GETTLER-RYAN INC.

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Alameda County
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Environmental Health

TRANSMITTAL

TO: Ms. Karen Streich
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94568

DATE: September 23, 2002
PROJ. #: DG90338H.4C01
SUBJECT: Report, Chevron SS# 9-0338
5500 Telegraph Avenue
Oakland, California

FROM:
Geoffrey D. Risse
Project Geologist
Gettler-Ryan Inc.
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COMMENTS:

Delta Environmental Consultants Inc. network associate Gettler-Ryan Inc. will also be submitting a copy of the above referenced report to the following:

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Mr. James Brownell, Delta Environmental Consultants Inc., 3164 Gold Camp Dr., Ste. 200, Rancho Cordova, California 95670

If you have any questions, please contact our Sacramento office at (916) 631-1300.

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SOIL BORING SAMPLING REPORT

at
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

Report No. DG90338H.4C01
Delta Project No. DG90-338-H

Prepared for:

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Prepared by:

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September 20, 2002

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SOIL BORING SAMPLING REPORT

at

Chervon Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

Report No. DG90338H.4C01
Delta Project No. DG90-338-H

INTRODUCTION

This report presents the results of additional site assessment performed by Delta Environmental Consultants Inc. network associate Gettler-Ryan Inc. (GR) at the above referenced site. The purpose of this work was to determine whether the utility trenches adjacent to the site are acting as preferential pathways, and to further delineate the petroleum hydrocarbon plume downgradient of the site. The scope of work performed included: updating the site safety plan; obtaining a drilling permit from the Alameda County Public Works Agency (ACPWA) and excavation permits from the City of Oakland; advancing four hand auger off-site soil borings; collecting soil and grab groundwater samples from the soil borings; analyzing selected soil and groundwater samples; and preparing a report documenting the work performed. The scope of work performed during this investigation was originally proposed in report #DG90338G.3C01, *Addendum to Plume Delineation Workplan*, dated December 3, 2001, and was subsequently approved by the Alameda County Health Care Services Agency-Environmental Health Department (ACHCSA-EHD) in a letter dated December 6, 2001.

SITE DESCRIPTION

The subject site is a Chevron service station located at the northeastern corner of Telegraph Avenue and 55th Street in Oakland, California (Figure 1). Site facilities consist of a station building, a car wash, six dispenser islands, and two gasoline underground storage tanks (USTs) that share a common pit near the northern site boundary. Pertinent site features are shown on Figure 2. The site vicinity is used for transportation, commercial, and residential purposes. The subject site is bordered to the north by State Route 24, to the east by residential housing, to the west by Telegraph Avenue, to the south by 55th Street. Beyond 55th Street to the south and southwest lie commercial buildings. West of Telegraph Avenue lies State Route 24.

The subject site is located on the East Bay Plain, approximately 2.5 miles east of San Francisco Bay and 2 miles north of Lake Merritt. The local topography is relatively flat at an elevation of approximately 125 feet above mean sea level.

As mapped by E.J. Helley and others (1979, Flatland Deposits of the San Francisco Bay Region, California: U.S. Geological Survey Professional Paper 943), soil in the site vicinity consists of Holocene-age Bay Mud containing unconsolidated saturated dark plastic carbonaceous clay and silty clay. These materials are underlain by late Pleistocene-age alluvium consisting of weakly consolidated slightly weathered, poorly sorted and irregularly interbedded clay, silt, sand, and gravel.

The nearest surface water body is Glen Echo Creek located approximately 1 mile south of the site. Based on groundwater monitoring data, the groundwater flow direction in the vicinity of the site has fluctuated between the southwest and the southeast.

PREVIOUS ENVIRONMENTAL ACTIVITIES

1988: October — Chevron removed one 1,000-gallon waste oil UST. A soil sample was collected from the beneath the waste oil UST at a depth of 8 feet below ground surface (bgs) (Blaine Tech Services, *Soil Sampling Report,* dated January 13, 1989).

1989: July — Chevron replaced the product lines associated with the gasoline USTs. During the removal and replacement of the product lines, contaminated soil was discovered in the westernmost product line trench (closest to Telegraph Avenue). Ten compliance soil samples were collected from the westernmost product trench at depths between 4.0 and 6.75 feet bgs (Geotest Report No. 90686-01 dated July 1989).
November — GR installed groundwater monitoring wells C-1, C-2, and C-3. Petroleum hydrocarbons were not detected in the soil samples collected from the well borings. Initial groundwater samples from the wells did not contain dissolved petroleum hydrocarbons (GR report no. 7263-2, *Well Installation Report*, dated February 14, 1990).

1998: July — GR removed three 10,000-gallon gasoline USTs, one 1,000-gallon waste oil UST, product lines and dispenser islands, three hydraulic hoists, and an oil/water separator. Soil samples were collected from beneath the USTs, the product lines, the dispenser islands, the hydraulic hoists and the oil/water separator (GR report no. 1288.02, *Sampling During Tank and Product Line Replacement at Chevron Station #9-0338, 5500 Telegraph Ave.*, Oakland, California, dated November 11, 1998).
October — GR supervised the destruction of monitoring well C-3. Following the destruction of well C-3, a grab groundwater sample was collected from a UST backfill well. Methyl tert-butyl ether was detected in the grab groundwater sample at a concentration of 15,000 parts per billion (ppb) (GR report no. 346456.01-2, *Well Destruction Letter Report*, dated October 5, 1998).

1999: May — GR supervised the installation of two groundwater monitoring wells (C-4 and C-5) and the replacement of two existing groundwater monitoring wells (C-1A and C-2A) (GR report no. 346456.02-2, *Monitoring Well Replacement and Installation Report*, dated July 1, 1999).

2001: September — GR prepared and submitted a Site Conceptual Model (SCM). The SCM presented summaries of fieldwork to date, description of hydrogeological conditions, contaminant distributions over time and space, current and potential receptors, and recommendations for future

work (Report no. DG90338B.4C01, *Site Conceptual Model Report*, dated September 26, 2001).

Discussion

Residual petroleum hydrocarbon impacted soil beneath the site is centered in the vicinity of the former USTs. Historical soil analytical data are presented in Table 1.

Boring logs from previous environmental investigations indicate that native soil beneath the site consists of sandy clays and silts underlain by clayey gravels and silty sands. Groundwater is first encountered at a depth of approximately 6 feet bgs.

Groundwater monitoring and sampling has been conducted quarterly since November 1989. During the latest monitoring and sampling event on June 25, 2002, MtBE was reported in wells C-1A, C-2A, C-4, and C-5 at concentrations of 7.5, 29, 21 and 180 ppb, respectively. Total Petroleum Hydrocarbons as gasoline (TPHg) were reported in wells C-1A, C-2A and C-5 at concentrations of 1,800, 1,100, and 79 ppb, respectively. Benzene was reported in wells C-2A and C-5 at concentrations of 17 and 7.7 ppb, respectively. Concentrations of dissolved petroleum hydrocarbons in the site wells appear to be stabilizing. Depth to water during this monitoring event ranged from 8.02 to 11.76 feet below top of casing, and groundwater flow was to the south at a gradient of approximately 0.02, which is consistent with historical data.

FIELD ACTIVITIES

To determine whether the utility trenches adjacent to the site are acting as preferential pathways, and to further delineate the petroleum hydrocarbon plume downgradient of the site, GR advanced four soil borings (HA-1 through HA-4) at the locations shown on Figure 2. Field work was performed in accordance with GR's Site Safety Plan dated August 6, 2002. GR Field Methods and Procedures are included in Appendix A. Underground Service Alert was notified prior to beginning site activities. The soil borings were advanced by GR (C57 #220793) under ACPWA permit no. 02-802 and City of Oakland excavation permit nos. X0200636 through X0200638 (Appendix B).

On August 12 and 13, 2002, four soil borings were advanced (HA-1 through HA-4) adjacent to the utility trenches in Telegraph Avenue and 55th Street. Borings HA-2 and HA-3 were advanced to a depth of 13.5 feet bgs. Boring HA-1 was advanced to a depth of 18.0 feet bgs. Boring HA-4 was advanced to a depth of 11.5 feet bgs. The borings were advanced using a 3.5-inch diameter hand auger. Soil samples were collected using a slide hammer. A GR geologist performed the field activities. Soil samples were collected from the borings for description and preparation of a log, and for possible chemical analysis. Grab groundwater samples were also collected from the borings. Boring logs are included in Appendix C. Borings were backfilled with pea gravel, compacted, then completed to ground surface per request of the City of Oakland Public Works Agency.

RESULTS OF THE SUBSURFACE INVESTIGATION

Soil encountered during this investigation consisted of interbedded clay, clay with sand, and clay with gravel to the total depth explored. Groundwater was encountered in boring HA-1 at approximately 16 feet bgs, in boring HA-2 and HA-3 at 13 feet bgs, and in boring HA-4 at 11 feet bgs. Detailed descriptions of the soil encountered in the borings are presented on the boring logs in Appendix C.

CHEMICAL ANALYTICAL RESULTS

A total of four soil samples and four grab groundwater samples collected from the soil borings were submitted under chain-of-custody for chemical analysis. Analyses were performed by Lancaster Laboratories (ELAP #2116) of Lancaster, Pennsylvania. Copies of the laboratory reports and chain-of-custody form are included in Appendix D. Soil and groundwater chemical analytical data are summarized in Tables 2 and 3, respectively.

Chemical Analytical Procedures

The soil and groundwater samples were analyzed for TPHg by EPA Method 8015 Modified, and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and MtBE by EPA Method 8021B. Groundwater samples were additionally analyzed for MtBE, ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), di-isopropyl ether (DIPE), and tert-butyl alcohol (TBA) by EPA Method 8260B.

Soil Analytical Results

Soil samples collected from borings HA-1 through HA-4 were non-detect for TPHg, BTEX, and MtBE.

Groundwater Analytical Results

The grab groundwater samples collected from borings HA-1 through HA-4 were non-detect for TPHg, BTEX, ETBE, DIPE, TAME, and TBA. MtBE was reported in grab groundwater samples from borings HA-3 and HA-2 at concentrations of 4.0 and 37 ppb, respectively, by EPA Method 8260B.

DISCUSSION

TPHg, BTEX or MtBE were not detected in soil during this investigation. Low levels of MtBE were
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reported in the grab groundwater samples from borings HA-2 (37 ppb) and HA-3 (4.0 ppb). Based on the depth to water encountered in the borings (11 to 16 feet bgs), the burial depth of sanitary sewer and storm drain lines in Telegraph Avenue and 55th Street (8.5 to 12 feet bgs), and that boring HA-4, which is located in the downslope direction for the sanitary sewer and storm drain lines, was non-detect for petroleum hydrocarbons, it appears that the utility trenches are mostly above the groundwater table and do not appear to be acting as preferential pathways for plume migration. Based on the results of this and previous investigations, no further subsurface assessment is warranted at this time. GR recommends that

the monitoring and sampling of the site wells be continued in order to further evaluate the dissolved hydrocarbon trends.

Table 1
Historical Soil Chemical Analytical Results
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

Sample ID	Sample Depth (feet)	Sample Date	TPHg (ppm)	TPHd (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MtBE (ppm)	Lead (ppm)	TOG (ppm)	Chromium (ppm)	Cadmium (ppm)	Zinc (ppm)	Nickel (ppm)	TPHho (ppm)
WOOP	8	10/5/88	NA	ND	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
1	--	7/7/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
2	--	7/7/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
3	--	7/7/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
4	--	7/7/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
5	--	7/7/89	340	NA	0.24	0.09	0.74	4.0	NA	NA	NA	NA	NA	NA	NA	NA
5B	--	7/7/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
6	--	7/7/89	800	NA	3.5	11	12	59	NA	NA	NA	NA	NA	NA	NA	NA
6C	--	7/7/89	49	NA	0.37	ND	0.72	3.0	NA	NA	NA	NA	NA	NA	NA	NA
7	--	7/7/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
8	--	7/7/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Southwest	6.75	7/11/89	130	NA	ND	ND	2.2	3.0	NA	NA	NA	NA	NA	NA	NA	NA
Southwest	4.5	7/14/89	73	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Northwest	6.25	7/11/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Northwest	4.0	7/14/89	1.5	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Southeast	6.75	7/11/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Southeast	5.0	7/14/89	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Northeast	6.25	7/11/89	480	NA	0.31	ND	10	28	NA	NA	NA	NA	NA	NA	NA	NA
Northeast	4.5	7/14/89	9.7	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
South	4.5	7/14/89	3	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
North	5.0	7/14/89	1.8	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA

Table 1
Historical Soil Chemical Analytical Results
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

Sample ID	Sample Depth (feet)	Sample Date	TPHg (ppm)	TPHd (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MtBE (ppm)	Lead (ppm)	TOG (ppm)	Chromium (ppm)	Cadmium (ppm)	Zinc (ppm)	Nickel (ppm)	TPHho (ppm)
C-1	10.5	11/13/89	<1	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA
C-1	15.5	11/13/89	<1	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA
C-1	25.5	11/13/89	<1	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA
C-2	10.5	11/13/89	<1	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA
C-2	15.5	11/13/89	<1	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA
C-2	25.5	11/13/89	<1	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA
C-3	10.5	11/13/89	<1	<10	<0.05	<0.05	<0.05	<0.05	NA	<10	<20	16	1.0	39	NA	NA
C-3	15.5	11/13/89	<1	<10	<0.05	<0.05	<0.05	<0.05	NA	<10	<20	12	0.6	60	NA	NA
C-3	25.5	11/13/89	<1	<10	<0.05	<0.05	<0.05	<0.05	NA	10	<20	27	1.4	74	NA	NA
CX-1-9	9.0	7/22/98	<1.0	NA	0.013	0.0058	0.044	0.067	0.46	5.1	NA	NA	NA	NA	NA	NA
CX-2-9	9.0	7/22/98	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	0.28	6.8	NA	NA	NA	NA	NA	NA
CX-3-9	9.0	7/22/98	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	0.21	5.1	NA	NA	NA	NA	NA	NA
CX-4-9	9.0	7/22/98	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	0.74	3.3	NA	NA	NA	NA	NA	NA
CX-5-9	9.0	7/22/98	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	6.4	NA	NA	NA	NA	NA	NA
CX-6-9	9.0	7/22/98	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	0.31	6.2	NA	NA	NA	NA	NA	NA
CT-1-3.5	3.5	7/27/98	<1.0	NA	<0.0050	<0.0050	<0.0050	0.012	<0.050	<1.0	NA	NA	NA	NA	NA	NA
CT-2-3.5	3.5	7/27/98	<1.0	NA	<0.0050	<0.0050	<0.0050	0.0057	<0.050	2.8	NA	NA	NA	NA	NA	NA
CT-3-4	4.0	7/27/98	<1.0	NA	<0.0050	<0.0050	<0.0050	0.0057	<0.050	1.0	NA	NA	NA	NA	NA	NA
CT-4-4	4.0	7/27/98	<1.0	NA	<0.0050	<0.0050	<0.0050	0.0057	<0.050	<1.0	NA	NA	NA	NA	NA	NA
CT-5-4	4.0	7/27/98	<1.0	NA	<0.0050	<0.0050	<0.0050	0.0057	<0.050	<1.0	NA	NA	NA	NA	NA	NA
CT-1-9	9.0	7/27/98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10
CT-2-9	9.0	7/27/98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10

Table 1
Historical Soil Chemical Analytical Results
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

Sample ID	Sample Depth (feet)	Sample Date	TPHg (ppm)	TPHd (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MtBE (ppm)	Lead (ppm)	TOG (ppm)	Chromium (ppm)	Cadmium (ppm)	Zinc (ppm)	Nickel (ppm)	TPHho (ppm)
CT-3-9	9.0	7/27/98	1.6	2,000	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<1.0	2,600	24	<0.50	47	23	2,800
CW-1-9	9.0	7/22/98	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<1.0	130	29.1	<0.50	35.2	18.9	NA
C4-6	6.0	5/12/99	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	NA	NA	NA	NA	NA	NA	NA
C4-11	11.0	5/12/99	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	NA	NA	NA	NA	NA	NA	NA
C5-6	6.0	5/12/99	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	NA	NA	NA	NA	NA	NA	NA
C5-11	11.0	5/12/99	1.3	NA	0.017	<0.0050	<0.0050	0.012	0.1	NA	NA	NA	NA	NA	NA	NA

EXPLANATIONS

NA = Not Analyzed
ppm = parts per million
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
TOG = Total Oil and Grease
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MtBE = Methyl tert-butyl ether
TPHho = Total Petroleum Hydrocarbons as hydraulic oil

Table 2
Soil Chemical Analytical Results
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

Sample ID	Sample Depth (feet)	Sample Date	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MtBE (ppm)
HA1-11.5	11.5	8/12/02	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050
HA2-12.0	12.0	8/12/02	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050
HA3-11.0	11.0	8/13/02	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050
HA4-11.0	11.0	8/13/02	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050

Explanation
ppm = parts per million
MtBE = Methyl-tert Butyl Ether
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
TPHg = Total Petroleum Hydrocarbons as gasoline

Analytical Laboratory
Lancaster Laboratories (ELAP# 2116)

Analytical Methods
TPHg by LUFT Methods
BTEX/MtBE by EPA 8021B

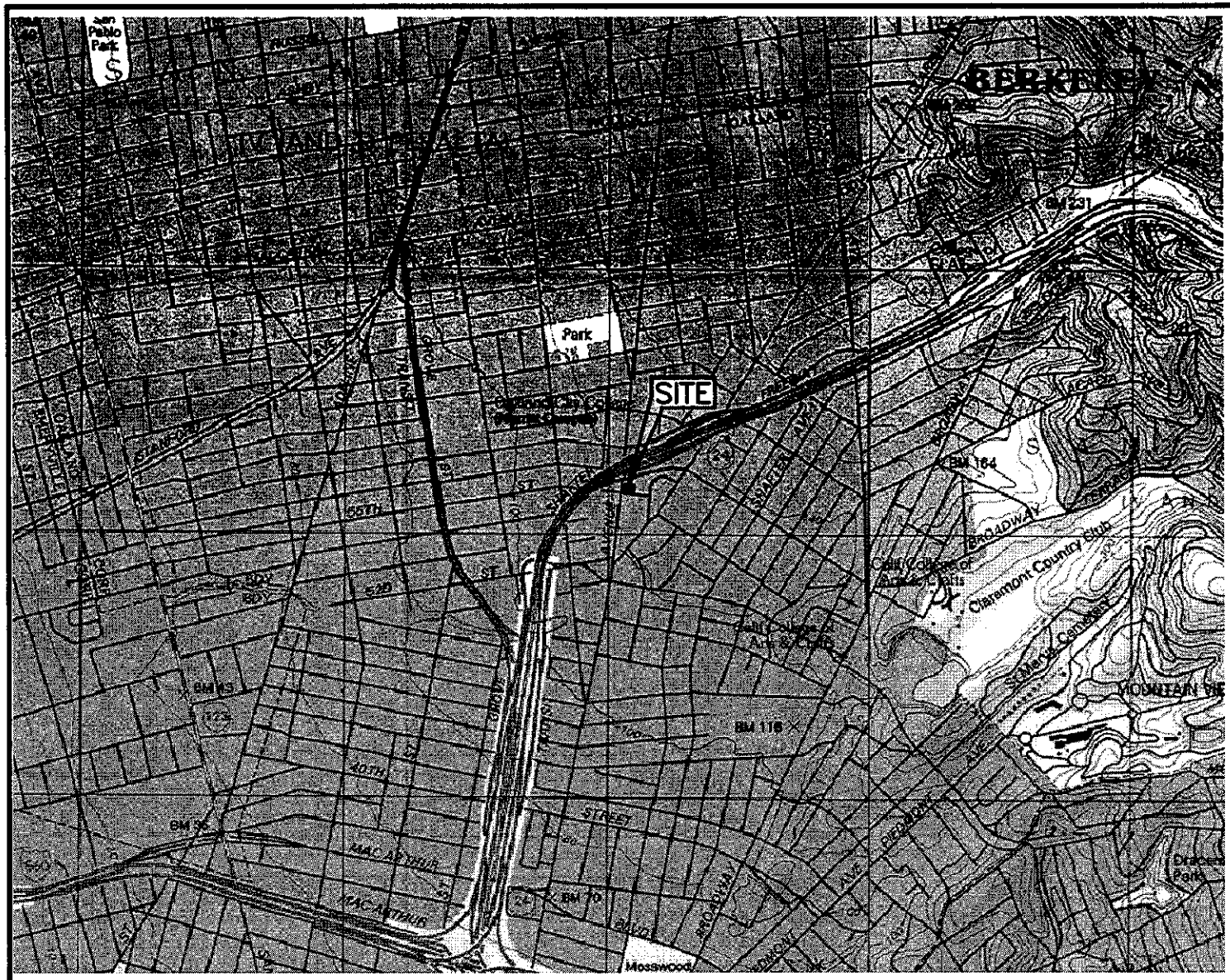
Table 3
Groundwater Chemical Analytical Results
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

Sample ID	Sample Date	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MtBE (ppb)	ETBE (ppb)	DIPE (ppb)	TAME (ppb)	TBA (ppb)
HA1-W	8/13/02	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5	<0.5	<0.5	<0.5	<5.0
HA2-W	8/12/02	<50	<0.50	<0.50	<0.50	<1.5	40/37	<0.5	<0.5	<0.5	<5.0
HA3-W	8/13/02	<50	<0.50	<0.50	<0.50	<1.5	3.9/4.0	<0.5	<0.5	<0.5	<5.0
HA4-W	8/13/02	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5	<0.5	<0.5	<0.5	<5.0

Explanation
ppb = parts per billion
TPHg = Total Petroleum Hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MtBE = Methyl-tert butyl ether
ETBE = Ethyl tert-butyl ether
DIPE = Di-isopropyl ether
TAME = Tert-amyl methyl ether
TBA = Tert-butyl alcohol

Analytical Laboratory
Lancaster Laboratories (ELAP# 2116)

Analytical Methods
TPHg by DHS LUFT Methods
BTEX by EPA Method 8021B
ETBE/DIPE/TAME/TBA by EPA Method 8260B
MtBE by EPA Method 8021B/MtBE by EPA Method 8260B



Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.

GETTLER - RYAN INC.
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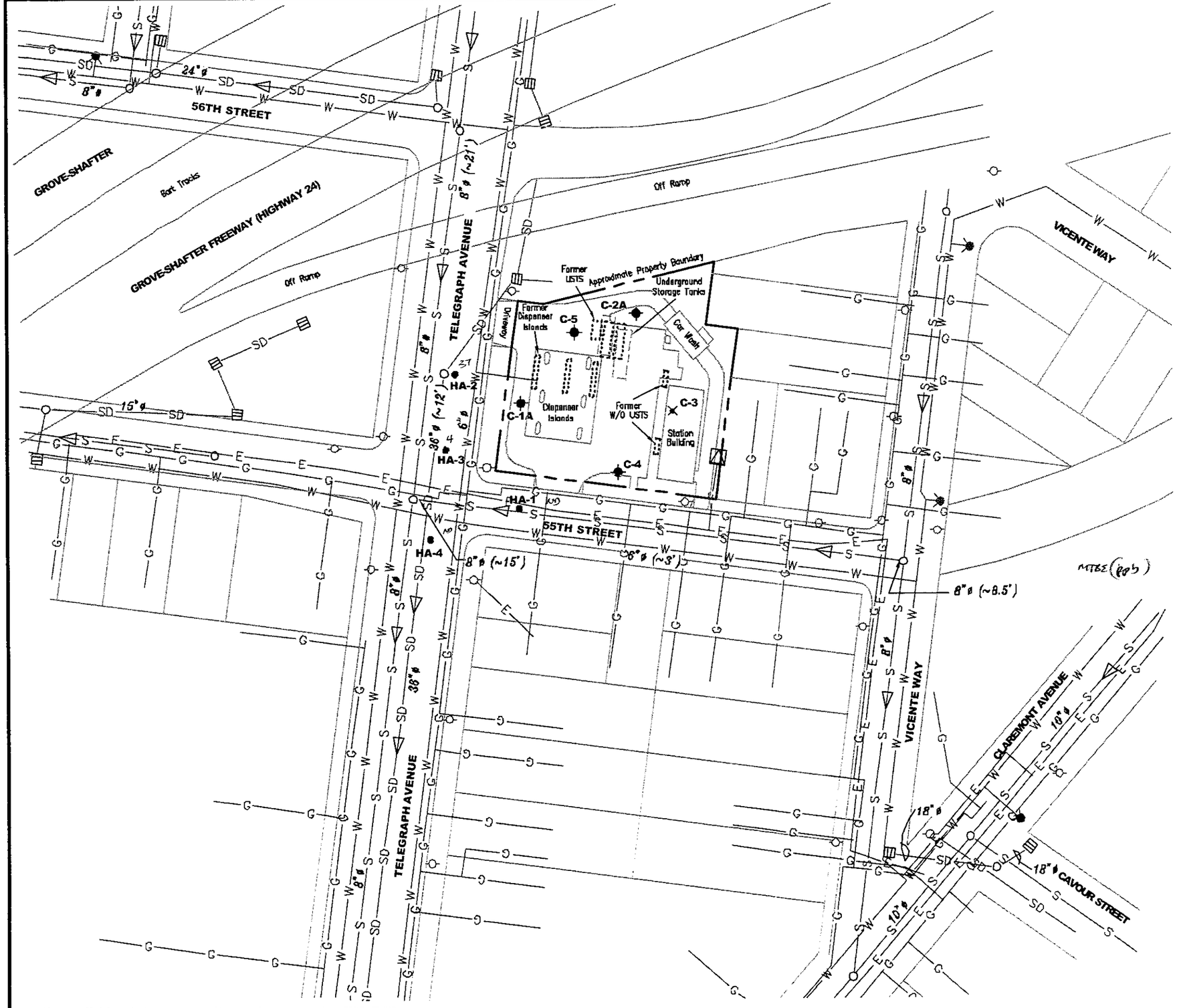
VICINITY MAP
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
DG90338B.3C01		7/01	

FILE NAME: P:\ENVIRO\CHEVRON\9-0338\VIC-9-0338.DWG | Layout Tab: CA-North



EXPLANATION

- Groundwater monitoring well
- Destroyed groundwater monitoring well
- Hand-augered soil boring
- Storm drain
- Fire Hydrant
- Electrical transformer
- Power pole
- Manhole
- Flow direction
- 8"ø Pipe diameter
- (~6') Approximate pipe depth

UNDERGROUND UTILITIES

- —S— Sanitary sewer
- —SD— Storm drain
- —W— Water
- —G— Natural gas
- —E— Electric

Source: Figure modified from drawing provided by BRW engineering contracting firm, PG&E, EBMUD.

FIGURE 2

EXTENDED SITE PLAN
Chevron Service Station No. 9-0338
5500 Telegraph Avenue
Oakland, California

DATE 8/02

REVISED DATE

GETTLER-RYAN INC.
6747 Sierra Ct., Suite J
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PROJECT NUMBER DG9033811.4C01

REVIEWED BY

FILE NAME: P:\ENVIRO\CHEVRON\9-0338\A01-9-0338.DWG | Layout Tab: Boring Plot 8-02

GETTLER-RYAN INC.

FIELD METHODS AND PROCEDURES
HAND-AUGERED BORINGS

Site Safety Plan

Field work performed by Gettler-Ryan Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the contents of these plans prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Hand-augered soil borings are drilled by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description and chemical analysis, and prepare a log the exploratory soil boring. Soil samples are collected from the boring with a hand-driven sampling device fitted with a 2-inch diameter, clean brass tube or stainless steel liner. After removal from the sampling device, soil samples are covered on both ends with Teflon sheeting, capped, labeled, and place in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory.

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from the soil sample. This test procedure involves placing a small amount of the soil to be screened in a sealed plastic bag. The bag is warmed in the sun to allow organic compounds in the soil sample to volatilize. The PID probe is inserted through the wall of the bag and into the headspace inside, and the meter reading is recorded in the field notes. Head-space screening is performed and results recorded as reconnaissance data only. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Grab Groundwater Sampling

Grab samples of groundwater are collected from the boring using a bailer. The groundwater sample is decanted into laboratory-supplied containers appropriate for the anticipated analyses. Sample bottles are then labeled and placed in chilled storage for transport to the analytical laboratory. A chain-of-custody form is initiated in the field and accompanies the groundwater samples to the analytical laboratory.

Storing and Sampling of Soil Stockpiles

Excavated material is stockpiled on and covered with plastic sheeting. Stockpile samples are collected and analyzed for disposal classification on the basis of one composite sample per 100 cubic yards of soil. Stockpile samples are composed of four discrete soil samples, each collected from an arbitrary location on the stockpile. The four discrete samples are then composited in the laboratory prior to analysis.

Each discrete stockpile sample is collected by removing the upper 12 to 18 inches of soil, and then driving the stainless steel or brass sample tube into the stockpiled material with a mallet or drive sampler. The sample tubes are then covered on both ends with Teflon sheeting, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 5500 Telegraph Ave, Oakland
(Chevron Service Station 9-0338)

CLIENT
Name Chevron Products Company
Address P.O. Box 6004 Phone (925) 842-1584
City San Ramon Zip 94583

APPLICANT
Name Gettler-Ryan INC
Fax (916) 631-131
Address 3140 Gold Camp Dr, Ste 170 Phone (916) 631-1300
City Rancho Cordova Zip 95670

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☑
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other ____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☑ Hand Auger		

DRILLER'S NAME Gettler-Ryan INC
DRILLER'S LICENSE NO. C-57 720793

WELL PROJECTS
Drill Hole Diameter ____ in. Maximum
Casing Diameter ____ in. Depth ____ ft.
Surface Seal Depth ____ ft. Owner's Well Number ____

GEOTECHNICAL PROJECTS
Number of Borings 4 Maximum
Hole Diameter 3.5 in. Depth 12 ft.

ESTIMATED STARTING DATE 8/12/02
ESTIMATED COMPLETION DATE 8/13/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] DATE 7/24/02

FOR OFFICE USE

PERMIT NUMBER WO2-0802
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and Industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

① Check with City of Oakland to see if excavation permit is req'd

APPROVED [signature] DATE 8/9/02

② Provide * clearer site map within

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 5500 TELEGRAPH AV Parcel# Appl# X0200636

Descr BORING FOR SOIL & WATER SAMPLING ADJACENT TO ABOVE ADDRESS Permit Issued 06/21/02
(SEE ATTACHED PLAN FOR LOCATIONS)

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner					
Contractor	GETTLER RYAN INC	X	(510)551-7555	220793 B	C61 A C57 C10
Arch/Engr					
Agent					

Applic Addr 6747 SIERRA CT, DUBLIN CA, 94568

$250.00 TOTAL FEES PAID AT ISSUANCE

$45.00	Applic	$205.00	Permit
$.00	Process	$.00	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other		

ADDRESS:

DIST:

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

NORTH 9-55TH ST.

PERMIT NUMBER X020 0636	SITE ADDRESS/LOCATION 5500 Telegraph Ave
APPROX. START DATE 7/31/02 / APPROX. END DATE 7/31/02	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number) (916) 631-1300
CONTRACTOR'S LICENSE # AND CLASS C-57 720793	CITY BUSINESS TAX #

ATTENTION:

1- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1-800-642-2444. Underground Service Alert (USA) # ~~332031~~ + 332036

2- **48 hours prior to starting work, you MUST CALL (510) 238-3651 to schedule an inspection.**

3- **48 hours prior to re-paving, a compaction certificate is required (waived for approved slurry backfill).**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. ________, B&PC for this reason ________.

WORKER'S COMPENSATION

☑ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # ________ Company Name ________

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

[signature] 6/21/02

Signature of Permittee ■ Agent for ☑ Contractor ☐ Owner Date

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES (☐ NO)	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) (☐ YES) ☐ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) (☐ YES) ☐ NO
ISSUED BY [signature]		DATE ISSUED 6/21/02	

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 5500 TELEGRAPH AV Parcel# Appl# X0200637

Descr BORING FOR SOIL & WATER SAMPLING ADJACENT TO ABOVE ADDRESS Permit Issued 06/21/02
(SEE ATTACHED PLAN FOR LOCATIONS)

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner					
Contractor	GETTLER RYAN INC	X	(510)551-7555	220793 B	C61 A C57 C10
Arch/Engr					
Agent					

Applic Addr 6747 SIERRA CT, DUBLIN CA, 94568

$250.00 TOTAL FEES PAID AT ISSUANCE

$45.00 Applic	$205.00 Permit
$.00 Process	$.00 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	

ADDRESS: _____

DIST: _____

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

Southside of 55'

PERMIT NUMBER **X 0 2 0** 0637	SITE ADDRESS/LOCATION 5500 Telegraph Ave
APPROX. START DATE 7/31/02 / APPROX. END DATE 7/31/02	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number) (916) 631-1300
CONTRACTOR'S LICENSE # AND CLASS C-57 220793	CITY BUSINESS TAX #

ATTENTION:

1- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1-800-642-2444. Underground Service Alert (USA) # 332014

2- **48 hours prior to starting work, you MUST CALL (510) 238-3651 to schedule an inspection.**

3- **48 hours prior to re-paving, a compaction certificate is required (waived for approved slurry backfill).**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____.

WORKER'S COMPENSATION

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Policy # _____ Company Name _____

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

Signature of Permittee _____ ☐ Agent for ☐ Contractor ☑ Owner Date 6/21/02

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☐ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☐ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☐ NO
ISSUED BY		DATE ISSUED 6/21/02	

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 5500 TELEGRAPH AV Parcel# Appl# X0200638

Descr BORING FOR SOIL & WATER SAMPLING ADJACENT TO ABOVE ADDRESS Permit Issued 06/21/02
(SEE ATTACHED PLAN FOR LOCATIONS)

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner					
Contractor	GETTLER RYAN INC	X	(510)551-7555	220793 B	C61 A C57 C10
Arch/Engr					
Agent					

Applic Addr 6747 SIERRA CT, DUBLIN CA, 94568

$250.00 TOTAL FEES PAID AT ISSUANCE

$45.00	Applic	$205.00	Permit
$.00	Process	$.00	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other		

ADDRESS:

DIST:

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

c/o Kleinfelder

PERMIT NUMBER	SITE ADDRESS/LOCATION
X 0 2 0 0638	5500 Telegraph Ave
APPROX. START DATE: 7/31/02 — APPROX. END DATE: 7/31/02	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number): (916) 631-1300
CONTRACTOR'S LICENSE # AND CLASS: C-57 220793	CITY BUSINESS TAX #

ATTENTION:

1- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1-800-642-2444. Underground Service Alert (USA) # 332023

2- **48 hours prior to starting work, you MUST CALL (510) 238-3651 to schedule an inspection.**

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☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

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☐ I am exempt under Sec. _____, B&PC for this reason _____.

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Policy # _____ Company Name _____

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I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

x _____ Signature of Permittee ☑ Agent for ☑ Contractor ☐ Owner — Date x 6/21/02

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☑ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☑ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☑ NO
ISSUED BY		DATE ISSUED	

MAJOR DIVISIONS				TYPICAL NAMES
COARSE-GRAINED SOILS (MORE THAN HALF IS COARSER THAN NO. 200 SIEVE)	GRAVELS (MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE)	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	Well graded gravels with or without sand, little or no fines
			GP	Poorly graded gravels with or without sand, little or no fines
		GRAVELS WITH OVER 15% FINES	GM	Silty gravels, silty gravels with sand
			GC	Clayey gravels, clayey gravels with sand
	SANDS (MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE)	CLEAN SANDS WITH LITTLE OR NO FINES	SW	Well graded sands with or without gravel, little or no fines
			SP	Poorly graded sands with or without gravel, little or no fines
		SANDS WITH OVER 15% FINES	SM	Silty sands with or without gravel
			SC	Clayey sands with or without gravel
FINE-GRAINED SOILS (MORE THAN HALF IS FINER THAN NO. 200 SIEVE)	SILTS AND CLAYS (LIQUID LIMIT 50% OR LESS)		ML	Inorganic silts and very fine sands, rock flour, silts with sands and gravels
			CL	Inorganic clays of low to medium plasticity, clays with sands and gravels, lean clays
			OL	Organic silts or clays of low plasticity
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50%)		MH	Inorganic silts, micaceous or diatomaceous, fine sandy or silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic silts or clays of medium to high plasticity
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils

PID	Volatile vapors in ppm
bgs	below ground surface
(2.5YR 6/2)	Soil color according to Munsell Soil Color Charts (1993 Edition)
BLOWS/FT.	Sample drive hammer weight – 140 pounds falling 30 inches. Blows required to drive sampler 1 foot are indicated on the logs.

———	Observed contact
– – – –	Inferred contact
	No soil sample recovered
	"Undisturbed" sample
	First encountered groundwater level
	Static groundwater level

GETTLER-RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

UNIFIED SOIL CLASSIFICATION
ASTM D 2488-85
AND
KEY TO SAMPLING DATA

Gettler-Ryan, Inc.

Log of Boring HA-1

PROJECT: *Chevron Service Station No. 9-0338*	LOCATION: *5500 Telegraph Avenue, Oakland, California*
PROJECT NO.: *DG90338H.4C01*	SURFACE ELEVATION:
DATE STARTED: *08/12/02*	WL (ft. bgs): *16.0* DATE: *08/13/02* TIME: *07:52*
DATE FINISHED: *08/12/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 1/2 in. Hand Auger*	TOTAL DEPTH: *18 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Asphalt – 6 inches thick.	Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
					Base rock – 1.5 feet thick.	
3				CL	CLAY (CL) – black (GLEY 2.5/N), moist, low plasticity; 80% clay, 10% silt, 10% fine sand.	
6					CLAY WITH SAND (CL) – light brown (7.5YR 6/4), dry, low plasticity; 80% clay, 20% fine sand.	
9					CLAY WITH GRAVEL (CL) – light brown (7.5YR 6/4), dry; 80% clay, 15% fine gravel, 5% fine sand.	
12	HA1-11.5				CLAY (CL) – light brown (7.5YR 6/4), moist; 80% clay, 10% silt, 10% fine gravel.	
15					▽	
18	HA1-W				Bottom of boring at 18 feet bgs.	Grab groundwater sample HA1-W, taken at 18 feet bgs.
21						

Gettler-Ryan, Inc.

Log of Boring HA-2

PROJECT: *Chevron Service Station No. 9-0338*	LOCATION: *5500 Telegraph Avenue, Oakland, California*
PROJECT NO.: *DG90338H.4C01*	SURFACE ELEVATION:
DATE STARTED: *08/12/02*	WL (ft. bgs): *13.0* DATE: *08/12/02* TIME: *14:20*
DATE FINISHED: *08/12/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 1/2 in. Hand Auger*	TOTAL DEPTH: *13.5 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Asphalt - 6 inches thick.	Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
					Base rock - 2.5 feet thick.	
3				CL	CLAY (CL) - black (GLEY 2.5/N), moist; 90% clay, 5% silt, 5% fine sand.	
6					Color changes to light brown (7.5YR 6/4), becomes dry; 80% clay, 10% silt, 10% fine sand.	
9					CLAY WITH SAND (CL) - greenish gray (5G 6/1), moist; 80% clay, 15% fine sand, 5% fine gravel.	
12	HA2-12.0				CLAY WITH GRAVEL (CL) - dark brown (7.5YR 3/4), moist; 80% clay, 20% fine gravel.	
	HA2-W				Bottom of boring at 13.5 feet bgs.	Grab groundwater sample HA2-W, taken at 13.5 feet bgs.
15						
18						
21						

JOB NUMBER: *DG90338H.4C01*

Gettler-Ryan, Inc.

Log of Boring HA-3

PROJECT: *Chevron Service Station No. 9-0338*	LOCATION: *5500 Telegraph Avenue, Oakland, California*
PROJECT NO.: *DG90338H.4C01*	SURFACE ELEVATION:
DATE STARTED: *08/12/02*	WL (ft. bgs): *13.0* DATE: *08/13/02* TIME: *10:42*
DATE FINISHED: *08/13/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 1/2 in. Hand Auger*	TOTAL DEPTH: *13.5 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Asphalt – 6 inches thick.	Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
					Base rock – 2.5 feet thick.	
3				CL	CLAY (CL) – black (GLEY 2.5/N), moist, low plasticity; 95% clay, 5% fine sand.	
6					Color changes to dark brown (7.5YR 3/4), becomes dry; 90% clay, 10% fine sand.	
9					CLAY WITH SAND (CL) – greenish gray (5G 6/1), moist, low plasticity; 15% fine to medium sand, 5% silt.	
	HA3-11				CLAY (CL) – dark brown (7.5YR 3/4), moist; 80% clay, 10% fine gravel, 10% fine sand.	
12					▽	
	HA3-W				Bottom of boring at 13.5 feet bgs.	Grab groundwater sample HA3-W, taken at 13.5 feet bgs.
15						
18						
21						

JOB NUMBER: *DG90338H.4C01*

Gettler-Ryan, Inc.

Log of Boring HA-4

PROJECT: *Chevron Service Station No. 9-0338*	LOCATION: *5500 Telegraph Avenue, Oakland, California*
PROJECT NO.: *DG90338H.4C01*	SURFACE ELEVATION:
DATE STARTED: *08/13/02*	WL (ft. bgs): *11.0* DATE: *08/13/02* TIME: *12:00*
DATE FINISHED: *08/13/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 1/2 in. Hand Auger*	TOTAL DEPTH: *11.5 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Asphalt – 6 inches thick.	Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
					Base rock – 2 feet thick.	
3				CL	CLAY (CL) – bluish black (5PB 2.5/1), moist, low plasticity; 95% clay, 5% silt.	
6					CLAY WITH SAND (CL) – greenish gray (5G 6/1), moist; 80% clay, 15% fine sand, 5% fine gravel.	
9					CLAY (CL) – dark brown (7.5YR 3/4), saturated; 80% clay, 10% fine to coarse gravel, 10% fine to medium sand.	
	HA4-11				▽	
	HA4-W					Grab groundwater sample HA4-W, taken at 11.5 feet bgs.
12					Bottom of boring at 11.5 feet bgs.	
15						
18						
21						

JOB NUMBER: *DG90338H.4C01*

CASE NARRATIVE

Prepared For:

Karen Streich
~~Bob Cochran~~
ChevronTexaco
6001 Bollinger Canyon Road L4310
San Ramon, CA 94583-0904

Prepared By:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 819126. Samples arrived at the laboratory on Thursday, August 15, 2002.

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

COMMENTS

The HA2 vials from Facility 90338 submitted for the Oxygenates analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.

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ANALYTICAL RESULTS

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 819126. Samples arrived at the laboratory on Thursday, August 15, 2002. The PO# for this group is 99011184 and the release number is STREICH.

Client Description			Lancaster Labs Number
HA1-S-11.5-020812	Grab	Soil	3879949
HA2-W-020812	Grab	Water	3879950
HA1-W-020813	Grab	Water	3879951
HA2-S-12.0-020812	Grab	Soil	3879952
HA3-S-11.0-020813	Grab	Soil	3879953
HA3-W-020813	Grab	Water	3879954
HA4-S-11.0-020813	Grab	Soil	3879955
HA4-W-020813	Grab	Water	3879956

1 COPY TO Gettler-Ryan Inc. Attn: Geoffrey D. Risse

Questions? Contact your Client Services Representative
Teresa M Lis at (717) 656-2300.

Respectfully Submitted,

Robert E. Mellinger
Sr. Chemist/Coordinator

Analysis Report

Lancaster Laboratories
Where quality is a science.

Lancaster Laboratories Sample No. SW 3879949

Collected:08/12/2002 10:10 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:18
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA1-S-11.5-020812 Grab Soil
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01726	TPH-GRO - Soils					
01727	TPH-GRO - Soils	n.a.	N.D.	1.0	mg/kg	25
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					
02160	BTEX/MTBE					
02174	Benzene	71-43-2	N.D.	0.0050	mg/kg	25
02177	Toluene	108-88-3	N.D.	0.0050	mg/kg	25
02178	Ethylbenzene	100-41-4	N.D.	0.0050	mg/kg	25
02182	Total Xylenes	1330-20-7	N.D.	0.015	mg/kg	25
02199	MTBE	1634-04-4	N.D.	0.050	mg/kg	25
	The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01726	TPH-GRO - Soils	N. CA LUFT Gasoline Method	1	08/16/2002 20:55	Steven A Skiles	25
02160	BTEX/MTBE	SW-846 8021B	1	08/16/2002 20:55	Steven A Skiles	25
01150	GC VOA Soil Prep	SW-846 5035	1	08/16/2002 09:16	Steven A Skiles	n.a.

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Analysis Report

Lancaster Laboratories
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Lancaster Laboratories Sample No. WW 3879950

Collected:08/12/2002 14:23 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:18
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA2-W-020812 Grab Water
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-2

HA2--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
02159	BTEX, MTBE					
02161	Benzene	71-43-2	N.D.	0.50	ug/l	1
02164	Toluene	108-88-3	N.D.	0.50	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.50	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02172	Methyl tert-Butyl Ether	1634-04-4	40.	2.5	ug/l	1
	A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
01595	Oxygenates by 8260B					
02010	Methyl t-butyl ether	1634-04-4	37.	0.5	ug/l	1
02011	di-Isopropyl ether	108-20-3	N.D.	0.5	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	N.D.	0.5	ug/l	1
02014	t-Amyl methyl ether	994-05-8	N.D.	0.5	ug/l	1
02015	t-Butyl alcohol	75-65-0	N.D.	5.	ug/l	1
	The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 4.					

State of California Lab Certification No. 2116

Laboratory Chronicle

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Lancaster Laboratories Sample No. WW 3879950

Collected:08/12/2002 14:23 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:18
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA2-W-020812 Grab Water
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-2

HA2--

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	08/17/2002 00:22	Melissa D Mann	1
02159	BTEX, MTBE	SW-846 8021B	1	08/17/2002 00:22	Melissa D Mann	1
01595	Oxygenates by 8260B	SW-846 8260B	1	08/20/2002 05:55	Kenneth L Boley Jr	1
01146	GC VOA Water Prep	SW-846 5030B	1	08/17/2002 00:22	Melissa D Mann	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/20/2002 05:55	Kenneth L Boley Jr	n.a.

Analysis Report

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Lancaster Laboratories Sample No. WW 3879951

Collected:08/13/2002 07:52 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:18
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA1-W-020813 Grab Water
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-1

HA1--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
02159	BTEX, MTBE					
02161	Benzene	71-43-2	N.D.	0.50	ug/l	1
02164	Toluene	108-88-3	N.D.	0.50	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.50	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02172	Methyl tert-Butyl Ether	1634-04-4	N.D.	2.5	ug/l	1
	A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
01595	Oxygenates by 8260B					
02010	Methyl t-butyl ether	1634-04-4	N.D.	0.5	ug/l	1
02011	di-Isopropyl ether	108-20-3	N.D.	0.5	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	N.D.	0.5	ug/l	1
02014	t-Amyl methyl ether	994-05-8	N.D.	0.5	ug/l	1
02015	t-Butyl alcohol	75-65-0	N.D.	5.	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	08/17/2002 00:58	Melissa D Mann	1
02159	BTEX, MTBE	SW-846 8021B	1	08/17/2002 00:58	Melissa D Mann	1
01595	Oxygenates by 8260B	SW-846 8260B	1	08/20/2002 06:21	Kenneth L Boley Jr	1

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Lancaster Laboratories Sample No. WW 3879951

Collected:08/13/2002 07:52 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:18
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA1-W-020813 Grab Water
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-1

HA1--

01146	GC VOA Water Prep	SW-846 5030B	1	08/17/2002 00:58	Melissa D Mann	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/20/2002 06:21	Kenneth L Boley Jr	n.a.

Analysis Report

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Lancaster Laboratories Sample No. SW 3879952

Collected:08/12/2002 13:21 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:19
Discard: 08/30/2002
HA2-S-12.0-020812 Grab Soil
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-2

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01726	TPH-GRO - Soils					
01727	TPH-GRO - Soils	n.a.	N.D.	1.0	mg/kg	25
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					
02160	BTEX/MTBE					
02174	Benzene	71-43-2	N.D.	0.0050	mg/kg	25
02177	Toluene	108-88-3	N.D.	0.0050	mg/kg	25
02178	Ethylbenzene	100-41-4	N.D.	0.0050	mg/kg	25
02182	Total Xylenes	1330-20-7	N.D.	0.015	mg/kg	25
02199	MTBE	1634-04-4	N.D.	0.050	mg/kg	25
	The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01726	TPH-GRO - Soils	N. CA LUFT Gasoline Method	1	08/16/2002 21:32	Steven A Skiles	25
02160	BTEX/MTBE	SW-846 8021B	1	08/16/2002 21:32	Steven A Skiles	25
01150	GC VOA Soil Prep	SW-846 5035	1	08/16/2002 09:17	Steven A Skiles	n.a.

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Analysis Report

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Lancaster Laboratories Sample No. SW 3879953

Collected:08/13/2002 09:57 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:19
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA3-S-11.0-020813 Grab Soil
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01726	TPH-GRO - Soils					
01727	TPH-GRO - Soils	n.a.	N.D.	1.0	mg/kg	25
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					
02160	BTEX/MTBE					
02174	Benzene	71-43-2	N.D.	0.0050	mg/kg	25
02177	Toluene	108-88-3	N.D.	0.0050	mg/kg	25
02178	Ethylbenzene	100-41-4	N.D.	0.0050	mg/kg	25
02182	Total Xylenes	1330-20-7	N.D.	0.015	mg/kg	25
02199	MTBE	1634-04-4	N.D.	0.050	mg/kg	25
	The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01726	TPH-GRO - Soils	N. CA LUFT Gasoline Method	1	08/16/2002 22:10	Steven A Skiles	25
02160	BTEX/MTBE	SW-846 8021B	1	08/16/2002 22:10	Steven A Skiles	25
01150	GC VOA Soil Prep	SW-846 5035	1	08/16/2002 09:18	Steven A Skiles	n.a.

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Lancaster Laboratories Sample No. WW 3879954

Collected:08/13/2002 10:42 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:19
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA3-W-020813 Grab Water
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-3

HA3--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
02159	BTEX, MTBE					
02161	Benzene	71-43-2	N.D.	0.50	ug/l	1
02164	Toluene	108-88-3	N.D.	0.50	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.50	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02172	Methyl tert-Butyl Ether	1634-04-4	3.9	2.5	ug/l	1
	A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
01595	Oxygenates by 8260B					
02010	Methyl t-butyl ether	1634-04-4	4.	0.5	ug/l	1
02011	di-Isopropyl ether	108-20-3	N.D.	0.5	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	N.D.	0.5	ug/l	1
02014	t-Amyl methyl ether	994-05-8	N.D.	0.5	ug/l	1
02015	t-Butyl alcohol	75-65-0	N.D.	5.	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	08/17/2002 01:33	Melissa D Mann	1
02159	BTEX, MTBE	SW-846 8021B	1	08/17/2002 01:33	Melissa D Mann	1
01595	Oxygenates by 8260B	SW-846 8260B	1	08/20/2002 06:47	Kenneth L Boley Jr	1

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Lancaster Laboratories Sample No. WW 3879954

Collected:08/13/2002 10:42 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:19
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA3-W-020813 Grab Water
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-3

HA3--

01146	GC VOA Water Prep	SW-846 5030B	1	08/17/2002 01:33	Melissa D Mann	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/20/2002 06:47	Kenneth L Boley Jr	n.a.

Analysis Report

Lancaster Laboratories
Where quality is a science.

Lancaster Laboratories Sample No. SW 3879955

Collected:08/13/2002 11:45 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:19
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA4-S-11.0-020813 Grab Soil
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01726	TPH-GRO - Soils					
01727	TPH-GRO - Soils	n.a.	N.D.	1.0	mg/kg	25
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					
02160	BTEX/MTBE					
02174	Benzene	71-43-2	N.D.	0.0050	mg/kg	25
02177	Toluene	108-88-3	N.D.	0.0050	mg/kg	25
02178	Ethylbenzene	100-41-4	N.D.	0.0050	mg/kg	25
02182	Total Xylenes	1330-20-7	N.D.	0.015	mg/kg	25
02199	MTBE	1634-04-4	N.D.	0.050	mg/kg	25
	The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.					

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01726	TPH-GRO - Soils	N. CA LUFT Gasoline Method	1	08/16/2002 22:48	Steven A Skiles	25
02160	BTEX/MTBE	SW-846 8021B	1	08/16/2002 22:48	Steven A Skiles	25
01150	GC VOA Soil Prep	SW-846 5035	1	08/16/2002 09:19	Steven A Skiles	n.a.

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Lancaster Laboratories Sample No. WW 3879956

Collected:08/13/2002 12:07 by GDR

Account Number: 10992

Submitted: 08/15/2002 09:15
Reported: 08/22/2002 at 20:19
Discard: 08/30/2002

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

HA4-W-020813 Grab Water
Facility# 90338 GRRC
5500 Telegraph Av-Oakland T0600100307 HA-4

HA4--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time. A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
02159	BTEX, MTBE					
02161	Benzene	71-43-2	N.D.	0.50	ug/l	1
02164	Toluene	108-88-3	N.D.	0.50	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.50	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02172	Methyl tert-Butyl Ether	1634-04-4	N.D.	2.5	ug/l	1
	A site-specific MSD sample was not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
01595	Oxygenates by 8260B					
02010	Methyl t-butyl ether	1634-04-4	0.7	0.5	ug/l	1
02011	di-Isopropyl ether	108-20-3	N.D.	0.5	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	N.D.	0.5	ug/l	1
02014	t-Amyl methyl ether	994-05-8	N.D.	0.5	ug/l	1
02015	t-Butyl alcohol	75-65-0	N.D.	5.	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	08/17/2002 02:09	Melissa D Mann	1
02159	BTEX, MTBE	SW-846 8021B	1	08/17/2002 02:09	Melissa D Mann	1
01595	Oxygenates by 8260B	SW-846 8260B	1	08/20/2002 07:13	Kenneth L Boley Jr	1

MEMBER ACIL
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PO Box 12425
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HA4--

01146	GC VOA Water Prep	SW-846 5030B	1	08/17/2002 02:09	Melissa D Mann	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/20/2002 07:13	Kenneth L Boley Jr	n.a.

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Quality Control Summary

Client Name: ChevronTexaco
Group Number: 819126
Reported: 08/22/02 at 08:19 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 02228A34A	Sample number(s): 3879949,3879952-3879953,3879955							
TPH-GRO - Soils	N.D.	1.	mg/kg	89		69-112		
Benzene	N.D.	.005	mg/kg	102		93-123		
Toluene	N.D.	.005	mg/kg	104		93-122		
Ethylbenzene	N.D.	.005	mg/kg	104		87-127		
Total Xylenes	N.D.	.015	mg/kg	103		88-120		
MTBE	N.D.	.05	mg/kg	101		80-132		
Batch number: 02228A56A	Sample number(s): 3879950-3879951,3879954,3879956							
TPH-GRO - Waters	N.D.	50.	ug/l	90	90	74-116	0	30
Benzene	N.D.	.5	ug/l	99	95	80-118	4	30
Toluene	N.D.	.5	ug/l	107	103	82-119	4	30
Ethylbenzene	N.D.	.5	ug/l	106	102	81-119	4	30
Total Xylenes	N.D.	1.5	ug/l	108	104	82-120	4	30
Methyl tert-Butyl Ether	N.D.	2.5	ug/l	103	99	79-127	4	30
Batch number: N022282AB	Sample number(s): 3879950-3879951,3879954,3879956							
Methyl t-butyl ether	N.D.	.5	ug/l	101		77-127		
di-Isopropyl ether	N.D.	.5	ug/l	104		74-125		
Ethyl t-butyl ether	N.D.	.5	ug/l	95		74-120		
t-Amyl methyl ether	N.D.	.5	ug/l	95		71-114		
t-Butyl alcohol	N.D.	5.	ug/l	95		59-139		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 02228A34A	Sample number(s): 3879949,3879952-3879953,3879955								
TPH-GRO - Soils	85	89	42-105	4	30				
Benzene	94	95	62-153	2	30				
Toluene	91	92	66-111	1	30				
Ethylbenzene	102	105	66-131	3	30				
Total Xylenes	95	98	62-120	3	30				
MTBE	102	102	43-186	0	30				
Batch number: 02228A56A	Sample number(s): 3879950-3879951,3879954,3879956								
TPH-GRO - Waters	99		74-132						
Benzene	103		83-130						
Toluene	106		87-129						
Ethylbenzene	111		86-133						
Total Xylenes	112		86-132						
Methyl tert-Butyl Ether	109		66-140						
Batch number: N022282AB	Sample number(s): 3879950-3879951,3879954,3879956								
Methyl t-butyl ether	103	103	69-134	0	30				
di-Isopropyl ether	107	105	68-133	2	30				
Ethyl t-butyl ether	94	96	73-123	2	30				
t-Amyl methyl ether	95	95	69-118	0	30				
t-Butyl alcohol	97	96	51-148	1	30				

Surrogate Quality Control

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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Quality Control Summary

Client Name: ChevronTexaco
Group Number: 819126
Reported: 08/22/02 at 08:19 PM

Surrogate Quality Control

Analysis Name: TPH-GRO - Soils
Batch number: 02228A34A

	Trifluorotoluene-F	Trifluorotoluene-P
3879949	90	96
3879952	84	98
3879953	88	102
3879955	88	101
Blank	96	103
LCS	108	99
MS	109	105
MSD	106	102
Limits:	58-118	68-122

Analysis Name: TPH-GRO - Waters
Batch number: 02228A56A

	Trifluorotoluene-F	Trifluorotoluene-P
3879950	84	94
3879951	84	95
3879954	83	95
3879956	84	94
Blank	86	95
LCS	94	94
LCSD	94	94
MS	94	97
Limits:	57-146	71-130

Analysis Name: Oxygenates by 8260B
Batch number: N022282AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
3879950	102	96	97	93
3879951	104	96	97	94
3879954	104	95	98	94
3879956	103	95	98	93
Blank	102	94	98	95
LCS	97	96	101	99
MS	101	95	98	101
MSD	100	98	98	102
Limits:	86-118	80-120	88-110	86-115

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
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GT #819126 Acct. #: 10992 For Lancaster Laboratories use only Sample #: 3875545-56 SCR#:

Facility #: 9-0338 (Global ID# T0600100307)
Site Address: 5500 Telegraph Avenue, Oakland
Chevron PM: Karen Streich Lead Consultant:
Consultant/Office: Gettler-Ryan Inc.
Consultant Prj. Mgr.: Geoffrey D. Risse
Consultant Phone #: (916) 631-1300 Fax #: (916) 631-1317
Sampler: Geoffrey D. Risse
Service Order #: ☐ Non SAR:

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil ☐ Air ☐	Total Number of Containers	Analyses Requested: BTEX + MTBE 8260 ☐ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	5 Oxygenates (5 pack)	Lead 7420 ☐ 7421 ☐
					☐ Potable ☐ NPDES				Preservation Codes: HCl	HCl			H	
HA1-11.5	8/12/02	1010	✓		✓				X	X				
HA2-W	8/12/02	1423	✓			✓			X	X			X	
HA1-W	8/13/02	0752	✓			✓			X	X			X	
HA2-12.0	8/12/02	1321	✓		✓				X	X				
HA3-11.0	8/13/02	0957	✓		✓				X	X				
HA3-W	8/13/02	1042	✓			✓			X	X			X	
HA4-11	8/13/02	1143	✓		✓				X	X				
HA4-W	8/13/02	1207	✓			✓			X	X			X	

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy s on highest hit
☐ Run ____ oxy s on all hits

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
(STD. TAT) 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I — Full
Type VI (Raw Data) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by: Geoffrey D. Risse	8/14/02	0800	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS (FedEx) Other			Received by:	8/15/02	0715
Temperature Upon Receipt 4.0 C°			Custody Seals Intact? (Yes) No		

3460 Rev. 7/30/01

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.