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TECHNOLOGIES

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Quarterly Groundwater Monitoring
19984 Meekland Avenue
Hayward, California

February 1, 1995

206-453-8383

Prepared For :

Mr. Jerry Harbert
20150 Rancho Bella Vista
Saratoga, California 95070

AGI Project No. 15,833.002

A Report Prepared For:


Mr. Jerry Harbert
20150 Rancho Bella Vista
Saratoga, California 95070

QUARTERLY GROUNDWATER MONITORING
19984 MEEKLAND AVENUE
HAYWARD, CALIFORNIA

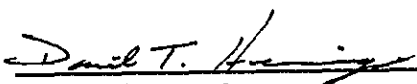
February 1, 1995

453-8383

by



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AGI Project No. 15,833.002.04

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INTRODUCTION

GENERAL

This report describes the actions conducted during quarterly groundwater monitoring performed by AGI Technologies (AGI), on behalf of Mr. Jerry Harbert (Formerly Harbert Transportation), at 19984 Meekland Avenue (the site) in Hayward, California. The work described herein was conducted in accordance with AGI's existing scope of services as authorized by AGI Service Agreement dated June 26, 1994.

PURPOSE AND SCOPE OF SERVICES

The purpose of our work was to perform groundwater monitoring at eight on-site and two off-site groundwater monitoring wells. Our specific scope of services include the following tasks:

- Collecting groundwater elevations from all 10 monitoring wells.
- Purging each monitoring well prior to sampling.
- Collecting and submitting groundwater samples for chemical testing of petroleum hydrocarbons and chlorinated solvents.
- Evaluating the hydrogeologic and chemical data generated during field activities.
- Preparing this report.

BACKGROUND

Site Setting

The site is relatively level and located at the northeast corner of Meekland Avenue and Blossom Way, in an unincorporated area of Alameda County near the City of Hayward, as shown on Figure 1. It was owned by Mr. Jerry Harbert and is currently unoccupied. The site is fenced on all sides and has no aboveground structures. The site surface is paved with concrete and asphaltic concrete, except where tanks and associated piping were previously located.

Land use in the area includes residential and commercial properties. The site is surrounded by single-family homes and multi-family complexes and is bounded by residential property to the east and north, Blossom Way to the south, and Meekland Avenue to the west. Commercial businesses located at the other three corners of the Meekland/Blossom intersection include a liquor store; an auto repair shop; and a strip mall that includes a grocery store, hair salon, and comics/trading shop. Both the liquor store and auto repair shop sites were previously occupied by gas stations. We understand that fuel tanks have been removed from both locations.

Ten on-site and two off-site groundwater monitoring wells were installed during previous investigations (see Figure 2). On-site wells MW1 and MW2 (not shown on the Site Plan) were subsequently abandoned.

Geological Setting

The site is underlain by fine-grained alluvial fan and flood plain deposits derived from the Diablo Range located approximately 2 miles to the east. Three to four feet of fill overlies native soils at the site. The fill consists of clayey and sandy gravel. Underlying native deposits consist of silty clay to clayey silt, with minor sand and gravel. Thin (3 to 4 inches) lenses of silty sand and gravel were encountered at various depths during monitoring and well installation. The clay and silt deposits reportedly extend to approximately 45 feet below the ground surface (bgs), which was the maximum depth explored. The deposits were reported to be homogeneous. The groundwater gradient direction at the site has historically been reported to be to the northwest at a depth of approximately 28 feet bgs.

Historical Use

During the 1940s and 1950s, the subject site was operated as a family-owned service station. Later, Harbert Transportation purchased the site and operated it as a vehicle fueling and maintenance facility. Durham Transportation used the site for vehicle parking from 1986 to 1989. In August 1989, three (one 4,000-gallon, one 5,000-gallon, and one 6,000-gallon) gasoline underground storage tanks (USTs) and one 500-gallon waste oil UST were removed from the site.

Previous Assessments

Previous site assessment results indicate that gasoline constituents benzene, ethylbenzene, toluene, and total xylenes (BETX) and petroleum hydrocarbons quantified as gasoline have been detected in soil samples collected from 12 to 28 feet bgs in the area of the three former USTs. A soil vapor survey of the site indicated gasoline and BETX were present from 20 to 28 feet bgs throughout most of the site. Analyses of groundwater samples from the on- and off-site wells indicate the presence of gasoline, BETX, and low levels of halogenated volatile organic compounds (HVOCs). The lateral extent of impacted groundwater was not delineated during the previous assessments.

GROUNDWATER MONITORING

Elevation Survey

On August 11, 1994, AGI performed a level survey to determine the top of well casing elevations of the monitoring wells using an assumed elevation of 100 feet above Mean Sea Level as an arbitrary datum. The well casing top of monitoring well MW3 was used as the bench mark. Monitoring well MW3 is located at the northwest corner of the site as shown on Figure 2.

Monitoring and Sample Collection

On October 20, 1994, AGI measured the depth to groundwater beneath the top of casing of the 10 wells to an accuracy of 0.01 feet and checked for the presence of free petroleum product (FP). No FP was encountered during this monitoring event. Depth to groundwater ranged from 26.46 to 28.25 feet bgs. Groundwater elevation data are presented in Table 1. A groundwater contour map constructed using the water level data is presented on Figure 3. Based on the data collected, the groundwater flow direction is toward the northwest, generally consistent with previous monitoring results.

AGI purged the wells using clean polyethylene bailers until the pH, temperature, and specific conductance of the purged water stabilized. At least three well volumes of water were removed from each well during purging. After purging, groundwater samples were collected from each of the wells using clean, disposable polyethylene bailers. Groundwater sampling procedures are described in Appendix A.

Sample Handling

The samples were placed in appropriate containers for the analytical tests performed. All samples were labeled, sealed, and placed in a chilled, thermally insulated cooler for transport to the project laboratory. Sample handling was documented using chain-of-custody records. Copies of chain-of-custody records are included in Appendix B.

CHEMICAL ANALYSIS

ANALYTICAL METHODS

Samples were submitted to Anametrix Laboratories, a California State-certified analytical laboratory located in San Jose, California. The samples were analyzed for total petroleum hydrocarbons quantified as diesel (TPH-D) and gasoline (TPH-G) using EPA Method 8015 Modified, BETX using EPA Method 8020, and HVOCs using EPA Method 8010. Results of groundwater chemical analyses are presented in Table 2 and shown graphically on Figure 4.

ANALYTICAL RESULTS

TPH-G was detected in samples collected from all wells except MW8 at concentrations ranging from 69 to 23,000 micrograms per liter ($\mu\text{g}/\text{L}$). Results of TPH-D analyses indicate the presence of diesel-range petroleum hydrocarbons in samples collected from all wells except MW4 and MW8 at concentrations ranging from 190 to 2,000 $\mu\text{g}/\text{L}$. However, the laboratory noted detections of petroleum hydrocarbons in the diesel range were primarily due to a lighter petroleum product (possibly gasoline) in the C_6 to C_{12} hydrocarbon range.

Benzene was detected in all wells except MW8 at concentrations ranging from 1.9 to 7,900 $\mu\text{g}/\text{L}$. Ethylbenzene was detected in all wells except MW4 and MW8 at concentrations ranging from 4.5 to 1,200 $\mu\text{g}/\text{L}$. Toluene was detected in MW3, MW5, MW6, MW7, and MW9 at concentrations ranging from 4.5 to 1,500 $\mu\text{g}/\text{L}$. Total xylenes were detected in all wells except MW4 and MW8 ranging from 6.8 to 3,200 $\mu\text{g}/\text{L}$.

Results of HVOC analyses indicate the presence of 1,2-dichloroethane (1,2-DCA) in samples collected from MW3, MW5, MW6, MW7, MW9, and MW10 at concentrations ranging from 1.8 to 85 $\mu\text{g}/\text{L}$. Tetrachloroethene (PCE) was detected in samples collected from MW7 and MW8 at 0.74 and 0.72 $\mu\text{g}/\text{L}$, respectively.

CONCLUSIONS

Groundwater elevations have decreased in all wells since the July 1994 monitoring event. The groundwater flow direction continues to be toward the northwest. Concentrations of petroleum hydrocarbons and HVOCs did not change significantly from the last monitoring event

DISTRIBUTION

3 Copies

c/o Mr. Jerry R. Harbert
Reed, Elliott, Creech & Roth
99 Almaden Boulevard
Eighth Floor
San Jose, California 95113

Attention: Mr. Jeffrey S. Lawson

3 Copies

Durham Transportation, Inc.
9171 Capital of Texas Highway North
Travis Building, Suite 200
Austin, Texas 78759

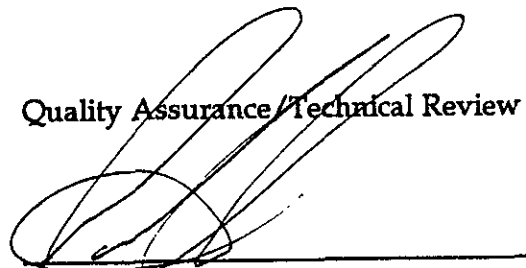
Attention: Mr. David Delamontte

1 Copy

Alameda County Health Care Services Agency
UST Local Oversight Program
80 Swan Way, Room 200
Oakland, California 94621

Attention: Ms. Julliet Shin

Quality Assurance/Technical Review by:



Gary Laakso
Remediation Services Manager

Table 1
Groundwater Elevation Data
 Harbert Transportation/Meekland Avenue
 Hayward, California

Well Number	Date Sampled	Top of Casing Elevation (feet)	Depth to Groundwater (ft bgs)	Groundwater Elevation (feet)
MW3	10/20/94	100.00	27.12	72.88
MW4	10/20/94	100.27	27.32	72.95
MW5	10/20/94	100.59	27.71	72.88
MW6	10/20/94	100.57	27.68	72.89
MW7	10/20/94	101.22	28.25	72.97
MW8	10/20/94	100.72	27.73	72.99
MW9	10/20/94	99.77	26.90	72.87
MW10	10/20/94	99.29	26.46	72.83
MW11	10/20/94	99.75	26.89	72.86
MW12	10/20/94	101.03	28.11	72.92

Note:

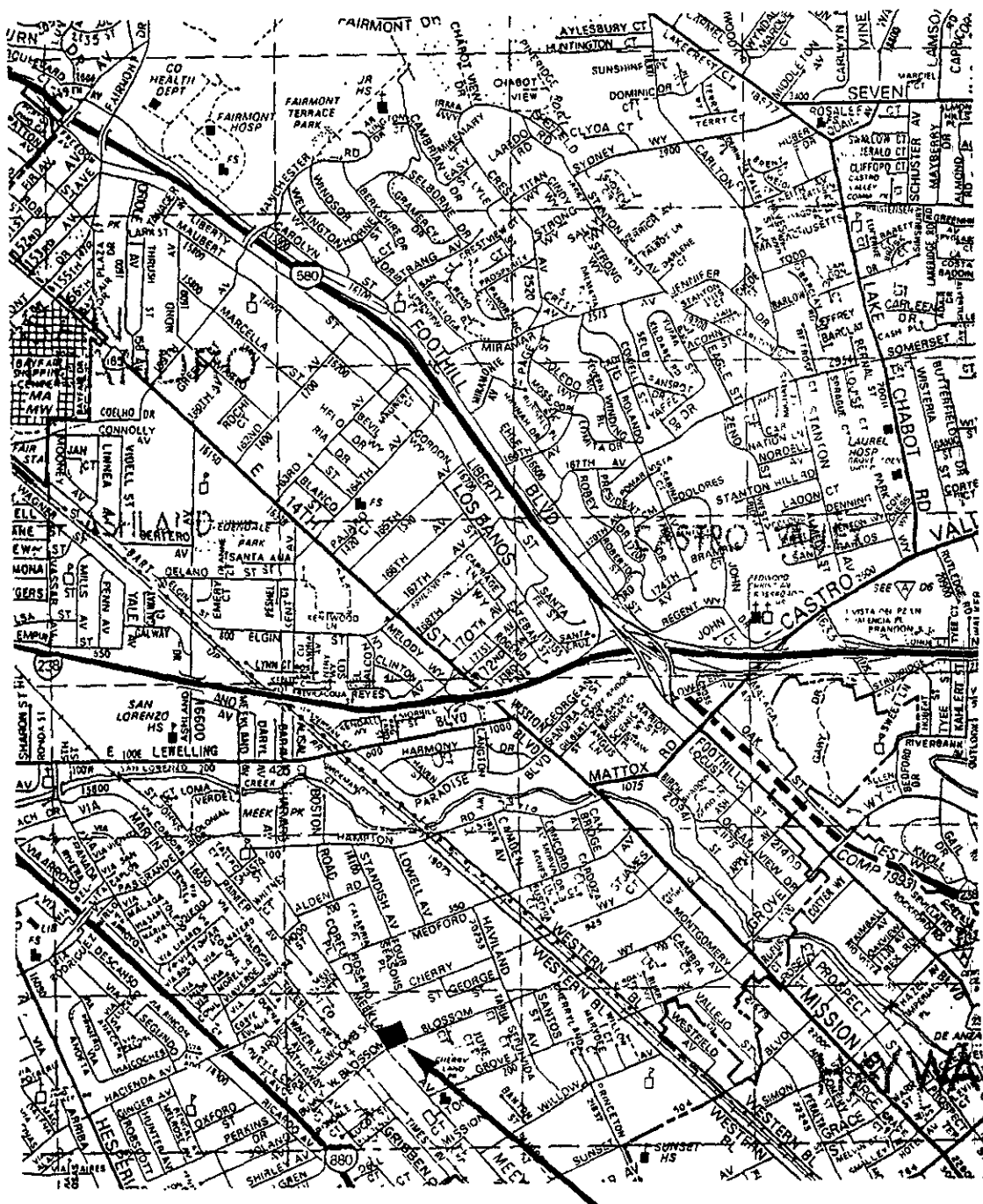
ft bgs - Feet below ground surface.

Table 2
Summary of Groundwater Chemical Analyses
 Harbert Transportation/Meekland Avenue
 Hayward, California

Well	Date Sampled	EPA Test Methods							
		8015 M		BETX 5030/8020				8010	
		TPH Gasoline µg/L	TPH Diesel µg/L	Benzene	Ethylbenzene µg/L	Toluene	Xylenes	1,2-DCA µg/L	PCE µg/L
MW3	07/28/94	7,700	970 ^a	1,800	810	ND	600	22	ND
	10/21/94	7,400	810	1,900	900	37	780	25	
MW4	07/28/94	120	ND	7.9	0.7	1.1	ND	ND	ND
	10/21/94	69	ND	3.4	ND	ND	ND	ND	
MW5	07/29/94	30,000	2,200 ^a	9,300	1,100	1,800	2,300	110	ND
	10/21/94	23,000	1,500	7,900	780	1,500	2,900	85	
MW6	07/29/94	15,000	2,100 ^b	3,100	1,100	71	2,000	37	ND
	10/21/94	18,000	1,500	3,900	1,200	170	3,200	35	
MW7	07/29/94	2,600	530 ^c	470	220	ND	310	2.7	6
	10/21/94	1,700	280	290	140	4.5	240	1.8	0.74
MW8	07/28/94	ND	78 ^a	ND	ND	ND	ND	ND	0.72
	10/21/94	ND	ND	ND	ND	ND	ND	ND	
MW9	07/28/94	6,000	1,300 ^c	90	170	27	370	26	ND
	10/21/94	6,900	600	1,800	280	220	1,500	31	
MW10	07/28/94	6,700	2,000 ^c	99	180	57	430	13	ND
	10/21/94	8,600	2,000	93	200	ND	680	12	
MW11	07/28/94	450	150 ^a	6.2	20	1.1	6.6	ND	ND
	10/21/94	460	190	4.9	14	ND	12	ND	
MW12	07/28/94	240	160	1.9	12	ND	5.8	ND	ND
	10/21/94	260	190	1.9	4.5	ND	6.8	ND	
Method Detection Limit		50	50	0.5	0.5	0.5	0.5	0.5	0.5

Notes:

- a) Hydrocarbons quantified as diesel are primarily due to discrete peaks not indicative of diesel fuel.
 - b) Hydrocarbons quantified as diesel are primarily due to the presence of a lighter petroleum product (C6-C12), possibly gasoline.
 - c) Hydrocarbons quantified as diesel are due to the presence of a lighter petroleum product (C6-C12) and discrete peaks not indicative of diesel fuel.
- µg/L - Micrograms per liter, equivalent to parts per billion.
 1,2-DCE - 1,2-dichloroethane.
 TPH-Gasoline - Total petroleum hydrocarbons quantified as gasoline.
 PCE - Tetrachloroethene.
 TPH-Diesel - Total petroleum hydrocarbons quantified as diesel.
 ND - Not detected at or above method detection limit.



Site



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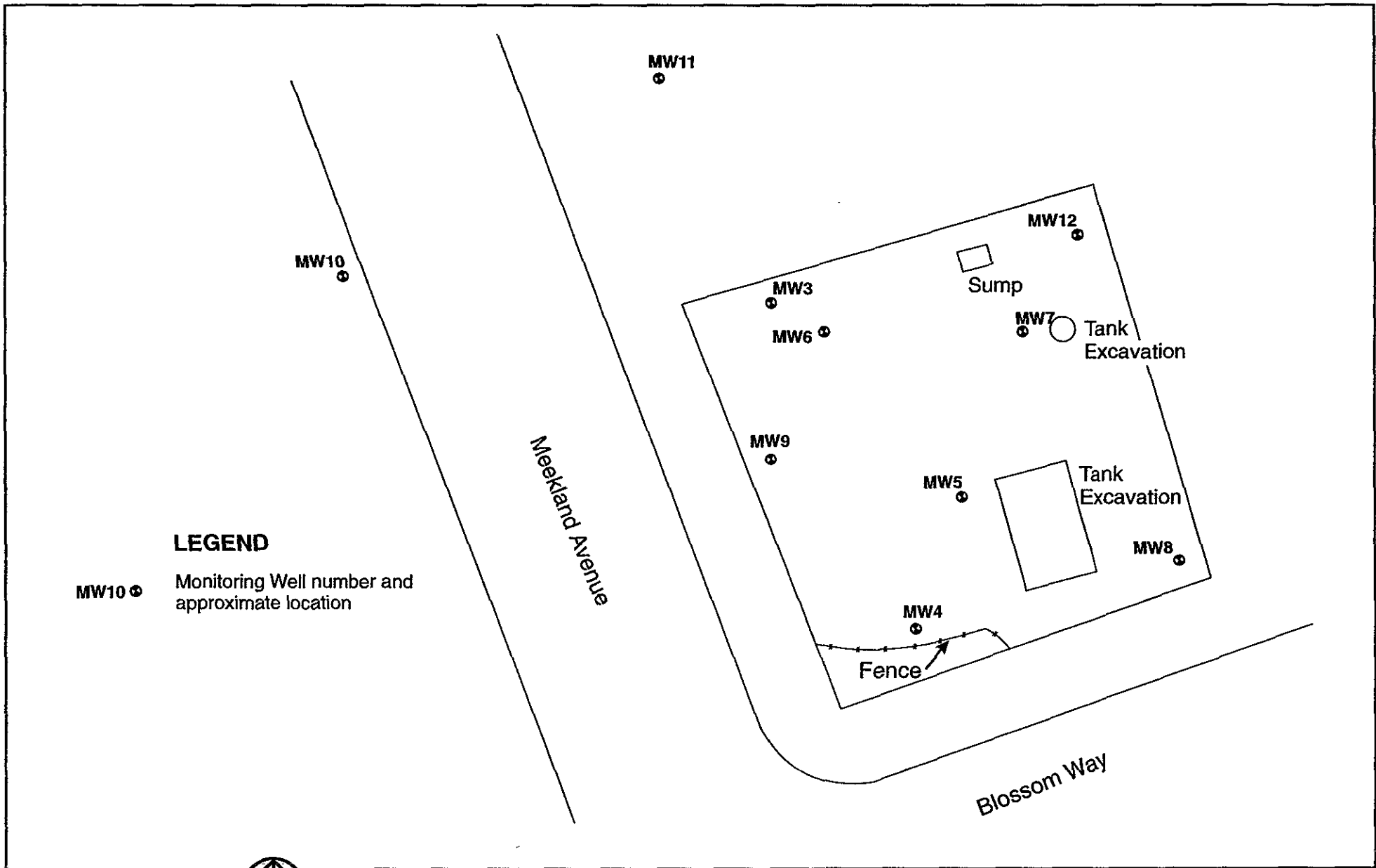
Scale in Feet

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Vicinity Map
Harbert Transportation/Meekland Avenue
Hayward, California

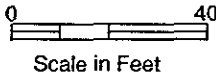
FIGURE
1

PROJECT NO. 15,833.002.04 DRAWN DFF DATE 15 Aug 94 APPROVED [Signature] REVISED DFF DATE 12 Oct 94

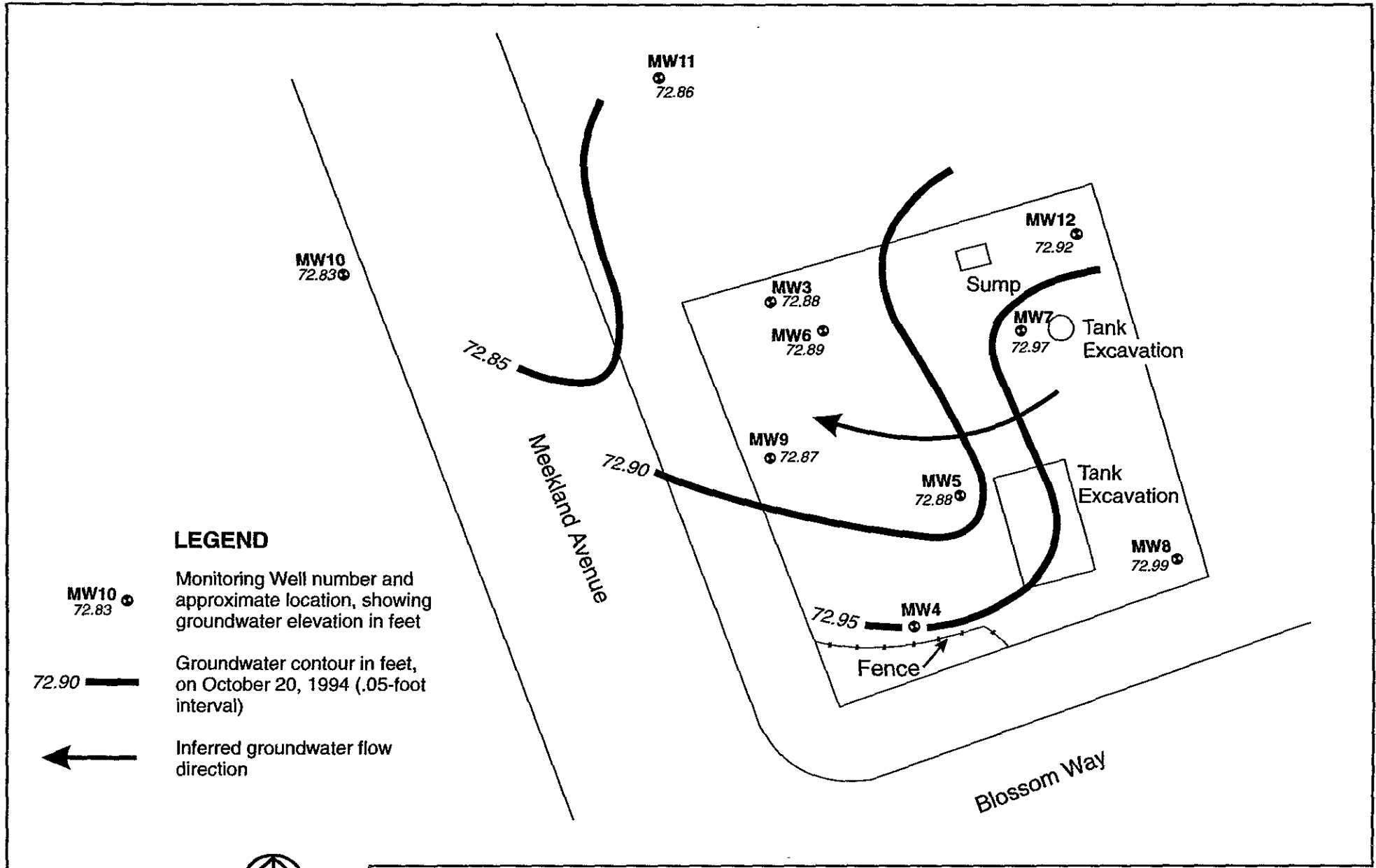


LEGEND

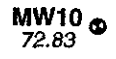
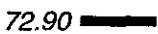

MW10 ● Monitoring Well number and approximate location

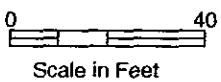




	Site Plan			FIGURE	
	Harbert Transportation/Meekland Avenue Hayward, California				2
PROJECT NO.	DRAWN	DATE	APPROVED	REVISD	DATE
15,833.002	DFE	29 August 94		DFE	24 Jan 95
siteplan.cdr					



LEGEND

- 
 Monitoring Well number and approximate location, showing groundwater elevation in feet
- 
 Groundwater contour in feet, on October 20, 1994 (.05-foot interval)
- 
 Inferred groundwater flow direction



	Groundwater Elevation and Contour Map Harbert Transportation/Meekland Avenue Hayward, California				FIGURE 3
	PROJECT NO 15,833.002 <small>grdwat.cdr</small>	DRAWN DFF	DATE 29 August 94	APPROVED 	REVISED DFF

B 93
E 200
T ND
X 680
TPH-G 8,600
TPH-D 2,000
1,2 DCA 12
PCE ND

MW10

B 4.9
E 14
T ND
X 12
TPH-G 460
TPH-D 190
1,2 DCA ND
PCE ND

MW11

B 1,900
E 900
T 37
X 780
TPH-G 7,400
TPH-D 810
1,2 DCA 25
PCE ND

MW3

MW6

B 3,900
E 1,200
T 170
X 3,200
TPH-G 18,000
TPH-D 1,500
1,2 DCA 35
PCE ND

MW12

B 1.9
E 4.5
T ND
X 6.8
TPH-G 260
TPH-D 190
1,2 DCA ND
PCE ND

B 290
E 140
T 4.5
X 240
TPH-G 1,700
TPH-D 280
1,2 DCA 1.8
PCE 0.74

B 1,800
E 280
T 220
X 1,500
TPH-G 6,900
TPH-D 600
1,2 DCA 31
PCE ND

MW9

B 7,900
E 780
T 1,500
X 2,900
TPH-G 23,000
TPH-D 1,500
1,2 DCA 85
PCE ND

MW5

B ND
E ND
T ND
X ND
TPH-G ND
TPH-D ND
1,2 DCA ND
PCE 0.72

MW8

B 3.4
E ND
T ND
X ND
TPH-G 69
TPH-D ND
1,2 DCA ND
PCE ND

MW4

LEGEND

MW10

Monitoring Well number and approximate location

All values expressed as $\mu\text{g/L}$ - micrograms per liter

ND Not Detected above method detection limit

Meekland Avenue

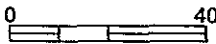
Blossom Way

Sump

Tank Excavation

Tank Excavation

Fence



Scale in Feet

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siteplan.cdr

PROJECT NO.
15,833.002

DRAWN
DFF/ALW

DATE
01 February 95

APPROVED

REVISED

FIGURE

4

DATE

Site Plan

Harbert Transportation/Meekland Avenue
Hayward, California

APPENDIX A

Groundwater Monitoring Procedures

APPENDIX A

Groundwater Monitoring Procedures

INTRODUCTION

The following sections describe procedures which are followed by AGI Technologies (AGI) during quarterly groundwater monitoring at 19984 Meekland Avenue in Hayward, California. Site-specific variations may be implemented, with the approval of the project manager, based upon site conditions, client or regulatory agency requirements, or other factors, provided the quality of data collected is not in any way reduced.

GROUNDWATER MONITORING PROCEDURES

Elevation Survey

Following well installation, the top of each well casing was surveyed using an on-site benchmark with an assumed elevation of 100.00 feet. Depth to groundwater from the survey mark at the casing top was measured in each well on June 30, 1994.

Water Level Measurements

Prior to sampling, the depth to groundwater was measured in each monitoring well. Measurements were taken at the highest point on the top of each well casing and obtained to the nearest hundredth of a foot using an electronic water level meter. Water level measurements were recorded on a separate field sampling record for each well. The total depth of each well was also measured to the nearest one-half foot and recorded on the field sampling record. These measurements were used to calculate the minimum purge volume for each well and to prepare the groundwater contour map.

Groundwater Sampling Procedures

Following collection of water level measurement data, each well was purged of a minimum of three well casing volumes of water prior to sample collection. During purging, pH, temperature, and specific conductance of the pump discharge were monitored using a calibrated electronic monitoring device. The well was considered fully purged when the pH, temperature, and specific conductance of the purge water stabilized, or when the well was pumped dry (low-yield wells only). Immediately following purging of each well, samples were collected using a 2-inch or 4-inch polyethylene bailer. A new, precleaned disposable bailer was used for each well.

Samples were collected in appropriate Environmental Protection Agency (EPA)-approved containers based upon the analyses required. Samples most sensitive to field conditions were collected first, followed by less sensitive samples (in descending order). Following collection, each sample was placed on Blue Ice in a chilled cooler prior to transport to the laboratory for analysis.

Following sample collection, all nondisposable sampling equipment was decontaminated using the following procedure:

- Step 1:* Rinse and preclean in potable water.
- Step 2:* Wash in solution of laboratory-grade nonphosphate-based soap and potable water.
- Step 3:* Dip rinse in potable water.
- Step 4:* Rinse with distilled water.

All solutions were renewed between sampling. Scrub brushes and nylon scrubbers were used during all steps. All equipment was air dried, when possible, and held in clean plastic bags between sampling.

Quality Assurance

The following steps were taken, as appropriate, during groundwater sampling to assure the quality of samples collected and field data recorded:

- Based upon review of the most recent historical analytical data from each well, a monitoring sequence was determined in order to prevent potential cross-contamination of the monitoring wells. The sequence was determined by the level of contamination in each well, and progressed from least contaminated to most contaminated (MW8 to MW5).
- To assure the accuracy of field parameter measurements, pH and specific conductance monitoring devices were calibrated each day prior to commencing sampling activities. A single-point calibration was used to verify proper function of the specific conductance meter, and a three-point calibration was used to ensure proper pH meter operation. No calibration of the electronic thermometer was required.
- The parameters pH, specific conductance, and temperature were monitored from the purged water. The stabilization variance limits employed during monitoring for these parameters are 0.1 pH units, 10 percent specific conductance, and 1°F. Readings were taken following removal of one well casing volume and each successive well casing volume.
- A bottom-emptying device was used to limit the loss of volatile organic compounds. After the sample was collected, volatile organic analysis (VOA) vials were checked for the presence of headspace. Samples with headspace were emptied and a replacement sample was collected. Each sample was labeled and placed in a chilled cooler for transport to the laboratory.
- Chain-of-custody documentation accompanied all samples collected and submitted to the laboratory. The original chain-of-custody document remained with the samples until analyzed, and a copy of each is retained in AGI's files. The chain-of-custody lists the sample identification number as shown on the sample label, number of sample containers, analyses required, date and time of collection, sampler's initials, and the relinquishing and receiving signatures of persons in control of sample handling following collection until delivery to the laboratory.

- Following each day of sampling, field notes and the sampling record were reviewed to ensure completeness and accuracy of documentation of sampling activities. Review included verification of sample identification numbers, purge volumes, field monitoring parameter stability, and chain-of-custody documentation. Special notations were added regarding outside factors, such as wind direction, ambient temperature, and fugitive odors, which may affect sample integrity.
- Results of analytical testing were reviewed for accuracy and any anomalies that occur, based upon historical data. The review includes evaluating results in conjunction with recorded field data and chain-of-custody documentation, comparing current and historical data, and validating data using chromatograms and associated QA/QC procedures and results supplied by the laboratory.

Containment and Disposal of Purge Water

Purge water removed from the wells during groundwater sampling are contained in 55-gallon Department of Transportation rated drums for later treatment or disposal following receipt of analytical results.

APPENDIX B

Quality Assurance and Analytical Laboratory Reports

QUALITY ASSURANCE REPORT

PROJECT AND SAMPLE INFORMATION

Project Name: Durham Transportation
 Project No.: 15,833.002
 Lab Name: Inchcape Testing Service, Anametrix Laboratories (ITS) - San Jose, CA
 Lab Number: 9410190
 Sample No.: MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW12
 Matrix: Water

QUALITY ASSURANCE SUMMARY

All data are of known quality and acceptable for use.

ANALYTICAL METHODS

<u>Parameter</u>	<u>Technique</u>	<u>Method</u>
Halogenated Volatile Organics (HVOCs)	GC/HALL	EPA 8010
BETX	GC/PID	EPA 8020
TPH-Gasoline ^b	GC/FID	DOHS LUFT Manual ^a
TPH-Diesel ^c	GC/FID	DOHS LUFT Manual

- a - Leaking Underground Fuel Tank Manual, California Department of Health Services.
- b - Total petroleum hydrocarbons as gasoline.
- c - Total petroleum hydrocarbons as diesel.

TIMELINESS

<u>Parameter</u>	<u>Date Sampled</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Time Until Extraction</u>	<u>Time Until Analysis</u>
HVOCs	10/21/94	NA	10/27/94	NA	6 (14)
BETX	10/21/94	NA	10/25/94	NA	4 (14)
TPH-Gasoline	10/21/94	NA	10/25/94	NA	4 (14)
TPH-Diesel	10/21/94	10/24/94	10/25/94 ^d	3 (14)	4 (40)

- d - Latest sample analysis date is used to verify holding time compliance.
- NA - Not applicable.
- () - Numbers in parentheses indicate recommended holding times in days.

All samples were extracted and analyzed within recommended holding times.

QUALITY ASSURANCE REPORT**PROJECT AND SAMPLE INFORMATION**

Project Name: Durham Transportation
Project No.: 15,833.002
Lab Name: Inchcape Testing Service, Anamatrix Laboratories (ITS) - San Jose, CA
Lab Number: 9410190
Sample No.: MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW12

FUEL HYDROCARBON CHROMATOGRAMS

TPH-Gasoline: Gasoline range TPH were detected in samples MW3, MW4, MW5, MW6, MW7, MW9, MW10, MW11, and MW12; these detections are consistent with sample chromatograms.

TPH-Diesel: Diesel range TPH were detected in samples MW3, MW5, MW6, MW7, MW9, MW10, MW11, and MW12; these detections are due to presence of a lighter petroleum product, possibly gasoline, and may not be representative of diesel fuel.

FIELD QUALITY CONTROL SAMPLES

Field Blank: None collected.
Field Duplicates: None collected.
Rinsate: None collected.
Trip Blank: None collected.

LAB QUALITY CONTROL SAMPLES

Method Blank: No analytes were detected at or above their method reporting limits (MRLs) by the following methods:
EPA 8010
EPA 8020
TPH-Gasoline
TPH-Diesel

Matrix Spikes: Matrix spike and matrix spike duplicate percent recoveries and relative percent differences (RPDs) are within ITS's control limit criteria for EPA 8010 and EPA 8020.

QUALITY ASSURANCE REPORT

PROJECT AND SAMPLE INFORMATION

Project Name: Durham Transportation
Project No.: 15,833.002
Lab Name: Inchcape Testing Service, Anamatrix Laboratories (ITS) - San Jose, CA
Lab Number: 9410190
Sample No.: MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW12

Duplicates: Duplicate sample analyses were not performed for any methods documented in this report.

Blank Spikes: Blank spike sample analyses were not performed for any methods documented in this report.

Lab Control Sample: Percent recoveries and RPDs for laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) are within ITS's control limit criteria for TPH-D.

LCS percent recoveries are within ITS's control limit criteria for EPA 8010 and EPA 8020.

Surrogates: All surrogate spike percent recoveries are within ITS's control limit criteria for the following methods:

EPA 8010
EPA 8020
TPH-Gasoline
TPH-Diesel

SIGNATURES

Prepared by *Maingta Cui* Date 11/30/94
Checked by *Katherine Bourbonais* Date 11/30/94



Inchcape Testing Services

Anamatrix Laboratories

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MR. DAN HENNINGER
APPLIED GEOTECHNOLOGY - OAKLAND
827 BROADWAY, SUITE 210
OAKLAND, CA 94607

Workorder # : 9410190
Date Received : 10/21/94
Project ID : 158,33.002
Purchase Order: N/A

The following samples were received at Anamatrix for analysis :

ANAMATRIX ID	CLIENT SAMPLE ID
9410190- 1	MW3
9410190- 2	MW4
9410190- 3	MW5
9410190- 4	MW6
9410190- 5	MW7
9410190- 6	MW8
9410190- 7	MW9
9410190- 8	MW10
9410190- 9	MW11
9410190-10	MW12

This report is organized in sections according to the specific Anamatrix laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Anamatrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anamatrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call us as soon as possible. Thank you for using Anamatrix.


Susan Kraska Yeager
Laboratory Director

11/03/94
Date

This report consists of 29 pages.



ANAMATRIX REPORT DESCRIPTION GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anamatrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "***", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "***", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anamatrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the reported amount exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- ♦ Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- ♦ Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. DAN HENNINGER
APPLIED GEOTECHNOLOGY - OAKLAND
827 BROADWAY, SUITE 210
OAKLAND, CA 94607

Workorder # : 9410190
Date Received : 10/21/94
Project ID : 158,33.002
Purchase Order: N/A
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9410190- 1	MW3	WATER	10/21/94	8010
9410190- 2	MW4	WATER	10/21/94	8010
9410190- 3	MW5	WATER	10/21/94	8010
9410190- 4	MW6	WATER	10/21/94	8010
9410190- 5	MW7	WATER	10/21/94	8010
9410190- 6	MW8	WATER	10/21/94	8010
9410190- 7	MW9	WATER	10/21/94	8010
9410190- 8	MW10	WATER	10/21/94	8010
9410190- 9	MW11	WATER	10/21/94	8010
9410190-10	MW12	WATER	10/21/94	8010

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. DAN HENNINGER
APPLIED GEOTECHNOLOGY - OAKLAND
827 BROADWAY, SUITE 210
OAKLAND, CA 94607

Workorder # : 9410190
Date Received : 10/21/94
Project ID : 158,33.002
Purchase Order: N/A
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

M. Hassenian 10/31/94
Department Supervisor Date

Kamil G. Kamil 10/31/94
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW3
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-01
 Analyst : *ES*
 Supervisor : *DL*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	25.	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW4
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-02
 Analyst : *ES*
 Supervisor : *Mh*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW5
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-03
 Analyst : *ES*
 Supervisor : *SA*
 Dilution Factor : 5.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	5.0	ND	U
74-87-3	Chloromethane	5.0	ND	U
75-01-4	Vinyl chloride	2.5	ND	U
74-83-9	Bromomethane	2.5	ND	U
75-00-3	Chloroethane	2.5	ND	U
75-69-4	Trichlorofluoromethane	2.5	ND	U
76-13-1	Trichlorotrifluoroethane	2.5	ND	U
75-35-4	1,1-Dichloroethene	2.5	ND	U
75-09-2	Methylene chloride	5.0	ND	U
156-60-5	trans-1,2-Dichloroethene	2.5	ND	U
75-34-3	1,1-Dichloroethane	2.5	ND	U
156-59-2	cis-1,2-Dichloroethene	2.5	ND	U
67-66-3	Chloroform	2.5	ND	U
71-55-6	1,1,1-Trichloroethane	2.5	ND	U
56-23-5	Carbon tetrachloride	2.5	ND	U
107-06-2	1,2-Dichloroethane	2.5	85.	U
79-01-6	Trichloroethene	2.5	ND	U
78-87-5	1,2-Dichloropropane	2.5	ND	U
75-27-4	Bromodichloromethane	2.5	ND	U
110-75-8	2-Chloroethylvinylether	5.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.5	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.5	ND	U
79-00-5	1,1,2-Trichloroethane	2.5	ND	U
127-18-4	Tetrachloroethene	2.5	ND	U
124-48-1	Dibromochloromethane	2.5	ND	U
108-90-7	Chlorobenzene	2.5	ND	U
75-25-2	Bromoform	2.5	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	ND	U
541-73-1	1,3-Dichlorobenzene	2.5	ND	U
106-46-7	1,4-Dichlorobenzene	2.5	ND	U
95-50-1	1,2-Dichlorobenzene	2.5	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW6
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-04
 Analyst : *KE*
 Supervisor : *sh*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	35.	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW7
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-05
 Analyst : *BT*
 Supervisor : *ML*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	1.8	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	.74	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW8
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-06
 Analyst : *TS*
 Supervisor : *sh*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	.72	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW9
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-07
 Analyst : *EG*
 Supervisor : *RL*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	31.	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW10
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-08
 Analyst : *ES*
 Supervisor : *sh*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	12.	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW11
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-09
 Analyst : *ES*
 Supervisor : *Sh*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW12
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-10
 Analyst : *[Signature]*
 Supervisor : *[Signature]*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33
 Sample ID : VBLKB1
 Matrix : WATER
 Date Sampled : 0/ 0/ 0
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : B02604I1
 Analyst : *CS*
 Supervisor : *ML*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33
 Sample ID : VBLKB2
 Matrix : WATER
 Date Sampled : 0/ 0/ 0
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : BO2703I1
 Analyst : *ES*
 Supervisor : *sh*
 Dilution Factor : 1.0
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
Matrix : LIQUID

Anamatrix ID : 9410190
Analyst : *TS*
Supervisor : *sh*

	SAMPLE ID	SU1	SU2	SU3
1	VBLKB1	78	88	87
2	MW10	75	94	92
3	MW10 MS	79	97	97
4	MW10 MSD	86	99	102
5	MW3	77	97	104
6	VBLKB2	76	95	97
7	MW4	76	95	97
8	MW5	83	99	100
9	MW6	75	98	103
10	MW7	78	94	93
11	MW8	73	95	93
12	MW9	81	98	101
13	MW11	76	93	94
14	MW12	76	89	96
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

QC LIMITS

SU1 = Bromochloromethane (56- 99)
SU2 = 1-Chloro-2-fluorobenze (73-110)
SU3 = 2-Bromochlorobenzene (65-108)

* Values outside of Anamatrix QC limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8010
 ANAMETRIX, INC. (408)432-8192

Project ID : 158,33.0
 Sample ID : MW10
 Matrix : WATER
 Date Sampled : 10/21/94
 Date Analyzed : 10/27/94
 Instrument ID : HP24

Anamatrix ID : 9410190-08
 Analyst : *TS*
 Supervisor : *sh*

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	%REC LIMITS
Trichlorotrifluoroethan	10.0	.0	8.9	89	42-111
1,1-Dichloroethene	10.0	.0	9.4	94	47-128
trans-1,2-Dichloroethen	10.0	.0	9.9	99	63-110
1,1-Dichloroethane	10.0	.0	10.0	100	72-128
cis-1,2-Dichloroethene	10.0	.0	10.3	103	62-126
1,1,1-Trichloroethane	10.0	.0	9.4	94	65-128
Trichloroethene	10.0	.0	9.5	95	64-115
Tetrachloroethene	10.0	.0	9.1	91	64-111
Chlorobenzene	10.0	.0	8.7	87	75-124
1,3-Dichlorobenzene	10.0	.0	8.9	89	68-119
1,4-Dichlorobenzene	10.0	.0	9.0	90	72-125
1,2-Dichlorobenzene	10.0	.0	9.0	90	70-131

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
Trichlorotrifluoroethan	10.0	9.0	90	2	13	42-111
1,1-Dichloroethene	10.0	9.5	95	1	11	47-128
trans-1,2-Dichloroethen	10.0	10.0	100	1	10	63-110
1,1-Dichloroethane	10.0	10.3	103	3	9	72-128
cis-1,2-Dichloroethene	10.0	10.7	107	3	12	62-126
1,1,1-Trichloroethane	10.0	9.8	98	4	19	65-128
Trichloroethene	10.0	9.7	97	2	17	64-115
Tetrachloroethene	10.0	9.0	90	1	11	64-111
Chlorobenzene	10.0	8.9	89	2	8	75-124
1,3-Dichlorobenzene	10.0	8.9	89	0	7	68-119
1,4-Dichlorobenzene	10.0	9.1	91	1	7	72-125
1,2-Dichlorobenzene	10.0	9.2	92	2	6	70-131

* Value is outside of Anamatrix QC limits

RPD: 0 out of 12 outside limits
 Spike Recovery: 0 out of 24 outside limits

EPA METHOD 601/8010
 INCHCAPE TESTING SERVICES - ANAMETRIX
 (408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LAB CONTROL SAMPLE	Laboratory ID: MO2701I
BATCH 10190	Instrument ID: HP24
Matrix: WATER	Concentration Units: ug/L
Date Analyzed: 10/27/94	Analyst: <i>ZS</i>
Date Released: 10/28/94	Supervisor: <i>ph</i>

COMPOUND NAME	SPIKE AMT	LCS REC	%REC LCS	%RECOVERY LIMITS
Trichlorotrifluoroethane	10		8.9	89% 65-116
1,1-Dichloroethene	10		9.3	93% 64-125
trans-1,2-Dichloroethene	10		10.1	101% 77-113
1,1-Dichloroethane	10		10.4	104% 85-129
cis-1,2-Dichloroethene	10		11.4	114% 78-130
1,1,1-Trichloroethane	10		9.8	98% 83-125
Trichloroethene	10		9.6	96% 76-124
Tetrachloroethene	10		8.9	89% 80-118
Chlorobenzene	10		9.0	90% 81-130
1,3-Dichlorobenzene	10		9.1	91% 82-115
1,4-Dichlorobenzene	10		9.2	92% 85-122
1,2-Dichlorobenzene	10		9.1	91% 86-122

Quality control limits are based on data generated by ITS-Anametrix Laboratories.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. DAN HENNINGER
APPLIED GEOTECHNOLOGY - OAKLAND
827 BROADWAY, SUITE 210
OAKLAND, CA 94607

Workorder # : 9410190
Date Received : 10/21/94
Project ID : 158,33.002
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9410190- 1	MW3	WATER	10/21/94	TPHd
9410190- 2	MW4	WATER	10/21/94	TPHd
9410190- 3	MW5	WATER	10/21/94	TPHd
9410190- 4	MW6	WATER	10/21/94	TPHd
9410190- 5	MW7	WATER	10/21/94	TPHd
9410190- 6	MW8	WATER	10/21/94	TPHd
9410190- 7	MW9	WATER	10/21/94	TPHd
9410190- 8	MW10	WATER	10/21/94	TPHd
9410190- 9	MW11	WATER	10/21/94	TPHd
9410190-10	MW12	WATER	10/21/94	TPHd
9410190- 1	MW3	WATER	10/21/94	TPHgBTEX
9410190- 2	MW4	WATER	10/21/94	TPHgBTEX
9410190- 3	MW5	WATER	10/21/94	TPHgBTEX
9410190- 4	MW6	WATER	10/21/94	TPHgBTEX
9410190- 5	MW7	WATER	10/21/94	TPHgBTEX
9410190- 6	MW8	WATER	10/21/94	TPHgBTEX
9410190- 7	MW9	WATER	10/21/94	TPHgBTEX
9410190- 8	MW10	WATER	10/21/94	TPHgBTEX
9410190- 9	MW11	WATER	10/21/94	TPHgBTEX
9410190-10	MW12	WATER	10/21/94	TPHgBTEX

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
 EPA METHOD 3510 WITH GC/FID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
 Matrix : WATER
 Date Sampled : N/A
 Date Extracted: 10/24/94
 Date Analyzed : 10/24/94

Anamatrix I.D. : MO2411F9
 Analyst : *AM*²⁰
 Supervisor : *CS*
 Date Released : 10/26/94
 Instrument I.D.: HP23

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	1090	87%	1050	84%	-4%	38-96
SURROGATE			98%		95%		47-114

* Quality control limits established by Anamatrix, Inc.

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9410190
 Matrix : WATER

Client Project ID : 158,33.002
 Units : ug/L

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		MW3	MW4	MW5	MW6	MW7
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9410190-01	9410190-02	9410190-03	9410190-04	9410190-05
Benzene	0.50	1900	3.4	7900	3900	290
Toluene	0.50	37	ND	1500	170	4.5
Ethylbenzene	0.50	900	ND	780	1200	140
Total Xylenes	0.50	780	ND	2900	3200	240
TPH as Gasoline	50	7400	69	23000	18000	1700
Surrogate Recovery		109%	101%	109%	114%	117%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		10/21/94	10/21/94	10/21/94	10/21/94	10/21/94
Date Analyzed		10/25/94	10/25/94	10/25/94	10/25/94	10/25/94
RLMF		25	1	100	100	5
Filename Reference		FPO19001.D	FPO19002.D	FPO19003.D	FPO19004.D	FRO19005.D

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPH_g : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Sueca Steer 10/31/94
 Analyst Date

Cheryl Balmer 10/31/94
 Supervisor Date

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anamatrix Laboratories - (408)432-8192

Lab Workorder : 9410190
 Matrix : WATER

Client Project ID : 158,33.002
 Units : ug/L

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		MW8	MW9	MW10	MW11	MW12
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9410190-06	9410190-07	9410190-08	9410190-09	9410190-10
Benzene	0.50	ND	1800	93	4.9	1.9
Toluene	0.50	ND	220	ND	ND	ND
Ethylbenzene	0.50	ND	280	200	14	4.5
Total Xylenes	0.50	ND	1500	680	12	6.8
TPH as Gasoline	50	ND	6900	8600	460	260
Surrogate Recovery		103%	114%	103%	113%	114%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		10/21/94	10/21/94	10/21/94	10/21/94	10/21/94
Date Analyzed		10/25/94	10/25/94	10/25/94	10/25/94	10/25/94
RLMF		1	50	50	1	1
Filename Reference		FPO19006.D	FPO19007.D	FPO19008.D	FPO19009.D	FPO19010.D

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Peggie Dawson 11/2/94
 Analyst Date

Cheryl Balmer 11/2/94
 Supervisor Date

Matrix Spike Report

Total Petroleum Hydrocarbons as BTEX

ITS - Anamatrix Laboratories - (408) 432-8192

Project ID : 158,33.002
 Sample ID : MW4
 Matrix : WATER
 Date Sampled : 10/21/94

Laboratory ID : 9410190-02
 Analyst : IS
 Supervisor : G
 Instrument ID : HP12
 Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	SAMPLE RESULTS	MS RECOVERY	MSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Benzene	20	3.4	113%	103%	45-139	9%	30
Toluene	20	ND	110%	105%	51-138	5%	30
Ethylbenzene	20	ND	117%	112%	48-146	4%	30
Total Xylenes	20	ND	120%	110%	50-139	9%	30
Surrogate Recovery		101%	107%	103%			
Date Analyzed		10/25/94	10/25/94	10/25/94			
Multiplier		1	1	1			
Filename Reference		FPO19002.D	FMO19002.D	FDO19002.D			

* Limits established by Incheape Testing Services, Anamatrix Laboratories.

Laboratory Control Spike Report
 Total Petroleum Hydrocarbons as BTEX
 ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP12
 Matrix : LIQUID

Analyst : IS
 Supervisor : CA
 Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	20	100%	52-133
Toluene	20	100%	57-136
Ethylbenzene	20	110%	56-139
Total Xylenes	20	105%	56-141
Surrogate Recovery		103%	61-139
Date Analyzed		10/25/94	
Multiplier		1	
Filename Reference		MO2501E1.D	

* Limits established by Incheape Testing Services, Anametrix Laboratories.

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9410190
Matrix : WATER
Date Sampled : 10/21/94
Date Extracted: 10/24/94

Project Number : 158,33.002
Date Released : 10/26/94
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)	Surrogate %Rec
9410190-01	MW3	10/24/94	50	810	93%
9410190-02	MW4	10/24/94	50	ND	97%
9410190-03	MW5	10/25/94	50	1500	95%
9410190-04	MW6	10/24/94	50	1500	93%
9410190-05	MW7	10/25/94	61	280	93%
9410190-06	MW8	10/25/94	50	ND	99%
9410190-07	MW9	10/25/94	50	600	95%
9410190-08	MW10	10/25/94	50	2000	90%
9410190-09	MW11	10/25/94	50	190	79%
9410190-10	MW12	10/25/94	50	190	97%
BO2411F9	METHOD BLANK	10/24/94	50	ND	95%

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for o-terphenyl are 47-114%.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as C10-C28 is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

APM
Analyst
10/21/94
Date

Charly Palmer
Supervisor
10/31/94
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. DAN HENNINGER
APPLIED GEOTECHNOLOGY - OAKLAND
827 BROADWAY, SUITE 210
OAKLAND, CA 94607

Workorder # : 9410190
Date Received : 10/21/94
Project ID : 158,33.002
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as diesel for samples MW3, MW5, MW6, MW7, MW9, MW10, MW11 and MW12 are primarily due to the presence of a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline.

Cheryl Balmer 10/31/94
Department Supervisor Date

R. Patel 10/31/94
Chemist Date

4122

AGI TECHNOLOGIES

94090

10/43

16/18

CHAIN-OF-CUSTODY

Date 10/21/94

Page 1 of 2

FILE

PROJECT INFORMATION					ANALYSIS REQUEST																														
Project Manager: <u>DAN HENNINGER</u>					Laboratory Number: _____																														
Project Name: <u>DURHAM TRANSPORTATION</u>					PETROLEUM HYDROCARBONS																														
Project Number: <u>158, 33, 222</u>					ORGANIC COMPOUNDS																														
Site Location: <u>HAYWARD, CA</u> Sampled By: <u>PRL</u>					PESTS/PCB's																														
DISPOSAL INFORMATION					METALS																														
					LEACHING TESTS																														
<input type="checkbox"/> Lab Disposal (return if not indicated)					OTHER																														
Disposal Method: _____					NUMBER OF CONTAINERS																														
Disposed by: _____ Disposal Date: _____																																			
QC INFORMATION (check one)					8015M 418.1 State: TPH Special Instructions TPH-D State: TPH-G State: TPH-ID State:																														
<input type="checkbox"/> SW-846 <input type="checkbox"/> CLP <input type="checkbox"/> Screening <input type="checkbox"/> AGI Std. <input type="checkbox"/> Special																																			
SAMPLE ID	DATE	TIME	MATRIX	LAB ID	8015M	418.1 State	TPH Special Instructions	TPH-D State	TPH-G State	TPH-ID State	8020M	8020M - BETX only	8240 GCMS Volatiles	8270 GCMS Semivol	8310 HPLC PAHs	8040 Phenols	DWS - Volatiles and Semivol	8080M PCBs only	8140 OP Pesticides	8150 OC Herbicides	8080M OC Pesticides	Selected metals: list	Total Lead (Wa)	Organic Lead (Ca)	TCL Metals (23)	Priority Poll. Metals (13)	DWS - Metals	MSP - Metals (Wa)	TCLP - Volatiles (ZHE)	TCLP - Semivolatiles	TCLP - Pesticides	TCLP - Metals			
① MW3	10/21/94		WATER		X						X	X																							8000
② MW4																																			8000
③ MW5																																			8000
④ MW6																																			8000
⑤ MW7																		X																	8000
⑥ MW8																																			8000
⑦ MW9																																			8000
⑧ MW10																																			8000

animal litters

- ①
- ②
- ③
- ④
- ⑤
- ⑥
- ⑦
- ⑧

LAB INFORMATION	SAMPLE RECEIPT	RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Lab Name: <u>ANAMETRIX</u>	Total Number of Containers: <u>66</u>	Signature: <u>Paul R Loman</u> Time: <u>11:15</u>	Signature: <u>[Signature]</u> Time: <u>11:25</u>	Signature: _____ Time: _____
Lab Address: <u>CONCOURSE DRIVE</u>	Chain of Custody Seals: <u>Y/N/NA</u>	Printed Name: <u>PAUL R LOMAN</u> Date: <u>10/21/94</u>	Printed Name: <u>Souther</u> Date: <u>10/21/94</u>	Printed Name: _____ Date: _____
<u>SAN JOSE CA</u>	Intact?: <u>Y/N/NA</u>	Company: <u>AGI TECHNOLOGIES</u>	Company: <u>Anamatrix</u>	Company: _____
Via: <u>ANAMETRIX COURTER</u>	Received in Good Condition/Cold: _____			
Turn Around Time: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 1 wk.		RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: 3.
PRIOR AUTHORIZATION IS REQUIRED FOR RUSH DATA				
Special Instructions: <u>HOLD 8080 ANALYSIS FOR MW7 PENDING AGI NOTIFICATION.</u>		Signature: <u>[Signature]</u> Time: <u>11:15</u>	Signature: <u>[Signature]</u> Time: <u>11:25</u>	Signature: _____ Time: _____
		Printed Name: <u>Souther</u> Date: <u>10/21/94</u>	Printed Name: <u>Maria Barajas</u> Date: <u>10/21/94</u>	Printed Name: _____ Date: _____
		Company: <u>Anamatrix</u>	Company: <u>ITS - Anamatrix</u>	Company: _____



SAMPLE RECEIVING CHECKLIST

WORKORDER NUMBER: 9410190

CLIENT PROJECT ID: 158,33.002

COOLER

Shipping slip (airbill, etc.) present?	YES	NO	<u>N/A</u>
If YES, enter carrier name and airbill # : _____			
Custody Seal on the outside of cooler?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Temperature of sample (s) within range?	YES	<u>NO</u>	N/A
List temperature of cooler (s): <u>23°C, 21°C, 11°C</u>			

SAMPLES

Chain of custody seal present for each container?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Samples arrived within holding time?	<u>YES</u>	NO	N/A
Samples in proper containers for methods requested?	<u>YES</u>	NO	
Condition of containers: INTACT <u>✓</u> BROKEN _____			
If NO, were samples transferred to proper container? _____			
Were VOA containers received with zero headspace?	YES	<u>NO</u>	N/A
If NO, was it noted on the chain of custody? _____			
Were container labels complete? (ID, date, time preservative, etc.)	<u>YES</u>	NO	
Were samples preserved with the proper preservative?	<u>YES</u>	NO	N/A
If NO, was the proper preservative added at time of receipt? _____			
pH check of samples required at time of receipt?	YES	<u>NO</u>	
If YES, pH checked and recorded by: _____			
Sufficient amount of sample received for methods requested?	<u>YES</u>	NO	
If NO, has the client or lab project manager been notified? _____			
Field blanks received with sample batch? # of Sets: _____	YES	NO	<u>N/A</u>
Trip blanks received with sample batch? # of Sets: _____	YES	NO	<u>N/A</u>

CHAIN OF CUSTODY

Chain of custody received with samples?	<u>YES</u>	NO
Has it been filled out completely and in ink?	<u>YES</u>	NO
Sample ID's on chain of custody agree with container labels?	<u>YES</u>	NO
Number of containers indicated on chain of custody agree with number received?	<u>YES</u>	NO
Analysis methods clearly specified?	<u>YES</u>	NO
Sampling date and time indicated?	<u>YES</u>	NO
Proper signatures of sampler, courier, sample custodian in appropriate place? with time and date?	<u>YES</u>	NO
Turnaround time? REGULAR <u>✓</u> RUSH _____		

Any NO response and/or any "BROKEN" that was checked must be detailed in the Corrective Action Form.

Sample Custodian: AB

Date: 10/21/94

Project Manager: LD

Date: 10/24/94