RO - 2437

Delta
Environmental
Consultants, Inc.

3164 Gold Camp Drive
Suite 200
Rancho Cordova, CA 95670-6021
U.S.A.
916/638-2085
FAX: 916/638-8385

APR 2 4 2002

April 23, 2002

Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Subject: *Temporary Monitoring Well Installation Results Report and Request for No Further Action*
Former Chevron Station No. 210208
6006 International Boulevard
Oakland, California
Delta Project No. DG20-208

Dear Ms. Chu:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Chevron Products Company (Chevron) to prepare a letter report, which summarizes the subsurface investigation conducted at the site in February 2002, and the monthly sampling of wells performed in February and March 2002. The location of the site is presented on Figure 1 and a site map illustrating on–site features is included on Figure 2. The purpose of the work was to verify that the concentration of petroleum hydrocarbons in groundwater collected from monitoring wells was similar in concentrations or less than the concentrations observed in groundwater samples collected during the Geoprobe® (geoprobe) investigation in July 2001 so that the site could be considered for regulatory closure. This report presents the results of drilling and well installation activities conducted on February 23, 2002, and the monitoring well sampling events performed on February 27 and March 27, 2002. The work was conducted in accordance with Delta's *Work Plan to Install Three Groundwater Monitoring Wells and Sample Monthly (2 Events)* dated February 20, 2002, as approved in the Alameda County Health Care Services Agency (ACHCSA) letter dated February 21, 2002. A copy of the ACHCSA letter is included in Enclosure A. This work was performed under the Alameda County Public Works Agency (ACPWA) well installation permit numbers W02-0210 through W02-0212. Copies of the permits are included in Enclosure B.

Project Background Information

In preparation for development of the site, Subsurface Consultants, Inc. (SCI) performed a geotechnical investigation that included both the subject site and two adjacent parcels in January 2001. A geophysical survey identified an underground storage tank (UST) beneath the sidewalk, and a product line running from the UST to the former dispenser island. SCI drilled two soil borings (B-4 and B-5) in the vicinity of the former service station. Soil samples from approximately 10 feet below surface grade (bsg) and grab groundwater samples were analyzed for petroleum hydrocarbons. Concentrations of gasoline-range, diesel-range, oil-range hydrocarbons, and benzene were detected in these samples. Elevated concentrations of lead were detected in backfill material from the UST pit.

One 1,000-gallon UST and associated product piping were removed in June 2001. Groundwater was encountered in the UST excavation, stabilizing at approximately 7 feet bsg (24 hours after UST removal). Soil samples were collected from the walls of the UST pit (CX-1-9 and CX-2-9) and the base of the product line trench (CT-1-2.5 and CT-2-2.5). Samples from the UST pit did not contain petroleum hydrocarbons. Gasoline range hydrocarbons were detected in the two soil samples collected from the product line trench. Hydrocarbons were also detected in a grab groundwater sample from the UST pit. The results of this investigation are presented in Gettler-Ryan Inc. *UST Remove Report and Work Plan for Subsurface Investigation*, dated July 2, 2001.

A total of 17 geoprobe borings (GP-1 through GP-7) were advanced at the site at depths up to 20 feet bsg in July 2001 to assess the lateral extent of petroleum hydrocarbons in soil and groundwater. Soil samples were collected at 2.5 and 5.5 feet bsg. Groundwater was first encountered at depths of 12 to 15 feet bsg, but quickly rose indicating semi-confined conditions or smeared sidewalls. Grab groundwater samples were collected from seven of the borings. Analytical data from the soil samples indicated that soil impact is limited to the immediate vicinity of the former product line and dispenser island. Based on these findings, approximately 150 cubic yards of soil was excavated and removed from the site in early August 2001. At the direction of ACHCSA soil samples were not collected from the walls of excavation (analytical results of the soils samples from the geoprobe borings were used to define the limits of the excavation). The results of the investigation are presented in Delta's *Subsurface Investigation and Soil Excavation Report,* dated August 28, 2001. A *Risk Management Plan*, dated August 28, 2001 was also submitted by Delta.

A risk assessment was prepared by Delta on October 10, 2001 and submitted to ACHCSA. The purpose of the risk assessment was to evaluate if residual petroleum hydrocarbon concentrations in soil and groundwater posed a potential risk to human health. Calculated site specific target levels (SSTL's) were not exceeded using the data from the grab groundwater and soil samples collected from the direct-push geoprobe borings. In addition, Delta submitted a *Fate and Transport Assessment* on October 11, 2001, for the site at the request of the ACHCSA. The fate and transport assessment assumed a groundwater gradient of 0.01 and a hydraulic conductivity ranging from 2.8 x 10^{-2} (sandy clay) to 2.8 (clayey sand) feet per day, and an effective porosity of 7 percent. A benzene flow rate of 0.036 to 0.36 feet per day was calculated. Based on this flow rate and the nearest receptor (industrial well) being located 1,600 feet from the site, a mean travel time of 694 years was calculated for benzene from the site to reach the nearest downgradient well. Since benzene has an affinity to biodegredation and attenuation, and clay tends to be a strong adsorber, it was proposed that it is unlikely that dissolved petroleum hydrocarbons beneath the site would be transported any significance distance downgradient due to the high (50-60 percent) clay content of the water bearing zone.

Based on the results of the risk assessment and the fate and transport assessment, ACHCSA did not object to the site being redeveloped for residential use, but recommended that the site not be granted closure until it could be demonstrated that the residual petroleum hydrocarbon constituents in groundwater were limited in extent, not migrating, and naturally attenuating. ACHCSA recommended installing temporary monitoring wells at the site and monitoring them on a monthly basis. After two months, the ACHCSA would review the groundwater analytical results and determine whether closure was warranted at the site.

All known aboveground and underground UST-related facilities have been removed. Delineation of soil impact is complete and petroleum hydrocarbon impacted soil has been excavated and removed. The site is currently being redeveloped as a multi-family residence complex.

Site Geology

The site is located on the East Bay Plane, approximately 3,000 feet northeast of the San Leandro Bay (eastern shore of San Francisco Bay). The site is relatively flat at an elevation of approximately 20 feet above mean sea level (msl). As mapped by 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 Pleistocene beach and dune sand deposits.

Soil Borings

On February 23, 2002, a Delta geologist was on-site to oversee Vironex Environmental Field Services of Hayward, California advance three borings (approximately 3-inch diameter) in the vicinity of the former dispenser island (Figure 2) using a truck-mounted, hydraulic, direct-push geoprobe rig. The three borings were drilled to 20 feet bsg and were completed as temporary groundwater monitoring wells TC-1 through TC-3. The upper most 5-feet of the borehole was expanded to a diameter of 6-inches to provide 2 inches of annular space around the casing for the annular seal. The locations of the monitoring wells are shown on Figure 2. Field methods and procedures used by Delta during installation of these wells are summarized in Enclosure C. Continuous cores from each boring were collected and logged. Logs of borings are included in Enclosure D.

Temporary Monitoring Well Installation

The monitoring wells were each constructed of ¾-inch diameter, flush threaded, Schedule 40 PVC casing fitted with pre-packed sand around the well screen. Each well was screened over the bottom 15 feet with 0.010-slot well screen. The well annulus was backfilled with 10 Pre Pak screen followed by Lonestar No. 2/12 sand to approximately one foot above the well screen followed by a 1-foot thick bentonite transition seal. The remaining annulus was filled with a cements/bentonite slurry (grout), mixed in accordance with ACPWA specifications, to within six inches of surface grade. The surface was completed with a 6-inch diameter, steel, above-grade, locking stovepipe cover set in concrete. Following completion, the wells were developed and sampled using the methods described in Enclosure B.

Well Development

The wells were developed immediately following completion of the wells by purging with disposable bailers and a peristaltic pump. Purging was repeated until purge water was relatively sediment free. When the well purged dry during development, it was allowed to recharge and was purged dry again three times. The water generated during development was containerized on-site in a 55-gallon drum pending disposal by Chevron's contractor, Integrated Wastestream Management (IWM), of Milpitas, California. The purge water will be disposed of by IWM within 90 days of being generated.

Survey of Temporary Monitoring Well Elevations

On March 27, 2002, Morrow Surveying (Morrow) of West Sacramento, California surveyed the locations of wells TC-1 through TC-3. To comply with the State of California Assembly Bill AB2886, the surveyor referenced the locations of the newly installed wells and soil borings to the California State Coordinate System using Global Positioning Satellite (GPS) surveying. The top of each groundwater monitoring well casing and surface grade were surveyed relative to msl. The northing and easting location of each well was also surveyed. A copy of the surveyor's map is included in Enclosure E.

Disposal of Drill Cuttings

Soil cuttings were not generated during the installation of the monitoring wells since direct-push geoprobe technology was used; therefore sampling and disposal of drill cuttings was not necessary.

Groundwater Elevation Measurements, Flow Direction, and Hydraulic Gradient

During the February 27 and March 27, 2002 sampling events, depth to groundwater was measured in wells TC-1 through TC-3. The groundwater elevation measurements collected by Delta are summarized in Table 1. Depth to groundwater during the sampling events ranged from 5.90 feet (TC-3) to 7.56 feet (TC-1) below the top of casing. Groundwater field data sheets are included in Enclosure F.

Based on the two sampling events, groundwater appears to flow toward the west/southwest with a gradient ranging from approximately 0.002 to 0.0008 feet/foot (ft/ft). Groundwater contours maps based on the February 27 and March 27, 2002 water level data for the wells are included as Figure 3 and 4, respectively.

Groundwater Sample Analytical Results

On February 27 and March 27, 2002, groundwater samples were collected from wells TC-1 through TC-3. All groundwater samples were submitted to Lancaster Laboratories (Lancaster) in Lancaster Pennsylvania for chemical analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) using 8021B, and total petroleum hydrocarbons as gasoline range organics (TPHg) and as diesel range organics (TPHd), with silica gel cleanup, using the North California LUFT Method.

Petroleum hydrocarbon constituents were detected in each of the monitoring wells during the February 27 and March 27, 2002 sampling events. Benzene was not reported in any of the wells during the initial sampling event. During the second March sampling event, benzene was reported in wells TC-2 and TC-3 at concentrations of 4.1 and 1.8 micrograms per liter (µg/L), respectively. Total petroleum hydrocarbons as gasoline range organics and TPHd were reported in well TC-1 at concentrations ranging from <50 to 210 µg/L and 330 to 1,300 µg/L, respectively. Total petroleum hydrocarbons as gasoline range organics and TPHd were detected in some of the samples collected from monitoring wells TC-2 and TC-3 at concentrations ranging from 480 to 3,100 µg/L and 1,200 to 8,400 µg/L, respectively. Methyl tertiary butyl ether was not reported in wells TC-2 and TC-3, but was reported

in well TC-1 at 7.0 µg/L during the March sampling event. Groundwater analytical results are presented in Table 1. Copies of the groundwater analytical reports are included in Enclosure G.

Conclusions/Recommendations

Based on the evaluation of groundwater analytical data from wells TC-1 through TC-3 for the two monthly sampling events and the groundwater samples collected during the geoprobe borings in July 2001, the concentrations of petroleum hydrocarbon constituents were generally lower in the wells than the geoprobe borings. The groundwater samples collected from the geoprobe borings in July 2001 contained concentrations of benzene at 28 (GP11-W) to 100 µg/L (GP-14W); ethylbenzene at 4.7 (GP16-W) to 180 (GP14-W) µg/L; total xylenes at 6.0 (GP16-W) to 57 (GP11-W) µg/L; TPHg at 57 (GP13-W) to 13,000 (GP11-W) µg/L. Methyl tertiary butyl ether was only detected in geoprobe sample GP14-W at a concentration of 140 µg/L. The groundwater samples collected from monitoring wells TC-1 through TC-3 during February and March 2002 contained concentrations of benzene at 1.8 (TC-3) and 4.1 (TC-2) µg/L; toluene at 6.8 (TC-3) and 8.0 (TC-2) µg/L; ethylbenzene at 1.2 (TC-1) to 13 (TC-3); TPHg at 210 (TC-1) to 3,100 (TC-3) µg/L; and TPHd at 330 (TC-1) to 8,400 (TC-2) µg/L. Total xylenes were only detected in TC-2 at a concentration of 5.5 µg/L. Methyl tertiary butyl ether was only detected in TC-1 at a concentration of 7.0 µg/L. Based on the inferred groundwater flow direction from the February and March 2002 groundwater elevation data, monitoring wells TC-1 and TC-2 are located hydraulically downgradient of the suspected source area on the subject property, and monitoring well TC-3 is located within the suspected source area. In general, the petroleum hydrocarbon concentrations in the groundwater samples collected from the two downgradient monitoring wells (TC-1 and TC-2) are considerably lower in concentration than the samples collected from the source area well (TC-3) which supports the findings presented in Delta's *Fate and Transport Assessment* report, dated October 11, 2001 that biodegradation and attenuation are occurring at the site.

The primary source (tanks and piping) of petroleum hydrocarbon constituents have been removed from the site. Approximately 180 cubic yards of petroleum-hydrocarbon impacted soil, which was limited to the vicinity of the former dispenser islands and product lines, was overexcavated in August 2001.

The presence of MTBE in the groundwater sample collected from monitoring well TC-1 at 7.0 µg/L indicates that the groundwater beneath the site may be impacted by an off-site source since the site had not been operated as a retail fuel service station since the early 1960's, which was prior to the use of MTBE in fuel in California.

Based on the findings from this investigation, the removal of the primary source area and overexcavation of petroleum-hydrocarbon impacted soil, the risk assessment, and the fate and transport assessment, Delta recommends that the site be considered a low risk groundwater site and no further action required.

Remarks/Signatures

The interpretations contained in this report represent our professional opinions, and are based in part, on information supplied by the client. These opinions are based on currently available information and

are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions regarding this project, please contact Mike Berrington at (916) 536-2616.

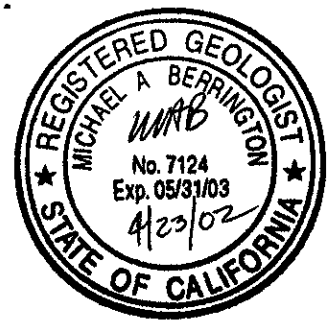
Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

William Stowe for

Brett A. Bardsley
Staff Geologist

Michael A. Berrington, R.G.
Project Manager
California Registered Geologist No. 7124



BAB (LRP002.210208)

Enclosures

cc: Mr. Tom Bauhs – Chevron Products Company
Mr. James Coles – Resources for Community Development, 2131 University Avenue, Suite 224, Berkeley, CA 94704
Mr. Liu-Mei Chen – 13710 41st Avenue N, Seattle, WA 98125

TABLE 1

GROUNDWATER SAMPLE ANALYTICAL RESULTS

Former Chevron Station No. 210208
6006 International Boulevard
Oakland, California

Sample ID	Date	Top of Casing Elevation (ft amsl)	Depth to Groundwater (ft btc)	Groundwater Elevation (ft amsl)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPHg (µg/L)	TPHd (µg/L)	MTBE (µg/L)
TC-1	02/27/02	22.26	7.56	14.70	<0.50	<0.50	<0.50	<1.5	<50	330	<2.5
	03/27/02		6.89	15.37	<0.50	<0.50	1.2	<1.5	210	1,300	7.0
TC-2	02/27/02	21.77	6.47	15.30	<2.5	8.0	<2.5	<7.5	480	8,400	<13
	03/27/02		6.45	15.32	4.1	<0.50	3.6	5.5	800	1,600	<2.5
TC-3	02/27/02	21.74	5.90	15.84	<10	6.8	13	<15	3,100	1,200	<25
	03/27/02		6.06	15.68	1.8	<0.50	8.0	<10	1,800	1,900	<2.5

amsl = above mean sea level

btc = below top of casing

TPHg = Total petroleum hydrocarbons in the gasoline range organics (C5-C9)

TPHd = Total petroleum hydrocarbons in the diesel range organics (C10-C28) with silica gel cleanup.

MTBE = Methyl tertiary butyl ether.

µg/L = micrograms per liter

GENERAL NOTES:
BASE MAP FROM U.S.G.S.
OAKLAND EAST & SAN LEANDRO, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1980

QUADRANGLE LOCATION

N

0 2000 FT

SCALE 1:24,000

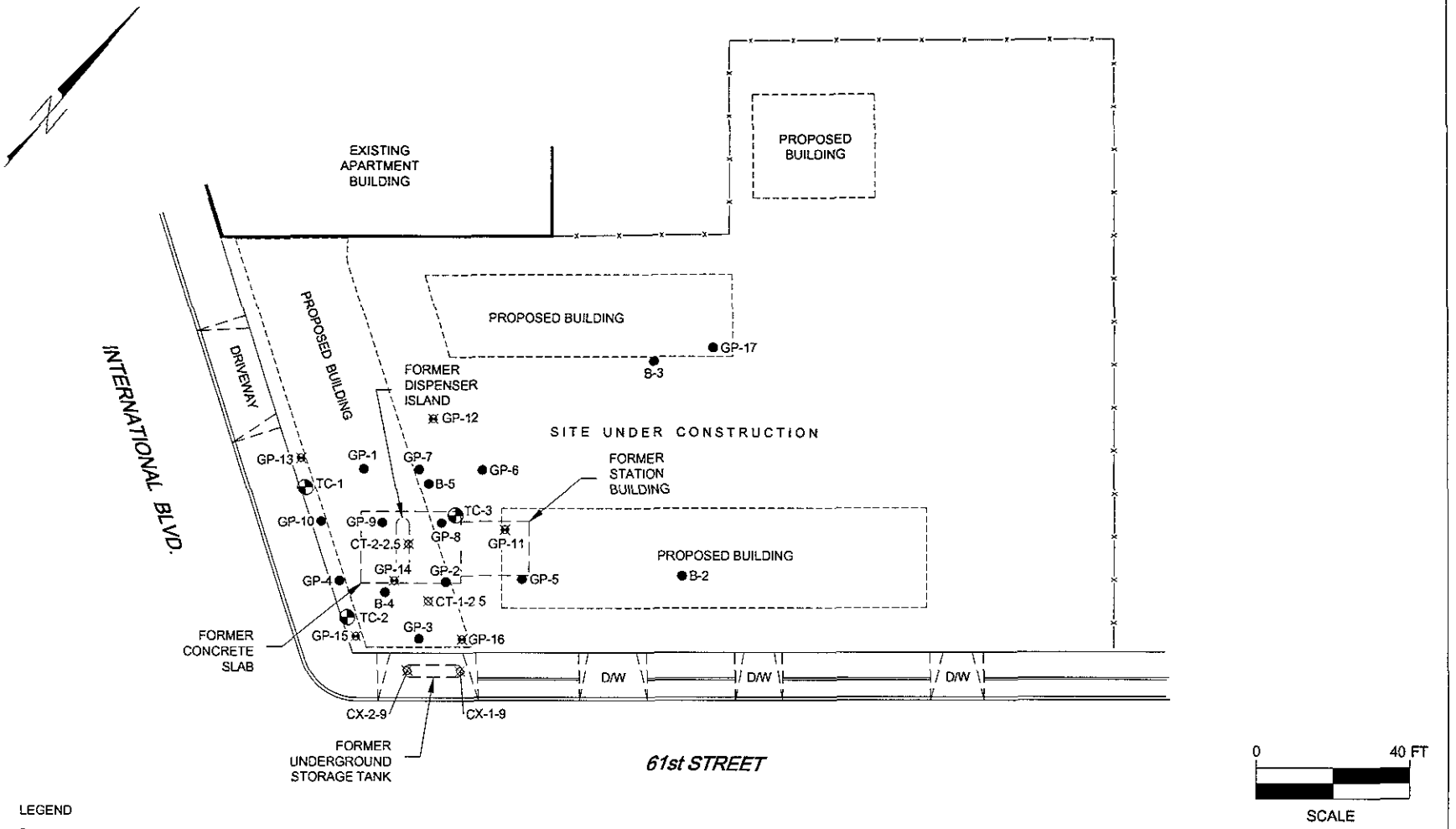
FIGURE 1

SITE LOCATION MAP

FORMER CHEVRON SERVICE STATION NO. 21-0208
6006 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. DG20-208	DRAWN BY M L 4/5/02
FILE NO DG21208A	PREPARED BY MAB
REVISION NO 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

TC-1	MONITORING WELL LOCATION
CT-1-2 5	SOIL SAMPLE LOCATION
B-1	SOIL BORING LOCATION
GP-1	SOIL BORING/ GRAB GROUNDWATER SAMPLE LOCATION

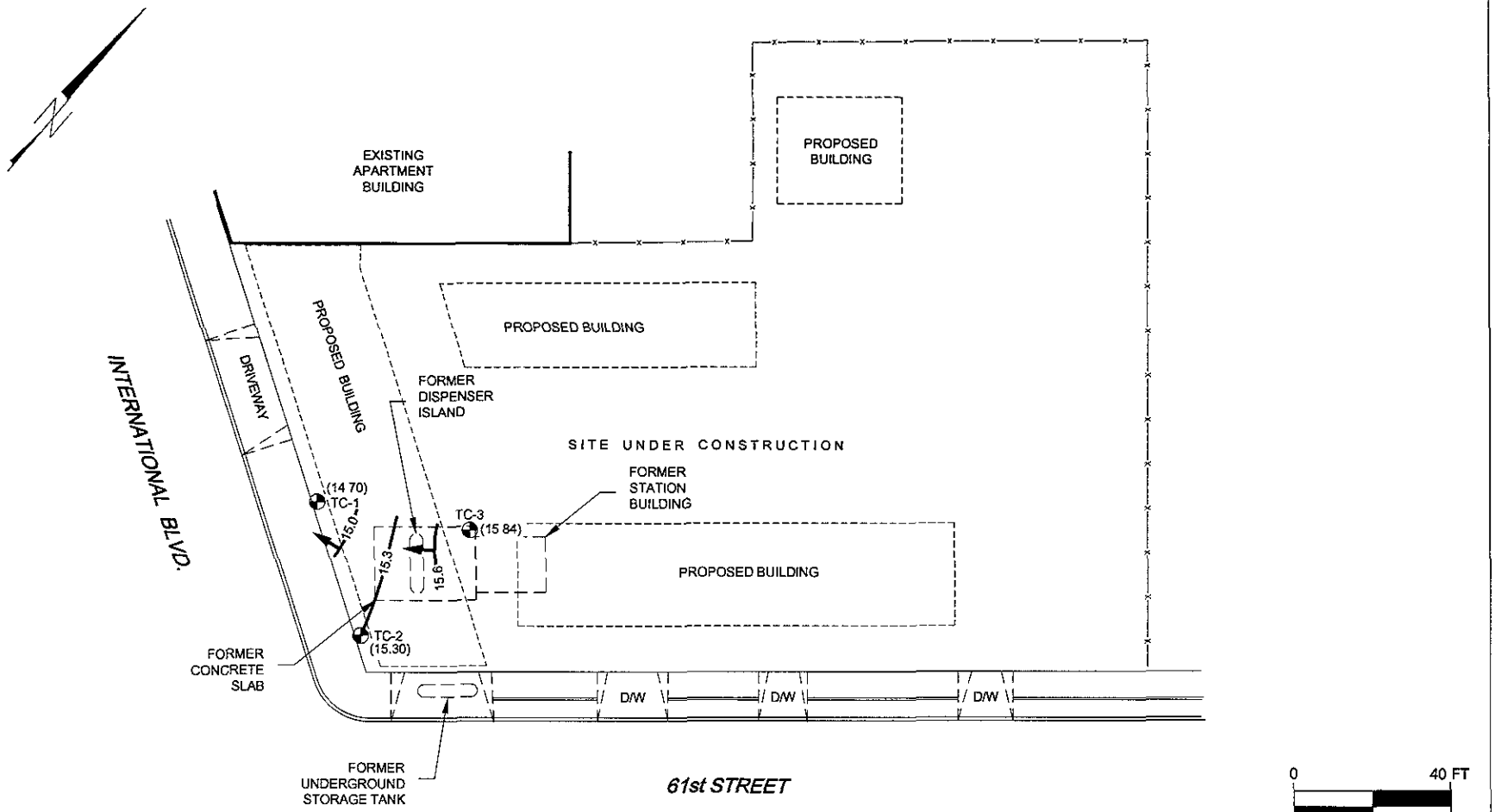
FIGURE 2

SITE MAP

FORMER CHEVRON SERVICE STATION NO. 21-0208
6006 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. DG20-208	DRAWN BY M L 4/5/02
FILE NO DG21208B	PREPARED BY MAB
REVISION NO 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND.

- TC-1 — MONITORING WELL LOCATION
- (14 70) — GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- —15 3— — INFERRED WATER TABLE CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL
- → — INFERRED GROUNDWATER FLOW DIRECTION

HYDRAULIC GRADIENT= 0.0024 FT/FT MEASURED BETWEEN TC-1 AND TC-3

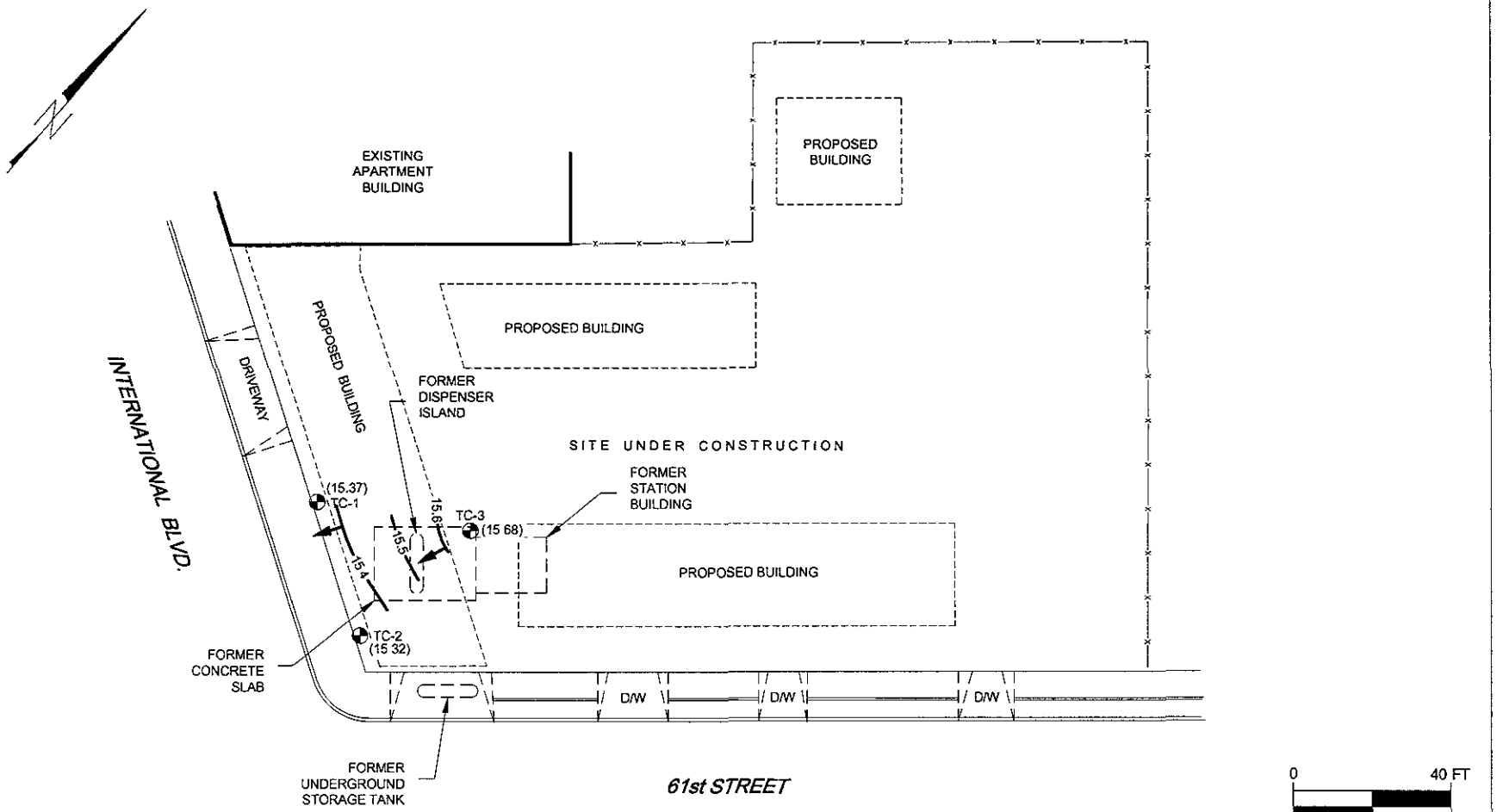
FIGURE 3

GROUNDWATER ELEVATION CONTOUR MAP
2/27/02

FORMER CHEVRON SERVICE STATION NO. 21-0208
6006 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO DG20-208	DRAWN BY M.L. 4/11/02
FILE NO. DG21208B	PREPARED BY BAB
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

- TC-1 — MONITORING WELL LOCATION
- (15 37) — GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- —15 5— — INFERRED WATER TABLE CONTOUR IN FEET RELATIVE TO MEAN SEA LEVEL
- → — INFERRED GROUNDWATER FLOW DIRECTION

HYDRAULIC GRADIENT= 0 00077 FT/FT MEASURED BETWEEN TC-2 AND TC-3

FIGURE 4

GROUNDWATER ELEVATION CONTOUR MAP
3/27/02

FORMER CHEVRON SERVICE STATION NO. 21-0208
6006 INTERNATIONAL BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO DG20-208	DRAWN BY M L 4/11/02
FILE NO DG21208B	PREPARED BY BAB
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

ENCLOSURE A

Alameda County Health Care Services Letter
Dated February 21, 2002

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502
(510) 567-6700
Fax (510) 337-9335

RO0002437

February 21, 2002

Mr. Tom Bauhs
Chevron
P.O. Box 6004
San Ramon, CA 94583

Mr. James Coles
Stanley Ave Affordable Housing
2131 University Ave #224
Berkeley, CA 94707

RE: Work Plan Approval for 6006 International Blvd, Oakland, CA

Dear Messrs. Bauhs and Coles:

I have completed review of Delta Environmental Consultants, Inc.'s February 2002 *Work Plan to Install Three Groundwater Monitoring Wells...* that was prepared for the above referenced site. The proposal to install three temporary groundwater monitoring wells is acceptable with the following changes/additions:

- Include TPHd analysis (can do silica gel cleanup prep)
- Calculate groundwater flow direction after well are installed
- Borings will be continuously logged (per Mike Berrington)
- Lancaster Laboratory in Pennsylvania must be California certified

Field work has be scheduled for February 23, 2002. If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

email: Mike Berrington

ENCLOSURE B

Permits

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
Former Chevron Service Station No. 21-0709
6004 International Boulevard
Oakland, California

CLIENT
Name Chevron Products Company
Address P.O. Box 6004 Phone (925) 842-9909
City San Ramon Zip 94583

APPLICANT
Name Delta Environmental Consultants
Address 3164 Gold Camp Dr. #200 Fax (916) 638-8385
City Rancho Cordova Phone (916) 638-2085 x 3164
Zip 95670

TYPE OF PROJECT
Well Construction
Cathodic Protection
Water Supply
Monitoring ✓
Geotechnical Investigation
General
Contamination
Well Destruction

PROPOSED WATER SUPPLY WELL USE
New Domestic
Municipal
Industrial
Replacement Domestic
Irrigation
Other

DRILLING METHOD:
Mud Rotary
Cable
Air Rotary
Other
Auger

DRILLER'S NAME Vironex

DRILLER'S LICENSE NO. C57 705927

WELL PROJECTS
Drill Hole Diameter 3.25" in. Maximum
Casing Diameter 2" in. Depth 30 ft.
Surface Seal Depth 4 ft. Owner's Well Number TC-1

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

ESTIMATED STARTING DATE 2/16/02
ESTIMATED COMPLETION DATE 2/16/02

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

APPLICANT'S SIGNATURE Brett Bardsley DATE 2/12/02

PLEASE PRINT NAME Brett Bardsley

FOR OFFICE USE
PERMIT NUMBER W02-0210
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.

APPROVED [signature] DATE 2-14-02

Rev. 5-13-00

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
Former Chevron Service Station No. 21-0209
6500 International Boulevard
Oakland, California

CLIENT
Name Chevron Products Company
Address P.O. Box 6004 Phone (925) 842-9999
City San Ramon Zip 94583

APPLICANT
Name Delta Environmental Consultants
Address 3164 Gold Camp Dr. #200 Fax (916) 638-8385
City Rancho Cordova Phone (916) 638-2164
Zip 95670

TYPE OF PROJECT
Well Construction
Cathodic Protection
Water Supply
Monitoring ✓
Geotechnical Investigation
General
Contamination
Well Destruction

PROPOSED WATER SUPPLY WELL USE
New Domestic
Municipal
Industrial
Replacement Domestic
Irrigation
Other

DRILLING METHOD:
Mud Rotary
Cable
Air Rotary
Other
Auger

DRILLER'S NAME Vironex

DRILLER'S LICENSE NO. C57 # 705927

WELL PROJECTS
Drill Hole Diameter 8.25" in. Maximum
Casing Diameter 4.75" in. Depth 20 ft.
Surface Seal Depth 4 ft. Owner's Well Number TC-2

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

ESTIMATED STARTING DATE 2/16/02
ESTIMATED COMPLETION DATE 2/16/02

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

APPLICANT'S SIGNATURE Brett Bardsley DATE 2/12/02

PLEASE PRINT NAME Brett Bardsley

Rev. 5-13-00

FOR OFFICE USE
PERMIT NUMBER W02-0211
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.

APPROVED [signature] DATE 2-14-02

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
Former Chevron Service Station No. 21-0208
6004 International Boulevard
Oakland, California

CLIENT
Name Chevron Products Company
Address P.O. Box 6004 Phone (925) 842-8898
City San Ramon Zip 94583

APPLICANT
Name Delta Environmental Consultants Fax (916) 638-8385
Address 3164 Gold Camp Dr. #2 Phone (916) 639-2164
City Rancho Cordova Zip 95670

TYPE OF PROJECT
Well Construction
Cathodic Protection
Water Supply
Monitoring ✓
Geotechnical Investigation
General
Contamination
Well Destruction

PROPOSED WATER SUPPLY WELL USE
New Domestic
Municipal
Industrial
Replacement Domestic
Irrigation
Other

DRILLING METHOD:
Mud Rotary
Cable
Air Rotary
Other
Auger

DRILLER'S NAME Vironex

DRILLER'S LICENSE NO. C57# 709927

WELL PROJECTS
Drill Hole Diameter 3.25" in. Maximum
Casing Diameter .75" in. Depth 20 ft.
Surface Seal Depth 4 ft. Owner's Well Number TC-3

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

ESTIMATED STARTING DATE 2/16/02
ESTIMATED COMPLETION DATE 2/16/02

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

APPLICANT'S SIGNATURE Brett Bardsley DATE 2/12/02

PLEASE PRINT NAME Brett Bardsley

Rev.5-13-00

FOR OFFICE USE
PERMIT NUMBER W02-0212
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.

APPROVED [signature] DATE 2-14-02

ENCLOSURE C

Field Methods and Procedures

1.0 METHODS AND PROCEDURES

Soil Borings

A Delta Environmental Consultants, Inc. geologist continuously logs (if required) each borehole according to the Soil Classification method section during drilling and checks drill cuttings for indications of first recognizable occurrence of groundwater and volatile hydrocarbons using either a portable photoionization detector or flame ionization detector.

Geoprobe®

The Geoprobe® (geoprobe) soil borings are advanced using a truck-mounted, hydraulically-powered, percussion/probing machine that utilizes static force and percussion to advance a 2-inch diameter by either 2 or 4-foot long core barrel into the soil. Using a locked drive point, the core barrel is advanced through the soil until the desired depth is reached. The locked drive point is then released and the sampler is advanced two to four feet (depending on length of core barrel) and the soil samples are collected in expendable clear acetate liners, brass or stainless steel tubes. The core barrel is then brought to the surface and the soil samples retrieved. Groundwater samples are collected by advancing a Hydropunch® sampling device into the interval to be sampled and inserting a small diameter bailer or disposable tygon tubing, fitted with a check valve, into the Hydropunch® device, and retrieved by removing the bailer or hand-jacking tygon tubing until the water inside the tube reaches the ground surface.

Sampling below the water table is conducted with a dual-walled, sealed, sampling device. The dual walled sampling system simultaneously advances a 2-inch diameter outer drive casing with a 1.25-inch diameter inner split spoon, sample barrel. As the tools are advanced, the inner split spoon collects a soil core sample. This sampler is then retrieved while the outer casing remains in place protecting the integrity of the hole. A new sampler is lowered into place and advanced further to collect the next soil sample. The soil samples are collected in expendable liners that are clear acetate, brass or stainless steel. Depth discrete soil samples can also be collected with the dual-walled sampler. Using a locked drive point, the dual-walled sampler is advanced, separating the soil until the desired depth is reached. The locked drive point is then released. The sampler is advanced an additional two feet and the soil samples are collected in expendable liners. Groundwater samples can be collected in tandem with either the continuous or discrete soil sampling methods. Groundwater samples are collected by retracting the outer driving casing one

to two feet, which in turn allows groundwater to flow in through the bottom of the core barrel. The groundwater sample is then collected either with a small diameter bailer or by "hand jacking" tygon tubing fitted with a check valve until the water reaches the ground surface.

A portion of the soil is placed within a resealable plastic bag for field screening purposes. The portion of the sample to be submitted to the laboratory will be capped on each end, with no headspace in the brass tube or acetate liner, and stored on ice for submittal to the laboratory. The sealed sample is labeled and handled according to the Quality Assurance Plan.

All drilling and sampling equipment is either steam-cleaned, or washed with a solution of Alconox® (or equivalent) soap and water and triple rinsed between boreholes and samples to minimize the potential for cross-contamination.

Soil Classification

As the samples are obtained in the field, the field geologist classifies them in accordance with the Unified Soil Classification System. Representative portions of the samples are then retained for further examination and verification of the field classification. Logs of the borings are prepared indicating the depth and identification of the various strata, the N value and pertinent information regarding the method of maintaining and advancing the borehole.

Soil Sample Screening

After the soil samples in resealable (Ziploc® type) plastic bags have been brought to ambient temperature, the headspace vapors in the bag are screened with a photoionization detector equipped with a 10.2 eV lamp. The corner of the bag is opened and the detector probe immediately placed within the headspace. The highest observed reading is recorded.

Monitoring Well Construction

The bore hole diameter for a monitoring well will be a minimum of four inches larger than the outside diameter of the casing, unless previously approved by the regulating agency.

The monitoring well is typically cased with threaded, factory-perforated and blank Schedule 40 PVC. The perforated interval consists of slotted casing, generally with 0.01 or 0.02 inch-wide by 1.5-inch-long slots, with 4 slots per foot. A threaded or slip PVC cap is secured to the bottom of the casing. The slip cap can be secured with stainless steel screws or friction. No solvents or cements are used. Centering devices may be fastened to the casing to

ensure even distribution of filter material and grout within the borehole annulus. The well casing is thoroughly washed and/or steam cleaned. It may be purchased as pre-cleaned prior to completion.

Setting the casing inside the hollow-stem auger or geoprobe drive casing, sand filter pack (or pre-packed well screen) material is placed in the annular space to fill from boring bottom to generally one foot above the perforated interval. The filter pack material in the well is selected to permit the development of a zone of higher hydraulic conductivity adjacent to the well screen but not allow piping of the finer-grained formation materials into the well. The slot size of the well screen is selected so that it will retain a minimum of 95 percent of the filter pack material. Before placement of the bentonite plug, the well is surged to set the filter pack. After surging, the top of the filter pack is measured and, as necessary, additional filter pack material is added. The well is then surged again. This procedure is repeated until the filter pack will not settle further. After setting the filter pack, a one to two foot thick bentonite plug is set above the filter pack to prevent grout from infiltrating into the filter pack. A regulatory approved annular filling material such as neat cement, cement with five percent (by volume) bentonite or sand-cement grout will be used to fill the annulus from the bentonite plug to within one foot of the ground surface. The annular filling material is placed by a method approved by the regulatory agency overseeing the site. The remaining foot of the well will be completed using a traffic-rated vault that is installed around each wellhead for wells located in parking lots or driveways, while steel (or other material) "stovepipes" are usually set over wellheads in landscaped areas. A traffic-rated vault is typically set 1/2-inch above grade to minimize surface water from entering the vault. In areas that may be plowed for snow removal, the vault is set flush with the surface to prevent damage to the vault by a snowplow.

After completion, the well is thoroughly developed to remove residual drilling materials from the wellbore, and to improve well performance by removing fine material from the filter pack that may pass into the well. Well development techniques used may include pumping, surging, bailing, swabbing, jetting, flushing and airlifting. All development water is collected either in drums or tanks for temporary storage and is properly disposed of depending on laboratory analytical results. To minimize the potential for cross-contamination between wells, all development equipment is either steam cleaned or properly washed prior to use. At the request of the client, and approval of the regulatory agency, the well may be developed before placement of the bentonite plug and annular seal.

Soil Cuttings From Drilling Operations

Soil generated during drilling operations will be stockpiled on-site. The stockpile is typically set on asphalt and covered by plastic sheeting in a manner to prevent rain water from coming in contact with the soil. If no asphalt is available, the soil is placed on plastic sheeting and covered in the above method. The soil will remain on-site until the proper method for disposal is assessed.

Stockpile Soil Sampling

Stockpile soil sampling is performed under the direction of a registered geologist or civil engineer. Prior to collecting soil samples, Delta personnel will measure and calculate the volume of soil in the stockpile(s). The stockpile(s) is then divided into sections containing the predetermined volume-sampling interval (50, 100, 200, 500 yd^3, etc.). Soil samples are typically collected from 0.5 to 2 feet below the surface of the stockpile. In some instances, two to four soil samples may be collected from each sampling interval and composited into one prior to laboratory analysis. The soil samples are collected in cleaned, brass or stainless tubes of varying diameter and lengths (typically 2 x 6 inches) or other appropriately cleaned sample containers. A hand-driven sampler holding the sample container may be used. To reduce the potential for cross-contamination between samples, the sampler is cleaned between each sampling event. Upon recovery, the sample container is sealed to minimize the potential of volatilization and cross-contamination prior to chemical analysis. Soil sampling tubes are typically closed at each end with Teflon® sheeting and plastic caps. The soil sample is collected, labeled and handled according to the Quality Assurance Plan.

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present. A water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typical a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Groundwater

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the

bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Purging and Sampling

Monitoring wells are purged using a pump or bailer until pH, temperature and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. If three well volumes cannot be removed in one half an hour of time, the well is allowed to recharge to 80 percent of the original level. After recharging, a groundwater sample is then removed from the well using a disposable bailer. The water sample is collected, labeled and handled according to the Quality Assurance Plan. Water generated during the monitoring event is disposed of according to the regulatory accepted method pertaining to the site.

QUALITY ASSURANCE PLAN

General Sample Collection and Handling Procedures

Proper collection and handling are essential to ensure the quality of a sample. Each sample is collected in a suitable container, preserved correctly for the intended analysis and stored prior to analysis for no longer than the maximum allowable holding time. Details on the procedures for collection and handling of samples used on this project can be found in this section.

Water Sample Collection for Volatile Organic Analyses

For volatile organic analyses (VOA), the water sample is decanted into each VOA vial in such a manner so that there is no meniscus at the top of the vial. A cap is quickly secured to the top of the vial. The vial is inverted and gently tapped to see if air bubbles are present. If none are present, the vial is labeled and refrigerated according to Soil and Water Sample Labeling and Preservation procedures.

Soil and Water Sample Labeling and Preservation

Label information includes a unique sample identification number, job identification number, date and time. After labeling, all soil and water samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at the Delta office, the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form.

Upon recovery, the sample container is sealed to minimize the potential of volatilization and cross-contamination prior to chemical analysis. Soil sampling tubes are typically closed at each end with Teflon® sheeting and plastic caps. The sample is then placed in a Ziploc® type bag and sealed. The sample is labeled and refrigerated at approximately 4° Celsius for delivery, under strict chain-of-custody, to the analytical laboratory.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection, to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection and, a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel and any other pertinent field observations is recorded on the borehole log or in the field records. A California-certified laboratory analyzes the samples.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The laboratory sample-control officer verifies the integrity of the sample and confirms the samples are collected in the proper containers, preserved correctly and contain adequate volumes for analysis.

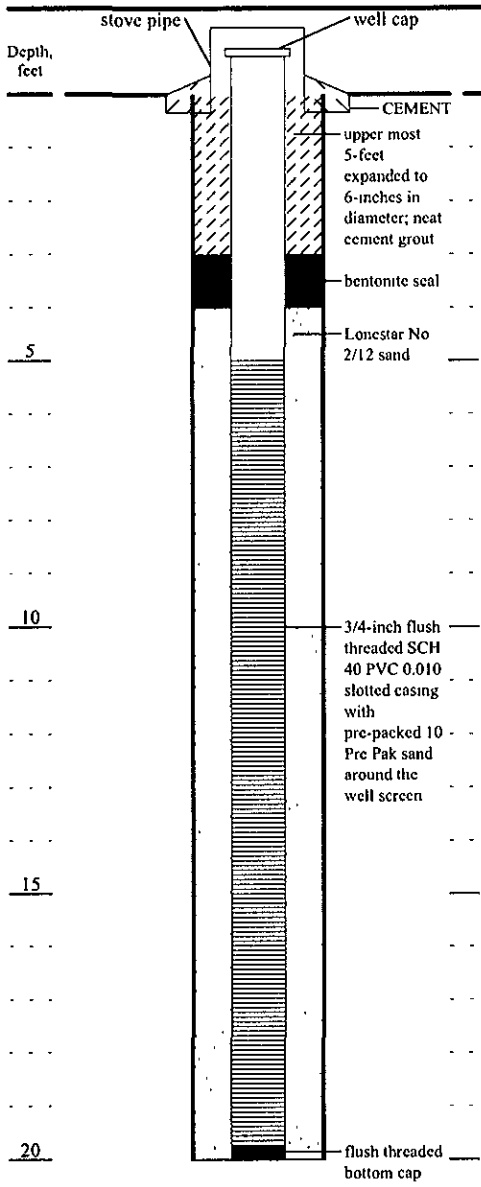
If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally required logbook maintained by the laboratory in the laboratory. The sample description, date received, client name and other relevant information is also recorded.

ENCLOSURE D

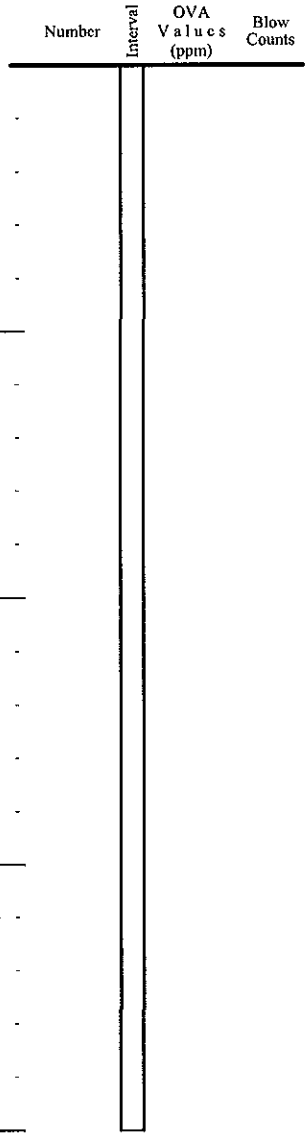
Log of Borings and Well Construction Details

Delta Environmental Consultants, Inc.	Street Address	Project ID	
	6006 International Boulevard	**Chevron Station No. 21-0208**	
	City & State	Surface Elev.	Well / Boring ID
	Oakland, California	**18.60'**	**TC-1**
	Delta Project #	Casing Elev.	Total Depth
	DG20-208	**22.26'**	**20'**

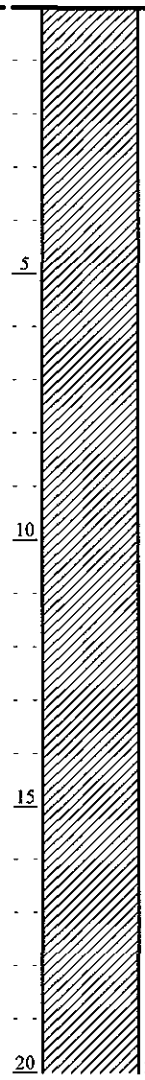
WELL CONSTRUCTION



SAMPLING DATA



SOIL PROFILE/LITHOLOGY



Visual Description

LEAN CLAY; Dark gray, low to medium plasticity, moist (CL)

SANDY LEAN CLAY , *fine to coarse grained sand; fine to* coarse grained gravel; light brown, low to medium plasticity, wet (CL)

LEAN CLAY, light brown, low to medium plasticity, moist (CL)

SANDY LEAN CLAY ; fine to coarse grained sand; fine to coarse grained gravel; light brown, low to medium plasticity, moist (CL)

LEAN CLAY; light brown, low to medium plasticity, moist (CL)

SANDY LEAN CLAY , fine to coarse grained sand; fine to coarse grained gravel; light brown, low to medium plasticity, moist (CL)

LEAN CLAY; light brown, low to medium plasticity, wet (CL)

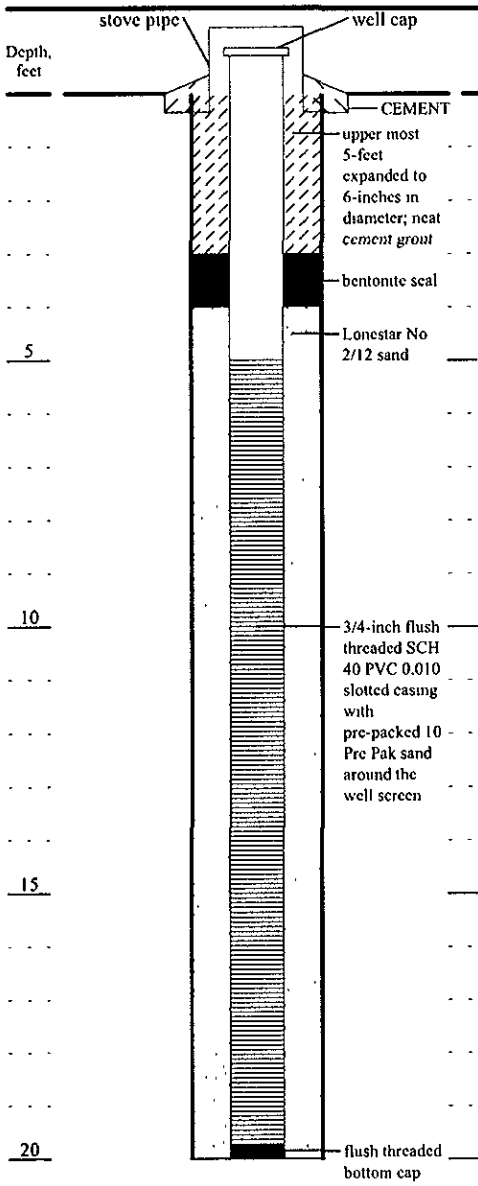
SANDY LEAN CLAY ; fine to coarse grained sand; fine to coarse grained gravel; light brown, low to medium plasticity, wet (CL)

LEAN CLAY; light brown, low to medium plasticity, moist (CL)

Dates and Times	Logger	Sampling Method & Diameter	Permitting Agency
	Brett A. Bardsley	**Continuous Core**	**Alameda County Public Works Agency**
Start	Drilling Company & Driller	Bore Hole Diameter	Permit #
2/23/02 0915	**Vironex, Mike Martin**	**3.25-inches**	**W02-0210**
Total Depth	Drillers C-57#	Diameter, Type & Slot Size of Casing	
2/23/02 0940	**705927**	**3/4-inch SCH 40 PVC/0.010 slot**	
Completion or backfill	Drilling Equipment and method		
2/23/02 1000	**Geoprobe Model 6600 DT, direct push**		**Page 1 of 1**

Delta Environmental Consultants, Inc.	Street Address	Project ID	
	6006 International Boulevard	**Chevron Station No. 21-0208**	
	City & State	Surface Elev.	Well / Boring ID
	Oakland, California	**18.40'**	**TC-2**
	Delta Project #	Casing Elev.	Total Depth
	DG20-208	**21.77'**	**20'**

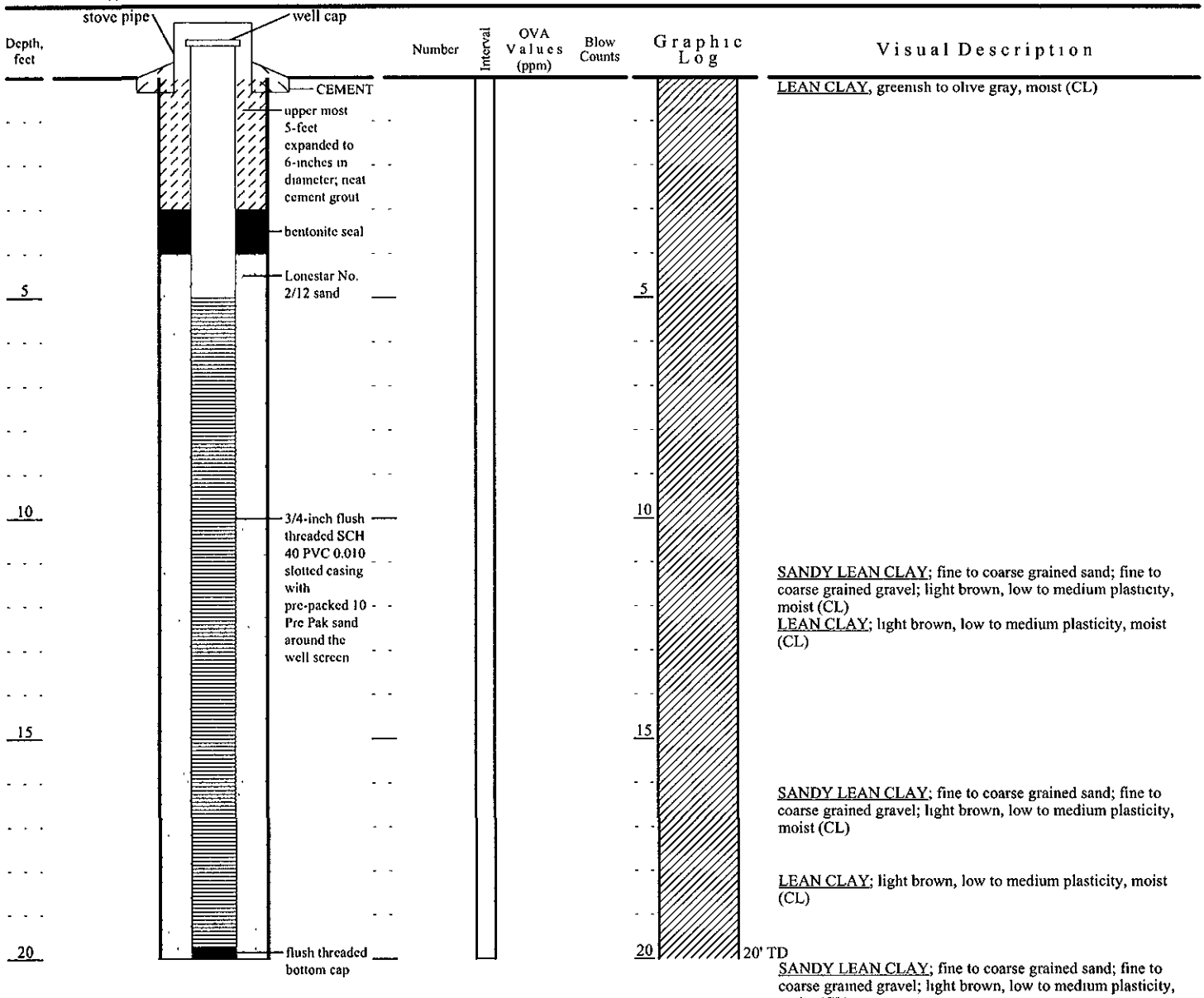
WELL CONSTRUCTION | SAMPLING DATA | SOIL PROFILE/LITHOLOGY



Number	Interval	OVA Values (ppm)	Blow Counts	Graphic Log	Visual Description
					LEAN CLAY; dark gray, low to medium plasticity, moist (CL)
					olive gray
					SANDY LEAN CLAY; fine to coarse grained sand; fine to coarse grained gravel; greenish gray, low to medium plasticity, wet (CL)
					LEAN CLAY; light brown, medium to high plasticity, moist (CL)
					20' TD

Dates and Times	Logger	Sampling Method & Diameter	Permitting Agency
	Brett A. Bardsley	**Continuous Core**	**Alameda County Public Works Agency**
Start	Drilling Company & Driller	Bore Hole Diameter	Permit #
2/23/02 0815	**Vironex, Mike Martin**	**3.25-inches**	**W02-0211**
Total Depth	Drillers C-57#	Diameter, Type & Slot Size of Casing	
2/23/02 0850	**705927**	**3/4-inch SCH 40 PVC/0.010 slot**	
Completion or backfill	Drilling Equipment and method		
2/23/02 0915	**Geoprobe Model 6600 DT, direct push**		**Page 1 of 1**

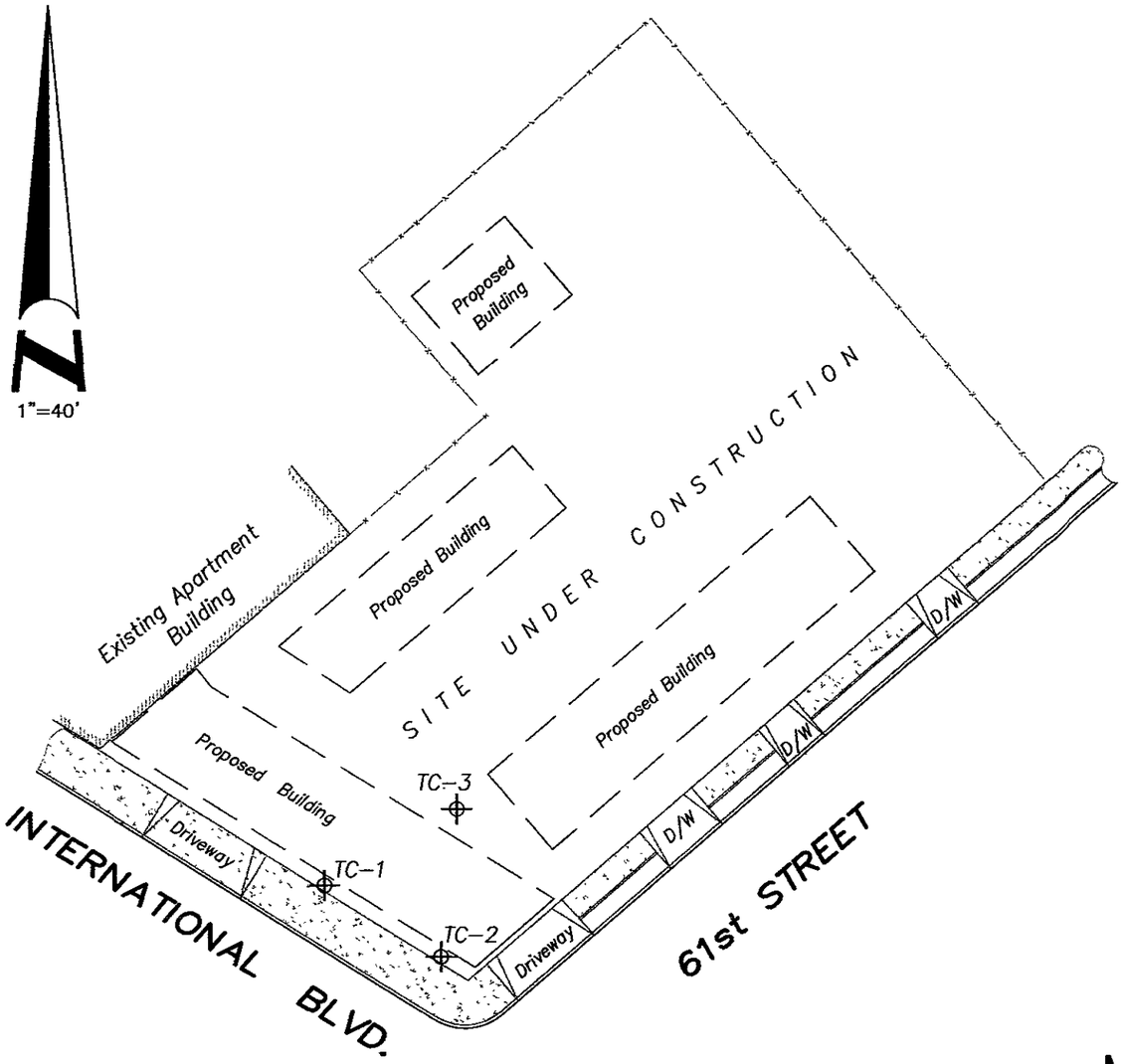
Delta Environmental Consultants, Inc.	Street Address	Project ID	
	6006 International Boulevard	**Chevron Station No. 21-0208**	
	City & State	Surface Elev.	Well / Boring ID
	Oakland, California	**19.30'**	**TC-3**
	Delta Project #	Casing Elev.	Total Depth
	DG20-208	**21.74'**	**20'**



Dates and Times	Logger	Sampling Method & Diameter	Permitting Agency
	Brett A. Bardsley	**Continuous Core**	**Alameda County Public Works Agency**
Start	Drilling Company & Driller	Bore Hole Diameter	Permit #
2/23/02 1000	**Vironex, Mike Martin**	**3.25-inches**	**W02-0212**
Total Depth	Drillers C-57#	Diameter, Type & Slot Size of Casing	
2/23/02 1025	**705927**	**3/4-inch SCH 40 PVC/0.010 slot**	
Completion or backfill	Drilling Equipment and method		
2/23/02 1100	**Geoprobe Model 6600 DT, direct push**		**Page 1 of 1**

ENCLOSURE E

Morrow Surveying Map



DESCRIPTION	NORTHING	EASTING	ELEV (PVC)	ELEV (GROUND)
TC-1	2105382.1	6070740.9	22.26	18.6
TC-2	2105363.5	6070771.2	21.77	18.4
TC-3	2105402.0	6070775.4	21.74	19.3

	LATITUDE	LONGITUDE
TC-1	37.7647568	-122.1984381
TC-2	37.7647071	-122.1983322
TC-3	37.7648131	-122.1983201

BASIS OF COORDINATES AND ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3 COORDINATES FROM GPS OBSERVATIONS USING UNIVERSITY OF CALIFORNIA BAY AREA DEFORMATION CORS STATION OBSERVATION FILES AND BASED ON THE CALIFORNIA SPATIAL REFERENCE CENTER DATUM, REFERENCE EPOCH 2000.35.

COORDINATE DATUM IS NAD 83(1986).

DATUM ELLIPSOID IS GRS80.

REFERENCE GEOID IS NGS99.

CORS STATIONS USED WERE BRIB AND PBL1.

ELEVATIONS BASED ON CITY OF OAKLAND BENCHMARK DESIGNATED 1931 IN FIELD BOOK BL 53, PAGE 70. CUT SQUARE AT MIDPOINT OF RETURN, S.E. CORNER 61ST & E. 14TH STREETS. ELEVATION=18.63'

Monitoring Well Exhibit

Prepared for:

GETTLER - RYAN INC.

GRAPHIC SCALE

40 0 20 40

(IN FEET)

1 inch = 40 ft.

Former Chevron Service Station No. 21-0208
6006 International Boulevard
Oakland
Alameda County
California

Morrow Surveying

1450 Harbor Blvd. Ste. D
West Sacramento
California 95691
(916) 372-8124
tom@morrowsurveying.com

Date: April 2, 2002
Scale: 1" = 40'
Sheet 1 of 1
Revised:
Field Book: MW-8
Dwg. No. 2480-021 SJP

ENCLOSURE F

Groundwater Sampling Field Data Sheets

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# TC-1 Project Name: Former Chevron Station No. 21-0208 Project No. DF 20-208

Location (address) 6006 International Boulevard, Oakland, California

Date Sampled: 02 / 27 / 02 Time: _____

Wellhead assembly condition: _____ Good _____ Fair _____ Poor (If poor, see comments)

Equipment Replaced: _____ bolts _____ locks _____ locking cap

Well Depth 19 ft below top of casing Casing diameter .75 inches

Depth to water (below top of casing) 7.56 ft. Date: 02 / 27 / 02 Time 0840

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ✓ Submersible pump _____ Bailer _____ Centrifugal pump _____ Other _____

At least _____ well volumes have been evacuated before sampling.

Tubing (type: _____). (new or previously used) was used to purge well

Sampling method: ✓ Disposable bailer _____ Sampling port

Samples collected _____ Sample appearance _____

Note any sampling problems Well was purged dry three times with pump. Approximately 1.5 gallons of water was extracted. Well was slow to recharge.

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance (umnos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)

Comments: _____

Transportation (thermal preservation) Cooler, Ice, VOAs, Amber Liter

Form completed by: Brett Bardsley Sampled by: Brett Bardsley

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# TC-2 Project Name: Former Chevron Station No. 21-0208 Project No. DF 20-208

Location (address) 6006 International Boulevard, Oakland, California

Date Sampled: 02 / 27 / 02 Time: _____

Wellhead assembly condition: _____ Good _____ Fair _____ Poor (If poor, see comments)

Equipment Replaced: _____ bolts _____ locks _____ locking cap

Well Depth 18 ft below top of casing Casing diameter .75 inches

Depth to water (below top of casing) 6.47 ft. Date: 02 / 27 / 02 Time 0830

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ✓ Submersible pump _____ Bailer _____ Centrifugal pump _____ Other _____

At least _____ well volumes have been evacuated before sampling.

Tubing (type: _____). (new or previously used) was used to purge well

Sampling method: ✓ Disposable bailer _____ Sampling port

Samples collected _____ Sample appearance _____

Note any sampling problems Well was purged dry three times with pump. Approximately 2 gallons of water was extracted. Driller said that this well may have sedimentation problem.

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance (umnos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)

Comments: _____

Transportation (thermal preservation) Cooler, Ice, VOAs, Amber Liter

Form completed by: Bret Bardsley Sampled by: Bret Bardsley

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# TC-3 Project Name: Former Chevron Station No. 21-0208 Project No. 05-20-208

Location (address) 6006 International Boulevard, Oakland, California

Date Sampled: 2 / 27 / 02 Time: _____

Wellhead assembly condition: _____ Good _____ Fair _____ Poor (If poor, see comments)

Equipment Replaced: _____ bolts _____ locks _____ locking cap

Well Depth 20 ft below top of casing Casing diameter .75 inches

Depth to water (below top of casing) 5.90 ft. Date: 02 / 27 / 02 Time 0842

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: ✓ Submersible pump _____ Bailer _____ Centrifugal pump _____ Other _____

At least _____ well volumes have been evacuated before sampling.

Tubing (type: _____). (new or previously used) was used to purge well

Sampling method: ✓ Disposable bailer _____ Sampling port

Samples collected _____ Sample appearance _____

Note any sampling problems Well was purged dry three times with pump. Approximately 2 gallons of water was extracted from the well. Well water appeared sediment free after third time.

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°F)	pH Units	Conductance (umnos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)

Comments: _____

Transportation (thermal preservation) Cooler, Ice, VOAs, Amber Liter

Form completed by: Brett Bardsley Sampled by: Brett Bardsley

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# TC-1 Project Name: Former Chevron Station No. 21-0208 Project No. DF 20-208

Location (address) 6006 International Boulevard, Oakland, California

Date Sampled: 3 / 27 / 02 Time: 1012

Wellhead assembly condition: _____ Good _____ Fair _____ Poor (If poor, see comments)

Equipment Replaced: _____ bolts _____ locks _____ locking cap

Well Depth 18 ft below top of casing Casing diameter .75 inches

Depth to water (below top of casing) 6.89 ft. Date: 3 / 27 / 02 Time 0845

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: _____ Submersible pump ✓ Bailer _____ Centrifugal pump _____ Other _____

At least 2.5 well volumes have been evacuated before sampling.

Tubing (type: _____). (new or previously used) was used to purge well

Sampling method: ✓ Disposable bailer _____ Sampling port

Samples collected _____ Sample appearance _____

Note any sampling problems For 2" well the casing watercolumn is 5.5. A 3/4 inch well is 37% of 2" so three casing volumes is 2.035. Actual purged 2.5, well went dry after purging.

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°C)	pH Units	Conductance (umnos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
910	19.9	6.70	1060		1
920	19.8	6.74	1062		2.4

Comments: _____

Transportation (thermal preservation) Cooler, Ice, VOAs, Amber Liter

Form completed by: Brett Bardsley Sampled by: Brett Bardsley

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# TC-2 Project Name: Former Chevron Station No. 21-6208 Project No. 06520-208

Location (address) 6006 International Boulevard, Oakland, California

Date Sampled: 3 / 27 / 02 Time: 1225

Wellhead assembly condition: _____ Good _____ Fair _____ Poor (If poor, see comments)

Equipment Replaced: _____ bolts _____ locks _____ locking cap

Well Depth 18 ft below top of casing Casing diameter .75 inches

Depth to water (below top of casing) 6.45 ft. Date: 3 / 27 / 02 Time 0849

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: _____ Submersible pump ✓ Bailer _____ Centrifugal pump _____ Other _____

At least 2 gallons well volumes have been evacuated before sampling.

Tubing (type: _____). (new or previously used) was used to purge well

Sampling method: ✓ Disposable bailer _____ Sampling port

Samples collected _____ Sample appearance _____

Note any sampling problems For 2" well the casing water column is 11.55, A 3/4 inch well is 37% of 2" so three casing volumes is 2.1; Actual purged 2 gallons, well went dry quickly. Could not measure depth to well because I could not get water level indicator past 10 feet below top of casing.

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°C)	pH Units	Conductance (umnos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
1019	18.8	6.88	613		1
1030	19.0	6.94	610		2

Comments: _____

Transportation (thermal preservation) Cooler, Ice, VOAs, Amber Liter

Form completed by: Brett Bardsley Sampled by: Brett Bardsley

SAMPLING INFORMATION SHEET

Delta Environmental Consultants, Inc.

Sample ID# TC-3 Project Name: Former Chevron Station No. 21-0208 Project No. 98-20-208

Location (address) 6006 International Boulevard, Oakland, California

Date Sampled: 3 / 27 / 02 Time: ~~1056~~ 1146

Wellhead assembly condition: ✓ Good _____ Fair _____ Poor (If poor, see comments)

Equipment Replaced: _____ bolts _____ locks _____ locking cap

Well Depth 20 ft below top of casing Casing diameter .75 inches

Depth to water (below top of casing) 6.06 ft. Date: 3 / 27 / 02 Time 0855

Well Casing Volume Multiplier: 0.16 for 2", 0.65 for 4", 1.47 for 6"

Purging method: _____ Submersible pump X Bailer _____ Centrifugal pump _____ Other _____

At least 2 gallons well volumes have been evacuated before sampling.

Tubing (type: _____). (new or previously used) was used to purge well

Sampling method: X Disposable bailer _____ Sampling port

Samples collected _____ Sample appearance _____

Note any sampling problems For 2" well, The casing water column is 13.94. A ~~2~~ 3/4 inch well is 37% of 2" so three casing volumes is 2.5 gallons, Actual purged 2 gallons, Well went dry after purging. ~~Sample~~ Well was sampled after it recharged.

GROUND WATER EVACUATION/STABILIZATION DATA

Time	Temperature (°C)	pH Units	Conductance (umnos/cm)	Water Level (Nearest 0.01 ft)	Cumulative Volume of Water Removed from Well (gallons)
~~1056~~	19.0	8.94	612		1
1110	19.0	8.83	608		2

Comments: _____

Transportation (thermal preservation) cooler, Ice, VOAs, Amber Liter

Form completed by: Brett Bardsley Sampled by: Brett Bardsley

ENCLOSURE G

Groundwater Sample Laboratory Analytical Reports

CASE NARRATIVE

Prepared For:

Thomas Bauhs
Chevron Products Company
6001 Bollinger Canyon Road
Building L
P.O. Box 6004
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 798691. Samples arrived at the laboratory on Friday, March 01, 2002.

METHODOLOGY

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

COMMENTS

The TC-1 and TC-2 vials from Facility 210208 submitted for the BTEX/MTBE and TPH-GRO analysis did not have a pH < 2 at the time of the 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.

Lancaster Laboratories
Where quality is a science.

ANALYTICAL RESULTS

Prepared for:

Chevron Products
6001 Bollinger Canyon Road
Building L PO Box 6004
San Ramon CA 94583-0904
925-842-8582

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 798691. Samples arrived at the laboratory on Friday, March 01, 2002. The PO# for this group is 99011184 and the release number is BAUHS.

Client Description			Lancaster Labs Number
TC-1-W-020227	NA	Water	3780905
TC-2-W-020227	NA	Water	3780906
TC-3-W-020227	NA	Water	3780907

METHODOLOGY

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

1 COPY TO Delta Environmental Attn: Mike Berrington

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

Respectfully Submitted,

Steven A. Skiles
Sr. Chemist

Lancaster Laboratories
Where quality is a science.

Lancaster Laboratories Sample No. WW 3780905

Collected:02/27/2002 12:30 by BB

Account Number: 10900

Submitted: 03/01/2002 09:10
Reported: 03/20/2002 at 15:20
Discard: 04/20/2002
TC-1-W-020227 NA Water

Chevron Products
6001 Bollinger Canyon Road
Building L PO Box 6004
San Ramon CA 94583-0904

Fac# 210208 DECR
6006 International Blvd. NA TC-1

TC1GC

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	330.	95.	ug/l	5

According to the California LUFT Protocol, the quantitation for Diesel Range Organics was performed by peak area comparison of the sample pattern to that of our #2 fuel oil reference standard (between C10 and C28 normal hydrocarbons).
Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

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.

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.

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.

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

Lancaster Laboratories
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Lancaster Laboratories Sample No. WW 3780905

Collected:02/27/2002 12:30 by BB

Account Number: 10900

Submitted: 03/01/2002 09:10
Reported: 03/20/2002 at 15:20
Discard: 04/20/2002
TC-1-W-020227 NA Water

Chevron Products
6001 Bollinger Canyon Road
Building L PO Box 6004
San Ramon CA 94583-0904

Fac# 210208 DECR
6006 International Blvd. NA TC-1

TC1GC

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

appropriate for the laboratory to adjust the pH at the time of sample receipt.

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	CA LUFT Diesel Range Organics	1	03/14/2002 12:02	Tracy A Cole	5
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	03/04/2002 21:55	Melissa D Mann	1
02159	BTEX, MTBE	SW-846 8021B	1	03/04/2002 21:55	Melissa D Mann	1
01146	GC VOA Water Prep	SW-846 5030B	1	03/04/2002 21:55	Melissa D Mann	n.a.
02176	Silica Quick Gel Cleanup	SW846, 3630C modified	1	03/04/2002 12:30	John A Myers	1

Lancaster Laboratories
Where quality is a science.

Lancaster Laboratories Sample No. WW 3780906

Collected:02/27/2002 12:15 by BB

Account Number: 10900

Submitted: 03/01/2002 09:10
Reported: 03/20/2002 at 15:20
Discard: 04/20/2002
TC-2-W-020227 NA Water

Chevron Products
6001 Bollinger Canyon Road
Building L PO Box 6004
San Ramon CA 94583-0904

Fac# 210208 DECR
6006 International Blvd. NA TC-2

TC2GC

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	8,400.	110.	ug/l	5
	According to the California LUFT Protocol, the quantitation for Diesel Range Organics was performed by peak area comparison of the sample pattern to that of our #2 fuel oil reference standard (between C10 and C28 normal hydrocarbons). Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level. The observed sample pattern is not typical of diesel/#2 fuel oil. Due to the nature of the sample matrix, the surrogate standard recovery is above the range of specifications.					
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	480.	250.	ug/l	5
	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. 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.					
02159	BTEX, MTBE					
02161	Benzene	71-43-2	N.D.	2.5	ug/l	5
02164	Toluene	108-88-3	8.0	2.5	ug/l	5
02166	Ethylbenzene	100-41-4	N.D.	2.5	ug/l	5
02171	Total Xylenes	1330-20-7	N.D.	7.5	ug/l	5
02172	Methyl tert-Butyl Ether	1634-04-4	N.D.	13.	ug/l	5
	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.					

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Lancaster Laboratories Sample No. WW 3780906

Collected:02/27/2002 12:15 by BB

Account Number: 10900

Submitted: 03/01/2002 09:10
Reported: 03/20/2002 at 15:20
Discard: 04/20/2002
TC-2-W-020227 NA Water

Chevron Products
6001 Bollinger Canyon Road
Building L PO Box 6004
San Ramon CA 94583-0904

Fac# 210208 DECR
6006 International Blvd. NA TC-2

TC2GC

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

Due to excessive foaming of the sample, normal reporting limits were not attained.

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.

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	CA LUFT Diesel Range Organics	1	03/05/2002 20:25	Tracy A Cole	5
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	03/04/2002 22:30	Melissa D Mann	5
02159	BTEX, MTBE	SW-846 8021B	1	03/04/2002 22:30	Melissa D Mann	5
01146	GC VOA Water Prep	SW-846 5030B	1	03/04/2002 22:30	Melissa D Mann	n.a.
02176	Silica Quick Gel Cleanup	SW846, 3630C modified	1	03/04/2002 12:30	John A Myers	1

Lancaster Laboratories
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Lancaster Laboratories Sample No. WW 3780907

Collected:02/27/2002 11:30 by BB

Account Number: 10900

Submitted: 03/01/2002 09:10
Reported: 03/20/2002 at 15:20
Discard: 04/20/2002
TC-3-W-020227 NA Water

Chevron Products
6001 Bollinger Canyon Road
Building L PO Box 6004
San Ramon CA 94583-0904

Fac# 210208 DECR
6006 International Blvd. NA TC-3

TC3GC

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	1,200.	94.	ug/l	5
	According to the California LUFT Protocol, the quantitation for Diesel Range Organics was performed by peak area comparison of the sample pattern to that of our #2 fuel oil reference standard (between C10 and C28 normal hydrocarbons). Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	3,100.	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.	10.	ug/l	5
02164	Toluene	108-88-3	6.8	2.5	ug/l	5
02166	Ethylbenzene	100-41-4	13.	2.5	ug/l	5
02171	Total Xylenes	1330-20-7	N.D.	15.	ug/l	5
02172	Methyl tert-Butyl Ether	1634-04-4	N.D.	25.	ug/l	5
	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.					

Due to the nature of the sample matrix, normal reporting limits were not attained.

State of California Lab Certification No. 2116

MEMBER ACIL
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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
Where quality is a science.

Lancaster Laboratories Sample No. WW 3780907

Collected:02/27/2002 11:30 by BB

Account Number: 10900

Submitted: 03/01/2002 09:10
Reported: 03/20/2002 at 15:20
Discard: 04/20/2002
TC-3-W-020227 NA Water

Chevron Products
6001 Bollinger Canyon Road
Building L PO Box 6004
San Ramon CA 94583-0904

Fac# 210208 DECR
6006 International Blvd. NA TC-3

TC3GC

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	CA LUFT Diesel Range Organics	1	03/07/2002 17:20	Devin M Lahr	5
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	03/05/2002 13:34	Melissa D Mann	1
02159	BTEX, MTBE	SW-846 8021B	1	03/05/2002 21:26	Melissa D Mann	5
01146	GC VOA Water Prep	SW-846 5030B	1	03/05/2002 13:34	Melissa D Mann	n.a.
02176	Silica Quick Gel Cleanup	SW846, 3630C modified	1	03/04/2002 12:30	John A Myers	1

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Quality Control Summary

Client Name: Chevron Products
Group Number: 798691
Reported: 03/20/02 at 03:21 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: 020610008A	Sample number(s): 3780905-3780907							
TPH-DRO CALUFT(Water) w/Si Gel	N.D.	20.	ug/l	93	91	54-120	1	20
Batch number: 02063A56A	Sample number(s): 3780905-3780906							
TPH-GRO - Waters	N.D.	50.	ug/l	93	96	76-126	4	30
Benzene	N.D.	.5	ug/l	113	110	80-118	3	30
Toluene	N.D.	.5	ug/l	111	106	82-119	5	30
Ethylbenzene	N.D.	.5	ug/l	110	105	81-119	5	30
Total Xylenes	N.D.	1.5	ug/l	111	106	82-120	4	30
Methyl tert-Butyl Ether	N.D.	2.5	ug/l	109	103	79-127	6	30
Batch number: 02064A55B	Sample number(s): 3780907							
TPH-GRO - Waters	N.D.	50.	ug/l	86	85	76-126	1	30
Benzene	N.D.	.5	ug/l	96	98	80-118	2	30
Toluene	N.D.	.5	ug/l	105	108	82-119	2	30
Ethylbenzene	N.D.	.5	ug/l	108	110	81-119	2	30
Total Xylenes	N.D.	1.5	ug/l	107	110	82-120	2	30
Methyl tert-Butyl Ether	N.D.	2.5	ug/l	99	99	79-127	0	30

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: 02063A56A	Sample number(s): 3780905-3780906								
TPH-GRO - Waters	109		74-132						
Benzene	113		77-131						
Toluene	111		80-128						
Ethylbenzene	111		76-132						
Total Xylenes	112		69-140						
Methyl tert-Butyl Ether	102		61-144						
Batch number: 02064A55B	Sample number(s): 3780907								
TPH-GRO - Waters	93		74-132						

Surrogate Quality Control

Analysis Name: TPH-DRO CALUFT(Water) w/Si Gel
Batch number: 020610008A

	Orthoterphenyl
3780905	104

*- 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.

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
Where Quality is Control

Quality Control Summary

Client Name: Chevron Products
Group Number: 798691
Reported: 03/20/02 at 03:21 PM

Surrogate Quality Control

3780906	220*
3780907	105
Blank	100
LCS	70
LCSD	68
Limits:	59-157

Analysis Name: TPH-GRO - Waters
Batch number: 02063A56A

	Trifluorotoluene-F	Trifluorotoluene-P
3780905	93	97
3780906	91	94
Blank	94	98
LCS	108	99
LCSD	108	99
MS	109	98
Limits:	67-135	71-130

Analysis Name: TPH-GRO - Waters
Batch number: 02064A55B

	Trifluorotoluene-F	Trifluorotoluene-P
3780907	116	81
Blank	94	86
LCS	100	86
LCSD	101	85
MS	102	87
Limits:	67-135	71-130

*- 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.

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
Where quality is a science.

10900 WA 3/8/02

For Lancaster Laboratories use only

Acct. #: 10992 Sample #: 378090S-07 SCR#:

Facility #: Former Chevron No. 21-208

Site Address: 6006 International Boulevard

Chevron PM: Tom Bauhs Lead Consultant: Delta Env. Consultants Inc.

Consultant/Office: 3164 Gold Camp Drive, Suite 200, Rancho Cordova, CA 95670

Consultant Prj. Mgr.: Mike Berrington

Consultant Phone #: 916-536-2616 Fax #: 916-638-8385

Sampler: Brett Bardsley

Service Order #: ☐ Non SAR:

Analyses Requested

Preservation Codes

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX + MTBE 8260 ☐ 8021 ☑	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☑ Silica Gel Cleanup	8260 full scan	Oxygenates ___	Lead 7420 ☐ 7421 ☐
TC-1	water			02 02 27	1230				6	X	X	X			
TC-2	water			02 02 27	1215				7	X	X	X			
TC-3	water			02 02 27	1130				7	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

All containers are HCL preserved

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

Relinquished by:	Date	Time	Received by:	Date	Time
Brett Bardsley	2/28/02	0735			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by.	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS FedEx Other			Received by: Kathy Birkley	3-5-02	0910
Temperature Upon Receipt 3° C°			Custody Seals Intact? Yes No N/A		

3460 Rev. 10/04/01

CASE NARRATIVE

Prepared For:

Thomas Bauhs
Chevron Products Company
6001 Bollinger Canyon Road
Building L
P.O. Box 6004
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 802178. Samples arrived at the laboratory on Friday, March 29, 2002.

METHODOLOGY

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

COMMENTS

The percent recovery for the TPH-GRO surrogate was outside the QC limits for the MS associated with samples TC-1, TC-2 and TC-3 from Facility 210208. The compound met recovery criteria in the LCS/LCSD analysis.

The surrogate data associated with sample TC-2 from Facility 210208 is outside the QC limits for the TPH-DRO analysis. There was no sample available for a reextraction.

Lancaster Laboratories
Where quality is a science.

ANALYTICAL RESULTS

Prepared for:

Chevron Products Company
6001 Bollinger Canyon Rd
Building L P.O. Box 6004
San Ramon CA 94583-0904
916-536-2623

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 802178. Samples arrived at the laboratory on Friday, March 29, 2002. The PO# for this group is 99011184 and the release number is BAUHS.

Client Description			Lancaster Labs Number
TC-1-W-020327	Grab	Water	3797287
TC-2-W-020327	Grab	Water	3797288
TC-3-W-020327	Grab	Water	3797289

METHODOLOGY

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

1 COPY TO Delta Environmental Attn: Mr. Mike Berrington

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

Respectfully Submitted,

Christine M. Dulaney
Sr. Chemist

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories Sample No. WW 3797287

Collected:03/27/2002 10:12 by BB

Account Number: 10900

Submitted: 03/29/2002 09:15
Reported: 04/09/2002 at 12:01
Discard: 05/10/2002
TC-1-W-020327 Grab Water

Chevron Products Company
6001 Bollinger Canyon Rd
Building L P.O. Box 6004
San Ramon CA 94583-0904

Facility# 210208 DECR
6006 INT'L BLVD NA TC-1

TC1--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	1,300.	50.	ug/l	1
	According to the California LUFT Protocol, the quantitation for Diesel Range Organics was performed by peak area comparison of the sample pattern to that of our #2 fuel oil reference standard (between C10 and C28 normal hydrocarbons). Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.					
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	210.	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. The percent recovery for the surrogate was outside QC limits in the MS/MSD associated with this sample. The compound met recovery criteria in the LCS analysis.					
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	1.2	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	7.0	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.					

State of California Lab Certification No. 2116

Laboratory Chronicle

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
Where quality is a science.

Lancaster Laboratories Sample No. WW 3797287

Collected:03/27/2002 10:12 by BB

Account Number: 10900

Submitted: 03/29/2002 09:15
Reported: 04/09/2002 at 12:01
Discard: 05/10/2002
TC-1-W-020327 Grab Water

Chevron Products Company
6001 Bollinger Canyon Rd
Building L P.O. Box 6004
San Ramon CA 94583-0904

Facility# 210208 DECR
6006 INT'L BLVD NA TC-1

TC1--

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	CA LUFT Diesel Range Organics	1	04/04/2002 19:18	Tracy A Cole	1
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	04/02/2002 12:06	John B Kiser	1
02159	BTEX, MTBE	SW-846 8021B	1	04/02/2002 12:06	John B Kiser	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/02/2002 12:06	John B Kiser	n.a.
02176	Silica Quick Gel Cleanup	SW846, 3630C modified	1	04/03/2002 09:00	William P Stafford	1
07003	Extraction - DRO (Waters)	TPH by CA LUFT	1	04/03/2002 09:00	William P Stafford	1

Lancaster Laboratories
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Lancaster Laboratories Sample No. WW 3797288

Collected:03/27/2002 12:25 by BB

Account Number: 10900

Submitted: 03/29/2002 09:15
Reported: 04/09/2002 at 12:01
Discard: 05/10/2002
TC-2-W-020327 Grab Water

Chevron Products Company
6001 Bollinger Canyon Rd
Building L P.O. Box 6004
San Ramon CA 94583-0904

Facility# 210208 DECR
6006 INT'L BLVD NA TC-2

TC2--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	1,600.	95.	ug/l	5

According to the California LUFT Protocol, the quantitation for Diesel Range Organics was performed by peak area comparison of the sample pattern to that of our #2 fuel oil reference standard (between C10 and C28 normal hydrocarbons).
Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

The surrogate data is outside the QC limits. There was no sample available for a reextraction.

01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	800.	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.
The percent recovery for the surrogate
was outside QC limits in the MS/MSD associated with this sample.
The compound met recovery criteria in the LCS analysis.

Due to the nature of the sample matrix, the surrogate standard recovery is above the range of specifications.

02159	BTEX, MTBE					
02161	Benzene	71-43-2	4.1	0.50	ug/l	1
02164	Toluene	108-88-3	N.D.	0.50	ug/l	1
02166	Ethylbenzene	100-41-4	3.6	0.50	ug/l	1
02171	Total Xylenes	1330-20-7	5.5	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.

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Lancaster Laboratories Sample No. WW 3797288

Collected:03/27/2002 12:25 by BB

Account Number: 10900

Submitted: 03/29/2002 09:15
Reported: 04/09/2002 at 12:01
Discard: 05/10/2002
TC-2-W-020327 Grab Water

Chevron Products Company
6001 Bollinger Canyon Rd
Building L P.O. Box 6004
San Ramon CA 94583-0904

Facility# 210208 DECR
6006 INT'L BLVD NA TC-2

TC2--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	CA LUFT Diesel Range Organics	1	04/06/2002 04:30	Tracy A Cole	5
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	04/02/2002 14:48	John B Kiser	1
02159	BTEX, MTBE	SW-846 8021B	1	04/02/2002 14:48	John B Kiser	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/02/2002 14:48	John B Kiser	n.a.
02176	Silica Quick Gel Cleanup	SW846, 3630C modified	1	04/03/2002 09:00	William P Stafford	1
07003	Extraction - DRO (Waters)	TPH by CA LUFT	1	04/03/2002 09:00	William P Stafford	1

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Lancaster Laboratories Sample No. WW 3797289

Collected:03/27/2002 11:46 by BB

Account Number: 10900

Submitted: 03/29/2002 09:15
Reported: 04/09/2002 at 12:01
Discard: 05/10/2002
TC-3-W-020327 Grab Water

Chevron Products Company
6001 Bollinger Canyon Rd
Building L P.O. Box 6004
San Ramon CA 94583-0904

Facility# 210208
6006 INT'L BLVD

NA TC-3 DECR

TC3--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	1,900.	96.	ug/l	5

According to the California LUFT Protocol, the quantitation for Diesel Range Organics was performed by peak area comparison of the sample pattern to that of our #2 fuel oil reference standard (between C10 and C28 normal hydrocarbons).
Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	1,800.	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.
The percent recovery for the surrogate
was outside QC limits in the MS/MSD associated with this sample.
The compound met recovery criteria in the LCS analysis.

Due to the nature of the sample matrix, the surrogate standard recovery is above the range of specifications.

02159	BTEX, MTBE					
02161	Benzene	71-43-2	1.8	0.50	ug/l	1
02164	Toluene	108-88-3	N.D.	0.50	ug/l	1
02166	Ethylbenzene	100-41-4	8.0	0.50	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	10.	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.

Due to the presence of interferents near their retention time, normal reporting limits were not attained for total xylenes. The presence or concentration of these compounds cannot be determined below the reporting limits due to the presence of these interferents.

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Lancaster Laboratories Sample No. WW 3797289

Collected:03/27/2002 11:46 by BB

Account Number: 10900

Submitted: 03/29/2002 09:15
Reported: 04/09/2002 at 12:01
Discard: 05/10/2002
TC-3-W-020327 Grab Water

Chevron Products Company
6001 Bollinger Canyon Rd
Building L P.O. Box 6004
San Ramon CA 94583-0904

Facility# 210208 DECR
6006 INT'L BLVD NA TC-3

TC3--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02202	TPH-DRO CALUFT(Water) w/Si Gel	CA LUFT Diesel Range Organics	1	04/06/2002 04:52	Tracy A Cole	5
01729	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	04/02/2002 23:58	John B Kiser	1
02159	BTEX, MTBE	SW-846 8021B	1	04/02/2002 23:58	John B Kiser	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/02/2002 23:58	John B Kiser	n.a.
02176	Silica Quick Gel Cleanup	SW846, 3630C modified	1	04/03/2002 09:00	William P Stafford	1
07003	Extraction - DRO (Waters)	TPH by CA LUFT	1	04/03/2002 09:00	William P Stafford	1

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Quality Control Summary

Client Name: Chevron Products Company
Group Number: 802178
Reported: 04/09/02 at 12:02 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: 020920027A	Sample number(s): 3797287-3797289							
TPH-DRO CALUFT(Water) w/Si Gel	N.D.	50.	ug/l	94	73	54-120	26*	20
Batch number: 02092A16A	Sample number(s): 3797287-3797289							
TPH-GRO - Waters	N.D.	50.	ug/l	98		76-126		
Benzene	N.D.	.5	ug/l	115	117	80-118	26*	
Toluene	N.D.	.5	ug/l	110	112	82-119	26*	
Ethylbenzene	N.D.	.5	ug/l	109	111	81-119	26*	
Total Xylenes	N.D.	1.5	ug/l	110	112	82-120	26*	
Methyl tert-Butyl Ether	N.D.	2.5	ug/l	106	104	79-127	26*	

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: 02092A16A	Sample number(s): 3797287-3797289								
TPH-GRO - Waters	41*	77	74-132	27	30				
Benzene	113		77-131						
Toluene	106		80-128						
Ethylbenzene	110		76-132						
Total Xylenes	118		69-140						
Methyl tert-Butyl Ether	105		61-144						

Surrogate Quality Control

Analysis Name: TPH-DRO CALUFT(Water) w/Si Gel
Batch number: 020920027A

	Orthoterphenyl
3797287	97
3797288	52*
3797289	60
Blank	78
LCS	104
LCSD	87
Limits:	59-157

Analysis Name: TPH-GRO - Waters
Batch number: 02092A16A

	Trifluorotoluene-F	Trifluorotoluene-P
3797287	79	101
3797288	138*	117

*- 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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2425 New Holland Pike
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Where quality is a science.

Quality Control Summary

Client Name: Chevron Products Company
Group Number: 802178
Reported: 04/09/02 at 12:02 PM

Surrogate Quality Control

3797289	218*	122
Blank	77	106
LCS	114	105
LCSD		105
MS	160*	100
MSD	228*	
Limits:	67-135	71-130

*- 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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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

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For Lancaster Laboratories use only
Acct. #: 10900 Sample #: 3797287-89 SCR#: _____

Facility #: Former Chevron No. 21-208
Site Address: 6006 International Boulevard
Chevron PM: Tom Bauhs Lead Consultant: Delta Env. Consultants Inc.
Consultant/Office: 3164 Gold Camp Dr., Suite 200, Rancho Cordova, CA 95670
Consultant Prj. Mgr.: Mike Berrington
Consultant Phone #: 916-536-2616 Fax #: 916-638-8385
Sampler: Brett Bardsley
Service Order #: _____ ☐ Non SAR: _____

Analyses Requested

Preservation Codes

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

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX + MTBE 8260 ☐ 8021 ☑	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☑ Silica Gel Cleanup	8260 full scan	Oxygenates ___	Lead 7420 ☐ 7421 ☐	
TC-1	water			02 03 27	1012				7	X	X	X				
TC-2	water	"		02 03 27	1225				7	X	X	X				
TC-3	water			02 03 27	1146				7	X	X	X				

Comments / Remarks
All containers are HCl preserved

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: Brett Bardsley	3/28/02	0837	Received by:		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS (FedEx) Other _____			Received by: Monee	3/29/02	0915
Temperature Upon Receipt 2 C°			Custody Seals Intact? Yes No (N/A)		

3460 Rev. 10/04/01

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.