

**CONNER • BAK LLP**

Tommy A. Conner  
J. Timothy Bak \*

\* Also admitted to practice in Nevada

ENVIRONMENTAL  
PROTECTION  
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444 De Haro Street, Suite 121  
San Francisco, CA 94107  
tel 415•621•3939  
fax: 415•621•3999

email: conbak@sirius.com

October 26, 1998

State Water Resources Control Board  
P. O. Box 944212  
Sacramento, California 94244-2120

**Re: *Third Quarter 1998 Groundwater Monitoring Report  
New Genico Facility  
3927 East 14th Street  
Oakland, California***

Dear Sir or Madam:

Enclosed is the *Third Quarter 1998 Groundwater Monitoring Report* prepared for Ruben Hausauer's 3927 East 14th Street, Oakland, California site. This report documents the results of the groundwater monitoring performed at the site. Groundwater monitoring was performed on September 24, 1998 by Kleinfelder, Inc. personnel. This report was prepared by Kleinfelder at the request of Ruben Hausauer.

If you have any questions or comments, please call either Kleinfelder, Inc. at (408) 436-1155, or me at (415) 621-3939. Than you for your time and attention.

Very truly yours,



Tommy A. Conner

TAC:syr/Enclosure

cc: Regional Water Quality Control Board (w/encl)

**ATTN: Fuel Leaks**

2101 Webster Street, Suite 500  
Oakland, CA 94612

Barney Chan (w/encl)  
Alameda County Health  
Care Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 95402

Gary Rogers, Ph.D (w/encl)  
Aquatic & Environmental  
Applications  
38053 Davy Court  
Fremont, CA 94536

**THIRD QUARTER 1998  
GROUNDWATER MONITORING  
NEW GENICO FACILITY  
3927 EAST 14<sup>TH</sup> STREET  
OAKLAND, CALIFORNIA**

For: Conner-Bak, LLP  
444 De Haro Street, Suite 121  
San Francisco, California 94107

Attention: Mr. Tommy A. Conner

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October 22, 1998



October 22, 1998  
File No. 12-3047-60

Mr. Tommy A. Conner  
Conner-Bak, LLP  
444 De Haro Street, Suite 121  
San Francisco, California 94107

**SUBJECT: Third Quarter 1998 Groundwater Monitoring Report, New Genico Facility,  
3927 East 14th Street, Oakland, California**

Dear Mr. Conner:

Kleinfelder, Inc., (Kleinfelder) is pleased to provide you with the Third Quarter 1998 Groundwater Monitoring Report for the New Genico facility (New Genico) located at 3927 East 14th Street, Oakland, California (site; Plate 1). Note that 14<sup>th</sup> Street has been renamed "International Boulevard." However, for consistency with previous reports, we will continue to refer to the site as 14<sup>th</sup> Street. This report discusses field procedures, observations, and results of the third quarter 1998 groundwater monitoring event. Work was conducted in accordance with Kleinfelder's proposal dated June 18, 1998.

Kleinfelder performed groundwater monitoring and sampling on <sup>Sept. 24</sup> ~~June 30~~, 1998, collecting groundwater samples from four groundwater monitoring wells at the site (HMW-1 through HMW-4). Monitoring well locations are shown on Plate 2.

#### **BRIEF BACKGROUND**

A release from an underground storage tank (UST) previously located on-site resulted in impacts to soil and groundwater. The UST was removed previously, along with some of the impacted soils. In accordance with Alameda County Health Care Services Agency (ACHCS) and California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), requirements, monitoring activities have been performed since August 1996 and are continuing at the site. A release from USTs formerly located across the street at the Motor Partners facility has also impacted soil and groundwater, and it appears that there is some commingling of plumes.

All of the wells are completed in the first continuous water-bearing zone encountered beneath the site. Wells HMW-1 through HMW-3 are constructed with 2-inch diameter polyvinyl chloride

(PVC) casing. HMW-4 was a "pre-constructed" well using 0.6-inch inner diameter PVC casing that was installed using direct push technology on November 18, 1997.

## FIELD WORK

Kleinfelder performed the monitoring concurrently with Motor Partners' monitoring event on September 24, 1998. Kleinfelder measured depths to water (Table 1) and collected groundwater samples on September 24, 1998, from the four monitoring wells in accordance with the protocol presented in Appendix A, with the exception that measurements of "redox" potential (reduction/oxidation potential) and dissolved oxygen were made immediately prior to sampling.

Prior to purging the wells, Kleinfelder remeasured water levels using an electronic measuring device, and in three of the four wells, a translucent bailer was used to monitor for the presence of floating product or a sheen. Kleinfelder noted a sheen on the groundwater in HMW-1 and HMW-2; but no measurable thickness of floating product was noted. Neither a sheen nor floating product were observed in monitoring well HMW-3. Due to the small diameter of HMW-4, it was not possible to insert a bailer and monitor for a sheen or floating product in this manner. Due to its small diameter, well HMW-4 had to be purged with a peristaltic pump. The other wells were purged with a bailer.

Purging was performed until a minimum of three casing volumes of water were removed from each well. Purge logs and field observation sheets are included in Appendix B.

## LABORATORY ANALYSES

Groundwater samples collected during the third quarter 1998 were analyzed for total petroleum hydrocarbons (TPH) quantified as diesel (TPHd), TPH as motor oil (TPHmo), and TPH as gasoline (TPHg) by modified United States Environmental Protection Agency (EPA) Method 8015; and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MtBE) by EPA Method 8020. A trip blank was analyzed for TPHg, BTEX, and MtBE. The four samples were also analyzed by the laboratory for the bioremediation indicator parameters that were specifically requested by ACHCS. These analyses include:

- ferrous iron;
- nitrate; and
- sulfate.

Samples were collected in laboratory supplied containers. The groundwater samples were submitted to Entech Analytical Labs, Inc of Sunnyvale, California, for chemical analysis. Entech is a laboratory certified by the State of California to perform the above-mentioned analyses.

## RESULTS

### Groundwater Gradient

Table 1 presents the water level data for September 1998 for the New Genico facility. Depth-to-water data, as measured and provided by Rogers Environmental Services on September 24, 1998, is presented on Table 2. Plate 2 presents the groundwater piezometric contours for September 24, 1998, using the data collected by Kleinfelder.

As illustrated in Plate 2, the groundwater flow direction beneath the site was southerly on September 24, 1998. The magnitude of the hydraulic gradient was approximately 0.012 foot per foot. This flow direction and hydraulic gradient are generally consistent with previous findings. Groundwater levels declined an average of 1.9 feet since last quarter in the site's four groundwater monitoring wells.

### Floating product

A slight sheen was observed in HMW-1 and HMW-2 this quarter, but there was no measurable quantity of floating product. Neither a sheen nor floating product were observed in any of the other site wells. Historic data with respect to the presence/absence of floating product or a sheen was not available at the time of preparation of this report.

### Groundwater Analyses

This quarter's groundwater chemistry data for the site are presented in Table 3. Historic data, also presented on Table 3, were obtained from Groundworks Environmental, Inc.'s *First Quarter 1998 Groundwater Monitoring Report* (April 10, 1998), ATC Associates, Inc.'s *Fourth Quarter 1997 Groundwater Monitoring Report*, 3927 East 14th Street, Oakland, California (January 8, 1998), and Artesian Environmental's *Groundwater Sampling Point Installation and Sampling Report* (January 30, 1998).

Laboratory reports from Entech are included in Appendix C. The values of the groundwater parameters measured prior to sampling (pH, temperature and specific conductivity) are presented on Table 4.

The following summarizes the September 1998 analytical results for the 3927 E. 14<sup>th</sup> Street facility.

- TPHd was not reported in any of the wells this quarter.
- TPHmo was reported in well HMW-1, its concentration increasing slightly from last quarter
- TPHg concentrations decreased in wells HMW-1, HMW-2 and HMW-4. TPHg was reported in low concentrations in HMW-3 after two consecutive quarters of reported non-detects.

- Benzene concentrations decreased in wells HMW-1, HMW-2 and HMW-4. Benzene remained non-detect (ND) in HMW-3 for the third consecutive quarter. Benzene concentrations are in excess of its Maximum Contaminant Level (MCL) of 1 microgram per liter ( $\mu\text{g/L}$ ) in HMW-1, HMW-2 and HMW-4.
- Toluene, ethylbenzene and total xylenes concentrations decreased in wells HMW-1, HMW-2 and HMW-4. Toluene and ethylbenzene remained ND in HMW-3 for the third consecutive quarter. Total Xylenes were reported at low levels in HMW-3 for the first time since August 1996. All three constituents that were reported were below their respective MCLs.
- Reported MtBE concentrations using EPA Method 8020 in HMW-4 were consistent with previous findings. MtBE was reported as ND in HMW-2 and HMW-3. MtBE was reported (using EPA Method 8020) in HMW-1 at 430  $\mu\text{g/L}$ . "Confirmation" analysis by GCMS (EPA method 8260) was performed for HMW-1 and was reported ND, indicating the EPA 8020 result was likely a "false positive."

Historically, when site samples reported to contain MtBE were re-analyzed using GCMS, the result was ND. Reports of detected MtBE using USEPA Method 8020 analyses are therefore suspected to have been "false positives."

### **Bioremediation Indicator Parameters**

Selected bioremediation indicator parameters were either measured in the field (dissolved oxygen and redox potential) or analyzed by the analytical laboratory (nitrate, sulfate, and ferrous iron). Results for upgradient wells and wells located proximate to the former UST location were compared to wells located downgradient of the former UST location to see if any general trends were discernible.

Dissolved oxygen concentrations were anomalously high this quarter, likely due to the fact that the readings were not made in the well. No discernible pattern with respect to the dissolved oxygen contents of groundwater from the various site wells was noted. Historically, the environment within the plume has not exhibited elevated oxygen concentrations. It appears, however, that bioremediation is occurring proximate to, and downgradient of, the former UST location. When bioremediation occurs in relatively anaerobic environments, such as this, the following trends may be observed across the dissolved contaminant plume:

- A decrease in nitrate concentrations;
- A decrease in sulfate concentrations;
- An increase in ferrous iron; and
- Redox potentials become increasingly negative.

The following presents our findings with respect to the selected bioremediation indicator parameters during this quarter

- Nitrate concentrations were highest in upgradient well HMW-3, low in HMW-1 which is located just downgradient of the former UST area, and ND in HMW-2 and HMW-4, located further downgradient of the former UST location, suggesting the occurrence of anaerobic bioremediation;
- Sulfate concentrations were highest in upgradient well HMW-3, low in HMW-4 which is furthest downgradient of the former UST area, and ND in HMW-1 and HMW-2, located just downgradient of the former UST location, suggestive of the occurrence of anaerobic bioremediation.
- Ferrous iron was reported ND for all four wells; and
- The redox potential in well HMW-2 was positive. Redox potentials in the remaining wells were negative, suggestive of the occurrence of anaerobic bioremediation;

### **Quality Control Results**

A trip blank was stored with the samples collected and submitted to the laboratory for analysis. The trip blank was analyzed for TPHg, BTEX and MtBE. None of these constituents were detected in the trip blank.

Laboratory quality control (QC) data were evaluated to assess the acceptability of the analytical results. QC results are included with the Certified Analytical Reports (CARs) in Appendix C. Laboratory QC consisted of checking adherence to holding times and evaluating method blanks and blank spikes (BS). All analyses were performed within the required holding times. No compounds were detected in any of the method blanks. BS recoveries were within the laboratory acceptance limits.

The laboratory QC results indicate the data are of acceptable quality.

### **LIMITATIONS**

Kleinfelder prepared this report in accordance with generally accepted standards of care which exist in Northern California at this time. Conclusions are based on field observations made by Kleinfelder personnel and quantitative chemical analysis of four groundwater samples and a trip blank provided by Entech laboratory.

It should be recognized that definition and evaluation of geologic and environmental conditions is a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the present subsurface conditions. More extensive studies, including additional subsurface investigations, may be performed to reduce uncertainties. If the Client wishes to reduce the uncertainties of this investigation, Kleinfelder should be notified for additional consultation. No warranty, express or implied, is made.

If you have any questions about the enclosed report or any other aspect of the work, please contact Bill Theyskens at (408) 436-1155.

Sincerely,

**KLEINFELDER, INC.**

*Joanne Winterberg for*

Neal Siler, R.E.A.  
Environmental Group Manager

*William G. Theyskens*

William G. Theyskens, C.E.G., C.HG.  
Project Manager

Attachments

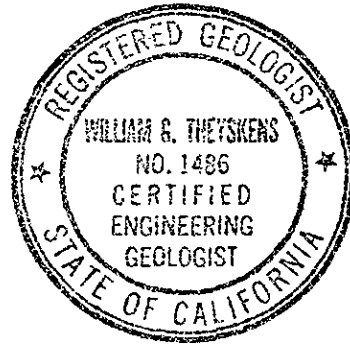




Table 1  
Groundwater Elevations (1)  
New Genico Facility  
1397 East 14th Street Oakland, California

Well	Date	Casing	Depth to	Groundwater	Floating	Corrected
		Elevation (feet, MSL)	Groundwater (feet)	Elevation (feet, MSL)	Product (2) (feet)	Elevation (3) (feet, MSL)
HMW-1	8/22/96	31.25	8.01	23.24	----	23.24
	2/25/97		5.95	25.30	----	25.30
	5/28/97		7.65	23.60	----	23.60
	9/2/97		8.56	22.69	----	22.69
	11/26/97		7.50	23.75	----	23.75
	2/9/98		3.35	27.90	----	27.90
	3/17/98		5.29	25.96	0.01	25.97
	6/30/98		6.63	24.62	0.00	24.62
9/24/98	8.22	23.03	0.00	23.03		
HMW-2	8/22/96	29.43	8.71	20.72	----	20.72
	2/25/97		6.00	23.43	----	23.43
	5/28/97		7.65	21.78	----	21.78
	9/2/97		8.59	20.84	----	20.84
	11/26/97		6.82	22.61	----	22.61
	2/9/98		3.24	26.19	----	26.19
	3/17/98		4.44	24.99	0.00	24.99
	6/30/98		6.30	23.13	0.00	23.13
9/24/98	8.20	21.23	0.00	21.23		
HMW-3	8/22/96	31.48	8.10	23.38	----	23.38
	2/25/97		6.00	25.48	----	25.48
	5/28/97		7.74	23.74	----	23.74
	9/2/97		8.60	22.88	----	22.88
	11/26/97		7.50	23.98	----	23.98
	2/9/98		2.34	29.14	----	29.14
	3/17/98		5.23	26.25	0.00	26.25
	6/30/98		6.60	24.88	0.00	24.88
9/24/98	8.32	23.16	0.00	23.16		
HMW-4	11/26/97	28.80	7.42	21.38	----	21.38
	2/9/98		2.96	25.84	----	25.84
	3/17/98		5.72	23.08	0.00	23.08
	6/30/98		7.40	21.40	0.00	21.40
	9/24/98		9.80	19.00	0.00	19.00

feet, MSL = feet, relative to Mean Sea Level

"----" = not measured, or data not readily available

- (1) Data prior to 3/17/98 was obtained from reports prepared by ATC Associates Inc. (1/8/98) and Artesian Environmental (1/30/98), and a Field Report/Data Sheet (ATC, 2/9/98)
- (2) Data regarding the presence/absence of floating product prior to March 1998 was not available at the time of preparation of this report
- (3) Corrected elevation is equal to groundwater elevation plus the estimated specific gravity of the floating product (0.83) multiplied by the floating product thickness  

$$\text{Corrected Elevation} = \text{Groundwater Elevation} + (0.83 \times \text{Floating Product Thickness})$$

Table 2  
Groundwater Elevations (1)  
Motor Partners Facility  
1234 40th Avenue  
Oakland, California

Well	Date	Casing Elevation (feet, MSL)	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	Floating Product (2) (feet)	Corrected Elevation (3) (feet, MSL)
MW-1	11/26/97	31.44	7.98	23.46	----	23.46
	3/17/98		5.84	25.60	----	25.60
	6/30/98		----	----	----	----
	9/24/98		8.74	22.70	----	22.70
MW-2	11/26/97	31.06	7.24	23.82	----	23.82
	3/17/98		5.05	26.01	----	26.01
	6/30/98		6.35	24.71	----	24.71
	9/24/98		7.94	23.12	----	23.12
MW-3	11/26/97	30.43	7.06	23.37	----	23.37
	3/17/98		5.11	25.32	----	25.32
	6/30/98		6.62	23.81	----	23.81
	9/24/98		8.13	22.30	----	22.30
MW-4	11/26/97	30.37	6.64	23.73	----	23.73
	3/17/98		4.52	25.85	----	25.85
	6/30/98		5.86	24.51	----	24.51
	9/24/98		7.23	23.14	----	23.14
MW-5	11/26/97	30.37	----	----	----	----
	3/17/98		5.80	24.57	----	24.57
	6/30/98		----	----	----	----
	9/24/98		8.76	22.39	----	22.39

feet, MSL = feet, relative to Mean Sea Level

"----" = Not measured, or data not readily available

- (1) Data prior to 3/17/98 was obtained from a report prepared by ATC Associates Inc. (1/8/98); 3/17/98 data was obtained from Gary Rogers of Aquatic & Environmental Applications.
- (2) Data regarding the presence/absence of floating product prior to March 1998 was not available at the time of preparation of this report
- (3) Corrected elevation is equal to groundwater elevation plus the estimated specific gravity of the floating product (0.83) multiplied by the floating product thickness  
Corrected Elevation = Groundwater Elevation + (0.83 x Floating Product Thickness)

Table 3  
 Groundwater Analytical Results <sup>1</sup>  
 New Gemco Facility  
 3927 E. 14th Street Oakland, California

Well ID No	Sample Date	TPH as Diesel (µg/L)	TPH as motor oil (µg/L)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Methyl tert Butyl Ether (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
HMW-1	8/22/96	ND	ND	7,400	1,200	170	530	490	----	----	----	----	----	----
	2/25/97	2,000	ND	5,400	760	110	260	260	ND	----	----	----	----	----
	5/28/97	2,000	600	6,600	1,100	100	290	340	130	----	----	----	----	----
	9/2/97	8,700	3,700	4,000	460	40	200	100	ND <sup>2</sup>	2	12	4.20	0.24	-14.4
	11/26/97	4,700	3,000	7,500	1,000	120	270	320	ND <sup>2</sup>	0.6	ND	<0.01	2.0	+105
	3/17/98	ND	16,000	11,000	2,100	290	600	760	1,200	ND	0.8	0.16	0.8 <sup>3</sup>	-60.4
	6/30/98	ND	5,900	10,000	1,300	160	390	390	160	0.4	2.0	0.96	0.77	-46.70
	9/24/98	ND	6,600	7,100	890	89	230	180	430/ND <sup>2</sup>	1	ND	ND	4.6	-17
HMW-2	8/22/96	7,400 <sup>4</sup>	2,100	6,300	170	57	370	120	----	2100	2100	----	----	----
	2/25/97	90	ND	8,400	150	35	280	70	ND <sup>2</sup>	ND	ND	----	----	----
	5/28/97	130	200	6,000	170	35	170	67	150	200	200	----	----	----
	9/2/97	4,502	ND <sup>5</sup>	8,000	210	30	160	90	ND <sup>2</sup>	ND	0.5	1.37	0.38	+25.2
	11/26/97	180	ND	1,600	41	7.5	40	10	31	ND	ND	0.03	2.5	+52
	3/17/98	ND	ND	8,600	200	96	410	120	330	ND	0.8	0.01	0.48 <sup>3</sup>	-50.28
	6/30/98	ND	ND	7,300	180	52	240	88	170	ND	ND	0.01	0.43	-45.50
	9/24/98	ND	ND	2,900	32	1.5	38	16	ND	ND	ND	ND	7.1	+67
HMW-3	8/22/96	ND	ND	1,300	3	6	8	12	----	ND	ND	----	----	----
	2/25/97	70	ND	150	ND	ND	ND	ND	ND	ND	ND	----	----	----
	5/28/97	ND	ND	80	ND	ND	0.60	ND	ND	ND	ND	----	----	----
	9/2/97	ND <sup>5</sup>	ND <sup>5</sup>	140	ND	ND	2.1	ND	ND	2	53	0.03	0.88	+98.6
	11/26/97	50	ND	70	0.6	0.8	0.8	ND	ND	3.5	50	0.01	1.4	+102
	3/17/98	ND	200	ND	ND	ND	ND	ND	ND	1.1	43	ND	0.63 <sup>3</sup>	91.90
	6/30/98	ND	ND	ND	ND	ND	ND	ND	ND	4.0	51	ND	0.25	95.70
	9/24/98	ND	ND	58	ND	ND	ND	0.76	ND	4.9	95	ND	3.7	-16
HMW-4	11/26/97	400	ND	1,600	4.2	3.1	1.7	5.9	ND	----	----	----	----	----
	3/17/98	ND	ND	1,300	20	1.4	6.8	3.0	19	ND	8.6	0.12	2.4 <sup>3</sup>	-26.67
	6/30/98	ND	ND	940	17	1.5	18	2	10	ND	18.0	ND	3.7	-21.7
	9/24/98	ND	ND	370	7.2	ND	0.75	1.3	11	ND	11	ND	6.6	-17



Table 3  
Groundwater Analytical Results <sup>1</sup>  
New Genico Facility  
3927 E. 14th Street Oakland, California

Well ID No	Sample Date	TPH as Diesel (µg/L)	TPH as motor oil (µg/L)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Methyl tert Butyl Ether (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Dissolved Oxygen <sup>2</sup> (mg/L)	Redox Potential <sup>3</sup> (mV)
TRIP BLANK	3/17/98	----	----	ND	ND	ND	ND	ND	ND	----	----	----	----	----
	6/30/98	----	----	ND	ND	ND	ND	ND	ND	----	----	----	----	----
	9/24/98	----	----	ND	ND	ND	ND	ND	ND	----	----	----	----	----
MCL <sup>6</sup>				1.0	150	700	1,750	35 <sup>7</sup>						

NOTES

- Well ID No: HMW-1, HMW-2 and HMW-3 are New Genico wells MW-1, MW-2, and MW-3, respectively
- TPH: Total petroleum hydrocarbons
- ND: Not detected above reporting limit
- : Not analyzed
- \*: Measured in the field
- 1: Data prior to 3/17/98 was obtained from a report prepared by ATC Associates Inc. (1/8/98)
- 2: Positive result by initial USEPA Method 8020 analysis/confirmation performed by USEPA Method 8260 reports ND
- 3: Dissolved oxygen measured prior to purging
- 4: Laboratory reported concentration for diesel is estimated due to overlapping fuel patterns
- 5: Samples collected on 10/3/97
- 6: Maximum Contaminant Level
- 7: California Drinking Water Advisory Level



Table 3  
Groundwater Analytical Results <sup>1</sup>  
New Genico Facility  
3927 E. 14th Street Oakland, California

Well ID No	Sample Date	TPH as Diesel (µg/L)	TPH as motor oil (µg/L)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Methyl tert Butyl Ether (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
HMW 1	8/22/96	ND	ND	7,400	1,200	170	530	490	----	----	----	----	----	----
	2/25/97	2,000	ND	5,400	760	110	260	260	ND	----	----	----	----	----
	5/28/97	2,000	600	6,600	1,100	100	290	340	130	----	----	----	----	----
	9/2/97	8,700	3,700	4,000	460	40	200	100	ND <sup>2</sup>	2	12	4.20	0.24	-14.4
	11/26/97	4,700	3,000	7,500	1,000	120	270	320	ND <sup>2</sup>	0.6	ND	<0.01	2.0	+105
	3/17/98	ND	16,000	11,000	2,100	290	600	760	1,200	ND	0.8	0.16	0.8 <sup>3</sup>	-60.4
	6/30/98	ND	5,900	10,000	1,300	160	390	390	160	0.4	2.0	0.96	0.77	-46.70
	9/24/98	ND	6,600	7,100	890	89	230	180	430/ND <sup>2</sup>	1	ND	ND	4.6	-17
HMW 2	8/22/96	7,400 <sup>4</sup>	2,100	6,300	170	57	370	120	----	2100	2100	----	----	----
	2/25/97	90	ND	8,400	150	35	280	70	ND <sup>2</sup>	ND	ND	----	----	----
	5/28/97	130	200	6,000	170	35	170	67	150	200	200	----	----	----
	9/2/97	4,502	ND <sup>5</sup>	8,000	210	30	160	90	ND <sup>2</sup>	ND	0.5	1.37	0.38	+25.2
	11/26/97	180	ND	1,600	41	7.5	40	10	31	ND	ND	0.03	2.5	+52
	3/17/98	ND	ND	8,600	200	96	410	120	330	ND	0.8	0.01	0.48 <sup>3</sup>	-50.28
	6/30/98	ND	ND	7,300	180	52	240	88	170	ND	ND	0.01	0.43	-45.50
	9/24/98	ND	ND	2,900	32	1.5	38	16	ND	ND	ND	ND	7.1	+67
HMW 3	8/22/96	ND	ND	1,300	3	6	8	12	----	ND	ND	----	----	----
	2/25/97	70	ND	150	ND	ND	ND	ND	ND	ND	ND	----	----	----
	5/28/97	ND	ND	80	ND	ND	0.60	ND	ND	ND	ND	----	----	----
	9/2/97	ND <sup>5</sup>	ND <sup>5</sup>	140	ND	ND	2.1	ND	ND	2	53	0.03	0.88	+98.6
	11/26/97	50	ND	70	0.6	0.8	0.8	ND	ND	3.5	50	0.01	1.4	+102
	3/17/98	ND	200	ND	ND	ND	ND	ND	ND	1.1	43	ND	0.63 <sup>3</sup>	91.90
	6/30/98	ND	ND	ND	ND	ND	ND	ND	ND	4.0	51	ND	0.25	95.70
	9/24/98	ND	ND	58	ND	ND	ND	0.76	ND	4.9	95	ND	3.7	-16
HMW-1	11/26/97	100	ND	1,600	4.2	3.1	1.7	5.9	ND	----	----	----	----	----
	3/17/98	ND	ND	1,300	20	1.4	6.8	3.0	19	ND	8.6	0.12	2.4 <sup>3</sup>	-26.67
	6/30/98	ND	ND	940	17	1.5	18	2	10	ND	18.0	ND	3.7	-21.7
	9/24/98	ND	ND	370	7.2	ND	0.75	1.3	11	ND	11	ND	6.6	-17



Table 3  
 Groundwater Analytical Results <sup>1</sup>  
 New Genco Facility  
 3927 E 14th Street Oakland, California

Well ID No	Sample Date	TPH as Diesel (µg/L)	TPH as motor oil (µg/L)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Methyl tert Butyl Ether (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
TRIP BLANK	3/17/98	----	----	ND	ND	ND	ND	ND	ND	----	----	----	----	----
	6/30/98	----	----	ND	ND	ND	ND	ND	ND	----	----	----	----	----
	9/24/98	----	----	ND	ND	ND	ND	ND	ND	----	----	----	----	----
MCL <sup>6</sup>				1.0	150	700	1,750	35 <sup>7</sup>						

NOTES

- Well ID No = HMW-1, HMW-2 and HMW-3 are New Genco wells MW-1, MW-2, and MW-3, respectively
- TPH = Total petroleum hydrocarbons
- ND = Not detected above reporting limit
- = Not analyzed
- \* = Measured in the field
- 1 = Data prior to 3/17/98 was obtained from a report prepared by ATC Associates Inc. (1/8/98)
- 2 = Positive result by initial USEPA Method 8020 analysis/confirmation performed by USEPA Method 8260 reports ND
- 3 = Dissolved oxygen measured prior to purging
- 4 = Laboratory reported concentration for diesel is estimated due to overlapping fuel patterns
- 5 = Samples collected on 10/3/97
- 6 = Maximum Contaminant Level
- 7 = California Drinking Water Advisory Level

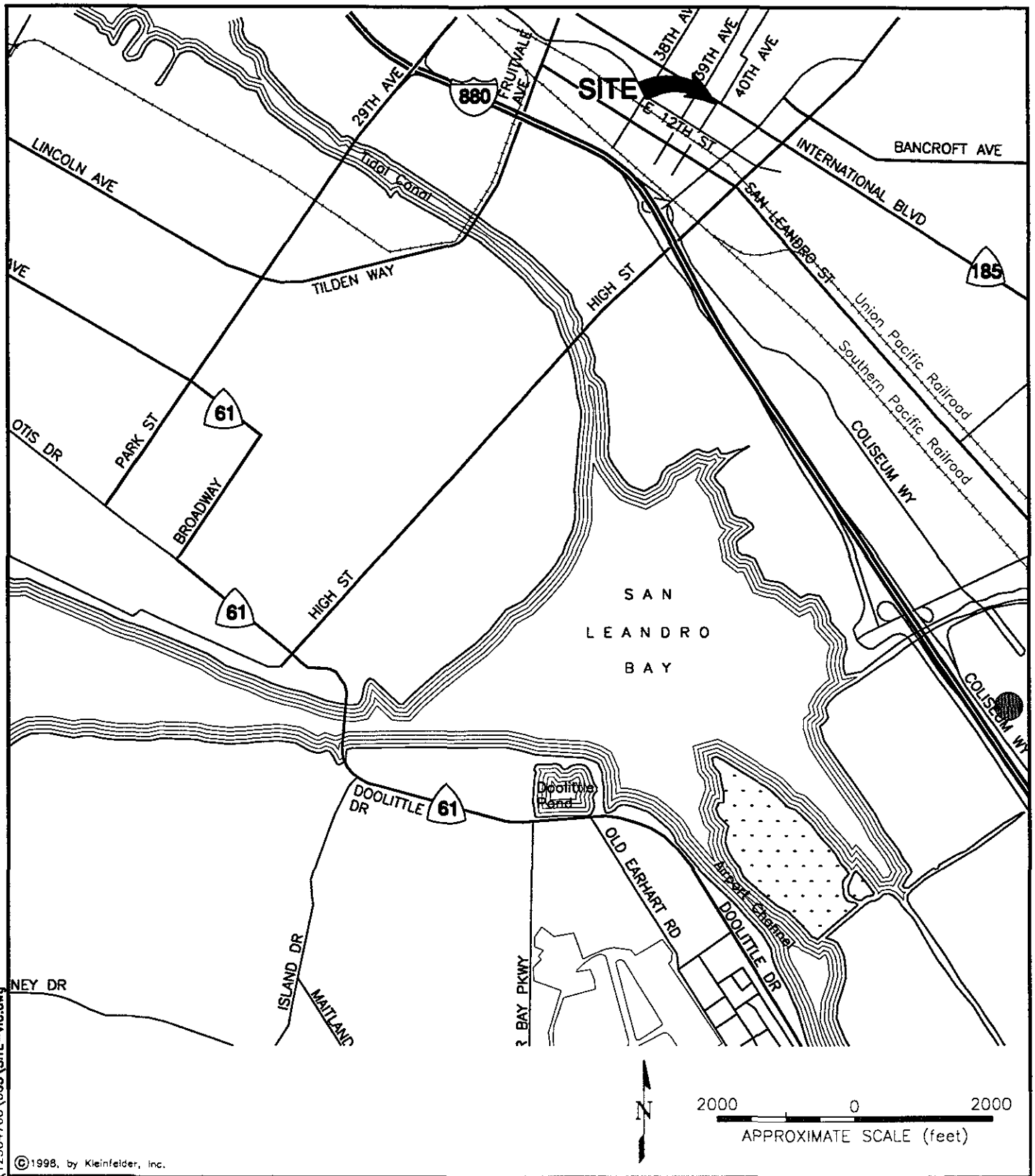


Table 4  
 Groundwater Parameters Measured Prior to Sampling  
 New Genico Facility  
 3927 E. 14th Street Oakland, California

Well I.D. No.	Sample Date	pH	Specific Conductivity ( $\mu$ mhos/cm)	Temperature (°F)
HMW-1	8/22/96	----	----	----
	2/25/97	4.55	680	75.0
	5/28/97	7.70	810	70.4
	9/2/97	6.73	1074	73.4
	11/26/97	6.93	966	70.0
	3/17/98	6.16	1,163	67.6
	6/30/98	6.80	1,006	71.6
	9/24/98	6.69	1,080	70.3
HMW-2	8/22/96	----	----	----
	2/25/97	4.65	450	72.1
	5/28/97	7.80	480	69.4
	9/2/97	6.82	762	74.8
	11/26/97	6.99	731	69.8
	3/17/98	6.62	741	66.0
	6/30/98	6.88	610	71.6
	9/24/98	6.81	650	71.9
HMW-3	8/22/96	----	----	----
	2/25/97	5.87	390	63.3
	5/28/97	8.00	400	67.6
	9/2/97	6.97	669	70.9
	11/26/97	6.87	665	67.8
	3/17/98	6.43	734	65.9
	6/30/98	6.96	640	71.6
	9/24/98	6.93	650	69.8
HMW-4	11/26/97	----	----	----
	3/17/98	6.66	769	66.3
	6/30/98	6.98	690	73.4
	9/24/98	7.05	620	70.9

NOTES

"----" = Not Measured



CAD FILE C:\\_KA-PROJ\SJ\12304760\003\SITE-VIC.dwg

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**KLEINFELDER**

**SITE VICINITY MAP**

NEW GENICO FACILITY  
3927 INTERNATIONAL BOULEVARD  
OAKLAND, CALIFORNIA

PLATE

1

DRAFTED BY: L. Sue

DATE 10-6-98

CHECKED BY: B. Theyskens

DATE: 10-6-98

PROJECT NO. 12-304760-003



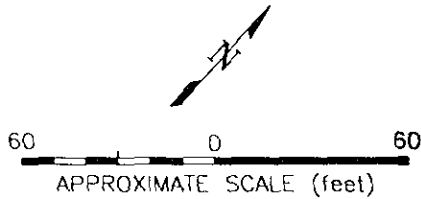
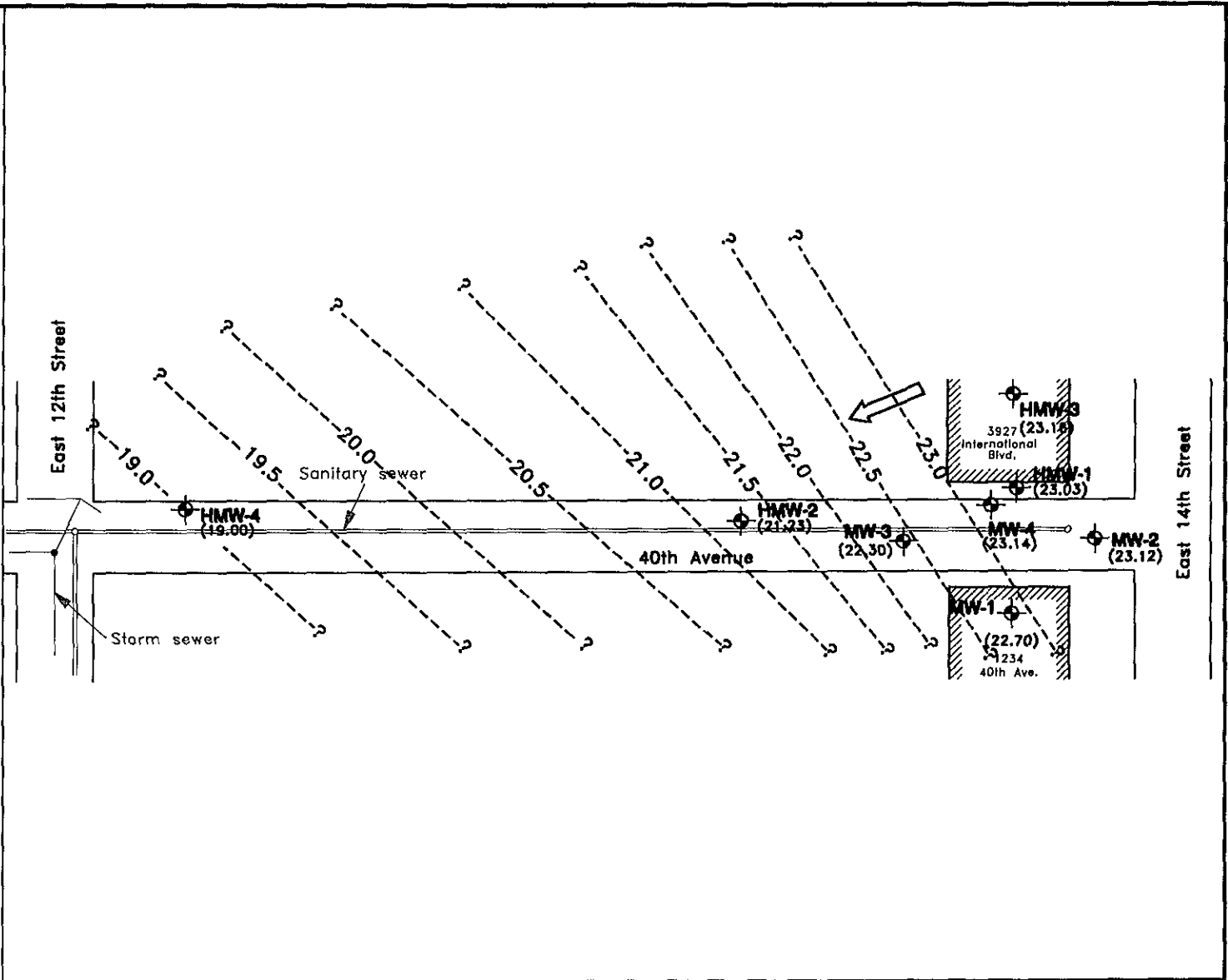
LEGEND

PERMANENT  
GROUNDWATER  
MONITORING WELL

(21.4) GROUNDWATER CONTOUR  
(feet, mean sea level)

GROUNDWATER ELEVATION  
(feet, mean sea level)  
MEASURED SEPTEMBER  
1998

APPROXIMATE DIRECTION  
OF GROUNDWATER FLOW



REFERENCE  
Groundworks Environmental, "Figure 2.  
Groundwater Elevation Contours - March  
1998," dated 4/9/98

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	<b>SITE PLAN</b>	PLATE  <b>2</b>
	NEW GENICO FACILITY 3927 EAST 14TH STREET OAKLAND, CALIFORNIA	
DRAFTED BY: L. Wahlgren	DATE: 10-6-98	
CHECKED BY: B. Theyskens	DATE: 10-6-98	
PROJECT NO. 12-304760-003		

## APPENDIX A KLEINFELDER FIELD PROTOCOL

### A-1 FIELD PREPARATION

Before performing work in the field, environmental staff review the scope of work, prepare a health and safety plan, coordinate the work to be done with their supervisor, assemble the necessary sample containers, and check, calibrate and clean equipment to be used in the field. When underground utilities may exist at a site where subsurface soil samples are being collected, USA Underground is contacted with the boring locations and the scheduled date of drilling, or a utility locating firm is employed to check the boring locations.

### A-2 DEPTH-TO-WATER MEASUREMENTS

Depth-to-water measurements are made in all the wells at the site prior to initiating purging and sampling, including wells that are not to be sampled. The depth-to-water measurements are made consecutively in as short a time as possible to reduce potential errors due to daily variations in the water table.

Depth-to-water (DTW) is measured in the well to within 1/100 of a foot using a conductivity-based water level indicator. Measurements are taken from the north or marked side of the top of casing of each well. These marks on the casings have been surveyed by a licensed survey relative to mean sea level (MSL). The conductivity probe and cable are rinsed in deionized water before and after measuring the first well, and after each subsequent well. The same water level indicator is used in each well.

### A-3 WELL SAMPLING

The Kleinfelder sampling protocol for wells is as follows:

- The depth-to-water is measured using a conductivity-based water level indicator.
- The volume of water standing in each well is calculated by subtracting the depth-to-water measurement from the total depth of the well and multiplying by the appropriate volume conversion factor.
- A minimum of three well volumes of water is purged from each well using a submersible pump. The pump is decontaminated prior to use in each well by washing with liquinox™ and rinsing with distilled water. Pump tubing is replaced prior to purging each well. Purgewater is placed in 55-gallon drums.
- Physical parameters of pH and temperature are monitored for stability during purging.
- Sample bottles, provided by the analytical laboratory are filled from a new sterile disposable bailer at each well
- Samples are immediately labeled and placed in an iced sample container. At the end of each day, the samples are delivered to the analytical laboratory, under chain-of-custody control.

# KA KLEINFELDER

## RECORD OF WATER LEVEL MEASUREMENTS

Date: 9/24/98 Weather: overcast Sheet 1 of 1  
 Project: Hausauer Submitted By: L. Walgreen Date: 9/27/98  
 Project No.: 12-304760 Reviewed By: B. Theyskens Date: 9/24/98

Instrument Number:

Well Number	Time (opened/measured) (24-hr)	Sensitivity Setting (est. %)	Measuring Point ↑ (M.P.)	Measurement 1	Replicate Measurements (if requested)			Notes			(locked?)
					2	3		Redox	D.O.		
MW-1			31.25	8.22	8.22			-17	4.6		
MW-2			29.43	8.20	8.20			-16	3.7		
MW-3			31.48	8.32	8.32			67	7.1		
MW-4			28.80	9.80	9.80			-17	6.6		

M.P.: TOC, GS, Cover ring, Other All Wells Locked -- YES / NO

WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-1

Date: 9/24/98 Weather: overcast Sheet 1 of 1  
 Project: Heuser Submitted By: L. Walden Date: 9/24/98  
 Project No.: 12-304760 Reviewed By: B. Theys Date: 9/24/98

Purpose of Log  Development  Sampling

Equipment & Decontamination	Purging Equipment	Bailer	<input checked="" type="checkbox"/> Disposable Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other:	
	Sampling Equipment	Bailer	<input checked="" type="checkbox"/> Disposable Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other:	
	Test Equipment	Water Level		pH		Conductivity		Turbidity
	Meter No.	NA						
	Calibration Date/Time	NA						
	Decontamination Methods	Wash		Rinse I		Rinse II		Rinse III
	TSP	DI Tap Other	Steam Hot Cool	DI Tap Other	Steam Hot Cool	DI Tap Other	Steam Hot Cool	DI Tap Other
	Alconox	Other	Cool	Other	Cool	Other	Cool	Other
	Other:							
	Vol. (gal):							
Source:								
Decon. Notes:								

Development / Purge Record	Well Security: good fair <input checked="" type="checkbox"/> poor	Well Integrity: good fair <input checked="" type="checkbox"/> poor	Locked: yes <input checked="" type="checkbox"/> no	
	Purge Volume (CV) T.D. - DTW x Factor x 1 C.V. = 1.8 gal			
	Well Diam.: 2" 4" 10.3 ft. - 8.2 ft. x 2=0.175 4=0.663 x 3 = 5.73 gal			
	Free Product?: Odor: no <input checked="" type="checkbox"/> yes Floating Product: none <input checked="" type="checkbox"/> sheen film feet thick			
	Time (24-hr) 13:52 13:57			Replicate Goals
	Gallons Purged 0 1.5 2.0 Well Went Dry			(dev. only)
	Surged (minutes) ↑			±0.10
	pH S 6.69			±1°C
	Temperature (°C) T 76.3			±10%
	Cond. (µmhos/cm) A 1080			±10%
Salinity (%) R			<50 NTUs	
Turbidity (NTU's) T moderate			Colorless	
Color ↓ brn			±0.01'	
Depth to Water				
Reference Point: TOC Other:				

Sample Log	Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
	MW-1	14:50	3	40 ml	VOA	HCl	—	TPH, RTEX, MTB	EnTech
			2	1 L	Amber	—	—	TPH, MO	
			1	250 ml	Plastic	—	—	Nitrate, Silica	
			1	125 ml	Amber w/Sept	—	—	Ferrous Iron	

Other Observations: Redox - 13 A.O. = 4.6  
 Well ran dry after approximately 2.0 gallons purged - Allowed to recharge before sample.  
 Final Check: VOAs free of bubbles? (yes) / no / NA Well Locked? yes (no) / NA

# KA KLEINFELDER

**WELL DEVELOPMENT & SAMPLING LOG** WELL NO. MW-2

Date: 9/24/98 Weather: overcast Sheet      of     

Project: Hausauer Submitted By: L. Wahlgren Date: 9/24/98

Project No.: 12-304760 Reviewed By: R. Theystens Date: 9/24/98

Purpose of Log  Development  Sampling

Equipment & Decontamination	Purging Equipment	Bailer	<u>Disposable</u> Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other:	
	Sampling Equipment	Bailer	<u>Disposable</u> Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other:	
	Test Equipment	<u>Water Level</u>		<u>pH</u>		<u>Conductivity</u>		
	Meter No.							
	Calibration Date/Time	<u>NA</u>						
	Decontamination Methods	<u>Wash</u>		<u>Rinse I</u>		<u>Rinse II</u>		<u>Rinse III</u>
	TSP	DI Tap	Steam Hot	DI Tap	Steam Hot	DI Tap	Steam Hot	DI Tap
	Alconox	Other	Cool	Other	Cool	Other	Cool	Other
	Other:							
	Vol. (gal):							
Source:								
Decon. Notes:								

Development / Purge Record	Well Security: good fair <u>poor</u>	Well Integrity: <u>good</u> fair poor	Locked: yes <u>no</u>				
	Purge Volume (CV) T.D. - DTW × Factor × I.C.V. = <u>163 gal</u>						
	Well Diam.: <u>2" □ 4"</u> <u>7.5 ft.</u> - <u>8.20 ft.</u> × <u>0.175</u> × <u>0.663</u> × <u>9.3</u> = <u>487 gal</u>						
	Free Product?: Odor: <u>no</u> <u>yes</u> Floating Product: none <u>sheen</u> film						
	Time (24-hr)	<u>13:15</u>	<u>13:18</u>	<u>13:22</u>	<u>13:26</u>	<u>13:29</u>	Replicate Goals
	Gallons Purged	<u>0</u>	<u>1.25</u>	<u>2.50</u>	<u>3.75</u>	<u>5.00</u>	(dev. only)
	Surged (minutes)	<u>↑</u>					
	pH	<u>S</u>	<u>7.37</u>	<u>7.00</u>	<u>6.85</u>	<u>6.81</u>	±0.10
	Temperature (°C)	<u>T</u>	<u>73.1</u>	<u>72.7</u>	<u>72.2</u>	<u>71.9</u>	±1°C
	Cond. (µmhos/cm)	<u>A</u>	<u>670</u>	<u>660</u>	<u>640</u>	<u>650</u>	±10%
Salinity (‰)	<u>R</u>					±10%	
Turbidity (NTU's)	<u>T</u>	<u>light</u>				<50 NTUs	
Color	<u>↓</u>	<u>lt grey</u>		<u>grey/bn</u>		Colorless	
Depth to Water						±0.01'	
Reference Point:	<u>TOC</u>	Other:					

Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
<u>MW-2</u>	<u>13:32</u>	<u>3</u>	<u>40ml</u>	<u>VOA</u>	<u>HCl</u>		<u>TPHg, REX, MB</u>	<u>Entech</u>
		<u>2</u>	<u>1L</u>	<u>Amber</u>			<u>TPHd, ma</u>	
		<u>1</u>	<u>250ml</u>	<u>Plastic</u>			<u>Nitrate, Sulfide</u>	
		<u>1</u>	<u>125ml</u>	<u>Amber Wisco</u>			<u>Ferrous Iron</u>	<u>↓</u>

Other Observations: redox = -16 D.O. = 3.7

Misc:

Final Check: VOAs free of bubbles? yes / no / NA Well Locked? yes / no / NA

WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-3

Date: 9/24/98 Weather: overcast

Sheet 1 of 1

Project: Hausauer Submitted By: L. Wahlgren

Date: 9/24/98

Project No.: 17-304760 Reviewed By: B. Theyskens

Date: 9/24/98

Purpose of Log  Development  Sampling

Equipment & Decontamination	Purging Equipment	Bailer	Disposable Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other:		
	Sampling Equipment	Bailer	Disposable Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other:		
	Test Equipment	Water Level		pH		Conductivity		Turbidity	
	Meter No.								
	Calibration Date/Time	NA							
	Decontamination Methods	Wash		Rinse I		Rinse II		Rinse III	
	TSP	DI Tap	Steam Hot	DI Tap	Steam Hot	DI Tap	Steam Hot	DI Tap	Steam Hot
	Alconox	Other	Cool	Other	Cool	Other	Cool	Other	Cool
	Other:								
	Vol. (gal):								
Source:									
Decon. Notes:									

Well Security: good <input checked="" type="radio"/> fair <input type="radio"/> poor	Well Integrity: good <input checked="" type="radio"/> fair <input type="radio"/> poor	Locked: <input checked="" type="radio"/> yes <input type="radio"/> no					
Purge Volume (CV) T.D. - DTW × Factor × 1 CV = 1.39 gal							
Well Diam.: □ 2" □ 4" 16.27ft - 8.32ft × 0.175 × 3 = 4.17 gal							
Free Product?: Odor: no <input checked="" type="radio"/> yes <input type="radio"/> Floating Product: none sheen film feet thick							
Time (24-hr)	14:10	14:14	14:19	14:24	14:28		Replicate Goals
Gallons Purged	0	1.0	2.0	3.0	4.5		(dev. only)
Surged (minutes)	↑	←					
pH	S	6.93	6.93	6.93	6.92		±0.10
Temperature (°C)	T	70.8	69.8	69.8	69.8		±1°C
Cond. (µmhos/cm)	A	650	690	620	610		±10%
Salinity (‰)	R						±10%
Turbidity (NTU's)	T	light					<50 NTUs
Color	↓	clear	clear	lt brn	lt brn		Colorless
Depth to Water							±0.01'
Reference Point:	TOC	Other:					

Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
MW-3	14:35	3	40ml	VOA	HCl	---	TPH-gas, RTX, etc	Entech
MW-3	14:35	2	1L	Amber	---	---	TPH-g, MO	
MW-3	14:35	1	250ml	Plastic	---	---	Nitrate & Sulfate	
MW-3	14:35	1	125ml	Amber Septa	---	---	Ferrous Iron	

Other Observations: Redox + 67 P.O. = 7.1

Final Check: VOAs free of bubbles? yes / (no) NA Well Locked?  yes / no / NA

# KA KLEINFELDER

## WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-4

Date: 9/24/98 Weather: overcast

Sheet 1 of 1

Project: Hausauer Submitted By: L. Waldgren

Date: 9/24/98

Project No.: 12-304760 Reviewed By: R. Theyskens

Date: 9/24/98

Purpose of Log  Development  Sampling

Equipment & Decontamination	Purging Equipment	Bailer	<input checked="" type="checkbox"/> Disposable Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other: <u>peristaltic pump</u>	
	Sampling Equipment	Bailer	<input checked="" type="checkbox"/> Disposable Bailer	Suction Pump	Submersible Pump	Dedicated Pump	Other:	
	Test Equipment	Water Level		pH		Conductivity		
	Meter No.							
	Calibration Date/Time	NA						
	Decontamination Methods	Wash		Rinse I		Rinse II		Rinse III
	TSP	<input checked="" type="checkbox"/> DI Tap	Steam Hot	<input checked="" type="checkbox"/> DI Tap	Steam Hot	<input checked="" type="checkbox"/> DI Tap	Steam Hot	<input checked="" type="checkbox"/> DI Tap
	Alconox	Other	<input checked="" type="checkbox"/> Cool	Other	<input checked="" type="checkbox"/> Cool	Other	<input checked="" type="checkbox"/> Cool	Other
	Other: <u>liquinox</u>							
	Vol. (gal):							
Source:								
Decon. Notes:								

Well Security: good <input checked="" type="checkbox"/> fair <input type="checkbox"/> poor <input type="checkbox"/>	Well Integrity: good <input checked="" type="checkbox"/> fair <input type="checkbox"/> poor <input type="checkbox"/>	Locked: yes <input type="checkbox"/> no <input checked="" type="checkbox"/>				
Purge Volume (CV) T.D. - DTW × Factor × 1 CV = <u>0.22 gal</u>						
Well Diam.: <u>2" x 4"</u> (1.2 ft) - <u>3.80 ft</u> × <u>2=0.375</u> × <u>4=0.663</u> × <u>3</u> = <u>0.66 gal</u>						
Free Product?: Odor: <input checked="" type="checkbox"/> no <input type="checkbox"/> yes	Floating Product: <input checked="" type="checkbox"/> none <input type="checkbox"/> sheen <input type="checkbox"/> film	feet thick				
Time (24-hr)	12:30	12:33	12:36	12:39	12:42	Replicate Goals
Gallons Purged	0	0.2	0.4	0.6	0.8	(dev. only)
Surged (minutes)	↑					
pH	S	7.10	7.08	7.07	7.05	±0.10
Temperature (°C)	T	71.9	70.9	70.7	70.9	±1°C
Cond. (µmhos/cm)	A	680	620	670	620	±10%
Salinity (‰)	R					±10%
Turbidity (NTU's)	T	trace				<50 NTUs
Color	↓	no color				Colorless
Depth to Water						±0.01'
Reference Point:	TOC	Other:				

Sample Log	Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
	MW-4	12:50							

Misc	Other Observations: <u>Redox - 17</u> <u>D.O. 6.6</u>
Final Check: VOAs free of bubbles <input checked="" type="checkbox"/> yes <input type="checkbox"/> no / NA	Well Locked? yes <input checked="" type="checkbox"/> no / NA

# Entech Analytical Labs, Inc.

CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Kleinfelder  
1362 Ridder Park Drive  
San Jose, CA 95131  
Attn: Bill Theyskens

Date: 10/8/98  
Date Received: 9/24/98  
Project: 12-304760  
PO #:  
Sampled By: Client

## Certified Analytical Report

### Water Sample Analysis:

Sample ID	MW-1			MW-2						
Sample Date	9/24/98			9/24/98						
Sample Time	14:50			13:32						
Lab #	E17346			E17347						
	Result	DF	DLR	Result	DF	DLR			PQL	Method
<b>Results in µg/Liter:</b>										
Analysis Date	9/28/98			9/29/98						
TPH-Diesel	ND	1.0	50	ND	1.0	50			50	8015M
TPH-Motor Oil	6,600	1.0	50	ND	1.0	50			50	8015M
Analysis Date	9/28/98			9/30/98						
TPH-Gas	7,100	40	2000	2,900	2.0	100			50	8015M
MTBE	430	40	200	12	2.0	10			5.0	8020
Benzene	890	40	20	32	2.0	1.0			0.50	8020
Toluene	89	40	20	1.5	2.0	1.0			0.50	8020
Ethyl Benzene	230	40	20	38	2.0	1.0			0.50	8020
Xylenes	180	40	20	16	2.0	1.0			0.50	8020

DF=Dilution Factor

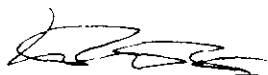
ND= None Detected above DLR

PQL=Practical Quantitation Limit

DLR=Detection Reporting Limit

· Report amended 10/8/98

· Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)



Michelle L. Anderson, Lab Director



# Entech Analytical Labs, Inc.

CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Kleinfelder  
1362 Ridder Park Drive  
San Jose, CA 95131  
Attn: Bill Theyskens

Date: 10/9/98  
Date Received: 9/24/98  
Project: 12-304760  
PO #:  
Sampled By: Client

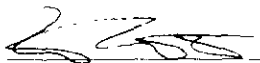
## Certified Analytical Report

### Water Sample Analysis:

Sample ID	MW-1			MW-2					
Sample Date	9/24/98			9/24/98					
Sample Time	14:50			13:32					
Lab #	E17346			E17347					
	Result	DF	DLR	Result	DF	DLR		PQL	Method
Results in mg/Liter:									
Analysis Dates:	9/25-9/29/98			9/25-9/29/98					
Ferrous Iron	ND	1.0	0.05	ND	1.0	0.05		0.05	SM3500
Nitrate-Nitrogen	1.4	1.0	0.1	ND	1.0	0.1		0.1	353.3
Sulfate	ND	1.0	0.1	ND	1.0	0.1		0.1	375.4

DF=Dilution Factor    ND= None Detected above DLR    PQL=Practical Quantitation Limit    DLR=Detection Reporting Limit

- Report amended 10/9/98
- Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)



Michelle L. Anderson, Lab Director

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CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Kleinfelder  
1362 Ridder Park Dr  
San Jose, CA 95131  
Attn: Bill Theyskens

Date: 10/8/98  
Date Received: 9/24/98  
Project: 12-304760  
PO #:  
Sampled By: Client

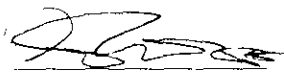
## Certified Analytical Report

### Water Sample Analysis:

Sample ID	MW-3			MW-4			Trip Blank				
Sample Date	9/24/98			9/24/98			9/24/98				
Sample Time	14:35			12:50							
Lab #	E17348			E17349			E17366				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
<b>Results in µg/Liter:</b>											
Analysis Date	9/28/98			9/28/98			9/28/98				
TPH-Diesel	ND	1.0	50	ND	1.0	50	na			50	8015M
TPH-Motor Oil	ND	1.0	50	ND	1.0	50	na			50	8015M
Analysis Date	9/28/98			9/28/98			9/28/98				
TPH-Gas	58	1.0	50	370	1.0	50	ND	1.0	50	50	8015M
MTBE	ND	1.0	5.0	11	1.0	5.0	ND	1.0	5.0	5.0	8020
Benzene	ND	1.0	0.50	7.2	1.0	0.50	ND	1.0	0.50	0.50	8020
Toluene	ND	1.0	0.50	ND	1.0	0.50	ND	1.0	0.50	0.50	8020
Ethyl Benzene	ND	1.0	0.50	0.75	1.0	0.50	ND	1.0	0.50	0.50	8020
Xylenes	0.76	1.0	0.50	1.3	1.0	0.50	ND	1.0	0.50	0.50	8020

DF=Dilution Factor      ND= None Detected above DLR      PQL=Practical Quantitation Limit      DLR=Detection Reporting Limit

- na: not analyzed
- Report amended 10/8/98
- Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)



Michelle L. Anderson, Lab Director

# Entech Analytical Labs, Inc.

CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Kleinfelder  
1362 Ridder Park Dr  
San Jose, CA 95131  
Attn: Bill Theyskens

Date: 10/9/98  
Date Received: 9/24/98  
Project: 12-304760  
PO #:  
Sampled By: Client

## Certified Analytical Report

### Water Sample Analysis: (All results in mg/Liter)

Sample ID	MW-3			MW-4					
Sample Date	9/24/98			9/24/98					
Sample Time	14:35			12:50					
Lab #	E17348			E17349					
	Result	DF	DLR	Result	DF	DLR		PQL	Method
Analysis Date	9/25-9/29/98			9/25-9/29/98					
Ferrous Iron	ND	1.0	0.010	ND	1.0	0.010		0.010	SM3500
Nitrate-Nitrogen	4.9	1.0	0.10	ND	1.0	0.10		0.10	353.3
Sulfate	95	1.0	0.10	11	1.0	0.10		0.10	375.4

- Report amended 10/9/98
- Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)

**RECEIVED**  
OCT 11 1998

KLEINFELDER SAN JOSE



Michelle L. Anderson, Lab Director

DI = Dilution Factor  
PQL = Practical Quantitation Limit

ND = None Detected above DLR  
DLR = Detection Reporting Limit

*Environmental Analysis Since 1983*

## QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4980930

Matrix: Water

Units: ug/L

Date Analyzed: 09/30/98

Quality Control Sample: Blank Spike

PARAMETER	Method #	MB ug/L	SA ug/L	SR ug/L	SP ug/L	SP % R	SPD ug/L	SPD %R	RPD	QC LIMITS	
										RPD	%R
Benzene	8020	<0.50	80	ND	66	83	64	80	3.4	25	77-116
Toluene	8020	<0.50	80	ND	65	81	65	81	0.4	25	76-116
Ethyl Benzene	8020	<0.50	80	ND	66	83	65	82	1.7	25	77-116
Xylenes	8020	<0.50	240	ND	207	86	203	85	2.0	25	73-122
Gasoline	8015	<50.0	1000	ND	1060	106	1050	105	0.9	25	65-136

Note: LCS and LCSD results reported for the following Parameters:

All

Acceptable LCS and LCSD results are reported when matrix interferences cause MS and MSD results to fall outside established QC limits.

## Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank

SA: Spike Added

SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated

**QUALITY CONTROL RESULTS SUMMARY**

METHOD: Gas Chromatography  
Laboratory Control Spikes

QC Batch #: DW980906  
Matrix: Water  
Units: µg/L

Date analyzed: 09/28/98  
Date extracted: 09/28/98  
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS	
										RPD	%R
Diesel	8015M	<50.0	950	ND	936	99	988	104	5	25	61-133

**Definition of Terms:**

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

# Entech Analytical Labs, Inc.

CA ELAP# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

**RECEIVED**  
OCT 10 1998

**Kleinfelder**  
1362 Ridder Park Drive  
San Jose, CA 95131  
Attn: Bill Theyskens

**KLEINFELDER SAN JOSE**

Date: 10/7/98  
Date Received: 9/24/98  
Project: 12-304760  
PO #:  
Sampled By: Client

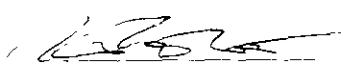
## Certified Analytical Report

### Water Sample Analysis:

Sample ID	MW-1									
Sample Date	9/24/98									
Sample Time	14:50									
Lab #	E17346									
	Result	DF	DLR						PQL	Method
Results in µg/Liter:										
Analysis Date	10/6/98									
MTBE	ND	10	50						5.0	8240

DF=Dilution Factor    ND= None Detected above DLR    PQL=Practical Quantitation Limit    DLR=Detection Reporting Limit

- Sample diluted due to high concentrations of non-target hydrocarbons
- Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)

  
Michelle L. Anderson, Lab Director

*Environmental Analysis Since 1983*

## QUALITY CONTROL RESULTS SUMMARY

## Volatile Organic Compounds

QC Batch #: 8240W980927

Matrix: Water

Units: µg/L

Date analyzed: 10/06/98

Spiked Sample:

Blank Spike

PARAMETER	Method #	SA	SR	SP	SP	SPD	SPD	RPD	QC LIMITS	
		µg/L	µg/L	µg/L	%R	µg/L	%R		RPD	%R
1,1-Dichloroethene	624/8240	25	ND	25	99%	27	106%	7.0	25	50-150
Methyl-tert-butyl ether	624/8240	25	ND	28	113%	32	127%	12.0	25	50-150
Benzene	624/8240	25	ND	25	100%	26	105%	4.7	25	50-150
Trichloroethene	624/8240	25	ND	24	98%	26	103%	5.2	25	50-150
Toluene	624/8240	25	ND	24	94%	26	102%	8.6	25	50-150
Chlorobenzene	624/8240	25	ND	23	93%	26	103%	10.2	25	50-150
1,2,4-Trichlorobenzene	624/8240	25	ND	26	106%	30	120%	13.1	25	50-150

## Definition of Terms:

na: Not Analyzed in QC batch

SA: Spike Added

SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP Spike Result

SP (%R) Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R) Spike Duplicate % Recovery

NC: Not Calculated

# Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • Telephone: (408) 735-1550 (800) 287-1799 • Fax: (408) 735-1554

## Chain of Custody/Analysis Work Order

Client: Klein Felder  
 Address: 1362 Ridder Park Dr  
San Jose CA, 95131  
 Contact: Bill Theystens  
 Telephone #: (408) 436-1155  
 Date Received: 9/24/98  
 Turn Around: Standard/normal

Project ID: 12-304760

Purchase Order #: \_\_\_\_\_

Sampler/Company: <u>Lars Wahlgren</u> <u>KleinFelder</u>	Telephone #: <u>(408)</u> <u>436-1155</u>
Special Instructions/Comments	

**LAB USE ONLY**

Samples arrived chilled and intact:

Yes                      No

Notes: \_\_\_\_\_

\_\_\_\_\_

Sample Information								Requested Analysis												
Lab #	Sample ID	Grab/Composite	Matrix	Date Collected	Time Collected	Pres.	Sample Container	TPH3	BTX	MTBE	TPH4	TPH MO	Ferrous	Iron	TV+HCL	Sulfide				
617344	MW-1	Grab	H <sub>2</sub> O	9/24/98	14:50	HCl	VOA	X												
	MW-1	↓	↓	↓	↓	↓	125 ml Amber						X							
	MW-1	↓	↓	↓	↓	↓	1L Amber				X									
	MW-1	↓	↓	↓	↓	↓	250 ml Plastic								X					
617347	MW-2	↓	↓	↓	13:32	HCl	VOA	X												
	MW-2	↓	↓	↓	↓	↓	125 ml Amber						X							
	MW-2	↓	↓	↓	↓	↓	1L Amber				X									
	MW-2	↓	↓	↓	↓	↓	250 ml Plastic								X					
Relinquish	<u>Jane Wahlgren</u>					Received By:	<u>John So 942</u>					Date	<u>9/24/98</u>		Time	<u>17:12</u>				
Relinquish	<u>John So 942</u>					Received By:	<u>Wahlgren</u>					Date	<u>9/24/98</u>		Time	<u>5:40pm</u>				
Relinquish						Received By:						Date			Time					



# Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • Telephone: (408) 735-1550 (800) 287-1799 • Fax: (408) 735-1554

## Chain of Custody/Analysis Work Order

Client: Kleinfelder  
 Address: 1362 Ridder Park Dr  
San Jose, CA 95131  
 Contact: Bill Theystens  
 Telephone #: (408) 436-1155  
 Date Received: 9/24/98  
 Turn Around: standard/normal

Project ID: 12-304760  
 Purchase Order #: \_\_\_\_\_

Sampler/Company:	Telephone #:
Lars Wahlgren/Kleinfelder	(408) 436-1155
Special Instructions/Comments	

LAB USE ONLY

Samples arrived chilled and intact:

Yes                      No

Notes: \_\_\_\_\_

\_\_\_\_\_

Sample Information								Requested Analysis					
Lab #	Sample ID	Grab/Composite	Matrix	Date Collected	Time Collected	Pres.	Sample Container	TPH BTX MTBE	TPH TPH M0	Ferrous Iron	Nitrate Sulfate		
*analyze for TPH, MTBE, & BTX													
517366	Trip Blank		H <sub>2</sub> O	9/24/98			VOA						
	Mw-3	Grab	H <sub>2</sub> O	9/24/98	14:35	HCl	VOA	X					
	Mw-3						125 ml Amber			X			
	Mw-3						1L Amber		X				
	Mw-3						250 ml Plastic				X		
	Mw-4				12:50	HCl	VOA	X					
	Mw-4						125 ml Amber			X			
	Mw-4						1L Amber		X				
	Mw-4						250 ml Plastic				X		
Relinquished By: <u>Lars Wahlgren</u>				Received By: <u>JMSO 942</u>				Date: <u>9/24/98</u>		Time: <u>17:12</u>			
Relinquished By: <u>JMSO 942</u>				Received By: <u>JMSO</u>				Date: <u>9/24/98</u>		Time: <u>5:40 pm</u>			
Relinquished By: _____				Received By: _____				Date: _____		Time: _____			