMATION				SAMPLE RECEIPT				RELINQUISHED BY 1.			RELINQUISHED BY 2.			RELINQUISHED BY 3.		
PROJECT NAME: <u>97-037</u>				TOTAL NO. OF CONTAINERS				<u>J. Cutch</u> 17:05								
PROJECT NUMBER				HEAD SPACE				(SIGNATURE) <u>T. Cutch</u>			(SIGNATURE)			(SIGNATURE)		
P.O. #				TEMPERATURE				(PRINTED NAME) <u>ITSE</u>			(PRINTED NAME)			(PRINTED NAME)		
				CONFORMS TO RECORD				G/27/00								
TAT	STANDARD 5-DAY			24	48	72	OTHER	RECEIVED BY 1.			RECEIVED BY 2.			RECEIVED BY (LABORATORY) 3.		
SPECIAL INSTRUCTIONS/COMMENTS: Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Electronic Report								(SIGNATURE)			(SIGNATURE) <u>Deafaraz</u> 17:05			(SIGNATURE) <u>CRUSE WA</u> 6/27/00		
								(PRINTED NAME)			(PRINTED NAME)			(PRINTED NAME)		
								(COMPANY)			(COMPANY)			(LAB) <u>ca</u>		

CHROMALAB, INC.

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Chain of Custody

Environmental Services (SDB) (DOHS 1094)

DATE 6/27/00 PAGE 3 OF 3

PROJ. MGR <u>Jeff Hess</u> COMPANY <u>ITSI</u> ADDRESS <u>2855 Mitchell Drive, Suite 111</u> <u>Walnut Cr., CA 94598</u>	ANALYSIS REPORT																				
SAMPLERS (SIGNATURE) <u>J. White</u> (PHONE NO.) <u>925-256-8912</u> (FAX NO.)	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;"><input type="checkbox"/> TPH (EPA 8015, 8020) <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE</td> <td style="width:10%;"><input type="checkbox"/> PURGEABLE AROMATICS BTEX (EPA 8020)</td> <td style="width:10%;"><input type="checkbox"/> TPH-Diesel (EPA 8015M)</td> <td style="width:10%;"><input type="checkbox"/> TPEH (EPA 8015M) <input type="checkbox"/> Diesel <input type="checkbox"/> M.O. <input type="checkbox"/> Other</td> <td style="width:10%;"><input type="checkbox"/> PURGEABLE HALOCARBONS (EPOCs) (EPA 8010)</td> <td style="width:10%;"><input type="checkbox"/> VOLATILE ORGANICS (VOCs) (EPA 8260)</td> <td style="width:10%;"><input type="checkbox"/> SEMIVOLATILES (EPA 8270)</td> <td style="width:10%;"><input type="checkbox"/> Oil & Grease Petrol <input type="checkbox"/> Total <input type="checkbox"/> 1664</td> <td style="width:10%;"><input type="checkbox"/> PESTICIDES (EPA 8080) <input type="checkbox"/> PCB'S (EPA 8080)</td> <td style="width:10%;"><input type="checkbox"/> PNA's by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310</td> <td style="width:10%;"><input type="checkbox"/> Spec. Cond. <input type="checkbox"/> TSS <input type="checkbox"/> TDS</td> <td style="width:10%;"><input type="checkbox"/> LUFT METALS: Cd, Cr, Pb, Ni, Zn</td> <td style="width:10%;"><input type="checkbox"/> CAM 17 METALS (EPA 6010/7470/7471)</td> <td style="width:10%;"><input type="checkbox"/> TOTAL LEAD</td> <td style="width:10%;"><input type="checkbox"/> W.E.T. (STLC) <input type="checkbox"/> TCLP</td> <td style="width:10%;"><input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24 hr. hold time for H2O)</td> <td style="width:10%;"><input type="checkbox"/> Total Fe</td> <td style="width:10%;"><input type="checkbox"/> Soluble Fe</td> <td style="width:10%;"><input type="checkbox"/> Sulfates</td> <td style="width:10%;"><input type="checkbox"/> NUMBER OF CONTAINERS</td> </tr> </table>	<input type="checkbox"/> TPH (EPA 8015, 8020) <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	<input type="checkbox"/> PURGEABLE AROMATICS BTEX (EPA 8020)	<input type="checkbox"/> TPH-Diesel (EPA 8015M)	<input type="checkbox"/> TPEH (EPA 8015M) <input type="checkbox"/> Diesel <input type="checkbox"/> M.O. <input type="checkbox"/> Other	<input type="checkbox"/> PURGEABLE HALOCARBONS (EPOCs) (EPA 8010)	<input type="checkbox"/> VOLATILE ORGANICS (VOCs) (EPA 8260)	<input type="checkbox"/> SEMIVOLATILES (EPA 8270)	<input type="checkbox"/> Oil & Grease Petrol <input type="checkbox"/> Total <input type="checkbox"/> 1664	<input type="checkbox"/> PESTICIDES (EPA 8080) <input type="checkbox"/> PCB'S (EPA 8080)	<input type="checkbox"/> PNA's by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	<input type="checkbox"/> Spec. Cond. <input type="checkbox"/> TSS <input type="checkbox"/> TDS	<input type="checkbox"/> LUFT METALS: Cd, Cr, Pb, Ni, Zn	<input type="checkbox"/> CAM 17 METALS (EPA 6010/7470/7471)	<input type="checkbox"/> TOTAL LEAD	<input type="checkbox"/> W.E.T. (STLC) <input type="checkbox"/> TCLP	<input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24 hr. hold time for H2O)	<input type="checkbox"/> Total Fe	<input type="checkbox"/> Soluble Fe	<input type="checkbox"/> Sulfates	<input type="checkbox"/> NUMBER OF CONTAINERS
<input type="checkbox"/> TPH (EPA 8015, 8020) <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	<input type="checkbox"/> PURGEABLE AROMATICS BTEX (EPA 8020)	<input type="checkbox"/> TPH-Diesel (EPA 8015M)	<input type="checkbox"/> TPEH (EPA 8015M) <input type="checkbox"/> Diesel <input type="checkbox"/> M.O. <input type="checkbox"/> Other	<input type="checkbox"/> PURGEABLE HALOCARBONS (EPOCs) (EPA 8010)	<input type="checkbox"/> VOLATILE ORGANICS (VOCs) (EPA 8260)	<input type="checkbox"/> SEMIVOLATILES (EPA 8270)	<input type="checkbox"/> Oil & Grease Petrol <input type="checkbox"/> Total <input type="checkbox"/> 1664	<input type="checkbox"/> PESTICIDES (EPA 8080) <input type="checkbox"/> PCB'S (EPA 8080)	<input type="checkbox"/> PNA's by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	<input type="checkbox"/> Spec. Cond. <input type="checkbox"/> TSS <input type="checkbox"/> TDS	<input type="checkbox"/> LUFT METALS: Cd, Cr, Pb, Ni, Zn	<input type="checkbox"/> CAM 17 METALS (EPA 6010/7470/7471)	<input type="checkbox"/> TOTAL LEAD	<input type="checkbox"/> W.E.T. (STLC) <input type="checkbox"/> TCLP	<input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24 hr. hold time for H2O)	<input type="checkbox"/> Total Fe	<input type="checkbox"/> Soluble Fe	<input type="checkbox"/> Sulfates	<input type="checkbox"/> NUMBER OF CONTAINERS		

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.																	
mw - F4	6/27/00	1445	water	-															X	1	
mw - F4	6/27/00	1445	water	-																X	1
mw - 13	6/27/00	1530	water	HCl	X																3
J	J	J	J	H ₂ SO ₄					X											X	1
J	J	J	J	HNO ₃																	1
mw - 13	6/27/00	1530	water	-																X	1
Duplicate	6/27/00	-	water	-	X																

PROJECT INFORMATION	SAMPLE RECEIPT	RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
PROJECT NAME: <u>97-037</u>	TOTAL NO. OF CONTAINERS	<u>J. White</u>		
PROJECT NUMBER	HEAD SPACE	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
P.O. #	TEMPERATURE	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
TAT	CONFORMS TO RECORD	<u>ITSI</u> <u>6/27/00</u>		
STANDARD 5-DAY	24 48 72 OTHER	(COMPANY)	(COMPANY)	(COMPANY)
SPECIAL INSTRUCTIONS/COMMENTS: Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Electronic Report		RECEIVED BY 1.	RECEIVED BY 2.	RECEIVED BY (LABORATORY) 3.
		(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
		(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) (DATE)
		(COMPANY)	(COMPANY)	(LAB)