ALTON GEOSCIENCE
THE RESULTS TEAM

November 27, 1991

Mr. Ravi Arulanantham
Alameda County Health Agency
80 Swan Way, Room 200
Oakland, California 94621

30-0095-01

Subject: Quarterly Ground Water
Monitoring and Sampling Report
Former Mobil Oil Service Station 10-KNK
~~7197 Village Parkway~~
Dublin, California 94568

Dear Mr. Arulanantham,

The enclosed report presents the results and findings of the August 1991 quarterly ground water monitoring and sampling performed by Alton Geoscience at former Mobil Oil Service Station 10-KNK, 7197 Village Parkway, Dublin, California.

If there are any questions or comments regarding this report, please call the undersigned at (415) 682-1582.
734-8134

Sincerely,

ALTON GEOSCIENCE

Brady Nagle
Project Manager

cc: Mr. Edgar Hoepker, Mobil Oil Corporation

QUARTERLY GROUND WATER MONITORING AND SAMPLING REPORT

Mobil Oil Corporation
Former Mobil Oil Service Station 10-KNK
7197 Village Parkway
Dublin, California

Project No. 30-0095-01

Prepared for:

Mobil Oil Corporation
836 "B" Southampton Drive, Suite 300
Benicia, California

Prepared by:

Alton Geoscience

November 21, 1991

QUARTERLY GROUND WATER MONITORING AND SAMPLING REPORT

Mobil Oil Corporation
Former Mobil Oil Service Station 10-KNK
7197 Village Parkway
Dublin, California

November 21, 1991

INTRODUCTION

This report presents the results and findings of the August 1991 quarterly ground water monitoring and sampling activities performed by Alton Geoscience at Mobil Oil Service Station 10-KNK, 7197 Village Parkway, Dublin, California. The site vicinity map is shown in Figure 1, and a site plan is shown in Figure 2.

PROJECT BACKGROUND

On December 7, 1988, a 280-gallon, single-walled, steel waste oil tank was removed from the site. Several holes up to 3/8-inch in diameter were observed in the tank. Analysis of soil samples collected from below the former waste oil tank detected up to 550 parts per million (ppm) total oil and grease (TOG). Between December 15 and 20, 1988, additional soil was excavated from the former waste oil tank cavity. Analysis of soil samples collected from the limits of excavation detected up to 79 ppm of TOG (Kaprealian 1989a).

In August of 1989, three monitoring wells (MW-1, MW-2, and MW-3) were installed at the site to assess the extent of hydrocarbons in the soil and ground water onsite. Analysis of the soil samples collected during monitoring well installation detected up to 4,000 ppm of TOG, 36 ppm of total petroleum hydrocarbons as diesel (TPH-D), and 17 ppm of total petroleum hydrocarbons as gasoline (TPH-G). Initial analysis of ground water samples from these wells detected up to 140 parts per billion (ppb) of TPH-D, 110 ppb of TPH-G, and 8,100 ppb of TOG (Kaprealian 1989b).

In January 1991, Alton Geoscience completed a site investigation to assess the extent of hydrocarbons in ground water at the site. After conducting a qualitative shallow ground water survey, three additional monitoring wells (AW-4, AW-5, and AW-6) were installed onsite, and all six onsite wells were monitored and sampled (Alton Geoscience 1991a).

Subsequent analysis of ground water samples collected from the monitoring wells onsite detected concentrations of TPH-G, benzene, toluene, ethylbenzene and xylene (BTEX) constituents which fluctuated between low and nondetectable concentrations. TOG and TPH-D have been encountered in MW-1 and MW-2 at concentrations up to 7,500 and 60 ppb, respectively, although the chromatographic pattern from the TPH-D was not indicative of diesel fuel. Methylene Chloride has also been detected in ground water samples collected from MW-1 and MW-2 at concentrations up to 45 ppb (Alton Geoscience 1991b and 1991c).

FIELD PROCEDURES

On August 23, 1991, Anametrix, Inc. of San Jose, California monitored and sampled Ground Water Monitoring Wells MW-1, MW-2, MW-3, AW-4, AW-5, and AW-6 in accordance with the guidelines of the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) and the Alameda County Health Agency (ACHA).

Prior to purging and sampling, the ground water level in each well was measured from a permanent mark on the top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to ground water at the time of sample collection and the top of casing elevation data were used to calculate the ground water elevation above mean sea level within each well. The survey data and relative ground water elevation measurements at the site are presented in Table 1, while the ground water elevation contour map is shown in Figure 3.

The ground water samples were collected using a clean hand bailer and observed for the presence of free product or sheen. Prior to sample collection, each well was purged of three casing volumes or until pH, temperature, and conductivity of the ground water stabilized. Ground water samples for laboratory analysis were collected by lowering a clean, 2 or 4-inch-diameter, bottom-fill, polyvinyl chloride (PVC) bailer to just below the air-water interface in the well. The ground water samples were then transferred into clean glass containers. All samples were inverted to ensure that entrapped air was not present. Each sample was labeled with sample number, well number, sample date, and sampler's initials. The samples were stored in an iced cooler for delivery to a California-certified laboratory following proper sample preservation and chain of custody procedures. The ground water sampling field survey forms are included in Appendix A.

ANALYTICAL METHODS

Ground water samples collected from all six wells at the site were analyzed for the following constituents:

- TPH-G using EPA Methods 5030/8015
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) constituents using EPA Methods 5030/8020

In addition, the ground water samples collected from Monitoring Wells MW-1, MW-2, and MW-3 were analyzed for the following constituents:

- Total oil and grease (TOG) using EPA Method 5520DF
- TPH-D using EPA Method 3510/8015
- Halogenated volatile organic compounds (HVOCs) using EPA Method 601/8010

Laboratory reports and the chain of custody records are presented in Appendix B, and a summary of analytical results of all ground water samples is presented in Table 1.

DISCUSSION OF RESULTS

The results of the August 1991 ground water monitoring and sampling event, as well as from previous monitoring and sampling events performed by Alton Geoscience, are summarized below.

- No free product or sheen was observed in any of the monitoring wells during this or previous monitoring events.
- The ground water gradient direction at the site for this quarter is predominantly to the southeast, with an average value of approximately 0.004 foot per foot across the site. This ground water gradient direction is not consistent with previous results (indicating a predominantly southwest gradient).
- During the August 23, 1991 sampling event, dissolved phase petroleum hydrocarbons were detected in ground water samples collected only from AW-6, which contained 57 ppb TPH-G and 0.7, 1.3, and 4.6 ppb toluene, ethylbenzene, and xylenes, respectively. Monitoring well AW-6 is constructed in a shallower

water-bearing zone not encountered in the other monitoring wells onsite. Toluene and ethylbenzene were not previously detected in samples collected from any of the monitoring wells at the site.

- TOG, TPH-D and HVOCs were not detected in the ground water samples collected from MW-1, MW-2, or MW-3. Previous sampling events revealed concentrations of TOG and HVOCs up to 7,500 and 45 ppb, respectively. Previously reported concentrations of TPH-D in samples from MW-1 and MW-2 were based on atypical chromatograghic patterns, and may be considered anomalous.

ALTON GEOSCIENCE

Brady Nagle
Project Manager

Peter C. Lange, R.G. 5089
Associate, Concord Operations

REFERENCES

Alton Geoscience, 1991a, Site Investigation Report, January 4, 1991.

Alton Geoscience, 1991b, Quarterly Ground Water Monitoring and Sampling Report, March 12, 1991.

Alton Geoscience, 1991c, Quarterly Ground Water Monitoring and Sampling Report, June 25, 1991.

California Regional Water Quality Control Board, 1989, Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks, July 1, 1988 and revised April 3, 1989.

Kaprealian Engineering, Inc., 1989a, Soil Sampling Report, January 11, 1989.

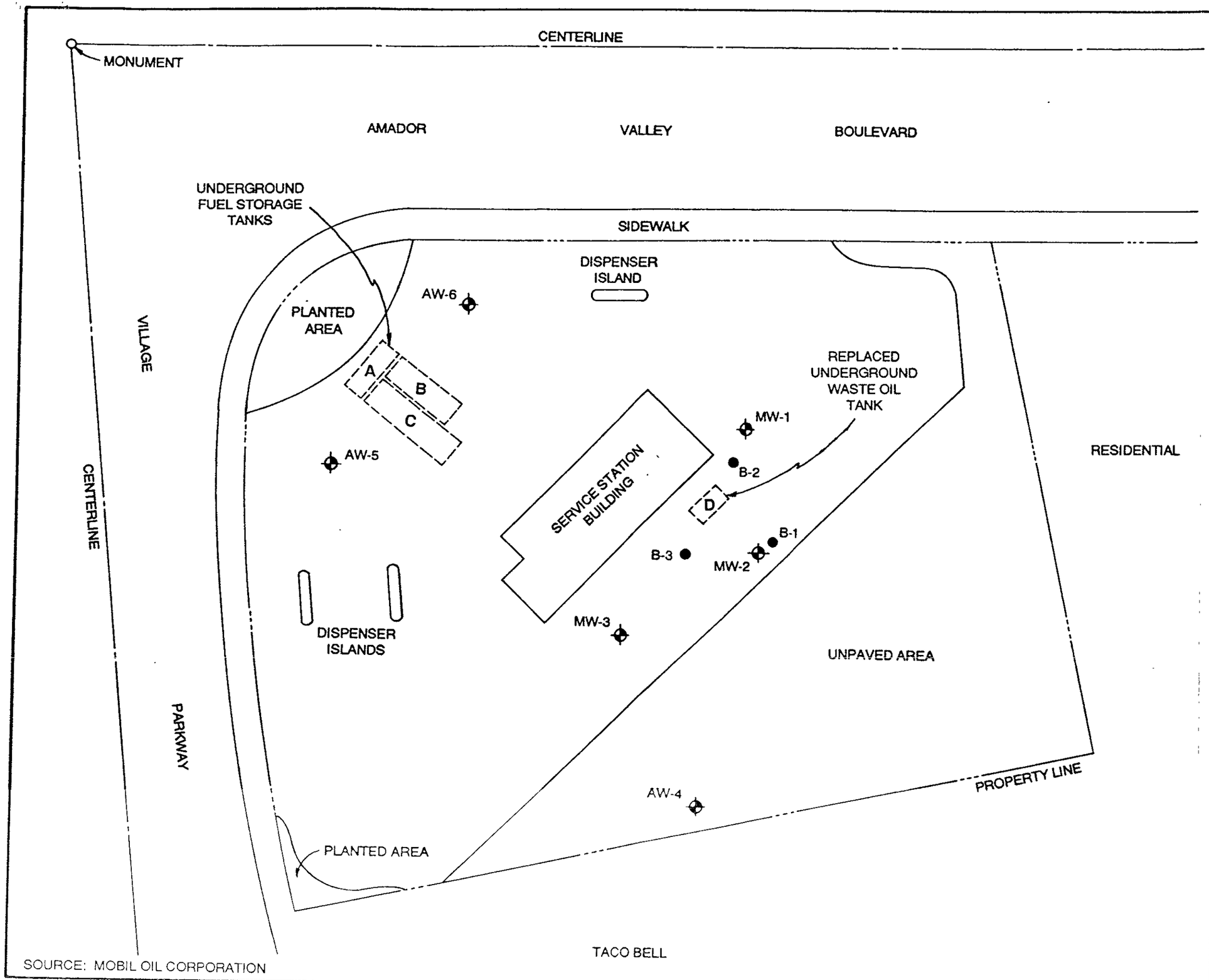
Kaprealian Engineering, Inc., 1989b, Preliminary Ground Water Investigation, October 17, 1989.

Source: U.S. Geological Map, Dublin Quadrangle, California, 7.5 minute series, 1953, Photorevised 1980.

FIGURE 1: SITE VICINITY MAP

MOBIL OIL CORPORATION
FORMER MOBIL OIL SERVICE STATION 10-KNK
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

ALTON GEOSCIENCE PROJECT NO. 30-095



SOURCE: MOBIL OIL CORPORATION

N

0 15 30

SCALE IN FEET

LEGEND

- GROUND WATER MONITORING WELL
- SOIL BORING

UNDERGROUND TANK CAPACITIES AND CONTENTS

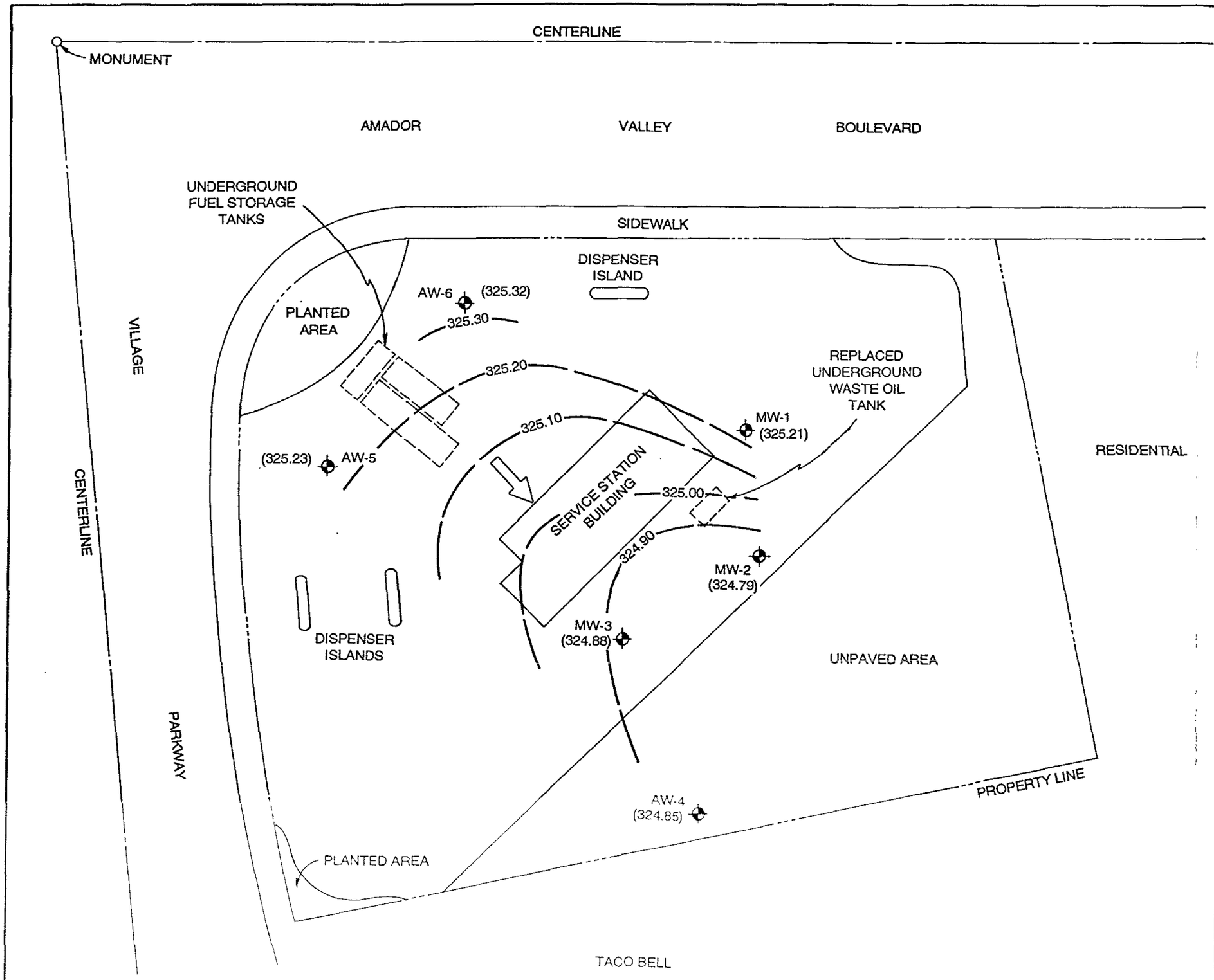
A: 6,000 GAL. UNLEADED PREMIUM
B: 8,000 GAL. UNLEADED REGULAR
C: 10,000 GAL. LEADED REGULAR
D: 3,000 GAL. WASTE OIL (REPLACEMENT)

FIGURE 2: SITE PLAN

MOBIL OIL CORPORATION
FORMER MOBIL OIL SERVICE STATION 10-KNK
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

ALTON GEOSCIENCE PROJECT NO. 30-095

ALTON GEOSCIENCE
1000 Burnett Ave., Ste 140
Concord, CA 94520



N

0 15 30

APPROXIMATE SCALE IN FEET

LEGEND

- GROUND WATER MONITORING WELL
- (325.21) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 324.90 GROUND WATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL - 0.1 FEET)
- GENERAL GROUND WATER GRADIENT DIRECTION

FIGURE 3: GROUND WATER ELEVATION CONTOUR MAP (AUGUST 23, 1991)

MOBIL OIL CORPORATION
FORMER MOBIL OIL SERVICE STATION 10-KNK
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

ALTON GEOSCIENCE PROJECT NO 30-0095-01

ALTON GEOSCIENCE
1000 Burnett Ave., Ste 140
Concord, CA 94520

TABLE 1

SURVEY AND WATER LEVEL MONITORING DATA

Mobil Oil Corporation
Former Mobil Service Station 10-KNK
7197 Village Parkway
Dublin, California

Elevation and Depth Measurements in Feet
Above Mean Sea Level

Concentration in Parts per Billions

Well Number	Date of Sampling	Top of Casing Elevation	Depth to Water Level	Water Level Elevation	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH as Diesel	TOG	Methylene Chloride
MW-1	10/12/90	335.19	9.92	325.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50	ND<5,000	ND
MW-1	11/15/90	335.19	10.16	325.03	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
MW-1	12/11/90	335.19	9.97	325.22	--	--	--	--	--	--	--	--
MW-1	02/15/91	335.19	9.89	325.30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	50*	ND<5,000	41
MW-1	05/14/91	335.19	8.43	326.76	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	7,500	ND
MW-1	08/23/91	335.19	9.98	325.21	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<5,000	ND
MW-2	10/12/90	334.60	9.60	325.00	93	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50	ND<5,000	ND
MW-2	11/15/90	334.60	9.68	324.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
MW-2	12/11/90	334.60	9.47	325.13	--	--	--	--	--	--	--	--
MW-2	02/15/91	334.60	9.28	325.32	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	60*	ND<5,000	45
MW-2	05/14/91	334.60	7.74	326.86	130*	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	6,000	ND
MW-2	08/23/91	334.60	9.81	324.79	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<5,000	ND
MW-3	10/12/90	335.15	10.08	325.07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50	ND<5,000	ND
MW-3	11/15/90	335.15	10.12	325.03	76	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
MW-3	12/11/90	335.15	9.92	325.23	--	--	--	--	--	--	--	--
MW-3	02/15/90	335.15	9.84	325.31	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<5,000	ND
MW-3	05/14/91	335.15	8.40	326.75	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<5,000	ND
MW-3	08/23/91	335.15	10.27	324.88	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<5,000	ND
AW-4	11/15/90	333.44	8.51	324.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
AW-4	12/11/90	333.44	9.19	324.25	--	--	--	--	--	--	--	--
AW-4	02/15/91	333.44	8.32	325.12	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--	--
AW-4	05/14/91	333.44	6.97	326.47	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--	--
AW-4	08/23/91	333.44	8.59	324.85	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--	--

TABLE 1

SURVEY AND WATER LEVEL MONITORING DATA

Mobil Oil Corporation
Former Mobil Service Station 10-KNK
7197 Village Parkway
Dublin, California

Elevation and Depth Measurements in Feet
Above Mean Sea Level

Concentration in Parts per Billions

Well Number	Date of Sampling	Top of Casing Elevation	Depth to Water Level	Water Level Elevation	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH as Diesel	TOG	Methylene Chloride
AW-5	11/15/90	334.81	9.67	325.14	ND<50	1.3	ND<0.5	ND<0.5	1.0	--	--	--
AW-5	12/11/90	334.81	9.44	325.37	--	--	--	--	--	--		
AW-5	02/15/91	334.81	10.00	324.81	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--	--
AW-5	05/14/91	334.81	8.64	326.17	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--	--
AW-5	08/23/91	334.81	9.58	325.23	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--	--
AW-6	11/15/90	334.93	9.58	325.35	230	25	ND<0.5	ND<0.5	0.8	--	--	--
AW-6	12/11/90	334.93	9.58	325.37	--	--	--	--	--	--	--	--
AW-6	02/15/91	334.93	9.66	325.27	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--	--
AW-6	05/14/91	334.93	8.38	326.55	90	2	ND<0.3	ND<0.3	ND<0.3	--	--	--
AW-6	08/23/91	334.93	9.61	325.32	57	ND<0.5	0.7	1.3	4.6	--	--	--

TPH - Total petroleum hydrocarbons
TOG - Total oil and grease
ND = Not detected above the reported dete
-- Not analyzed
*Typical chromographic pattern not presen

Note: Methylene chloride was detected in MW-1 and MW-2 during the 02/15/91 sampling event using EPA Method 8010. No other constituents were detected using this method above reported detection limits.

Note: Top of casing elevations for all wells was surveyed relative to the City of Dublin monument in the intersection of Village Parkway and Amador Valley Boulevard, with an elevation of 335.92 feet above mean sea level (NGVD-1929).

APPENDIX A

WATER SAMPLING FORMS

FIELD LOGBOOK ENTRY

DATE: 08/23/91

PROJECT NO. : 30-095
SITE : B.P. Station, Dublin
WELL I.D. : MW-1
CODE NO. :
EQUIPMENT NO.: B-3
SAMPLER NAME: Taghi
SIGNATURE :

TOTAL DEPTH : 25.87'
WATER DEPTH : 9.98' TIME: 8:45
WELL DIAMETER : 2"
PURGE VOLUME :(3 X) = 30 liters
PUMPING RATE :
PUMPING TIME :
BAILER CAPACITY: 1 liter
NO. OF BAILS : 30
WELL YIELD : Low
SAMPLE TIME : 11:40

TIME	VOLUME	TURBIDITY	pH	E.C.	T°C
10:20	1		6.1	11630	18
10:25	2		6.1	11360	19
10:30	3		6.1	11360	19

PURGE PROCEDURE : 1 Liter Teflon Bailer PUMP PLACEMENT:

SAMPLE PROCEDURE: 1 Liter Teflon Bailer

PARAMETER:	CONTAINER (TYPE/NUMBER):	PRESERVATIVE:
TPHg/BTEX	3 X 40 ml	HCl/Cool
TPHd	2 X Liter	Cool
5520BF	2 X Liter	H_2SO_4/Cool

FIELD OBSERVATIONS: Almost clear with no sheen or smell of hydrocarbons. Sample was taken after 80% recovery.

RECOVERY RATE: 0.51' per minute RECOVERY PERCENTAGE: % AT HRS

CLIMATIC CONDITIONS: High clouds and partly sunny with temperature in the mid 60's.

FIELD LOGBOOK ENTRY

DATE: 08/23/91

PROJECT NO. : 30-095
SITE : B.P. Oil, Dublin
WELL I.D. : MW-2
CODE NO. :
EQUIPMENT NO.: B-2
SAMPLER NAME: Taghi
SIGNATURE :

TOTAL DEPTH : 25.68'
WATER DEPTH : 9.81' TIME: 8:50
WELL DIAMETER : 2"
PURGE VOLUME :(3 X) = 30 liters
PUMPING RATE :
PUMPING TIME :
BAILER CAPACITY: 1 liter
NO. OF BAILS : 30
WELL YIELD : High
SAMPLE TIME : 11:25

TIME	VOLUME	TURBIDITY	pH	E.C.	T°C
10:05	1		6.0	12496	19
10:10	2		6.0	12496	19
10:15	3		6.0	12496	19

PURGE PROCEDURE : 1 Liter Teflon Bailer PUMP PLACEMENT:

SAMPLE PROCEDURE: 1 Liter Teflon Bailer

PARAMETER:	CONTAINER (TYPE/NUMBER):	PRESERVATIVE:
TPHg/BTEX	3 X 40 ml	HCl/Cool
TPHd	2 X Liter	Cool
5520BF	2 X Liter	H_2SO_4/Cool

FIELD OBSERVATIONS: Almost clear with no sheen or smell of hydrocarbons. Sample was taken after 80% recovery.

RECOVERY RATE: 0.51' per minute RECOVERY PERCENTAGE: % AT HRS

CLIMATIC CONDITIONS: High clouds with temperature in the mid 60's.

FIELD LOGBOOK ENTRY

DATE: 08/23/91

PROJECT NO. : 30-095
SITE : B.P. Oil, Dublin
WELL I.D. : MW-3
CODE NO. :
EQUIPMENT NO.: B-1
SAMPLER NAME: Taghi
SIGNATURE :

TOTAL DEPTH : 25.51'
WATER DEPTH : 10.27' TIME: 8:58
WELL DIAMETER : 2"
PURGE VOLUME :(5 X) = 50 liters
PUMPING RATE :
PUMPING TIME :
BAILER CAPACITY: 1 liter
NO. OF BAILS : 50
WELL YIELD : High
SAMPLE TIME : 10:35

TIME	VOLUME	TURBIDITY	pH	E.C.	T°C
9:25	1	>200	5.4	10870	21
9:35	2	>200	5.6	11120	20
9:45	3	>200	5.7	11020	20.4
9:50	4	>200	6.0	11120	20
9:55	5	>200	6.0	11120	20

PURGE PROCEDURE : 1 Liter Teflon Bailer PUMP PLACEMENT:

SAMPLE PROCEDURE: 1 Liter Teflon Bailer

PARAMETER:	CONTAINER (TYPE/NUMBER):	PRESERVATIVE:
TPHg/BTEX	3 X 40 ml	HCl/Cool
TPHd	2 X Liter	Cool
5520BF	2 X Liter	H_2SO_4/Cool

FIELD OBSERVATIONS: Medium silt and medium brown/gray in color. Sample was taken after 80% recovery.

RECOVERY RATE: 0.48' per minute RECOVERY PERCENTAGE: % AT HRS

CLIMATIC CONDITIONS: High clouds with temperature in the low 60's.

FIELD LOGBOOK ENTRY

DATE: 08/23/91

PROJECT NO. : 30-095
SITE : B.P. Station, Dublin
WELL I.D. : AW-4
CODE NO. :
EQUIPMENT NO.: Pump/B-4
SAMPLER NAME: Taghi
SIGNATURE :

TOTAL DEPTH : 34.24'
WATER DEPTH : 8.59' TIME: 9:00
WELL DIAMETER : 4"
PURGE VOLUME :(3 X) = 48 gallons
PUMPING RATE : 1.5 gallons per minute
PUMPING TIME : 25 minutes
BAILER CAPACITY:
NO. OF BAILS :
WELL YIELD :
SAMPLE TIME : 14:15

TIME	VOLUME	TURBIDITY	pH	E.C.	T°C
12:30	1		6.9	12793	18
12:45	2		6.9	12793	18
12:55	3		6.9	12793	18

PURGE PROCEDURE : Teel Pump PUMP PLACEMENT: 34'.00

SAMPLE PROCEDURE: 1 Liter Teflon Bailer

PARAMETER:	CONTAINER (TYPE/NUMBER):	PRESERVATIVE:
TPHg/BTEX	3 X 40 ml	HCl/Cool

FIELD OBSERVATIONS: Water was almost clear. No sheen or smell of hydrocarbons.

RECOVERY RATE: 0.41' per minute RECOVERY PERCENTAGE: % AT HRS

CLIMATIC CONDITIONS: Clear and sunny with temperature in the low 80's.

FIELD LOGBOOK ENTRY

DATE: 08/23/91

PROJECT NO. : 30-095
SITE : B.P. Oil, Dublin
WELL I.D. : AW-5
CODE NO. :
EQUIPMENT NO.: B-5/Y-1
SAMPLER NAME: Taghi
SIGNATURE :

TOTAL DEPTH : 33.05'
WATER DEPTH : 9.58' TIME: 9:05
WELL DIAMETER : 4"
PURGE VOLUME :(X)
PUMPING RATE :
PUMPING TIME :
BAILER CAPACITY: 4 liters
NO. OF BAILS : 33
WELL YIELD : Low
SAMPLE TIME : 14:35

TIME	VOLUME	TURBIDITY	pH	E.C.	T°C
13:20	1		7.3	30672	19
13:30	2		7.3	3261	21

PURGE PROCEDURE : 1 Gallon PVC Bailer PUMP PLACEMENT:

SAMPLE PROCEDURE: 1 Liter Teflon Bailer

PARAMETER:	CONTAINER (TYPE/NUMBER):	PRESERVATIVE:
TPHg/BTEX	3 X 40 ml	HCl/Cool

FIELD OBSERVATIONS: Almost clear with a yellow tint. No sheen or hydrocarbon smell for the 1st volume. Medium brown in color. Went dry half way thru 3rd volume. Well starting to dry at 33 gallons. It went dry after purging 41 gallons. Sample was taken after 80% recovery.

RECOVERY RATE: 0.13' per minute RECOVERY PERCENTAGE: % AT HRS

CLIMATIC CONDITIONS: Clear and sunny with temperature in the mid 80's.

FIELD LOGBOOK ENTRY

DATE: 08/23/91

PROJECT NO. : 30-095
SITE : B.P. Station, Dublin
WELL I.D. : AW-6
CODE NO. :
EQUIPMENT NO.: Y-2/B-6
SAMPLER NAME: Taghi
SIGNATURE :

TOTAL DEPTH : 16.75'
WATER DEPTH : 9.61' TIME: 9:10
WELL DIAMETER : 4"
PURGE VOLUME :(3 X) = 15 gallons
PUMPING RATE :
PUMPING TIME :
BAILER CAPACITY: 4 liters
NO. OF BAILS : 15
WELL YIELD : Mid
SAMPLE TIME : 14:25

TIME	VOLUME	TURBIDITY	pH	E.C.	T°C
13:50	1		7.2	4067	23
13:55	2		7.2	4362	22
14:00	3		7.2	4256	22

PURGE PROCEDURE : 1 Gallon PVC Bailer PUMP PLACEMENT:
SAMPLE PROCEDURE: 1 Liter Teflon Bailer

PARAMETER:	CONTAINER (TYPE/NUMBER):	PRESERVATIVE:
TPHg/BTEX	3 X 40 ml	HC/Cool

FIELD OBSERVATIONS: Almost clear with light brown tint. Went dry at end of 3rd volume. No sheen or smell of hydrocarbon. Sample was taken after 80% recovery.

RECOVERY RATE: 0.31' per minute RECOVERY PERCENTAGE: % AT HRS

CLIMATIC CONDITIONS: Clear and sunny with temperature in the mid 80's. 10 MPH wind from the northwest.

APPENDIX B

LABORATORY REPORTS AND CHAIN OF CUSTODY

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E San Jose CA 95131
(408) 432-8192 • Fax (408) 432-8198

SEP 10 1991

REPORT

MR. BRADY NAGLE
ALTON GEOSCIENCE
1000 BURNETT AVE, SUITE 140
CONCORD, CA 94520

Workorder # : 9108251
Date Received : 08/23/91
Project ID : 30-095
Purchase Order: 411680

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9108251- 1	MW-1
9108251- 2	MW-2
9108251- 3	MW-3
9108251- 4	AW-4
9108251- 5	AW-5
9108251- 6	AW-6
9108251- 7	TRAVEL BLANK
9108251- 8	BAILER BLANK

This report consists of 19 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

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

Sarah Schoen, Ph.D.
Laboratory Manager

9-9-91
Date

ANAMETRIX 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 Anametrix 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

Anametrix uses several data qualifiers (Q) in it's 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 amount reported 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. BRADY NAGLE
ALTON GEOSCIENCE
1000 BURNETT AVE, SUITE 140
CONCORD, CA 94520

Workorder # : 9108251
Date Received : 08/23/91
Project ID : 30-095
Purchase Order: 411680
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9108251- 1	MW-1	WATER	08/23/91	8010
9108251- 2	MW-2	WATER	08/23/91	8010
9108251- 3	MW-3	WATER	08/23/91	8010

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

MR. BRADY NAGLE
ALTON GEOSCIENCE
1000 BURNETT AVE, SUITE 140
CONCORD, CA 94520

Workorder # : 9108251
Date Received : 08/23/91
Project ID : 30-095
Purchase Order: 411680
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- The amount of methylene chloride reported in the method blank is within normal laboratory background level.

Corinne Pham 09/05/91
Department Supervisor Date

Juliet Ojwang 9/5/91
Chemist Date

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED
EPA METHOD 601/8010

CAS #	COMPOUND NAME	ABBREVIATED NAME
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlrofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB

mh/3426 - 10MH

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project ID : 30-095BP
Sample ID : MW-1
Matrix : WATER
Date Sampled : 8/23/91
Date Analyzed : 8/30/91
Instrument ID : HP15

Anametrix ID : 9108251-01
Analyst : dro
Supervisor : CP

Dilution Factor : 1.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	.50	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project ID : 30-095BP
Sample ID : MW-2
Matrix : WATER
Date Sampled : 8/23/91
Date Analyzed : 8/30/91
Instrument ID : HP15

Anametrix ID : 9108251-02
Analyst : bvp
Supervisor : CP

Dilution Factor : 1.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	.50	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	1.0	ND	U
110-75-8	Chloroethylvinl	.50	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	1.0	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB			

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project ID : 30-095BP
Sample ID : MW-3
Matrix : WATER
Date Sampled : 8/23/91
Date Analyzed : 8/30/91
Instrument ID : HP15

Anametrix ID : 9108251-03
Analyst : JLO
Supervisor : CP

Dilution Factor : 1.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	.50	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project ID : 30-095
Sample ID : VBLANK
Matrix : WATER
Date Sampled : 0/ 0/ 0
Date Analyzed : 8/30/91
Instrument ID : HP15

Anametrix ID : 15B0830H01
Analyst : JC
Supervisor : CP

Dilution Factor : 1.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	.50	1.3	
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project ID : 30-095BP
Matrix : LIQUID

Anametrix ID : 9108251
Analyst : [illegible]
Supervisor : [illegible]

	SAMPLE ID	SU1	TOTAL OUT
1	VBLANK	57	0
2	MW-1	104	0
3	MW-2	119	0
4	MW-3	121	0
5			
6			
7			
8			
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26			
27			
28			
29			
30			

	QC LIMITS
SU1 = Surrogate	(51-136)

* Values outside of Anametrix QC limits

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

MR. BRADY NAGLE
ALTON GEOSCIENCE
1000 BURNETT AVE, SUITE 140
CONCORD, CA 94520

Workorder # : 9108251
Date Received : 08/23/91
Project ID : 30-095
Purchase Order: 411680
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9108251- 1	MW-1	WATER	08/23/91	TPHd
9108251- 2	MW-2	WATER	08/23/91	TPHd
9108251- 3	MW-3	WATER	08/23/91	TPHd
9108251- 1	MW-1	WATER	08/23/91	TPHg/BTEX
9108251- 2	MW-2	WATER	08/23/91	TPHg/BTEX
9108251- 3	MW-3	WATER	08/23/91	TPHg/BTEX
9108251- 4	AW-4	WATER	08/23/91	TPHg/BTEX
9108251- 5	AW-5	WATER	08/23/91	TPHg/BTEX
9108251- 6	AW-6	WATER	08/23/91	TPHg/BTEX
9108251- 7	TRAVEL BLANK	WATER	08/23/91	TPHg/BTEX
9108251- 8	BAILER BLANK	WATER	08/23/91	TPHg/BTEX

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

MR. BRADY NAGLE
ALTON GEOSCIENCE
1000 BURNETT AVE, SUITE 140
CONCORD, CA 94520

Workorder # : 9108251
Date Received : 08/23/91
Project ID : 30-095
Purchase Order: 411680
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The recoveries for the diesel method spike and method spike duplicate are outside of Anametrix control limits.

Department Supervisor 9/4/91 Date

Chemist 9/4/91 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9108251
Matrix : WATER
Date Sampled : 08/23/91

Project Number : 30-095
Date Released : 09/04/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-1 -01	Sample I.D.# MW-2 -02	Sample I.D.# MW-3 -03	Sample I.D.# AW-4 -04	Sample I.D.# AW-5 -05
Benzene	0.5	ND	ND	ND	ND	ND
Toluene	0.5	ND	ND	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND	ND	ND
% Surrogate Recovery		100%	88%	125%	94%	124%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		08/29/91	08/29/91	08/29/91	08/29/91	08/29/91
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst — Date 9/4/91

Supervisor — Date 9/4/91

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9108251
Matrix : WATER
Date Sampled : 08/23/91

Project Number : 30-095
Date Released : 09/04/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# AW-6 -06	Sample I.D.# TRAVEL BLANK -07	Sample I.D.# BAILER BLANK -08	Sample I.D.# 12B0829A BLANK	Sample I.D.# 12B0830A BLANK
Benzene	0.5	ND	ND	ND	ND	ND
Toluene	0.5	0.7	ND	ND	ND	ND
Ethylbenzene	0.5	1.3	ND	ND	ND	ND
Total Xylenes	0.5	4.6	ND	ND	ND	ND
TPH as Gasoline	50	57	ND	ND	ND	ND
% Surrogate Recovery		90%	89%	120%	92%	86%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		08/30/91	08/29/91	08/29/91	08/29/91	08/30/91
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst — Date 9/4/91

Supervisor — Date 9/4/91

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

Anametrix W.O.: 9108251
Matrix : WATER
Date Sampled : 08/23/91
Date Extracted: 08/27/91

Project Number : 30-095
Date Released : 09/04/91
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9108251-01	MW-1	08/28/91	50	ND
9108251-02	MW-2	08/28/91	50	ND
9108251-03	MW-3	08/28/91	50	ND
DWBL082791	METHOD BLANK	08/28/91	50	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 50ug/L.
ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

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

Irma Shor 9/4/91
Analyst Date

Cheryl Balmer 9/4/91
Supervisor Date

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

Sample I.D. : METHOD SPIKE
Matrix : REAGENT WATER
Date Sampled : N/A
Date Extracted: 08/27/91
Date Analyzed : 08/29/91

Anametrix I.D. : SPK082791
Analyst : IS
Supervisor : CV
Date Released : 09/04/91
Instrument I.D.: HP23

COMPOUND	SPIKE AMT. (ug/L)	MS (ug/L)	%REC MS	MSD (ug/L)	%REC MSD	RPD	%REC LIMITS
Diesel	1250	1500	120%	1400	112%	-7%	35-109

* Limits established by Anametrix, Inc.

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

MR. BRADY NAGLE
ALTON GEOSCIENCE
1000 BURNETT AVE, SUITE 140
CONCORD, CA 94520

Workorder # : 9108251
Date Received : 08/23/91
Project ID : 30-095
Purchase Order: 411680
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9108251- 1	MW-1	WATER	08/23/91	5520BF
9108251- 2	MW-2	WATER	08/23/91	5520BF
9108251- 3	MW-3	WATER	08/23/91	5520BF

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

MR. BRADY NAGLE
ALTON GEOSCIENCE
1000 BURNETT AVE, SUITE 140
CONCORD, CA 94520

Workorder # : 9108251
Date Received : 08/23/91
Project ID : 30-095
Purchase Order: 411680
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Sept, 6Th 1991

Department Supervisor Date

09-06-91

Chemist Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : 30-095
Matrix : WATER
Date sampled : 08/23/91
Date ext. TOG: 09/03/91
Date anl. TOG: 09/03/91

Anametrix I.D. : 9108251
Analyst : AJP
Supervisor : EJF
Date released : 09/05/91

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9108251-01	MW-1	5	ND
9108251-02	MW-2	5	ND
9108251-03	MW-3	5	ND
GWBL090391	METHOD BLANK	5	ND

ND - Not detected at or above the practical quantitation limit for the method.
TOG - Total Oil & Grease is determined by Standard Method 5520BF.

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

TOTAL OIL AND GREASE METHOD SPIKE
STANDARD METHOD 5520BF
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : METHOD SPIKE
Matrix : WATER
Date Sampled : N/A
Date extracted: 09/03/91
Date analyzed : 09/03/91

Anametrix I.D. : SPK090391
Analyst : APP.
Supervisor : CP
Date Released : 09/05/91

COMPOUND	SPIKE AMT. (mg/L)	MS (mg/L)	%REC MS	MSD (mg/L)	%REC MSD	%RPD	%REC LIMITS
Motor Oil	50	48	96%	48	96%	0%	47-99%

* Quality control limits established by Anametrix, Inc.

9108251 10/15 ... ②⑯ FB 1625

CLIENT CHAIN-OF-CUSTODY

PROJECT NUMBER	PROJECT NAME
30-095 BP oil	

Send Report Attention of:	Report Due	Verbal Due
Brady Nagle	9 10 6/91	/ /

Witnessing Agency	Inspector Name	Date

	Sample Number	Date	Time	Comp	Grab	Station Location	Number of Cntnrs	Type of Containers	TPHg/BTEX	TPHd	5520BF	8010							REMARKS:
1	MW-1	8-23-91	11.40				10	6 VOAs 4 x Liters	X	X	X	X							#2 one voa has 2mm bubbles
2	MW-2	"	11.25				"	"	X	X	X	X							#3 one voa has 3mm bubbles
3	MW-3	"	10.35				"	"	X	X	X	X							#5 1 voa has 2mm bubbles
4	[illegible]	"	[illegible]				[illegible]	[illegible]											[illegible] other samples
5	MW-5	"	14.35				"	"	X										all samples cold
6	MW-6	"	14.25				"	"	X										improper container
7	[illegible]	"	15.35				"	"	X										all voas are not preserved
8	[illegible]	"	15.35				"	"	X										voas for TPHg/BTEX are preserved
																			voas for [illegible] [illegible]
																			F.B.

CLIENT NAME, ADDRESS and PHONE NUMBER

ALTON GeoScience

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Jaghi Merrilach	8-23-91 15.30	Farah Badii	8-23-91 15:30

The following MUST BE completed by the laboratory accepting samples for analysis:

1. Have all samples received for analysis been stored in ice? yes
2. Will samples remain refrigerated until analyzed? yes
3. Did any samples received for analysis have headspace? 3 voas
4. Were samples in appropriate containers and properly packaged? yes

Farah Badii sample custodian 8-23-91

Signature & Title — Date