

June 1, 1993

Mr. Ted Klink
City of Pleasanton Fire Department
P.O. Box 320
Pleasanton, California 94566-0802

30-0065-10

Subject: Quarterly Ground Water Monitoring and Sampling Report
Former Mobil Station 04-H6J
1024 Main Street
Pleasanton, California

Dear Mr. Klink:

The enclosed report presents the results of quarterly ground water monitoring and sampling performed April 5, 1993, by Alton Geoscience at former Mobil Station 04-H6J, 1024 Main Street, Pleasanton, California.

Please call if you have questions or comments regarding this report.

Sincerely,

ALTON GEOSCIENCE

Eric R. Schaper
Project Hydrogeologist

cc: Ms. Cherine Foutch - Mobil Oil Corporation
Mr. Lester Feldman - RWQCB - San Francisco Bay Region
Mr. Barton and Mrs. Bonnie Yates - Property Owner
Mr. Joe Ramia - Adjacent Property Owner

m:\...mobil\04-h6j\q2.93



March 30, 1993

Mr. Ted Klink
City of Pleasanton Fire Department
P.O. Box 320
Pleasanton, California 94566-0802

30-0065-10

Subject: Quarterly Ground Water Monitoring and Sampling Report
Former Mobil Station 04-H6J
1024 Main Street
Pleasanton, California

Dear Mr. Klink:

The enclosed report presents the results of quarterly ground water monitoring and sampling performed January 22, 1993, by Alton Geoscience at former Mobil Station 04-H6J, 1024 Main Street, Pleasanton, California.

Please call if you have questions or comments regarding this report.

Sincerely,

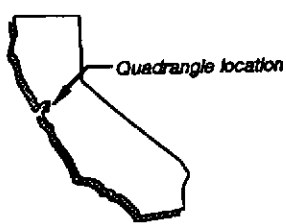
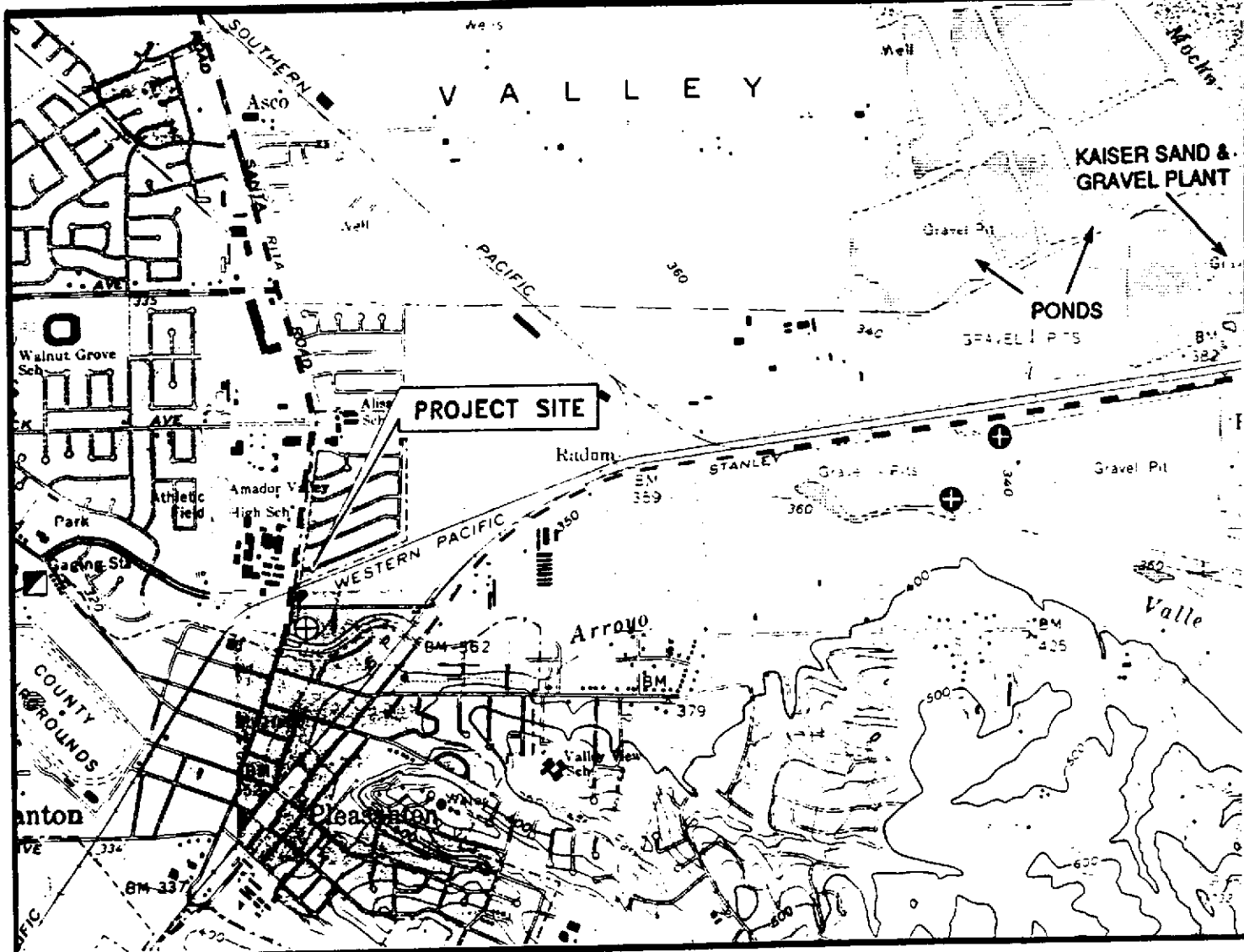
ALTON GEOSCIENCE

A handwritten signature in black ink, appearing to read 'Eric R. Schaper', is written over the typed name.

Eric R. Schaper
Project Hydrogeologist

cc: Ms. Cherine Foutch - Mobil Oil Corporation
Mr. Lester Feldman - RWQCB - San Francisco Bay Region
Mr. Barton and Mrs. Bonnie Yates - Property Owner
Mr. Joe Ramia - Adjacent Property Owner

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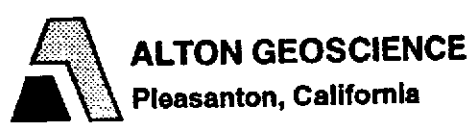
Source: U.S.G.S. Map
Dublin/Livermore
Quadrangles
California
7.5 Minute Series

LEGEND

- ▣ U.S.G.S. Gaging Station
- ⊕ City of Pleasanton Monitoring Well
- ⊕ Kaiser Discharge to Arroyo Valle

SITE VICINITY MAP

Former Mobil Station 04-H6J
1024 Main Street
Pleasanton, California

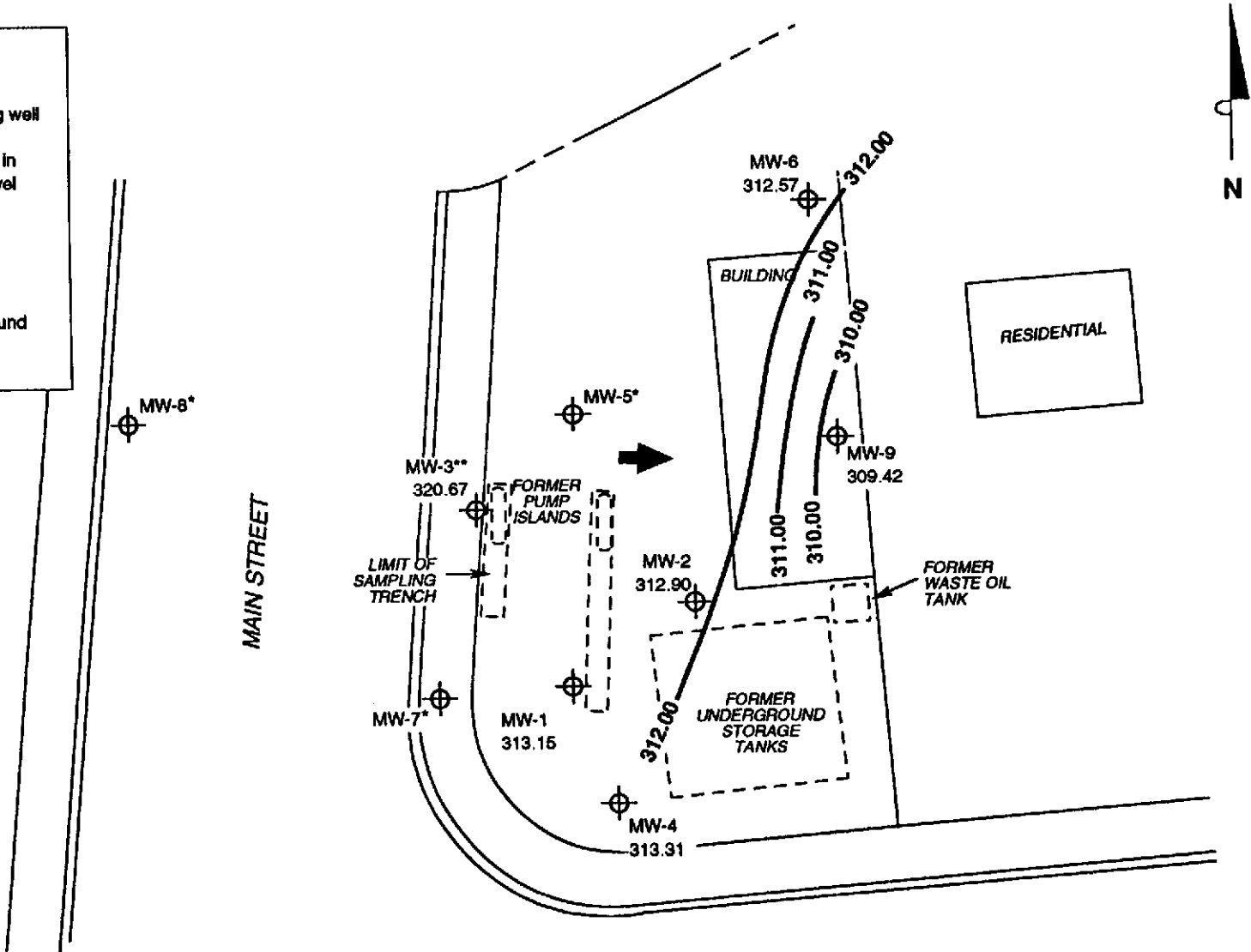


Project No. 31-0065

FIGURE 1

LEGEND

- ⊕ MW-9 Ground water monitoring well
- 309.42 Ground water elevation, in feet above mean sea level [NGVD-1929]
- Ground water elevation contour line
- ➔ General direction of ground water gradient



NOTES:
 Contour lines are interpretive based on fluid level measurements collected January 22, 1993.
 Contour interval = 2.0 foot.
 * = Dry well.
 ** = perched ground water.

GROUND WATER ELEVATION CONTOUR MAP
 January 22, 1993

Former Mobil Station 04-H6J
 1024 Main Street
 Pleasanton, California

FIGURE 2



TABLE 1
Results of Ground Water Monitoring and Sampling
Former Mobil Service Station No. 10-H6J
1024 Main Street Pleasanton, California
Project No 30-065-05

Concentrations in parts per billion (ppb)

SAMPLE ID	DATE OF SAMPLING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	PRODUCT THICKNESS	TPH-G	TPH-D	B	T	E	X	1,2-DCE	Organic Lead	Total Lead	LAB
MW-1	04/12/90	348.03	43.57	304.46	0.00	3600	---	73	13	3	180	45	ND<10	---	SAL
MW-1	10/18/90	348.03	43.18	304.85	0.00	5000	ND<1000	700	360	170	480	54	---	---	SA/
MW-1	08/06/91	348.03	38.65	309.38	0.00	2600	---	310	340	110	340	ND<25	---	ND<5.0	SAL
MW-1	01/08/92	348.03	38.68	309.35	0.00	2400	---	270	370	18	340	14	ND<50	---	SAL
MW-1	04/30/92	348.03	39.93	308.10	0.00	1300	---	150	120	12	160	4.3	---	---	SEQ
MW-1	07/31/92	348.03	43.05	304.98	0.00	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	SEQ
MW-1	10/27/92	348.03	42.86	305.17	0.00	2700	---	320	310	84	310	---	---	---	SEQ
MW-1	01/22/93	348.03	34.88	313.15	0.00	2800	---	190	340	87	320	---	---	---	SEQ
MW-2	04/12/90	348.45	44.14	304.31	0.00	64000	---	5500	7600	1900	7800	200	ND<10	---	SAL
MW-2	10/18/90	348.45	43.18	305.27	0.00	83000	10000	6800	9100	2400	11000	460	---	---	SAL
MW-2	08/06/91	348.45	39.19	309.26	0.00	160000	---	16000	25000	4300	19000	330	---	330	SEQ
MW-2	01/08/92	348.45	39.40	309.07	0.02	---	---	---	---	---	---	---	---	---	NA
MW-2	04/30/92	348.45	40.50	307.95	0.00	71000	---	9200	19000	3700	15000	420	---	---	SEQ
MW-2	07/31/92	348.45	43.64	304.93	0.15	---	---	---	---	---	---	---	---	---	NA
MW-2	10/27/92	348.45	43.53	304.92	TRACE	---	---	---	---	---	---	---	---	---	NA
MW-2	01/22/93	348.45	35.55	312.90	TRACE	---	---	---	---	---	---	---	---	---	NA
MW-3	04/12/90	347.97	23.18	324.79	0.00	2100	---	32	56	31	170	117	ND<10	---	SAL
MW-3	10/18/90	347.97	14.28	333.69	0.00	110	ND<1000	3	3	1	5	2	---	---	SAL
MW-3	08/06/91	347.97	DRY	---	---	---	---	---	---	---	---	---	---	---	NA
MW-3	01/08/92	347.97	32.36	315.61	0.00	680	---	8.9	26	8.5	72	5.7	---	---	SE'
MW-3	04/30/92	347.97	DRY	---	---	---	---	---	---	---	---	---	---	---	NA
MW-3	07/31/92	347.97	DRY	---	---	---	---	---	---	---	---	---	---	---	NA
MW-3	10/27/92	347.97	DRY	---	---	---	---	---	---	---	---	---	---	---	NA
MW-3	01/22/93	347.97	27.30	320.87	0.00	2600	---	240	300	170	440	---	---	---	SEQ
MW-4	10/18/90	348.07	43.16	304.91	0.00	9600	2000	180	500	200	1200	9	---	---	SAL
MW-4	08/06/91	348.07	38.65	309.42	0.00	8600	---	320	420	220	650	ND<25	---	ND<5.0	SEQ
MW-4	01/08/92	348.07	38.65	309.42	0.00	3400	---	600	880	220	1100	9.2	ND<50	---	SEQ
MW-4	04/30/92	348.07	39.88	308.19	0.00	7200	---	650	1200	210	1200	ND<50	---	---	SEQ
MW-4	07/31/92	348.07	43.07	305.00	0.00	3800	---	320	340	120	360	---	---	---	SEQ
MW-4	10/27/92	348.07	42.78	305.29	0.00	9000	---	440	750	190	900	---	---	---	SEQ
MW-4	01/22/93	348.07	34.76	313.31	0.00	12000	---	540	1200	320	1900	---	---	---	SEQ

TABLE 1
Results of Ground Water Monitoring and Sampling
Former Mobil Service Station No. 10-H6J
1024 Main Street Pleasanton, California
Project No 30-065-05

Concentrations in parts per billion (ppb)

SAMPLE ID	DATE OF SAMPLING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	PRODUCT THICKNESS	TPH-G	TPH-D	B	T	E	X	1,2-DCE	Organic	Total	LAB
													Lead	Lead	
MW-9	02/04/92	348.53	43.54	304.99	0.00	16000	----	3000	740	1200	2500	68	----	ND<5.0	SEQ
MW-9	04/30/92	348.53	42.83	305.70	0.00	5600	----	1000	120	410	350	ND<50	----	----	SEQ
MW-9	07/31/92	348.53	47.36	301.17	0.00	9300	----	1800	1900	620	940	----	----	----	SEQ
MW-9	10/27/92	348.53	48.32	300.21	0.00	13000	----	2400	1600	680	1100	----	----	----	SEQ
MW-9	01/22/93	348.53	39.11	309.42	0.00	5600	----	1200	200	510	350	----	----	----	SEQ

EXPLANATION OF ABBREVIATIONS:

TPH-G :total petroleum hydrocarbons quantified as gasoline
 TPH-D :total petroleum hydrocarbons quantified as diesel
 B :benzene
 T :toluene
 E :ethylbenzene
 X :total xylenes

ND :not detected at or above reported detection limit
 ---- :not applicable/not analyzed
 * :reported by laboratory as non gasoline mixture
 ** :well inaccessible
 1,2-DC:1,2-Dichloroethane
 SAL :Superior Analytical Laboratories
 SEQ :Sequoia Analytical

APPENDIX A
PROJECT BACKGROUND

PROJECT BACKGROUND

March 1989: A soil gas survey was conducted by Target Environmental Services (TES). Hydrocarbon vapors were detected in soil near the existing pump islands.

October 1989: Balch Petroleum removed three underground fuel storage tanks and an underground waste oil tank. Analysis of soil samples collected from the western boundary of the fuel tank cavity detected between 890 parts per million (ppm) and 2,400 ppm total petroleum hydrocarbons as gasoline (TPH-G). Following removal of the tanks approximately 260 yards of hydrocarbon-affected soil were excavated, sampled, aerated onsite, and subsequently removed for disposal.

June 1, 1990: Alton Geoscience submitted a site investigation report. Eight exploratory soil borings were drilled, three of which were subsequently converted to Monitoring Wells MW-1, MW-2, and MW-3. The geology of the site indicates the presence of two aquifers, separated by a difference in ground water elevations of approximately 20 feet. The highest hydrocarbon concentrations were detected in soil samples collected between 25 and 45 feet below grade with up to 3,500 ppm TPH-G.

January 15, 1991: Alton Geoscience submitted a supplemental site investigation report. Five additional monitoring wells MW-4 through MW-8 were installed. Two water bearing zones were encountered within 50 feet below grade (fbg), and appeared to be separated vertically and laterally by a less permeable clay. The ground water gradient of the upper water bearing zone was directed towards the northeast, and the lower to the northwest. Aquifer testing was performed on both water bearing zones. Adsorbed-phase hydrocarbons appeared limited to the vicinity of the former pump islands and north-northeast of the former underground fuel storage tanks.

August, 1991: Alton Geoscience supervised Earth Technology Corporation during a geotechnical survey using cone penetrometer test (CPT) methods and ground water sampling using a hydropunch tool. Nine CPT soundings were conducted and eight water samples collected. CPT results were used to help define the stratigraphy beneath the site. Results of CPT soundings and hydropunch sampling are summarized in the Alton Geoscience report dated July 31, 1992.

October 24 and 25, 1991: Alton Geoscience supervised Balch Petroleum during trenching operations beneath the location of the former pump islands. Analysis of soil samples collected during the excavation revealed the presence of hydrocarbon-affected soil. Approximately 100 yards of soil were excavated and stockpiled onsite.

August to November 1991: Alton Geoscience continuously monitored ground water levels from several wells using a data logger. Significant changes in ground water elevations were observed. Significant fluctuations in ground water elevations have been noted by Zone 7 in Monitoring Well 3S/1E 16P 5, located approximately 250 feet south of the site.

January 8, 1992: Trenches excavated by Balch Petroleum in October 1991 were backfilled by Balch Petroleum.

January 29 and 30, 1992: Alton Geoscience supervised Clear Heart Construction during drilling of MW-9 (SB-14) and SB-15 inside the former station building.

March 2 and 3, 1992: Alton Geoscience performed two constant rate pumping tests on MW-1 and MW-2. Pumping test results are presented in Alton Geoscience report dated July 31, 1992.

July 31, 1992: Alton Geoscience submitted Supplemental Site Investigation: Assessment and Remedial Investigation of Hydrocarbon-Affected Soil and Ground Water. The report concluded that adsorbed-phase hydrocarbons apparently originated from elbow junctions of the former product lines south of the western dispenser island and north of the former fuel tank cavity and possibly from the former fuel tanks. The migration of hydrocarbons in the vadose zone appears to have been controlled by lenses of coarser sediments within silty clays. The extent of dissolved-phase hydrocarbons in either the upper or lower aquifers has not been defined, however, liquid-phase hydrocarbons appear to be limited to the vicinity of MW-2.

APPENDIX B

**ALTON GEOSCIENCE GENERAL FIELD PROCEDURES FOR
MONITORING WELL SAMPLING**

ALTON GEOSCIENCE GENERAL FIELD PROCEDURES FOR MONITORING WELL SAMPLING

Monitoring wells were inspected for the presence of free product using an electronic interface probe prior to purging. Before sampling, wells were purged of 3 to 4 casing volumes of water or until pH, temperature, and electroconductivity stabilized. Ground water samples were collected by lowering a 2-inch-diameter bottom-fill disposable polyethylene bailer below the air/water interface in the well. The samples were carefully transferred from the bailer to zero-headspace 40-milliliter and 1-liter glass containers fitted with Teflon-sealed caps. 40-milliliter samples were inverted to ensure entrapped air was not present. Each sample was labeled with sample number, well number, date, and sampler's initials, and remained on ice prior to and during transport to a California-certified laboratory for analysis. The samples were handled in accordance with proper chain of custody documentation. The purged water was pumped into barrels prior to disposal or recycling at an appropriate waste disposal facility.

APPENDIX C

**ANALYTICAL METHODS, OFFICIAL
LABORATORY REPORTS, AND CHAIN OF CUSTODY RECORD**

**ANALYTICAL METHODS, OFFICIAL
LABORATORY REPORTS, AND CHAIN OF CUSTODY RECORD**

This appendix includes copies of the official laboratory reports and chain of custody record for soil and ground water samples selected for laboratory analysis.

Laboratory analyses were performed by Sequoia Analytical, a California-certified laboratory (California Certification No. 1271).

Chemical analyses of soil and ground water samples were performed using standard test methods of the United States Environmental Protection Agency (EPA) and the California Department of Health Services (Cal-DHS).

Chain of custody protocol was followed for all samples. The chain of custody form(s) accompanies the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to actual analysis.



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

FEB 3 1993

Alton Geoscience 5870 Stoneridge Drive, Suite 6 Pleasanton, CA 94588 Attention: Eric Schaper	Client Project ID: #30-0065-10 / Mobil #04 - H6J Sample Matrix: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 301-0705	Sampled: Jan 22, 1993 Received: Jan 27, 1993 Reported: Feb 2, 1993
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 301-0705 MW - 1	Sample I.D. 301-0706 MW - 3	Sample I.D. 301-0707 MW - 4	Sample I.D. 301-0708 MW - 6	Sample I.D. 301-0709 MW - 9
Purgeable Hydrocarbons	50	2,800	2,600	12,000	250	5,600
Benzene	0.5	190	240	540	12	1,200
Toluene	0.5	340	300	1,200	2.4	200
Ethyl Benzene	0.5	87	170	320	1.4	510
Total Xylenes	0.5	320	440	1,900	1.9	350
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	10	20	10	1.0	10
Date Analyzed:	1/28/93	1/28/93	1/28/93	1/29/93	1/28/93
Instrument Identification:	HP-5	HP-5	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	105	107	102	108	111

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL


Scott A. Chieffo
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

FEB 3 1993

Alton Geoscience
5870 Stoneridge Drive, Suite 6
Pleasanton, CA 94588
Attention: Eric Schaper

Client Project ID: #30-0065-10 / Mobil #04 - H6J

QC Sample Group: 3010705-709

Reported: Feb 2, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
	Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	J.F.	J.F.	J.F.	J.F.
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Jan 29, 1993	Jan 29, 1993	Jan 29, 1993	Jan 29, 1993
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	20	20	20	60
Conc. Matrix Spike:	22	21	20	67
Matrix Spike % Recovery:	110	105	100	112
Conc. Matrix Spike Dup.:	24	22	21	73
Matrix Spike Duplicate % Recovery:	120	110	105	122
Relative % Difference:	8.6	4.6	4.8	8.5

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL


Scott A. Chieffo
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

3010705.ALT <2>

Mobil Chain of Custody



SEQUOIA ANALYTICAL

Redwood City:
Concord:
Sacramento:

(415) 364-9600
(510) 686-9600
(916) 921-9600

Consulting Firm Name: <u>ALTON GEOSCIENCE</u>		Site SS #: <u>04-H6J</u>	Phase of Work:
Address: <u>5870 STONERIDGE DR. STE. 6</u>		Mobil Site Address: <u>1024 MAIN ST, Pleasanton</u>	<input type="checkbox"/> A. Emrg. Response
City: <u>PLEASANTON</u> State: <u>CA</u> Zip Code: <u>94588</u>	Mobil Engineer:		<input type="checkbox"/> B. Site Assessment
Telephone: <u>(510) 734-8134</u> FAX #: <u>734-8420</u>	Consultant Project #: <u>30-0065-10</u>		<input type="checkbox"/> C. Remediation
Project Contact: <u>ERIC SCHAPER</u> Sampled by: <u>T. GROTTIS</u>	Sequoia's Work Order Release #:		<input checked="" type="checkbox"/> D. Monitoring
			<input type="checkbox"/> E. OGC/Claims

Turnaround Time: Standard TAT (5 - 10 Working Days)
 Other _____

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Description	# of Containers	Sequoia's Sample #	Analyses Requested					Comments
					TPH Gas/BTEX	TPH Diesel	TRPH by I.R. EPA 418.1	Oil & Grease EPA 413.2		
1. MW-1	1-22-93 1117	W	HCl pres. 2		X					3010705AB
2. MW-3	1-22-93 1355	W	2		X					706AB
3. MW-4	1-22-93 1453	W	2		X	FEB	3 1993			707AB
4. MW-6	1-22-93 1225	W	2		X					708AB
5. MW-9	1-22-93 1557	W	2		X					709AB
6.										
7.										
8.										
9.										
10.										

Relinquished By: <u>T. Grottis</u>	Date: <u>1-27-93</u>	Time: <u>1400</u>	Received By: <u>[Signature]</u>	Date: <u>1/27/93</u>	Time: <u>1400</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____

Method of Shipment SEQUOIA