CAMBRIA

ENVIRONMENTAL PROTECTION
99 DEC 15 PM 2:26

December 13, 1999

Ms. Eva Chu
Alameda County Department of Environmental Heath
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: LETTER OF TRANSMITTAL – MONITORING WELL INSTALLATION and QUATERLY MONITORING REPORT
Clark's Home and Garden
23040 Clawiter Road
Hayward, California

Dear Ms. Chu:

Cambria Environmental Technology, Inc. has enclosed the *Monitoring Well Installation and Quarterly Monitoring Report* for the above-referenced site.

If you have any questions, please do not hesitate to call me at (510) 420-3340.

Sincerely,
Cambria Environmental Technology, Inc.

John A. Riggi
Senior Staff Geologist

jriggi@cambria-env.com

Enclosures

cc: Mr. Ken Clark, 537 Hidden Valley Road, Grants Pass, Oregon 97527

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Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

CAMBRIA

MONITORING WELL INSTALLATION and QUARTERLY MONITORING REPORT

Clark's Home and Garden
23040 Clawiter Road
Hayward, California
Cambria Project No. 189-1541

December 6, 1999

Prepared for:

Kenneth D. Clark
Clarks Home and Garden
23040 Clawiter Road
Hayward, California

Prepared by:

Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, California 94608

REGISTERED GEOLOGIST
DAVID CARL ELIAS
No. 6584
STATE OF CALIFORNIA

John A. Riggi
Senior Staff Geologist

David C. Elias, R.G.
Senior Geologist

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INTRODUCTION

On behalf of Mr. Kenneth Clark, the property owner, and Mr. Clark's representatives, Mr. and Mrs. Bob and Shirley Price, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Monitoring Well Installation and Quarterly Monitoring Report* for the above-referenced site. In a February 22, 1999 letter, the Alameda County Health Care Services Agency (ACHCSA) requested additional permanent monitoring wells offsite. On July 23, 1999 the ACHCSA approved Cambria's Soil and Groundwater Investigative Work Plan dated July 23, 1999. Presented below are summaries of the site background, well installation activities, investigation results, conclusions and recommendations, and planned activities.

SITE BACKGROUND

The site is located near the intersection of Clawiter Road and National Avenue in Hayward, California (Figure 1). Currently the property is operated as a home and garden center in a commercial area.

1988 Underground Storage Tank (UST) Removal: In November 1988 Kaprealian Engineering Inc. (KEI), of Benicia, California removed one 3,000 gallon unleaded UST and one 1,000 gallon diesel UST from the north side of the site's main office building. There were no leaks observed in the unleaded UST during removal. However, KEI observed several small holes in the diesel UST. Analytical results from samples collected underneath the diesel UST indicated the presence of up to 3,500 mg/kg total petroleum hydrocarbons as gasoline (TPHg) and 24,000 mg/kg total petroleum hydrocarbons as diesel (TPHd) beneath the site. KEI excavated soil to a

depth of 18 feet below ground surface (bgs). Sidewall sample SW-1, collected after the excavation, reported TPHg and TPHd concentrations of 670 mg/kg and 1,100 mg/kg, respectively.

1991 Monitoring Well Installation: On August 1, 1991, groundwater monitoring well MW-1 was installed on the western edge of the former UST excavation. One soil sample analyzed from the capillary fringe at 15 feet bgs contained 6,700 mg/kg TPHg and 350 mg/kg TPHd, however, no benzene or toluene was detected.

1995 Soil Borings: On November 22, 1995, Geomatrix of San Francisco, California conducted an additional site assessment at the request of the ACHCSA. Four borings were advanced to collect grab groundwater samples across the site. Total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as gasoline (TPHg), and total petroleum hydrocarbons as motor oil (TPHmo) were detected in grab groundwater samples at concentrations of 11,000, 270,000, and 3,300 micrograms per liter (µg/l), respectively.

1997 Soil Borings: Based on their November 22, 1995 findings, in February 1997 Geomatrix advanced four additional borings to collect additional grab groundwater samples in Clawiter Street, downgradient of the site. Grab groundwater samples contained maximum concentrations of 1,100,000 µg/l TPHd, 8,600 µg/l TPHg, and 4 µg/l benzene. No methyl tertiary butyl ether (MTBE) was detected.

WELL INSTALLATION ACTIVITIES

Scope of Work: To further assess the lateral extent of hydrocarbons in groundwater, Cambria installed two offsite monitoring wells near former downgradient borings B-6 and B-7 (Figure 2). Cambria's standard field procedures for monitoring well installation are presented in Appendix A.

Personnel Present: John Riggi, Cambria Geologist, working under the supervision of David Elias, California Registered Geologist. Jacquelyn Jones, Cambria Geologist, was onsite to assist with traffic control.

Permits: Alameda County Public Works Agency drilling permit # 99WR466, and City of Hayward encroachment permit # 99-31000230 were obtained prior to drilling (Appendix B).

Drilling Company: V & W Drilling, Inc. of Rio Vista, California (C-57 License No. 720904).

Drilling Date: August 18, 1999.

Number of Wells: Two (MW-2 and MW-3).

Drilling Method: Brainard-Kilman 61 drilling rig equipped with 8-inch diameter hollow stem augers.

Sampling Method: Well MW-3 was sampled using a modified-California split-spoon sampler. Due to overhead obstructions, well MW-2 was not sampled.

Boring Depths: Well MW-2 was drilled to 25 feet bgs. Well MW-3 was drilled to 31.5 feet bgs.

Soil Types Encountered: Soil types encountered offsite consisted of silt and silty sands to approximately 10 feet depth, underlain by silts and clayey silts to the maximum depth of explored 31.5 feet bgs (Appendix C).

Groundwater Depths: On August 18, 1999, groundwater was first-encountered at approximately 17 and 25 feet bgs and stabilized at 15 feet bgs.

Well Construction: The groundwater monitoring wells were constructed of two-inch diameter schedule 40 PVC casing with 0.010-inch slotted screens. Well MW-2 was screened from 10 to 25 feet bgs and well MW-3 was screened from 10 to 30 feet bgs. The wells were completed with Monterey No. 3 sand from the bottom of the boring to 1 foot above the top of screened casing, which was overlain with 2 feet of bentonite, and bentonite-cement grout to the ground surface. Flush-mounted, traffic-rated well boxes were installed to protect each well (Appendix C).

Well Development: The wells were developed during installation prior to grouting. Development consisted of surging and purging approximately 10 casing volumes from each well.

Soil Disposal: Soil cuttings produced during drilling activities were transported by Denbeste Transportation to the Forward Landfill in Manteca, California for disposal.

Elevation Survey: On August 24, 1999, Virgil Chavez, a California state licensed land surveyor, measured the elevations of the two new monitoring wells and onsite well relative to a nearby benchmark. The data are presented in Appendix D and summarized in Table 1.

Chemical Analysis: Selected soil and groundwater samples were analyzed for TPHg and TPHd by EPA Method 8015, and BTEX and MTBE by EPA Method 8020 at McCampbell Analytical of Pacheco, California, a California-certified laboratory (Tables 1 and 2). Analytical reports are presented in Appendix E.

Groundwater Sampling: On October 15, 1999 Cambria conducted groundwater monitoring and sampling at the site for the fourth quarter of 1999. The results are included in this report.

INVESTIGATION RESULTS

In general, the soil types encountered were consistent with previous investigations. Soil sample MW-3-16, collected at the capillary fringe during the monitoring well installation, did not contain any TPHg, BTEX or MTBE. However, a TPHd concentration of 1.6 mg/kg was detected. At 21 feet bgs, soil sample MW-3-21 contained a TPHg concentration of 2.6 mg/kg and 1.1 mg/kg TPHd.

No TPHg, BTEX, or MTBE were detected in groundwater samples collected from downgradient well MW-3, on October 15, 1999. However, a low concentration of 99 µg/l TPHd was detected. Groundwater samples collected from the source area monitoring well, MW-1 contained concentrations of 1,000 µg/l TPHg, 1,400 µg/l TPHd, 3.3 µg/l benzene and low concentrations of toluene, ethylbenzene, and xylenes. Monitoring well MW-2, located approximately 50 feet downgradient from the source area contained TPHd and TPHg concentrations of 3,100 µg/l, and 4,300 µg/l, respectively. No benzene or MTBE was detected in groundwater samples collected from MW-2, however low concentrations of toluene, ethylbenzene, and xylenes were detected.

CONCLUSIONS AND RECOMMENDATIONS

Cambria recommends sampling monitoring wells MW-1, MW-2, and MW-3 three more times to complete one hydrogeologic cycle. In addition to TPHg, BTEX, and TPHd, Cambria recommends analyzing the samples for dissolved oxygen, sulfate, nitrate, ferrous iron, and oxygen reduction potential to confirm that natural hydrocarbon biodegradation is occurring at the site. If hydrocarbon concentrations remain stable during these sampling events, Cambria will likely recommend case closure based on the ~~flowing~~ following rationale:

- There are no known sensitive receptors in the site vicinity. Based on United States

Geological Survey topographic maps, the nearest surface water bodies are more than one mile away. According to Geomatrix's June 11, 1997 *Groundwater Investigation Results and Evaluation of Closure Criteria Report*, the nearest water supply well is a domestic well located west of the site at 23145 Clawiter Road. Since there is no significant impact to shallow groundwater at the site, it is expected that potential deeper drinking water aquifers beneath the site will not be impacted.

- The site has been adequately characterized and the plume is stable. Since the removal of the USTs and overexcavation in 1988, the 1991 Terratech well installation, the 1995 and 1997 Geomatrix investigations, and the 1999 Cambria well installation have adequately defined the plume. No BTEX were detected in any of the soil samples collected from downgradient monitoring wells MW-2 and MW-3. MTBE was not detected in any soil sample collected and analyzed during the well installations. MTBE was not detected in the groundwater water samples collected and analyzed during the fourth quarter monitoring and sampling activities. Benzene was not detected in any groundwater samples collected from the downgradient wells MW-2 and MW-3. Although 3.3 µg/l benzene was detected in source area monitoring well MW-1, this is near the Department of Toxics Substances Control maximum contaminant level of 1 µg/l and benzene concentrations have decreased from 18 µg/l to 3.3 µg/l since 1997. Based on the decrease in concentrations from soil and groundwater samples collected since 1988, natural attenuation is likely occurring beneath the site.

- The site presents no significant risk to human health. Due to the relatively low benzene concentrations in soil and groundwater, it is unlikely that the remaining hydrocarbons will pose a significant human health risk.

PLANNED ACTIVITIES

Groundwater Monitoring: Cambria will continue quarterly monitoring at the site until further notice from the ACHCSA.

- No conduits

ATTACHMENTS

Figure 1 – Vicinity Map
Figure 2 – Site Plan

Table 1 - Soil Analytical Results
Table 2 - Groundwater Analytical Results

Appendix A - Standard Field Procedures for Monitoring Well Installation
Appendix B - Drilling and Encroachment Permit
Appendix C - Boring Logs
Appendix D - Monitoring Well Survey Data
Appendix E - Analytical Report

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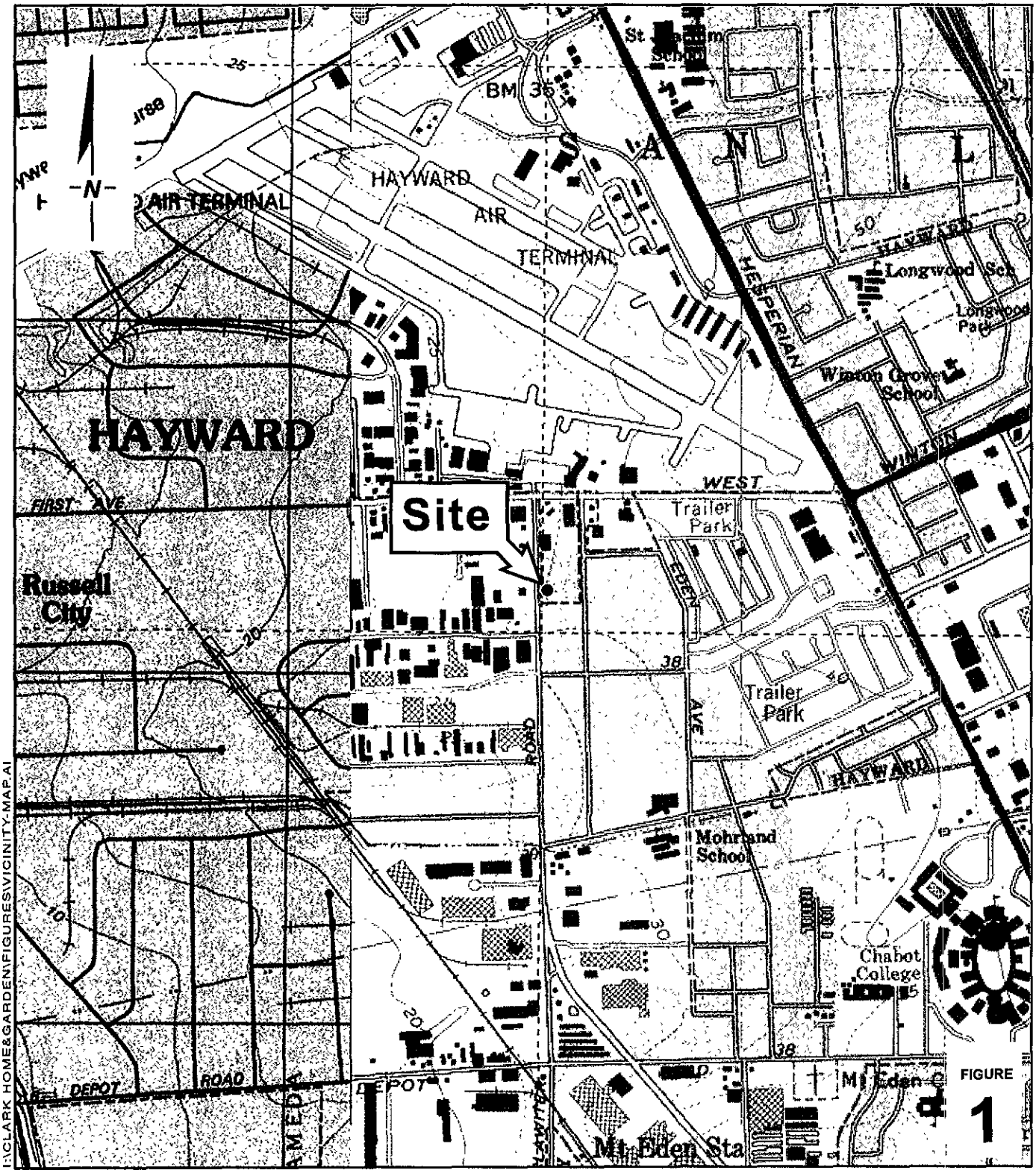
Figures

09/09/99



I:\CLARK HOME&GARDEN\FIGURES\VICINITY-MAP.AI

FIGURE 1

0 1/8 1/4 1/2 1

SCALE 1:1/4 MILE

Clark's Home and Garden

23040 Clawiter Road

Hayward, California

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Vicinity Map

H:\CLARKS H&G\FIGURES\WELL-LOC.DWG

Clark's Home and Garden

23040 Clawiter Road

Hayward, California

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Groundwater Monitoring Well Locations

CLAWITER ROAD

concrete pad

Former Fuel Dispenser

MW-1

Former USTs

Clark's Home and Garden

Building

MW-2

MW-3

N

0 20 40

Scale (ft)

FIGURE 2

EXPLANATION

MW-1 Monitoring Well Location

Soil Sample Location (Kaprealian Engineering, Inc.)

Grab Groundwater sample collected 11/22/95

Grab Groundwater Sample collected 02/19/97

09/09/99

Tables

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Table 1. Soil Sample Analytic Data - Clark's Home and Garden, 23040 Clawiter Road, Hayward, California

Sample ID	Sample Depth (ft)	Sample Date	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
			<----------(mg/kg)---------->						
MW-3 @ 16'	16.0	8/18/99	1.6[a]	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
MW-3 @ 21'	21.0	8/18/99	1.1[b]	2.6[c]	<0.005	<0.005	<0.005	<0.005	<0.05

Notes:

TPHd = Total purgeable petroleum hydrocarbons as diesel by EPA method Modified 8015.

TPHg = Total purgeable petroleum hydrocarbons as gasoline by EPA method Modified 8015.

Benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA method 8020.

MTBE = Methyl tert-butyl ether by modified EPA method 8020.

a = Analytical laboratory notes diesel range compounds are significant; no recognizable pattern.

b = Analytical laboratory notes gasoline range compounds are significant.

c = Analytical laboratory notes no recognizable pattern

Table 2. Groundwater Analytical Data - Clark's Home and Garden, 23040 Clawiter Road, Hayward, California

Well ID *TOC (ft)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft*)	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
				<--------			(µg/L)			-------->
MW-1 *35.30*	8/7/91	na	na	5,900	7,100	45	<25	130	520	na
	9/5/91	na	na	47,000	2,800	<50	<50	230	660	na
	10/15/91	na	na	24,000	13,000	<50	<50	<50	390	na
	1/7/92	na	na	23,000	9,000	<50	<50	270	800	na
	4/8/92	na	na	8,100	3,500	19	<5	350	210	na
	7/7/92	na	na	7,000	6,300	<5	<5	190	170	na
	11/23/93	na	na	2,400	1,600	1.5	3.7	41	24	na
	1/31/94	na	na	3,900	1,900	1.9	4.2	56	49	na
	4/11/94	na	na	2,200	3,000	1.2	4.6	11	11	na
	7/27/94	na	na	6,200	4,400	<1	<1	50	74	na
	10/31/94	na	na	1,700	1,800	2.1	4.9	20	42	na
	10/9/95	na	na	870	1,300	<0.5	<0.5	12	10.4	na
	1/17/96	na	na	1,800	1,800	10	<5	16	19.8	na
	4/25/96	na	na	1,700	1,500	11	5.7	26	25	na
	2/19/97	na	na	2,800	430	9	6	33	50	na
	10/15/99	14.45	20.85	1,000[a]	1,400	3.3	5	4.6	6.7	<5.0

Table 2. Groundwater Analytical Data - Clark's Home and Garden, 23040 Clawiter Road, Hayward, California

Well ID *TOC (ft)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft*)	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
				<--------			(µg/L)			-------->
MW-2 *34.62*	10/15/99	13.86	20.76	4300[g,j]	3,100	<1	6.7	11	11	<5 0
MW-3 *35.30*	10/15/99	14.88	20.42	<50	99	<0.5	<0 5	<0.5	<0.5	<5.0
TB	10/15/99	na	na	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0

Abbreviations and Methods:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020
MTBE = Methyl tert-butyl ether by EPA Method 8020
MTBE (8260) = Methyl tert-butyl ether by EPA Method 8260
mg/L = micrograms per liter

Abbreviations and Methods (Cont'd):

TOC = top of casing elevation
TB = trip blank
na = not applicable
-- = not available, not analyzed, or does not apply

Notes:

a -unmodified or weakly modified gasoline is significant.
b - lighter than water immiscible sheen is present.
g - strongly aged gasoline or diesel range compounds are significant
j - no recognizable pattern

Appendix A

Standard Field Procedures for Monitoring Well Installation

CAMBRIA

STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document describes Cambria Environmental Technology's standard field methods for drilling, installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Well Construction and Surveying

Groundwater monitoring wells are installed in soil borings to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Appendix B

Drilling and Encroachment Permits

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 23040 Clawiter Road
Hayward California

California Coordinates Source _____ ft. Accuracy ± ___ ft.
CCN _____ ft. CCE _____ ft.
APN 441 - 9a - 09

CLIENT
Name Mr Kenneth Clark & Mr Bob Price
Address 537 Hidden Valley Phone _____
City Grants Pass OR Zip 97527

APPLICANT
Name JOHN RIGGI - CAMBRIA ENVR.
Fax 510 420 9170
Address 1144 65th Street Phone 510 420 3340
City OAKLAND CA Zip 94608

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE

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

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	■
Cable	☐	Other		8" Hollow Stem	

DRILLER'S LICENSE NO. C57 - 720904

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2" in. Depth 25 ft.
Surface Seal Depth 5 ft. Number 2

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

ESTIMATED STARTING DATE August 18, 1999
ESTIMATED COMPLETION DATE August 12, 1999

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

APPLICANT'S SIGNATURE _____ DATE 7/27/99

FOR OFFICE USE

PERMIT NUMBER 99WR0616
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 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 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 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.

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

F. WELL DESTRUCTION
See attached.

C. SPECIAL CONDITIONS

APPROVED Carla Schultheis DATE 7/28/99

CITY OF HAYWARD

PERMIT

TAKEN BY: KAB DATE:08/11/99
ISSUED BY: BYA DATE:08/17/99
PERMIT NO. 99-31000230

OWNER/ APPLICANT:	CLARK'S HOME AND GARDEN 23040 CLAWITER ROAD HAYWARD CA 94545
CONTRACTOR:	CAMBRIA ENVIRONMENTAL TECH, INC. 1144 65TH STREET, STE. B OAKLAND CA 94608

PROJECT LOCATION:
23040 CLAWITER RD

CONTACT NAME & TELEPHONE:
JACQUELYN JONES
(510) 420 – 0700
JOHN RIGGI

THE APPLICANT HEREBY APPLIES FOR PERMISSION TO:

Install two (2) groundwater monitoring wells in City's right-of-way (sidewalk).

This Permit is subject to the following conditions:

1. The permittee assumes all responsibility for damage to existing underground utilities.
2. Hours of Operation shall be limited to between 9:00 AM and 3:00 PM.
3. Traffic routing shall be performed per Caltrans Traffic Manual & Standard Plans.
4. All existing concrete to be removed shall be saw-cut 1" deep at the nearest score mark and removed or removed at expansion joints.
5. Any pavement damaged due to this construction shall be neatly edged, removed and replaced at the direction of the City Inspector.
7. Call USA toll free 1-800-642-2444 at least 48 hours prior to any excavation.
8. Call (510) 583-4140 one day in advance to schedule an inspection.
9. This permit subject to cancellation if work is not completed within 90 days.

FEE: $293.00 (Additional Fee of $32.00 Due) **ACCOUNT: 4815**

APPROVED BY:

Bashir Z. Jaafar 8/17/99
DATE

APPLICANT AGREES TO COMPLY WITH ALL OF THE APPLICABLE SECTIONS OF THE CITY OF HAYWARD MUNICIPAL CODE AND STANDARD SPECIFICATIONS.

x_____
DATE

In consideration of the granting of this permit and other good and valuable consideration therefore, the undersigned intending to be legally bound does hereby for the undersigned and the heirs, executors, administrators and assigns of the undersigned agree to indemnify and hold harmless the City of Hayward, the members of the City Council and their agents, servants and employees and each of them, from and against liability for injury to or death of persons and/or liability for damage to property arising from any and all work herein permitted or, incidental thereto or which may arise from failure of permittee to perform the obligations of permittee under this permit, with respect to maintenance.

Appendix C

Soil Boring Logs

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Clark's Home and Garden	**BORING/WELL NAME**	MW-2
JOB/SITE NAME	Clark's Home and Garden	**DRILLING STARTED**	18-Aug-99
LOCATION	23040 Clawiter Road, Hayward, California	**DRILLING COMPLETED**	18-Aug-99
PROJECT NUMBER	189-1517	**WELL DEVELOPMENT DATE (YIELD)**	18-Aug-99
DRILLER	V&W Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	8"	**SCREENED INTERVAL**	10 to 25 ft bgs
LOGGED BY	J. Jones	**DEPTH TO WATER (First Encountered)**	18.0 ft (18-Aug-99)
REVIEWED BY	D. Elias, RG# 6584	**DEPTH TO WATER (Static)**	15.00ft (18-Aug-99)
REMARKS	Hand augered to 5' bgs; located in planter in front of 23040; logged from soil cuttings.		

TPHg (mg/kg)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
				0	SP		**SAND with Silt and Gravel**; (SP); brown; dry; 5% clay, 15% silt, 65% sand, 15% gravel; high estimated permeability.	1.0	
					ML		**SILT**; (ML); dark brown; dry; 5% clay, 85% silt, 10% very fine to fine grained sand; no plasticity; moderate estimated permeability.		Portland Type I/II
				5				5.0	
					SM		**Silty SAND with Gravel**; (SM); light brown; dry; 20% silt, 65% sand, 15% gravel; moderate to high estimated permeability.		
								8.0	Bentonite Seal
							SILT; (ML); light brown; moist; 85% silt, 10% sand, 5% gravel; slight plasticity; low to moderate estimated permeability.		Monterey Sand #3
				10					
				15	ML		@ 15' - as above; olive grey mottled with brown; 5% clay, 80% silt, 10% very fine grained sand, 5% angular gravel to 1"; low plasticity; low to moderate estimated permeability.		2"-diam., 0.010" Slotted Schedule 40 PVC
				20			@ 20' - as above; olive grey; damp' 90% silt, 5% very fine grained sand, 5% gravel; very low plasticity; low to moderate estimated permeability.		
				25				25.0	Bottom of Boring @ 25 ft

WELL LOG (TPH-G) H:\CLARKS~1\GINT\CLARKSHG.GPJ DEFAULT.GDT 9/10/99

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Clark's Home and Garden	**BORING/WELL NAME**	MW-3
JOB/SITE NAME	Clark's Home and Garden	**DRILLING STARTED**	18-Aug-99
LOCATION	23040 Clawiter Road, Hayward, California	**DRILLING COMPLETED**	18-Aug-99
PROJECT NUMBER	189-1517	**WELL DEVELOPMENT DATE (YIELD)**	18-Aug-99
DRILLER	V&W Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	8"	**SCREENED INTERVAL**	10 to 30 ft bgs
LOGGED BY	J. Jones	**DEPTH TO WATER (First Encountered)**	25.0 ft (18-Aug-99)
REVIEWED BY	D. Elias, RG# 6584	**DEPTH TO WATER (Static)**	15.00ft (18-Aug-99)
REMARKS	Hand augered to 5' bgs; located in sidewalk planter across Clawiter Road from 23040.		

TPHg (mg/kg)	BLOW COUNTS	SAMPLE ID	DEPTH (ft bgs)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)
			0	SM	**Silty SAND**; (SM); light brown; dry; 5% clay, 20% silt, 65% sand, 10% gravel; no plasticity; high estimated permeability.	1.0
				ML	**Sandy SILT**; (ML); dark brown; dry; 5% clay, 65% silt, 30% sand; slight plasticity; moderate estimated permeability.	
	10 7 14	MW-3@6'	5			5.5
				SM	**Silty SAND**; (SM); light brown; medium dense; dry; 20% silt, 80% fine grained sand; no plasticity; moderate estimated permeability.	
	6 6 8	MW-3@11'	10		@ 10' - as above; moist; 5% clay, 20% silt, 70% fine grained sand, 5% gravel.	
	4 5 7	MW-3@16'	15		@ 15' - as above; damp; 10% clay, 30% silt, 60% very fine to fine grained sand; slight plasticity.	
<1.0						18.0
					Clayey SILT; (ML); dark brown; very stiff; damp; 20% clay, 80% silt; low to medium plasticity; low estimated permeability.	
	4 8 11	MW-3@21'	20			
2.6				ML		
	5 7 8	MW-3@26'	25		**SILT with SAND**; (ML); light brown; stiff; damp; 5% clay, 80% silt, 15% very fine to fine grained sand; very low plasticity; low estimated permeability.	
	10 12 15	MW-3@31'	30		@ 30' - as above; brown; very stiff; 10% clay, 70% silt, 15% very fine grained sand, 5% gravel; low plasticity; low to moderate estimated permeability.	31.5

WELL DIAGRAM

- Portland Type I/II
- Bentonite Seal
- Monterey Sand #3
- 2"-diam., 0.010" Slotted Schedule 40 PVC
- Bottom of Boring @ 31.5 ft

WELL LOG (TPH-G) H:\CLARKS~1\GINT\CLARKSHG.GPJ DEFAULT.GDT 9/10/99

Appendix D

Monitoring Well Survey Data

Virgil Chavez Land Surveying
312 Georgia Street, Suite 200
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

September 16, 1999
Project No. 1703-30

John Riggi
Cambria Environmental
1144 65th Street, Suite C
Oakland, Ca. 94608

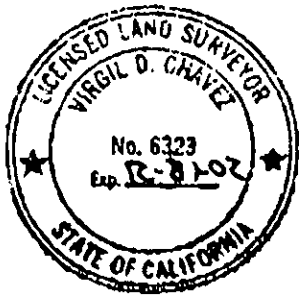
Subject: Monitoring Well Survey
Clark's Home and Garden
23040 Clawiter Road
Hayward, Ca.

Dear Mr. Riggi:

This is to confirm that we have proceeded at your request to survey the monitoring wells at the above referenced location. The survey was performed on September 15, 1999. The benchmark for the survey was a City benchmark being the disk of the southerly monument at Clawiter & National Ave. Measurements taken at approximate north side of top of box, and top of casings. The coordinate table is for casing locations, the coordinates are arbitrary.

Monitoring Well No.	Rim Elevation	TOC Elevation
MW - 1	35.81'	35.30'
MW - 2	35.18'	34.62'
MW - 3	36.00'	35.30'

Description	Northing	Easting
MW - 1	4867.39	4926.59
MW - 2	4935.19	4998.19
MW - 3	4968.44	5030.30
Corner Conc. Block Wall (Northwest Corner of Site)	5000.49	5006.18



Sincerely,

Virgil D. Chavez

Virgil D. Chavez, PLS 6323

Appendix E

Analytical Report

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Environmental Technology	Client Project ID: #189-1541; Clark's Home & Garden	Date Sampled: 08/18/99
1144 65th Street, Suite C		Date Received: 08/19/99
Oakland, CA 94608	Client Contact: John Riggi	Date Extracted: 08/19-08/23/99
	Client P.O:	Date Analyzed: 08/20-08/23/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Recovery Surrogate
17494	MW3 @ 16'	S	ND	ND	ND	ND	ND	ND	101
17495	MW3 @ 21'	S	2.6,j	ND	ND	ND	ND	ND	96
17498	Comp	S	4.7,j	ND	ND	ND	ND	ND	95
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Environmental Technology 1144 65th Street, Suite C Oakland, CA 94608	Client Project ID: #189-1541; Clark's Home & Garden	Date Sampled: 08/18/99
		Date Received: 08/19/99
	Client Contact: John Riggi	Date Extracted: 08/19/99
	Client P.O:	Date Analyzed: 08/19-08/23/99

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
17494	MW3 @ 16'	S	1.6,b	98
17495	MW3 @ 21'	S	1.1,d	99
17498	Comp	S	7.8,a,d	110
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Cambria Environmental Technology 1144 65th Street, Suite C Oakland, CA 94608	Client Project ID: #189-1541; Clark's Home & Garden	Date Sampled: 08/18/99
		Date Received: 08/19/99
	Client Contact: John Riggi	Date Extracted: 08/19/99
	Client P.O:	Date Analyzed: 08/19/99

Lead*

EPA analytical methods 6010/200.7, 239.2+

Lab ID	Client ID	Matrix	Extraction °	Lead*	% Recovery Surrogate
17498	Comp	S	TTLC	7.4	97
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		S	TTLC	3.0 mg/kg	
		W	TTLC	0.005 mg/L	
		—	STLC,TCLP	0.2 mg/L	

* soil and sludge samples are reported in mg/kg, wipe samples in ug/wipe, and water samples and all STLC / SPLP / TCLP extracts in mg/L

+Lead is analysed using EPA method 6010 (ICP)for soils, sludges, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

° EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC - CA Title 22

surrogate diluted out of range; N/A means surrogate not applicable to this analysis

& reporting limit raised due matrix interference

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

DHS Certification No. 1644

Edward Hamilton, Lab Director

16395 ZC46

McCAMBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
Telephone: (510) 798-1620 Fax: (510) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: John Rigan Bill To: Cambria
Company: Cambria Environmental Technology
1144 65th Street, Suite C
Oakland, CA 94608
Tele: (510) 420-0700 Fax: (510) 420-9170
Project #: 189-1541 Project Name: Clark's Home + Garden
Project Location: 23049 Clawiter Rd Hayward CA
Sampler Signature: Jacquelyn Jones

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
MW3 @ 6'		8/18/99	827	1	V		X				X																				17492 H
MW3 @ 11'			839																												
MW3 @ 16'			843												X	X															17493 H
MW3 @ 21'			850																												17494
MW3 @ 26'			857																												
MW3 @ 31'			910																												17495
Comp		8/18/99	1230	4	V		X				X				X	X											X				17496 H
																															17497 H
																															17498

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATION APPROPRIATE ✓
CONTAINERS ✓

VOAS | O&G | METALS | OTHER

Relinquished By:	Date:	Time:	Received By:
	8/18/99	1:58	
Relinquished By:	Date:	Time:	Received By:
	8/18	255	Nina A Butler
Relinquished By:	Date:	Time:	Received By:

Remarks:
R brass tube

McCAMPBELL ANALYTICAL INC.
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http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Environmental Technology 1144 65th Street, Suite C Oakland, CA 94608	Client Project ID: #189-1517; Clark's H & G	Date Sampled: 10/15/99
		Date Received: 10/18/99
	Client Contact: Jacquelyn Jones	Date Extracted: 10/19-10/25/99
	Client P.O:	Date Analyzed: 10/19-10/25/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Recovery Surrogate
23494	MW 1	W	1000,a	ND	3.3	5.0	4.6	6.7	---#
23495	MW 2	W	4300,g,j	ND	ND<1	6.7	11	11	---#
23496	MW 3	W	ND	ND	ND	ND	ND	ND	108
23497	TB	W	ND	ND	ND	ND	ND	ND	102
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

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DHS Certification No. 1644

Edward Hamilton, Lab Director

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Cambria Environmental Technology 1144 65th Street, Suite C Oakland, CA 94608	Client Project ID: #189-1517; Clark's H & G	Date Sampled: 10/15/99
		Date Received: 10/18/99
	Client Contact: Jacquelyn Jones	Date Extracted: 10/18/99
	Client P.O:	Date Analyzed: 10/18/99

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
23494	MW 1	W	1400,d,b	107
23495	MW 2	W	3100,d,b	111
23496	MW 3	W	99,b	105
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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QC REPORT

Date: 10/17/99-10/18/99 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 23194					Instrument: GC-3		
Xylenes	0.0	304.0	305.0	300.00	101	102	0.3
Ethyl Benzene	0.0	100.0	100.0	100.00	100	100	0.0
Toluene	0.0	103.0	100.0	100.00	103	100	3.0
Benzene	0.0	102.0	99.0	100.00	102	99	3.0
MTBE	0.0	100.0	88.0	100.00	100	88	12.8
GAS	0.0	874.9	881.3	1000.00	87	88	0.7
SampleID: 23325					Instrument: GC-6 A		
TPH (diesel)	0.0	328.5	331.4	7500.00	4	4	0.9
SampleID: 23325					Instrument: IR-1		
TRPH	0.0	25.8	26.5	23700.00	0	0	2.7

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

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QC REPORT

Date: 10/19/99 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 23194				Instrument: GC-3			
Xylenes	0.0	303.0	308.0	300.00	101	103	1.6
Ethyl Benzene	0.0	100.0	102.0	100.00	100	102	2.0
Toluene	0.0	103.0	105.0	100.00	103	105	1.9
Benzene	0.0	111.0	113.0	100.00	111	113	1.8
MTBE	0.0	104.0	106.0	100.00	104	106	1.9
GAS	0.0	880.8	884.9	1000.00	88	88	0.5
SampleID: 23325				Instrument: GC-6 A			
TPH (diesel)	0.0	345.9	331.6	7500.00	5	4	4.2

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

17270 2270

McCAMPBELL ANALYTICAL INC.

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PACHECO, CA 94553
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Jacquelyn Jones Bill To: Cambria

Company: Cambria Environmental Technology
1144 65th Street, Suite C
Oakland, CA 94608

Tele: (510) 420-0700 Fax: (510) 420-9170

Project #: 189-1577 Project Name: Clark's H+G

Project Location: 23040 Clawiter Rd, Hayward

Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other
MW1	above	10/15/91	150	5	✱	✓					✓	✱		
MW2	↓	↓	130	↓	↓	✓					✓	✓		
MW3	↓	↓	115	↓	↓	✓					✓	✓		
TB	↓	↓	—	1	VOA	✓					✓	✓		

	VOAS	O&G	METALS	OTHER
PRESERVATION	✓			
APPROPRIATE				
CONTAINERS	✓			

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

Analysis Request	Other	Comments
BTEX & TPH as Gas (602/8020 + 8015) MTBE ✓		23494
TPH as Diesel (8015) ✓		23495
Total Petroleum Oil & Grease (5520 E&F/B&F)		23496
Total Petroleum Hydrocarbons (418.1)		23497
EPA 601 / 8010		
BTEX ONLY (EPA 602 / 8020)		
EPA 608 / 8080		
EPA 608 / 8080 PCB's ONLY		
EPA 624 / 8240 / 8260		
EPA 625 / 8270		
PAH's / PNA's by EPA 625 / 8270 / 8310		
CAM-17 Metals		
LUFT 5 Metals		
Lead (7240/7421/239.2/6010)		
RCI		

Relinquished By:	Date:	Time:	Received By:
	9/18/91		
	10/15/91	16:35	
Relinquished By:	Date:	Time:	Received By:
			Bill Butler 10/15
Relinquished By:	Date:	Time:	Received By:
Bill Butler	9/18	12:34	

Remarks: ✱ 4 Helpes VOA's
1 unpres. Lanber