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**QUARTERLY GROUNDWATER
MONITORING REPORT
FOURTH QUARTER 1999
NEW GENICO FACILITY
3927 EAST 14th STREET
OAKLAND, CALIFORNIA**

1/24/00

Submitted By:

ATC Associates
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ATC Project No. 75 61137.0008 0002

January 24, 2000

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Mr. Ruben Hausauer
6017 International Boulevard
Oakland, California 94621

Quarterly Groundwater Monitoring Report
Fourth Quarter 1999
New Genico Facility
3927 East 14th Street
Oakland, California

Dear Mr. Hausauer:

ATC Associates Inc. is pleased to present this report of the Fourth Quarter 1999 groundwater monitoring conducted at the above referenced site for your review.

If you have any questions about this report please call me at (925) 460-5300.

Very truly yours,

A handwritten signature in cursive script that reads 'Al Martinez'.

Al Martinez
Project Manager

Enclosures

cc: Barney M. Chan, Alameda County Health Care Services

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**QUARTERLY GROUNDWATER MONITORING REPORT
FOURTH QUARTER 1999
NEW GENICO FACILITY
3927 EAST 14TH STREET
OAKLAND, CALIFORNIA**

1.0 INTRODUCTION

ATC Associates Inc. (ATC) has been retained by Ruben Hausauer to perform quarterly groundwater monitoring for the New Genico facility located at 3927 East 14th Street, Oakland, California (**Figure 1**). This quarterly groundwater monitoring report has been prepared per the request of the Alameda County Health Care Services (ACHCS) as stated in their letter dated August 3, 1999. The site plan showing the location of the adjacent streets, monitoring wells, and other site-specific features is shown on **Figure 2**.

The monitoring wells are sampled quarterly to monitor the shallow groundwater underlying the site. The program objectives are listed below:

- Measure depth of groundwater.
- Sample and analyze groundwater samples for specified petroleum hydrocarbon constituents.
- Sample and analyze groundwater samples for bioremediation parameters to assess the compatibility of the groundwater environment for degradation of petroleum hydrocarbons.
- Construct a groundwater elevation contour map within the study area.
- Compare current and past data.

The existence and degree of petroleum hydrocarbons in the groundwater underlying a site is evaluated by (1) the presence of free-floating product, and (2) the laboratory analyses of groundwater samples. Groundwater samples are analyzed for total petroleum hydrocarbons (TPH) as gasoline (TPH-G), TPH as diesel (TPH-D), TPH as motor oil (TPH-M), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tert-butyl ether (MTBE).

2.0 INTRINSIC BIOREMEDIATION OF GROUNDWATER

Biological parameter testing was performed as part of the quarterly sampling at the site in order to assess whether intrinsic bioremediation is occurring at the site.

Several detailed field studies have been performed examining indicators of intrinsic bioremediation and identifying factors which significantly effect the rate and extent of bioremediation (Buscheck and others, 1993; McAllister and Chiang, 1994; Borden and others, 1995; Buscheck and Alcantar, 1995). Through these studies, and ongoing research of the factors which control biodegradation, it is now understood that dissolved petroleum hydrocarbons in groundwater will biodegrade, without artificial enhancement, due to the presence of naturally occurring (indigenous) microorganisms. The U.S. Air Force, Chevron Corporation, and others have developed technical protocols for implementing and monitoring intrinsic bioremediation studies in groundwater.

Intrinsic bioremediation, in brief, is the process of indigenous microorganisms degrading contaminants which have been released into the subsurface. The biodegradation of the contaminants is essentially an oxidation-reduction (redox) reaction where the hydrocarbon is oxidized (donates an electron) and an electron acceptor is reduced (accepts electrons). There are several compounds that can serve as electron acceptors including oxygen, nitrate, iron oxides (Fe III), Manganese (Mn IV), sulfate, and carbon dioxide (Borden and others, 1995). Aerobic microorganisms use oxygen as the electron acceptor. Anaerobic microorganisms use other compounds such as nitrate, iron oxides (ferric iron), manganese oxide (Mn IV), sulfate, and carbon dioxide as electron acceptors.

Oxygen is the most preferred electron acceptor in groundwater because microorganisms gain more energy from these reactions; however, this process usually results in the depletion of oxygen with an increase in carbon dioxide in the subsurface. Therefore, low concentrations of dissolved oxygen and corresponding high concentrations of carbon dioxide within hydrocarbon plume indicate biodegradation is taking place (Borden and others, 1995).

In anaerobic environments, microorganisms may use other compounds such as nitrate, ferric iron, manganese, and sulfate as electron acceptors. Thus, an increase in ferrous iron, carbon dioxide, dissolved manganese (Mn II), and perhaps sulfide, and a corresponding decrease in nitrate and or sulfate within a hydrocarbon plume may indicate biodegradation is taking place

Additional indicators of anaerobic biodegradation include total alkalinity, redox potential (Buscheck and O'Reilly, 1995), and methane (Borden and others, 1995). The total alkalinity of a groundwater system is indicative of the water's capacity to neutralize acid. Alkalinity results from the dissolution of rock (particularly carbonate rocks), the transfer of carbon dioxide from the atmosphere, and the respiration of microorganisms. Therefore, an increase in alkalinity within a hydrocarbon plume is potentially an indicator of bioremediation occurring (Buscheck and O'Reilly, 1995). The redox potential of groundwater generally ranges from -400 millivolts (mV) to 800 mV. Under oxidizing conditions, the redox potential of groundwater is positive while reducing conditions are negative. The redox potential inside a hydrocarbon plume should be less than that measured outside the plume (Buscheck and O'Reilly, 1995), and generally negative. Methane levels generally increase within the plume as a byproduct of the breakdown of petroleum hydrocarbons under anaerobic conditions (Borden and others, 1995).

Indicators of potential intrinsic biodegradation occurring across a dissolved contaminant plume can be summarized by the following trends:

A Relative Decrease In:	A Relative Increase In:
Dissolved Oxygen	Ferrous Iron (Fe II)
Oxidation-Reduction Potential	Total Alkalinity
Nitrate (NO ₃)	Carbon Dioxide (CO ₂)
Sulfate (SO ₄)	Sulfide (S)
	Methane (CH ₄)
	Dissolved Manganese (Mn II)

3.0 GROUNDWATER SAMPLING

Four groundwater monitoring wells (HMW-1, HMW-2, HMW-3, and HMW-4) were gauged on December 29, 1999 by ATC. In addition, five groundwater monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5) installed by Motor Partners were gauged and sampled on December 29, 1999 by Aquatic & Environmental Applications of Fremont, California. Subsequently, three groundwater monitoring wells (HMW-1, HMW-2, and HMW-4) were sampled on December 29, 1999 by ATC. Groundwater monitoring well HMW-3 is only sampled annually during the second quarter. A groundwater sample was collected after purging each well of approximately three well volumes of water and recording consistent pH, conductivity, and temperature measurements. Once each well had recovered to at least 80% of its original volume, a water sample was collected using a disposable bailer. Each groundwater sample was carefully poured into the appropriate sample container. Each groundwater sample was properly labeled and placed in a cooler with ice. Chain-of-custody procedures were followed until delivery of the groundwater samples to a State certified laboratory. Groundwater purged from the well, and equipment decontamination water were placed in a Department of Transportation (DOT) approved 17H drum. The contents of the drum will be transported by a licensed hauler for disposal at a licensed waste treatment site.

The groundwater monitoring data for the New Genico facility are summarized in **Table 1**. The groundwater monitoring data (i.e. gauging data) for the Motor Partners facility are summarized in **Table 2**. The Groundwater Sampling Protocol is described in **Appendix A**. The volume of groundwater removed from each well and other measured sampling parameters are noted on the field Water Sampling Logs included in **Appendix B**.

4.0 LABORATORY ANALYSIS

ATC utilized the laboratory services of Sequoia Analytical of Morgan Hill, California for this project. Sequoia Analytical is certified in California by the Department of Health Services under the Environmental Laboratory Accreditation Program (ELAP).

The groundwater sample was analyzed for the presence of TPH-G, TPH-D, and TPH-M in accordance with Environmental Protection Agency (EPA) Method 8015, and BTEX and MTBE in accordance with EPA Method 8020.

In addition, the groundwater sample was analyzed for dissolved oxygen, oxidation-reduction potential, nitrate (EPA Method 300.0), sulfate (EPA Method 300.0), and ferrous iron (EPA Method 6010A) to assess whether intrinsic bioremediation is occurring at the site. Copies of the signed laboratory analytical reports and chain-of-custody forms are provided in **Appendix C**.

5.0 RESULTS OF GROUNDWATER MONITORING

5.1 Groundwater Flow

Figure 2 shows the groundwater elevation contours based on the water-level data for December 29, 1999. The apparent groundwater flow direction was south-southwest at a gradient of approximately 0.015.

5.2 Groundwater Laboratory Analysis

Groundwater monitoring wells HMW-1, HMW-2, and HMW-4 were sampled on December 29, 1999. A summary of the analytical results from the December 29, 1999, and past well sampling events are presented in Table 1.

TPH-G, TPH-D, and BTEX were detected in the groundwater sample obtained from HMW-1, HMW-2, and HMW-4 (ethylbenzene not detected). TPH-M was detected in groundwater samples obtained from HMW-1 and HMW-4. The maximum benzene concentration was 184 microgram per liter (ug/l) in groundwater sample obtained from HMW-1. MTBE (EPA Method 8020) was detected in HMW-1, HMW-2, and HMW-4. The maximum MTBE concentration was 407 ug/l in groundwater sample obtained from HMW-2. Confirmation MTBE analysis was performed on HMW-2 in accordance with EPA Test method 8260. MTBE was not detected in HMW-2 using EPA Test Method 8260 (detection limit of 0.500 ug/l).

5.3 Analysis of Intrinsic Bioremediation Parameters

Samples were collected from site wells and analyzed for one or more of the following: dissolved ferrous iron, nitrate, sulfate, dissolved oxygen, and/or oxidation-reduction potential (redox potential). The analyses are presented in Table 3. When comparing data from wells within the plume which generally have high concentrations of petroleum hydrocarbons i.e., monitoring wells HMW-1 and HMW-2, to the well beyond the plume (i.e., HMW-4) and upgradient of the plume (i.e., HMW-3), the data in Table 3 suggests that bioremediation processes are occurring. Review of the data reveals the following observations:

The ferrous iron concentrations in HMW-1 and HMW-2 were higher than in groundwater monitoring well HMW-4. Redox potential is generally lower in wells within the plume compared to the wells beyond of the plume. Based on the review of the groundwater analytical data collected to date, it appears that intrinsic bioremediation may be occurring at the site.

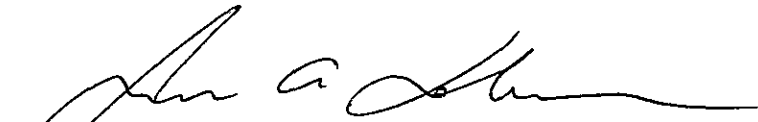
6. REPORTING REQUIREMENTS

At the request of Ruben Hausauer, ATC Associates Inc. will forward a copy of this report to the following agencies:

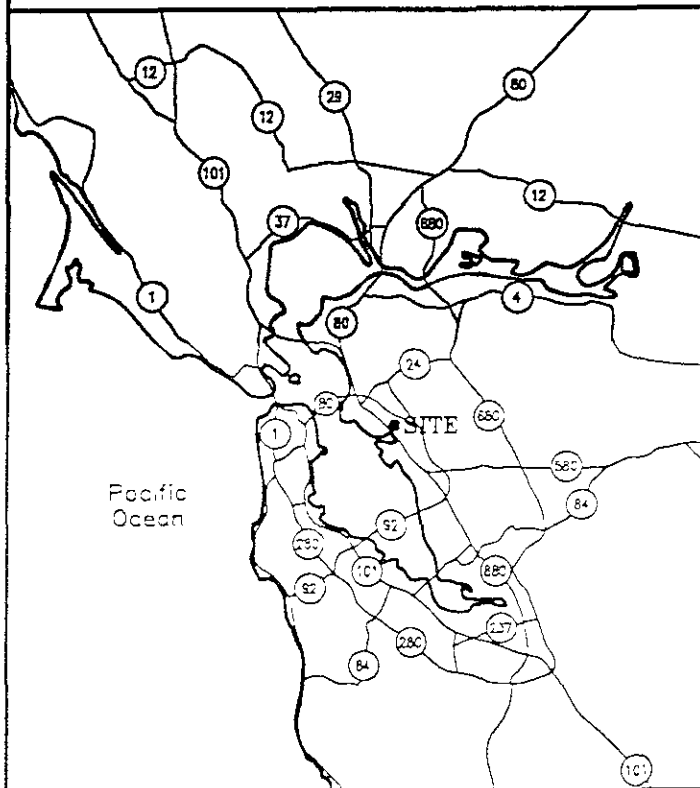
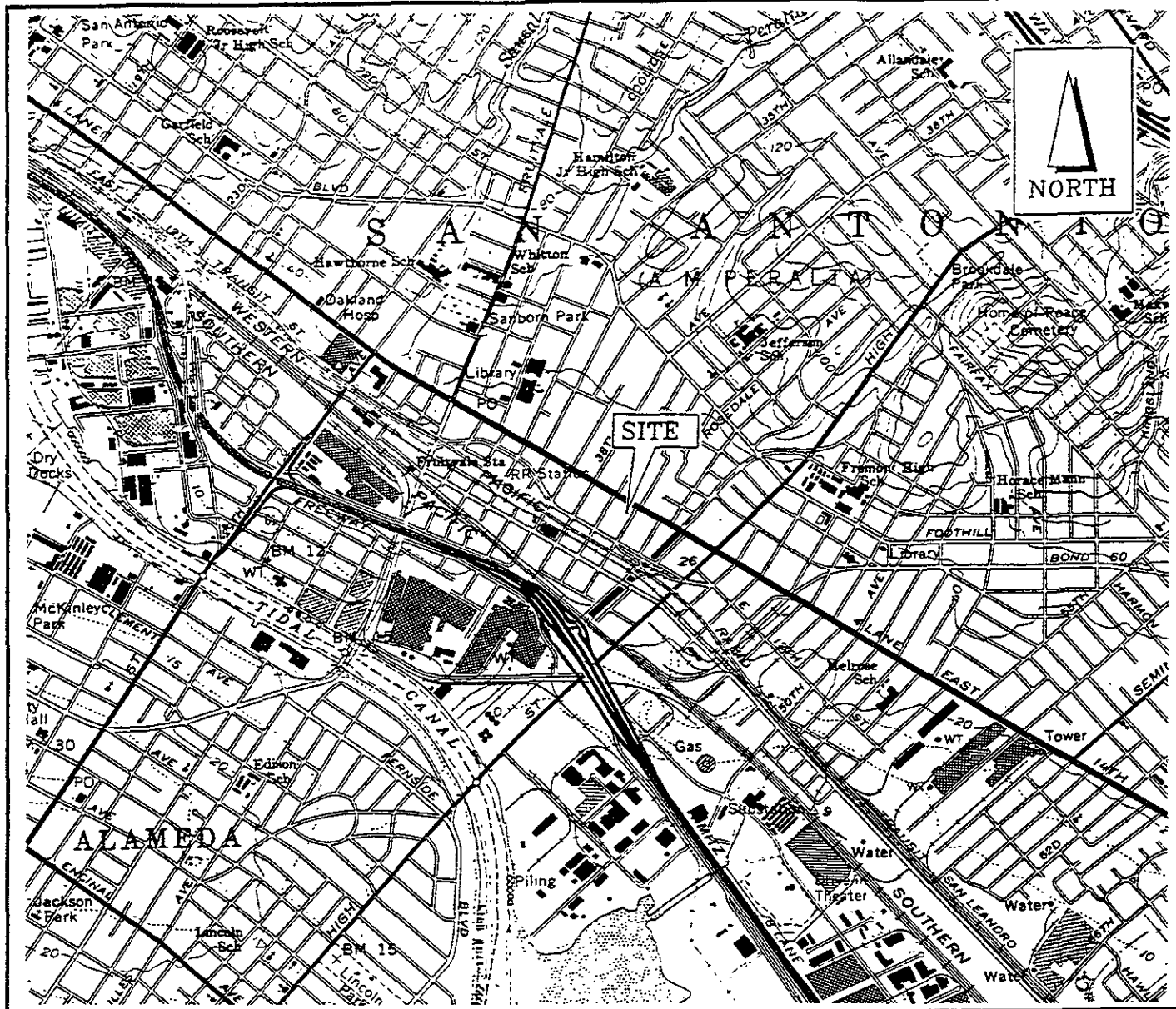
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577
Mr. Barney M. Chan

CERTIFICATION

This Quarterly Groundwater Monitoring Report was prepared under the direction of a California Registered Geologist.

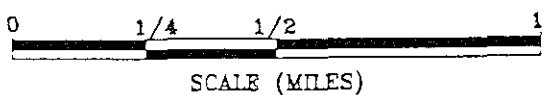


James A. Lehrman, RG, CHG
Program Director, Subsurface/Remediation



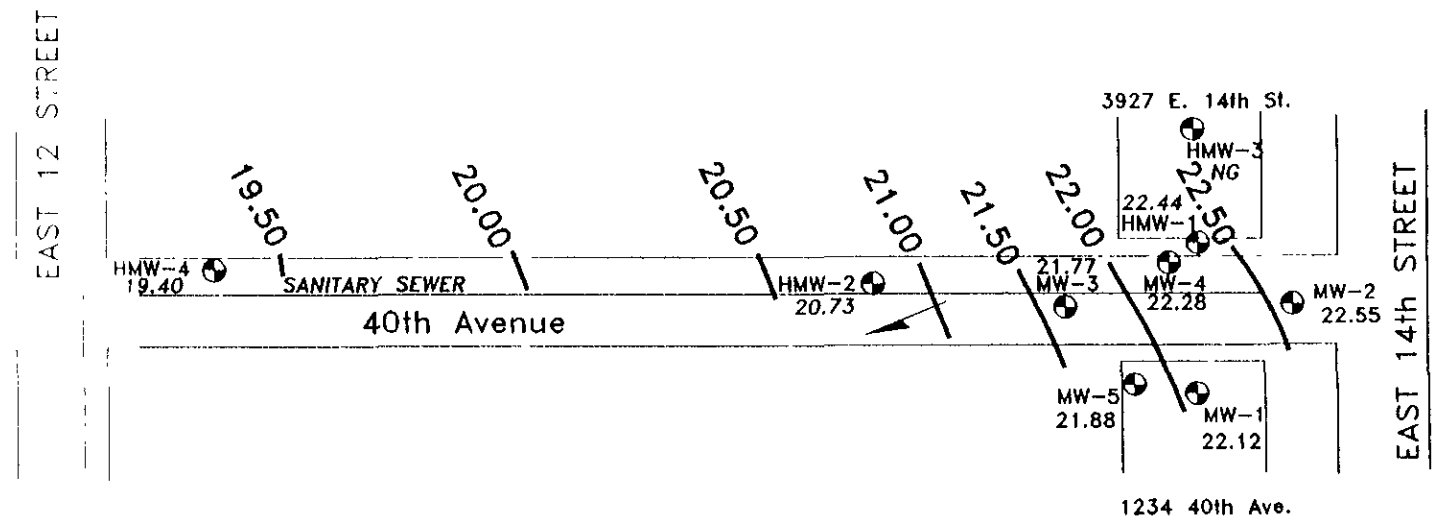
Notes:

- 1) All locations and dimensions are approximate.
- 2) Base map from USGS Oakland East (1961) Quadrangle, 7.5 Minute Series Topographic. Photorevised in 1980.


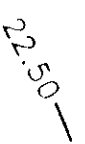



ATC ASSOCIATES INC.
 Environmental, Geotechnical and Materials Professionals

SITE LOCATION MAP
 3927 E. 14TH STREET
 OAKLAND, CALIFORNIA

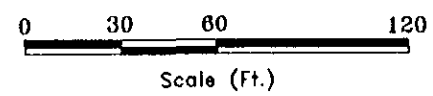


EXPLANATION

-  HMW-3 Groundwater Monitoring Well
- 22.55 Groundwater Elevation in Feet (mean sea level) Measured on December 29, 1999.
-  Groundwater Elevation Contour Line in Feet (mean sea level)
-  Approximate Groundwater Flow Direction

Notes:

1. Base Map developed from survey map provided by Kier & Wright
2. Location of HMW-4 obtained from Artesian Environmental Project No.: 197-002-01 Date: 1/8/98
3. Location of MW-5 obtained from Aquatic & Environmental Applications, Project No.: 1004 Date: 3/27/98
4. HMW-3 not gauged due to well not being accessible at time of gauging.




 VATC ASSOCIATES INC. <small>ENVIRONMENTAL, GEOTECHNICAL AND MATERIALS PROFESSIONALS</small>	
GROUNDWATER ELEVATION CONTOUR MAP (DECEMBER 29, 1999) NEW GENICO 3927 E. 14th Street Oakland, California	
Project No. 61137.0008	Figure 2

Table 1

Cumulative Results of Groundwater Sampling and Analyses
 New Genico Facility
 3927 East 14th Street
 Oakland, California

Date Sampled	TPH-D (ug/L)	TPH-M (ug/L)	TPH-G (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Well Elevation (ft above MSL)	Depth to Groundwater (feet)	Groundwater Elevation (ft above MSL)
<i>HMW-1</i>											
08/22/96	ND	ND	7,400	1,200	170	530	490	NA	31.25	8.01	23.24
02/25/97	2,000	ND	5,400	760	110	260	260	ND	31.25	5.95	25.30
05/28/97	2,000	600	6,600	1,100	100	290	340	130	31.25	7.65	23.60
09/02/97	8,700	3,700	4,000	460	40	200	100	ND*	31.25	8.56	22.69
11/26/97	4,700	3,000	7,500	1,000	120	270	320	ND*	31.25	7.50	23.75
03/17/98	ND	16,000	11,000	2,100	290	600	760	1,200	31.25	5.29	25.97
06/30/98	ND	5,900	10,000	1,300	160	390	390	160	31.25	6.63	24.62
09/24/98	ND	6,600	7,100	890	89	230	180	430/ND*	31.25	8.22	23.03
12/16/98	ND	1,400	1,900	290	39	85	100	NR	31.25	6.66	24.59
03/16/99	5,100	8,100	7,700	1,100	120	250	240	100	31.25	4.71	26.54
06/23/99	ND	12,000	3,300	510	52	110	110	70	31.25	7.25	24.00
09/23/99	1,190	540	1,360	150	19.9	37.7	42.5	125/ND*	31.25	8.75	22.50
12/29/99	2,440	3,110	1,380	184	22.7	38.6	57.8	70.7	31.25	8.81	22.44
<i>HMW-2</i>											
08/22/96	7,400**	2,100	6,300	170	57	370	120	NA	29.43	8.71	20.72
02/25/97	90	ND	8,400	150	35	280	70	ND*	29.43	6.00	23.43
05/28/97	130	200	6,000	170	35	170	67	150	29.43	7.65	21.78
09/02/97	4,502	ND***	8,000	210	30	160	90	ND*	29.43	8.59	20.84
11/26/97	180	ND	1,600	41	7.5	40	10	31	29.43	6.82	22.61
02/09/98	NA	NA	NA	NA	NA	NA	NA	NA	29.43	3.24	26.19
03/17/98	ND	ND	8,600	200	96	410	120	330	29.43	4.44	24.99
06/30/98	ND	ND	7,300	180	52	240	88	170	29.43	6.30	23.13
09/24/98	ND	ND	2,900	32	1.5	38	16	ND	29.43	8.20	21.23
12/16/98	ND	ND	5,300	93	25.0	160	53	NR	29.43	6.64	22.79
02/19/99	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
03/16/99	1,500	730	5,200	83	31	150	45	140*	29.43	4.08	25.35
06/23/99	ND	ND	1,200	31	11	36	12	52	29.43	7.02	22.41
09/23/99	NA	NA	NA	NA	NA	NA	NA	NA	29.43	8.74	20.69
12/29/99	1,560	ND 500	4,410	145	45.6	111	80.8	407 ND*	29.43	8.70	20.73

Table 1

Cumulative Results of Groundwater Sampling and Analyses
New Genico Facility
3927 East 14th Street
Oakland, California

Date Sampled	TPH-D (ug/L)	TPH-M (ug/L)	TPH-G (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Well Elevation (ft above MSL)	Depth to Groundwater (feet)	Groundwater Elevation (ft above MSL)
<i>HMW-3</i>											
08/22/96	ND	ND	1,300	3	6	8	12	NA	31.48	8.10	23.38
02/25/97	70	ND	150	ND	ND	ND	ND	ND	31.48	6.00	25.48
05/28/97	ND	ND	80	ND	ND	0.60	ND	ND	31.48	7.74	23.74
09/02/97	ND***	ND***	140	ND	ND	2.1	ND	ND	31.48	8.60	22.88
11/26/97	50	ND	70	0.6	0.8	0.8	ND	ND	31.48	7.50	23.98
02/09/98	NA	NA	NA	NA	NA	NA	NA	NA	31.48	2.34	29.14
03/17/98	ND	200	ND	ND	ND	ND	ND	ND	31.48	5.23	26.25
06/30/98	ND	ND	ND	ND	ND	ND	ND	ND	31.48	6.60	24.88
09/24/98	ND	ND	58	ND	ND	ND	0.76	ND	31.48	8.32	23.16
12/16/98	ND	ND	ND	ND	ND	ND	ND	NR	31.48	6.71	24.77
02/19/99	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
03/16/99	70	ND	98	ND	ND	ND	ND	ND	31.48	4.61	26.87
06/23/99	70	ND	71	ND	0.70	ND	1.6	ND	31.48	7.12	24.36
09/23/99	NA	NA	NA	NA	NA	NA	NA	NA	31.48	8.86	22.62
12/29/99	NA	NA	NA	NA	NA	NA	NA	NA	31.48	NG	NG
<i>HMW-4</i>											
08/22/96	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
02/25/97	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
05/28/97	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
09/02/97	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
11/26/97	400	ND	1,600	4.2	3.1	1.7	5.9	ND	28.80	7.42	21.38
02/09/98	NA	NA	NA	NA	NA	NA	NA	NA	28.80	2.96	25.84
03/17/98	ND	ND	1,300	20	1.4	6.8	3.0	19	28.80	5.72	23.08
06/30/98	ND	ND	940	17	1.5	18	2	10	28.80	7.40	21.40
09/24/98	ND	ND	370	7.2	ND	0.75	1.3	11	28.80	9.80	19.00
12/16/98	ND	ND	830	11.0	ND	2.70	5.0	NR	NG	NG	NG
02/19/99	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
03/16/99	200	ND	660	6.1	ND	1.0	2.8	7.3	28.80	4.95	23.85
06/23/99	ND	ND	1,100	5.3	1.1	2.0	3.9	27	28.80	7.43	21.37
09/23/99	NA	NA	NA	NA	NA	NA	NA	NA	28.80	9.36	19.44
12/29/99	2,240	911	2,020	33.9	22.7	ND 10.0	11.1	66.2	28.80	9.40	19.40

Table 1

**Cumulative Results of Groundwater Sampling and Analyses
New Genico Facility
3927 East 14th Street
Oakland, California**

Date Sampled	TPH-D (ug/L)	TPH-M (ug/L)	TPH-G (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Well Elevation (ft above MSL)	Depth to Groundwater (feet)	Groundwater Elevation (ft above MSL)
<i>Trip Blank</i>											
08/22/96	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
02/25/97	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
05/28/97	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
09/02/97	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
11/26/97	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
02/09/98	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
03/17/98	NA	NA	ND	ND	ND	ND	ND	ND	NG	NG	NG
06/30/98	NA	NA	ND	ND	ND	ND	ND	ND	NG	NG	NG
09/24/98	NA	NA	ND	ND	ND	ND	ND	ND	NG	NG	NG
12/16/98	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
02/19/99	NA	NA	NA	NA	NA	NA	NA	NA	NG	NG	NG
03/16/99	NA	NA	ND	ND	ND	ND	ND	ND	NG	NG	NG
06/23/99	NA	NA	ND	ND	ND	ND	ND	ND	NG	NG	NG
09/23/99	NA	NA	ND 50.0	ND 0.500	ND 0.500	ND 0.500	ND 0.500	ND 2.50	NG	NG	NG
12/29/99	NA	NA	ND 50.0	ND 0.500	ND 0.500	ND 0.500	ND 0.500	ND 2.50	NG	NG	NG

Notes:

TPH-G denotes total petroleum hydrocarbons as gasoline

TPH-D denotes total petroleum hydrocarbons as diesel

TPH-M denotes total petroleum hydrocarbons as motor oil

MTBE denotes methyl-tert-butyl ether

NA denotes no analyzed

NG denotes not gauged

NR denotes not reported due to laboratory instrument conditions

ug/L denotes micrograms per liter

ND denotes not detected above listed detection limit for the method or see actual laboratory analytical report

ft denotes feet

MSL denotes mean sea level

* Positive result by initial EPA Method 8020 confirmation performed by EPA Method 8260

** Laboratory reported concentration for diesel is estimated due to overlapping fuel pattern

*** Sample collected on October 3, 1997

**** Corrected elevation for 0.01 feet of free product in monitoring well

Data obtained on 3/17/98 obtained by Aquatic & Environmental Applications. Data obtained between 6/30/98 to 6/23/99

obtained by Kleinfelder

Table 2

Cumulative Results of Groundwater Monitoring
 Motor Partners Facility
 1234 40th Street
 Oakland, California

Date Sampled	Well Elevation (ft above MSL)	Depth to Groundwater (feet)	Groundwater Elevation (ft above MSL)
<i>MW-1</i>			
11/26/97	31.44	7.98	23.46
03/17/98	31.44	5.84	25.60
06/30/98	31.44	NG	NG
09/24/98	31.44	8.74	22.7
12/16/98	31.44	7.11	24.33
03/16/99	31.44	5.26	26.18
06/23/99	31.44	7.62	23.82
09/23/99	31.44	9.30	22.14
12/29/99	31.44	9.32	22.12
<i>MW-2</i>			
11/26/97	31.06	7.24	23.82
03/17/98	31.06	5.05	26.01
06/30/98	31.06	6.35	24.71
09/24/98	31.06	7.94	23.12
12/16/98	31.06	6.42	24.64
03/16/99	31.06	4.54	26.52
06/23/99	31.06	6.87	24.19
09/23/99	31.06	8.38	22.68
12/29/99	31.06	8.51	22.55
<i>MW-3</i>			
11/26/97	30.43	7.06	23.37
03/17/98	30.43	5.11	25.32
06/30/98	30.43	6.62	23.81
09/24/98	30.43	8.13	22.30
12/16/98	30.43	6.52	23.91
03/16/99	30.43	4.36	26.07
06/23/99	30.43	7.06	23.37
09/23/99	30.43	8.73	21.70
12/29/99	30.43	8.66	21.77

Table 2

Cumulative Results of Groundwater Monitoring
 Motor Partners Facility
 1234 40th Street
 Oakland, California

Date Sampled	Well Elevation (ft above MSL)	Depth to Groundwater (feet)	Groundwater Elevation (ft above MSL)
<i>MW-4</i>			
11/26/97	30.37	6.64	23.73
03/17/98	30.37	4.52	25.85
06/30/98	30.37	5.86	24.51
09/24/98	30.37	7.23	23.14
12/16/98	30.37	5.92	24.45
03/16/99	30.37	4.12	26.25
06/23/99	30.37	6.42	23.95
09/23/99	30.37	8.08	22.29
12/29/99	30.37	8.09	22.28
<i>MW-5</i>			
11/26/97	NG	NG	NG
03/17/98	31.15	5.80	25.35
06/30/98	NG	NG	NG
09/24/98	31.15	8.76	22.39
12/16/98	31.15	7.19	23.96
03/16/99	31.15	5.14	26.01
06/23/99	31.15	7.66	23.49
09/23/99	31.15	9.38	21.77
12/29/99	31.15	9.27	21.88

Notes:

NG denotes not gauged

Data obtained from Kleinfelder's Second Quarter 1999 Groundwater Monitoring Report dated July 22, 1999

Data obtained on September 23, 1999 by ATC Associates

Table 3

Cumulative Results of Intrinsic Bioremediation Parameters
New Genico Facility
3927 East 14th Street
Oakland, California

Date Sampled				Field Measurement	
	Dissolved Ferrous Iron (mg/l)	Nitrate (mg/l)	Sulfate (mg/l)	Dissolved Oxygen** (mg/l)	Redox Potential** (mV)
<i>HMW-1</i>					
08/22/96	NA	NA	NA	NA	NA
02/25/97	NA	NA	NA	NA	NA
05/28/97	NA	NA	NA	NA	NA
09/02/97	4.20	2.0	12	0.24	-14.4
11/26/97	<0.01	0.6	ND	2.0	105
03/17/98	0.16	ND	0.8	0.8*	-60.4
06/30/98	0.96	0.4	2.0	0.77	-46.70
09/24/98	ND	1.4	ND	0.4	-17
12/16/98	0.17	5.1	33.0	NR	-40
02/19/99	NA	NA	NA	1.00	107
03/16/99	0.14	4.8	12.0	1.25	-84
06/23/99	0.19	5.8	ND	1.60	-78
09/23/99	0.800	36.9	34.1	0.73	-61
12/29/99	1.40	31.2	29.6	NA	-90
<i>HMW-2</i>					
08/22/96	NA	2,100	2,100	NA	NA
02/25/97	NA	ND	ND	NA	NA
05/28/97	NA	200	200	NA	NA
09/02/97	1.37	ND	0.5	0.38	25.2
11/26/97	0.03	ND	ND	2.5	52
03/17/98	0.01	ND	0.8	0.48*	-50.28
06/30/98	0.01	ND	ND	0.43	-45.50
09/24/98	ND	ND	ND	0.32	67
12/16/98	1.1	ND	ND	0.38	-73
02/19/99	NA	NA	NA	1.10	101
03/16/99	ND	ND	ND	1.20	125
06/23/99	0.43	ND	0.93	1.45	-81
09/23/99	NA	NA	NA	0.55	105
12/29/99	1.90	ND 1.00	ND 5.00	0.58	-71
<i>HMW-3</i>					
08/22/96	NA	ND	ND	NA	NA
02/25/97	NA	ND	ND	NA	NA
05/28/97	NA	ND	ND	NA	NA

Table 3

**Cumulative Results of Intrinsic Bioremediation Parameters
New Genico Facility
3927 East 14th Street
Oakland, California**

Date Sampled				Field Measurement	
	Dissolved Ferrous Iron (mg/l)	Nitrate (mg/l)	Sulfate (mg/l)	Dissolved Oxygen** (mg/l)	Redox Potential** (mV)
<i>HMW-3 (Continued)</i>					
09/02/97	0.03	2	53	0.88	98.6
11/26/97	0.01	3.5	50	1.4	102
03/17/98	ND	1.1	43	0.63*	91.90
06/30/98	ND	4.0	51	0.25	95.70
09/24/98	ND	4.9	95	0.63	-16
12/16/98	ND	4.0	55	0.71	138
02/19/99	NA	NA	NA	0.95	89
03/16/99	ND	3.1	11	0.75	104
06/23/99	ND	6.2	46	1.00	128
09/23/99	NA	NA	NA	0.51	110
12/29/99	NA	NA	NA	NA	NA
<i>HMW-4</i>					
08/22/96	NA	NA	NA	NA	NA
02/25/97	NA	NA	NA	NA	NA
05/28/97	NA	NA	NA	NA	NA
09/02/97	NA	NA	NA	NA	NA
11/26/97	NA	NA	NA	NA	NA
03/17/98	0.12	ND	8.6	2.4*	-26.67
06/30/98	ND	ND	18.0	3.7	-21.7
09/24/98	ND	ND	11	0.58	-17
12/16/98	1.20	ND	12	1.2	-34
02/19/99	NA	NA	NA	NA	NA
03/16/99	ND	ND	23	1.15	-45
06/23/99	1.3	ND	30	1.20	82
09/23/99	NA	NA	NA	NA	NA
12/29/99	0.410	ND 1.00	12.6	NA	-94

Notes

\A denotes no analyzed

\R denotes not reported due to laboratory instrument conditions

mg/L denotes milligrams per liter

\ND denotes not detected above listed detection limit for the method or see actual laboratory analytical report

* dissolved oxygen measured prior to purging

** measured in field

Data obtained on 3/17/98 obtained by Aquatic & Environmental Applications. Data obtained between 6/30/98 to 6/23/99 obtained by Kleinfelder

APPENDIX A

GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

The static water level and floating product level, if present, in each well that contained water was measured with an ORS Interphase Probe Model No. 1068018 or Solonist Water Level Indicator. These instruments are accurate to the nearest 0.01 foot. These groundwater depths were subtracted from wellhead elevations, including corrections for product thickness, when necessary, for gradient evaluation by multiplying product thickness (PT) by a correction factor of 0.8 and subtracting from the DTW (Adjusted DTW = DTW - [PT x 0.8]).

Water samples collected for subjective evaluation were collected by gently lowering approximately half the length of a new disposable or Teflon® bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples were checked for measurable floating hydrocarbon product. All Teflon® bailers are triple-washed with Alconox® and triple-rinsed with distilled water prior to use.

Before water samples were collected from the groundwater monitoring wells, the wells were purged until stabilization of the temperature, pH, and conductivity were obtained. Approximately four well casing volumes were purged before those characteristics stabilized. The quantity of water purged from each well was calculated as follows:

$$\text{One Well Casing Volume} = \pi r^2 h(7.48)$$

Where:

- r = radius of the well casing in feet
- h = column of water in the well in feet (depth-to bottom, depth-to-water)
- 7.48 = conversion constant from cubic feet to gallons

Gallons of water purged divided by gallons in one well casing volume equals well casing volumes removed.

After purging, each well was allowed to recharge to at least 80% of the initial water level. Water samples were collected with a new disposable or Teflon® bailer and carefully poured into 40-milliliter (ml) glass vials, which were filled so as to produce a positive meniscus. Each vial was preserved with hydrochloric acid, sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace. The samples were promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain of Custody Record, to a California-certified laboratory.

APPENDIX B

WATER SAMPLING LOGS

FIELD REPORT/DATA SHEET

Date 12/29/99

Project Number: 61137.0008

Field Technician: J. SALA

Day M Tu **W** Th F

DTW Order	Well ID	Diam.	Lock	Exp. Cap	Total Depth	DTW Initial	DTW Final	Time Sampled	D.O. %	Comments
	HMW-4	1/2"	good	good	14.36	9.40				D.O. Probe will NOT F.T. in 1/2" well
	HMW-2	2	good	good	17.65	8.70				58/63
	HMW-1	2	↓	↓	19.48	8.75	*			Trace of oil/g Product ^{bio-sol}
	HMW-3	2			19.48					In SIDE BUILDING, Building locked

NOTES:

* DID NOT PUT D.O. in product -

Number of Drums Onsite

Full	Empty	TOTAL

Estimated Value _____

ARE ALL DRUMS LABELLED WITH THE LABELS FACING OUT

ATC ASSOCIATES INC. WATER SAMPLING LOG

WELL DESIGNATION HMW-4

SITE: New GENICO

SAMPLE DESIGNATION HMW-4

DATE 12/29/99

PROJECT# 6137.0008

SAMPLER J. SALA

AMBIENT CONDITIONS Sunny

WATER LEVEL INFORMATION

MEASURING POINT T.O.C.

W.L. BEFORE PURGE 9.40 TIME

W.L. AFTER PURGE

TIME

W.L. FOR 80% RECOVERY

W.L. TIME OF SAMPLE

DATE TIME

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD

WELL DEPTH 1436

DIAMETER 2

#CASING VOLUMES 3

SCREENED INTERVAL

PUMP SETTING

PURGE VOLUME CALCULATION 14.36 - 9.40 4.96 x .06 = .29 gal

TIME PURGE BEGINS 1255

ACTUAL AMOUNT PURGED 1.0

TIME	VOLUME	pH	COND.	TEMP	COLOR	TURBIDITY	D.O. mg/L/%	O.R.P
1257	700 ML	6.95	548	16.0	DR grey	MOD	.29 / 30	-94
1302	2000 ML	6.92	550	65.7	↓	↓	.43 / 4.6	-93
1306	3000 ML	6.93	570	65.4	↓	↓	.77 / 8.3	-92

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD

SAMPLING TIME 1320

DATE 12/29/99

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
VOAS	3	40 ML	TPHG/BTEX/MCBE	SEQ/DA	HCL	NONE
AMBER	1	liter	TPH-D/TPH-U	↓	—	—
plastic	1	↓	Nitrate/SULFATE	↓	—	—
↓	1	↓	FERROUS/IRON	↓	—	—

SAMPLING EQUIPMENT INFORMATION

PURGE EQUIPMENT
 SUBMERSIBLE PUMP BAILER (TEFLON)
 BAILER (PVC) HONDA PUMP DEDICATED

SAMPLING EQUIPMENT
 SUBMERSIBLE PUMP BAILER (TEFLON) BAILER (DISPOSABLE)
 BAILER (PVC) DIPPER PRESSURIZED DISPOSABLE BAILER

OTHER: TUBING

OTHER: TUBING

PREVIOUSLY USED IN WELL

PREVIOUSLY USED IN WELL

SITE

SITE

DECON METHOD ALCONOX LIQUINOX

DECON METHOD ALCONOX LIQUINOX

QA/QC INFORMATION

TEMP BLANK YES NO

TRAVEL BLANK YES NO ID TB-1 QA/QC SPIKE YES NO ID

DUPLICATE YES NO ID FIELD BLANK YES NO ID

WELL INTEGRITY good

LOCK- good

NOTES strong odor seen spots started at purge

SIGNATURE

workfile sampling sampling.xls

ATC ASSOCIATES INC. WATER SAMPLING LOG

WELL DESIGNATION HMW-1

SITE: New Grenico

SAMPLE DESIGNATION HMW-1

DATE 12/29/99

PROJECT# 61370008

SAMPLER J. SALA

AMBIENT CONDITIONS Sunny

WATER LEVEL INFORMATION

MEASURING POINT X
 W.L. BEFORE PURGE 8.75 TIME - W.L. AFTER PURGE - TIME -
 W.L. FOR 80% RECOVERY - W.L. TIME OF SAMPLE 9:25 DATE 12/29/99 TIME 11:57

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD

WELL DEPTH 19.48 DIAMETER 2 #CASING VOLUMES 3
 SCREENED INTERVAL - PUMP SETTING -
 PURGE VOLUME CALCULATION 19.48 - 8.75 = 10.73 X .49 = 5.25

TIME PURGE BEGINS 11:21 ACTUAL AMOUNT PURGED 55

TIME	VOLUME	pH	COND.	TEMP	COLOR	TURBIDITY	DO.	O.R.P.
11:24	1.5	6.75	951	64.5	Clear	very slight	1.34 / 14.6	-90
11:27	3.0	6.90	795	65.2	lt olive	+	1.76 / 13.6	-83
11:31	4.5	6.87	7.69	65.7	↓	↓	1.63 / 17.8	-82
11:34	5.5	6.85	7.55	65.8	↓	↓	1.61 / 17.6	-81

WATER SAMPLING INFORMATION MONITORING WELL SAMPLE METHOD

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
VONS	3	40 ML	TPHG/BTEX/MTBE		SEQUOIA	HCL
AMBER	1	Liter	TPH-D/TPH-M			
PLASTIC	1	↓	nitrate/SULFATE			
+	1	↓	Ferrous IRON			

SAMPLING EQUIPMENT INFORMATION

PURGE EQUIPMENT	SAMPLING EQUIPMENT
<input type="checkbox"/> SUBMERSIBLE PUMP <input checked="" type="checkbox"/> BAILER (TEFLON) <u>DISPOSABLE</u>	<input type="checkbox"/> SUBMERSIBLE PUMP <input type="checkbox"/> BAILER (TEFLON) <input checked="" type="checkbox"/> BAILER (DISPOSABLE)
<input type="checkbox"/> BAILER (PVC) <input type="checkbox"/> HONDA PUMP <input type="checkbox"/> DEDICATED	<input type="checkbox"/> BAILER (PVC) <input type="checkbox"/> DIPPER <input type="checkbox"/> PRESSURIZED DISPOSABLE BAILER
OTHER: _____	OTHER: _____
PREVIOUSLY USED IN WELL _____	PREVIOUSLY USED IN WELL _____
SITE _____	SITE _____
DECON METHOD ALCONOX LIQUINOX	DECON METHOD ALCONOX LIQUINOX

QA/QC INFORMATION

TEMP BLANK YES NO
 TRAVEL BLANK YES NO ID TB-1 QA/QC SPIKE YES NO ID _____
 DUPLICATE YES NO ID _____ FIELD BLANK YES NO ID _____
 WELL INTEGRITY good LOCK# 7000

NOTES

SIGNATURE

ATC ASSOCIATES INC. WATER SAMPLING LOG

WELL DESIGNATION HMW-2
 SAMPLE DESIGNATION HMW-2
 AMBIENT CONDITIONS SUNNY

SITE: NEW GENICO
 DATE: 12/29/99
 PROJECT#: 6137.0008
 SAMPLER: J. SALA

WATER LEVEL INFORMATION

MEASURING POINT TOC.
 W.L. BEFORE PURGE 8.70 TIME - W.L. AFTER PURGE - TIME -
 W.L. FOR 80% RECOVERY - W.L. TIME OF SAMPLE 9.20 DATE 12/29/99 TIME 1110

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD

WELL DEPTH 17.65 DIAMETER 2 #CASING VOLUMES 3
 SCREENED INTERVAL - PUMP SETTING -
 PURGE VOLUME CALCULATION 17.65 - 8.70 = 8.95 X .49 = 4.38
 TIME PURGE BEGINS 1043 ACTUAL AMOUNT PURGED 4.5

TIME	VOLUME	pH	COND.	TEMP	COLOR	TURBIDITY	D.O. mg/L / %	O.R.P
1045	1.0	6.79	672	64.1	light	Slight	2.03 / 122.0	-71
1048	2.0	6.79	675	63.7	olive	↓	1.65 / 119.9	-82
1051	3.0	6.81	680	65.0	↓	↓	1.72 / 119.4	-84
1054	4.5	6.84	686	65.5	↓	↓	1.56 / 117.0	-85

WATER SAMPLING INFORMATION MONITORING WELL SAMPLE METHOD

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
VOA'S	3	40 mL	TPH, BTEX / MTBE	SEQUOIA	HCL	NONE
AMBER	1	liter	TPH-D / TPH-M		-	-
plastic	1	↓	Nitrate / SULFATE		-	-
↓	1	↓	FERROUS/IRON		-	-

SAMPLING EQUIPMENT INFORMATION

PURGE EQUIPMENT: SUBMERSIBLE PUMP DISPOSABLE BAILER (TEFLON)
 BAILER (PVC) HONDA PUMP DEDICATED
 OTHER: _____
 PREVIOUSLY USED IN WELL: _____
 SITE: _____
 DECON METHOD ALCONOX LIQUINOX

SAMPLING EQUIPMENT: SUBMERSIBLE PUMP BAILER (TEFLON) BAILER (DISPOSABLE)
 BAILER (PVC) DIPPER PRESSURIZED DISPOSABLE BAILER
 OTHER: _____
 PREVIOUSLY USED IN WELL: _____
 SITE: _____
 DECON METHOD ALCONOX LIQUINOX

QA/QC INFORMATION

TEMP BLANK YES NO
 TRANS BLANK YES NO ID TB-1 QA/QC SPIKE YES NO ID _____
 DUPLICATE YES NO ID _____ FIELD BLANK YES NO ID _____

WELL INTEGRITY good LOCK: good
 NOTES strong odor through purging

SIGNATURE _____

APPENDIX C

**ANALYTICAL LABORATORY REPORT AND
CHAIN OF CUSTODY RECORDS**



January 12, 2000

Al Martinez
ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

RE: New Genico/M912AAW

Dear Al Martinez

Enclosed are the results of analyses for sample(s) received by the laboratory on December 30, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kayvan Kimyai
Project Manager D.M.

CA ELAP Certificate Number 1210



ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

ANALYTICAL REPORT FOR M912AAW

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
HMW-2	M912AAW-01	Water	12/29/99
HMW-1	M912AAW-02	Water	12/29/99
TB-1	M912AAW-03	Water	12/29/99
HMW-4	M912AAW-04	Water	12/29/99





ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				M912AAW-01				
HMW-2							Water	
Purgeable Hydrocarbons	0010135	1/6/00	1/6/00		1000	4410	ug/l	1,D
Benzene	"	"	"		10.0	145	"	D
Toluene	"	"	"		10.0	45.6	"	D
Ethylbenzene	"	"	"		10.0	111	"	D
Xylenes (total)	"	"	"		10.0	80.8	"	D
Methyl tert-butyl ether	"	"	"		50.0	407	"	D
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		153	%	2
				M912AAW-02				
HMW-1							Water	
Purgeable Hydrocarbons	0010135	1/6/00	1/6/00		250	1380	ug/l	1,D
Benzene	"	"	"		2.50	184	"	D
Toluene	"	"	"		2.50	22.7	"	D
Ethylbenzene	"	"	"		2.50	38.6	"	D
Xylenes (total)	"	"	"		2.50	57.8	"	D
Methyl tert-butyl ether	"	"	"		12.5	70.7	"	D
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		134	%	2
				M912AAW-03				
TB-1							Water	
Purgeable Hydrocarbons	0010135	1/6/00	1/6/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		90.7	%	
				M912AAW-04				
HMW-4							Water	
Purgeable Hydrocarbons	0010135	1/6/00	1/6/00		1000	2020	ug/l	3,D
Benzene	"	"	"		10.0	33.9	"	D
Toluene	"	"	"		10.0	22.7	"	D
Ethylbenzene	"	"	"		10.0	ND	"	D
Xylenes (total)	"	"	"		10.0	11.1	"	D
Methyl tert-butyl ether	"	"	"		50.0	66.2	"	D
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		120	%	



ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Gemco
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

**Diesel Hydrocarbons (C9-C24) and Motor Oil by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
HMW-2				<u>M912AAW-01</u>		<u>Water</u>		
Diesel Range Hydrocarbons	0010099	1/4/00	1/6/00		50.0	1560	ug/l	4
Motor Oil (C16-C36)	"	"	"		500	ND	"	
Surrogate: n-Pentacosane	"	"	"	50.0-150		78.6	%	
HMW-1				<u>M912AAW-02</u>		<u>Water</u>		
Diesel Range Hydrocarbons	0010099	1/4/00	1/6/00		50.0	2440	ug/l	4
Motor Oil (C16-C36)	"	"	"		500	3110	"	5
Surrogate: n-Pentacosane	"	"	"	50.0-150		192	%	2
HMW-4				<u>M912AAW-04</u>		<u>Water</u>		
Diesel Range Hydrocarbons	0010099	1/4/00	1/6/00		50.0	2240	ug/l	4
Motor Oil (C16-C36)	"	"	"		500	911	"	5
Surrogate: n-Pentacosane	"	"	"	50.0-150		114	%	



ATC Associates, Inc. - Pleasanton	Project: -	Sampled: 12/29/99
6666 Owens Drive	Project Number: New Genico	Received: 12/30/99
Pleasanton, CA 94588	Project Manager: Al Martinez	Reported: 1/12/00

MTBE by EPA Method 8260A
Sequoia Analytical - Morgan Hill

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>HMW-2</u>				<u>M912AAW-01</u>			<u>Water</u>	
Methyl tert-butyl ether	0010262	1/10/00	1/10/00		0.500	ND	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	70 0-130		499	%	6



ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Morgan Hill

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>HMW-2</u> Ferrous Iron	0010189	1/5/00	1/6/00	<u>M912AAW-01</u> EPA 6010A	0.0100	1.90	<u>Water</u> mg/l	
<u>HMW-1</u> Ferrous Iron	0010189	1/5/00	1/6/00	<u>M912AAW-02</u> EPA 6010A	0.0100	1.40	<u>Water</u> mg/l	
<u>HMW-4</u> Ferrous Iron	0010189	1/5/00	1/6/00	<u>M912AAW-04</u> EPA 6010A	0.0100	0.410	<u>Water</u> mg/l	



ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

**Anions by EPA Method 300.0
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
				<u>M912AAW-01</u>				
<u>HMW-2</u> Nitrate as NO3	0010061	12/31/99	12/31/99	EPA 300.0	1.00	ND	<u>Water</u> mg/l	D
Sulfate as SO4	"	"	"	EPA 300.0	5.00	ND	"	D
				<u>M912AAW-02</u>				
<u>HMW-1</u> Nitrate as NO3	0010061	12/31/99	12/31/99	EPA 300.0	1.00	31.2	<u>Water</u> mg/l	D
Sulfate as SO4	"	"	"	EPA 300.0	5.00	29.6	"	D
				<u>M912AAW-04</u>				
<u>HMW-4</u> Nitrate as NO3	0010061	12/31/99	12/31/99	EPA 300.0	1.00	ND	<u>Water</u> mg/l	D
Sulfate as SO4	"	"	"	EPA 300.0	5.00	12.6	"	D



ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control Sequoia Analytical - Morgan Hill

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0010135			Date Prepared: 1/6/00		Extraction Method: EPA 5030B [P/T]					
Blank			0010135-BLK1							
Purgeable Hydrocarbons	1/6/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.50				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.44	"	70.0-130	94.4			
LCS			0010135-BS1							
Benzene	1/6/00	10.0		7.22	ug/l	70.0-130	72.2			
Toluene	"	10.0		8.15	"	70.0-130	81.5			
Ethylbenzene	"	10.0		9.45	"	70.0-130	94.5			
Xylenes (total)	"	30.0		28.6	"	70.0-130	95.3			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.16	"	70.0-130	91.6			
Matrix Spike			0010135-MS1 M912AAO-06							
Benzene	1/6/00	10.0	ND	7.20	ug/l	60.0-140	72.0			
Toluene	"	10.0	ND	8.27	"	60.0-140	82.7			
Ethylbenzene	"	10.0	ND	9.52	"	60.0-140	95.2			
Xylenes (total)	"	30.0	ND	28.7	"	60.0-140	95.7			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.72	"	70.0-130	87.2			
Matrix Spike Dup			0010135-MSD1 M912AAO-06							
Benzene	1/6/00	10.0	ND	8.58	ug/l	60.0-140	85.8	25.0	17.5	
Toluene	"	10.0	ND	8.68	"	60.0-140	86.8	25.0	4.84	
Ethylbenzene	"	10.0	ND	9.30	"	60.0-140	93.0	25.0	2.34	
Xylenes (total)	"	30.0	ND	27.0	"	60.0-140	90.0	25.0	6.14	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.23	"	70.0-130	92.3			



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Project -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

**Diesel Hydrocarbons (C9-C24) and Motor Oil by DHS LUFT/Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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Batch: 0010099

Date Prepared: 1/4/00

Extraction Method: EPA 3510B

Blank

0010099-BLK1

Diesel Range Hydrocarbons	1/6/00			ND	ug/l	50.0				
Motor Oil (C16-C36)	"			ND	"	500				
Surrogate: n-Pentacosane	"	100		79.0	"	50.0-150	79.0			

LCS

0010099-BS1

Diesel Range Hydrocarbons	1/6/00	1000		684	ug/l	60.0-140	68.4			
Surrogate n-Pentacosane	"	100		67.4	"	50.0-150	67.4			

LCS Dup

0010099-BSD1

Diesel Range Hydrocarbons	1/6/00	1000		937	ug/l	60.0-140	93.7	50.0	31.2	
Surrogate n-Pentacosane	"	100		94.4	"	50.0-150	94.4			



ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

**MTBE by EPA Method 8260A/Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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Batch: 0010262

Date Prepared: 1/10/00

Extraction Method: EPA 5030B [P/T]

Blank

0010262-BLK1

Methyl tert-butyl ether	1/10/00			ND	ug/l	0.500				
Surrogate: 1,2-Dichloroethane-d4	"	10.0		8.88	"	70.0-130	88.8			

LCS

0010262-BS1

Methyl tert-butyl ether	1/10/00	10.0		8.02	ug/l	70.0-130	80.2			
Surrogate: 1,2-Dichloroethane-d4	"	10.0		7.53	"	70.0-130	75.3			

Matrix Spike

0010262-MS1 M912750-02

Methyl tert-butyl ether	1/10/00	2000	3320	4900	ug/l	70.0-130	79.0			D
Surrogate: 1,2-Dichloroethane-d4	"	10.0		7.88	"	70.0-130	78.8			

Matrix Spike Dup

0010262-MSD1 M912750-02

Methyl tert-butyl ether	1/10/00	2000	3320	4860	ug/l	70.0-130	77.0	25.0	2.56	D
Surrogate: 1,2-Dichloroethane-d4	"	10.0		7.55	"	70.0-130	75.5			



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Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

**Total Metals by EPA 6000/7000 Series Methods/Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0010189			Date Prepared: 1/5/00			Extraction Method: EPA 3020A				
Blank			0010189-BLK1							
Ferrous Iron	1/6/00			ND	mg/l	0.0100				
LCS			0010189-BS1							
Ferrous Iron	1/6/00	1.00		1.00	mg/l	80.0-120	100			
Matrix Spike			0010189-MS1 M912AAW-01							
Ferrous Iron	1/6/00	1.00	1.90	2.60	mg/l	80.0-120	70.0			7
Matrix Spike Dup			0010189-MSD1 M912AAW-01							
Ferrous Iron	1/6/00	1.00	1.90	2.80	mg/l	80.0-120	90.0	20.0	25.0	8



ATC Associates, Inc. - Pleasanton	Project -	Sampled: 12/29/99
6666 Owens Drive	Project Number New Genico	Received: 12/30/99
Pleasanton, CA 94588	Project Manager Al Martinez	Reported: 1/12/00

**Anions by EPA Method 300.0/Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0010061			Date Prepared: 12/31/99			Extraction Method: General Preparation				
Blank			0010061-BLK1							
Nitrate as NO3	12/31/99			ND	mg/l	0.100				
Sulfate as SO4	"			ND	"	0.500				
LCS			0010061-BS1							
Nitrate as NO3	12/31/99	10.0		9.85	mg/l	80.0-120	98.5			
Sulfate as SO4	"	10.0		9.67	"	80.0-120	96.7			
Matrix Spike			0010061-MS1 M912AAW-01							
Nitrate as NO3	12/31/99	100	ND	101	mg/l	75.0-125	101			
Sulfate as SO4	"	100	ND	99.0	"	75.0-125	99.0			
Matrix Spike Dup			0010061-MSD1 M912AAW-01							
Nitrate as NO3	12/31/99	100	ND	101	mg/l	75.0-125	101	20.0	0	
Sulfate as SO4	"	100	ND	98.1	"	75.0-125	98.1	20.0	0.913	



ATC Associates, Inc. - Pleasanton
6666 Owens Drive
Pleasanton, CA 94588

Project: -
Project Number: New Genico
Project Manager: Al Martinez

Sampled: 12/29/99
Received: 12/30/99
Reported: 1/12/00

Notes and Definitions

#	Note
D	Data reported from a dilution
1	Chromatogram Pattern: Gasoline C6-C12
2	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
3	Chromatogram Pattern: Weathered Gasoline C6-C12 + Unidentified Hydrocarbons C6-C12..
4	Chromatogram Pattern. Unidentified Hydrocarbons C9-C24
5	Chromatogram pattern: Motor Oil C16-C36.
6	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
7	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch
8	The RPD value for this QC sample is above the established control limit. Review of associated QC indicates the high RPD does not represent an out-of-control condition for the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

885 Jarvis • Modesto, CA 95207 (408) 776-9600 FAX (408) 782-8888
 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 FAX (925) 988-9673
 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342
 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 FAX (650) 232-9612

Company Name: ATC ASSOCIATES		Project Name: NEW GENICO	
Mailing Address: 6666 OWENS DR		Billing Address (if different): SAME	
City: PLEASANTON State: CA	Zip Code: 94588		
Telephone: (925) 460-5300	FAX #: (925) 463-2559	P.O. #: 61137.0008	
Report To: AL MARTINEZ	Sampler: J. SALA	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 Time 7 Working Days 2 Working Days
 5 Working Days 24 Hours **M 9/12 AM**

Drinking Water
 Waste Water
 Other

Analyses Requested
 TPH-G/BTEX/MXBTX
 TPH-D
 TPH-M
 Nitrate
 SULFATE
 FERROUS IRON
 (FILTER AT LAB)

Client Sample ID	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-G/BTEX/MXBTX	TPH-D	TPH-M	Nitrate	SULFATE	FERROUS IRON (FILTER AT LAB)	Comments
1 HMW-4	12/21/99 1320	water	3	VOAS	04	X						
2 ↓	↓	↓	1	AMBER			X	X				
3 ↓	↓	↓	2	plastic					X	X	X	
4												
5												
6												
7												
8												
9												
10												

Relinquished By: J. Sala	Date: 12/30/99	Time: 9:25	Received By: Steve Tz	Date: 12/30/99	Time: 9:25
Relinquished By: Steve Tz	Date: 12/30/99	Time:	Received By: TJT (MM)	Date: 12/30/99	Time: 14:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

188 [redacted] vis [redacted] • Mc [redacted] Hill [redacted] 950 [redacted] 408 [redacted] 960 [redacted] FAX [redacted] 782 [redacted]
 □ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
 □ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 FAX (925) 988-9673
 □ 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342
 □ 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 FAX (650) 232-9612

Company Name: ATC ASSOCIATES Project Name: NEW GENICO
 Mailing Address: 6666 OWENS DR Billing Address (if different): SAME
 City: Pleasanton State: CA Zip Code: 94588
 Telephone (925) 460-5300 FAX #: (925) 463-2559 P.O. #: 61137, 0008
 Report to: AL MARTINEZ Sampler: J. SALA QC Data: Level D (Standard) Level C Level B Level A

Turnaround Time: 10 Working Days 3 Working Days 2 - 8 Hours
 7 Working Days 2 Working Days Drinking Water
 5 Working Days 24 Hours Waste Water
 Other

Analyses Requested:
 TPH-G/BTEX/MBB
 TPH-D
 TPH-M
 Nitrate
 SULFATE
 FERROUS IRON (FILTER-AT-LAB)

Client Sample ID	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-G/BTEX/MBB	TPH-D	TPH-M	Nitrate	SULFATE	FERROUS IRON (FILTER-AT-LAB)	Comments
1 HMW-2	12/29/99 1106	Water	3	VOAS	01	X						
2 ↓	↓	↓	1	AMBER			X	X				
3 ↓	↓	↓	2	Plastic					X	X		
4 HMW-1	1147	↓	3	VOAS	02	X						
5 ↓	↓	↓	1	AMBER			X	X				
6 ↓	↓	↓	2	Plastic					X	X		
7 TB-1	—	↓	3	VOAS	03	X						BUBBLE in samples
8												
9												
10												

Relinquished By: <u>Jeffrey D. Sala</u>	Date: <u>12/30/99</u>	Time: <u>9:25</u>	Received By: <u>Steve TR</u>	Date: <u>12/30/99</u>	Time: <u>9:25</u>
Relinquished By: <u>Steve TR</u>	Date: <u>12/30/99</u>	Time:	Received By: <u>TJT (MH)</u>	Date: <u>12-30-99</u>	Time: <u>14:00</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Pink - Client
Yellow - Sequoia
White - Sequoia