

WEGE WESTERN
GEO-ENGINEERS

CALIF CONTRACTOR # 513857 A CORPORATION
REGISTERED GEOLOGISTS

1386 EAST BEAMER STREET
WOODLAND, CA 95776-6003
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November 5, 1996

Mr. John Rutherford
Desert Petroleum Inc.
P.O. Box 1601
Oxnard, California 93032
(805) 644-5892
FAX (805) 654-0720

RE: September, 1996 Quarterly Groundwater Sampling Report for
Former Desert Petroleum Station #796, 2844 Mountain Boulevard,
Oakland, California.

Dear Mr. Rutherford:

As you requested Western Geo-Engineers (WEGE) has performed the quarterly monitoring/sampling of this site. The following report represents WEGE's September, 1996 Quarterly Ground Water Sampling with site visits occurring on September 18, October 1, 8, 15 and 21, 1996.

INTRODUCTION

In response to the June 17, 1996 letter/review by Alameda County Health Care Services Agency, Desert Petroleum Inc. requested that Western Geo-Engineers (WEGE) sample the monitor wells and provide the requested items detailed in the June 17, 1996 letter, see Appendix A.

A WEGE sample technician monitored and sampled the four existing groundwater monitoring wells on September 18, 1996. During this site visit, Ms. Jennifer Eberly of Alameda County, Department of Environmental Health conducted an inspection of the well traffic boxes and security and noted a leaking diesel dispenser at pump island #4, see Appendix A.

Clarification of items outlined in June 17, 1996 ACHCS letter regarding the RSI Report.

- Item 1. Documentation of disposal of soils removed during the piping replacement and excavation of the south end of the super unleaded fuel tank in 1989.

where?
WEGE communications with Mr. John Rutherford of Desert Petroleum Inc. The estimated 90 to 150 cubic yards of soil excavated during the piping replacement and excavation at the south end of the super unleaded fuel tank was ~~excavated and then used as fill~~. On-Site Technologies performed the sampling, but Desert Petroleum can not locate the documentation.

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ENVIRONMENTAL
PROTECTION
AM 9:53
NOV 23 1996

Item 2. Errors on page 2 of RSI report dated May, 1996.

WEGE has noted the higher concentrations for TPHg, ethylbenzene and xylenes based on sample #5, tank. These concentrations will be used in any future RBCA modeling. *ok*

Item 3. The groundwater elevations on Figures 4 and 5 appear to be incorrect, as per listed on Table 1 March 1996 quarterly report.

WEGE reviewed Table 1 of the May, 1996 Supplemental Risk Based Corrective Action Report by RSI and found errors in the calculations of water table elevations, for monitor wells RS-1, RS-2, RS-3 and RS-4 Nov-95 and Feb-96. Table 1 of this report has the matamatically corrected values and Figures 4 and 5 of this report are the corrected groundwater gradient figures for November, 1995 and February, 1996 respectively. WEGE is assuming that the top of casing elevatins were properly surveyed and that well head installations have not been physically altered. *ok*

Item 4. "FHCS were only detected in soil beneath the tank location on the west portion of the property". All four piping samples collected on 3/22/89, in addition to soil sampled from all four well boreholes and soil sampled from the former waste oil tank excavation also contained hydrocarbons.

WEGE made note of this comment and will review past reports concerning this site to document the contaminant concentrations in soil left after repairs and excavating had taken place. *ok*

GROUNDWATER SAMPLE RESULTS, SEPTEMBER 19, 1996

Table 1 is a summary of groundwater monitoring of this site since May, 1990. The most recent sampling/monitoring, September 19, 1996 found a thin film of free product in monitor well RS-1. RS-2 and RS-3 both contain high levels of dissolved gasoline range hydrocarbons. RS-4 was below laboratory detection limits for gasoline range hydrocarbons. MTBE was tested for in RS-2, RS-3 and RS-4. RS-2 contained the highest concentration at 160 mg/L. No diesel or oil range hydrocarbons were detected in the monitor wells and analysis of the free product found in RS-1 indicated that this is an aged gasoline; again, no diesel or oil range hydrocarbons were detected, see Appendix B for Laboratory report with Chromatograms.

FP = "old" release

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LOCATION

The site is an operating ARCO service station that retails regular unleaded, super unleaded gasoline and diesel and is also an operating garage performing automobile maintenance. The site is located East of Highway 13 at 2844 Mountain Blvd., Oakland, California, west of Joaquin Miller Park.

GROUNDWATER GRADIENT "FLOW DIRECTION"

Figures 4, 5 and 6 depicts groundwater elevations as measured in November, 1995, February, 1996 and on September 10, 1996 respectively. All three figures document a gradient flow to the southwest, which concures with the local topography, see Figure 2.

GROUNDWATER QUALITY

Obtained groundwater samples from monitor wells RS-2, RS-3, RS-4 on September 19, 1996. No water sample was obtained from RS-1. Free phase product was discovered in this well, see Table 1 and Figure 7 and Appendix B and C.

INTERIM PRODUCT RECOVERY

On October 3, 1996, weekly purging and venting of RS-1 was initiated for removal of free phase product and interim recovery. RS-2 and RS-3 were also purged and vented. No free phase product was recovered from RS-2 and RS-3. Gasoline taint was observed in groundwater from RS-1, see Appendix D.

TIME FRAME

December 5, 1996	Termination of weekly venting for product recovery, migration control.
December 19, 1996	Monitoring and sampling groundwater from wells RS-1, RS-2, RS-3 and RS-4.
January 20, 1996	Report of findings and evaluation for Risk Based Corrective Action, Tier 2.

HEALTH AND SAFETY

This site is being treated as a class D site, normal common sense is to be used.

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SAMPLE METHODS

A WEGE technician working directly under California Registered Geologist #3037 using approved methods gauged, purged and sampled the monitor wells on September 18, 1996, see Appendix C.

SAMPLE PRESERVATION.

Each sample was placed into two, certified clean, glass, 40 ml VOAs with laboratory installed HCl preservative and 1 liter amber.

ANALYTICAL METHODS AND DHS LABORATORY SELECTED.

WEGE contracted American Environmental Network (AEN), DHS #1172, 3440 Vincent Road, Pleasant Hill, CA 94523 (510) 930-9090 to perform the analysis of the ground water samples.

AEN analyzed the samples for Total Petroleum Hydrocarbons as gasoline (TPHg) w/ BTEX distinction utilizing EPA Methods 8020 (GCFID) with 3050 extraction method and TPH as diesel and oil range utilizing EPA Methods 8015 with 3510 extraction method as described on page 17, Table 2 of the TRI-REGIONAL BOARD STAFF RECOMMENDATIONS FOR PRELIMINARY EVALUATION AND INVESTIGATION OF UNDERGROUND TANK SITES, 10 AUGUST-1990.

AEN noted that Methyl Tert Butly Ether (MTBE) was evident in the samples (RS-2, RS-3 and RS-4), see Table 1 and Appendix B. The detection limits in water are: TPH G & D 50 ug/L; Benzene, Toleuene and Ethylbenzene 0.5 ug/L, Xylenes 2 ug/L and MTBE 5 ug/L.

RINSEATES AND PURGED GROUNDWATER STORAGE/TREATMENT.

All rinseates and purged water produced from the groundwater sampling and weekly purging of the wells is transferred into 55 gallon DOT H17 drums for later removal by Evergreen Services to be recycled.

LIMITATIONS

The information presented in this report is based on the following:

1. The observations and data collected by field personnel.
2. The results of laboratory analyses performed by a state certified analytical laboratory.
3. Our understanding of the regulations of Alameda County, the City of Oakland and the State of California.
4. References reviewed for this report.

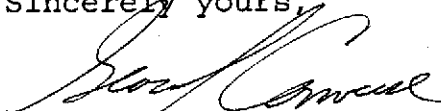
DP796, Sept., 1996 RPT


Changes in groundwater conditions can occur due to variations in rainfall, temperature, local and regional water use, and local construction practices. In addition, variations in the soil and groundwater conditions could exist beyond the points explored in this investigation.

State Certified Laboratory analytical results are included in this report. This laboratory follows EPA and State of California approved procedures; however, WEGE is not responsible for errors in these laboratory results.

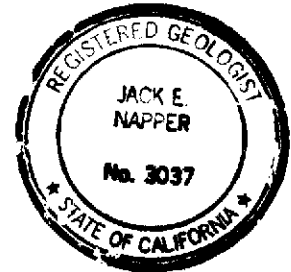
The services performed by Western Geo-Engineers, a corporation under California Registered Geologist #3037 and/or Contractors License #513857, have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the State of California, the City of Oakland and Alameda County. Our work and/or supervision of remediation and/or abatement operations, active or preliminary at this site is no way meant to imply that we are owners or operators of this site. Please note that the known contamination of soil and/or ground water must be reported to the appropriate agencies in a timely manner. No other warranty expressed or implied, is made.

Sincerely yours,


George L. Converse
Project Manager/Geologist-WEGE


Jack E. Napper
Calif. Reg. Geologist

cc: Ms. Jennifer Eberly, Alameda County Health



DP796, Sept., 1996 RPT

TABLE 1
SUMMARY OF GROUNDWATER MONITORING
DP 796

2844 MOUNTAIN BOULEVARD, OAKLAND, CALIFORNIA 94602

WELL DATE	CASING ELEVATION	DEPTH TO TOP FLUID	DEPTH TO FREE TOP WATER	PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH GASOLINE mg/L	BENZENE ug/L	TOLUENE ug/L	ETHYL-BENZENE ug/L	XYLENES ug/L	MTBE ug/L	SAMPLED BY
RS-1 MAY-90	689.25	7.2	7.2	0.00	682.05	2.7	370	420	40	320		RSI
MAY-91	689.25	8.35	8.35	0.00	680.9	1.3	580	130	62	240		RSI
OCT.-91	689.17	10.22	10.22	0.00	678.95	1.1	140	100	45	210		RSI
JAN.-92	689.17	8.06	8.06	0.00	681.11	1.7	9.9	31	9.7	170		RSI
JAN.-93	689.17	5.3	5.3	0.00	683.87	3.7	650	9.2	51	170		RSI
AUG.-93	689.17	8.56	8.56	0.00	680.61	0.9	14	0.6	2.1	8		RSI
NOV.-93	689.17	8.44	8.44	0.00	680.73	1.4	9.6	ND	0.9	5		RSI
JAN.-94	689.17	6.88	6.88	0.00	682.29	4.2	95	3.1	58	130		RSI
MAY-94	675.63	7.87	7.87	0.00	667.76	7.5	270	11	37	96		RSI
AUG.-94	675.63	16.28	16.28	0.00	659.35	0.13	12	0.5	2.6	5		RSI
NOV.-94	675.63	8.02	8.02	0.00	667.61	0.27	4.7	0.7	0.6	15		RSI
FEB.-95	675.63	6.51	6.51	0.00	669.12	12	81	2.3	1	12		RSI
JUN.-95	675.63	7.34	7.34	0.00	668.29	37	460	ND	ND	ND	63000	RSI
NOV.-95	675.63	8.71	8.71	0.00	666.92	ND	660	16	140	330	31000	RSI
FEB.-96	675.63	6.95	6.95	0.00	668.68	66	110	ND	12	21	84000	RSI
09/18/96	675.63	8.44	8.52	0.08	667.17	ONE INCH FREE PRODUCT heavy gasoline						WEGE
RS-2 MAY-90	689	7.06	7.06	0.00	681.94	23	7200	4800	300	3300		RSI
MAY-91	689	7.14	7.14	0.00	681.86	26	14000	1800	750	2900		RSI
OCT.-91	688.89	8.84	8.84	0.00	680.05	13	4300	910	300	2300		RSI
JAN.-92	688.89	7.34	7.34	0.00	681.55	8.3	1800	920	140	1700		RSI
JAN.-93	688.89	4.1	4.1	0.00	684.79	41	7000	210	1200	4200		RSI
AUG.-93	688.89	7.32	7.32	0.00	681.57	19	5300	62	810	1600		RSI
NOV.-93	688.89	7.34	7.34	0.00	681.55	9.3	2400	3.9	46	800		RSI
JAN.-94	688.89	5.52	5.52	0.00	683.37	30	4900	ND	880	2600		RSI
MAY-94	675.25	6.4	6.4	0.00	668.85	120	3300	330	ND	2200		RSI
AUG.-94	675.25	22.11	22.11	0.00	653.14	0.51	7.3	3.8	3.5	32		RSI

TABLE 1
SUMMARY OF GROUNDWATER MONITORING
DP 796
2844 MOUNTAIN BOULEVARD, OAKLAND, CALIFORNIA 94602

WELL DATE	CASING ELEVATION	DEPTH TO TOP FLUID	DEPTH TO TOP WATER	FREE PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH					SAMPLED BY	
						GASOLINE mg/L	BENZENE ug/L	TOLUENE ug/L	ETHYL-BENZENE ug/L	XYLENES ug/L		MTBE ug/L
NOV.-94	675.25	9.82	9.82	0.00	665.43	0.62	6.6	3.9	1.1	47		RSI
FEB.-95	675.25	4.81	4.81	0.00	670.44	22	228	80	2	463		RSI
JUN.-95	675.25	5.8	5.8	0.00	669.45	49	1300	160	200	1600	71000	RSI
NOV.-95	675.25	7.64	7.64	0.00	667.61	ND	670	25	150	360	65000	RSI
FEB.-96	675.25	4.69	4.69	0.00	670.56	75	1400	170	59	460	71000	RSI
09/18/96	675.25	7.34	7.34	0.00	667.91	6.3	2000	48	350	570	160000	WEGE ND ND
RS-3 MAY-90	670	6	6	0.00	664.00	0.33	2	1	1	150		RSI
MAY-91	670	6.76	6.76	0.00	663.24	ND	0.4	ND	0.8	8		RSI
OCT.-91	670	8.98	8.98	0.00	661.02	ND	ND	ND	ND	ND		RSI
JAN.-92	670	6.81	6.81	0.00	663.19	ND	2.2	7.2	0.6	4		RSI
JAN.-93	670	4.05	4.05	0.00	665.95	ND	ND	ND	ND	ND		RSI
AUG.-93	670	7.19	7.19	0.00	662.81	ND	30	6	2.4	5		RSI
NOV.-93	670	7.12	7.12	0.00	662.88	ND	4.8	0.4	0.6	2		RSI
JAN.-94	670	5.42	5.42	0.00	664.58	0.33	25	3.2	3.9	12		RSI
MAY-94	676.2	5.78	5.78	0.00	670.42	0.67	34	4	28	70		RSI
AUG.-94	676.2	5.86	5.86	0.00	670.34	ND	ND	ND	ND	ND		RSI
NOV.-94	676.2	5.08	5.08	0.00	671.12	0.069	2.5	3.1	1	4		RSI
FEB.-95	676.2	4.51	4.51	0.00	671.69	ND	0.3	0.4	ND	1		RSI
JUN.-95	676.2	5.29	5.29	0.00	670.91	ND	ND	ND	ND	ND	66	RSI
NOV.-95	676.2	7.1	7.1	0.00	669.10	ND	ND	ND	ND	ND	44	RSI
FEB.-96	676.2	4.48	4.48	0.00	671.72	0.12	ND	ND	ND	ND	110	RSI
09/18/96	676.2	6.92	6.92	0.00	669.28	1	13	8.6	10	17	33	WEGE ND ND
RS-4 MAY-90	689.06	8.34	8.34	0.00	680.72	0.44	9	11	9	49		RSI
MAY-91	689.06	9.5	9.5	0.00	679.56	ND	8	4	3	5		RSI
OCT.-91	689.1	10.82	10.82	0.00	678.28	0.83	280	120	24	170		RSI

2

TPH₁ TPH₂

160000

ND ND

ND ND

TABLE 1
SUMMARY OF GROUNDWATER MONITORING
DP 796
2844 MOUNTAIN BOULEVARD, OAKLAND, CALIFORNIA 94602

WELL DATE	CASING ELEVATION	DEPTH TO TOP FLUID	DEPTH TO FREE TOP WATER	GROUND PRODUCT THICKNESS	GROUND WATER ELEVATION	TPH GASOLINE mg/L	BENZENE ug/L	TOLUENE ug/L	ETHYL-BENZENE ug/L	XYLENES ug/L	MTBE ug/L	SAMPLED BY
JAN.-92	689.1	9.31	9.31	0.00	679.79	0.62	34	8.3	2.1	21		RSI
JAN.-93	689.1	6.89	6.89	0.00	682.21	0.15	32	1.7	5.8	13		RSI
AUG.-93	689.1	9.68	9.68	0.00	679.42	ND	0.9	0.7	ND	0		RSI
NOV.-93	689.1	9.83	9.83	0.00	679.27	ND	ND	ND	ND	ND		RSI
JAN.-94	689.1	8.17	8.17	0.00	680.93	ND	1.7	ND	0.81	2		RSI
MAY-94	675.38	8.69	8.69	0.00	666.69	ND	ND	ND	ND	1		RSI
AUG.-94	675.38	9.04	9.04	0.00	666.34	0.42	6.5	4.1	1.9	40		RSI
NOV.-94	675.38	8	8	0.00	667.38	0.13	4.1	0.7	1.7	8		RSI
FEB.-95	675.38	7.93	7.93	0.00	667.45	ND	6	1.2	3.5	13		RSI
JUN.-95	675.38	8.61	8.61	0.00	666.77	ND	ND	ND	ND	ND	69	RSI
NOV.-95	675.38	10.43	10.43	0.00	664.95	ND	ND	ND	ND	ND	47	RSI
FEB.-96	675.38	7.44	7.44	0.00	667.94	0.96	ND	ND	0.6	ND	80	RSI
09/18/96	675.38	9.58	9.58	0.00	665.80	<0.05	<0.5	<0.5	<0.5	<2	200	WEGE ND ND

MTBE Methyl t-Butyl Ether

TPH Total Petroleum Hydrocarbons

mg/L Milligrams per liter (ppm)

ND or < Below laboratory detection limits

ug/L Micrograms per liter (ppb)

-WEGE-

FORMER DESERT PETROLEUM #796
2844 MOUNTAIN BOULEVARD
OAKLAND, CALIFORNIA

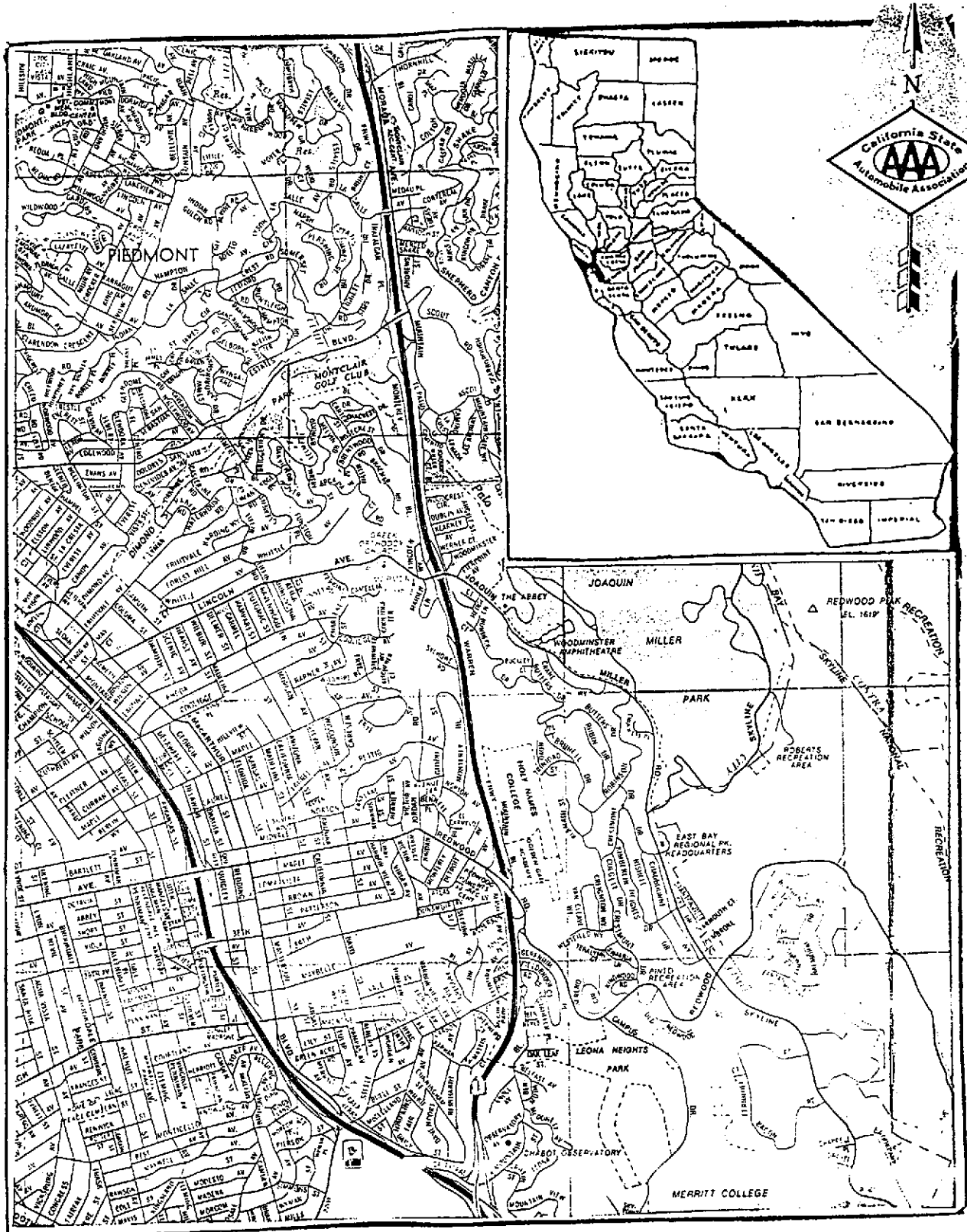


FIGURE 1

Location (AAA Map)

-WEGE-

FORMER DESERT PETROLEUM #796
2844 MOUNTAIN BOULEVARD
OAKLAND, CALIFORNIA

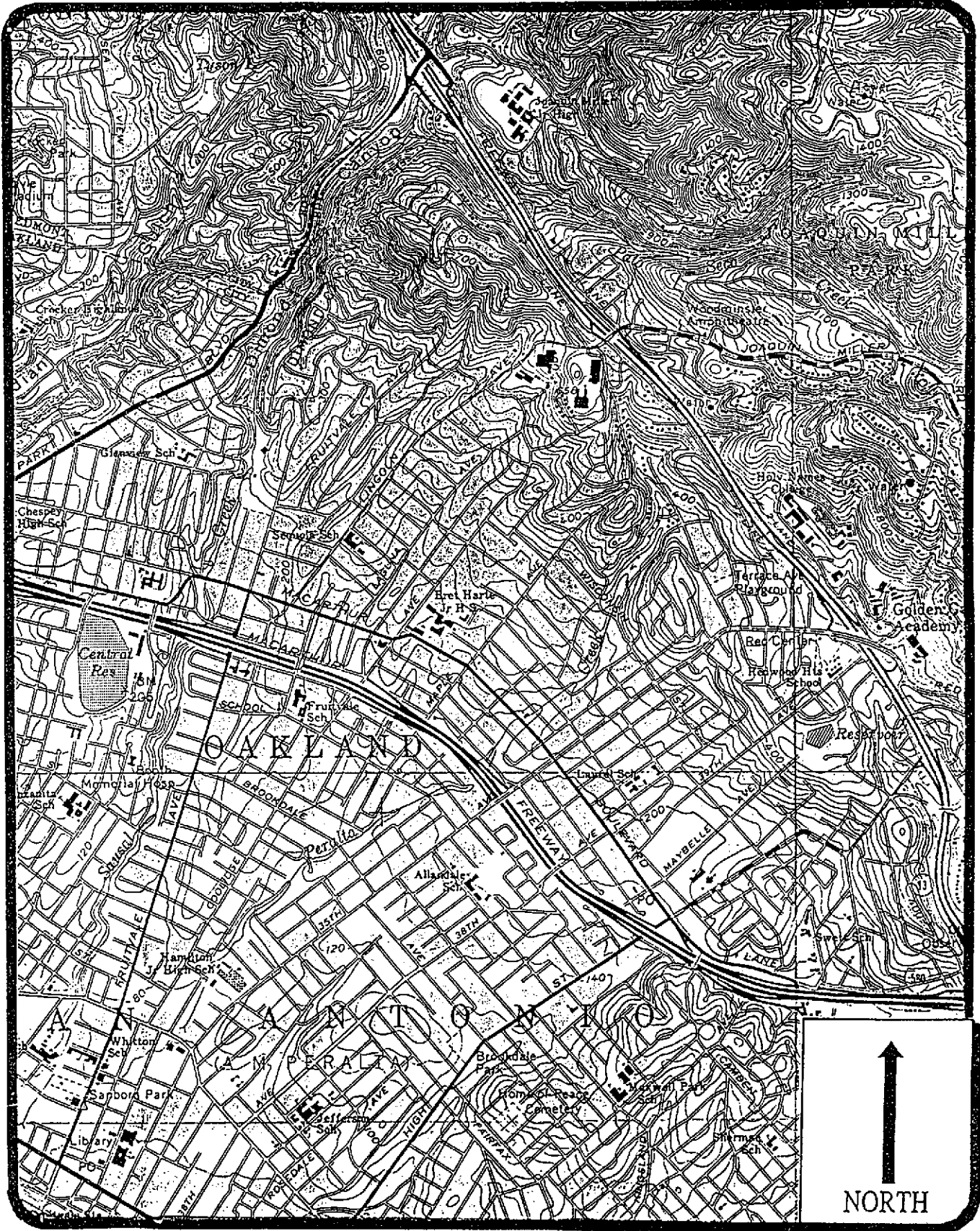


FIGURE 2, USGS TOPOGRAPHIC MAP

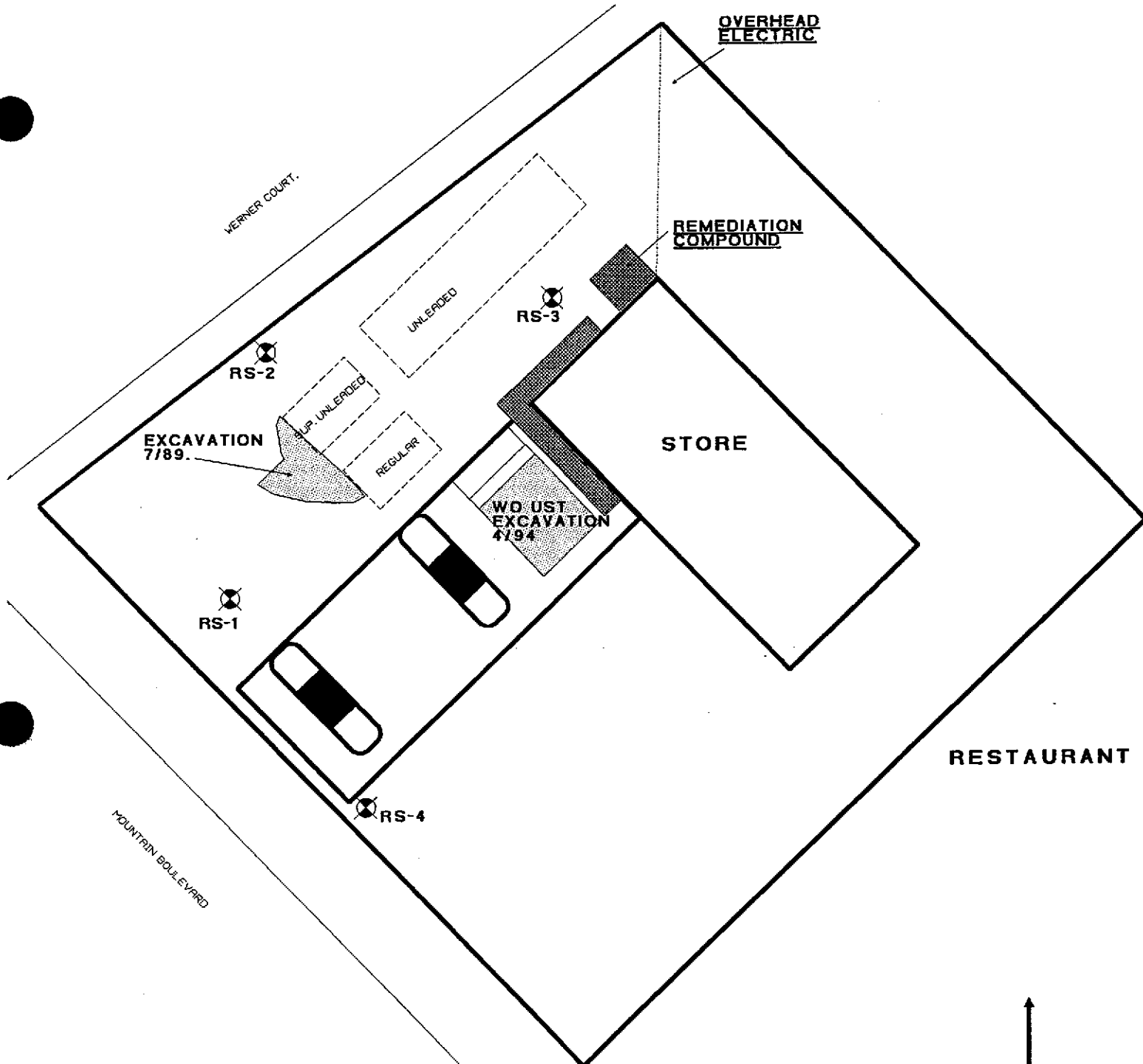
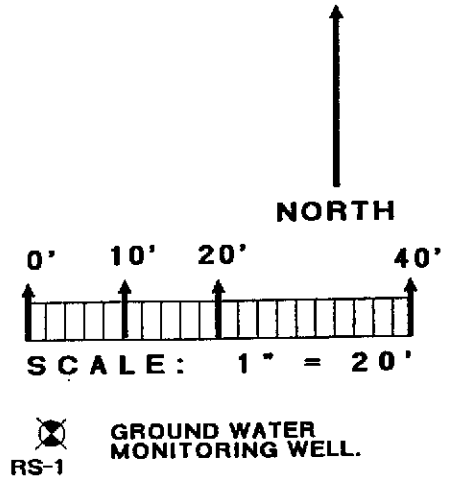


FIGURE 3
FORMER DESERT PETROLEUM #796
2844 MOUNTAIN BOULEVARD
OAKLAND, CALIFORNIA
SITE CONDITIONS
SEPTEMBER 10, 1996.



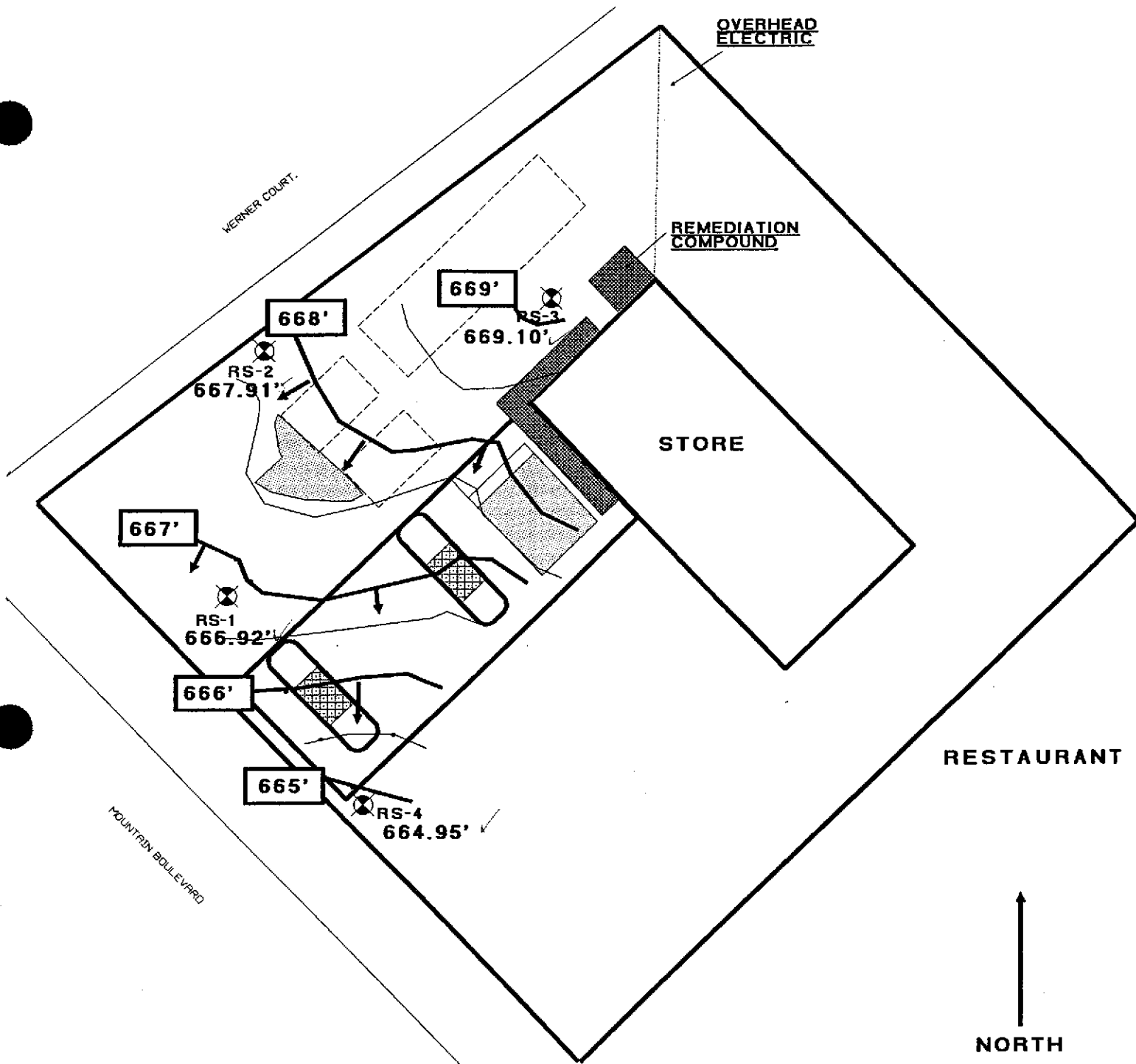
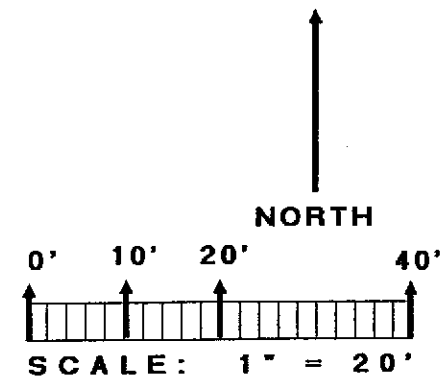





FIGURE 4

**FORMER DESERT PETROLEUM #796
2844 MOUNTAIN BOULEVARD
OAKLAND, CALIFORNIA**

**GROUNDWATER GRADIENT
NOVEMBER, 1996**

1996



-  GROUND WATER MONITORING WELL.
-  GROUNDWATER FLOW DIRECTION VECTOR.
-  GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR IN FEET ABOVE MEAN SEA LEVEL. INTERVAL 0.5 FEET.

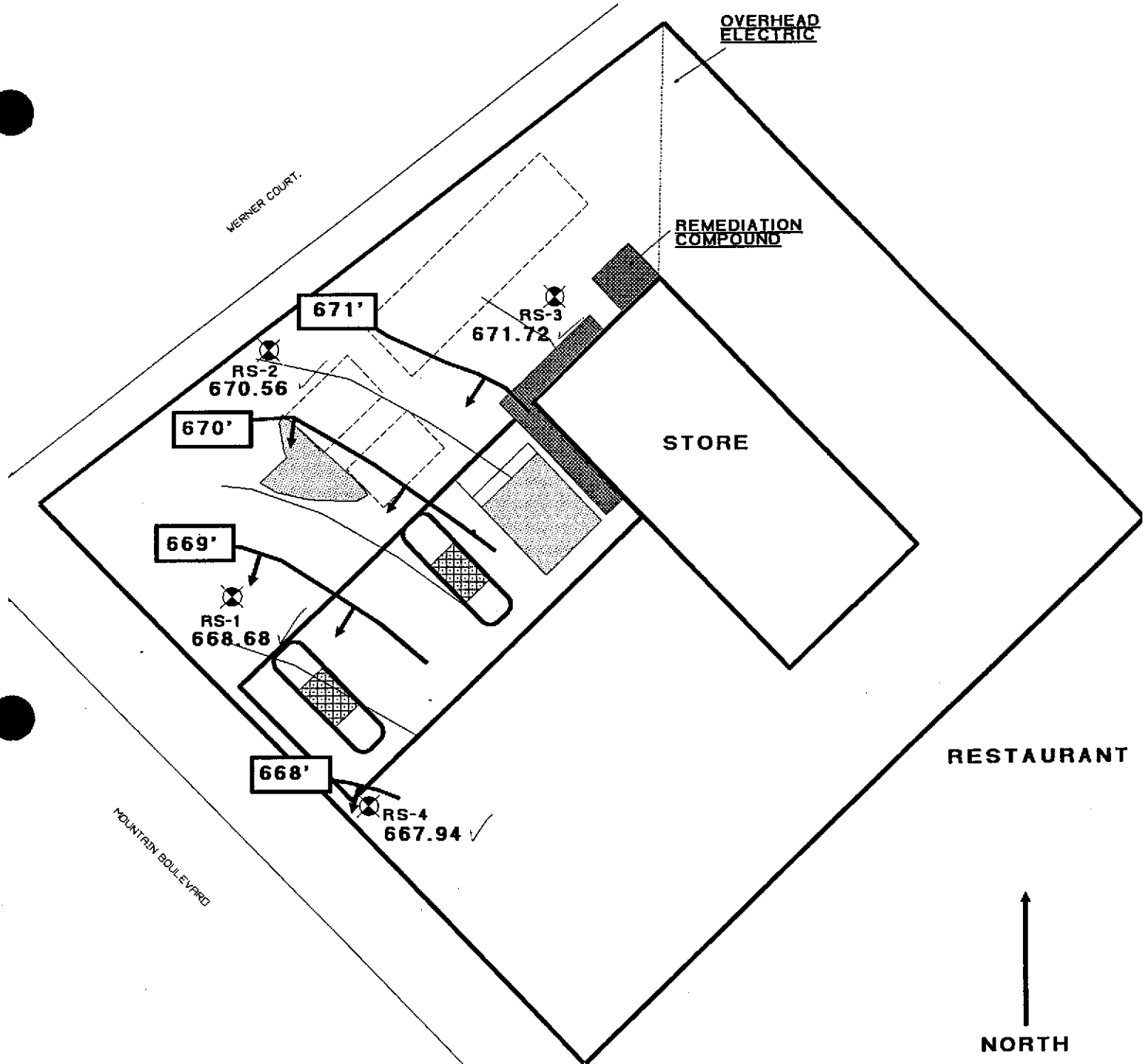


FIGURE 5
FORMER DESERT PETROLEUM #796
2844 MOUNTAIN BOULEVARD
OAKLAND, CALIFORNIA
GROUNDWATER GRADIENT
FEBRUARY 1998

↑
NORTH

0' 10' 20' 40'

SCALE: 1" = 20'

- ⊗ GROUND WATER MONITORING WELL.
- RS-1
- ↗ GROUNDWATER FLOW DIRECTION VECTOR.
- GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR IN FEET ABOVE MEAN SEA LEVEL. INTERVAL 0.5 FEET.

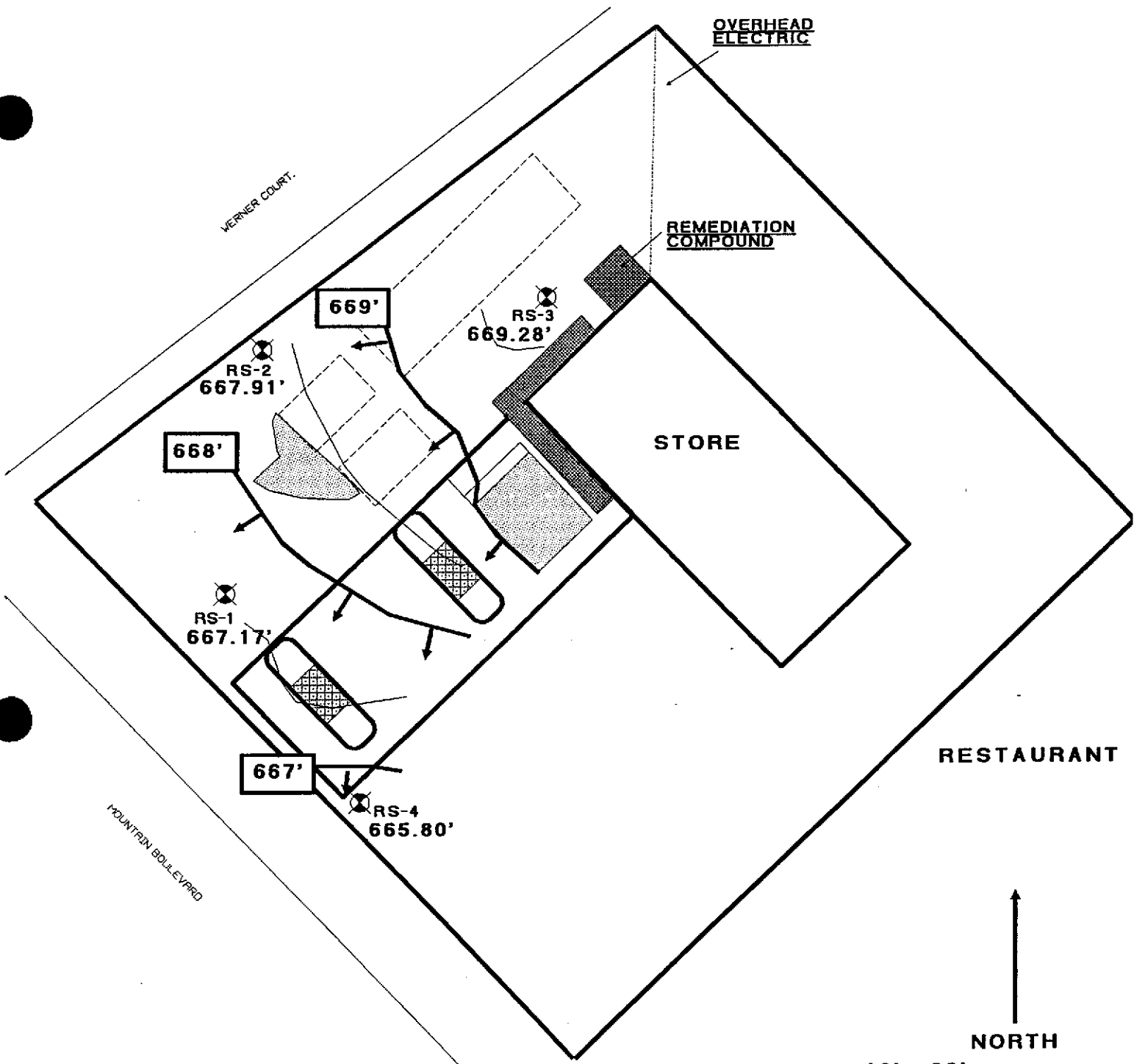





FIGURE 6
FORMER DESERT PETROLEUM #796
2844 MOUNTAIN BOULEVARD
OAKLAND, CALIFORNIA
GROUNDWATER GRADIENT
SEPTEMBER 19, 1996.

-  **GROUND WATER MONITORING WELL.**
- RS-1**
-  **GROUNDWATER FLOW DIRECTION VECTOR.**
-  **GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR IN FEET ABOVE MEAN SEA LEVEL. INTERVAL 0.5 FEET.**

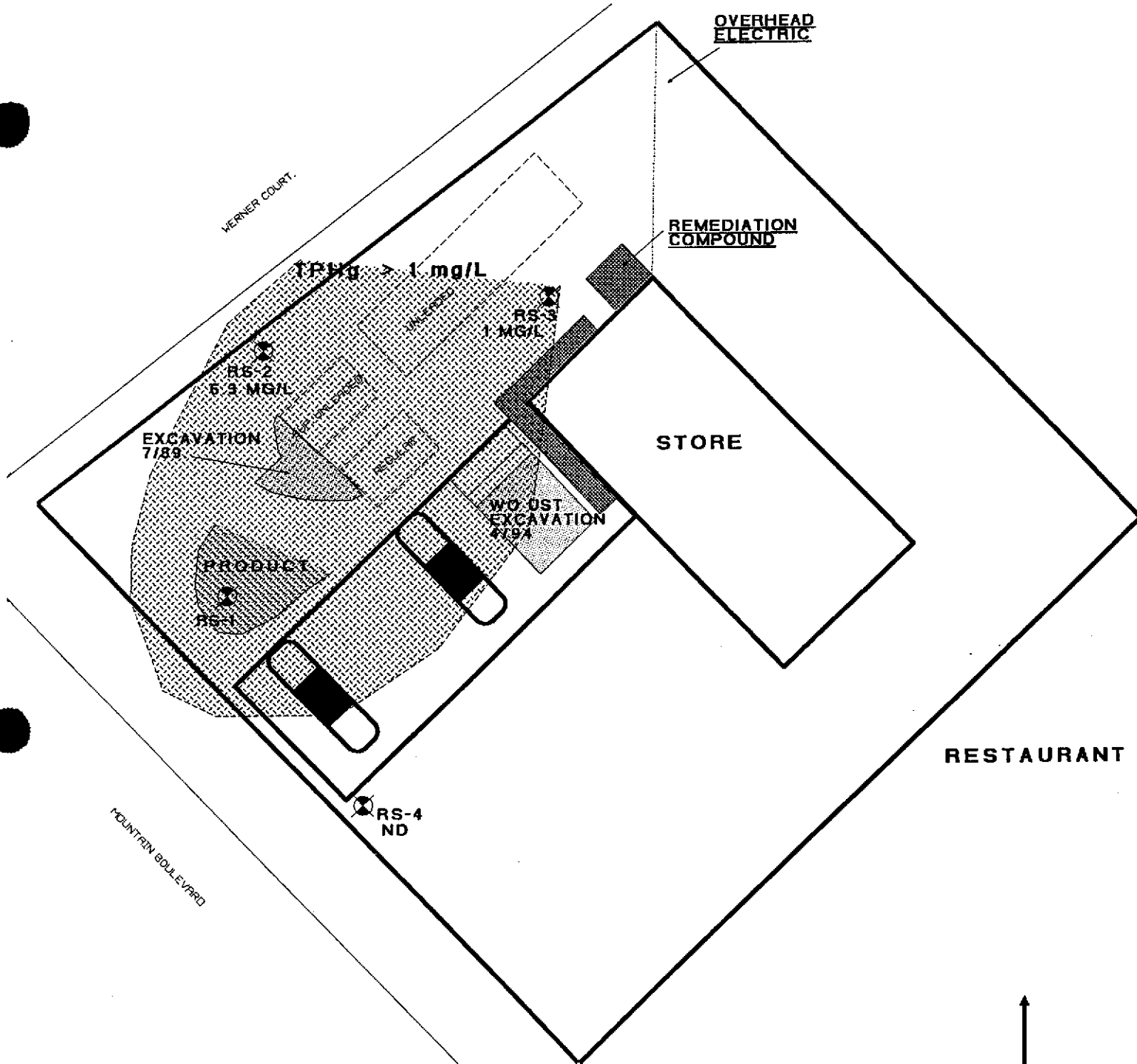
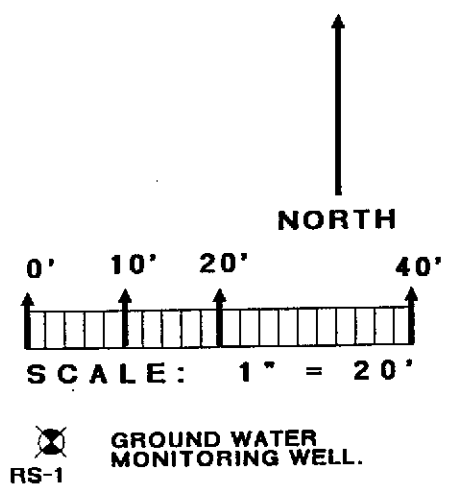


FIGURE 7

**FORMER DESERT PETROLEUM #796
2844 MOUNTAIN BOULEVARD
OAKLAND, CALIFORNIA**

**TPHg IN GROUNDWATER PLUME
SEPTEMBER 16, 1996.**



⊗ **GROUND WATER
MONITORING WELL.**
RS-1

APPENDIX A

**ALAMEDA COUNTY
HEALTH CARE SERVICES**



AGENCY

DAVID J. KEARS, Agency Director

Alameda County CC4580
Environmental Protection Services
1131 Harbor Bay Parkway, Room 250
Alameda CA 94502-6577

June 17, 1996
STID 851
page 1 of 2

John Rutherford
Desert Petroleum Inc.
PO Box 1601
Oxnard CA 93032

SENT EXTENSION LETTER 45 DAY 7/96
JE LFT MSLI RET CALL 9/6
CONF K. GRAVES 9/2 → APPEAL
CONF WET → APPEAL
JE LFT MSLI RET CALL 9/11
CONF J.R. STATUS 9/9

RE: Desert Petroleum site #796, 2844 Mountain Blvd., Oakland CA 94602

Dear Mr. Rutherford,

I have received and reviewed the "Supplemental Risk Based Corrective Action Report," prepared by Remediation Service Int'l (RSI), dated May 1996. This report was to incorporate the "Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites," aka designation E 1739-95, published by the American Society for Testing and Materials (ASTM). However, a qualitative approach was used, which determined that most routes of exposure were "insignificant." A more detailed approach is needed. Site specific concentrations of contaminants should be compared to the Tier 1 look up table RBSLs, if appropriate. In this case, the Tier 1 appears to be inappropriate, due to the site's shallow water table. Tier 1 assumes the depth to water is at least 9.84' bgs (300 cm, as per Table X2.6). Therefore, it appears that you should be utilizing at the Tier 2 equations.

In addition, the following items need to be clarified or corrected:

- 1) Our files indicate no documentation of disposal for soils removed during the piping replacement and excavation of the south end of the super unleaded fuel tank in 1989. The 8/31/89 report by On-Site Technologies does not indicate what happened to the soil. Does your file contain any such information? *[90-150 yds. Hauled & covered @ fill On-site Sample]*
- 2) There may be some errors on page 2 of your report, which lists maximum soil contaminants. I believe the TPHg concentration should be 8,400 ppm, the ethylbenzene concentration should be 102 ppm, and the xylenes concentration should be 1,000 ppm. This is based on "sample #5, tank" which was collected during the piping replacement/sampling on 3/22/89. I have enclosed a copy of the lab report.
- 3) The groundwater elevations (GWEs) on Figures 4 and 5 appear to be incorrect, as per the GWEs listed in Table 1 of the last quarterly report (March 1996).

Figure 4 = Nov, 1995
Figure 5 = Feb 1996

- 4) The first sentence on page 3 indicates that "FHCs were only detected in soil beneath the tank location on the west portion of the property." Please note that all four piping samples collected on 3/22/89 contained hydrocarbons (see attached lab report). In addition, soil sampled from all four well boreholes contained hydrocarbons. And soil sampled from the former waste oil tank excavation, located between the building and the closest pump island, also contained hydrocarbons.

For all of the above stated reasons, the "Supplemental Risk Based Corrective Action Report" is unacceptable. Please submit a new Corrective Action Plan which incorporates Action Plan which incorporates the issues raised in this letter, and submit it to this office within 45 days, or by August 1, 1996.

In the meantime, groundwater monitoring and sampling should continue on a semi-annual basis, as outlined in my letter dated 4/30/96. Please submit groundwater contour (potentiometric) maps for each future sampling event, as well as the 2/96 and 11/95 events, as requested in my 4/30/96 letter.

If you have any questions or comments, please contact me directly at 510-567-6761.

Sincerely,



Jennifer Eberle
Hazardous Materials Specialist

cc: Kevin Graves, RWQCB
Rick Pilat, Remediation Service, Intl, 2060 Knoll Dr., Suite 200, Ventura CA 93003
Cheryl Gordon, SWRCB, UST CleanUp Fund
Shahram Shahnazi, Compare Prices, 2844 Mountain Blvd., Oakland, CA 94602
Acting Chief/file

je.851-C
enclosure

white - env. health
yellow - facility
pink - files

ALAMEDA COUNTY, DEPARTMENT OF
ENVIRONMENTAL HEALTH

1131 Harbor Bay Pkwy
Alameda CA 94502
510/567-6700

Hazardous Materials Inspection Form

II, III

Site ID # _____ Site Name Compare Prices Today's Date 9/18/96
Site Address 2844 N. Blvd.
City Oakland Zip 94602 Phone _____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- ____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Hazardous Materials Business Plan, Acutely Hazardous Materials
____ III. Under ground Storage Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:

2:30 arrived onsite -
Met Matt of WEGE + man-fri Lawrence
Tank Testing (to purge the water mechanically).
2:45 Opened RS1. Took 2 photos. Well box is raised or
mounded ~2-3" above ground level. Concrete mounding has
general cracks. Inside of 4" casing has some streaks.
2:50 Opened RS2. Well box is raised ~3" above ground level,
+ 1" a few cracks. Inside of 4" casing is badly sealed.
Took 2 photos. 3:15 Opened RS1. Well box raised ~2" above
ground, no cracks, inside of 4" casing is a little dirty (black streaks).
3:10 Opened RS4. Water is inside well box. Well is also
mounded ~2". Top of 4" casing is a grey-colored PVC best,
as in RS1. Bldg across Werner Ct is a restaurant
(on corner of N. Blvd). Residences lie behind the
restaurant on Werner Ct. All 4 MW's have a 1"
PVC casing inside the 4" casing. Dispenser near N
N. Blvd has petroleum leak (photo) which appears
to be dripping from diesel pump line. I noted
fresh diesel on the line/hose. (pump island #4).
left site 3:25

Contact

Matt Penick

Title

WEGE

Signature

Matt Penick

Inspector

J. Eberle

Signature

J. Eberle

II, III

APPENDIX B

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING
1386 E. BEAMER STREET
WOODLAND, CA 95776-6003

ATTN: MATT PENICK
CLIENT PROJ. ID: DP 796

REPORT DATE: 09/30/96

DATE(S) SAMPLED: 09/18/96 ✓

DATE RECEIVED: 09/20/96

AEN WORK ORDER: 9609266

PROJECT SUMMARY:

On September 20, 1996, this laboratory received 3 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.


Larry Klein
Laboratory Director

WESTERN GEO-ENGINEERING

SAMPLE ID: RS-3
 AEN LAB NO: 9609266-01
 AEN WORK ORDER: 9609266
 CLIENT PROJ. ID: DP 796

DATE SAMPLED: 09/18/96
 DATE RECEIVED: 09/20/96
 REPORT DATE: 09/30/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	13 *	0.5	ug/L	09/20/96
Toluene	108-88-3	8.6 *	0.5	ug/L	09/20/96
Ethylbenzene	100-41-4	10 *	0.5	ug/L	09/20/96
Xylenes, Total	1330-20-7	17 *	2	ug/L	09/20/96
Purgeable HCs as Gasoline	5030/GCFID	1.0 *	0.05	mg/L	09/20/96
Methyl t-Butyl Ether	EPA 8020	33 *	5	ug/L	09/20/96

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: RS-2 ✓
 AEN LAB NO: 9609266-02
 AEN WORK ORDER: 9609266
 CLIENT PROJ. ID: DP 796

DATE SAMPLED: 09/18/96
 DATE RECEIVED: 09/20/96
 REPORT DATE: 09/30/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	2,000 *	5	ug/L	09/20/96
Toluene	108-88-3	48 *	5	ug/L	09/20/96
Ethylbenzene	100-41-4	350 *	5	ug/L	09/20/96
Xylenes, Total	1330-20-7	570 *	20	ug/L	09/20/96
Purgeable HCs as Gasoline	5030/GCFID	6.3 *	0.5	mg/L	09/20/96
Methyl t-Butyl Ether	EPA 8020	160,000 *	1000	ug/L	09/24/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: RS-4
AEN LAB NO: 9609266-03
AEN WORK ORDER: 9609266
CLIENT PROJ. ID: DP 796

DATE SAMPLED: 09/18/96
DATE RECEIVED: 09/20/96
REPORT DATE: 09/30/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5 ug/L		09/20/96
Toluene	108-88-3	ND	0.5 ug/L		09/20/96
Ethylbenzene	100-41-4	ND	0.5 ug/L		09/20/96
Xylenes, Total	1330-20-7	ND	2 ug/L		09/20/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05 mg/L		09/20/96
Methyl t-Butyl Ether	EPA 8020	200 *	5 ug/L		09/24/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9609266

CLIENT PROJECT ID: DP 796

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits:

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA
METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9609266
INSTRUMENT: H
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
09/20/96	RS-3	01	96
09/20/96	RS-2	02	125
09/20/96	RS-4	03	102
QC Limits:			70-130

DATE ANALYZED: 09/19/96
SAMPLE SPIKED: 9609096-01
INSTRUMENT: H

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Benzene	22.0	97	8	85-109	17
Toluene	74.9	99	6	87-111	16
Hydrocarbons as Gasoline	500	105	3	66-117	19

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

*** END OF REPORT ***

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING
1386 E. BEAMER STREET
WOODLAND, CA 95776-6003

ATTN: GEORGE CONVERSE
CLIENT PROJ. ID: DP796

REPORT DATE: 10/08/96

DATE(S) SAMPLED: 09/18/96

DATE RECEIVED: 09/20/96

AEN WORK ORDER: 9609260


PROJECT SUMMARY:

On September 20, 1996, this laboratory received 4 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Chromatograms are included. Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.


Larry Klein
Laboratory Director

WESTERN GEO-ENGINEERING

SAMPLE ID: RS-3
AEN LAB NO: 9609260-01
AEN WORK ORDER: 9609260
CLIENT PROJ. ID: DP796

DATE SAMPLED: 09/18/96
DATE RECEIVED: 09/20/96
REPORT DATE: 10/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/20/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	09/22/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/22/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: RS-2
 AEN LAB NO: 9609260-02
 AEN WORK ORDER: 9609260
 CLIENT PROJ. ID: DP796

DATE SAMPLED: 09/18/96
 DATE RECEIVED: 09/20/96
 REPORT DATE: 10/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/20/96
TPH as Diesel	GC-FID	ND	0.4 mg/L		09/22/96
TPH as Oil	GC-FID	ND	0.2 mg/L		09/22/96

Reporting limit elevated for diesel due to hydrocarbon interference in the gasoline range.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: RS-1
AEN LAB NO: 9609260-03
AEN WORK ORDER: 9609260
CLIENT PROJ. ID: DP796

DATE SAMPLED: 09/18/96
DATE RECEIVED: 09/20/96
REPORT DATE: 10/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	>95 *	-	%	09/23/96
TPH as Diesel	GC-FID	<1	-	%	09/23/96

See page 6 for comments pertaining to this sample.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: RS-4
AEN LAB NO: 9609260-04
AEN WORK ORDER: 9609260
CLIENT PROJ. ID: DP796

DATE SAMPLED: 09/18/96
DATE RECEIVED: 09/20/96
REPORT DATE: 10/08/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/20/96
TPH as Diesel	GC-FID	ND	0.05 mg/L		09/22/96
TPH as Oil	GC-FID	ND	0.2 mg/L		09/22/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9609260

CLIENT PROJECT ID: DP796

Quality Control and Project Summary

Sample RS-1: Top layer of sample was analyzed for diesel content in a gasoline matrix. Diesel range integrated and quantitates to less than 1% of total hydrocarbons present. No diesel can be seen on the chromatogram; it is actually the heavier end of the gasoline range.

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9609260
 DATE EXTRACTED: 09/20/96
 INSTRUMENT: C
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
09/22/96	RS-3	01	92
09/22/96	RS-2	02	108
09/22/96	RS-4	04	97
QC Limits:			65-125

DATE EXTRACTED: 09/18/96
 DATE ANALYZED: 09/18/96
 SAMPLE SPIKED: 9608341-15
 INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Diesel	4.00	81	3	60-110	15

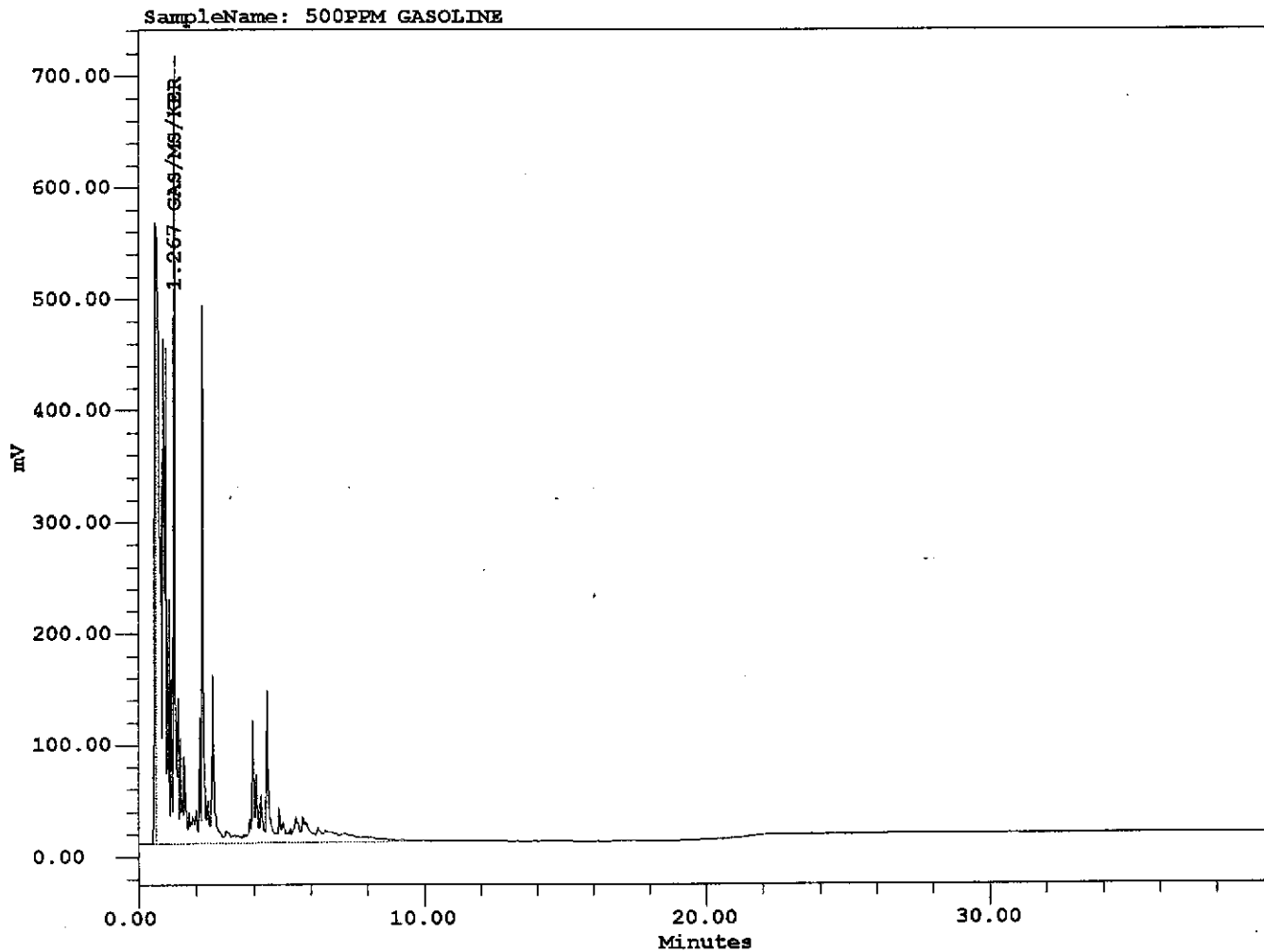
Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

*** END OF REPORT ***

EXTRACTABLE HYDROCARBONS

SampleName: 500PPM GASOLINE
 Date Acquired: 09/24/96 01:12:38 PM
 Date Processed: 09/24/96 04:13:18 PM
 Date Printed: September 24, 1996
 Column: RTX-1,15m,0.53mm ID,0.5mm FT
 DIESEL CAL: 07/23/96 , 2.6054 E-5
 OIL CAL: 07/23/96, 3.1376 E-5

System: GC_CA
 Processing Method: GC_CA_DIESEL
 Set Name: CA0924
 Dilution: 100.00000
 SampleWeight: 500.00000
 Vial: 3



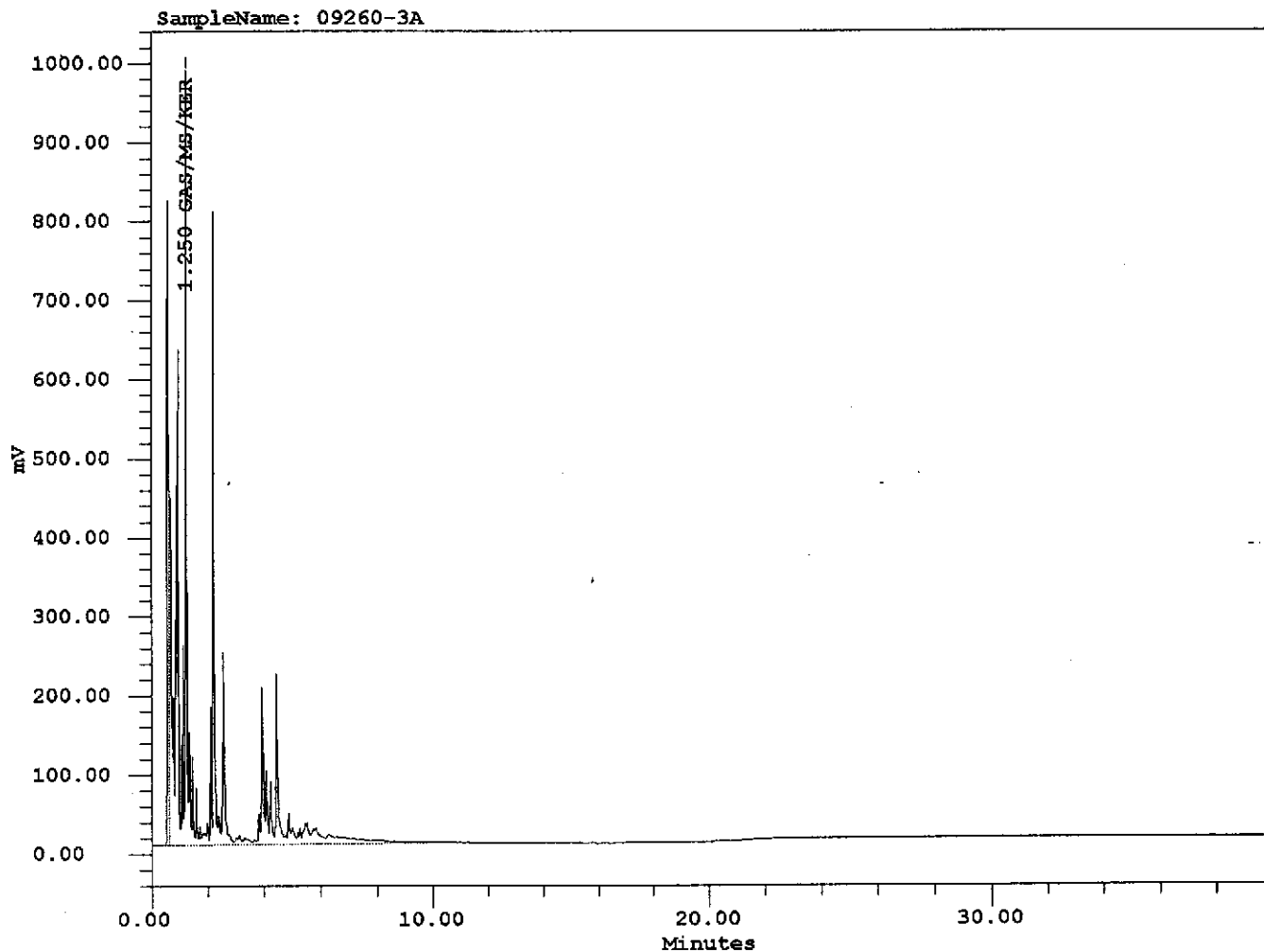
Quant Report

#	Name	Retention Time (min)	Area (uV*sec)	SURR_REC	Inst Con(ppm)	Spl Con (ppm)
1		0.583	1403770			
2	GAS/MS/KER	1.267	20025706	0.000	521.750	104.350

EXTRACTABLE HYDROCARBONS

SampleName: 09260-3A *500 ppm*
 Date Acquired: 09/24/96 02:10:36 PM
 Date Processed: 09/24/96 04:18:04 PM
 Date Printed: September 24, 1996
 Column: RTX-1,15m,0.53mm ID,0.5mm FT
 DIESEL CAL: 07/23/96 , 2.6054 E-5
 OIL CAL: 07/23/96, 3.1376 E-5

System: GC_CA
 Processing Method: GC_CA_DIESEL
 Set Name: CA0924
 Dilution: 100.00000
 SampleWeight: 500.00000
 Vial: 4



Quant Report

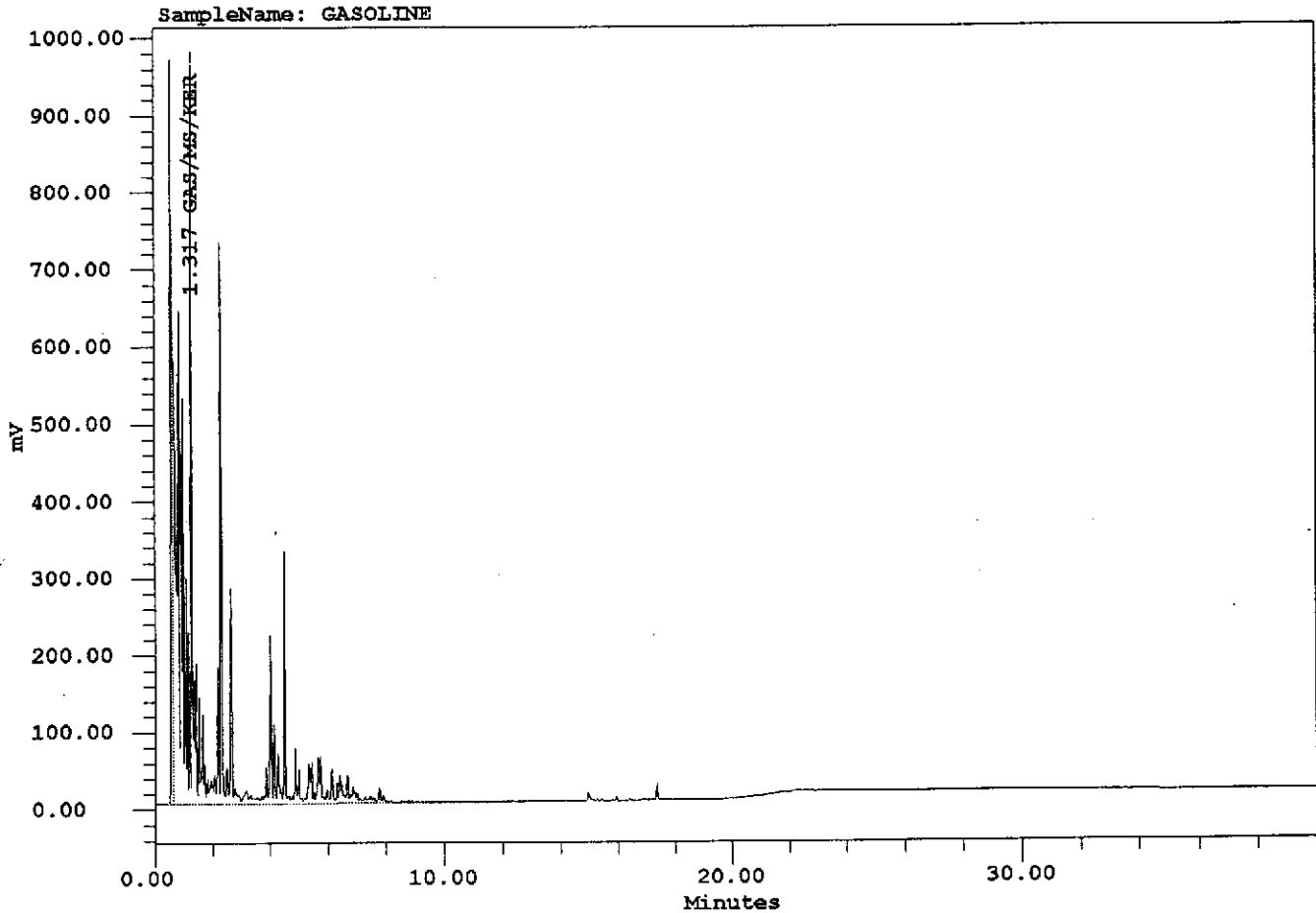
#	Name	Retention Time (min)	Area (uV*sec)	SURR_REC	Inst Con (ppm)	Spl Con (ppm)
1		0.583	2780834			
2	GAS/MS/KER	1.250	20157815	0.000	525.192	105.038

9%

EXTRACTABLE HYDROCARBONS

SampleName: GASOLINE
 Date Acquired: 09/23/96 01:20:54 PM
 Date Processed: 09/24/96 04:03:26 PM
 Date Printed: September 24, 1996
 Column: RTX-2887,10m,0.53mm ID,2.65um FT
 DIESEL CAL: 04/03/96, 2.318 E-5
 OIL CAL: 04/04/96, 3.1783 E-5

System: GC_A
 Processing Method: GC_A_DIESEL
 Set Name: A0923
 Dilution: 1.00000
 SampleWeight: 1.00000
 Vial: 2



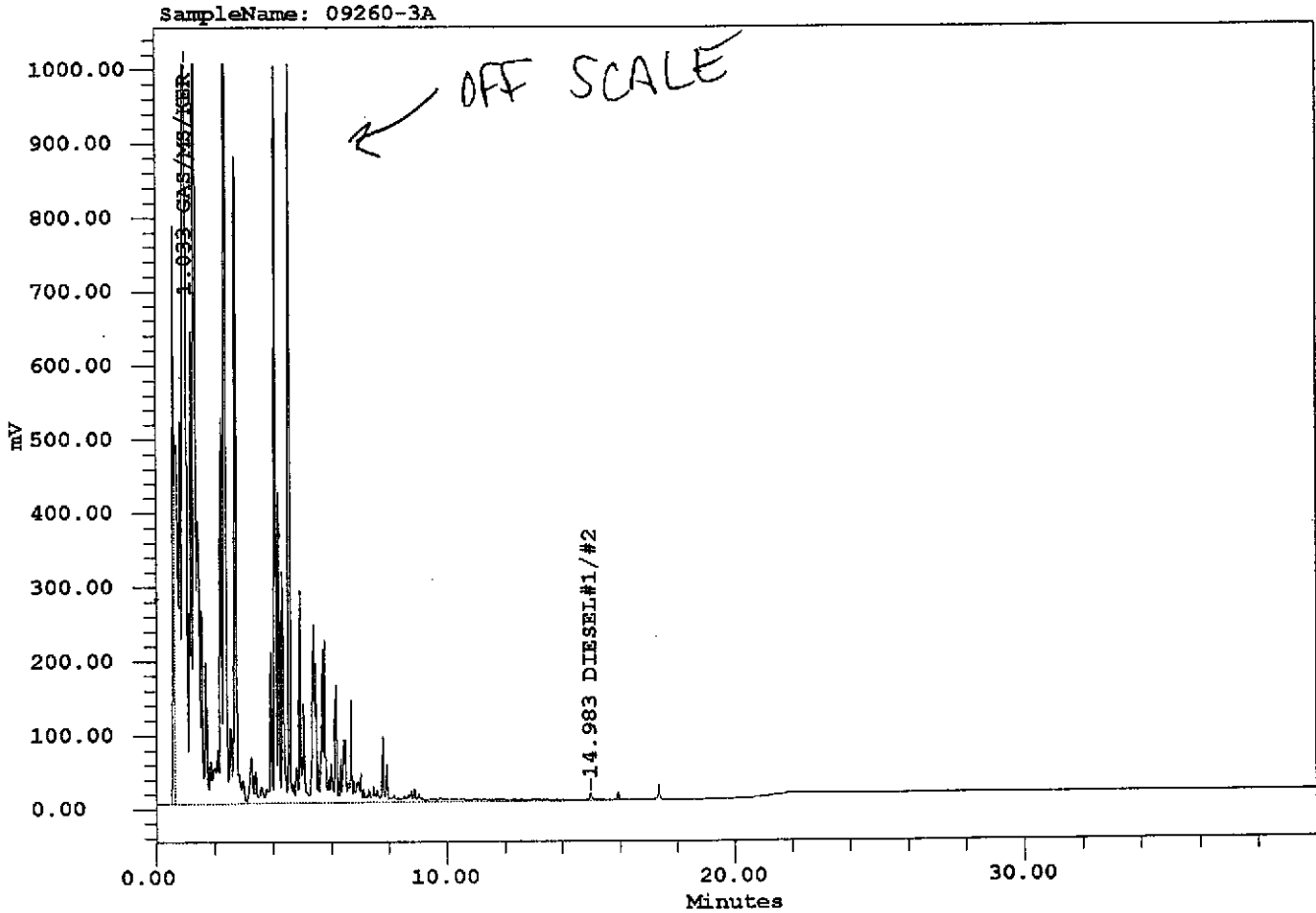
Quant Report

#	Name	Retention Time (min)	Area (uV*sec)	SURR_REC	Inst Con(ppm)	Spl Con (ppm)
1		0.617	2764073			
2	GAS/MS/KER	1.317	24634831	0.000	571.060	571.060

EXTRACTABLE HYDROCARBONS

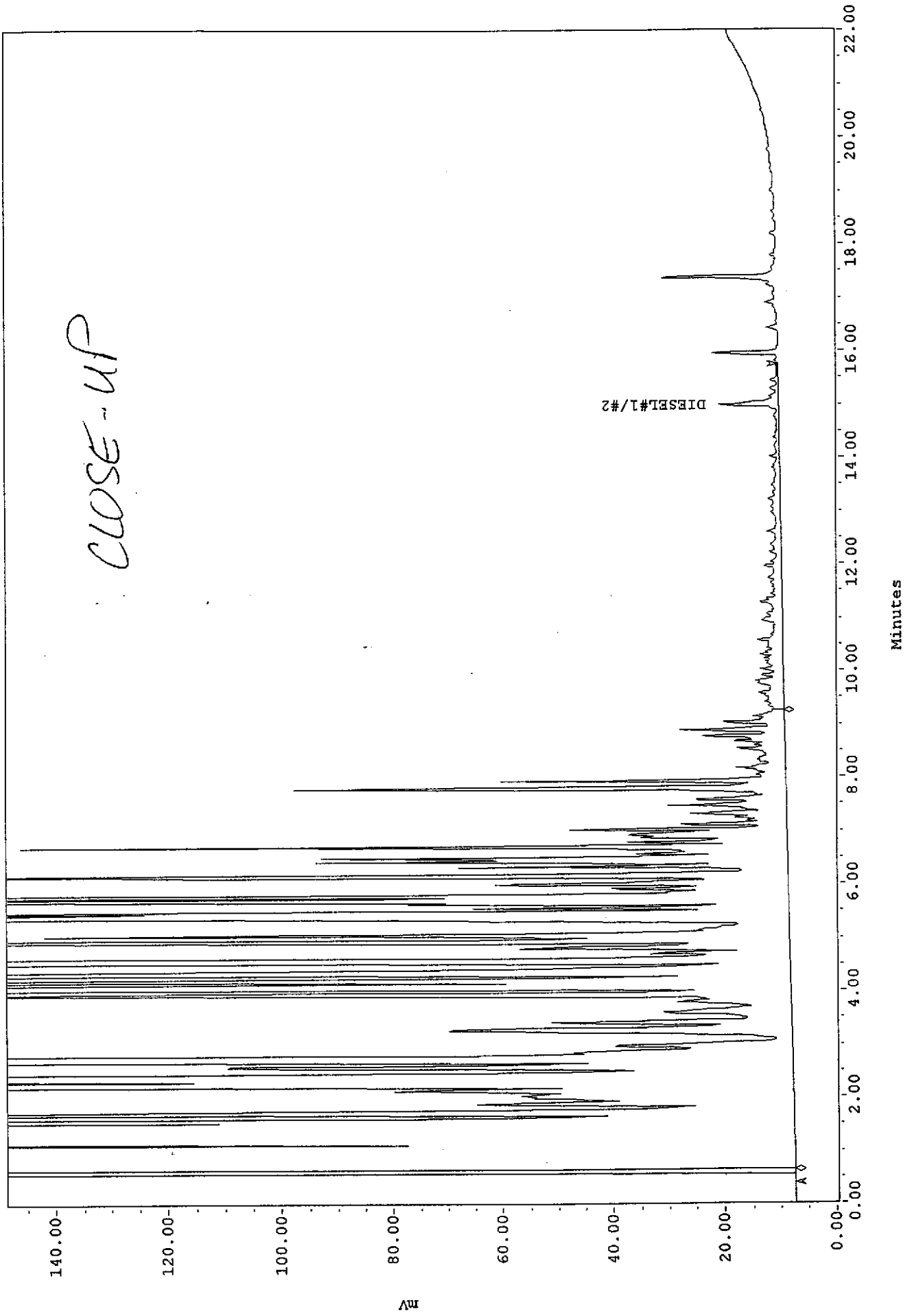
SampleName: 09260-3A
 Date Acquired: 09/23/96 02:18:27 PM
 Date Processed: 09/24/96 04:00:24 PM
 Date Printed: September 24, 1996
 Column: RTX-2887, 10m, 0.53mm ID, 2.65um FT
 DIESEL CAL: 04/03/96, 2.318 E-5
 OIL CAL: 04/04/96, 3.1783 E-5

System: GC_A
 Processing Method: GC_A_DIESEL
 Set Name: A0923
 Dilution: 100.00000
 SampleWeight: 2000.00000
 Vial: 3



Quant Report

#	Name	Retention Time (min)	Area (uV*sec)	SURR_REC	Inst Con (ppm)	Spl Con (ppm)
1		0.617	2058768			
2	GAS/MS/KER	1.033	64617532	0.000	1497.899	74.895
3	DIESEL#1/#2	14.983	657871	0.000	15.250	0.763

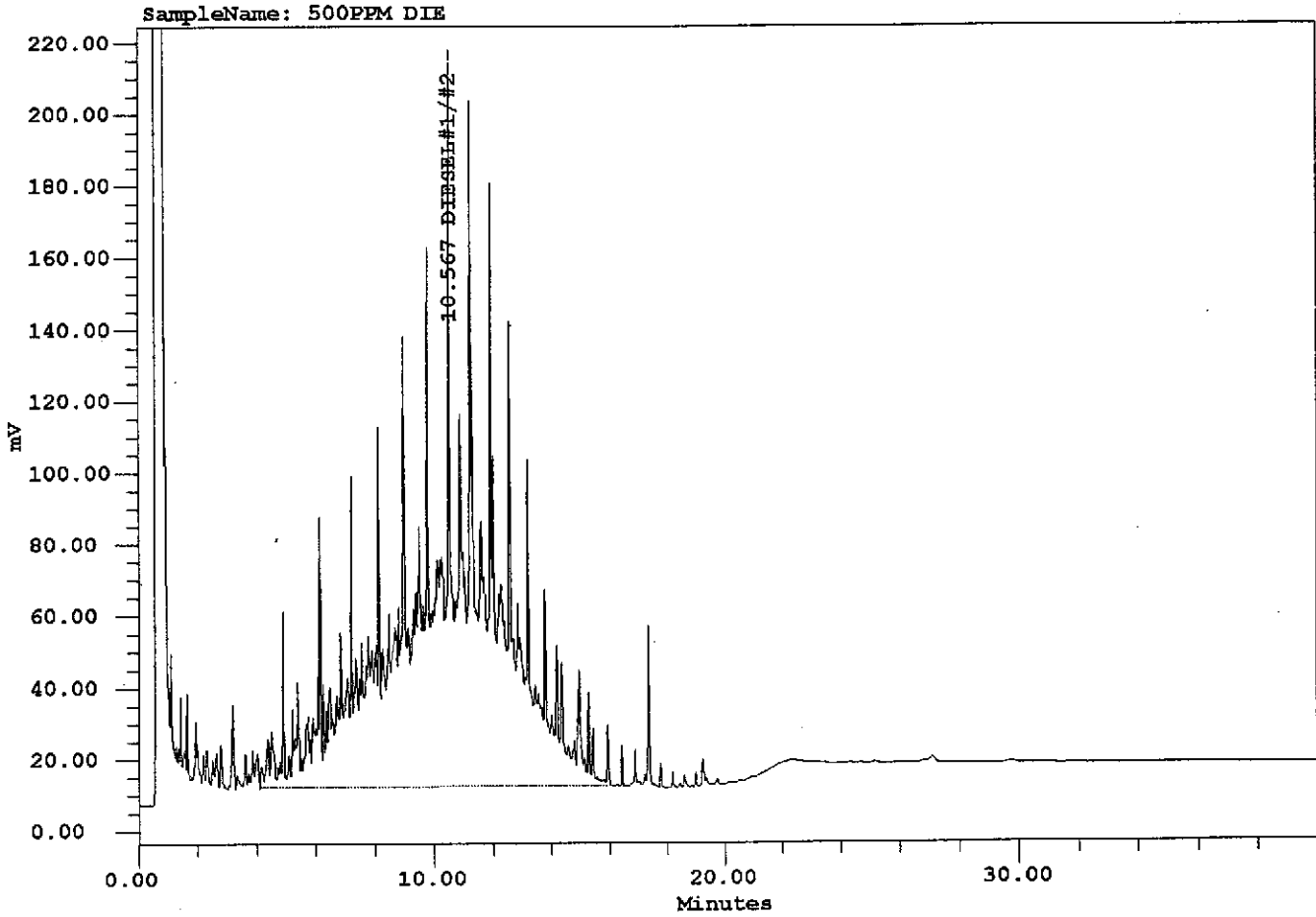


SampleName: 09260-3A Vial: 3 Inj: 1 Ch: SATIN Type: Unknown

EXTRACTABLE HYDROCARBONS

SampleName: 500PPM DIE
 Date Acquired: 09/23/96 03:46:47 PM
 Date Processed: 09/24/96 03:45:18 PM
 Date Printed: September 24, 1996
 Column: RTX-2887,10m,0.53mm ID,2.65um FT
 DIESEL CAL: 04/03/96, 2.318 E-5
 OIL CAL: 04/04/96, 3.1783 E-5

System: GC_A
 Processing Method: GC_A_DIESEL
 Set Name: A0923
 Dilution: 100.00000
 SampleWeight: 500.00000
 Vial: 4



Quant Report

#	Name	Retention Time (min)	Area (uV*sec)	SURR_REC	Inst Con(ppm)	Spl Con (ppm)
1	DIESEL#1/#2	10.567	23313880	0.000	540.439	108.088

Reporting Informant

1. Client: as to 2
 Address: _____
 Contact: _____
 Alt. Contact: _____

American Environmental Network

3440 Vincent Road, Pleasant Hill, CA 94523
 Phone (510) 930-9090
 FAX (510) 930-0256

AEN

RI SH
 Page 1 of 1

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: 9609260
 Lab Destination: _____
 Date Samples Shipped: _____
 Lab Contact: _____
 Date Results Required: _____
 Date Report Required: _____
 Client Phone No.: _____
 Client FAX No.: _____

Address Report To:

2. Western Geo Engineers
1386 F. Beamer St.
Woodland C.A. 95776
Amo.

Send Invoice To:

3. as to 2

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: _____ Client Project I.D. No.: DP 796

Sample Team Member (s) Matt Penick

Lab Number	Client Sample Identification	Air Volume	Date/Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS	Comments / Hazards
<u>01AB</u>	<u>RS-3</u>	<u>9-18-96</u>	<u>3:42</u>	<u>7</u>	<u>N</u>	<u>2</u>	<u>Amber</u>	<input checked="" type="checkbox"/>	<u>Push turn around</u>
<u>02AB</u>	<u>RS-2</u>		<u>4:03</u>					<input checked="" type="checkbox"/>	
<u>03A</u>	<u>RS-1</u>		<u>4:22</u>					<input checked="" type="checkbox"/>	<u>*Please ID Product</u>
<u>04AB</u>	<u>RS-4</u>		<u>4:50</u>					<input checked="" type="checkbox"/>	<u>as to % gasoline</u>
									<u>Diesel</u>

3510/8015 water oil Diesel

Relinquished by: (Signature) <u>Matt Penick</u>	DATE <u>9-20-96</u>	TIME <u>7:15</u>	Received by: (Signature) <u>[Signature]</u>	DATE <u>9-20-96</u>	TIME <u>2:25</u>
Relinquished by: (Signature) <u>[Signature]</u>	DATE <u>9-20-96</u>	TIME <u>11:45</u>	Received by: (Signature) <u>Gina Gillispie</u>	DATE <u>9-20-96</u>	TIME <u>1445</u>
Relinquished by: (Signature) _____	DATE _____	TIME _____	Received by: (Signature) _____	DATE _____	TIME _____
Method of Shipment			Lab Comments		

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
 4) PVC filter, diam. _____ pore size _____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
 10) Other _____ 11) Other _____

APPENDIX C

APPENDIX C.

METHODS AND PROCEDURES, QA/QC

This Appendix documents the specific methods, procedures, and materials used to collect and analyze groundwater samples and monitoring the vapor recovery system.

Gauging and Measuring Monitor Wells.

Prior to sampling a well, WEGE personnel obtain three measurements: the depth to groundwater (DTW) and the product thickness using a battery powered depth to water-product interface probe and or by using a specially designed bailer. And the vacuum influence at the well head, using a water manometer that is attached to a sample port in the well head. The DTW probe is lowered into the well casing until the instrument signals that the top of water has been reached. The distance from the top of water to the top of casing is read from the tape that is attached to the probe. The tape is calibrated in 0.01 foot intervals for accuracy to 0.01 foot. The measured distance is subtracted from the established elevation at the top of casing to determine the elevation of groundwater with respect to mean sea level. The probe is washed with TSP (Tri Sodium Phosphate) and rinsed in distilled water before each measurement. WEGE has designed and built bailers that will collect a sample of the contents of a well to show the exact thickness of any floating product. Some of the abbreviations used in water sampling and or measuring or monitoring are: DTW, Depth to Water (from surface reference ie usually TOC); TOC, Top of Casing; MSL, Mean Sea Level; AMSL and BMSL, Above and Below MSL; BS, Below Surface; TOW, Top of Water; TSP, Tri Sodium Phosphate.

Purging Standing Water from Monitor Wells

If no product is present, WEGE personnel purge the well. This is accomplished by removing groundwater from the well until the water quality parameters (temperature, pH, and conductivity) stabilize, or until the well is emptied of water. Periodic measurements of groundwater temperature, pH, and conductivity were taken with a Hydac Monitor or other meter and recorded along with the volume of groundwater removed from the well. Purging is done by one or more methods singularly or in combination. Bailers, pneumatic or electric sample pumps, or vacuum pump tanks or trucks may be used. The usual amount of water removed is three well volumes. The water collected during purging is either safely stored onsite for later disposition, transported to an approved onsite or offsite sewer discharge system, or an approved onsite or offsite treatment system.

Collection of Water Sample for Analysis

The well is allowed to recover after purging and a groundwater sample is collected. A fresh bailer is used to collect enough water for the requirements of the laboratory for the analyses needed or required. The water samples are decanted from the bailer into the appropriate number and size containers. These containers are furnished pre-cleaned to exact EPA protocols, with and without preservatives added, by the analytical laboratory or a chemical supply company. The bottles are filled, with no headspace, and then capped with plastic caps with teflon liners.

The vials or bottles containing the groundwater samples are labeled with site name, station, date, time, sampler, and analyses to be performed, and documented on a chain of custody form. They were placed in ziplock bags and stored in a chest cooled to 4°C with ice. The preserved samples are chain of custody delivered to the chosen laboratory.

Analytical Results

TPH is the abbreviations used for Total Petroleum Hydrocarbons used by the laboratories for water and soil analyses. The letter following TPH indicates a particular distinction or grouping for the results. The letters "g", "d", "k", or "o" indicate gasoline, diesel, kerosene, or oil, respectively, ie TPH-d for diesel range TPH.

BTEX or MTBE are acronyms or abbreviations used for Benzene, Toluene, Ethylbenzene and all of the Xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE), respectively.

MBTEX is the designation for the combination of the above five compounds.

The less than symbol, <, used with a "parts per value" indicates the lower detection limit for a given analytical result and the level, if present, of that particular analyte is below or less than that lower detection limit.

Other abbreviations commonly used are ppm, ppb, mg/Kg, ug/Kg, ml/l and ul/l are parts per million, parts per billion, milligrams per kilogram, micrograms per kilogram, milliliters per liter, microliters per liter, respectively.

Chain of Custody Documentation

All water samples that are collected by WEGE and transported to a certified analytical laboratory are accompanied by chain-of-custody (COC) documentation. This documentation is used to record the movement and custody of a sample from collection in the field to final analysis and storage. Samples to be analyzed at the certified laboratory were logged on the COC sheet provided by the laboratory. The same information provided on the sample

labels (site name, sample location, date, time, and analysis to be performed) are also noted on the COC form. Each person relinquishing custody of the sample set signs the COC form indicating the date and time of the transfer to the recipient. A copy of the COC follows the samples or their extracts throughout the laboratory to aid the analyst in identifying the samples and to assure analysis within holding times.

Copies of the COC documentation are included with the laboratory results in Appendix A of this report.

INTERIM PRODUCT REMOVAL

Monitor wells RS-1 is depleted of groundwater and free phase product twice once a week and RS-2 and RS-3 are depleted of groundwater once a week using LTT vacuum truck that pulls and estimated 17-20 feet of water vacuum. The purged water and product are stored on site in 55 gallon 17 H DOT drums. The drums are emptied by Evergreen Environmental Services and the purged fluids are transported to their recycling facility.

VENTING PROCEDURES

WEGE is using LTT vacuum trucks to pull an estimated 17 - 20 feet of water vacuum on RS-1, RS-2 AND RS-3, for 0.25 hours weekly and exhaust directly to atmosphere. This vacuum generates a flow rate of approximately 30 cfm. A WEGE technician monitors the ambient air surrounding the exhaust with a photo-ionizing detector.

COLLECTING VAPOR SAMPLES

The sample is obtained from a sample port located, prior to the vacuum pump from a sample port on the flow meter orifice. Sterile poly tubing was used to attach a one liter tedlar bag, fitted with a special septum "valve" and tubing bib, to the sample port. The sample port is on the vacuum side of the pump and therefore a vacuum greater than the well vacuum must be exerted on the outside of the tedlar bag to "fill" the bag with the vapor sample. A special vacuum box, in which the tedlar bag is sealed inside, is used to exert a high vacuum to the exterior of the bag, thereby pulling a sample into the bag. Once the tedlar bag is filled, its valve is closed and locked and the appropriate label is placed on the bag.

The label shows the date, time, sample ID# and analyses to be run and the sampler's initials. The tedlar bag samples are then placed within a cooler, and are hand delivered to WEGE's laboratory that same day.

The vapor sample is then injected into an FID (Flame Ionizing Detector) chromatograph and the resulting chromatogram compared to standard chromatograms of known TPHg (Total Petroleum Hydrocarbons, gasoline) and BTEX (benzene, toluene, ethylbenzene,

and xylenes) concentrations.

Carbon dioxide (CO₂) concentration is measured from the tedlar bag samples by connecting a Dräger tube and pump to the inlet/outlet of the tedlar bag. CO₂ reading in percent is then obtained and recorded on the chromatogram produced from the GC-FID analysis.

FLOW RATES

Flow rates are measured at the site using an orifice plate. A one inch orifice-sampling manifold is placed directly on the casing of the monitor well, carefully avoiding any vacuum leaks. An orifice plate restricts the flow causing a pressure drop across the orifice. By measuring the resulting pressure change across the orifice it is possible to calculate the air flow rate. The flow rate is calculated by the pressure drop (millimeters (mm) mercury or water) across a square edge orifice plate.

$$V_e = CK \text{ sqr}(P) \quad Q = A V_e$$

Where:

V_e = velocity in feet per minute (fpm)

C = Orifice Coefficient = 0.65 (for orifice used)

K = Constant = 794.6 for mm water or 2929.8 for mm mercury.

P = Pressure differential across the orifice

Q = Flow rate in cubic feet per minute (CFM)

A = Area orifice in square feet. 1" = 0.00545 ft²

$$Q = A \times 0.65 \times 794.6 \times \text{sqr}(P)$$

CALCULATIONS

To calculate the pounds (lb) per day the concentration is multiplied by the volume of air produced in one day.

The lab reports the Concentrations (C) of the air sampling in µg/liter. The first step is to convert this value to lbs/cf (pounds per cubic foot). 1 µg/l x 0.000001g/µg x 0.0022051/g x 28.321/cf = 0.00000006211lb/cf

The volume of air produced in one day, equals the flow rate (Q) x the time of flow.

$$V = Q \times T = \text{cf/day} = \text{cf/min} \times 1440\text{min/day}$$

The volume must be corrected to standard temperature and pressure (STP).

P = Pressure = 14.7 lb/in² @ STP

V = Volume cf

T = Temperature in degrees above absolute Zero = 491.58°R @

STP.

Using the Ideal Gas Law $P_1V_1/T_1 = P_2V_2/T_2$

Solving for $V_2 = P_1V_1T_2/P_2T_1$

Assuming $P_1 = P_2 = 14.7 \text{ lb/in}^2$, P cancels from the equation leaving $V_2 = V_1T_2/T_1$.

$V_1 = Q \text{ cf/m} \times 1440 \text{ min/day}$

$T_2 = 491.58^\circ\text{R}$ $T_1 = 459.58 + T^\circ\text{F}$ at site.

$V_2 = Q \text{ cf/min} \times 1440 \text{ min/day} \times 491.58^\circ\text{R}/(459.58^\circ + T^\circ\text{F})$

$X \text{ lb/day} = C \text{ ug/l} \times 0.0000000621 \text{ lb l/ug} \times Q \text{ cf/min} \times 1440 \text{ min/day} \times 491.58^\circ\text{R}/(459.58^\circ + T^\circ\text{F})$

Q for the Influent sample = The well flow rate.

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 9-18-96	TIME 2:59
WELL RS-1	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 6.92 DTB: 24.25		
FLUID ELEVATION = 1" head = DTW 6.85'		
BAILER TYPE disposable bailer		
PUMP Paul LTT		

WELL PURGING RECORD				
TIME	VOLUME REMOVED	TEMP.	pH	COND.
	1st bailer		" "	X1000

FINAL VOLUME PURGED	gal
TIME SAMPLED	4:22
SAMPLE ID.	RS-1
SAMPLE CONTAINERS	2 vials 2 amber
ANALYSIS TO BE RUN	TPHg/BTEX
LABORATORY	AEN
NOTES:	1st bailer 1/2 inch product
	Now bailer 1 Amber sample
	1 vial
	sample

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 9-18-96	TIME 3:10
WELL RS-2	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 7.34 DTB: 24.50		
FLUID ELEVATION		
BAILER TYPE disposable bailer		
PUMP Paul LTT		

WELL PURGING RECORD				
TIME	VOLUME REMOVED	TEMP.	pH	COND.
3:49	1st bailer	93.5	7.14	.80 X1000
3:55	28 gal	83.7	7.12	.65
3:57		80.0	7.06	.61
3:59		79.7	7.07	.59
4:02		80.2	7.07	.59
			Sampled	

FINAL VOLUME PURGED 29 1/4 gal
TIME SAMPLED 4:03
SAMPLE ID. RS-2
SAMPLE CONTAINERS 2 vials 2 ampers
ANALYSIS TO BE RUN TPHg/BTEX
LABORATORY AEM
NOTES: 1st bailer clear light odor
New Bailer

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 9-18-96	TIME 3:15
WELL RS-3	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 6.92 DTB: 24.90		
FLUID ELEVATION		
BAILER TYPE disposable bailer		
PUMP Paul LTT		

WELL PURGING RECORD				
TIME	VOLUME REMOVED	TEMP.	pH	COND.
3:30	1st bailer	90.5	7.13	1.00 X1000
3:35	30 gal	86.0	7.15	.75
3:36		88.2	7.14	.84
3:38		89.0	7.14	.80
3:40		89.2	7.14	.81
			Sampled	

FINAL VOLUME PURGED	31 1/4 gal
TIME SAMPLED	3:42
SAMPLE ID.	RS-3
SAMPLE CONTAINERS	2 vials 2 grab bags
ANALYSIS TO BE RUN	TPH _g /BTEX
LABORATORY	AEN
NOTES:	1st bailer clear No odor
	New Bailer

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 9-18-96	TIME 2:40
WELL RS-4	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 9.58 DTB: 29.50		
FLUID ELEVATION		
BAILER TYPE disposable bailer		
PUMP Paul LTT		

WELL PURGING RECORD				
TIME	VOLUME REMOVED	TEMP.	pH	COND.
4:30	1st bailer	93.3	7.07	.56 X1000
4:42	30 gal	78.2	7.08	.50
4:44		76.5	7.07	.48
4:46		76.0	7.08	.46
4:48		76.2	7.08	.47
		sampled		

FINAL VOLUME PURGED 31 1/4 gal
TIME SAMPLED 4:50
SAMPLE ID. RS-4
SAMPLE CONTAINERS 2 voas 2 ambers
ANALYSIS TO BE RUN TPHg/BTEX
LABORATORY AEN
NOTES: 1st bailer clear light odor

New Bailer

CHANGE ORDER REQUEST

AMERICAN ENVIRONMENTAL NETWORK (AEN)
3440 VINCENT ROAD
PLEASANT HILL, CA 94523

PHONE (510) 930-9090

FAX (510) 930-0256

DATE/TIME 9/23/96

COMPANY WEFE

AEN REP. Bill

CONTACT George Converse

AEN PROJ NO. 9609266

PROJECT _____

PROJ #

COC #

ADDITIONAL ANALYSIS

CHANGED ANALYSIS

OTHER

Need MTBE reported also

ACCEPTED - The above specifications of this Change Order are satisfactory and are hereby accepted

DATE OF ACCEPTANCE _____

SIGNATURE _____

PLEASE AUTHORIZE BY SIGNING REQUEST AND RETURN BY FAX

APPENDIX D

TABLE 1
VENTING RS-1, RS-2 & RS-3
FORMER DESERT PETROLEUM STATION #796
2844 MOUNTAIN BLVD.
OAKLAND, CALIFORNIA

DATE	TIME	PID	DEPTH TO VACUUM WATER		VACUUM FLOW		FLOW AVERAGE		TFH GASOLINE mg/L	CO2 PERCENT	CALCULATED POUNDS AS GASOLINE	ACCUMULATIVE POUNDS AS GASOLINE	CALCULATED POUNDS AS CARBON	ACCUMULATIVE POUNDS AS CARBON	GALLONS WATER PURGED	TOTAL GALLONS PURGED	TOTAL FREE PHASE PRODUCT	
			FEET	mm Hg	FEET	mmHg	CFM	CFM										
10/01/96	RS-1	*	14.75	NS	9.4	400	18.75	8	29.3									
			15	NS		430	20.15	10	32.8	31.06	166.32	3	4.812	4.81	0.47	0.47	30	30
	RS-2	*	15.25	15	7.64	400	18.75	7	27.4									
			15.5	100		420	19.69	10	32.8	30.11	134.59	3.5	3.775	8.59	0.53	0.99	30	60
	RS-3	*	15.5	NS	7.1	390	18.28	14	38.8									
			15.75	253		378	17.72	14	38.8	38.80	150.3	6	5.432	14.02	1.17	2.16	25	85
	RS-1	*	15.75	109		420	19.69	10	32.8									
			16	109		420	19.69	10	32.8	32.79	173.65	4	5.304	19.32	0.66	2.82	25	110
10/08/96	RS-1		12.5	NS	8.94	400	18.75	8	29.3									
			12.75	NS	12.15	430	20.15	10	32.8	31.06	136.08	2.9	3.937	23.26	0.45	3.27	40	150
	RS-2		13.25	15	7.8	400	18.75	7	27.4									
			13.75	100	19.8	420	19.69	10	32.8	30.11	141.44	3.7	7.935	31.20	1.12	4.39	30	180
	RS-3		14	NS	7.2	390	18.28	14	38.8									
			14.5	253	8.32	378	17.72	14	38.8	38.80	116.5	3.1	8.421	39.62	1.21	5.59	25	205
	RS-1		14.75	109	10.7	420	19.69	10	32.8									
			15	109	19.24	420	19.69	10	32.8	32.79	112.38	3	3.433	43.05	0.49	6.09	30	235
10/15/96	RS-1		13.5	50	9	440	20.62	10	32.8									
			14	200	13.24	430	20.15	10	32.8	32.79	179.04	4.5	10.938	53.99	1.48	7.56	35	270

TABLE 1
 VENTING RS-1, RS-2 & RS-3
 FORMER DESERT PETROLEUM STATION #796
 2844 MOUNTAIN BLVD.
 OAKLAND, CALIFORNIA

DATE	TIME	PID	DEPTH TO WATER		VACUUM		FLOW		AVERAGE	TFH	CO2	CALCULATED	ACCUMULATIVE	CALCULATED	ACCUMULATIVE	GALLONS	TOTAL	TOTAL	
			FEET	mm Hg	FEET	mmHg	CFM	FLOW	GASOLINE	CFM	mg/L	PERCENT	AS GASOLINE	AS GASOLINE	AS CARBON	AS CARBON	PURGED	PURGED	FREE PHASE
																			0
	RS-2	14.25	50	7.8	450	21.09	10	32.8											
		14.75	150	19	394	18.47	14	38.8	35.80	136.13	4	9.078	63.07	1.44	9.00	35	305	0	
	RS-3	14.75	10	7.25	480	22.50	16	41.5											
		15.25	140	8.92	370	17.34	18	44.0	42.74	103.1	3.5	8.209	71.28	1.50	10.50	25	330	0	
	RS-1	15.5	40	11.32	430	20.15	10	32.8											
		15.75	180	19.2	430	20.15	10	32.8	32.79	80.7	2.5	2.465	73.74	0.41	10.91	25	355	0	
10/21/96	RS-1	14.25	190	8.05	420	19.69	12	35.9											
		14.75	25	13.35	430	20.15	10	32.8	34.36	128.69	3.5	8.237	81.98	1.21	12.11	25	380	0	
	RS-2	15	6	7.82	160	7.50	20	46.4											
		15.25	170	13.42	400	18.75	16	41.5	43.93	117.98	3	4.828	86.81	0.66	12.77	20	400	0	
	RS-3	15.75	6	7.3	370	17.34	20	46.4											
		16	130	8.6	370	17.34	18	44.0	45.19	106.36	3	4.477	91.28	0.68	13.45	25	425	0	
	RS-1	16.75	10	7.3	426	19.97	10	32.8											
		17	300	8.6	426	19.97	10	32.8	32.79	11.7	0.5	0.357	91.64	0.08	13.53	25	450	0	

* VACUUM AND FLOW MEASUREMENTS INFERRED FROM 10/8/96 FIELD NOTES.

CFM CUBIC FEET PER MINUTE

mm MILLIMETERS

Hg MERCURY

mg/L PARTS PER MILLION, MILLIGRAMS PER LITER

TFH TOTAL FUEL HYDROCARBONS

CO2 CARBON DIOXIDE

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 10-1-96	TIME 1:51
WELL RS-1	SAMPLED BY. <i>mp</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTP 8.88 DTW 9.40		
FLUID ELEVATION		
BAILER TYPE Product Bailer		
PUMP Paul LTT		

WELL PURGING RECORD				
TIME	VOLUME REMOVED	Reading	pH	COND.
1:55	0-200	80		in Well RS-1
1:54	0-20	4		from LTT EX
2:00	0-200	48		in Well RS-1
2:05	0-200	100		in Well RS-1
2:09	0-2000	225		in Well RS-1

Air Sample #1 taken

FINAL VOLUME PURGED 30 gal
TIME SAMPLED
SAMPLE ID. RS-1
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: <i>1/2 product</i>

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 10-1-96	TIME 2:12
WELL RS-2	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW 7.64		
FLUID ELEVATION		
BAILER TYPE disposable bailer		
PUMP Perist LTT		

WELL PURGING RECORD				
TIME	VOLUME REMOVED	COND. Reading	pH	COND.
No+ Pumping 2:15	0-200	74	in Well	RS-2
Pumping 2:20	0-2000	220	LTT EX.	
pumping 30gal 2:25	0-200	48	in well	RS-2
No+ pumping 2:29	0-200	50	in well	RS-2 on top
No+ pumping 2:35	0-200	22	in well	RS-2
No+ pumping 2:40	0-20	17	in well	RS-2
No+ pumping 2:44	0-200	20	in well	RS-2 Air Sample

FINAL VOLUME PURGED 30 gal
TIME SAMPLED
SAMPLE ID. RS-2
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: No product bad odor

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 10-1-96	TIME 2:41
WELL RS-3	SAMPLED BY. <i>mp</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW 7.10		
FLUID ELEVATION		
BAILER TYPE disposable bailer		
PUMP Pawl LTT		

WELL PURGING RECORD				
TIME	VOLUME REMOVED	Reading	pH	COND.
Not Pumping 2:44	0-20	15	in well RS-3	
pumping 2:48	0-2000	240	LTT EX	
pumping 2:50	0-2000	220	LTT EX	
pumping 2:55	30gal 0-200	75	in well RS-3	
Not pumping 3:02	0-20	10	in well RS-3	Air sample taken
Not pumping 3:07	0-20	10	in well RS-3	
Not pumping 3:12	0-20	10	in well RS-2	

FINAL VOLUME PURGED 30 gal
TIME SAMPLED
SAMPLE ID. RS-3
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: No product light odor

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 10-1-96	TIME 3:20
WELL AS-1	SAMPLED BY. <i>mp</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER <i>DTW/ 7.40</i>		
FLUID ELEVATION		
BAILER TYPE <i>disposable bailer</i>		
PUMP <i>Paul LTT</i>		

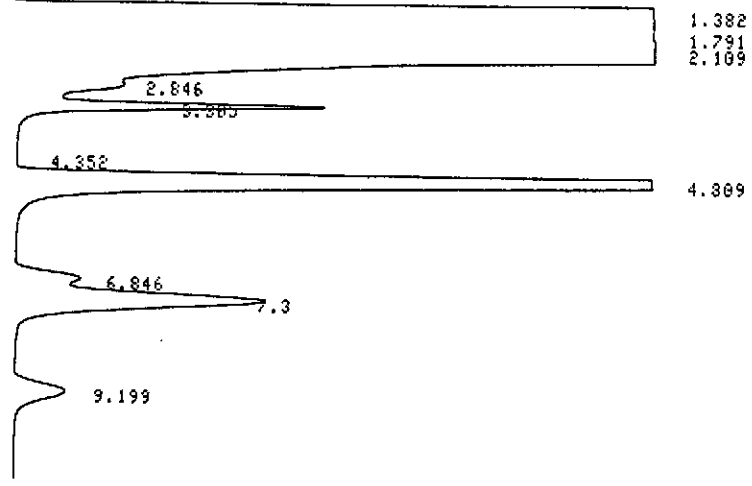
WELL PURGING RECORD					
TIME	VOLUME REMOVED	Reading	pH	COND.	
<i>Not pumping</i> 3:21	0-20	4	<i>in well</i>	AS-1	
<i>Not pumping</i> 3:26	0-200	110	<i>in well</i>	AS-1	
<i>pumping</i> 3:31 <i>25 gal</i>	0-20	11	<i>in well</i>	AS-1	
<i>Not pumping</i> 3:35	0-20	10	<i>in well</i>	AS-1	
<i>Not pumping</i> 3:40	0-20	15	<i>in well</i>	AS-1	
<i>Not pumping</i> 3:43	0-20	10	<i>in well</i>	AS-1	

Air Sample taken ←

Not pumping
Not pumping
pumping
Not pumping
Not pumping
Not pumping

FINAL VOLUME PURGED <i>25 gal</i>
TIME SAMPLED
SAMPLE ID. <i>AS-1</i>
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: <i>No Product</i>

DP 769 RS-1 #1
10-1-96 Co2 = 3 1 pump



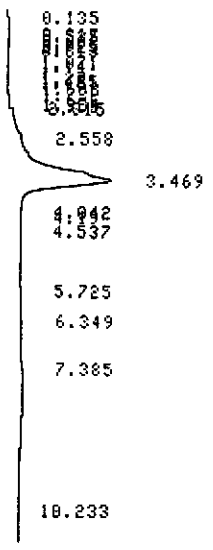
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 1

FILE 0
METHOD 44
SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.382	16387734	E			
2	1.791	4582133	V			
3	2.109	1558755	SV			
4	2.846	4509	T			
5	3.385	57428	T	1	0.2062	BENZEN 0.185 mg/L
6	4.352	175				
7	4.809	455126		2	2.1045	TOLUEN = 1.732 mg/L
8	6.846	27457		3	0.1599	ETHYL- = 0.147 mg/L
9	7.3	140002	V	4	1.6188	M/PXYL > = 1.665 mg/L
10	9.199	31446		5	0.3638	M-XLYL

TOTAL 23244756
CHROMATOGRAM 101 MEMORIZED 4.4532



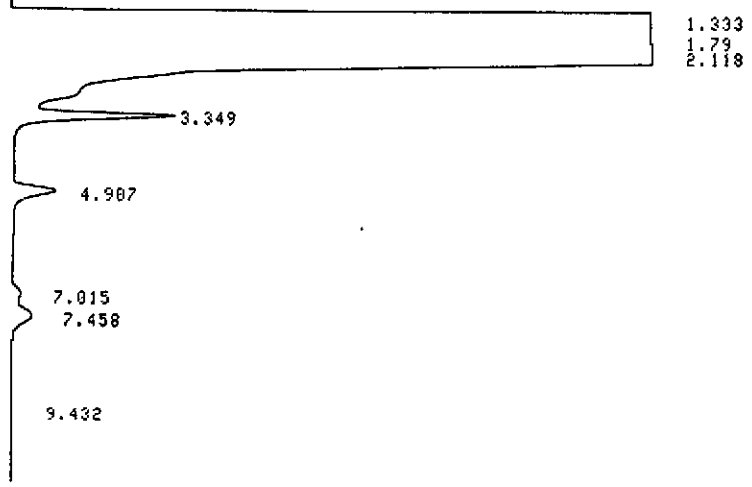
CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 2

FILE 9
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	0.135	41			0.0279	
2	0.317	47			0.0318	
3	0.525	26			0.0175	
4	0.606	18	V		0.0121	
5	0.725	38	V		0.0253	
6	0.813	40	V		0.0268	
7	1.071	33			0.0219	
8	1.14	12			0.0081	
9	1.27	54	V		0.0363	

DP 746 RS-2
10-1-96 c_{o2} = 3.5 1 ppm

1
2
3
4
5
6
7
8
9
10
11
12

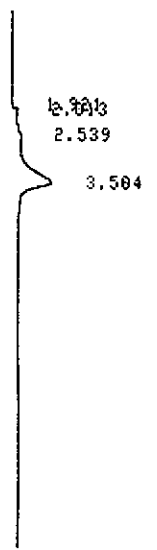


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 5

FILE 0
METHOD 44
SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.333	15562491	E			
2	1.79	2381141	V			
3	2.118	834594	SV			
4	3.349	31966	T	1	0.1148	BENZEN = 0.103 mg/L
5	4.907	15904		2	0.0735	TOLUEN = 0.061 mg/L
6	7.015	4557		3	0.0265	ETHYL = 0.024 mg/L
7	7.458	12838	V	4	0.1484	M/PXYL = 0.125 mg/L
8	9.432	1678		5	0.0194	M-KLYL
TOTAL		18845162			0.3827	



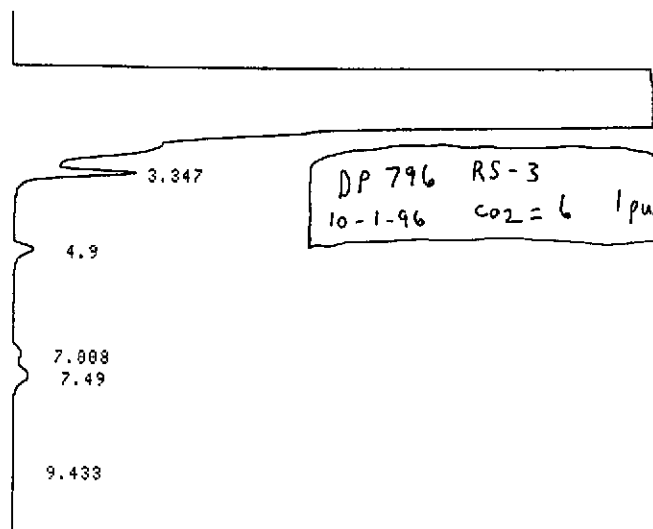
CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 6

FILE 9
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.921	41			0.1205	
2	2.013	273	V		0.7939	
3	2.539	5535	V		16.0959	
4	3.504	28536	V		82.9896	
TOTAL		34386			100	

205-0007-02
S-Standard

1. 0.000
2. 0.000
3. 0.000
4. 0.000
5. 0.000
6. 0.000
7. 0.000
8. 0.000
9. 0.000
10. 0.000

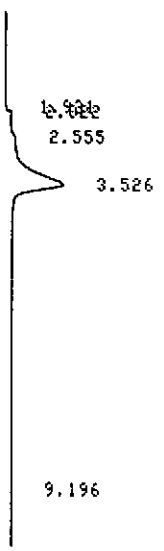


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 7

FILE 0
METHOD 44
SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.325	12137296	E			
2	1.474	3946306	V			
3	1.641	998627	V			
4	1.792	2350727	V			
5	2.121	1558788	SV			
6	3.347	18733	T	1	0.0673	BENZEN = 0.060 mg/L
7	4.9	7209		2	0.0333	TOLUEN = 0.027 mg/L
8	7.008	4038		3	0.0235	ETHYL- = 0.022 mg/L
9	7.49	9828	V	4	0.1136	M/PXYL } = 0.107 mg/L
10	9.433	1191		5	0.0138	M-KLYL
TOTAL		21032736			0.2515	



CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 8

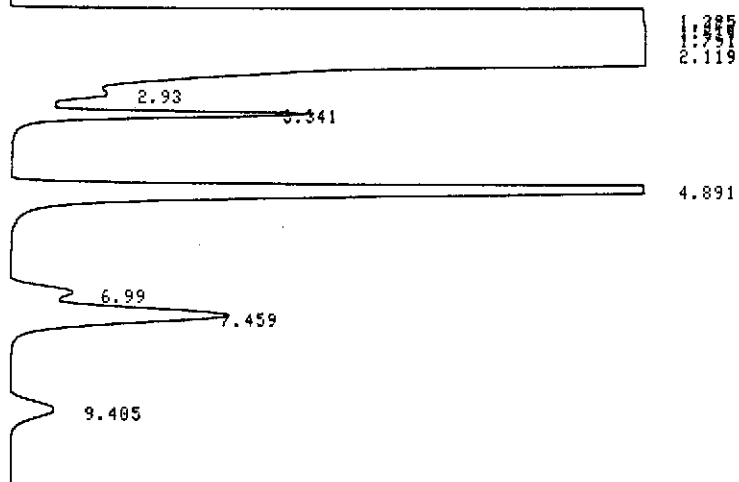
FILE 9
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.931	96			0.191	
2	2.022	397	V		0.7883	
3	2.555	5805	V		11.5195	
4	3.526	43834	V		86.9787	
5	9.196	263			0.5225	
TOTAL		50396			100	

2000020702

DP 796 RS-1 # 2

10-1-96 CO2 = 4 1 pump



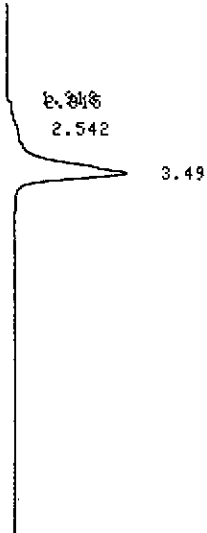
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 3

FILE 0
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.325	12154430	E			
2	1.472	4265863	V			
3	1.614	1257201	V			
4	1.791	4560609	V			
5	2.119	1416751	SV			
6	2.93	6185	T			
7	3.341	57316	T	1	0.2058	BENZEN = 0.184 mg/L
8	4.891	377599		2	1.746	TOLUEN = 1.437 mg/L
9	6.99	28016		3	0.1631	ETHYL = 0.154 mg/L
10	7.459	123776	V	4	1.4311	M/XYL = 1.471 mg/L
11	9.405	27704		5	0.3206	M-XLYL
TOTAL		24275442			3.8667	

TFH = 173.65 mg/L



CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 4

FILE 9
 METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.918	40			0.0475	
2	2.015	393			0.4717	
3	2.542	6647	V		7.9861	
4	3.49	76154	V		91.4946	

00000007 02

00000007 02

Lawrence Tank Testing

D.L. Lawrence
Owner



P.O. Box 407

Downieville, California 95936

(916) 289-3109

CUSTOMER NAME AND ADDRESS: WESTERN GEO ENGINEERS				DATE 10-8-96			
1386 EAST BEAVER ST LINDLAND CA				INVOICE NO.			
SITE ADDRESS: FORMER XXXX = DPE 996							
2844 MOUNTAIN BLVD. DAKLAND CA							
PHONE NO.				TECHNICIAN'S NAME PAUL			
DESCRIPTION OF WORK PERFORMED		LABOR CHARGES			MATERIAL CHARGES		
		TIME	MILES	AMOUNT	MATERIALS USED	QTY.	PRICE
		HRS					TOTAL
RS-1	8.94 DTW ¹²⁵⁰ VAL NO FLO 8 mm						
R-S-1	1245 = VAL 450 mmHg - FLO 450 mmHg = (1200) VAL 430 mm FLO 10 mm DTW 12 15						
RS-2	7.80 DTW PURGE 30 gal = VAL 450 mmHg - FLO 7 mm						
RS-2	VAL (1325) 450 mmHg FLO 450 mmHg = VAL (1200) 450 mm FLO 10 mm AIR SAP DTW 19.80						
RS-3	7.20 DTW 25 gal (1355) VAL 390 mm FLO 14 mm (1410) VAL 390 mm FLO 14 mm						
R-3	(1425) VAL 378 mm FLO 14 mm AIR SAP DTW						
RS-1	16.70 DTW 30 gal = (1400) VAL 450 mm FLO 10 mm (1410) VAL 450 mm FLO 10 mm						
RS-1	AIR SAMPLE						
TRAVEL TIME:							
MILEAGE:							
		TOTAL TIME		TOTAL LABOR CHARGES			
RATES:				TOTAL MATERIALS			
LABOR AT \$ PER HOUR	ARRIVAL TIME HRS MIN	DEPART TIME HRS MIN	SALES TAX				
TRAVEL TIME AT \$ PER HOUR	1230	1515	LABOR CHARGES				
MILEAGE AT \$ PER MILE						TOTAL \$	
DUMP ON SITE							

1.208
1.783

Blank

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 5

FILE 0
METHOD 44
SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.208	118				
2	1.351	860	V			
3	1.473	285	V			
4	1.783	375				

TOTAL 1558
CHROMATOGRAM 101 MEMORIZED

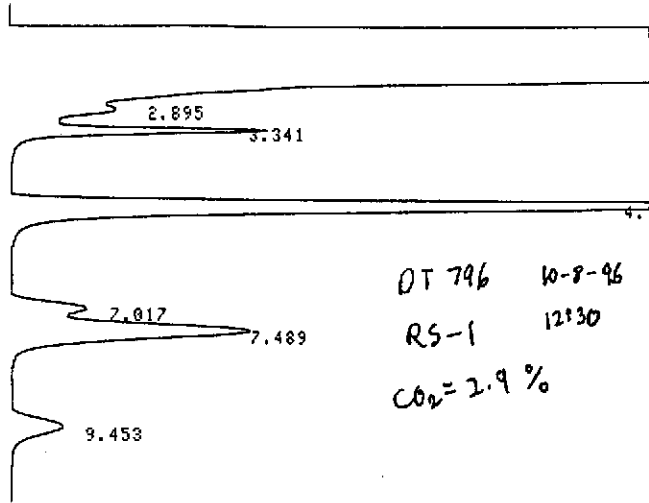
1.924
2.535
3.104
3.451

CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 6

FILE 9
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.924	10			0.463	
2	2.535	487			22.0965	
3	3.104	875	V		39.7289	
4	3.451	831	V		37.7196	

TOTAL 2203 100



1000
1000
1000
1000

CHROMATOGRAM 1 MEMORIZED

CR581 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 1

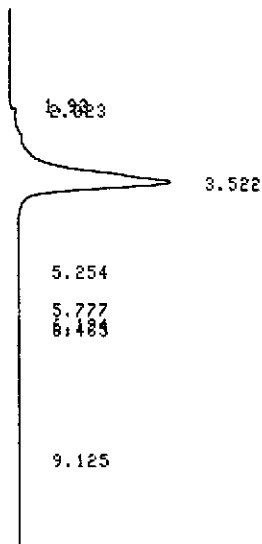
FILE 0
METHOD 44
SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.325	9732592	E			
2	1.46	3052996	V			
3	1.605	869148	V			
4	1.78	3495515	V			
5	2.11	1256943	SV			
6	2.895	7156	T			
7	3.341	47545	T			
8	4.9	313446		1	0.1707	BENZEN = 0.153 mg/L
9	7.017	33883		2	1.4494	TOLUEN = 1.193 mg/L
10	7.489	136135	V	3	0.1973	ETHYL = 0.181 mg/L
11	9.453	32409		4	1.574	M/PXYL = 1.637 mg/L
				5	0.375	M-XLYL

TFH = 136.08 mg/L

TOTAL 18977758
CHROMATOGRAM 101 MEMORIZED

3.7664



CR581 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 2

FILE 9
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.93	25			0.0224	
2	2.823	310			0.2802	
3	3.522	110010	V		99.5709	
4	5.254	72			0.0649	
5	5.777	39			0.0349	
6	6.194	18			0.0166	
7	9.125	11			0.01	

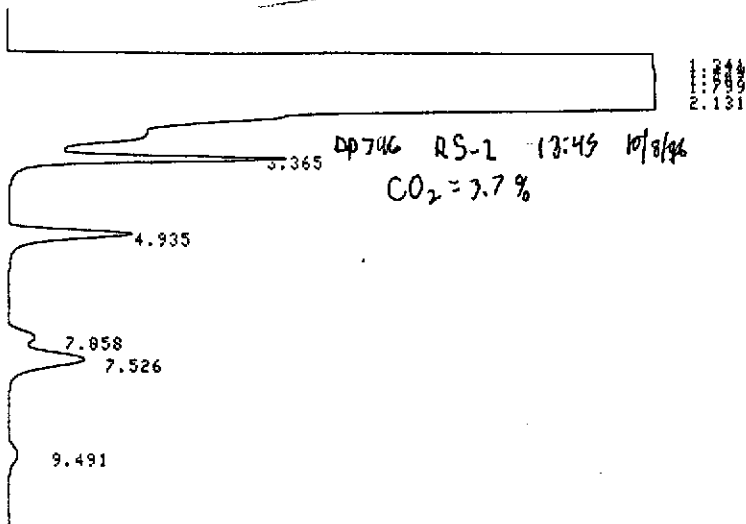
TOTAL 110485

100

123456789

1011121314

1516171819

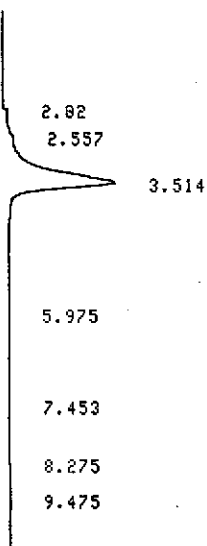


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 7

FILE 0
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.341	10556520	E			
2	1.479	3439965	Y			
3	1.647	954105	Y			
4	1.799	3315904	Y			
5	2.131	1341910	SV			
6	3.365	50938	T	1	0.1829	BENZEN = 0.164 mg/L
7	4.935	43147		2	0.1995	TOLUEN = 0.164 mg/L
8	7.058	11945		3	0.0696	ETHYL = 0.064 mg/L
9	7.526	43369	Y	4	0.5014	M/PXYL
10	9.491	5950		5	0.0688	M-XLYL } = 0.479
TOTAL		19763744			1.0223	



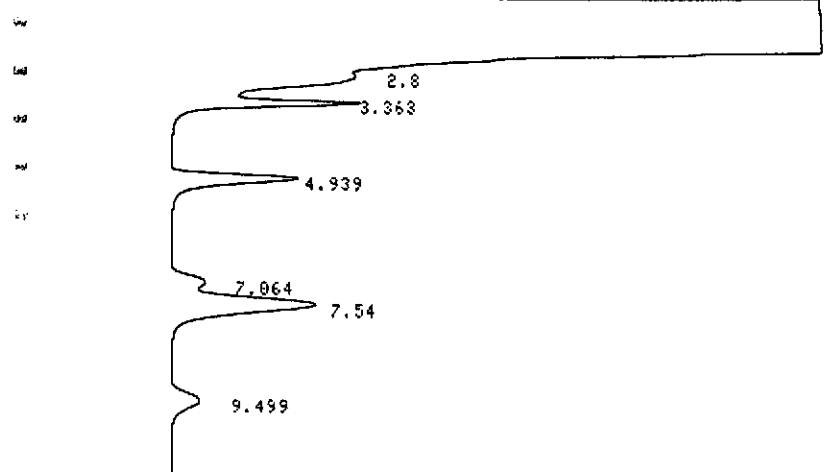
CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 8

FILE 9
 METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.02	240			0.2551	
2	2.557	5229	Y		5.5554	
3	3.514	76022	Y		80.7674	
4	5.975	5775	Y		6.1351	
5	7.453	4850	Y		5.1525	
6	8.275	1672	Y		1.7769	
7	9.475	337	Y		0.3576	
TOTAL		94124			100	

BP 796 R53 10/8/46 14:30 CO₂ = 3.1%

Printed
 Date
 Time
 Channel
 Output



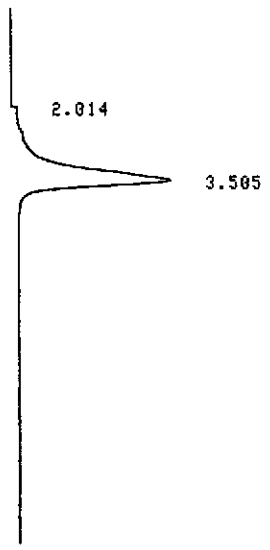
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 9

FILE 0
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.351	8806792	E			
2	1.48	2707382	V			
3	1.651	784894	V			
4	1.802	2212820	V			
5	2.132	1524506	SV			
6	2.8	12340	T			
7	3.363	29296	T	1	0.1052	BENZEN = 0.094
8	4.939	44368		2	0.2052	TOLUEN = 0.169
9	7.064	15018		3	0.0874	ETHYL = 0.080
10	7.54	79688	V	4	0.9214	M/PXYL = 0.937
11	9.499	16796		5	0.1943	M-XLYL
TOTAL		16233896			1.5135	

TFH_g = 116.50 mg/L



CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 10

FILE 9
 METHOD 41

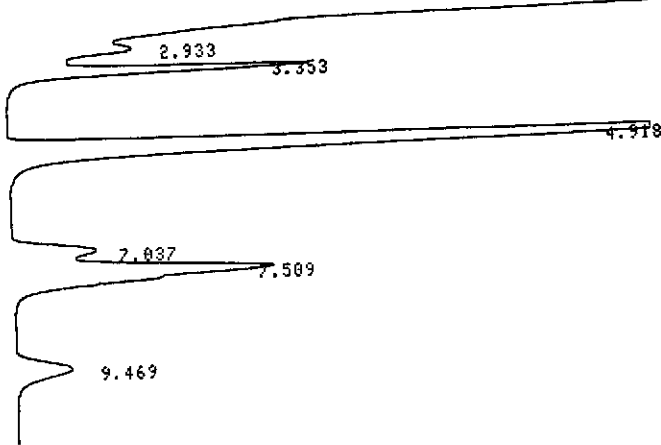
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.014	327			0.3054	
2	3.505	106898	V		99.6946	
TOTAL		107225			100	

213-00097-02

© Shimadzu

DP 746 RS-1 10/8/86 15:65 C62 = 20%

1.355
1.473
2.124



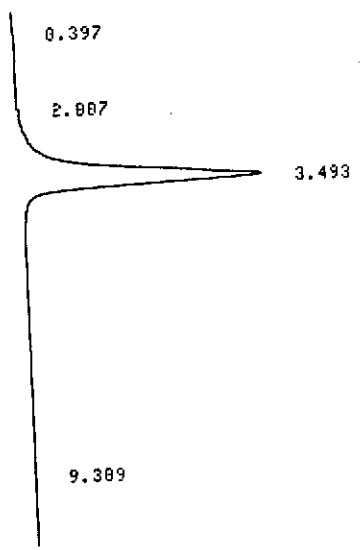
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 3
 FILE 0
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	1.355	6968297		E		
2	1.473	2957717		V		
3	1.618	743156		V		
4	1.792	3758265		V		
5	2.124	1271665		SV		
6	2.933	9993		T		
7	3.353	56807		T		
8	4.918	382426				
9	7.037	37911				
10	7.509	147423		V		
11	9.469	34921				

T_{PH} = 112.88 mg/L
 0.204 BENZEN = 0.183 mg/L
 1.3984 TOLUEN = 6.151 mg/L
 0.2207 ETHYL = 0.203 mg/L
 1.7046 M/PXYL = 1.771 mg/L
 0.484 M-XLYL

TOTAL 15688574 3.9318



CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 4
 FILE 9
 METHOD 41

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	0.397		35		0.0231	
2	2.087		234		0.1529	
3	3.493	153823		V	99.8888	
4	9.389		36		0.0233	
TOTAL					100	

508-07037-02

© S. I. Instrument

WELL SAMPLING DATA SHEET

1st time

SITE DP 796	DATE 10-8-96	TIME 12:15
WELL RS-1	SAMPLED BY. <i>mp</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER PTP: N/A DTW: 8.94 DTB: 29.55		
FLUID ELEVATION		
BAILER TYPE Disposable Bailer		
PUMP Paul LTT		

pumping H₂O

pumping Air
Air Sample
taken
12:30

WELL PURGING RECORD				
TIME	VOLUME REMOVED	Reading	pH	COND.
12:21	25 gal	60	0-200	
12:26	10	80		
12:29	5	75		
12:30		90		
12:37		160		
12:45		130		
12:50		140		
12:55		100		

DTW: 26.74

1:02 DTW: 12.15

FINAL VOLUME PURGED 40
TIME SAMPLED
SAMPLE ID. RS-1
SAMPLE CONTAINERS Bag
ANALYSIS TO BE RUN
LABORATORY
NOTES: Vac: 430 flow: 10
No Visable Product light gas odor

WELL SAMPLING DATA SHEET

SITE DP796	DATE 10-8-96	TIME 1:10
WELL RS-2	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 7.80 DTB: 24.89		
FLUID ELEVATION		
BAILER TYPE Disposable Bailor		
PUMP Paul LTT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
1:10	25 gal	110	0-200	
1:15	5	30	0-200	
1:17		80	0-200	1:16 DTW 22.30
1:22		80	0-200	
1:27		40	0-200	
1:32		100	0-200	
1:37		160	0-200	
1:42		75	0-200	
1:45	Air Sample taken			1:43 DTW 19.80

pumping
water

pumping
Air

FINAL VOLUME PURGED 30 gal
TIME SAMPLED 1:45
SAMPLE ID. RS-2
SAMPLE CONTAINERS Bag
ANALYSIS TO BE RUN
LABORATORY
NOTES: No product
Vacume: 409; flow: 10

4 in Well

WELL SAMPLING DATA SHEET

SITE	DP 796	DATE	10-8-96	TIME	1:55
WELL	RS-3	SAMPLED BY.	mp		
WELL ELEVATION					
PRODUCT THICKNESS					
DEPTH TO WATER DTW: 7.20 DTB: 24.40					
FLUID ELEVATION					
BAILER TYPE disposable Bailer					
PUMP Paul LTT					

WELL PURGING RECORD

TIME	VOLUME REMOVED	READING	pH	COND.
1:57	15 gal	9	0-20	
2:00	10	4	0-20	2:00 DTW: 22.70
2:04		13	0-20	
2:07		17	0-20	
2:12		40	0-200	
2:20		70	0-200	
2:26		60	0-200	
2:29		50	0-200	2:30 DTW: 8.32
				air sample taken

Stopping water
pumping Air

FINAL VOLUME PURGED	25 gal
TIME SAMPLED	2:30
SAMPLE ID.	RS-3
SAMPLE CONTAINERS	Bag
ANALYSIS TO BE RUN	
LABORATORY	
NOTES:	No Product
Vacume:	378
flow:	14

WELL SAMPLING DATA SHEET

2nd time

SITE DP 796	DATE 10-8-96	TIME 2:41
WELL RS-1	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER	DTW: 10.20	DTB 29.55
FLUID ELEVATION		
BAILER TYPE	Disposable Bailer	
PUMP	Pawl LTT	

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
2:44	20 gal	50	0-200	
2:49	10	110	0-200	2:50 DTW 28.60
2:51		100	0-200	
2:56		70	0-200	
3:01		80	0-200	
3:05		110	0-200	3:08 air sample taken
				3:08 DTW 19.24

pump in H₂O
pumping Air

FINAL VOLUME PURGED	30 gal
TIME SAMPLED	3:05
SAMPLE ID.	RS-1
SAMPLE CONTAINERS	Bag
ANALYSIS TO BE RUN	
LABORATORY	
NOTES:	No Product Gas Odor
Vacume:	240
flow:	10

Lawrence Tank Testing

D.L. Lawrence
Owner



P.O. Box 407

Downieville, California 95936

(916) 289-3109

CUSTOMER NAME AND ADDRESS: WESTERN GEO ENGINEERS		DATE 10-15-76					
1386 EAST BEAMER ST WOODLAND CA		INVOICE NO.					
SITE ADDRESS: FORMER XXXX = DPH 796							
2844 MOUNTAIN PLUD, OAKLAND CA.							
PHONE NO.		TECHNICIAN'S NAME PAUL					
DESCRIPTION OF WORK PERFORMED	LABOR CHARGES			MATERIAL CHARGES			
	TIME HRS MIN	MILES	AMOUNT	MATERIALS USED	QTY.	PRICE	TOTAL
RS-1: DTW 9.00 VAC 35 GAL - AIR SAMPLE							
RS-1 (1830) = VAC 440 mm FLO 10 mm = (1450) VAC 480 mm FLO 10 mm =							
RS-2 DTW 7.80 = VAC 25 GAL (1410) .14 = 450 mm FLO 10 mm							
RS-2 (1440) VAC 394 mm H; FLO 14 mm H; AIR SAMPLE = (1940) VAC ON TANK MY GAGE DTW 19.50							
RS-3 DTW - 7.25 = VAC 25 GAL = (1445) VAC 480 mm H; FLO 16 mm H;							
RS-3 1515 VAC 372 mm H; FLO 18 mm H; AIR SAMPLE = DTW 8.92 (1812 ON TANK)							
RS-1 = DTW 12.32 - VAC 25 GAL = 1525 VAC 430 mm H; FLO 10 mm H;							
RS-1 = 1540 VAC 430 mm H; FLO 10 mm H; AIR SAMPLE DTW 19.20 (1912 ON TANK ST)							
TRAVEL TIME:							
MILEAGE:							
	TOTAL HRS	TOTAL MILES	TOTAL LABOR CHARGES	TOTAL MATERIALS			
LABOR AT \$ PER HOUR	ARRIVAL TIME HRS MIN	DEPART TIME HRS MIN		SALES TAX			
TRAVEL TIME AT \$ PER HOUR	1315	1615		LABOR CHARGES			
MILEAGE AT \$ PER MILE				TOTAL \$			
DUMP ON SITE							
BRITISH ...							

WELL SAMPLING DATA SHEET

SITE PP 796	DATE 10-15-96	TIME 12:30
WELL RS-1	SAMPLED BY. MP	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTP: N/A DTW: 9.0 DTB: 29.45		
FLUID ELEVATION		
BAILER TYPE Disposable Bailer		
PUMP Paw LTT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
1:32		50	0-200	
1:35		100	0-200	
1:37		60	0-200	
1:40		190	0-200	DTW: 28.35
1:42		180	0-200	
1:45		200	0-200	
1:52		160	0-200	
1:59		150	0-200	
2:08		130	0-200	DTW: 13.24

pumping H₂O

pumping Air while Air filling sample

FINAL VOLUME PURGED 35
TIME SAMPLED 1:41
SAMPLE ID. RS-1 1st time
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: 1st Bailer No product Gas odor

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 10-15-96	TIME 12:40
WELL RS-2	SAMPLED BY. <i>mp</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 7.80 OTB 24.50		
FLUID ELEVATION		
BAILER TYPE disposable Bailer		
PUMP Pgw LTT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading.	pH	COND.
2:10	35 gal	50	0-200	DTW 21.30
2:15		90	0-200	
2:18		110	0-200	
2:27		120	0-200	
2:32		150	0-200	
2:35		110	0-200	DTW: 19.0

pumping H₂O
pumping Air

Air sample taken

FINAL VOLUME PURGED 35
TIME SAMPLED 2:35
SAMPLE ID. RS-2
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: Clear No Product light Gas odor

WELL SAMPLING DATA SHEET

SITE DP796	DATE 10-15-96	TIME 12:48
WELL RS-3	SAMPLED BY. <i>MP</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 7.25 DTB: 24.90		
FLUID ELEVATION		
BAILER TYPE <i>disposable Bailer</i>		
PUMP <i>Paul LTT</i>		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
2:48	25 gal	10	0-20	
2:50		12	0-20	
2:51		13	0-20	DTW: 22.15
2:52		140	0-200	
2:59		110	0-200	
3:07		100	0-200	
3:15		110	0-200	
3:20		110	0-200	DTW: 8.92

pumping H₂O

pumping Air

Air sample taken

FINAL VOLUME PURGED <i>25 gal</i>
TIME SAMPLED <i>3:20</i>
SAMPLE ID. <i>RS-3</i>
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: <i>No product light Gas odor</i>

WELL SAMPLING DATA SHEET

2nd time

SITE	DP 796	DATE	10-15-96	TIME	3:25
WELL	RS-1	SAMPLED BY.	MP		
WELL ELEVATION					
PRODUCT THICKNESS					
DEPTH TO WATER DTW: 11.32 DTB 29.45					
FLUID ELEVATION					
BAILER TYPE disposable Bailer					
PUMP Pail LTT					

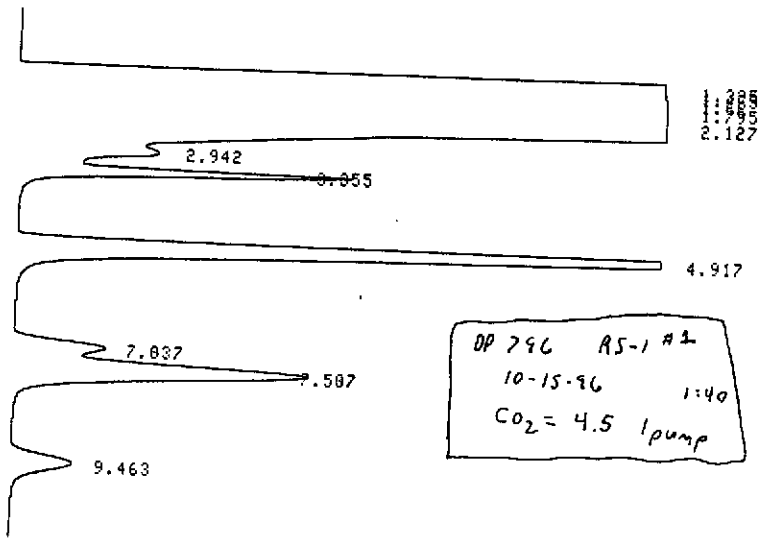
WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
3:27	25 gal	90	0-200	
3:30		40	0-200	
3:32		50	0-200	DTW: 28.20
3:37		140	0-200	
3:42		130	0-200	
3:47		180	0-200	DTW: 19.20
		\$		

pumping H₂O

pumping Air

FINAL VOLUME PURGED	25 gal
TIME SAMPLED	3:48
SAMPLE ID.	RS-1
SAMPLE CONTAINERS	
ANALYSIS TO BE RUN	
LABORATORY	
NOTES:	No Product Gas odor



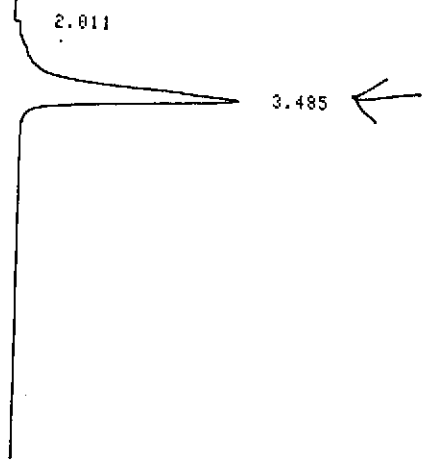
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 3

FILE 0
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.325	11884525	E			
2	1.475	4486932	V			
3	1.62	1257330	V			
4	1.795	4984888	V			
5	2.127	1697753	SV			
6	2.942	10558	T			
7	3.355	60626	T	1		
8	4.917	342459		2	0.2177	BENZEN = 0.195 mg/L
9	7.037	48792		3	1.5835	TOLUEN = 1.303 mg/L
10	7.507	165693	V	4	0.2375	ETHYL = 0.218 mg/L
					1.9158	M/PXYL = 1.609 mg/L

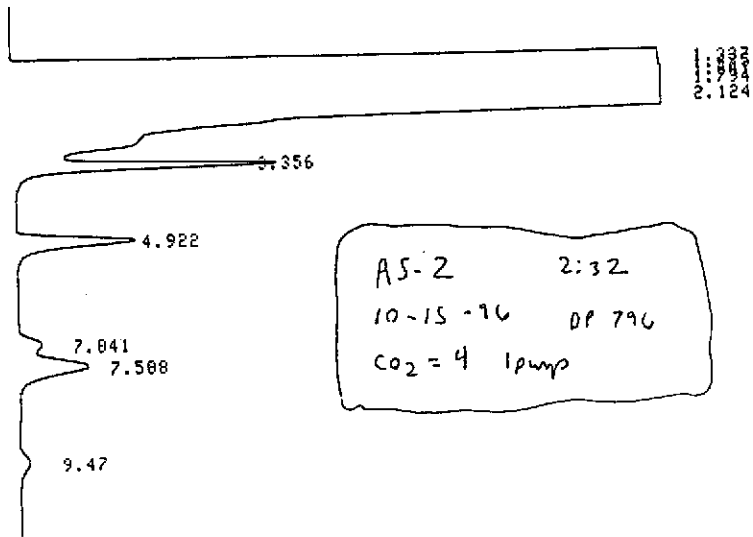
11	9.463	37361		5	0.4323	M-XLYL
TOTAL		24968918			4.3869	



CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 4

FILE 9
 METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.011	393			0.2693	
2	3.485	145590	V		99.7307	
TOTAL		145983			100	



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 5

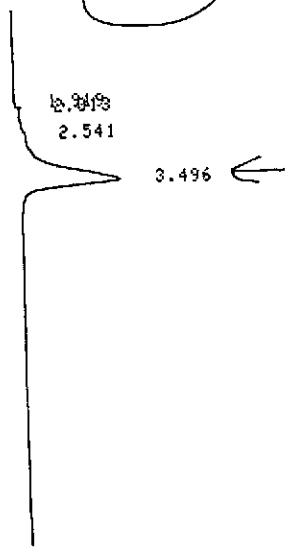
FILE 0
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.337	10081054	E			
2	1.475	3277677	V			
3	1.641	914065	V			
4	1.794	3346296	V			
5	2.124	1257647	SV			
6	3.356	47771	T	1	0.1716	BENZEN = 0.154 mg/L
7	4.922	41596		2	0.1923	TOLUEN = 0.158 mg/L
8	7.041	10753		3	0.0626	ETHYL- = 0.057 mg/L
9	7.508	40388	V	4	0.467	N/PXYL } = 0.452 mg/L
10	9.47	6117		5	0.0708	M-XLYL

TPH = 136.13 mg/L

TOTAL 19023356

0.9643



CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 6

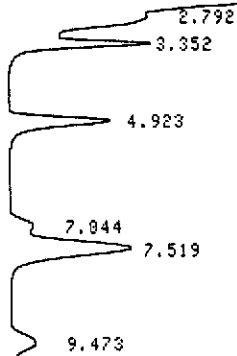
FILE 9
 METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.919	40			0.0518	
2	2.013	307			0.398	
3	2.541	5060	V		6.5522	
4	3.496	71824	V		92.998	
TOTAL		77232			100	

209 1037-02

© Shimadzu

1:357
1:796
2:125



10-15-86 DT 796
AS-3 3:20
CO2 = 3.5 1 pump

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 7

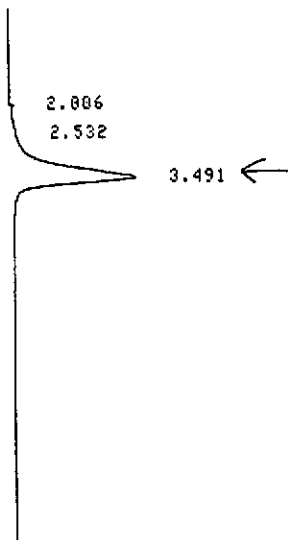
FILE 0
METHOD 44
SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.357	8079738	E			
2	1.475	2345918	V			
3	1.644	669828	V			
4	1.795	1940737	V			
5	2.125	1184142	SV			
6	2.792	9184	T			
7	3.352	22493	T			
8	4.923	35884				
9	7.044	10348				
10	7.519	68287	V			
11	9.473	15657				

TFH_g = 103.1 mg/L
0.0888 BENZEN = 0.072 mg/L
0.1659 TDLUEN = 0.137 mg/L
0.0602 ETHYL- = 0.055 mg/L
0.7896 N-PXYL } = 0.815 mg/L
0.1812 M-XLYL }

TOTAL 1438220
CHROMATOGRAM 101 MEMORIZED

1.2776



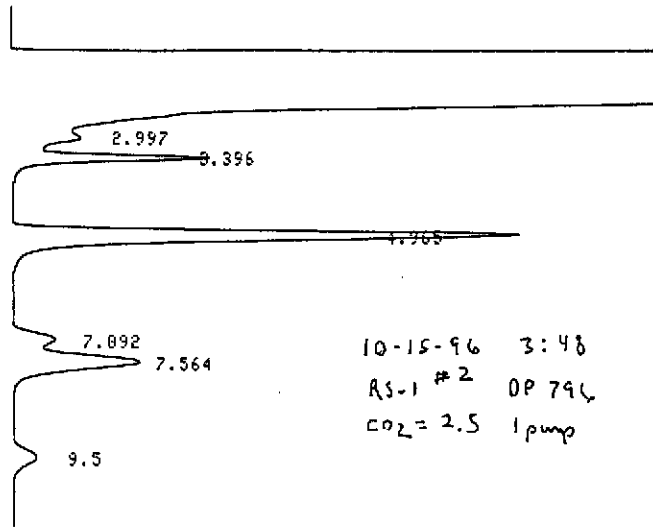
CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 8

FILE 9
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.006	322			0.3813	
2	2.532	4687	V		5.4488	
3	3.491	79618	V		94.1699	
TOTAL		84547			100	

20-00007-02

11-11-96
P. 162



10-15-96 3:48
 AS-1 #2 DP 796
 CO2 = 2.5 1 pump

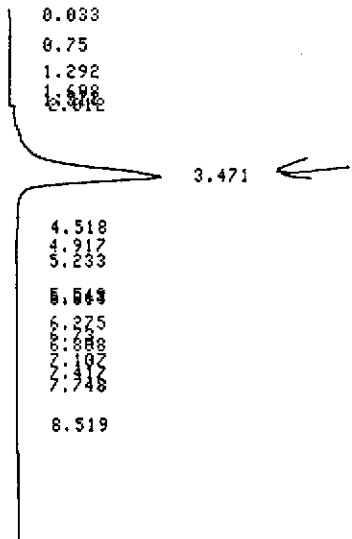
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 9

FILE 0
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.382	5111051				
2	1.503	1704796	V			
3	1.647	520772	V			
4	1.826	2784454	V			
5	2.162	768773	SV			
6	2.997	5878	T			
7	3.396	37808	T			
8	4.965	176932		1	0.1358	BENZEN = 0.122 mg/L
9	7.092	19457		2	0.8181	TOLUEN = 0.677 mg/L
10	7.564	70211	V	3	0.1133	ETHYL = 0.104 mg/L
11	9.5	14484		4	0.8118	N-PXYL >= 0.822 mg/L
				5	0.1676	M-XLYL
TOTAL		11213812			2.0466	

CHROMATOGRAM 101 MEMORIZED



CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 10

FILE 9
 METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	0.033	22			0.0201	
2	0.75	14			0.0131	
3	1.608	45			0.0416	
4	1.772	56	V		0.0519	
5	1.911	53	V		0.0491	
6	2.012	366			0.3403	
7	3.471	106548	SV		99.123	
8	4.917	26	TV		0.0245	

P.02
510 228 5617
Oct-22-96 07:55A WICKLAND OIL MTZ.

Lawrence Tank Testing

D.L. Lawrence
Owner



P.O. Box 407

Downieville, California 95936

(916) 289-3109

CUSTOMER NAME AND ADDRESS: WESTERN GEO ENGINEERS				DATE 10.21-96						
1386 EAST BEANNER ST WINDYLAND CA				INVOICE NO.						
SITE ADDRESS: FORMER RESERT # 996										
2800 MOUNTAIN BLVD, OAKLAND CA										
PHONE NO.				TECHNICIAN'S NAME PAUL						
DESCRIPTION OF WORK PERFORMED 3 WALLS				LABOR CHARGES		MATERIAL CHARGES				
				TIME HRS MIN	MILES	AMOUNT	MATERIALS USED	QTY.	PRICE	TOTAL
RS-1 = DTW 8.05 - VAC DRY 25 GPM H ₂ O										
RS-1 = VAC 480 MM FLD 12 MM H ₂ O 430 MM FLD				10			VAC 430	FLD 12		MM H ₂ O
RS-2 = DTW 1.70 VAC 20 GPM = 1500 - VAC 160 MM FLD 20 MM H ₂ O 1515 VAC 700 MM FLD 16										MM H ₂ O
RS-2 = VAC 384 MM FLD 14 MM H ₂ O - AIR SAMPLE = 1550										
RS-2 = DTW 7.30 - VAC 25 GPM H ₂ O 1540 VAC 370 MM FLD 20 MM H ₂ O 1555 VAC 370 MM FLD 18										MM H ₂ O
RS-2 = DTW 10.10 VAC 266 MM H ₂ O FLD 20 MM H ₂ O - AIR SAMPLE										
RS-1 = DTW 11.25 - VAC 25 GPM H ₂ O = 1640 - VAC 426 MM H ₂ O FLD 10 MM H ₂ O - AIR SAMPLE										
RS-1 = DTW 19.60										
TRAVEL TIME:										
MILEAGE:										
				TOTAL TIME		TOTAL LABOR CHARGES	1" x 20' PVC	5		
RATES:				TOTAL MATERIALS						
LABOR AT \$ PER HOUR				ARRIVAL TIME HRS MIN	DEPART TIME HRS MIN	SALES TAX				
TRAVEL TIME AT \$ PER HOUR				1330	1700	LABOR CHARGES				
MILEAGE AT . PER MILE				TOTAL						
DUMP ON SITE										
RE PLACED 1" PVC IN RS-1-2-3 10 FULL BARRELS										

10 Drums full on site



1386 EAST BEAMER
WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP796	DATE 10-21-96	TIME 2:00
WELL RS-1	SAMPLED BY. <i>mp</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTP: N/A DTW: 8.05 DTB: 29.45		
FLUID ELEVATION		
BAILER TYPE Disposable Bailer		
PUMP Pawl LTT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
2:25	25 gal	150	0-200	
2:29		2	0-20	10 feet Away 29.0
2:30		110	0-200	DTB: Dry well
2:31		150	0-200	
2:35		50	0-200	10 feet Away
2:40		130	0-200	10 feet Away
2:45		150	0-200	
2:47		190/150	0-200	5 feet Away 10 feet Away
2:55		25	0-200	10 feet Away
2:58		100	0-200	DTW: 13.35

pumping H₂O

pumping Air Sample taken →

FINAL VOLUME PURGED 25 gal
TIME SAMPLED 2:35
SAMPLE ID. RS-1
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: No product

WELL SAMPLING DATA SHEET

SITE DP 796	DATE 10-21-96	TIME 2:00
WELL RS-2	SAMPLED BY. <i>mf</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTP: N/A DTW: 7.82 DTB: 24.50		
FLUID ELEVATION		
BAILER TYPE Disposable Bailer		
PUMP Pawl LTT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
3:00	20 gal	6	0-20	10 feet Away
3:01		150	0-200	DTW: 23.0
3:04		9	0-20	10 feet Away
3:05		90	0-200	
3:11		19	0-20	10 feet Away
3:12		90	0-200	
3:19		30	0-200	10 feet Away
3:20		100	0-200	
3:25		110	0-200	10 feet Away
3:29		170	0-200	DTW: 18.42

pumping H₂O

pumping Air

FINAL VOLUME PURGED 20 gal
TIME SAMPLED 3:31
SAMPLE ID. RS-2
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: No product

WELL SAMPLING DATA SHEET

SITE DP796	DATE 10-21-96	TIME 2:00
WELL RS-3	SAMPLED BY. <i>mf</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTP: N/A DTW: 7.30 DTB: 24.90		
FLUID ELEVATION		
BAILER TYPE Disposable Bailer		
PUMP Pawl LTT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
3:38	25 gal	6	0-20	10 feet Away
3:39		110	0-200	DTW 22.40
3:42		80	0-200	10 feet Away
3:43		90	0-200	
3:56		17	0-20	10 feet Away
3:57		90	0-200	
4:07		15	0-20	10 feet Away
4:08		130	0-200	DTW: 8.60

pumping H₂O

pumping Air

FINAL VOLUME PURGED	25 gal
TIME SAMPLED	4:10
SAMPLE ID.	RS-3
SAMPLE CONTAINERS	
ANALYSIS TO BE RUN	
LABORATORY	
NOTES:	No product

WELL SAMPLING DATA SHEET

2nd Time

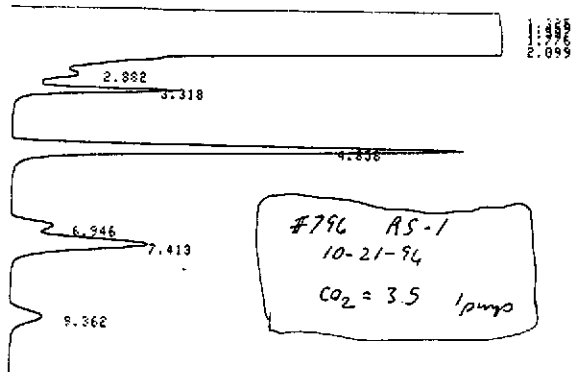
SITE DP 796	DATE 10-21-96	TIME 2:00
WELL RS-1	SAMPLED BY. <i>MP</i>	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTP: NA DTW: 11.25 DTB: 29.45		
FLUID ELEVATION		
BAILER TYPE Disposable Bailer		
PUMP Paul LIT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	Reading	pH	COND.
4:24	25 gal	1	0-20	10 feet Away
4:25		40	0-200	DTW: 28.0
4:26		10	0-20	10 feet Away
4:27		150	0-200	
4:32		150	0-200	10 feet Away
4:33		390	0-200	
4:40		120	0-200	10 feet Away
4:41		180	0-200	DTW: 19.60

pumping H₂O
pumping AIR

FINAL VOLUME PURGED 25 gal
TIME SAMPLED 4:45
SAMPLE ID. RS-1
SAMPLE CONTAINERS
ANALYSIS TO BE RUN
LABORATORY
NOTES: No product



CHROMATOGRAM 1 MEMORIZED

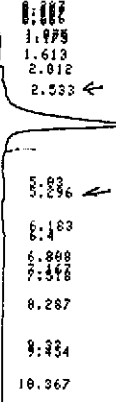
CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 8
 REPORT NO 3

FILE 8
 METHOD 44
 SAMPLE WT 188

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	1.325	9743872	E			
2	1.459	2707556	V			
3	1.597	738878	V			
4	1.776	3866712	V			
5	2.099	978549	SV			
6	2.882	7501	T			
7	3.318	40704	T	1	0.1462	BENZEN = 0.131mg/L
8	4.858	196617		2	0.9092	TOLUEN = 0.748mg/L
9	6.946	24164		3	0.1407	ETHYL = 0.129mg/L
10	7.413	99532	V	4	1.1568	M/PHYL = 1.225mg/L
11	9.362	26658		5	0.3084	M-XLYL

TOT = 128.69 mg/L
 0.1462 BENZEN = 0.131mg/L
 0.9092 TOLUEN = 0.748mg/L
 0.1407 ETHYL = 0.129mg/L
 1.1568 M/PHYL = 1.225mg/L
 0.3084 M-XLYL

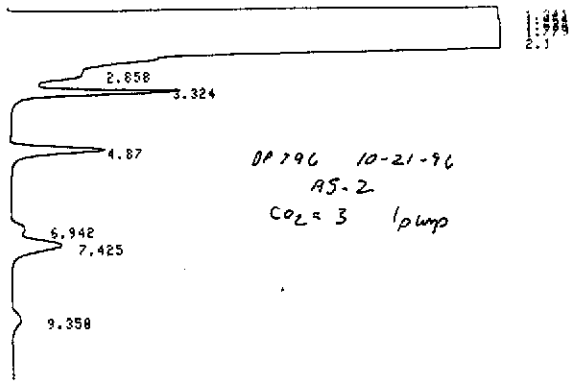
TOTAL 17930728 2.6553



CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 4

FILE 9
 METHOD 41

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	0.287	12			0.0075	
2	0.467	17	V		0.0187	
3	0.586	13			0.0086	
4	1.075	1555			0.9936	
5	1.175	2013	V		1.2261	
6	1.613	794	V		0.5876	
7	2.012	1213	V		0.7749	
8	2.533	8159	V	←	5.2137	
9	3.514	108377	V	←	69.2533	
10	5.83	6736	V		4.3045	
11	5.296	3898	V	←	2.491	
12	6.183	5782	V		3.6437	
13	6.4	2224	V		1.4209	
14	2.882	7501	V		0.1462	



CHROMATOGRAM 1 MEMORIZED

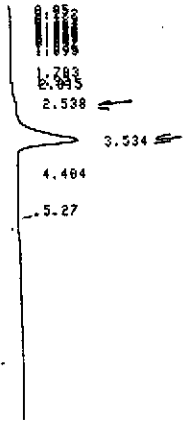
CR501 CHROMATOPAC
 CHANNEL NO 1
 SAMPLE NO 0
 REPORT NO 5

FILE 8
 METHOD 44
 SAMPLE WT 100

PKNO	TIME	AREA	HK	IDNO	CONC	NAME
1	1.341	8746880	E			
2	1.464	2617476	V			
3	1.624	764123	V			
4	1.779	3189942	V			
5	2.1	1030560	SV			
6	2.858	3295	T			
7	3.324	42333	T	1	0.152	BENZEN = 0.136 ml/L
8	4.87	41519	T	2	0.192	TOLUEN = 0.158 ml/L
9	6.942	8523	T	3	0.0496	ETHYL = 0.046 ml/L
10	7.425	37265	V	4	0.4389	M-XYL = 0.434 ml/L
11	9.358	7467	V	5	0.8864	M-XLYL

Totals = 117.88 ml
 0.9109

TOTAL 6489366
 CHROMATOGRAM 101 MEMORIZED

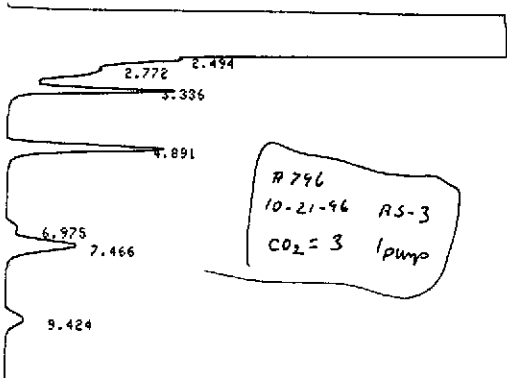


CR501 CHROMATOPAC
 CHANNEL NO 2
 SAMPLE NO 0
 REPORT NO 6

FILE 9
 METHOD 41

PKNO	TIME	AREA	HK	IDNO	CONC	NAME
1	0.05		22		0.0338	
2	0.172		59	V	0.0918	
3	0.329		238	V	0.3738	
4	0.401		136	V	0.213	
5	0.502		212	V	0.3323	
6	0.596		42	V	0.0655	
7	0.637		73	V	0.1151	
8	0.705		50	V	0.0783	
9	0.763		16	V	0.0232	
10	0.788		28	V	0.0445	
11	0.82		61	V	0.0956	
12	0.89		49	V	0.0772	
13	1.036		66	V	0.1036	
14	1.095		79	V	0.1236	
15	1.703		24		0.0384	
16	1.92		61		0.0955	
17	2.015		379		0.5943	
18	2.538		6333	V	9.9267	
19	3.534		53199	V	33.3829	
20	4.404		1617	V	2.5339	
21	5.27		1056	V	1.655	
TOTAL					63801	100

© Standard



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 7

FILE 0
METHOD 44
SAMPLE WT 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.35	7761106	E			
2	1.468	2527121	V			
3	1.637	798165	V			
4	1.783	2416784	V			
5	2.106	1148369	SV			
6	2.494	2831	T			
7	2.772	7435	T			
8	3.336	48627	T	1	0.1459	BENZEN = 0.131 mg/L
9	4.891	68133		2	0.315	TOLUEN = 0.259 mg/L
10	6.975	6678		3	0.0388	ETHYL = 0.036 mg/L
11	7.466	58279	V	4	0.5813	M-PKYL } = 0.676 mg/L
12	9.424	15169		5	0.1755	M-XLYL }

TFL = 106.36 mg/L
BENZEN = 0.131 mg/L
TOLUEN = 0.259 mg/L
ETHYL = 0.036 mg/L
M-PKYL } = 0.676 mg/L
M-XLYL }

TOTAL 14842678



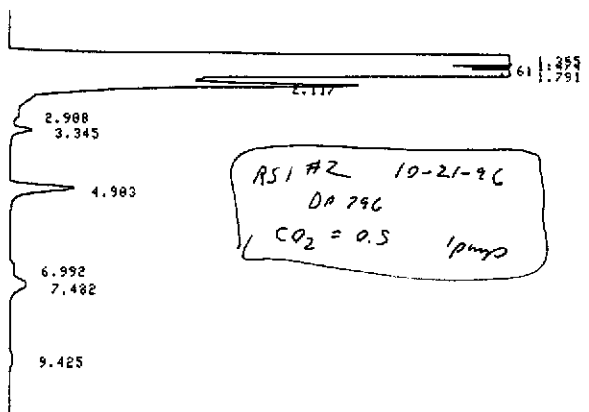
CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 8

FILE 9
METHOD 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	0.292	35	V		0.0928	
2	0.363	59	V		0.0573	
3	0.582	85			0.083	
4	0.646	117	V		0.1139	
5	0.941	42			0.0414	
6	1.082	29			0.028	
7	1.065	106	V		0.1039	
8	1.267	120			0.1177	
9	1.313	27	V		0.0268	
10	1.394	79	V		0.0774	
11	1.586	64			0.0624	
12	1.736	89			0.0874	
13	1.91	89	V		0.0873	
14	2.086	415			0.4855	
15	2.53	5483	V		5.3567	
16	3.518	71663	V		78.8136	
17	5.096	7329	V		7.1682	
18	5.7	4213	V		4.116	
19	6.982	4364	V		4.2636	
20	7.741	8307	V		2.254	
21	8.721	3153	V		3.0887	
22	9.398	1166	V		1.0607	
23	9.689	631	V		0.6161	
24	10.395	635	V		0.6282	
25	10.763	54	V		0.0532	

TOTAL 102356

100



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 8
REPORT NO 9

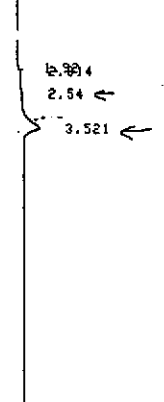
FILE 8
METHOD 44
SAMPLE WT 180

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	1.355	620940				
2	1.474	236897	V			
3	1.61	83517	V			
4	1.791	481881	V			
5	2.117	143050	SV			

6	2.988	1035	T			
7	3.345	5869	T			
8	4.983	28592				
9	6.992	3559				
10	7.482	13896	V			
11	9.425	3471				

TFly = 11.70 ml/L
 0.0211 BENZEN = 0.019 ml/L
 0.1322 TOLUEN = 0.109 ml/L
 0.0207 ETHYL = 0.161 ml/L
 0.1514 M/PXYL = 0.019 ml/L
 0.0402 M-XLYL = 0.161 ml/L

TOTAL 162190 0.3655



CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 8
REPORT NO 18

FILE 9
METHOD 41

PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	1.92	48			0.2408	
2	2.014	498			2.4217	
3	2.54	2473	V		12.4697	
4	3.521	16829	V		84.8677	
TOTAL		19830			100	