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12/10/93

93 DEC -6 PM 1:39

Ms. Eva Chu  
Hazardous Materials Specialist  
Alameda County Health Care Services  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, CA 94821

November 30, 1993

RE: 6085 Scarlett Court, Dublin, California. Installation of one monitoring well in the downgradient direction.

Dear Ms. Chu;

This letter report transmits information collected through implementation of the work plan for the installation of one monitoring well at 6085 Scarlett Court, Dublin, California. The work plan was submitted to Alameda County Health Care Services, Hazardous Materials Division on June 25, 1992. Figure 1, taken from the work plan, shows the site location. Figure 2, also taken from the work plan, shows the approximate location of the monitoring well. All field procedures followed the work plan which is incorporated herein by reference.

The monitoring well was drilled under ZONE 7 WATER AGENCY Permit No.93106. Attachment A contains a copy of the drilling permit and the California Department of Water Resources Form 188 (No. 185641) for this well that was submitted to ZONE 7.

The borehole was drilled to a total depth of 21.5 feet. First encountered groundwater was at a depth of 10.5 feet, at a gray clay. Approximately static water was at a depth of 3.5 feet. Thus the aquifer is confined or semi-confined at this location. The borehole log is contained in Attachment B.

Soil samples were collected in the borehole for MW-1 at depths of 5-5.5 and 10-10.5 feet below ground surface. The soil samples were immediately placed in an ice chest at about 4 °C and submitted to ChromaLab, Inc., located in San Ramon, California under chain-of-custody documentation. The following concentrations were reported:

	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-1					
5-5.5 Feet	<1.0 mg/Kg	<5.0 µg/Kg	7.5 µg/Kg	<5.0 µg/Kg	<5.0 µg/Kg
10-10.5 Feet	17 mg/Kg	37 µg/Kg	<16 µg/Kg	210 µg/Kg	144 µg/Kg

page 844-5454

The laboratory report and chain-of-custody documentation is contained in Attachment C.

The monitoring well was completed with screen extending from 5.5 feet below ground surface to 19.0 feet. Total well depth is 19.5 feet. A well completion diagram is included in Attachment B.

On March 12, 1993, the well was developed and purged through surging and pumping until a low turbidity water was withdrawn. Pumping continued following well development, periodically emptying the wellbore, until an additional 5.8 gallons total had been withdrawn. There were a total of 2.33 casing volumes purged from the well. The volume purged, specific conductance, temperature, and pH were as follows:

Time	Volume Purged	Specific Conductance	Temperature	pH
06:58	3.5 Gal	2,440 $\mu$ S/cm	57.1 °F	6.83
07:03	4.0 Gal	2,260 $\mu$ S/cm	56.0 °F	6.88
07:09	5.0 Gal	2,240 $\mu$ S/cm	56.3 °F	6.89
07:14	5.3 Gal	2,200 $\mu$ S/cm	56.1 °F	6.89
07:22	5.8 Gal	2,220 $\mu$ S/cm	55.9 °F	6.91

The last field measurement sample and the sample for analysis utilized a Teflon™ bailer with a bottom emptying device. The sample was collected in a 40 mL VOA vial.

The water supply well was allowed to run until approximately 200 gallons had been pumped. A 40 mL VOA vial was then filled from the discharge spigot at the well head.

The groundwater samples were immediately placed in an ice chest at about 4 °C and submitted to ChromaLab, Inc., located in San Ramon, California under chain-of-custody documentation. Analyses were performed for total petroleum hydrocarbons as gasoline (TPH-G) and the aromatic hydrocarbons benzene (B), toluene (T), ethylbenzene (E), and total xylene isomers (X), collectively known as BTEX.

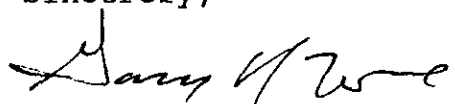
	TPH-G	Benzene	Toluene	Ethylbenzene	Total Xylenes
03/12/93 MW-1	64,000	25,000	8,000	1,600	4,900
Production Well	<50	<0.5	<0.5	<0.5	<0.5

Ms. Eva Chu  
November 30, 1993  
page 3

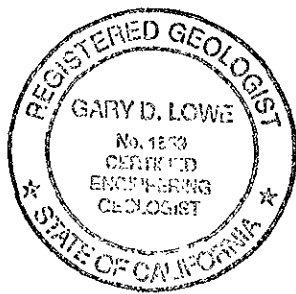
The laboratory report and chain-of-custody documentation is contained in Attachment C.

Please do not hesitate to call me at (510)-373-9211 should you have any questions.

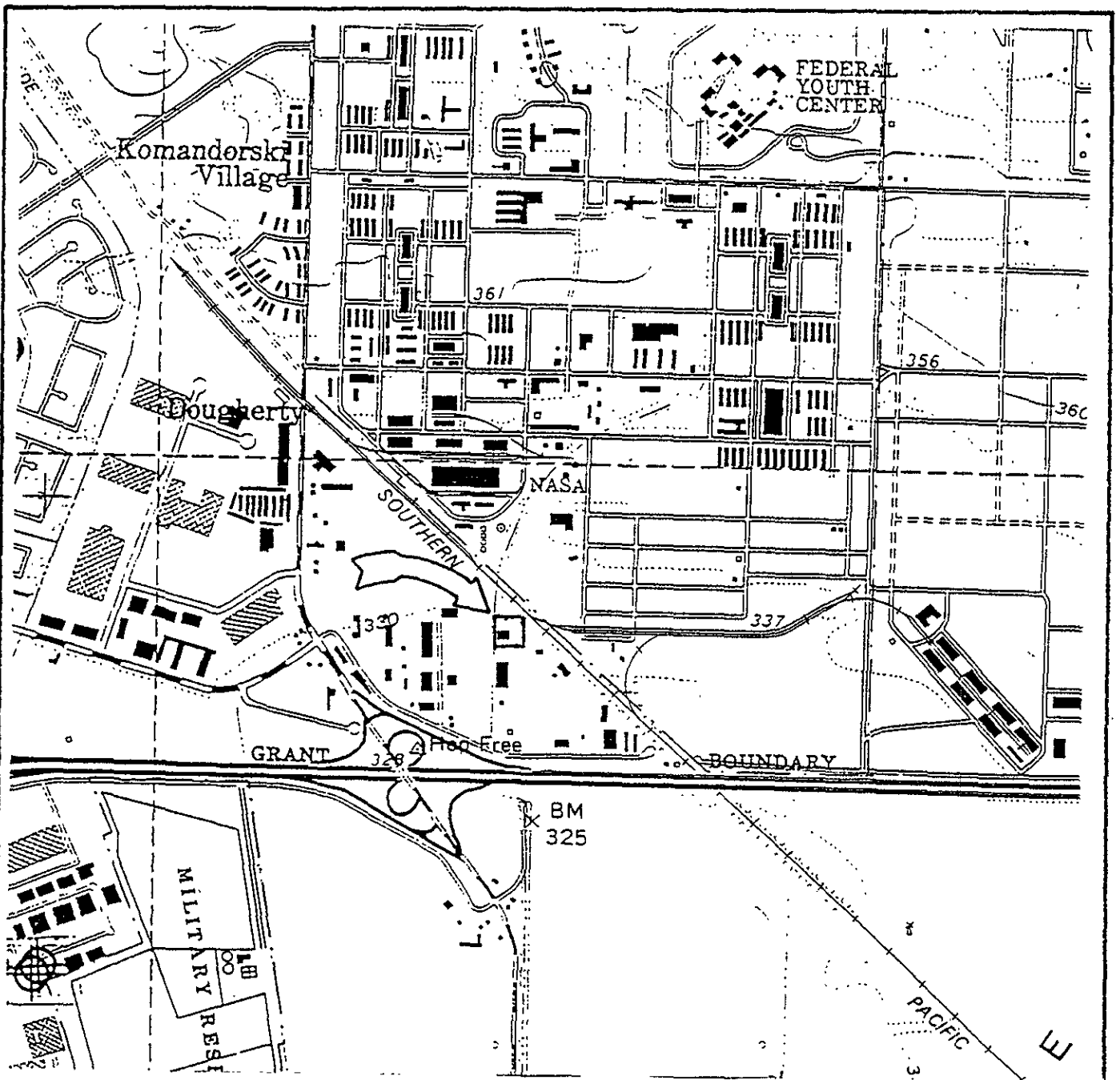
Sincerely,



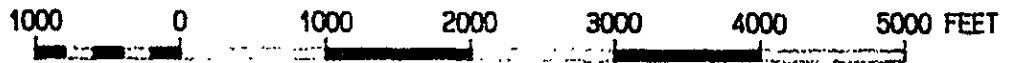
Gary D. Lowe, R.G., C.E.G  
Principal, Hydrogeologist



xc: Mr. Chuck Lemoine, Old World German Sausage Company



Base from U.S. Geological Survey Dublin 7.5 Minute Series Topographic Map

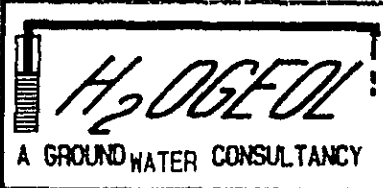
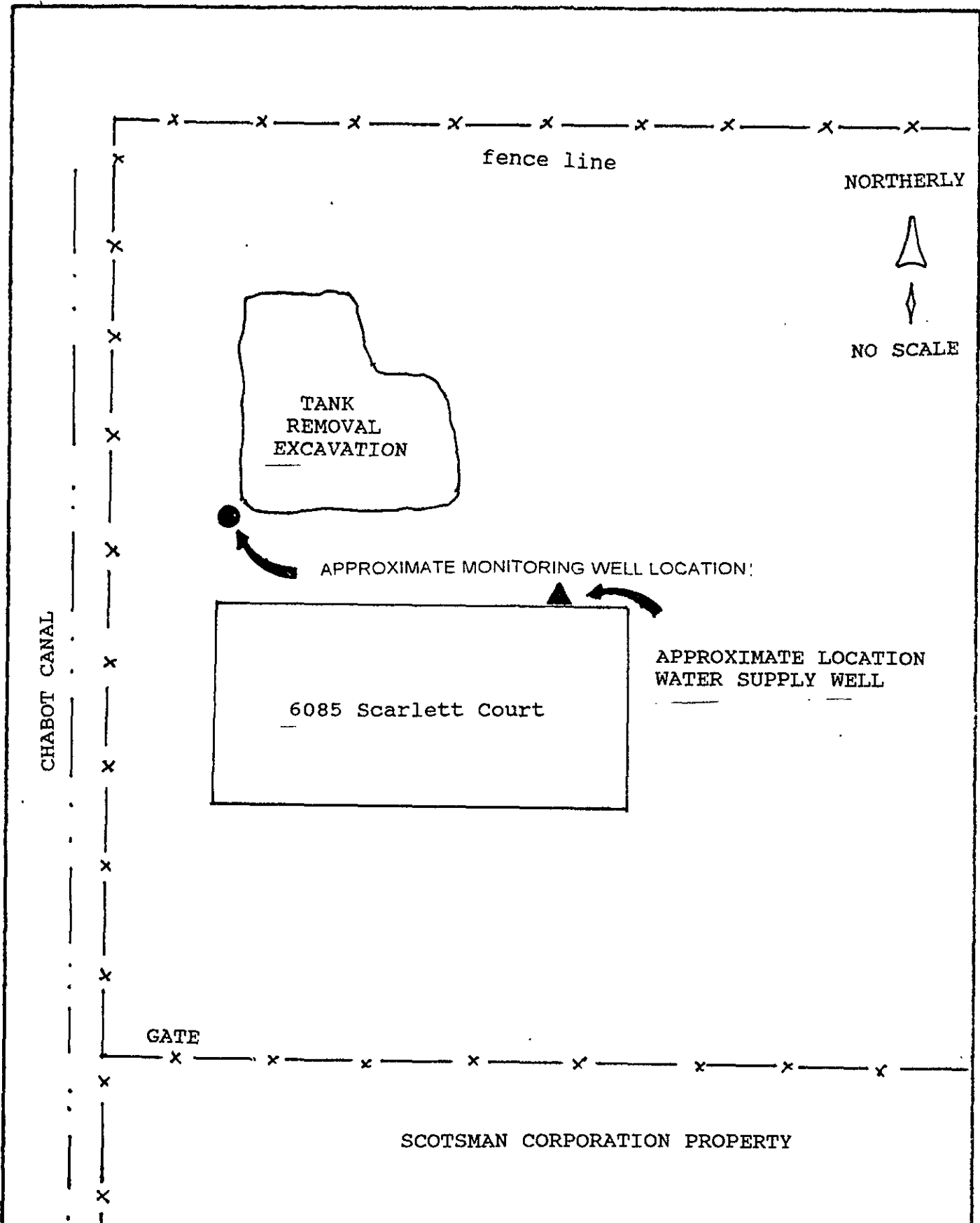


**H<sub>2</sub>O G E O L**  
 A GROUND WATER CONSULTANCY

**SITE LOCATION MAP**

6085 Scarlett Court  
 Dublin, California

**FIGURE**  
 1



PROPOSED MONITORING WELL LOCATION  
6085 Scarlett Court  
Dublin, California

FIGURE  
2



P.O.Box 2165 ■ Livermore, California 94551 ■ 510-379-9211

**ATTACHMENT A**

COPIES OF  
ZONE 7  
DRILLING PERMIT No. 93106  
AND CALIFORNIA DWR  
FORM 188  
FOR  
MONITORING WELL AT  
608 SCARLETT COURT  
DUBLIN, CALIFORNIA



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE     PLEASANTON, CALIFORNIA 94588     (510) 484-2600

5 March 1993

H<sub>2</sub>O Geol  
P.O. Box 2165  
Livermore, CA 94551

Gentlemen:

Enclosed is drilling permit 93106 for a monitoring well construction project at 6085 Scarlett Court in Dublin for The Old World German Sausage Company.

Please note that permit condition A-2 requires that a well construction report be submitted after completion of the work. The report should include drilling and completion logs, location sketch, and permit number.

If you have any questions, please contact Craig Mayfield or me at 484-2600.

Very truly yours,

Wyman Hong  
Water Resources Technician

WH:mm  
Enc.



# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 6085 Scarlett Court  
Orinda, CA

PERMIT NUMBER 93106  
LOCATION NUMBER \_\_\_\_\_

### CLIENT

Name Charles Lemone - dba Cidico-Albion  
Address 1367 52nd St Phone 533-7211 Sausalito CA  
City Oakland CA Zip 94601

### PERMIT CONDITIONS

Circled Permit Requirements Apply

### APPLICANT

Name Gary D. Lowe  
H.O. Beck A Groundwater Control Inc  
Address PO Box 2165 Phone 373-9211  
City Livermore CA Zip 94551

### TYPE OF PROJECT

Well Construction \_\_\_\_\_ Geotechnical Investigation \_\_\_\_\_  
Cathodic Protection \_\_\_\_\_ General \_\_\_\_\_  
Water Supply \_\_\_\_\_ Contamination \_\_\_\_\_  
Monitoring X Well Destruction \_\_\_\_\_

### PROPOSED WATER SUPPLY WELL USE

Domestic \_\_\_\_\_ Industrial \_\_\_\_\_ Other \_\_\_\_\_  
Municipal \_\_\_\_\_ Irrigation \_\_\_\_\_

### DRILLING METHOD:

Mud Rotary \_\_\_\_\_ Air Rotary \_\_\_\_\_ Auger X  
Cable \_\_\_\_\_ Other \_\_\_\_\_

DRILLER'S LICENSE NO. CSA No. 1014108

### WELL PROJECTS

Drill Hole Diameter 7 in. Maximum 20  
Casing Diameter 2 in. Depth 15 ft.  
Surface Seal Depth 5 ft. Number 1

### GEOTECHNICAL PROJECTS

Number of Borings \_\_\_\_\_ Maximum \_\_\_\_\_  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

ESTIMATED STARTING DATE 03/08/93 prob 3/10  
ESTIMATED COMPLETION DATE 03/12/93

### A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

### B. WATER WELLS, INCLUDING PIEZOMETERS

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. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved \_\_\_\_\_

Wyman Hong  
Wyman Hong

Date 3 Mar 93

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

APPLICANT'S SIGNATURE \_\_\_\_\_

Charles Lemone Date 02-26-93  
11/11/92



**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**



P.O.Box 2165 ■ Livermore, California 94551 ■ 510-373-9211

**ATTACHMENT B**  
**BOREHOLE LITHOLOGIC LOG**  
**AND**  
**WELL COMPLETION DIAGRAM**  
**FOR**  
**MONITORING WELL AT**  
**608 SCARLETT COURT**  
**DUBLIN, CALIFORNIA**

Project No. \_\_\_\_\_ Date 03/10/93 Drilling Co. Frontier Services Drill Model B-57  
 Client Charles L & Maize Drilling Method Hollow-Stem Borehole Diameter 8 inches  
 Location 6085 Scarlett Ct., Dublin Ground Surface Elevation \_\_\_\_\_ Datum \_\_\_\_\_  
 Logged by RCV Driller Sam Borehole \_\_\_\_\_ completed as monitoring well: Well No. 1

SAMPLING BLW COUNTS	PIT/PTD IN/OUT READING	DEPTH feet	SAMPLE	Soil Sample Number	GRAPHIC SOIL SYMBOL	USCS SOIL SYMBOL	Water Level		
							10.5' bgs	3.5' bgs	4.10' (PVC)
							Time	Time	Time
							03/10/93	03/10/93	03/12/93

Field Soil Description Time

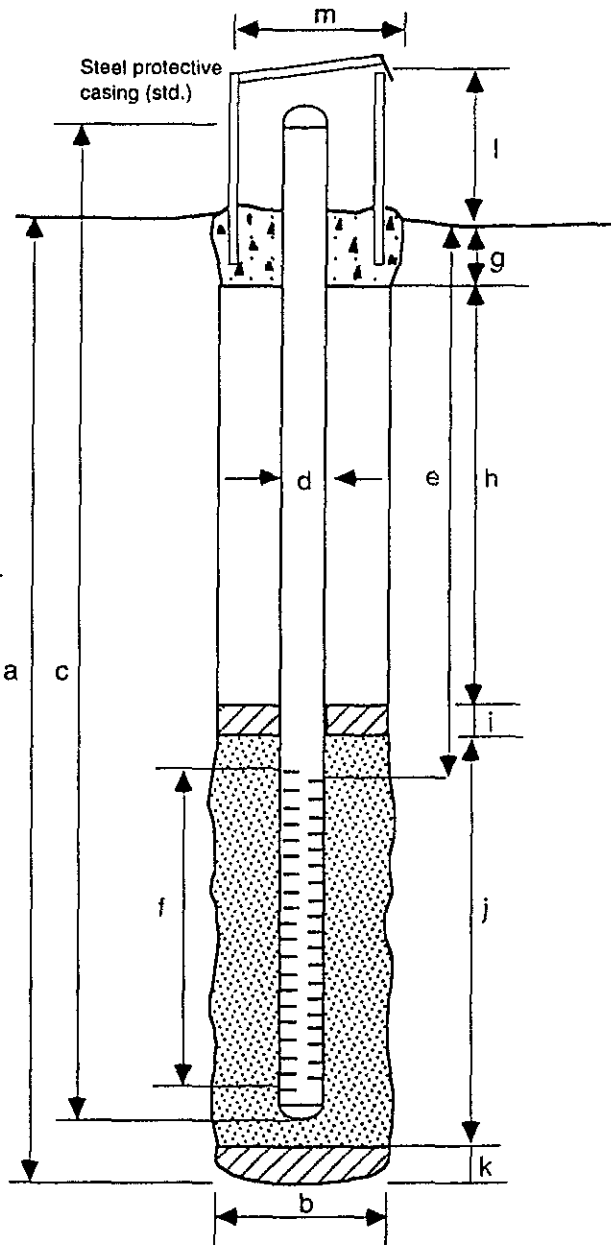
STL	DEPTH	SAMPLE	USCS	DESCRIPTION	TIME
	0-0.25'			Asphalt	
	0.25'-1.0'			Gravel Base	
std. 4	1	X	Cl	Very dark gray clay (2.5 yr N3/), stiff, moist, no odor, no reaction with HCl, roots present	
std. 7	2	X			
std. 9	3	X			
std. 6	4	X			
std. 6	5	X			
std. 9	6	X			
mod. 8	7	X	Cl	Gray clay (10 yr 5/1), stiff, moist, no odor, no reaction w/ HCl	
mod. 8	8	X			
mod. 12	9	X			
	10	X	Cl	Dark gray clay (10 yr 4/1), stiff, moist, no odor, no reaction w/ HCl	
mod. 4	11	X			
mod. 8	12	X			
mod. 10	13	X	Cl	Gray clay (10 yr 5/1) stiff, moist to wet, slight petroleum odor, no cracks w/ HCl	
	14	X			
	15		ml	3" layer of yellow brown sand (10 yr 5/4), med to coarse, poorly graded, petroleum odor	
				Dark grayish brown silt (2.5 yr 4/2), moist, very slight petroleum odor, no reaction w/ HCl	

SAMPLING BLOR COUNTS	PIT/RED PINK/ORA reading	DEPTH feet	SAMPLE	Soil Sample Number	GRAPHIC SOIL SYMBOL	UBCS SOIL SYMBOL	Field Soil Description	
							Field Soil Description	Time
3		16	X			SP	Gray silty sand (7.5 yd NS1), predominantly fine sands which are subrounded, about 25% silty fines with low dry strength, rapid dilatancy and low toughness	
		17	X					
		18					Gray clay with sand (7.5 yd NS1), about 15% fine subrounded sands, moist, clay hard made dry strength, slow dilatancy and made toughness - Petroleum odor until 20'	
		19						
3		20	X					
9		21	X				no odor	
12		21	X					
		22						
		23						
		24						
		25						
		26						
		27						
		28						
		29						
		30						
		31						
		32						
		33						

# WELL DETAILS

Project Name OWGS  
 Project Location 6085 Scarlett Ct., Dublin, CA  
 Local Agency Zone 7 Water Agency  
 Well Permit No. 93106

Boring/Well No. MW-1  
 Top of Casing Elev. na  
 Ground Surface Elev. na  
 Datum \_\_\_\_\_



## EXPLORATORY BORING

a. Total Depth 19.5 ft.  
 b. Diameter 8 in.  
 Drilling Method hollow-stem auger  
 Drill-Rig Type Mobile B-57

## WELL CONSTRUCTION

c. Casing Length 18.5 ft.  
 Material PVC  
 d. Diameter 2 in.  
 e. Depth to top perforations 5.5 ft.  
 f. Perforated Length 13.5 ft.  
 Perforated interval from 5.5 to 19.0 ft.  
 Perforation type slotted  
 Perforation size 0.002 in. ?  
 g. Surface seal 0.5 ft.  
 Surface material sand mixed w/ cement  
 h. Backfill 2.0 ft.  
 Backfill material neat cement  
 i. Seal 0.5 ft.  
 Seal material 3/8" bentonite  
 j. Filter Pack 16.5 ft.  
 Pack material # 3 sand  
 k. Bottom seal 0 ft.  
 Seal material none  
 l. Protective Casing height 1.5 ft.  
 m. Protective casing diameter 6 in.



P.O. Box 2165 • Livermore, California 94551 • 510-373-9211

**ATTACHMENT C**

**LABORATORY ANALYTICAL REPORT  
FOR  
GROUNDWATER SAMPLE COLLECTED  
MARCH 12, 1992  
FROM  
MONITORING WELL AT  
608 SCARLETT COURT  
DUBLIN, CALIFORNIA**

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

March 19, 1993

ChromaLab File No.: 0393146  
REVISED November 18, 1993

H2O-GEOL

Attn: Gary D. Lowe

RE: Two soil samples for Gasoline and BTEX analysis

Date Sampled: Mar. 10, 1993  
Date Analyzed: March 17, 1993

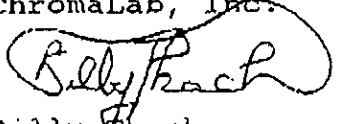
Date Submitted: Mar. 12, 1993

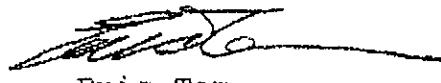
## RESULTS:

Sample I.D.	Gasoline (mg/Kg)	Benzene ( $\mu$ g/Kg)	Toluene ( $\mu$ g/Kg)	Ethyl Benzene ( $\mu$ g/Kg)	Total Xylenes ( $\mu$ g/Kg)
OWGS-1	N.D.	N.D.	7.5	N.D.	N.D.
OWGS-2	17	37	N.D.*	210	144
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	115%	91%	95%	97%	98%
DUP SPIKE RECOVERY	--	94%	95%	97%	97%
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/8015	8020	8020	8020	8020

\* Detection limit = 16  $\mu$ g/Kg due to dilution needed.

ChromaLab, Inc.

  
Billy Thach  
Analytical Chemist

  
Eric Tam  
Laboratory Director

do

# CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

March 19, 1993

ChromaLab File No.: 0393146

H2O-GEOL

Attn: Gary D. Lowe

RE: Two water samples for Gasoline and BTEX analysis

Date Sampled: Mar. 12, 1993

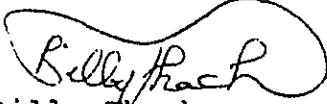
Date Submitted: Mar. 12, 1993


Date Analyzed: Mar. 17, 1993

## RESULTS:

Sample I.D.	Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)
Production Well MW-1	N.D. 64000	N.D. 25000	N.D. 8000	N.D. 1600	N.D. 4900
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	89%	96%	100%	101%	100%
DUP SPIKE RECOVERY	----	90%	93%	95%	95%
DETECTION LIMIT	50	0.5	0.5	0.5	0.5
METHOD OF ANALYSIS	5030/8015	602	602	602	602

ChromaLab, Inc.

  
Billy Thach  
Analytical Chemist

  
Eric Tam  
Laboratory Director

cc



# CHROMALAB, INC.

2239 Omega Road, #1 • San Ramon, California 94583  
510/831-1788 • Facsimile 510/831-8798

## Chain of Custody

DATE 3/11/93 PAGE 1 OF 1

PROJ. MGR. <u>Gary D. Lowe</u> COMPANY <u>H<sub>2</sub>O-Geol</u> ADDRESS <u>21 P.O. Box 2165</u> <u>Livermore, CA 94551-2165</u>					ANALYSIS REPORT															NUMBER OF CONTAINERS
SAMPLERS (SIGNATURE) <u>Richard C. Vorse</u> (PHONE NO.) 					TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524 2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520 E&F)	PESTICIDES/PCB (EPA 608, 8080)	PHENOLS (EPA 604, 8040)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	EXTRACTION (TCLP, STLC)	
SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.																
OWGS-1	3/10/93	8:45	Soil			X														1
OWGS-2	3/10/93	9:15	Soil			X														1
Production well	3/12/93	7:18	Aqueous			X														2
MW-1	3/12/93	7:23	Aqueous			X														2
CHROMALAB FILE # 393146 ORDER # 10784																				
PROJECT INFORMATION					SAMPLE RECEIPT					RELINQUISHED BY 1			RELINQUISHED BY 2			RELINQUISHED BY 3				
PROJECT NAME		TOTAL NO. OF CONTAINERS			(SIGNATURE) <u>Richard C. Vorse</u> 8:02 (PRINTED NAME) <u>Richard C. Vorse</u> 3/12/93 (COMPANY) <u>S.E.C.</u>			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (COMPANY) _____			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (COMPANY) _____			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (COMPANY) _____						
PROJECT NUMBER		CHAIN OF CUSTODY SEALS																		
SHIPPING ID NO.		REC'D GOOD CONDITION/COLD			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (COMPANY) _____			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (COMPANY) _____			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (COMPANY) _____									
VIA		CONFORMS TO RECORD												RECEIVED BY 1			RECEIVED BY 2			RECEIVED BY (LABORATORY) 3
SPECIAL INSTRUCTIONS/COMMENTS: <u>* Collect sample from core end marked with arrow.</u> <u>* No preservatives in VOAs.</u>					LAB NO.			(SIGNATURE) <u>Jack Kelly</u> 8:02 (PRINTED NAME) <u>Jack Kelly</u> 3-12-93 (COMPANY) _____			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (COMPANY) _____			(SIGNATURE) _____ (TIME) _____ (PRINTED NAME) _____ (DATE) _____ (LAB) _____						