

BLAINE
TECH SERVICES INC.
ENVIRONMENTAL PROTECTION

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96 JUL -8 AM 8:37

May 29, 1996

Attn: Amy Leach

Chester Clark
537 Hidden Valley Road
Grants Pass, OR 97527

ATTN: Bob Price

Site:
Clark's Home and Garden
23040 Clawiter Road
Hayward, California

Date:
April 25, 1996

GROUNDWATER SAMPLING REPORT 960425-V-1

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results, or become involved with the marketing or installation of remedial systems.

This report deals with the groundwater well sampling performed by our firm in response to your request. Data collected in the course of our work at the site are presented in the TABLE OF MONITORING DATA. This information was collected during our inspection, well evacuation and sample collection. Measurements include the total depth of the well and the depth to water. Water surfaces were further inspected for the presence of immiscibles. A series of electrical conductivity, pH, and temperature readings were obtained during well evacuation and at the time of sample collection.

STANDARD PRACTICES

Evacuation and Sampling Equipment

As shown in the TABLE OF MONITORING DATA, the wells at this site were evacuated according to a protocol requirement for the three case volumes. The wells were evacuated using bailers.

Samples were collected using bailers.

Bailers: A bailer, in its simplest form, is a hollow tube which has been fitted with a check valve at the lower end. The device can be lowered into a well by means of a cord. When the bailer enters the water, the check valve opens and liquid flows into the interior of the bailer. The bottom check valve prevents water from escaping when the bailer is drawn up and out of the well.

Two types of bailers are used in groundwater wells at sites where fuel hydrocarbons are of concern. The first type of bailer is made of a clear material such as acrylic plastic and is used to obtain a sample of the surface and the near surface liquids, in order to detect the presence of visible or measurable fuel hydrocarbon floating on the surface. The second type of bailer is made of Teflon or stainless steel and is used as an evacuation and/or sampling device.

Bailers are inexpensive and relatively easy to clean. Because they are manually operated, variations in operator technique may have a greater influence than would be found with more automated sampling equipment. Also where fuel hydrocarbons are involved, the bailer may include near surface contaminants that are not representative of water deeper in the well.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site.

Effluent Materials

The evacuation process creates a volume of effluent water which must be contained. Blaine Tech Services, Inc. will place this water in appropriate containers of the client's choice or bring new 55 gallon DOT 17 E drums to the site, which are appropriate for the containment of the effluent materials. The determination of how to properly dispose of the effluent water must usually await the results of laboratory analyses of the sample collected from the groundwater

well. If that sample does not establish whether or not the effluent water is contaminated, or if effluent from more than one source has been combined in the same container, it may be necessary to conduct additional analyses on the effluent material.

Sampling Methodology

Samples were obtained by standardized sampling procedures that follow an evacuation and sample collection protocol. The sampling methodology conforms to both State and Regional Water Quality Control Board standards and specifically adheres to EPA requirements for apparatus, sample containers and sample handling as specified in publication SW 846 and T.E.G.D. which is published separately.

Sample Containers

Sample containers are supplied by the laboratory performing the analyses.

Sample Handling Procedures

Following collection, samples are promptly placed in an ice chest containing deionized ice or an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days, as jobs and projects often do.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under our standard chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date and signature of person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to Curtis & Tompkins Laboratory in Berkeley, California. Curtis & Tompkins Laboratory is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory, and is listed as DOHS HMTL #1459.

Personnel

All Blaine Tech Services, Inc. personnel receive 29 CFR 1910.120(e)(2) training as soon after being hired as is practical. In addition, many of our personnel have additional certifications that include specialized training in level B supplied air apparatus and the supervision of employees working on hazardous materials sites. Employees are not sent to a site unless we are confident they can adhere to any site safety provisions in force at the site and unless we know that they can follow the written provisions of an SSP and the verbal directions of an SSO.

In general, employees sent to a site to perform groundwater well sampling will assume an OSHA level D (wet) environment exists unless otherwise informed. The use of gloves and double glove protocols protects both our employees and the integrity of the samples being collected. Additional protective gear and procedures for higher OSHA levels of protection are available.

Reportage

Submission to the Regional Water Quality Control Board and the local implementing agency should include copies of the sampling report, the chain of custody and the certified analytical report issued by the Hazardous Materials Testing Laboratory.

The following addresses have been listed here for your convenience:

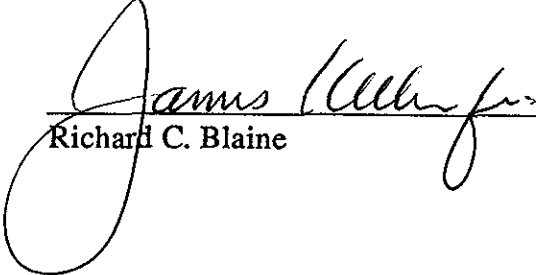
Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, 5th Floor
Oakland, CA 94612

ATTN: Dennis Mishek

Alameda Fire Dept.
300 Park Street
Alameda, CA 94501

ATTN: Albert L. Smith

Please call if we can be of any further assistance.


Richard C. Blaine

RCB/mc

attachments: table of well monitoring data
certified analytical report
chain of custody

TABLE OF WELL MONITORING DATA

ENVIRONMENTAL
PROTECTION

96 JUL -8 AM 8:37

Well I.D.	#1	#1	#1						
Date Sampled	10/9/95	1/17/96	4/25/96						
Well Diameter (in.)	2	2	2						
Total Well Depth (ft.)	23.58	23.64	23.60						
Depth To Water (ft.)	15.03	14.80	12.95						
Free Product (in.)	NONE	NONE	NONE						
Reason If Not Sampled	--	--	--						
1 Case Volume (gal.)	1.36	1.40	1.70						
Did Well Dewater?	NO	NO	NO						
Gallons Actually Evacuated	4.5	4.5	6.0						
Purging Device	BAILER	BAILER	BAILER						
Sampling Device	BAILER	BAILER	BAILER						
Time	10:31	10:36	10:39	11:44	11:49	11:52	8:18	8:22	8:25
Temperature (Fahrenheit)	66.4	66.2	66.2	62.2	60.2	59.6	64.2	64.4	64.4
pH	7.6	7.2	7.2	7.0	7.2	7.2	6.8	6.4	6.4
Conductivity (micromhos/cm)	1800	1600	1600	1000	920	900	2000	2000	200
Nephelometric Turbidity Units	>200	>200	>200	122	90	88	>200	>200	>200
BTS Chain of Custody	951009-V-2			960117-J-3			960425-V-1		
BTS Sample I.D.	#1			#1			#1		
Analysis	TPH (GAS), BTEX & TPH (DIESEL)			TPH (GAS), BTEX & TPH (DIESEL)			TPH (GAS), BTEX & TPH (DIESEL)		

S U M M A R Y O F C A R R E S U L T S in parts per billion unless otherwise noted

DOHS HMTL Laboratory	CURTIS & TOMPKINS	CURTIS & TOMPKINS	CURTIS & TOMPKINS
Laboratory Sample I.D.	122969-001	124133-001	125372-001
TPH Gasoline	870	1800	1700
Benzene	<0.5	10	11
Toluene	<0.5	<0.5	5.7
Ethyl Benzene	12	16	26
Total Xylenes	--	--	--
m,p-Xylenes	5.2	13	15
o-Xylene	5.2	6.8	10
TPH Diesel	1300	1800	1500

In the interest of clarity, an addendum has been added to the **TABLE** which lists analytical results in such a way that our field observations are presented together with the analytical results. This addendum is entitled a **SUMMARY OF CAR RESULTS**. As indicated by the title, the source documents for these numbers are the laboratory's certified analytical reports. These **certified analytical reports (CARs)** are generated by the laboratory as the sole official documents in which they issue their findings. Any discrepancy between the CAR and a tabular or text presentation of analytical values must be decided in favor of the CAR on the grounds that the CAR is the authoritative legal document.



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Clark's Home & Garden
537 Hidden Valley Road
Grant's Pass, OR 97527

Date: 24-MAY-96
Lab Job Number: 125372
Project ID: 960425-V-1
Location: Clarks Home & Garden

Reviewed by: _____

Reviewed by: _____

Damara Moore

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TVH-Total Volatile Hydrocarbons

Client: Clark's Home & Garden
Project#: 960425-V-1
Location: Clarks Home & Garden

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
125372-001 #1		27350	04/25/96	05/02/96	05/02/96	

Matrix: Water

Analyte	Units	125372-001
Diln Fac:		1
Gasoline	ug/L	1700
Surrogate		
Trifluorotoluene	%REC	99
Bromobenzene	%REC	118



BTXE

Client: Clark's Home & Garden
Project#: 960425-V-1
Location: Clarks Home & Garden

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
125372-001 #1		27350	04/25/96	05/02/96	05/02/96	

Matrix: Water

Analyte	Units	125372-001
Diln Fac:		1
Benzene	ug/L	11
Toluene	ug/L	5.7
Ethylbenzene	ug/L	26
m,p-Xylenes	ug/L	15
o-Xylene	ug/L	10
Surrogate		
Trifluorotoluene	%REC	102
Bromobenzene	%REC	107

Lab #: 125372

BATCH QC REPORT

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BTXE

 Client: Clark's Home & Garden
 Project#: 960425-V-1
 Location: Clarks Home & Garden

 Analysis Method: EPA 8020
 Prep Method: EPA 5030

METHOD BLANK

 Matrix: Water
 Batch#: 27350
 Units: ug/L
 Diln Fac: 1

 Prep Date: 05/01/96
 Analysis Date: 05/01/96

MB Lab ID: QC20692

Analyte	Result
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	95	58-130
Bromobenzene	81	62-131



Lab #: 125372

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Clark's Home & Garden
Project#: 960425-V-1
Location: Clarks Home & Garden

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 27350
Units: ug/L
Diln Fac: 1

Prep Date: 05/01/96
Analysis Date: 05/01/96

MB Lab ID: QC20692

Analyte	Result	
Gasoline	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	89	69-120
Bromobenzene	74	70-122



Lab #: 125372

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons			
Client:	Clark's Home & Garden	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	960425-V-1	Prep Method:	EPA 5030
Location:	Clarks Home & Garden		
LABORATORY CONTROL SAMPLE			
Matrix:	Water	Prep Date:	05/01/96
Batch#:	27350	Analysis Date:	05/01/96
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC20693

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1908	2006	95	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	103	69-120		
Bromobenzene	99	70-122		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 125372

BATCH QC REPORT

Page 1 of 1

BTXE

Client: Clark's Home & Garden
Project#: 960425-V-1
Location: Clarks Home & Garden

Analysis Method: EPA 8020
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 27350
Units: ug/L
Diln Fac: 1

Prep Date: 05/01/96
Analysis Date: 05/01/96

LCS Lab ID: QC20694

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	20.7	20	104	80-120
Toluene	21.4	20	107	80-120
Ethylbenzene	20.2	20	101	80-120
m,p-Xylenes	20.1	40	101	80-120
o-Xylene	21.5	20	108	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	105	58-130		
Bromobenzene	93	62-131		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 125372

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Clark's Home & Garden
 Project#: 960425-V-1
 Location: Clarks Home & Garden

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 125375-013
 Matrix: Water
 Batch#: 27350
 Units: ug/L
 Diln Fac: 1

Sample Date: 04/26/96
 Received Date: 04/26/96
 Prep Date: 05/01/96
 Analysis Date: 05/01/96

MS Lab ID: QC20695

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50.00	1622	81	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	93	69-120			
Bromobenzene	90	70-122			

MSD Lab ID: QC20696

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1746	87	75-125	7	<20
Surrogate	%Rec	Limits				
Trifluorotoluene	93	69-120				
Bromobenzene	90	70-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Clark's Home & Garden
Project#: 960425-V-1
Location: Clarks Home & Garden

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
125372-001 #1		27361	04/25/96	05/01/96	05/10/96	

Matrix: Water

Analyte	Units	125372-001
Diln Fac:		1
Diesel C12-C22	ug/L	1500 YL
Surrogate		
Hexacosane	%REC	100

Y: Sample exhibits fuel pattern which does not resemble standard

L: Lighter hydrocarbons than indicated standard



Lab #: 125372

BATCH QC REPORT

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TEH-Tot Ext Hydrocarbons

Client: Clark's Home & Garden
Project#: 960425-V-1
Location: Clarks Home & Garden

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 27361
Units: ug/L
Diln Fac: 1

Prep Date: 05/01/96
Analysis Date: 05/05/96

MB Lab ID: QC20752

Analyte	Result	
Diesel C12-C22	<50	
Surrogate	%Rec	Recovery Limits
Hexacosane	102	60-140

Lab #: 125372

BATCH QC REPORT



Curtis & Tompkins, Ltd.
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TEH-Tot Ext Hydrocarbons			
Client: Clark's Home & Garden	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 960425-V-1	Prep Method: EPA 3520		
Location: Clarks Home & Garden			
BLANK SPIKE/BLANK SPIKE DUPLICATE			
Matrix: Water	Prep Date: 05/01/96		
Batch#: 27361	Analysis Date: 05/05/96		
Units: ug/L			
Diln Fac: 1			

BS Lab ID: QC20753

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1949	79	60-140
Surrogate	%Rec	Limits		
Hexacosane	100	60-140		

BSD Lab ID: QC20754

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2565	1958	79	60-140	0	<35
Surrogate	%Rec	Limits				
Hexacosane	93	60-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

12501

CONDUCT ANALYSIS TO DETECT

LAB Curtis & Thompkins DHS # _____
ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
 EPA RWQCB REGION _____
 LIA
 OTHER

CHAIN OF CUSTODY
960425-V-1

CLIENT
Chester Clark

SITE
Clark's Home & Garden
73040 Clawiter Rd.
Hayward, CA.

SAMPLE I.D	S = SOIL W = H2O	CONTAINERS	
		TOTAL	

#1	W	7	WDA/cite
----	---	---	----------

C = COMPOSITE ALL CONTAINERS

TPH-GAS BIEX
TPH-Diesel

SPECIAL INSTRUCTIONS IF Benzene concentration is greater than 5 ppb, run by 8240.
- Invoice & Report to Chester Clark

CL: Blaine Tech Services

ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	4-25-96	8:00	FA. VANDENBERG	"As Contracted"

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
<i>[Signature]</i>	4-29-96	1100	<i>[Signature]</i>	4-29-96	1100

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #