Chevron

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

August 4, 1994

Mr. Scott Seery
Alameda County Environmental Health Department
80 Swan Way, Room 200
Oakland, CA 94621

Re : Former Chevron Service Station No. 9-4930
3369 Castro Valley Blvd., Castro Valley, CA 94546

Dear Mr. Seery :

Groundwater Technology monitored and sampled the above referenced site on June 13, 1994 and measured the depth to water on June 30, 1994. Results show dissolved hydrocarbons in monitoring wells MW-1, MW-2, and MW-4. Solvents were also detected in these wells including MW-3. Groundwater Technology will continue to sample and monitor the site on a quarterly basis and will continue to obtain depth to water level measurements on a more monthly basis. If the groundwater direction remains consistent, Chevron will request a reduction in the monthly monitoring.

Please refer to the enclosed report from Groundwater Technology dated July 15, 1994. If you have any questions or comments, please feel free to call me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Engineer

LKAN/MacFile 9-4930R8

Enclosure

cc : Mr. Richard Hiett
RWQCB-S.F.Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

Anna Counelis & Tula Gallanes
109 Casa Vieja Place
Orinda, CA 94563

Ms. Bette Owen
Chevron U.S.A. Products Co.

AUG 04 '94 K.L.K.

GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387
FAX: (415) 685-9148

July 15, 1994

Project No. 020105001

Mr. Kenneth Kan
Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583-0804

SUBJECT: *Groundwater Monitoring and Sampling Activities*
Chevron Service Station No. 9-4930
3369 Castro Valley Blvd., Castro Valley, California

Dear Mr. Kan:

Groundwater Technology, Inc. presents the groundwater monitoring and sampling data collected for the second quarter 1994. Groundwater monitoring data was collected on April 4, April 29, June 13, and June 30, 1994. Groundwater monitoring and sampling data was collected on June 13, 1994. Four groundwater monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. **Separate-phase hydrocarbons were not detected in the monitoring wells.** A potentiometric surface map and a summary of groundwater monitoring data are presented in Attachments 1 and 2, respectively. After the DTW was measured, the monitoring wells were purged and sampled. Groundwater monitoring and sample collection protocol and field data sheets are presented in Attachment 3. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, xylenes, total petroleum hydrocarbons-as-gasoline and purgeable halocarbons. Results of the chemical analyses are summarized in Attachment 2. The laboratory report and chain-of-custody record are included in Attachment 4. Monitoring-well purge water was transported by Groundwater Technology to the Chevron Terminal in Richmond, California, for recycling. The next groundwater monitoring rounds are scheduled for the fourth week of July, August and September, 1994. The next sampling round is scheduled for the fourth week of August.

Groundwater Technology is pleased to assist Chevron on this project. If you have any questions or comments, please contact our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Kenneth P. Johnson
Project Manager

PR

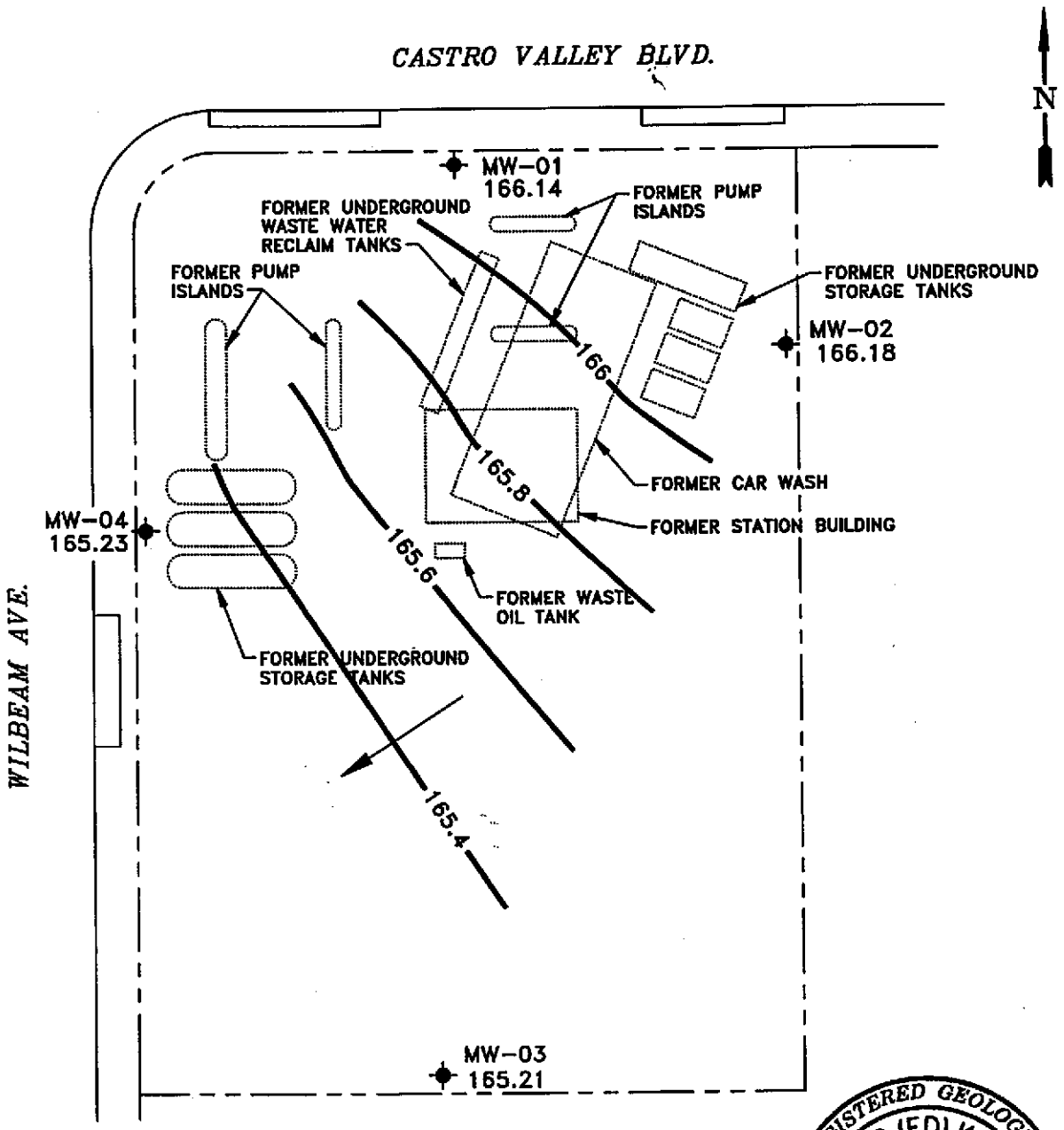
For:
Wendell W. Lattz
Vice President, General Manager
West Region

Attachment 1 Figure
Attachment 2 Table
Attachment 3 Protocol and Field Data Sheets
Attachment 4 Laboratory Report

5001QMSR.294

ATTACHMENT 1

Figures



REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

LEGEND

- PROPERTY LINE
- MONITORING WELL
- X.XX — POTENTIOMETRIC SURFACE ELEVATION (FT)
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

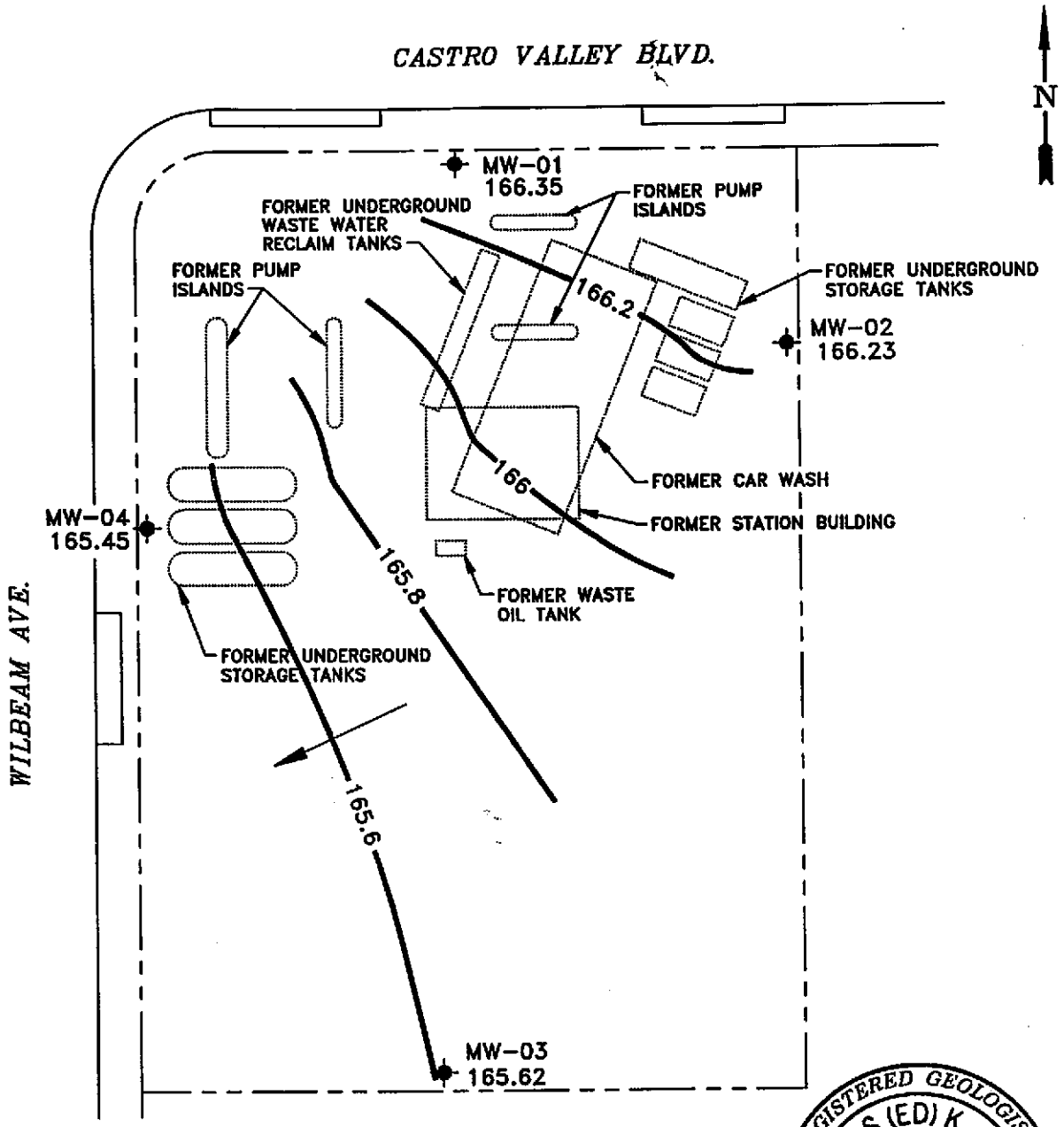
NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (4/4/94)

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION NO. 9-1723	FILE: 5001PSM, (1:40)	PROJECT NO.: 02010-5001	PM: KT	PE/RG: EKS	
LOCATION: 3369 CASTRO VALLEY BLVD. CASTRO VALLEY, CALIFORNIA	REV.			FIGURE: 1	
	DES.: SS	DET.: SS	DATE: 7/11/94		



REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

LEGEND

— — —	PROPERTY LINE
✦	MONITORING WELL
X.XX	POTENTIOMETRIC SURFACE ELEVATION (FT)
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

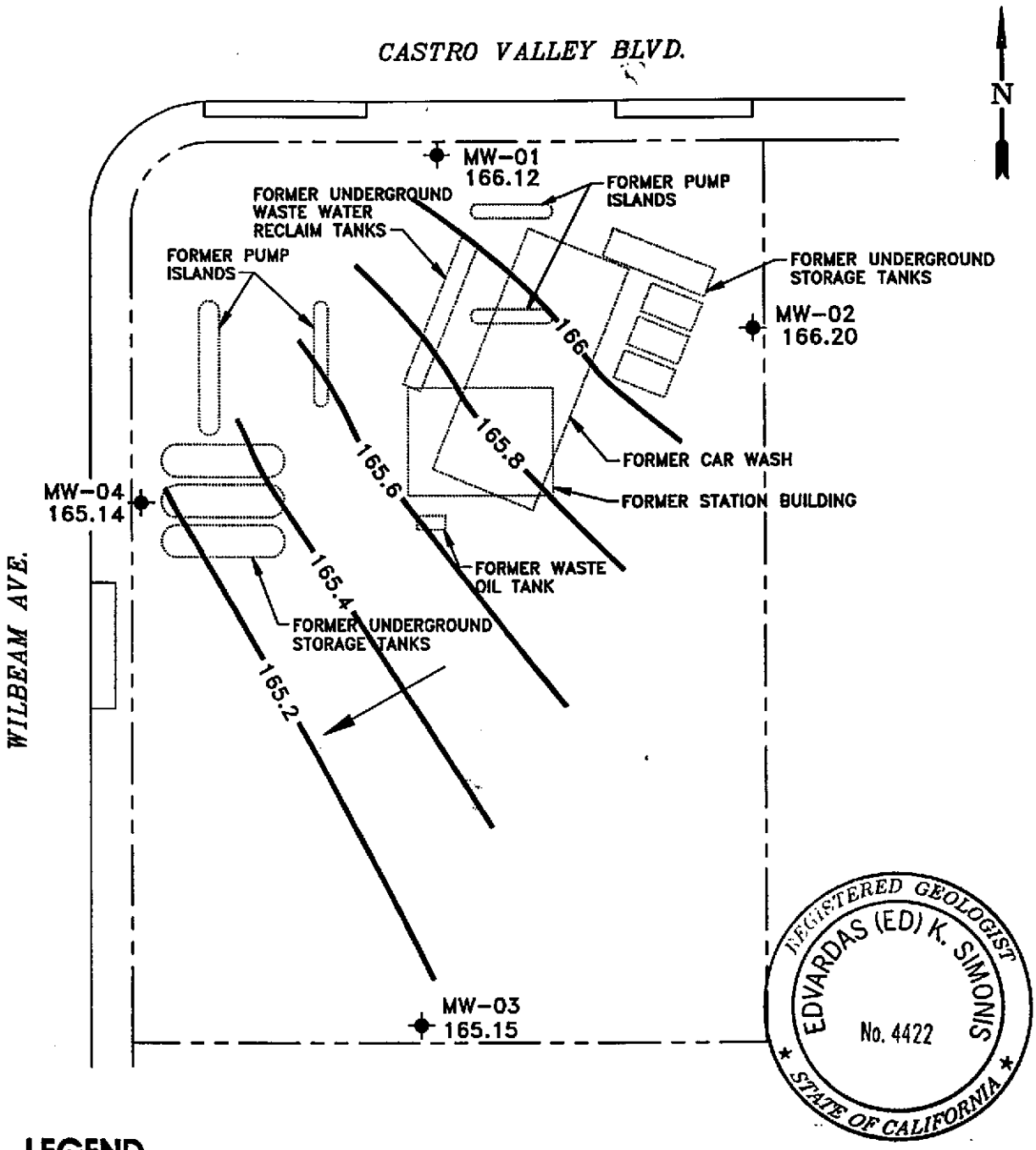
NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (4/29/94)

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION NO. 9-1723	FILE: 5001PSM, (1:40)		PROJECT NO.: 02010-5001	PM KO	PE/RG EK
	REV.			FIGURE: 1	
LOCATION: 3369 CASTRO VALLEY BLVD. CASTRO VALLEY, CALIFORNIA	DES. SS	DET. SS	DATE: 7/11/94		



LEGEND

— — — —	PROPERTY LINE
✦	MONITORING WELL
X.XX	POTENTIOMETRIC SURFACE ELEVATION (FT)
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

NOTE:

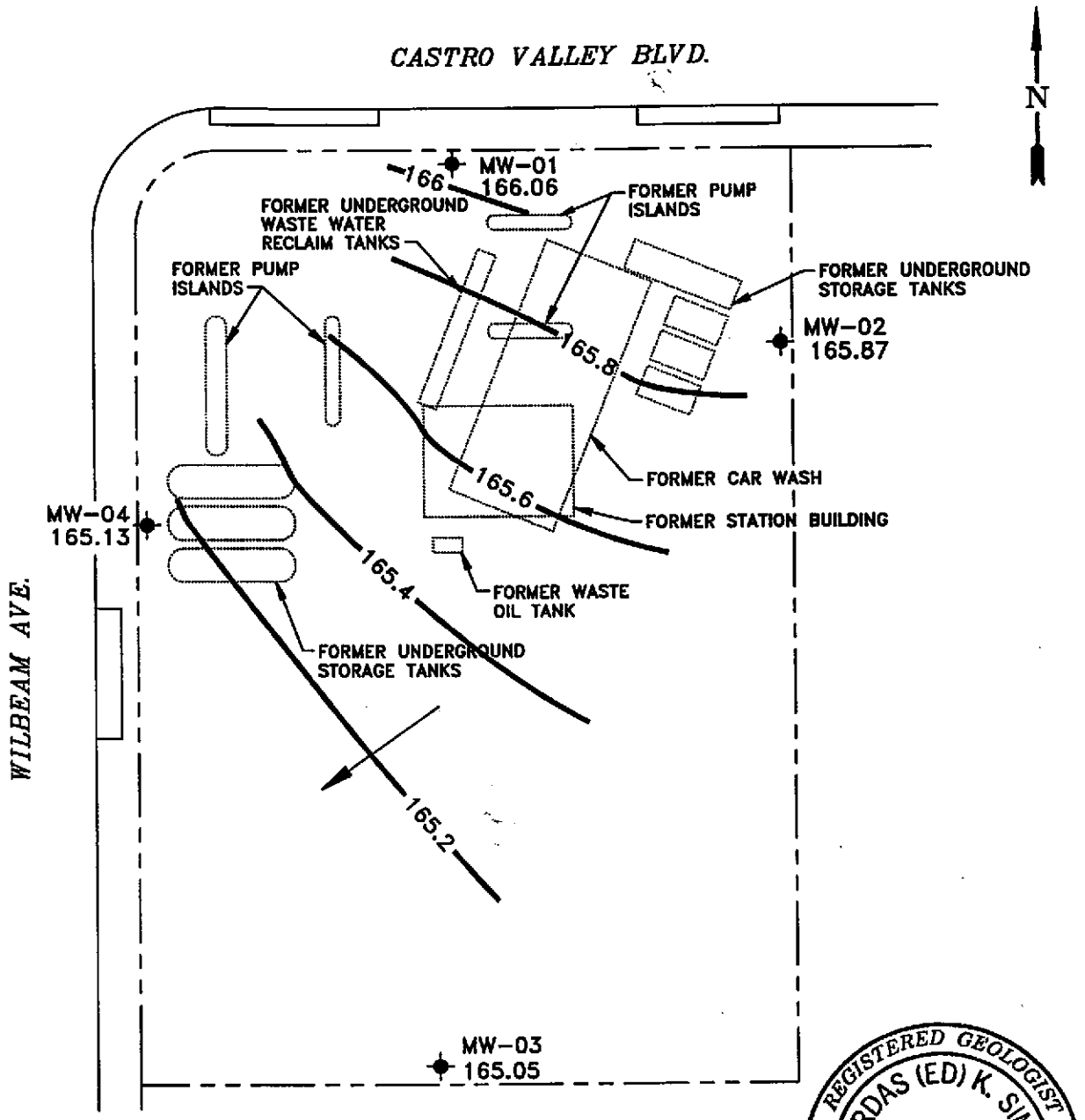
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (6/13/94)

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION NO. 9-1723	FILE: 5001PSM, (1:40)		PROJECT NO.: 02010-5001	PM	PE/RG
	REV.				FIGURE:
LOCATION: 3369 CASTRO VALLEY BLVD. CASTRO VALLEY, CALIFORNIA	DES. SS	DET. SS	DATE: 6/23/94		1



REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

LEGEND

- PROPERTY LINE
- MONITORING WELL
- X.XX — POTENTIOMETRIC SURFACE ELEVATION (FT)
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (6/30/94)

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION NO. 9-1723	FILE: 5001PSM, (1:40)	PROJECT NO.: 02010-5001	PM	PE/RG	
	REV.			FIGURE: 1	
LOCATION: 3369 CASTRO VALLEY BLVD. CASTRO VALLEY, CALIFORNIA	DES. SS	DET. SS	DATE: 7/11/94		

ATTACHMENT 2

Table

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-4930
3369 Castro Valley Blvd., Castro Valley, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2 DCE	TCE	DCFM	PCE	DTW (ft)	SPT (ft)	WTE (ft)
MW-1	10/29/93	1,000	11	17	32	110	---	---	---	---	6.75	0.00	166.15
172.90	02/25/94	250	6	1	5	3	0.2	8.0	2.0	4	6.10	0.00	166.80
	04/04/94	---	---	---	---	---	---	---	---	---	6.76	---	166.14
	04/29/94	---	---	---	---	---	---	---	---	---	6.55	---	166.35
	06/13/94	670	95	3.5	43	3.9	0.8	16	14	47	6.78	0.00	166.12
	06/30/94	---	---	---	---	---	---	---	---	---	6.84	0.00	166.06
MW-2	10/29/93	5,600	140	3.2	17	330	---	---	---	---	7.86	0.00	166.05
173.91	02/25/94	820	41	<0.5	17	5	ND	ND	ND	0.6	6.95	0.00	166.96
	04/04/94	---	---	---	---	---	---	---	---	---	7.73	---	166.18
	04/29/94	---	---	---	---	---	---	---	---	---	7.68	---	166.23
	06/13/94	1,100	160	0.8	64	2.0	<0.5	0.9	<0.5	2	7.71	0.00	166.20
	06/30/94	---	---	---	---	---	---	---	---	---	8.04	0.00	165.87
MW-3	10/29/94	110*	<0.5	<0.5	<0.5	<0.5	---	---	---	---	7.64	0.00	164.96
172.60	02/25/94	<50	<0.5	<0.5	<0.5	<0.5	ND	1.0	ND	170	6.38	0.00	166.22
	04/04/94	---	---	---	---	---	---	---	---	---	7.39	---	165.21
	04/29/94	---	---	---	---	---	---	---	---	---	6.98	---	165.62
	06/13/94	<50	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	220	7.45	0.00	165.15
	06/30/94	---	---	---	---	---	---	---	---	---	7.55	0.00	165.05
MW-4	10/29/93	640	6.7	3.3	0.6	6.7	---	---	---	---	5.50	0.00	165.18
170.68	02/25/94	450	20	0.8	12	6	1.3	5.1	2.5	480	4.82	0.00	165.86
	04/04/94	---	---	---	---	---	---	---	---	---	5.45	---	165.23
	04/29/94	---	---	---	---	---	---	---	---	---	5.23	---	165.45
	06/13/94	1,700	180	1.4	100	11	2.2	59	13	180	5.54	0.00	165.14
	06/30/94	---	---	---	---	---	---	---	---	---	5.55	0.00	165.13

GROUNDWATER TECHNOLOGY ®

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-4930
3369 Castro Valley Blvd., Castro Valley, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2 DCE	TCE	DCFM	PCE	DTW (ft)	SPT (ft)	WTE (ft)
Rinsate	02/25/94	<50	<0.5	<0.5	<0.5	<0.5	---	--- ---	--- ---	--- ---	---	---	---
TBLB	02/25/94 06/13/94	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	--- ---	--- ---	--- ---	--- ---	--- ---	---	--- ---

TPH-G = Total petroleum hydrocarbons-as-gasoline
DTW = Depth to water
SPT = Separate-phase hydrocarbon thickness
WTE = Water-table elevation
* = Compound does not match typical gasoline pattern
1,2 DCE = 1,2 Dichloroethene
TCE = Trichloroethene
DCFM = Dichlorodifluoromethane
PCE = Tetrachloroethene
C-Form = Chloroform
Concentrations are in parts per billion.

Data from 10/29/93 is from RESNA.

ATTACHMENT 3

Groundwater Monitoring and Sample Collection Protocol
and
Field Data Sheets

GROUNDWATER TECHNOLOGY GROUNDWATER MONITORING AND SAMPLE COLLECTION PROTOCOL

Groundwater Monitoring

Groundwater monitoring is accomplished using a INTERFACE PROBE™ Well Monitoring System. The INTERFACE PROBE™ Well Monitoring System is a hand held, battery operated device for measuring the depth to separate-phase hydrocarbons and depth to water. The INTERFACE PROBE™ Well Monitoring System consists of a dual-sensing probe which utilizes an optical liquid sensor and electrical conductivity to distinguish between water and petroleum products.

Monitoring is accomplished by measuring from the surveyed top of well casing or grade to groundwater and separate-phase hydrocarbons if present. The static water elevation is then calculated for each well and a potentiometric surface map is constructed. If separate-phase hydrocarbons are detected the water elevation is adjusted by the following calculation:

(Product thickness) x (0.8) + (Water elevation) = Corrected water elevation

Groundwater monitoring wells are monitored in order of wells with lowest concentrations of volatile organic compounds to wells with the highest concentrations, based upon historical concentrations. If separate-phase hydrocarbons are encountered in a well, the product is visually inspected to confirm and note color, amount, and viscosity. Monitoring equipment is washed with laboratory grade detergent and rinsed with distilled or deionized water before monitoring each well.

Groundwater Sampling

Before groundwater samples are collected, sufficient water is purged from each well to ensure representative formation water is entering the well. Wells are purged and sampled in the same order as monitoring, from wells with the lowest concentrations of volatile organic compounds to wells with the highest concentrations. Wells are purged using either a polyvinyl chloride (PVC) bailer fitted with a check valve or with a stainless steel submersible Grundfos pump. The purge equipment is decontaminated before use in each well by washing with laboratory grade detergent and tripled rinsing with deionized or distilled water. A minimum of 3 well-casing volumes of water are removed from each well while pH, electrical conductivity, and temperature are recorded to verify that "fresh" formation water is being sampled and the parameters have stabilized. If the well is low yielding, it may be purged dry and sampled before 3 casing volumes are purged. The wells are then allowed to recharge to approximately 80 percent of the initial water level before a sample is collected.

Groundwater samples are collected from each well using a new, prepackaged disposable bailer and string. The water sample is decanted from the bailer into laboratory-provided containers (appropriate for the analyses required) so that there is no headspace in the containers. Samples collected for benzene, toluene, ethylbenzene, xylene, and total petroleum hydrocarbons (TPH)-as-gasoline analyses are collected in 40-milliliter vials fitted with Teflon® septum lids. Samples are preserved with hydrochloric acid (HCL) to a pH of less than 2. Dissolved metals samples are filtered through a 0.45-micron paper filter in the field and preserved as required before submitting to the laboratory for analyses. All samples are labeled immediately upon collection and logged on the chain-of-custody record. Sample label and chain-of-custody recorded information includes the project name and number, sample identification, date and time of collection, analyses requested, and the sampler's name. Sample bottles are placed in plastic bags (to protect the bottles and labels) and on ice (frozen water) in an insulated cooler and are shipped under chain-of-custody protocol to the laboratory.

The chain-of-custody record documents who has possession of the samples until the analyses is performed. Other pertinent information is also noted for the laboratory use on the chain-of-custody record.

Trip blanks (TBLBs) are used for each project as a quality assurance/quality control measure. The TBLBs are prepared by the laboratory and are placed in the insulated cooler and accompany the field samples throughout the sampling event.

Project Name: Chevron - Castro Valley

Site Address: 3369 Castro Valley Blvd.

Project Number: 020105001.0610

Date: 6-13-94

Page 1 of 4

Project Manager: Tim Watchers

Well ID: MW-1

Well Diameter: 2

DTW Measurements:
Initial: 6.78
Recharge:

Calc Well Volume: gal
Well Volume: 6 gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed X
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:

Other:

Time	Temp X C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
13:15	24.0	1.00	7.51	0		(SILTY) GREY/LT BROWN, NO ODOR
13:16	21.5	0.98	7.19	1		
13:17	19.5	0.97	7.10	2		
13:18	19.4	0.97	7.12	3		
13:19	19.2	0.98	7.10	4		
13:20	19.4	0.97	7.11	5		
13:22	19.3	0.97	7.12	6		

Project Name: Chevron - Castro Valley

Site Address: 3369 Castro Valley Blvd.

Project Number: 020105001.0610

Date: 6-13-94

Page 2 of 4

Project Manager: Tim Watchers

Well ID: MW-2

Well Diameter: 2

DTW Measurements:
Initial: 7.71
Recharge: --

Calc Well Volume: ____ gal
Well Volume: 5 gal

Purge Method
Peristaltic ____
Gear Drive ____
Submersible ____

Pump Depth ____ ft.
Hand Bailed X
Air Lift ____
Other ____

Instruments Used
YSI: X
Hydac: ____
Omega: ____

Other: ____

Time	Temp ~~C~~ F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
13:34	19.0	1.03	7.10	0		Clear SLT Brown, SLTY NO ODOR
13:35	19.2	1.04	7.07	1		
13:36	19.0	1.04	7.08	2		
13:38	18.9	1.05	7.09	3		
13:39	18.8	1.03	7.15	4		
13:40	18.9	1.00	7.10	5		

Project Name: Chevron - Castro Valley

Site Address: 3369 Castro Valley Blvd.

Project Number: 020105001.0610

Date: 6-13-94

Page 3 of 4

Project Manager: Tim Watchers

Well ID: MW-3

Well Diameter: 2

DTW Measurements:
Initial: 7.45
Recharge:

Calc Well Volume: gal
Well Volume: 6 gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed X
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp X C F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
13:45	18.6	0.89	7.10	0		Clear, No odor
13:47	18.6	0.91	7.02	1		Light Brown, No odor
13:48	18.5	0.92	7.01	2		↓
13:49	18.4	0.92	7.03	3		
13:50	18.3	0.95	7.04	4		
13:52	18.4	0.93	7.02	5		
13:53	18.4	0.93	7.04	6		✓

Project Name: Chevron - Castro Valley

Site Address: 3369 Castro Valley Blvd.

Project Number: 020105001.0610

Date: 6-13-94

Page 4 of 4

Project Manager: Tim Watchers

Well ID: MW-4

Well Diameter: 2

DTW Measurements:
Initial: 5.54
Recharge:

Calc Well Volume: gal
Well Volume: 6 gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed X
Air Lift X
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp X C F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
14:02	19.2	0.99	6.95	0		light Brown, NO ODOR
14:03	19.8	1.03	6.91	1		Brown, SILTY, NO ODOR
14:04	19.8	1.03	6.94	2		
14:05	19.2	1.01	6.95	3		
14:06	19.5	1.03	6.93	4		
14:07	19.7	1.05	6.93	5		
14:08	19.6	1.04	6.93	6		

ATTACHMENT 4

Laboratory Report

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080 Pike Lane, Suite C
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
FAX (510) 825-0720

Client Number: 020105001
Consultant Project Number: 020105001—
Facility Number: 9-4930
Project ID: 3369 Castro Valley
Work Order Number: C4-06-0261

June 24, 1994

Tim Watchers
Groundwater Technology, Inc.
4057 Port Chicago Hwy.
Concord, CA 94520

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 06/15/94.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Rashmi Shah
Laboratory Director

Client Number: 020105001
Consultant Project Number: 020105001
Facility Number: 9-4930
Project ID: 3369 Castro Valley
Work Order Number: C4-06-0261

ANALYTICAL RESULTS

Aromatic Volatile Organics and

Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		01	02	03	04[b]
Client Identification		TRIP BLANK	MW1	MW2	MW3
Date Sampled		06/13/94	06/13/94	06/13/94	06/13/94
Date Analyzed		06/22/94	06/21/94	06/22/94	06/22/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	35	160	<0.5
Toluene	0.5	<0.5	3.5	0.8	<0.5
Ethylbenzene	0.5	<0.5	43	64	<0.5
Xylene, total	0.5	<0.5	3.9	2.0	<0.5
TPH as Gasoline	50	<50	670	1100	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		100	105	105	98.5

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

b. Uncategorized compound is not included in gasoline concentration.

Client Number: 020105001
Consultant Project Number: 020105001
Facility Number: 9-4930
Project ID: 3369 Castro Valley
Work Order Number: C4-06-0261

ANALYTICAL RESULTS

Aromatic Volatile Organics and

Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		05[b]	Q062194-5		
Client Identification		MW4	METHOD BLANK		
Date Sampled		06/13/94	–		
Date Analyzed		06/22/94	06/21/94		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	130	<0.5		
Toluene	0.5	1.4	<0.5		
Ethylbenzene	0.5	100	<0.5		
Xylene, total	0.5	11	<0.5		
TPH as Gasoline	50	1700	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		110	129		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

b. Uncategorized compound is not included in gasoline concentration.

Client Number: 020105001
Consultant Project Number: 020105001
Facility Number: 9-4930
Project ID: 3369 Castro Valley
Work Order Number: C4-06-0261

ANALYTICAL RESULTS

Purgeable Halocarbons in Water

EPA Method 601[a]

GTEL Sample Number		02	03	04	05
Client Identification		MW1	MW2	MW3	MW4
Date Sampled		06/13/94	06/13/94	06/13/94	06/13/94
Date Analyzed		06/20/94	06/17/94	06/19/94	06/17/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	1	<1	<1	<1	<1
Chloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Methylene chloride	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene	0.5	0.8	<0.5	<0.5	22
Chloroform	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5	16	0.9	2	59
Dichlorodifluoromethane	0.5	14	<0.5	<0.5	13
Dibromochloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1	<1	<1	<1	<1
Bromoform	0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	0.5	47	2	220	180
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	0.5	<0.5	<0.5	<0.5	<0.5
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		91.0	91.8	92.0	89.2

a. Federal Register, Vol. 49, October 26, 1984. BFB surrogate recovery acceptability limits are 65-135%.

Client Number: 020105001
Consultant Project Number: 020105001
Facility Number: 9-4930
Project ID: 3369 Castro Valley
Work Order Number: C4-06-0261

ANALYTICAL RESULTS

Purgeable Halocarbons in Water

EPA Method 601[a]

GTEL Sample Number		P061994			
Client Identification		METHOD BLANK			
Date Sampled		–			
Date Analyzed		06/19/94			
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5			
Bromomethane	0.5	<0.5			
Vinyl chloride	1	<1			
Chloroethane	0.5	<0.5			
Methylene chloride	0.5	<0.5			
1,1-Dichloroethene	0.5	<0.5			
1,1-Dichloroethane	0.5	<0.5			
1,2-Dichloroethene	0.5	<0.5			
Chloroform	0.5	<0.5			
1,2-Dichloroethane	0.5	<0.5			
1,1,1-Trichloroethane	0.5	<0.5			
Carbon tetrachloride	0.5	<0.5			
Bromodichloromethane	0.5	<0.5			
1,2-Dichloropropane	0.5	<0.5			
cis-1,3-Dichloropropene	0.5	<0.5			
Trichloroethene	0.5	<0.5			
Dichlorodifluoromethane	0.5	<0.5			
Dibromochloromethane	0.5	<0.5			
1,1,2-Trichloroethane	0.5	<0.5			
trans-1,3-Dichloropropene	0.5	<0.5			
2-Chloroethylvinyl ether	1	<1			
Bromoform	0.5	<0.5			
Tetrachloroethene	0.5	<0.5			
1,1,2,2-Tetrachloroethane	0.5	<0.5			
Chlorobenzene	0.5	<0.5			
1,2-Dichlorobenzene	0.5	<0.5			
1,3-Dichlorobenzene	0.5	<0.5			
1,4-Dichlorobenzene	0.5	<0.5			
Trichlorofluoromethane	0.5	<0.5			
Detection Limit Multiplier		1			
BFB surrogate, % recovery		89.6			

a. Federal Register, Vol. 49, October 26, 1984. BFB surrogate recovery acceptability limits are 65-135%.

Client Number: 020105001
Consultant Project Number: 020105001
Facility Number: 9-4930
Project ID: 3369 Castro Valley
Work Order Number: C4-06-0261

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	C4060236-1	20.0	ug/L	102	91.5	10.9	57.3 - 138
Toluene	C4060236-1	20.0	ug/L	107	95.0	11.9	63.0 - 134
Ethylbenzene	C4060236-1	20.0	ug/L	108	102	5.7	59.3 - 137
Xylene, total	C4060236-1	60.0	ug/L	103	96.2	6.8	59.3 - 144
EPA 8010/8020:							
Chlorobenzene	C4060248-5	20.0	ug/L	108	94.0	13.9	63.5 - 129
Benzene	C4060248-5	20.0	ug/L	104	102	1.9	57.3 - 138
Toluene	C4060248-5	20.0	ug/L	102	101	1.0	63 - 134
Ethylbenzene	C4060248-5	20.0	ug/L	102	101	1.0	59.3 - 137
Xylene, total	C4060248-5	60.0	ug/L	104	103	9.7	59.3 - 144
1,1-Dichloroethene	C4060248-5	20.0	ug/L	104	92.5	11.7	44.6 - 150
Trichloroethene	C4060248-5	20.0	ug/L	102	94.0	8.2	61.5 - 133

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Chain-of-Custody-Reco

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-4930
Facility Address 3369 Castro Valley
Consultant Project Number 020105001,0610
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord, CA. 94520
Project Contact (Name) Tim Watchers
(Phone) 510-671-2387 (Fax Number)

Chevron Contact (Name) Ken Kan
(Phone) (510) 842-8752
Laboratory Name GTEL
Laboratory Release Number 741-501
Samples Collected by (Name)
Collection Date 6-13-94
Signature

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	[illegible]				Remarks
TRIPblank	01	2	W	G	~~14:30~~	Hcl	YES	X	ND											
MW1	02	6	↓	↓	14:30	↓	↓	X	ND	10.						X				
MW2	03	6			14:50			X	ND	17.						X				
MW3	04	6			15:00			X		20. ND						X				
MW4	05	6			15:10			X		20.						X				

NOTE: Do Not Bill TB-LB SAMPLE

04060261

E-Bill

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	GTI	6/13/94	[signature]	GTI	6-17-94
[signature]	GTI	6-15-94 11:30	John Weber	GTEL	6-15-94 11:30
[signature]	GTEL	6-15-94 11:45	Received For Laboratory By (Signature) [signature]		

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted