LIMITED PHASE II ENVIRONMENTAL SITE INVESTIGATION

2301-2307 LINCOLN AVENUE ALAMEDA CALIFORNIA

FOR

MR. ALLAN SEABANC HILLSBOROUGH CALIFORNIA



AUGUST 12, 1999 99-ENV168A



August 12, 1999 99-ENV168A

Mr. Allan A. Seabanc 10 Stacey Court Hillsborough, CA 94010

Subject:

Limited Phase II Environmental Site Investigation Report

2301-2307 Lincoln Avenue

Alameda, CA 94501

Dear Mr. Seabanc:

This report describes a Limited Phase II Environmental Site Investigation Report of the site located at 32301-2307 Lincoln Avenue in Alameda, California. The scope of work included a preliminary investigation to assess the potential subsurface environmental impacts from past gasoline and auto maintenance operations conducted at the subject site.

Based on the information compiled from the sampling of the soil from six onsite test borings and ground water from five onsite test borings, our findings indicate significant levels of total petroleum hydrocarbons as gasoline and its constituents appear to be impacting the ground water and recommend further investigation of site conditions.

Should you have any questions regarding this report, please contact the undersigned.

Sincerely,

Basics Environmental

Donavan G. Tom, M.B.A., R.E.A. Principal Consultant

PHASE-II.LTR

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PROFESSIONAL CERTIFICATION

REPORT LIMITED PHASE II SITE INVESTIGATION 2301-2307 LINCOLN AVENUE ALAMEDA, CALIFORNIA 99-ENV168A AUGUST 12, 1999

This report has been prepared by the staff of Basics Environmental (Basics) under the professional supervision of the Principal Consultant whose seal and signature appears hereon. The findings, interpretations of data, recommendations, specifications or professional opinions are presented within the limits prescribed by available information at the time the report was prepared, in accordance with generally accepted professional engineering and geologic practice and within the requirements by the Client. There is no other warranty, either expressed or implied.

The data and findings of this report are based on the data and information obtained from the agreed upon scope of work between Basics and the Client. Because contamination is not necessarily evenly distributed across the property's soils and ground water, it can easily remain undetected. Additional scope of services (at greater cost) may or may not disclose information which may significantly modify the findings of this report. We accept no liability on completeness or accuracy of the information presented and or provided to us, or any conclusions and decisions which may be made by the Client or others regarding the subject Site.

This report was prepared solely for the benefit of Basic's Client. Basics consents to the release of this report to third parties involved in the evaluation of the property for which the report was prepared, including without limitation, lenders, title companies, public institutions, attorneys, and other consultants. However, any use of or reliance upon this report shall be solely at the risk of such party and without legal recourse against Basics, or its subcontractors, affiliates, or their respective employees, officers, or directors, regardless of whether the action in which recovery of damage is sought is based upon contract, tort (including the sole, concurrent or other negligence and strict liability of Basics), statute or otherwise. This report shall not be used or relied upon by a party that does not agree to be bound by the above statements.

No. 05598

Expires: 1900

Donavan G. Tom, M.B.A., R.E.A.

Principal Consultant

1.0 INTRODUCTION

1.1 Purpose of Investigation

Basics Environmental (Basics) has performed this Limited Phase II Site Investigation (Phase II) for Mr. Allan A. Seabanc pursuant to our letter of engagement signed July 16, 1999. The "subject site" is at 2301-2307 Lincoln Avenue, Alameda, California (See Drawing 1).

1.2 Background

Historical information obtained from an Environmental Assessment, dated March 19, 1998 conducted by Basics for the subject site, revealed revealed the site was occupied by three residential dwellings in 1897. Sometime between 1897 and 1948, the site was occupied by an auto shop (2301 Lincoln Avenue) and two residential dwellings. Sometime between 1948 and 1950, the site was occupied by a gasoline service station/tire recapping facility (2301 Lincoln Avenue) and two residential dwellings. The gasoline service station and auto repair facilities were noted at the northeast corner of the Lincoln Avenue and Oak Street. Sometime during the early 1980s, the subject site was reported to have been redeveloped into the retail strip center as noted today. Since that time the subject site has been utilized for commercial retail space.

Information from local regulatory agencies revealed 2301 Lincoln Avenue was first developed into a gas station in 1926. In 1970, the underground storage tanks were replaced by Shell Oil. In 1982, the Shell gasoline service station was closed. During that time one 8,000-gallon, two 2,000-gallon, and one 1,000-gallon gasoline underground storage tanks were removed. No additional information regarding soil and/or ground water testing or visual observations during removal were available.

1.3 Scope of Work

Based on historical information, the subject site has a potential long history of utilizing hazardous materials associated with past gasoline and auto maintenance operations including, but not limited to, petroleum hydrocarbons, lubricating oils and solvents. In addition, the lack of soil and ground water testing during the removal of the former gasoline station, associated underground storage tanks, pumps and piping (reported by local regulatory agencies) suggest a

potential of inadvertent discharges of these materials to surface below.

On the basis of the information reviewed, Basics was contracted by Mr. Allan A. Seabanc to perform the following Limited Phase II Environmental Site Investigation approach to assess the potential subsurface environmental impacts from past gasoline and auto maintenance operations conducted at the subject site.

The scope of work performed for this Limited Phase II Site Investigation consisted of the following tasks:

- Under the direction of a California Registered Geologist, six exploratory borings were to be advanced within the former area of the underground storage tanks (based on historical Sanborn Fire Insurance Maps) and along the northwest perimeter of the subject site (perceived up gradient);
- Soil samples were to be collected from below the concrete surface at approximately five to eight feet below ground surface within the native soil. One grab water sample was also to be taken from each boring. If deemed waranted from visual observations of the samples, additional soil samples may be collected from the exploratory borings;
- Samples were to be collected, labeled, placed in a cooler with chemical ice, and transported under Chain of Custody control to McCambell Analytical Laboratory, a certified laboratory with the Department of Toxic Substances Control (DTSC) of the California Environmental Protection Agency, for analysis; and
- Samples were to be analyzed for Total Petroleum Hydrocarbons as gasoline, benzene, toluene, ethylbenzene, total xylenes and tert-methyl butyl ethylene (TPH-g, BTEX and MTBE) and Volatile Organic Compounds.

The work for this Limited Phase II Site Investigation was performed within the client approved scope of work and budget for the investigation.

1.4 Permits and Regulatory Compliance

Several regulatory agencies were contacted prior to the beginning of this work and the permits necessary to proceed were obtained. Permits and/or approvals were obtained from the following agencies:

- Mr. Alvin Kan, County of Alameda Public Works Agency, Water Resources Section, Permit No. 99WR463; and
- Underground Services Alert (U.S.A.), U.S.A. Job No. 536222.

2.0 SOIL AND GROUND WATER SAMPLING

2.1 Field Activities

2.1.1 Preliminary Subsurface Investigation

On July 24, 1999, six soil test borings were advanced by Fast Tek, Inc. (FTI; Richmond, California) under the direction of a California Registered Geologist. The borings were specifically designed to sample the soil and ground water if encountered. The targeted areas of concern are shown on Drawing 2 and include:

• Six exploratory borings (SB-1 - SB-6) were advanced within the former area of the underground storage tanks (based on historical Sanborn Fire Insurance Maps) and along the northwest perimeter of the subject site (perceived up gradient).

These locations were intended to provide subsurface chemistry data at potential areas of environmental impacts from past gasoline and automobile maintenance operations conducted at the site.

FTI utilized Geoprobe® 5400 Direct Penetration Technology (DPT) drilling methods. DPT uses dry impact methods to drive boring tools into the subsurface. A soil sample was collected in 2-inch diameter, four foot steel continuous core sampler. Polyethylene terephthalate glycol (PETG) soil liners were utilized within the inner sample barrel. PETG soil liners are transparent and inert to petroleum hydrocarbons, metals, solvents, pesticides and most hazardous materials (except high levels of phenols). After advancing both the drive-casing and sample barrel 4 feet, the sampler was retracted, and the sample removed. Selected samples then were sealed and labeled for analytical purposes; the remainder of the samples were scrutinized for field characterization. The drive-casing and sample barrel were advanced in this manner until the total depth of each borehole was reached.

A soil sample from each of the borings was retrieved from the discrete depth of 5 and 7.5 feet bgs. within the native soil. The samples for analytical purposes were covered on each end with Teflon, capped, sealed with tape, labeled, and placed in an insulated chest containing ice. A log of the borings, which indicate site lithology, soil sampling depths, and other pertinent information was developed under the direction of a California Registered Geologist during the drilling program and is included in Appendix A.

The borings were advanced to total depths not exceeding 10 feet bgs and converted to temporary wells and "grab" ground water samples were collected. The sampling procedures followed by Basics field geologist are described below:

- Threading together and lowering into the boring 1-inch diameter PVC well casing to the bottom of the borehole;
- Allowing the temporary well time to stabilize;
- Lowering a plastic disposable bailer into the well, collecting a ground water sample, and lifting the water sample to the surface; and
- Decanting the sample into labeled, laboratory-provided containers and placing the containers into an insulated chest containing ice.

Ground water was not encountered in SB-5 after letting stand for one hour. Subsequently, the PVC well casing was removed and all of the boreholes were backfilled to the surface with a neat cement slurry. The drill cuttings were collected and placed in one 5-gallon pail, which was properly disposed of by FTI.

Once collected in the field, all samples were maintained under chain of custody until delivered to the laboratory. The soil and ground water samples were immediately delivered to McCambell Analytical Laboratory, Inc. (McCambell; Pacheco, California), a State-certified laboratory.

3.0 CHEMICAL ANALYSES AND RESULTS

3.1 Chemical Analyses

The soil and "grab" ground water samples taken from the soil test borings were analyzed for the following:

- Total Petroleum Hydrocarbons as gasoline, benzene, toluene, ethylbenzene, total xylenes and tert-methyl butyl ethylene (TPH-g, BTEX and MTBE) (EPA Modified Method 8015); and
- Volatile Organic Compounds (VOCs) (EPA Method 8260).

3.2 Analytical Results

Results of chemical analyses on soil and grab water samples collected on July 24, 1999 are presented in Table 1, Table 2 and Table 3. Certified laboratory reports are presented in Appendix B, including chain-of-custody record data.

Table 1. Soil Analytical Results

Sample	Depth	TPH-g	В	T	E	$\mathbf{X}_{\mathbf{x}}$	MTBE	Carbon
<u>ID</u>	<u>Feet</u>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Disulfide mg/kg
SB-1	7.5	ND	ND	ND	ND	ND	ND	ND
SB-2	7.5	ND	ND	ND	ND	ND	ND	13
SB-3	7.5	40*	ND	ND	0.012	ND	ND	ND
SB-4	7.5	ND	ND	ND	ND	ND	ND	ND
SB-5	7.5	ND	ND ·	ND	ND	ND	ND	ND
SB-6	5	ND	ND	ND	ND	ND	ND	ND

ND means not detected above the reporting limit. No other detectable amounts of volatile organic compounds analyzed as part of EPA 8260 were discovered in the soil samples taken. *Strongly aged gasoline or diesel range compounds are significant. MTBE results were verified using EPA Method 8260.

Table 2. Ground Water Analytical Results (TPH-g, BTEX, MTBE)

~' - =-				-	0,	,	2 3)
Sample	Depth	TPH-g	В	\mathbf{T}	E	X	MTBE
<u>ID</u>	<u>Feet</u>	μg/L	ug/L	μg/L	μg/L	μg/L	μg/L
SB-1W	8	ND	ND	ND	ND	NID	
SB-2W	8	NITS.			ND	ND	ND
	0	ND	ND	ND	ND	ND	ND
SB-3W	8	4,500*	ND	4.4			1410
OD ATT			ND	4.4	2.7	4.0	ND
SB-4W	8	ND	ND	ND	ND	NID).TD
SB-6W	. 8	160			עוו	ND	ND
OD OW	O	160	ND	ND	ND	ND	ND

ND means not detected above the reporting limit. *Heavier gasoline range compounds are significant (aged gasoline), lighter than water immiscible sheen was present and liquid sample contained greater than 5% volume of sediment. Note ground water was not encountered within SB-5 at depths of 10 feet bgs.

Table 3. Ground Water Analytical Results (VOCs)

					· -	,
Sample	Depth	n-Butyl		Isopropyl	n-Propyl	Vinyl
D	<u>Feet</u>	benzene ug/L	benzene μg/L	benzene ug/L	benzene ug/L	Acetate µg/L
SB-1W	8	ND	ND	ND	ND	ND
SB-2W	8	ND	ND	ND	ND	ND
SB-3W	8	10	14	45	60	26
SB-4W	8	ND	ND	ND	ND	ND
SB-6W	8	160	ND	ND	ND	ND

ND means not detected above the reporting limit. No other detectable amounts of other volatile organic compounds analyzed as part of EPA 8260 were discovered in the grab water samples taken. Note ground water was not encountered within SB-5 at depths of 10 feet bgs.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Based on the results of the soil testing reported herein, detectable amounts of total petroleum hydrocarbons as gasoline and ethylbenzene were discovered within exploratory boring (SB-3) located at the southwest corner of the subject site and detectable amounts of carbon disulfide was discovered within exploratory boring (SB-2) located at the northwest perimeter of the subject site at depths of 7.5 feet bgs. Maximum concentrations detected included 40 mg/kg of total petroleum hydrocarbons as gasoline, 0.012 mg/kg of ethylbenzene and 13 mg/kg of carbon disulfide. No other detectable amounts of volatile organic compounds analyzed as part (EPA Method 8260) were discovered within the soil samples collected.

Based on the results of the ground water testing reported herein, detectable amounts of total petroleum hydrocarbons as gasoline, toluene, ethylbenzene, total xylenes, n-butyl benzene, secbutyl benzene, isopropyl benzene, n-propyl benzene, and vinyl acetate were discovered within the ground water from SB-3 located at the southwest corner of the subject site. Maximum concentrations detected included 4,500 μ g/L of total petroleum hydrocarbons as gasoline, 4.4 μ g/L of toluene, 2.7 μ g/L of ethylbenzene, 4.0 μ g/L of total xylenes, 10 μ g/L of n-butyl benzene, 14 μ g/L of sec-butyl benzene, 45 μ g/L of isopropyl benzene, 60 μ g/L of n-propyl benzene, and 26 μ g/L of vinyl acetate from a grab water sample taken at 8 feet below the surface. In addition, 160 μ g/L of total petroleum hydrocarbons as gasoline was detected in the grab water sample taken from SB-6 located east of the former underground storage tanks. No other volatile organic compounds analyzed as part (EPA Method 8260) were discovered within the grab water samples collected.

Analytical results indicate impacts of total petroleum hydrocarbons as gasoline, ethylbenzene and carbon disulfide to the soil are not considered significant and below regulatory action. The level of these chemicals are below the Preliminary Remediation Goals set forth by the Department of Toxic Substance Control for industrial sites.

Analytical results indicate impacts of toluene, ethylbenzene, total xylenes and vinyl acetate to the ground water are not considered significant and below regulatory action. The level of these chemicals are below the published Maximum Contaminant Levels (MCLs) for drinking water. However, analytical results indicate impacts of total petroleum hydrocarbons as gasoline, n-butyl

benzene, sec-butyl benzene, isopropyl benzene and n-propyl benzene to the ground water are considered significant and above regulatory action. The level of these chemicals are above the published Maximum Contaminant Levels (MCLs) for drinking water.

Based on the fact that (1) ground water in the vicinity is very shallow; (2) elevated levels of total petroleum hydrocarbons as gasoline, n-butyl benzene, sec-butyl benzene, isopropyl benzene and n-propyl benzene were only discovered within the grab water sample collected from SB-3 (southwest corner of the subject site) at depths of 8 feet bgs at the subject site; (3) the total petroleum hydrocarbons as gasoline detected are in the heavier gasoline range (aged gasoline) and the benzene constituents appear to be by products of benzene; and (4) MTBE was not discovered within any of the ground water samples collected, suggest ground water impact from onsite underground storage tanks, pipes or pumps formerly located at or below the shallow aquifer appears to be confined to the extreme southwest corner of the subject site.

4.2 <u>Recommendations</u>

On the basis of the information compiled from the limited soil and ground water investigation conducted by Basics, the level of total petroleum hydrocarbons as gasoline, n-butyl benzene, sec-butyl benzene, isopropyl benzene and n-propyl benzene discovered within the ground water are considered significant, above regulatory action levels and warrant further investigation. Based on these levels the owner/operator is required to report the results to the local enforcing agency (Alameda County Environmental Health Services, Local Oversight Program (ACEHS) for review. Based on ACEHS review, the owner/operator may be required to "define" or provide more specific information about the contamination problem.

Site Location



Limited Phase II Environmental Site Investigation 2301-2307 Lincoln Avenue Alameda, California PROJECT NO. 99-ENV168A

DRAWING NO.

DGT

8/10/99

REVIEWED BY



Limited Phase II Environmental Site Investigation 2301-2307 Lincoln Avenue Alameda, California PROJECT NO. 99-ENV168A

DRAWING NO.

2

APPENDIX A

Ge	eolo	ogic Log	r	PROJE	ECT	NO: 99-ENV168A		BORING NO: SB-1	SHEET 1 OF 1
CUENT		ALLAN A. SEABANC				SITE: 23	301-	I 2307 Lincoln Avenue, Alameda, Califo	rnio
		ennifer Pucci		С	HEC	CKED BY: Marda T. Herbe	rt. R		7/24/99
		D: 7/24/99 =	DA ⁻	TE(S) WE	LL	INSTALLED:		BORING DIA: 2"	TOTAL DEPTH: 10ft.
DRILLIN	ID ELEV:	E. L.	T.O	.C. ELEV:			DEF	PTH/ELEV. GROUND WATER (ATD): 8	ift
	INATES:	Fast-Tek, Inc.		Di	RILL	ER: TF	DRI	LLING EQUIP: Geoprobe	
	IG SUMM	ARV: O				SAMPLING	INF	ORMATION:	
		with neat cement sign	anced to 10 fo urry.	eet in depth	h: sc	oil sample collected at 5' and 7.5'	'. Scre	eened with PVC liner. Ground water encoun	tered at 8'. Backfilled
Sample No.	Recovery	Well Diagram	Depth Elev. 0	Graphic Log	Sample	<u> </u>	esc	Lithologic Description ription, Color, Density, Moistu	ıre
SB-1 @5'	3.0 for 4.0 4.0 for 4.0		5		Y	GROUND SURFACE SAND (SP) - fine graine As Above	ed, r	medium brown, no moisture, no o	dor
@7.5 ^t			10	>	<	As Above, slightly moist			
			15						
			25						
			30						

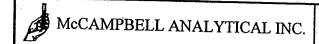
Ge	olo	gic Log		PROJEC	CTNO: 99-	ENV168A		BORING NO:	SB-2		SHEET 1 OF 1
CLIENT:.	MR. A	LLAN A. SEABANC				SITE:	2301-	2307 Lincoln Aven	ue, Alame	da, Californ	nia
LOGGED	BY: Jen	nifer Pucci		CH-	ECKED BY:	Marda T. Herl				DATE:	
DATE(S)	DRILLE	D: 7/24/99 ==	DAT	E(S) WEL	VELL INSTALLED: BORING DIA: 2"				OTAL DEPTH: 10ft.		
GROUND	ELEV:		T.O.	C. ELEV:		······································	DEI	PTH/ELEV. GROU			1
DRILLING	:00: f	ast-Tek, Inc.		DF	NLLER: TF				eoprobe		
COORDIN	VATES:					SAMPLI		ORMATION:			
DRILLING	SUMMA	RY: Continous core advance with neat cement slum	ced to 10 fe	et in depth	: soil sample co	ollected at 5' and 7	7.5'. Scr	eened with PVC line	r. Ground w	ater encount	ered at 8'. Backfilled
Sample No.	Recovery	Well Diagram	Depth Elev. 0	1 5 1 2	Cariforn		Desc	Lithologic [cription, Color,			re
					GROUND						
	3.0	·			SAND	(SP) - fine gra	ained,	medium brown,	no moist	ture, no oc	lor
	for 4.0										
SB-2	4.0		- - <u>-</u>	≥	≤ As Abo	ve					
@5'	4.0		5_		, Y						
	for	· -	_	-1							
SB-2 @7.5'	4.0		_		≤ As Abo	ve					
		level.	-	-							
			10	- 2555	5- 4D-				····		
				4	End Bo	ring at 10 fee	t belo	w ground surfac	e.		
			L								
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			15	1							
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Ge	olo	gic Log		PROJEC	TNO: 99-EN	IV168A	BORING NO: SB-3		SHEET 1 OF 1
CLIENT:	MR.	ALLAN A. SEABANC			'' 	SITE: 2301-	I 2307 Lincoln Avenue, Alan	neda, Califor	L
		nnifer Pucci		СН	ECKED BY: M	arda T. Herbert, R		DATE:	
		D: 7/24/99	DAT	re(s) Well	- INSTALLED:		BORING DIA: 2"		OTAL DEPTH: 10ft.
GROUN			T.O	.C. ELEV:		DEF	PTH/ELEV. GROUND WAT		
DRILLING		Fast-Tek, Inc.		DRI	LLER: TF		ILLING EQUIP: Geoprobe	V /	
COORDI						SAMPLING INF	T	· · · · · · · · · · · · · · · · · · ·	
DRILLING	3 SUMM.	ARY: Continous core adva with neat cement slu	inced to 10 f	eet in depth:	soil sample collect	ed at 5' and 7.5'. Scr	reened with PVC liner. Ground	water encount	ered at 8'. Backfilled
		Well Diagram	Depth Elev.			Desc	Lithologic Descrip	tion y, Moistu	re
					GROUND SUR				
	3.0		-		SAND (SP) - fine grained,	medium brown, no mois	sture, no od	lor
	for 4.0		†						
	4.0		-	-					
SB-3 @5'			5		As Above,	color change, g	reenish		
60	4.0		-	-					
	for 4.0		-	-					
SB-3			-	-		:i			
@ 7.5'		ground water	-	-11112	SILTY SAN	ID (SM) - fine gr	rained, 30% fines, 70%	sand. soil s	taining.
		level.	-	\dashv	hydrocarbo	n odor		· · · · · -, · · · ·	
			_ 10		F-4 D-4-	-1.101			
			-	-	Ena Boring	at 10 feet below	w ground surface.		
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		ogic Log	•	PROJE	CTNO: 99-ENV168A		BORING NO: SB-4		SHEET 1 OF 1
CLIENT:		ALLAN A. SEABANC		SITE: 2301-2307 Lincoln Avenue, Alameda, California					
		ennifer Pucci		CHECKED BY: Marda T. Herbert, R.G., C.E.G. DATE: 7/24					···
<u> </u>		D: 7/24/99			LL INSTALLED:	********	BORING DIA: 2"	1	OTAL DEPTH: 10ft.
GROUN			T.O.	.C. ELEV:		DEI	PTH/ELEV. GROUND WATE		
DRILLIN		Fast-Tek, Inc.		DF	RILLER: TF		LLING EQUIP: Geoprobe		
COORDI		A PM /			SAMPLIN	G INF	ORMATION:		
DRILLIN	G SUMM.	AHY: Continous core adva with neat cement slu	anced to 10 fa	eet in depth	s soil sample collected at 5' and 7.	5'. Scr	eened with PVC liner. Ground w	ater encounte	ered at 8'. Backfilled
		Well Diagram	Depth Elev.			Desc	Lithologic Descripti ription, Color, Density	ion ⁄, Moistui	e
	3.0 for 4.0		-	-		ned,	medium brown, no moist	ure, no od	or
SB-4 @5' SB-4	3.0 for 4.0		5						
@ 7.5'		ground water level.	10		As Above, moist	holou			
			-		End Boring at 10 feet	belov	v ground surface.		
			15						
·			20						
			30						

Geo	olo	gic Log		PROJE	CTI	NO: 99-ENV168A	BORING NO: SB-6	SHEET 1 OF 1
CLIENT:	MR. A	LLAN A. SEABANC				SITE: 2301	2307 Lincoln Avenue, Alameda, Californ	nia
LOGGED	BY: Jen	nifer Pucci		a	HEC	KEDBY: Marda T. Herbert, F		
DATE(S)	DRILLEC): 7/24/99	DAT	E(S) WE	LL II	STALLED:		FOTAL DEPTH: 10ft.
GROUND	ELEV:		T.O.	C. ELEV:	:	DE	PTH/ELEV. GROUND WATER (ATD): 8	
DRILLING	CO: F	ast-Tek, Inc.		Di	RILLI		ILLING EQUIP: Geoprobe	
COORDIN	IATES:					SAMPLING IN	FORMATION:	
DRILLING	SUMMA	RY: Continous core advanc with neat cement slurry	ed to 10 fo	eet in deptl	h: soi	sample collected at 5' and 10'. Sc	eened with PVC liner. Ground water encounte	ered at 8'. Backfilled
		Well Diagram	Depth Elev. 0			Des	Lithologic Description cription, Color, Density, Moistu	re
SB-6 @5'	3.0 for 4.0 3.0 for		- - - - - - - -		×	ASPHALT SURFACE SAND (SP) - Firm, well go As Above	aded, medium brown, no moisture,	no odor
SB-6 @10'	4.0		- - 10		×	As Above, moist As Above, color change,		
			15			End Boring at 10 feet belo	w ground surface.	
			25 - 30 - 35					

Appendix B



Client Project ID: Alameda	Date Sampled: 07/24/99
	Date Received: 07/24/99
Client Contact: Donavan Tom	Date Extracted: 07/24/99
Client P.O:	Date Analyzed: 07/24/99
	Client Contact: Donavan Tom

08/02/99

Dear Donavan:

Enclosed are:

- 1). the results of 11 samples from your Alameda project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

Basics Environmental	Client Project ID: Alameda	Date Sampled: 07/24/99
116 Gloreitta Boulevard		Date Received: 07/24/99
Orinda, CA 94563	Client Contact: Donavan Tom	Date Extracted: 07/24/99
	Client P.O:	Date Analyzed: 07/26-07/30/99
Gasoline Range (C6-C12) V	Volatile II	1

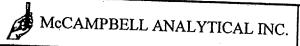
Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

	EPA meti	ods 5030, modifie	d 8015, and	Persion) mas	Region) method GCFID(5030)					
	Lab ID	Client ID	Matrix	TPH(g) ⁺	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery
	15958	SB-6,5	S	ND	ND	ND	ND	ND	ND	Surrogate 96
	15961	SB-5,8	s	ND	ND	ND	ND	ND	ND	102
	15963	SB-4,8	S	ND	ND	ND	ND	ND	ND	
	15965	SB-3,8	S	40,g	ND	ND	ND	0.012		94
	15967	SB-1,5	S	ND	ND	ND			ND	97
ľ	15969	CD1 0			 	ND	ND	ND	ND	101
-		SB1,8	S	ND	ŅD	ND	ND	ND	ND	95
-	15970	SBIW	W	ND,i	ND	ND	ND	ND	ND	108
-	15971	SB2W	W	ND,i	ND	ND	ND	ND	ND	104
L	15972	SB3W	w	4500,j,b,h,i	ND<20	ND	4.4	2.7	4.0	102
	15973	SB4W	W	ND,i	ND	ND	ND	ND	ND	109
	15974	SB6W	w	160,b,i	ND	ND	ND	ND		
								IND .	ND	100
-										
٠,	otherwise	Limit unless stated; ND	I:ND W SU Ug/L		5.0	0.5	0.5	0.5	0.5	
	means not detected above the reporting limit		S .	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	
									5.005	

^{*} 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.

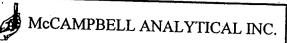


-					
Basics Environmental	Client Project ID: Alameda		Date Sampled: 0	7/24/99	
116 Gloreitta Boulevard			Date Received: 07/24/99		
Orinda, CA 94563	Client Cont	act: Donavan Tom	Date Extracted: 0	07/24/99	
	Client P.O:	Client P.O: Date A		7/26-08/02/99	
EPA method 8260	Volat	ile Organics By GC/MS			
Lab ID		15050			
Client ID		15958			
Matrix		SB6,5			
Compound	Concentration*	S			
Acetone (b)	ND<15	Compound		Concentration*	
Benzene	ND ND	trans-1,3-Dichloropropene		ND	
Bromobenzene	ND	Ethylene dibromide		ND	
Bromochloromethane	ND	Ethylbenzene		ND	
Bromodichloromethane	ND	Hexachlorobutadiene Iodomethane		ND	
Bromoform	ND			ND	
Bromomethane	ND	Isopropylbenzene		ND	
n-Butyl benzene	ND	p-Isopropyl toluene Methyl butyl ketone ^(d)		ND	
sec-Butyl benzene	ND	Methylene Chloride ^(e)		ND	
tert-Butyl benzene	ND	Methyl ethyl ketone (f)		ND<10	
Carbon Disulfide	ND	Methyl isobutyl ketone (g)		ND	
Carbon Tetrachloride	ND	Methyl tert-Butyl Ether (MTBE)		ND	
Chlorobenzene	ND	Naphthalene			
Chloroethane	ND	n-Propyl benzene		ND<10	
2-Chloroethyl Vinyl Ether(c)	ND	Styrene (f)		ND	
Chloroform	ND	1,1,1,2-Tetrachloroethane		ND	
Chloromethane	ND	1,1,2,2-Tetrachloroethane		ND	
2-Chlorotoluene	ND	Tetrachloroethene		ND	
4-Chlorotoluene	ND	Toluene (m)		ND<10	
Dibromochloromethane	ND	1,2,3-Trichlorobenzene		ND	
1,2-Dibromo-3-chloropropane	ND.	1,2,4-Trichlorobenzene		ND	
Dibromomethane	ND	1,1,1-Trichloroethane		ND	
1,2-Dichlorobenzene	ND	1,1,2-Trichloroethane		ND	
1,3-Dichlorobenzene	ND	Trichloroethene		ND	
1,4-Dichlorobenzene		Trichlorofluoromethane		ND	
Dichlorodifluoromethane	ND	1,2,3-Trichloropropane		ND	
1,1-Dichloroethane	ND	1,2,4-Trimethylbenzene		ND	
1,2-Dichloroethane	ND ND	1,3,5-Trimethylbenzene		ND	
1,1-Dichloroethene	ND	Vinyl Acetate (n)	·	ND	
cis-1,2-Dichloroethene	ND	Vinyl Chloride (o)		ND -	
trans-1,2-Dichloroethene	ND	Xylenes, total (p)		ND	
1,2-Dichloropropane	ND (Comments:		ND	
1,3-Dichloropropane	ND		ecoveries (%)		
2,2-Dichloropropane	ND 1	Dibromofluoromethane	CLUTEI IES (%)	100	
1,1-Dichloropropene cis-1,3-Dichloropropene	ND 7	Toluene-d8		100	
1,3-Dichiotopropene	ND 4	I-Bromofluorobenzene		107 99	
•				77	

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

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2 ug/wipe ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2-sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n)

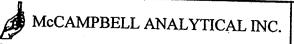


Basics Environmental	Client Project ID: Alameda		Date Sampled: 07/24/99	
116 Gloreitta Boulevard		·	Date Received: 07/24/99	
Orinda, CA 94563	Client Contr	pot: Donouse T	Dute Received, 07/24/99	
O'IIAU, CA 94303	Client Contact: Donavan Tom		Date Extracted:	07/24/99
	Client P.O: Date Analyze		Date Analyzed:	07/26 09/02/00
EPA method 8260	Volati	ile Organics By GC/MS	- are intury zou.	01120-00102199
Lab ID	T			
Client ID		15961		
Matrix	 	SB5,8		
Compound	-	S		
Acetone (b)	Concentration*	Compound		Concentration*
Benzene	ND<15	trans-1,3-Dichloropropene		ND ND
Bromobenzene	ND	Ethylene dibromide		ND ND
Bromochloromethane	ND	Ethylbenzene		
Bromodichloromethane	ND	Hexachlorobutadiene		ND
Bromoform	ND	Iodomethane		ND
	ND	Isopropylbenzene		ND
Bromomethane n-Butyl benzene	ND	p-Isopropyl toluene		ND
sec-Butyl benzene	ND	Methyl butyl ketone (d)		ND
tert-Butyl benzene	ND	Methylene Chloride ^(c)		ND
Carbon Disulfide	ND	Methyl ethyl ketone (f)		ND<10
	ND	Methyl isobutyl ketone (g)		· ND
Carbon Tetrachloride Chlorobenzene	ND	Methyl tert-Butyl Ether (MTBE)		ND
Chloroethane	ND	Naphthalene		
	ND	n-Propyl benzene		ND<10
2-Chloroethyl Vinyl Ether ^(c)	ND	Styrene (i)		ND
Chloroform	ND	1,1,1,2-Tetrachloroethane		ND ND
Chloromethane	ND	1,1,2,2-Tetrachloroethane		ND
2-Chlorotoluene	ND	Tetrachloroethene		ND
4-Chlorotoluene	ND	Toluene (m)		ND<10
Dibromochloromethane	ND	1,2,3-Trichlorobenzene		ND
1,2-Dibromo-3-chloropropane	ND	1,2,4-Trichlorobenzene		ND ND
Dibromomethane	ND	1,1,1-Trichloroethane		ND
1,2-Dichlorobenzene	ND	1,1,2-Trichloroethane		ND
1,3-Dichlorobenzene	ND	Trichloroethene		ND
1,4-Dichlorobenzene	ND	Trichlorofluoromethane		ND
Dichlorodifluoromethane	ND	1,2,3-Trichloropropane		ND
1,1-Dichloroethane	ND	1,2,4-Trimethylbenzene		ND
1,2-Dichloroethane		1,3,5-Trimethylbenzene		ND
1,1-Dichloroethene		Vinyl Acetate (a)		ND
cis-1,2-Dichloroethene		Vinyl Chloride (6)		ND
trans-1,2-Dichloroethene		Xylenes, total (p)	<u></u>	ND
1,2-Dichloropropane		Comments:		ND
1,3-Dichloropropane	ND			
2,2-Dichloropropane		Surrogate R Dibromofluoromethane	ecoveries (%)	
1,1-Dichloropropene		Foluene-d8		102
cis-1,3-Dichloropropene		I-Bromofluorobenzene		108
•		Diomondolovenzene		106

*water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / SPLP extracts in ug/L Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n)

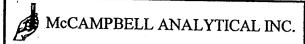


Basics Environmental	Client Project ID: Alameda		Date Sampled: 07/24/99	
116 Gloreitta Boulevard			Date Received: 07/24/99	
Orinda, CA 94563	Client Contact: Donavan Tom		Date Extracted: 0	07/24/99
	Client P.O: Date Analyzed		Date Analyzed: 0	7/26-08/02/99
EPA method 8260	Volati	le Organics By GC/MS		
Lab ID				
Client ID		15963		
Matrix	 	SB4,8		
Compound	Concentration	S		
Acetone (b)	Concentration*	Compound		Concentration*
Benzene	ND<15	trans-1,3-Dichloropropene		ND
Bromobenzene	ND	Ethylene dibromide		ND
Bromochloromethane	ND	Ethylbenzene		ND
	ND	Hexachlorobutadiene		ND
Bromodichloromethane	ND	Iodomethane		ND
Bromoform	ND	Isopropylbenzene		ND
Bromomethane	ND	p-Isopropyl toluene		ND
n-Butyl benzene	ND	Methyl butyl ketone (d)		ND
sec-Butyl benzene	ND	Methylene Chloride ^(e)		ND<10
tert-Butyl benzene Carbon Disulfide	ND	Methyl ethyl ketone (f)		ND ND
Carbon Distinge Carbon Tetrachloride	ND	Methyl isobutyl ketone (g)		ND
Chlorobenzene	ND	Methyl tert-Butyl Ether (MTBE)		- ND
Chloroethane	ND-	Naphthalene		ND<10
	ND	n-Propyl benzene		ND ND
2-Chloroethyl Vinyl Ether ^(c) Chloroform	ND	Styrene (1)		ND
Chloromethane	ND	1,1,1,2-Tetrachloroethane		ND
	ND	1,1,2,2-Tetrachloroethane		ND
2-Chlorotoluene	ND	Tetrachloroethene		ND<10
4-Chlorotoluene	ND	Toluene (m)		ND
Dibromochloromethane	ND	1,2,3-Trichlorobenzene		ND
1,2-Dibromo-3-chloropropane	ND	1,2,4-Trichlorobenzene		ND
Dibromomethane 1,2-Dichlorobenzene	ND	1,1,1-Trichloroethane		ND
1,3-Dichlorobenzene	ND	1,1,2-Trichloroethane		ND ND
1,4-Dichlorobenzene	ND	Trichloroethene		ND
	ND	Trichlorofluoromethane		ND
Dichlorodifluoromethane	ND	1,2,3-Trichloropropane		ND ND
1,1-Dichloroethane	ND	1,2,4-Trimethylbenzene		ND
,2-Dichloroethane		1,3,5-Trimethylbenzene		ND
,1-Dichloroethene	ND	Vinyl Acetate (n)		ND ND
cis-1,2-Dichloroethene	ND	Vinyl Chloride (6)		ND ND
rans-1,2-Dichloroethene	ND	Xylenes, total (p)		ND
,2-Dichloropropane	ND	Comments:	······································	IAD
,3-Dichloropropane	ND		ecoveries (%)	
,2-Dichloropropane	ND	Dibromofluoromethane	COVELLES (70)	102
,1-Dichloropropene		Foluene-d8		103
is-1,3-Dichloropropene		-Bromofluorobenzene		105 98

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

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2 ug/wipe ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n) chloroethene; (o) dimethylbenzenes.



Basics Environmental	Client Project ID: Alameda		Date Sampled: 07/24/99	
116 Gloreitta Boulevard			Date Received: 07/24/99	
Orinda, CA 94563	Client Conta	ct: Donavan Tom	Date Extracted: 0	7/24/99
	Client P.O:		Date Analyzed: 0	7/26-08/02/99
EPA method 8260	Volati	le Organics By GC/MS		
Lab ID		15965		
Client ID		SB3,8		
Matrix		S55,8		······································
Compound	Concentration*			
Acetone (b)		Compound	· · · · · · · · · · · · · · · · · · ·	Concentration*
Benzene	ND<15	trans-1,3-Dichloropropene		ND
Bromobenzene	ND	Ethylene dibromide		ND
Bromochloromethane	ND ND	Ethylbenzene		ND
Bromodichloromethane	ND	Hexachlorobutadiene		ND
Bromoform	ND	Iodomethane		ND
Bromomethane	ND	Isopropylbenzene		ND
n-Butyl benzene	ND	p-Isopropyl toluene		ND
sec-Butyl benzene	ND	Methyl butyl ketone (d)		ND
tert-Butyl benzene	ND	Methylene Chloride ^(e)		ND<10
Carbon Disulfide	ND	Methyl ethyl ketone (f)		ND
Carbon Tetrachloride	ND	Methyl isobutyl ketone (c)		ND
Chlorobenzene	ND	Methyl tert-Butyl Ether (MTBE)		**-
Chloroethane	ND ND	Naphthalene		ND<10
2-Chloroethyl Vinyl Ether(c)	ND	n-Propyl benzene		ND
Chloroform	ND ND	Styrene (1)		ND
Chloromethane	ND ND	1,1,1,2-Tetrachloroethane		ND
2-Chlorotoluene	ND ND	1,1,2,2-Tetrachloroethane		ND
-Chlorotoluene	ND ND	Tetrachloroethene		ND<10
Dibromochloromethane	ND NE	Toluene (m)		ND
,2-Dibromo-3-chloropropane	ND ND	1,2,3-Trichlorobenzene	·	ND
Dibromomethane	ND ND	1,2,4-Trichlorobenzene		ND
,2-Dichlorobenzene	ND ND	1,1,1-Trichloroethane		ND
.3-Dichlorobenzene	ND ND	1,1,2-Trichloroethane		ND
.4-Dichlorobenzene	ND ND	Trichloroethene		ND
Dichlorodifluoromethane	ND ND	Trichlorofluoromethane		ND
,1-Dichloroethane	ND ND	1,2,3-Trichloropropane		ND
,2-Dichloroethane	ND ND	1,2,4-Trimethylbenzene		. ND
,1-Dichloroethene	ND ND	1,3,5-Trimethylbenzene Vinyl Acetate (n)		ND
is-1,2-Dichloroethene	ND ND	Vinyl Chloride (0)		ND
rans-1,2-Dichloroethene		Xylenes, total (p)		ND
,2-Dichloropropane	ND ND	Comments:	<u> </u>	ND
,3-Dichloropropane				
,2-Dichloropropane	ND ND	Surrogate	Recoveries (%)	
1-Dichloropropene		Dibromofluoromethane		101
		Toluene-d8 4-Bromofluorobenzene		106

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

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2 ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2-pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n) chloroethene; (o) dimethylbenzenes.



-					
Basics Environmental	Client Project ID: Alameda		Date Sampled: 07/24/99		
116 Gloreitta Boulevard				7/24/99	
Orinda, CA 94563	Client Conta	ct: Donavan Tom	Date Extracted: 0	7/24/99	
	Client P.O:		Date Analyzed: 0	7/26-08/02/99	
EPA method 8260	Volati	le Organics By GC/MS			
Lab ID		15967			
Client ID		SB2,8	· · · · · · · · · · · · · · · · · · ·		
Matrix		S S			
Compound	Concentration*				
Acetone (b)	ND<15	Compound		Concentration*	
Benzene	ND<13	trans-1,3-Dichloropropene		ND	
Bromobenzene	ND ND	Ethylene dibromide		ND	
Bromochloromethane	ND ND	Ethylbenzene	····	ND	
Bromodichloromethane		Hexachlorobutadiene		ND	
Bromoform	ND ND	Iodomethane		ND	
Bromomethane		Isopropylbenzene		ND	
n-Butyl benzene	ND ND	p-Isopropyl toluene		ND	
sec-Butyl benzene		Methyl butyl ketone (d)		ND	
tert-Butyl benzene	ND	Methylene Chloride ^(e) Methyl ethyl ketone ^(f)		ND<10	
Carbon Disulfide	ND 12	Methyl isobutyl ketone (g)		ND	
Carbon Tetrachloride	13			ND	
Chlorobenzene	ND	Methyl tert-Butyl Ether (MTBE)			
Chloroethane	ND	Naphthalene		ND<10	
2-Chloroethyl Vinyl Ether ^(c)	ND ND	n-Propyl benzene		ND	
Chloroform		Styrene (b)		. ND	
Chloromethane	ND ND	1,1,1,2-Tetrachloroethane		ND	
2-Chlorotoluene		1,1,2,2-Tetrachloroethane		ND	
4-Chlorotoluene	ND	Tetrachloroethene		ND<10	
Dibromochloromethane	ND	Toluene (m)		ND	
1,2-Dibromo-3-chloropropane	ND	1,2,3-Trichlorobenzene		ND	
Dibromomethane	ND ND	1,2,4-Trichlorobenzene		ND	
1,2-Dichlorobenzene	ND ND	1,1,1-Trichloroethane		ND	
1,3-Dichlorobenzene		1,1,2-Trichloroethane		ND	
1,4-Dichlorobenzene	ND ND	Trichloroethene		ND .	
Dichlorodifluoromethane	ND ND	Trichlorofluoromethane		ND	
1,1-Dichloroethane	ND ND	1,2,3-Trichloropropane 1,2,4-Trimethylbenzene	****	ND	
1,2-Dichloroethane		, ,		ND	
1,1-Dichloroethene	ND ND	1,3,5-Trimethylbenzene Vinyl Acetate ^(a)		ND	
cis-1,2-Dichloroethene	ND ND	Vinyl Acetate (a) Vinyl Chloride (b)		ND	
trans-1,2-Dichloroethene	ND ND	Xylenes, total (p)		ND ND	
1,2-Dichloropropane				ND	
	ND	Comments:			
1,3-Dichloropropane	ND ND		te Recoveries (%)		
2,2-Dichloropropane	ND	Dibromofluoromethane		. 80	
1,1-Dichloropropene	. ND	Toluene-d8		104	
cis-1,3-Dichloropropene	ND	4-Bromofluorobenzene		113	

*water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / SPLP extracts in ug/L
Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2 ug/wipe
ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2-pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n) chloroethene; (o) dimethylbenzenes.

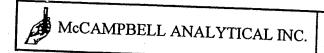


Basics Environmental	Client Proje	ect ID: Alameda	Date Sampled: 07/24/99		
116 Gloreitta Boulevard			Date Received: 07/24/99		
Orinda, CA 94563	Client Cont	act: Donavan Tom	Date Extracted: ()7/24/99	
	Client P.O:	Client P.O:		07/26-08/02/99	
EPA method 8260	Volat	ile Organics By GC/MS			
Lab ID		15000			
Client ID		15969			
Matrix		SB1,8			
Compound	Concentration*	S			
Acetone (b)	ND<15	Compound		Concentration*	
Benzene	ND ND	trans-1,3-Dichloropropene		ND	
Bromobenzene	ND ND	Ethylene dibromide		ND	
Bromochloromethane	ND	Ethylbenzene		ND	
Bromodichloromethane	ND	Hexachlorobutadiene		ND	
Bromoform	ND	Iodomethane		ND	
Bromomethane	ND ND	Isopropylbenzene		ND	
n-Butyl benzene	ND	p-Isopropyl toluene		ND	
sec-Butyl benzene	ND	Methyl butyl ketone (d)		ND	
tert-Butyl benzene	ND ND	Methylene Chloride ^(e)		ND<10	
Carbon Disulfide	ND	Methyl ethyl ketone (f)		ND	
Carbon Tetrachloride	ND	Methyl isobutyl ketone (g)		ND	
Chlorobenzene	ND	Methyl tert-Butyl Ether (MTBE)			
Chloroethane	ND	Naphthalene		ND<10	
2-Chloroethyl Vinyl Ether(c)	ND	n-Propyl benzene Styrene (1)		ND	
Chloroform	ND ND			ND	
Chloromethane	ND	1,1,1,2-Tetrachloroethane		ND	
2-Chlorotoluene	ND	1,1,2,2-Tetrachloroethane Tetrachloroethene		ND	
4-Chlorotoluene	ND	Toluene (m)		ND<10	
Dibromochloromethane	ND	1,2,3-Trichlorobenzene		ND	
1,2-Dibromo-3-chloropropane	ND	1,2,4-Trichlorobenzene		ND	
Dibromomethane	ND	1,1,1-Trichloroethane		ND	
1,2-Dichlorobenzene	ND	1,1,2-Trichloroethane		ND	
1,3-Dichlorobenzene	ND	Trichloroethene		ND	
1,4-Dichlorobenzene	ND	Trichlorofluoromethane		ND	
Dichlorodifluoromethane		1,2,3-Trichloropropane		ND	
1,1-Dichloroethane		1,2,4-Trimethylbenzene		ND	
,2-Dichloroethane		1,3,5-Trimethylbenzene		ND	
,1-Dichloroethene		Vinyl Acetate (n)		ND .	
is-1,2-Dichloroethene		Vinyl Chloride (0)		ND	
rans-1,2-Dichloroethene		Xylenes, total (p)		ND	
,2-Dichloropropane		Comments:		ND	
,3-Dichloropropane	ND				
,2-Dichloropropane		Surrogate R Dibromofluoromethane	ecoveries (%)		
,1-Dichloropropene		Foluene-d8		103	
is-1,3-Dichloropropene		l-Bromofluorobenzene		114	
		VIII OHOUCHZENE		120	

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

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2ug/wipe ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n)



			*	
Basics Environmental	Client Project ID: Alameda		Date Sampled: 07/24/99	
116 Gloreitta Boulevard			Date Received: 07/24/99	
Orinda, CA 94563	Client Cont	act: Donavan Tom	- atto Received. 07/24/99	
5-man, C/1 94505	Cheff Cont	act. Donavan Tom	Date Extracted:	07/26-08/02/99
· · · · · · · · · · · · · · · · · · ·	Client P.O:		Date Analyzed:	07/26-08/02/00
EPA method 8260	Volat	ile Organics By GC/MS		01/120 00/02/99
Lab ID	T			
Client ID		15970		
Matrix		SBIW		
Compound	Concentration*	W		•
Acetone (b)	ND<5	Compound		Concentration
Benzene		trans-1,3-Dichloropropene		ND
Bromobenzene	ND ND	Ethylene dibromide		ND
Bromochloromethane		Ethylbenzene		ND
Bromodichloromethane	ND	Hexachlorobutadiene		ND ND
Bromoform	ND	Iodomethane		ND ND
Bromomethane	ND ND	Isopropylbenzene		ND
n-Butyl benzene	ND ND	p-Isopropyl toluene		ND
sec-Butyl benzene	ND ND	Methyl butyl ketone (d)		ND ND
ert-Butyl benzene	110	Methylene Chloride ^(e)		ND<5
Carbon Disulfide	ND ND	Methyl ethyl ketone ^(f)		ND ND
Carbon Tetrachloride	ND ND	Methyl isobutyl ketone (8)		ND
Chlorobenzene	ND ND	Methyl tert-Butyl Ether (MTBE)		ND
Chloroethane	ND	Naphthalene		ND
2-Chloroethyl Vinyl Ether(c)	ND	n-Propyl benzene		ND ND
Chloroform	ND ND	Styrene (i)		ND ND
Chloromethane	ND	1,1,1,2-Tetrachloroethane		ND
Chlorotoluene	ND ND	1,1,2,2-Tetrachloroethane		ND
-Chlorotoluene	ND ND	Tetrachloroethene		ND<5
Dibromochloromethane	ND ND	Toluene (m)		ND ND
2-Dibromo-3-chloropropane	ND	1,2,3-Trichlorobenzene		ND
ibromomethane		1,2,4-Trichlorobenzene		ND
2-Dichlorobenzene		1,1,1-Trichloroethane		ND
3-Dichlorobenzene		1,1,2-Trichloroethane		ND
4-Dichlorobenzene		Trichloroethene		ND
chlorodifluoromethane		Trichlorofluoromethane		ND
l-Dichloroethane		1,2,3-Trichloropropane		ND
2-Dichloroethane		1,2,4-Trimethylbenzene		ND
-Dichloroethene		1,3,5-Trimethylbenzene		ND
s-1,2-Dichloroethene		Vinyl Acetate (n)		ND
ins-1,2-Dichloroethene	ND 3	Vinyl Chloride (0)		ND
2-Dichloropropane		Xylenes, total (p)		ND ND
3-Dichloropropane	ND	Comments: i		

Toluene-d8

Dibromofluoromethane

4-Bromofluorobenzene

ND

ND

ND

ND

1,3-Dichloropropane

2,2-Dichloropropane

1,1-Dichloropropene

cis-1,3-Dichloropropene

Surrogate Recoveries (%)

105

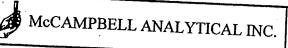
106

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

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2 ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n)

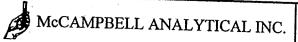


Basics Environmental	Client Proj	ect ID: Alameda	Date Sampled: 07/24/99		
116 Gloreitta Boulevard			Date Received: 07/24/99		
Orinda, CA 94563	Client Contact: Donouse T		 		
	Client P.O:			ted: 07/26-08/02/99	
			Date Analyzed:	07/26-08/02/99	
EPA method 8260	Vola	tile Organics By GC/MS			
Lab ID		1.5000			
Client ID		15971	<u> </u>		
Matrix		SB2W			
Compound	Concentration*	W			
Acetone (b)	ND<5	Compound		Concentration	
Benzene	ND ND	trans-1,3-Dichloropropene		ND ND	
Bromobenzene	ND	Ethylene dibromide		ND	
Bromochloromethane	ND	Ethylbenzene			
Bromodichloromethane	ND	Hexachlorobutadiene		ND ND	
Bromoform	ND	Iodomethane		ND:	
3romomethane	ND	Isopropylbenzene		ND ND	
-Butyl benzene	ND	p-Isopropyl toluene		ND	
ec-Butyl benzene	ND	Methyl butyl ketone (d)		ND	
ert-Butyl benzene	ND	Methylene Chloride ^(e)		ND<5	
arbon Disulfide	ND	Methyl ich ketone (f)		ND ND	
arbon Tetrachloride	ND	Methyl isobutyl ketone (g)		ND	
hlorobenzene	ND	Methyl tert-Butyl Ether (MTBE) Naphthalene			
hloroethane	ND	n-Propyl benzene		ND	
Chloroethyl Vinyl Ether(c)	ND	Styrene (i)		ND	
nloroform	ND	1,1,1,2-Tetrachloroethane		ND	
nloromethane	ND	1,1,2,2-Tetrachloroethane		ND	
Chlorotoluene	ND	Tetrachloroethene		ND	
Chlorotoluene	ND	Toluene (m)		ND<5	
bromochloromethane	ND	1,2,3-Trichlorobenzene		ND	
-Dibromo-3-chloropropane	ND	1,2,4-Trichlorobenzene		ND	
promomethane	ND	1,1,1-Trichloroethane		ND	
-Dichlorobenzene	ND	1,1,2-Trichloroethane		ND	
-Dichlorobenzene	ND	Trichloroethene		ND	
Dichlorobenzene hlorodifluoromethane	ND	Trichlorofluoromethane		ND	
Dichloroethane	ND	1,2,3-Trichloropropane		ND	
Dichloroethane Dichloroethane	ND	1,2,4-Trimethylbenzene		ND	
Dichloroethene Dichloroethene	3.00	1,3,5-Trimethylbenzene		ND	
1,2-Dichloroethene	ND V	Vinyl Acetate (n)		ND	
s-1,2-Dichloroethene		/inyl Chloride (0)		ND	
Dichloroemene	ND X	(ylenes, total (p)		ND	
Dichloropropane		Comments: i		ND	
Dichloropropane	ND				
Dichloropropane		ibromofluoromethane	ecoveries (%)		
Nichla					
Dichloropropene 3-Dichloropropene		oluene-d8		104	

water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / SPLP extracts in ug/L Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n) DHS Certification No. 1644



Basics Environmental	G1: -		D. 6		
Dasies Environmental	Client Project ID: Alameda		Date Sampled: 07/24/99		
116 Gloreitta Boulevard			Date Received: 07/24/99		
Orinda, CA 94563	Client Conta	lient Contact: Donavan Tom Date Extracted: 07		7/26-08/02/99	
	Client P.O:	P.O: Date Analyzed: 07/26		7/26-08/02/99	
EPA method 8260	Volat	ile Organics By GC/MS			
Lab ID		15972			
Client ID		SB3W			
Matrix					
Compound	Concentration*				
Acetone (b)	ND<2.5	Compound	·	Concentration*	
Benzene	ND<2.5	trans-1,3-Dichloropropene		ND<2.5	
Bromobenzene	ND<2.5	Ethylene dibromide Ethylbenzene		ND<2.5	
Bromochloromethane	ND<2.5	Hexachlorobutadiene		ND<2.5	
Bromodichloromethane	ND<2.5	Iodomethane		ND<2.5	
Bromoform	ND<2.5	Isopropylbenzene		ND<2.5	
Bromomethane	ND<2.5			45	
n-Butyl benzene	10	p-Isopropyl toluene		ND<2.5	
sec-Butyl benzene	14	Methyl butyl ketone (d)		ND<2.5	
tert-Butyl benzene	ND<2.5	Methylene Chloride ^(e) Methyl ethyl ketone ^(f)		ND<2.5	
Carbon Disulfide	ND<2.5	Methyl ethyl ketone (f)		ND<2.5	
Carbon Tetrachloride	ND<2.5	Methyl isobutyl ketone (g)		ND<2.5	
Chlorobenzene	ND<2.5	Methyl tert-Butyl Ether (MTBE) Naphthalene		.***	
Chloroethane	ND<2.5	n-Propyl benzene		ND<5	
2-Chloroethyl Vinyl Ether(c)	ND<2.5	Styrene (f)		60	
Chloroform	ND<2.5	1,1,1,2-Tetrachloroethane		ND<2.5	
Chloromethane	ND<2.5	1,1,2-Tetrachloroethane		ND<2.5	
2-Chlorotoluene	ND<2.5	Tetrachloroethene		ND<2.5	
1-Chlorotoluene	ND<2.5	Toluene (m)		ND<2.5	
Dibromochloromethane	ND<2.5	1,2,3-Trichlorobenzene		ND<2.5	
,2-Dibromo-3-chloropropane	ND<2.5	1,2,4-Trichlorobenzene		ND<2.5	
Dibromomethane	ND<2.5	1,1,1-Trichloroethane		ND<2.5	
,2-Dichlorobenzene	ND<2.5	1,1,2-Trichloroethane		ND<2.5	
,3-Dichlorobenzene	ND<2.5	Trichloroethene		ND<2.5	
,4-Dichlorobenzene		Trichlorofluoromethane		ND<2.5	
Dichlorodifluoromethane		1 2 2 Triable		ND<2.5	
,1-Dichloroethane		1,2,3-Trichloropropane 1,2,4-Trimethylbenzene		ND<2.5	
,2-Dichloroethane		1,3,5-Trimethylbenzene		ND<2.5	
1-Dichloroethene		Vinyl Acetate (a)		ND<2.5	
is-1,2-Dichloroethene		Vinyl Chloride (0)		26	
ans-1,2-Dichloroethene		Xylenes, total (9)		ND<2.5	
2-Dichloropropane		Comments: h,i		ND<2.5	
3-Dichloropropane	ND<2.5				
2-Dichloropropane		Surrogate I	Recoveries (%)		
1-Dichloropropene		Dibromofluoromethane		102	

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

Toluene-d8

ND<2.5

ND<2.5

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2 ug/wipe ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

4-Bromofluorobenzene

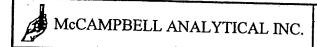
1,1-Dichloropropene

cis-1,3-Dichloropropene

110

93

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n)

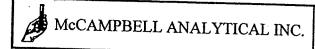


Basics Environmental	Client Project ID: Alameda		Date Sampled: 07/24/99	
116 Gloreitta Boulevard			Date Received: 07/24/99	
Orinda, CA 94563	Client Conta	Client Contact: Donavan Tom		07/26-08/02/99
	Client P.O:	P.O: Date Analyzed: 07/26		07/260-08/02/99
EPA method 8260	Volat	ile Organics By GC/MS		
Lab ID		15973	· .	
Client ID		SB4W		·
Matrix		W		
Compound	Concentration*			
Acetone (b)	ND<5	Compound		Concentration*
Benzene	ND ND	trans-1,3-Dichloropropene		ND
Bromobenzene	ND	Ethylene dibromide		ND
Bromochloromethane	ND	Ethylbenzene		ND
Bromodichloromethane	ND	Hexachlorobutadiene Iodomethane		ND
Bromoform	ND ND			ND
Bromomethane	ND	Isopropylbenzene		ND
n-Butyl benzene	ND	p-Isopropyl toluene		ND
sec-Butyl benzene	ND	Methyl butyl ketone (d)		ND
tert-Butyl benzene	ND	Methylene Chloride ^(c) Methyl ethyl ketone ^(f)		ND<5
Carbon Disulfide	ND.	Methyl isobutyl ketone (g)		ND
Carbon Tetrachloride	ND	Methyl test Due 1 Feb - G FFD F		ND
Chlorobenzene	ND	Methyl tert-Butyl Ether (MTBE) Naphthalene		
Chloroethane	ND			ND
2-Chloroethyl Vinyl Ether(c)	ND	n-Propyl benzene Styrene ⁽¹⁾		ND
Chloroform	ND			ND
Chloromethane	ND	1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane		ND
2-Chlorotoluene	ND	Tetrachloroethene		ND
4-Chlorotoluene	ND	Toluene (m)		ND<5
Dibromochloromethane	ND	1,2,3-Trichlorobenzene	·	ND
1,2-Dibromo-3-chloropropane	ND	1,2,4-Trichlorobenzene		ND
Dibromomethane	ND	1,1,1-Trichloroethane		ND
1,2-Dichlorobenzene	ND	1,1,2-Trichloroethane		ND
1,3-Dichlorobenzene	ND	Trichloroethene		ND
1,4-Dichlorobenzene	ND	Trichlorofluoromethane		ND
Dichlorodifluoromethane	ND ND	1 2 2 T-i-Li-	<u> </u>	ND
1,1-Dichloroethane	ND	1,2,4-Trimethylbenzene		ND
1,2-Dichloroethane	ND	1,3,5-Trimethylbenzene		ND
1,1-Dichloroethene	ND	Vinyl Acetate (n)		ND ND
cis-1,2-Dichloroethene	ND	Vinyl Chloride (0)		ND
rans-1,2-Dichloroethene		Xylenes, total (p)		ND
,2-Dichloropropane		Comments: i		ND
,3-Dichloropropane	ND			
,2-Dichloropropane		Surrogate l	Recoveries (%)	
,1-Dichloropropene		Dibromofluoromethane		105
is-1,3-Dichloropropene		Toluene-d8 4-Bromofluorobenzene		105
	141/	4-Bromofluorobenzene		92

*water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / SPLP extracts in ug/L Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2-sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n) chloroethene; (o) dimethylbenzenes.



Basics Environmental	Client Proje	ct ID: Alameda	Date Sampled: 07/24/99		
116 Gloreitta Boulevard			Date Received: 07/24/99		
Orinda, CA 94563	Client Conta	act: Donavan Tom	Date Extracted: (07/26-08/02/99	
	Client P.O:				
EPA method 8260	Volat	ile Organics By GC/MS			
Lab ID		1.00-4			
Client ID		15974			
Matrix		SB6W			
Compound	Concentration*	W			
Acetone (b)		Compound		Concentration*	
Benzene	ND<5	trans-1,3-Dichloropropene		ND	
Bromobenzene	ND	Ethylene dibromide		ND	
Bromochloromethane	ND	Ethylbenzene		ND	
Bromodichloromethane	ND	Hexachlorobutadiene		ND	
Bromoform	ND_	Iodomethane		ND	
Bromomethane	ND	Isopropylbenzene		ND	
n-Butyl benzene	ND_	p-Isopropyl toluene		ND	
sec-Butyl benzene	ND.	Methyl butyl ketone (d)		ND	
tert-Butyl benzene	ND	Methylene Chloride ^(c)		ND<5	
Carbon Disulfide	ND	Methyl ethyl ketone ^(f)		ND	
Carbon Tetrachloride	ND	Methyl isobutyl ketone (g)		ND	
Chlorobenzene	ND	Methyl tert-Butyl Ether (MTBE)			
Chloroethane	ND	Naphthalene		ND	
2-Chloroethyl Vinyl Ether(c)	ND ND	n-Propyl benzene		ND	
Chloroform	ND	Styrene (I)		ND	
Chloromethane	ND	1,1,1,2-Tetrachloroethane		ND	
2-Chlorotoluene	ND	1,1,2,2-Tetrachloroethane		ND	
-Chlorotoluene	ND	Tetrachloroethene		ND<5	
Dibromochloromethane	ND	Toluene (m)		ND	
,2-Dibromo-3-chloropropane	ND	1,2,3-Trichlorobenzene		ND	
Dibromomethane	ND	1,2,4-Trichlorobenzene		ND	
,2-Dichlorobenzene	ND	1,1,1-Trichloroethane		ND	
,3-Dichlorobenzene	ND ND	1,1,2-Trichloroethane		ND	
,4-Dichlorobenzene	ND	Trichloroethene		ND	
Dichlorodifluoromethane	ND	Trichlorofluoromethane		ND	
,1-Dichloroethane	ND ND	1,2,3-Trichloropropane		ND	
2-Dichloroethane		1,2,4-Trimethylbenzene		ND	
1-Dichloroethene		1,3,5-Trimethylbenzene		ND	
s-1,2-Dichloroethene		Vinyl Acetate (n)		ND	
ans-1,2-Dichloroethene		Vinyl Chloride (0)		ND	
2-Dichloropropane		Xylenes, total (9)		ND	
3-Dichloropropane		Comments: i			
2-Dichloropropane	ND	Surrogate	Recoveries (%)		
I-Dichloropropene	ND I	Dibromofluoromethane		112	
S-1.3-Dichloronsonene	ND ·	Foluene-d8		103	

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

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2ug/wipe

4-Bromofluorobenzene

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

ND

cis-1,3-Dichloropropene

103

97

⁽b) 2-propanone or dimethyl ketone; (c) (2-chloroethoxy) ethene; (d) 2-hexanone; (e) dichloromethane; (f) 2-butanone; (g) 4-methyl-2pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) ethenylbenzene; (l) methylbenzene; (m) acetic acid ethenyl ester; (n)

QC REPORT FOR HYDROCARBON ANALYSES

Date:

07/25/99-07/26/99

Matrix:

WATER

Analyte	Concen Sample	tration	(ug/L)	7	% Rec	overy	
	(#15450)) MS	MSD	Amount Spiked	Ms	MSD	RPD
TPH (gas) Benzene Toluene Ethyl Benzene Xylenes	0.0 0.0 0.0 0.0	107.4 9.9 10.1 10.3 30.8	105.4 9.6 9.8 10.0 30.1	100.0 10.0 10.0 10.0 30.0	107.4 99.0 101.0 103.0 102.7		1.9 3.1 3.0 3.0
TPH(diesel)	0.0	7717	7643	7500	103	102	1.0
TRPH (oil & grease)	0	21000	21400	23700	89	90	1.9

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

^{*} Rec. = (MS - Sample) / amount spiked x 100

QC REPORT FOR HYDROCARBON ANALYSES

Date:

07/25/99-07/26/99

Matrix: SOIL

Analyte	Concent Sample	ration	(mg/kg)		% Reco		
	(#09617)	MS	MSD	Amount Spiked	MS	MSD	RPD
TPH (gas) Benzene Toluene Ethylbenzene Xylenes	0.000 0.000 0.000 0.000 0.000	2.162 0.196 0.204 0.206 0.598	2.172 0.212 0.220 0.224 0.644	2.03 0.2 0.2 0.2 0.2 0.6	107 98 102 103 100	107 106 110 112 107	0.5 7.8 7.5 8.4 7.4
TPH(diesel)	0	318	319	300	106	106	0.3
TRPH (oil and grease)	0.0	21.0	21.4	20.8	101	103	1.9

^{*} Rec. = (MS - Sample) / amount spiked \times 100

RPD = (MS - MSD) / (MS + MSD) \times 2 \times 100

QC REPORT FOR VOCs (EPA 8240/8260)

Date: 07/25/99-07/26/99

Matrix:

WATER

Analyte	Concentr Sample	ation	(ug/kg,u		% Reco		
	(#15328)	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-Dichloroethe Trichloroethene EDB Chlorobenzene Benzene Toluene	0 0 N/A 0 0	116 92 N/A 102 100	117 93 N/A 105 98 108	100 100 N/A 100 100	116 92 N/A 102 100	117 93 N/A 105 98 108	0.9 1.1 N/A 2.9 2.0 3.8

% Rec. = (MS - Sample) / amount spiked \mathbf{x} 100

 $RPD = (MS - MSD) / (MS + MSD) \times 2 \times 100$

QC REPORT FOR VOCs (EPA 8240/8260)

Date:

07/25/99-07/26/99

Matrix:

SOIL

Analyte	Concentr Sample	ation	(ug/kg,u		% Reco		
	(#09033)	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-Dichloroethe Trichloroethene EDB Chlorobenzene Benzene Toluene	0 0 N/A 0 0	98 84 N/A 101 105 101	98 82 N/A 99 100	100 100 N/A 100 100	98 84 N/A 101 105 101	98 82 N/A 99 100	0.0 2.4 N/A 2.0 4.9 1.0

% Rec. = (MS - Sample) / amount spiked \times 100

RPD = (MS - MSD) / (MS + MSD) $\times 2 \times 100$

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SAMPLE ID	LOCATION	Date	Time	# Containers	Type Containers	Water	Air	Sludge	Other	e	HCI	Other	TPH as	TPH as Diesel (8015)	Total Petroleum Oil	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EFA 625 / 8770	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	0707				96 (962	
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	SAMPLE ID	LOCATION	-	Time	# Containers	Type Containers		MAT			PRE	ETHO SERV	/ED	TPH as Gas (602/8020	TPH as Diesel (8015)	troleum Oil &	roleum Hydro	/8010	BTEX ONLY (EPA 602 / 8020)	EDA 609 / 8080 PCT1 CTT	EFA 624 / 8240 (8767)	18270	NA's by EPA	Metals	Actals	Lead (7240/7421/239.2/6010)							
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