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2:25 pm, Apr 03, 2008

Alameda County Environmental Health

April 1, 2008



Mr. Jerry Wickham Alameda County Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Subject: Site Located at 1544 Stanley Boulevard, Pleasanton, CA

Fuel Leak Case No. RO0002603, Eliot Aggregate Plan

Dear Mr. Wickham:

On behalf of CEMEX Construction Materials, SOMA's "Additional Soil and Groundwater Investigation Around Former Underground Storage Tanks" report for the subject site has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

If you have any questions or comments, please call me at (925) 734-6400. Your time is greatly appreciated in reviewing this report.

Sincerely,

Mansour Sepehr, Ph.D., PE Principal Hydrogeologist

cc: Mr. Robert Aldenhuysen, CEMEX w/report enclosure Mr. Wyman Hong, Alameda County Flood Control and Water Conservation District w/report enclosure



Additional Soil and Groundwater Investigation Around Former Underground Storage Tanks

1544 Stanley Boulevard Pleasanton, California

April 1, 2008

Project 3042

Prepared for
CEMEX Construction Materials, L.P.
6601 Koll Center Parkway
Pleasanton, California 94566

CERTIFICATION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this additional site investigation report on behalf of CEMEX Construction Materials, L.P., property owner of 1544 Stanley Boulevard, Pleasanton, California. It was prepared in accordance with SOMA's workplan entitled "Workplan to Conduct Additional Soil and Groundwater Investigation Around Former Underground Storage Tanks," dated October 30, 2007 and to comply Alameda County Health Care Services, Department of Environmental Health correspondence dated November 19, 2007, granting approval of the workplan.

Mansour Sepehr, Ph.D., P.E. Principal Hydrogeologist



PERJURY STATEMENT

Subject: 1544 Stanley Boulevard, Pleasanton, CA

"I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge".

Robert Aldenhuysen

CEMEX

5180 Golden Foothill Parkway, Suite 200

El Dorado Hills, California 95762

Responsible Party

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1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this additional site investigation report on behalf of CEMEX Construction Materials, L.P., property owner of 1544 Stanley Boulevard, Pleasanton, California (the Site). It was prepared in accordance with SOMA's workplan entitled "Workplan to Conduct Additional Soil and Groundwater Investigation Around Former Underground Storage Tanks," dated October 30, 2007 and to comply with Alameda County Health Care Services, Department of Environmental Health (ACEHD) correspondence dated November 19, 2007, granting approval of the workplan. The Site is known as Eliot Aggregate Plant. Figure 1 shows the Site and surrounding areas.

The Site was previously owned and operated by RMC Pacific Materials, Inc. until CEMEX purchased the company in June 2005. On November 20, 2003, during the installation of under-dispenser containment (UDC) at the gasoline dispenser, analysis of soil samples taken 3 feet below the dispenser disclosed the presence of methyl tertiary-butyl ether (MtBE) at 71 mg/kg (EPA Method 8260B). On October 7, 2005, and again on February 24, 2006, ACEHD requested a workplan to assess the lateral and vertical extent of soil and groundwater contamination beneath the Site. In response, CEMEX submitted a request to postpone delineation of the soil and water contamination until the two underground fuel storage tanks (USTs) on the Site were removed.

On January 11, 2007, at the direction of ACEHD, a California state-licensed contractor removed two 10,000-gallon USTs (gasoline and diesel) from the Site. On April 18, 2007, CEMEX submitted a report entitled "Fuel Tank Removals -Fuel Leak Case #R00002603, RMC Pacific Materials d.b.a. CEMEX - Eliot Aggregate Plant, 1544 Stanley Blvd., Pleasanton, CA 94566" in which laboratory analysis results for soil samples taken from the two UST and dispenser excavations revealed that all samples were non-detectable to a depth of 13 feet below ground surface (bgs) for the following: benzene, toluene, ethylbenzene, total xylenes (BTEX); MtBE; ethyl tertiary-butyl ether (ETBE); tertiary-butyl alcohol (TBA); tertiary-amyl methyl ether (TAME); diisopropyl ether (DIPE); 1,2-dichloroethane (1,2-DCA); and 1,2-dibromoethane (EDB). Subsequently, based on analysis results for soil samples, CEMEX requested that no further action (NFA) status to be adopted by the ACEHD. ACEHD responded with a letter dated May 8, 2007 stating that additional work would be required before NFA status could be considered. This report discusses results of additional soil and groundwater investigation beneath the two former USTs.

2. SCOPE OF WORK

In accordance with ACEHD directive, the objective of the investigation was to evaluate whether petroleum hydrocarbons and their constituents had impacted

groundwater beneath the former USTs. Therefore, two hydropunches were drilled and soil and groundwater samples were collected for laboratory analysis.

During this investigation, SOMA performed the following tasks:

Task 1: Permit acquisition and preparation of Site Health and Safety Plan

Task 2: Drilling of temporary boreholes and collection of soil and groundwater

samples

Task 3: Laboratory analysis

Task 4: Report preparation

Following are brief descriptions of the above tasks.

2.1 Permit Acquisition and Preparation of Site Health and Safety Plan

Prior to commencing field activities, on February 8, 2008 SOMA obtained a drilling permit from Alameda County Flood Control and Water Conservation District, Zone 7 Water Agency. Drilling permit 28022 is attached as Appendix A.

On February 26, 2008, prior to field activities, SOMA's field crew visited the Site and marked boring locations with washable white paint, as delineated in SOMA's workplan dated October 30, 2007, using chalk-based white paint and flags where feasible.

To protect the field crew from underground utility hazards, on February 26, 2008, SOMA contacted Underground Service Alert (USA ticket No 067284). Furthermore, written notice was emailed to the regulator on February 2, 2008 for the appropriate approval prior to beginning March 3rd drilling operations.

Before initiating field activities, SOMA prepared a site-specific Health and Safety Plan (HASP). The HASP is a requirement of the Occupational Safety and Health Administration (OSHA), "Hazardous Waste Operation and Emergency Response" guidelines (29 CFR 1910.120) and the California Occupational Safety and Health Administration (Cal/OSHA) "Hazardous Waste Operation and Emergency Response" guidelines (CCR Title 8, section 5192). The HASP is designed to address safety provisions during field activities and protect the field crew from physical and chemical hazards resulting from drilling and sampling. The HASP establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans. The HASP was reviewed and signed by field staff and contractors prior to beginning field operations at the Site.

2.2 Drilling of Soil Borings and Soil and Groundwater Sample Collection

On March 3, 2008, SOMA's field geologist met with WDC Exploration & Wells (WDC) to advanced two deep borings (SB-1, SB-2) using direct-push technology (DPT) at locations presented in Figure 3. One soil boring was drilled northwest of the former gasoline UST and within 5 feet, while the other was drilled west of the former diesel UST.

The DPT borings were advanced to a depth of 65 feet bgs (SB-1) and 60 feet bgs (SB-2). The borings were terminated upon detection of the first water-bearing zone at the Site. Each boring was continuously cored, and the cored soil described in accordance with the Unified Soil Classification System (Appendix B). In addition, the cored soil was checked for hydrocarbon odors, visual staining, and liquid phase hydrocarbons (free product). No hydrocarbon odors, visual staining, or free product were observed in the cored soil.

Soil samples were collected with a split spoon sampler at 10 feet bgs and at the capillary fringe from each soil boring. The segmented section holding the sample (depth) were sealed at both ends with Teflon sheeting and plastic end caps, labeled with sample identifier, and date and time of sample collection, recorded on a chain of custody form, and placed in a cooled ice chest pending transport to a California state-certified analytical laboratory for analyses. Soil sample results are shown in Table 1.

At each boring location, one grab groundwater sample was collected from the top of the water table for laboratory analysis. Once the sampler was full, the groundwater sample was collected using a stainless steel bailer, and transferred to the appropriate sample containers. The sample containers included 40-mL VOA vials, pre-preserved with hydrochloric acid, which were completely filled and sealed properly to prevent air bubbles from forming in the vial headspace. Furthermore, samples for total petroleum hydrocarbons as diesel (TPH-d) testing were emplaced in 1-L amber containers and preserved with ice. Once collected, samples were labeled with sample identifier and date and time of sample collection, recorded on a chain of custody form, and placed in a cooled ice chest pending transport to a California state-certified analytical laboratory for analyses. Groundwater analysis results are shown in Table 2.

The samples were submitted on March 5, 2008 to Pacific Analytical Laboratory, a state certified laboratory and analyzed as described below.

- TPH as gasoline (TPH-g), BTEX, MtBE, fuel oxygenates, 1,2-DCA, and EDB using EPA Method 8260
- TPH-d using EPA Method 8015

Following soil sampling, the boreholes were decommissioned according to Cal/EPA guidelines with a neat-cement grout mixture and completed at the surface with rapid-set cement grout and asphalt at the top to match existing grade. To prevent bridging and help ensure a good seal, grout was kept under pressure during emplacement. This was achieved by use of a tremie pipe to feed grout into the bottom of the hole. At all times, the opening of the tremie pipe was submerged several feet below the level of grout in the hole; the amount of submergence was dependent on the amount of pressure needed to ensure adequate penetration of grout into the formation.

3. ANALYSIS RESULTS

The following is a brief description of the results from our investigation conducted on the Site. Appendix C includes laboratory analysis reports of soil and groundwater collected on March 3, 2008.

3.1 Soil Analysis Results

Table 1 shows analysis results of soil samples collected during the borehole drilling on March 3, 2008. As shown in the table, all laboratory results were below the minimum laboratory reporting limit for TPH-g, TPH-d, BTEX, MtBE, DIPE, ETBE, TAME, TBA and other gasoline oxygenates and lead scavengers.

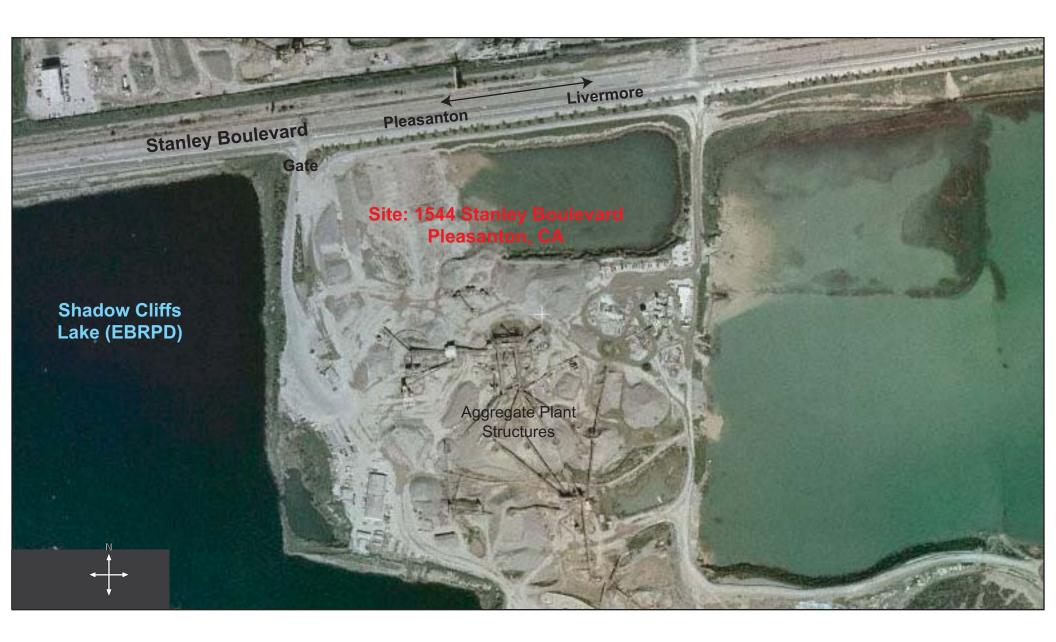
3.2 Groundwater Analytical Results

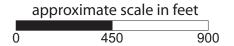
Table 2 shows analysis results for grab groundwater samples collected during borehole drilling on March 3, 2008. As shown in the table, all laboratory results were below the minimum laboratory reporting limit for TPH-g, TPH-d, BTEX, MtBE, DIPE, ETBE, TAME, TBA and other gasoline oxygenates and lead scavengers.

4. CONCLUSIONS AND RECOMMENDATIONS

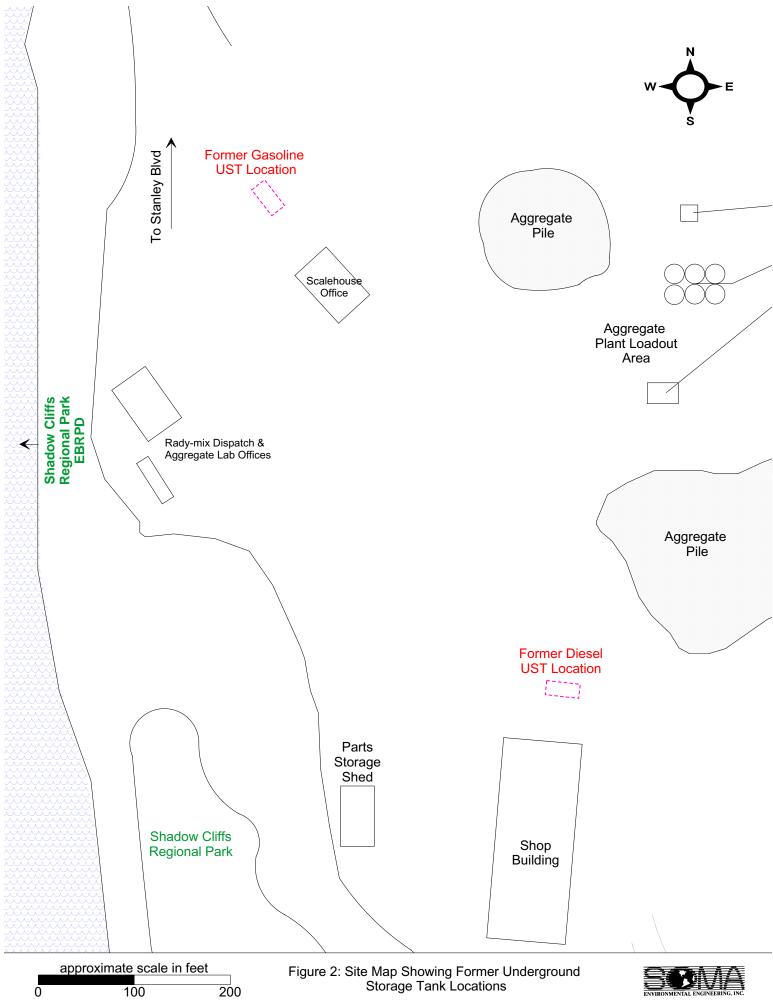
Results of this soil and groundwater investigation indicate that mostly sandy gravel and sandy clay materials underlie the Site. Results of SOMA's soil and groundwater investigations indicate that the soil and groundwater beneath the former UST sites is not impacted by any dissolved phase fuel hydrocarbons or free product. Based on results of the additional soil and groundwater investigation, SOMA recommends that unrestricted NFA status be adopted by the ACEHD for the Site.

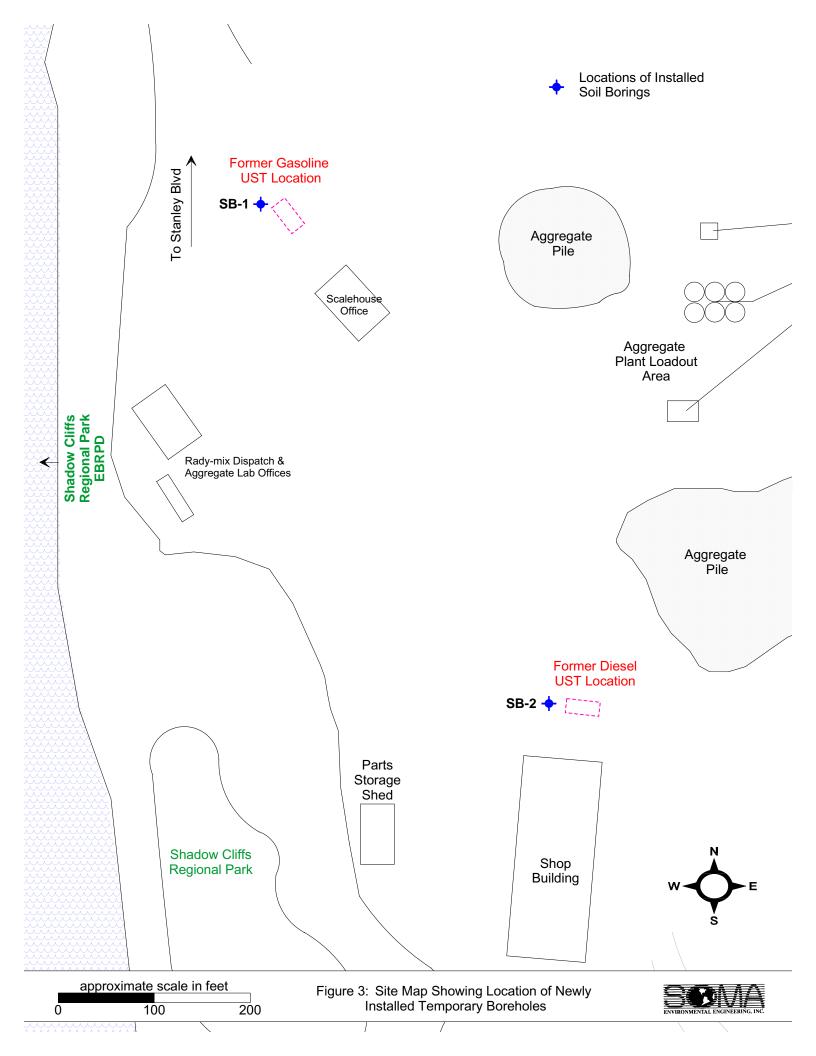
FIGURES











TABLES

Table 1
March 3, 2008
Soil Analytical Results, TPH-g, TPH-d, BTEX, & MtBE
1544 Stanley Blvd., Pleasanton, CA

Well	Sample	TPH-g (μg/L)	TPH-d (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- Benzene (μg/L)	Total Xylenes (μg/L)	MtBE* (μg/L) EPA 8260B	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2- DCA (μg/L)	EDB (μg/L)
SB-1	10 ft bgs	<50.0	<50.0	<0.5	<2.0	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	60 ft bgs	<50.0	<50.0	<0.5	<2.0	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
SB-2	15 ft bgs	<50.0	<50.0	<0.5	<2.0	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	50 ft bgs	<50.0	<50.0	< 0.5	<2.0	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5

Not detected above laboratory reporting limits.

Table 2
March 3, 2008
Groundwater Analytical Results, TPH-g, TPH-d, BTEX, & MtBE
1544 Stanley Blvd., Pleasanton, CA

Well	TPH-g (μg/L)	TPH-d (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- Benzene (μg/L)	Total Xylenes (μg/L)	MtBE* (μg/L) EPA 8260B	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2-DCA (μg/L)	EDB (μg/L)
SB-1	<50.0	<50.0	<0.5	<2.0	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
SB-2	<50.0	<50.0	<0.5	<2.0	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5

Not detected above laboratory reporting limits.

APPENDIX A DRILLING PERMIT



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100 NORTH CANYONS PARKWAY, LIVERMORE, CA 94551-9486

PHONE (925) 454-5000

February 25, 2008

Mr. Rich McKinney SOMA Environmental Engineering 6620 Owens Drive, Suite A Pleasanton, CA 94558

Dear Mr. McKinney:

Enclosed is drilling permit 28022 for a contamination investigation at 1544 Stanley Boulevard in Pleasanton for CEMEX Construction Materials. Also enclosed is a current drilling permit application for your files. Drilling permit applications for future projects can also be downloaded from our web site at www.zone7water.com.

Please note that permit conditions A-2 and G requires that a report be submitted after completion of the work. The report should include drilling and completion logs, location sketch, permit number and any analysis of the soil and water samples. Please submit the original of your completion report. We will forward your submittal to the California Department of Water Resources.

If you have any questions, please contact me at extension 5056 or Matt Katen at extension 5071.

Sincerely,

Wyman Hong

Water Resources Specialist

Enc.

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306 E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

	FOR APPLICANT TO COMPLETE	it , ;	FOR OFFICE USE
BLUL	DEPROJECT 1544 STANLEY DEMEMBENTON CA 94566 LIOT AGGREGATE PLANT		NUMBER
	ordinates Sourceft. Accuracy• •ft.		PERMIT CONDITIONS (Circled Permit Requirements Apply)
APPLICANT NameEmail	EMEX CONSTRUCTION MATERIALS 1001 KOLL CENTER PKUPhone 425-989-66 ASTRONO CA ZIP 945/06 RICH MCKINNEY SOMA ENVIRONMENTAL EngiNEE 1000 ONENS DRIVE Phone 925-734-6400 PLEASANTON CA ZIP 94588	let essay	 GENERAL A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects. Permit is void if project not begun within 90 days of approval date. WATER SUPPLY WELLS
TYPE OF PR Well Constru- Well Destruct Cathodic Pro PROPOSED Domestic Municipal Industrial	ROJECT: ction		 Minimum surface seal diameter is four inches greater than the well casing diameter. 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. Grout placed by tremie. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements. A sample port is required on the discharge pipe near the wellhead.
1961 W	IETHOD: •• Air Rotary •• Hollow Stem Auger	S	GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS 1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter. 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet. 3. Grout placed by tremie.
WELL SPEC Drill Hol Casing	Diameter in. Maximum in. Depth ft.	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.
SOIL BORIN Number Hole Di	r of Borings Maximum	E. F.	CATHODIC. Fill hole above anode zone with concrete placed by tremie. WELL DESTRUCTION. See attached.
ESTIMATED ESTIMATED	STARTING DATE MARCH 3, 2405 COMPLETION DATE MARCH 4, 2005	G.	SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.
County Ordin APPLICANT SIGNATURE	Date 2-8-00	Appro	oved Wyman Hong Date 2/25/08
ATTACH SIT	TE PLAN OR SKETCH /		

APPENDIX B BOREHOLE LOGS



PAGE 1 OF 3

PROJECT:3042

SITE LOCATION: 1544 Stanley Blvd.,

Pleasanton

DRILLER: WDC Exploration & Wells

DRILLING METHOD: HSA

BORING DIAMETER: 8"

LOGGED BY: E. Hightower

DATE DRILLED: March 8, 2008

CASING ELEVATION: N/A

DEPTH TO GW: 60 Feet

T.O.C. TO SCREEN: N/A

SCREEN LENGTH: N/A

APPROVED BY: Mansour Sephr Ph.D., P.E.

				ignion of		•		•	
PID ppm	ОЕРТН	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON	CORE SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
	5—		GR	PEA GRAVEL: Dark gray, moist, loose, fine-grained gravel, no PHC odor	X			10 10/ 10/	
	15—		SW	SANDY GRAVEL: Brown, loose, moist, coarse-grained gravel, fine-to medium grained sand, no PHC odor					
	25—								

COMMENTS:



PAGE 2 OF 3

PROJECT: 3042

DATE DRILLED: March 3, 2008

SITE LOCATION: 1544 Stanley Blvd.,

CASING ELEVATION: N/A

Pleasanton

DEPTH TO GW: 60 Ft.

DRILLER: WDC

T.O.C. TO SCREEN: N/A

DRILLING METHOD: HSA

SCREEN LENGTH: N/A

BORING DIAMETER: 8"

LOGGED BY: E. Hightower APPROVED BY: M. Sepehr, Ph.D., P.E.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON	CORE	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
	- -		sw	SILTY GRAVEL: Brown, loose, moist, coarse-grained gravel, No PHC odor					
	30	-							
	- 35— - -		SW	SILTY GRAVEL: As above, no PHC odor					
	- 40— - -								
	- 45— - -		CL/SC	SANDY CLAY: Dark brown, soft, moist,fine- to coarse-grained sand, some coarse-grained gravel, no PHC odor	-				
	- 50—	_							

COMMENTS:



PAGE 3 OF 3

PROJECT: 3042

SITE LOCATION: 1544 Stanley Blvd.,

Pleasanton

DRILLER: WDC

DRILLING METHOD: HSA

BORING DIAMETER: 8"

COMMENTS: TD @ 65'

LOGGED BY: E. Hightower

DATE DRILLED: March 3, 2008

CASING ELEVATION: N/A

DEPTH TO GW: 60 Ft

T.O.C. TO SCREEN: N/A

SCREEN LENGTH: N/A

APPROVED BY: M. Sepehr, Ph.D., P.E.

LOGGLD	D1. L. 11	igitiower 7.1 Though Bit. Mr. dop			٠.,		
PID ppm DEPTH GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON	CORE SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
55— 60— 65— 70— 75—		SANDY CLAY: Dark brown, soft, moist, fine- to coarse-grained sand, some coarse-grained gravel, No PHC odor	nas X			23 35/ 40	
'							



PAGE 1 OF 3

PROJECT: 3042

SITE LOCATION: 1544 Stanley Blvd.,

Pleasanton

DRILLER: WDC

DRILLING METHOD: HSA

BORING DIAMETER: 8"

LOGGED BY: E. Hightower

DATE DRILLED: March 3, 2008

CASING ELEVATION: N/A

DEPTH TO GW: 55 Ft.

T.O.C. TO SCREEN: N/A

SCREEN LENGTH: N/A

APPROVED BY: Mansour Sepehr, Ph.D., P.E.

l									
PID ppm	DEРТН	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	NOO ds II Sboon	CORE SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
	-		GR	PEA GRAVEL: Dark gray, moist, loose, fine-grained gravel, no PHC odor					
	- 5—								
	- -								
	10—								
	_		SW	SANDY GRAVEL: Dark gray, loose, moist, fine- to coarse-grained sand, fine- to coarse-grained gravel, no PHC odor					
	15—				×			11 23/ 30	
	-								
	20-		SC	SANDY CLAY: Dark Brown, soft, moist, fine- to coarse- grained sand, some coarse-grained gravel, no PHC odor					
	- 25—								

COMMENTS:



PAGE 2 OF 3

PROJECT: 3042

SITE LOCATION: 1544 Stanley Blvd.

Pleasanton

DRILLER: WDC

COMMENTS:

DRILLING METHOD: HSA

BORING DIAMETER: 8"

LOGGED BY: E. Hightower

DATE DRILLED: March 3, 2008

CASING ELEVATION: N/A

DEPTH TO GW: 55 Ft.

T.O.C. TO SCREEN: N/A

SCREEN LENGTH: N/A

APPROVED BY: M. Sepehr, Ph.D., P.E.

-	OGGLDL) I . L. I II	igniowei 71 i rooteb b i i wi. dopo			٠٠.,		
PID ppm DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION					WELL DIAGRAM
	_	SC	SANDY CLAY: Dark Brown, soft, moist, fine- to coarse- grained sand, some coarse-grained gravel, no PHC odor	, s	ORE SAMPLED		BLOWCOUNTS	
	_							
30-	_							
35—								
35—								
	_							
40-	_							
-	_							
45-	_							
-	_							
-	_							
50-								



PAGE 3 OF 3

PROJECT: 3042

SITE LOCATION: 1544 Stanley Blvd.,

Pleasanton

DRILLER: WDC

DRILLING METHOD: HSA

BORING DIAMETER: 8"

LOGGED BY: E. Hightower

DATE DRILLED: March 3, 2008

CASING ELEVATION: N/A

DEPTH TO GW: 55 Ft

T.O.C. TO SCREEN: N/A

SCREEN LENGTH: N/A

APPROVED BY: M. Sepehr, Ph.D., P.E.

				ginowor	,		,		
PID ppm	DЕРТН	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON	SAMPLED	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM
			SW	SANDY GRAVEL: Dark gray, loose, moist, fine- to coarse-	×		_	BI	
	_			SANDY GRAVEL: Dark gray, loose, moist, fine- to coarse-grained sand, fine- to coarse-grained gravel, no PHC odor					
	_								
	_								
	55 —						∇		
	-								
	_								
	_								
	60—				-				
	-								
	-	-							
	_								
	65-								
	_								
	-								
	_								
	70-								
	-								
	_								
	_								
	75—								
	13								

COMMENTS: TD @ 60 Ft.

APPENDIX C

SOIL AND GROUNDWATER ANALYTICAL LABORATORY RESULTS AND CHAIN OF CUSTODY FORMS

CHAIN OF CUSTODY FORM

Page ___ of___

PAL Pacific Analytical Laboratory 851 West Midway Ave., Suite 201B Alameda, CA 94501 510-864-0364 Telephone 510-864-0365 Fax

PAL Login# 8 030006

Proje	et No: 3042	ampler: Lizzie Hightower										Anal	alyses/Method					
	ct Name: 1544 St		port									MtBE		Gasoline oxygenates , Lead scavengers 8260				
900				Co	mpa	any:	SOMA En	viror	me	ntal	Engi	neering, Inc	C.	X, o		ger		
Turn	around Time: St		Te Fa			5-734-6400 5-734-6401							TPH-g, BTEX, MtBE 8260	TPH-d 8015	ine oxy scaven			
		Date/Time	N	1atri:	x	# of Containers Preso			reservatives				TPH	TPH-0	Gasol			
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H ₂ S04	HNO ₃	ICE		Field Notes					
١	SBHO	3/3/08	1009	4			16" Steek				X			1	X	×		
3	581-60	3/3/08	10:44	X			16" Steeve				+			X	X	×		
3	5B1-W	3/3/08	11:09		X		3-12 Amber	X			X			×	X	Y		
4	582-15	3 3 08	13:25	XX			16" Sleeve				X			*	X	X		_
6	582-W	3/3/08	14:23		X		3 VO A Sher	X			X			X	X	X		
Sam	oler Remarks:						Relinquisl	hed l	oy:		Date	e/Time:	Received by:			Date/Tim		
	OUTPUT REQUI		. TAME. T	ВА			E. Hofe	10	_		3/4	52	V. Vaguer	7		3-4-	08	

27 March 2008

Mansour Sepehr SOMA Environmental Engineering Inc. 6620 Owens Drive, Suite A Pleasanton, CA 94588

RE: 1544 Stanley Blvd, Pleasanton

Work Order Number: 8030006

Mapad Ach

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,

Maiid Akhavan

Laboratory Director



6620 Owens Drive, Suite AProject Number: 3042Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr27-Mar-08 17:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB1-10	8030006-01	Soil	03-Mar-08 10:09	05-Mar-08 17:45
SB1-60	8030006-02	Soil	03-Mar-08 10:44	05-Mar-08 17:45
SB1-W	8030006-03	Water	03-Mar-08 11:09	05-Mar-08 17:45
SB2-15	8030006-04	Soil	03-Mar-08 13:01	05-Mar-08 17:45
SB2-50	8030006-05	Soil	03-Mar-08 13:25	05-Mar-08 17:45
SB2-W	8030006-06	Water	03-Mar-08 14:23	05-Mar-08 17:45



6620 Owens Drive, Suite AProject Number: 3042Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr27-Mar-08 17:19

Extractable Petroleum Hydrocarbons by 8015 DRO Pacific Analytical Laboratory

			Reporting	** *		D . 1				
Analyte	R	esult	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-10 (8030006-01) Soil	Sampled: 03-Mar-08 10:09	Received: (05-Mar-0	8 17:45						
Diesel (C10-C24)		ND	50.0	mg/kg	1	BC81801	05-Mar-08	18-Mar-08	EPA 8015M	
Surrogate: Pentacosane			99.6 %	70-	130	"	"	"	"	
SB1-60 (8030006-02) Soil	Sampled: 03-Mar-08 10:44	Received:	05-Mar-0	8 17:45						
Diesel (C10-C24)		ND	50.0	mg/kg	1	BC81801	05-Mar-08	19-Mar-08	EPA 8015M	
Surrogate: Pentacosane			98.4 %	70-	130	"	"	"	"	
SB1-W (8030006-03) Wate	er Sampled: 03-Mar-08 11:	09 Received	d: 05-Ma	r-08 17:45						
Diesel (C10-C24)		ND	50.0	ug/l	1	BC81802	05-Mar-08	19-Mar-08	EPA 8015M	
Surrogate: Pentacosane			83.0 %	50.4	!-137	"	"	"	"	
SB2-15 (8030006-04) Soil	Sampled: 03-Mar-08 13:01	Received:	05-Mar-0	8 17:45						
Diesel (C10-C24)		ND	50.0	mg/kg	1	BC81801	05-Mar-08	19-Mar-08	EPA 8015M	
Surrogate: Pentacosane			98.2 %	70-	130	"	"	"	"	
SB2-50 (8030006-05) Soil	Sampled: 03-Mar-08 13:25	Received:	05-Mar-0	8 17:45						
Diesel (C10-C24)		ND	50.0	mg/kg	1	BC81801	05-Mar-08	19-Mar-08	EPA 8015M	
Surrogate: Pentacosane			93.4 %	70-	130	"	"	"	"	
SB2-W (8030006-06) Wate	er Sampled: 03-Mar-08 14:	23 Received	d: 05-Ma	r-08 17:45						
Diesel (C10-C24)		ND	50.0	ug/l	1	BC81802	05-Mar-08	19-Mar-08	EPA 8015M	
Surrogate: Pentacosane			69.8 %	50.4	!-137	"	"	"	"	



6620 Owens Drive, Suite AProject Number: 3042Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr27-Mar-08 17:19

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SB1-10 (8030006-01RE1) Soil Sampled: (03-Mar-08 10:09	Received: 05-Ma	ar-08 17:45						
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BC81901	11-Mar-08	11-Mar-08	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	ND	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	2.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	11-Mar-08	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		74.0 %	70-13	80	"	"	"	"	
Surrogate: Dibromofluoromethane		105 %	70-13	80	"	"	"	"	
Surrogate: Perdeuterotoluene		87.6 %	70-13	80	"	"	"	"	
SB1-60 (8030006-02RE1) Soil Sampled: (03-Mar-08 10:44	Received: 05-Ma	ar-08 17:45						
Gasoline (C6-C12)) ID	50.00			DC01001	11-Mar-08	11-Mar-08	ED4 02/0D	
	ND	50.00	ug/kg	1	BC81901			EPA 8260B	
Benzene		50.00 0.5000	ug/kg "	1 "	BC81901	"	"	EPA 8260B	
Benzene	ND ND ND	0.5000 0.5000							
Benzene Ethylbenzene	ND	0.5000	"	"	"	"	"	"	
Benzene Ethylbenzene m&p-Xylene	ND ND ND	0.5000 0.5000	"	"	"	"	"	"	
Benzene Ethylbenzene	ND ND	0.5000 0.5000 2.000	"	"	"	" "	" "	" "	
Benzene Ethylbenzene m&p-Xylene o-xylene	ND ND ND ND	0.5000 0.5000 2.000 0.5000	" "	" " "	"	" " " " " " " " " " " " " " " " " " " "	" "	11 11 11	
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene	ND ND ND ND ND	0.5000 0.5000 2.000 0.5000 2.000	" " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11	
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE	ND ND ND ND ND ND	0.5000 0.5000 2.000 0.5000 2.000 0.500	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " 11-Mar-08	11 11 11	
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE	ND ND ND ND ND ND	0.5000 0.5000 2.000 0.5000 2.000 0.500 0.500	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	"	" " " 11-Mar-08	11 11 11 11	
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE	ND	0.5000 0.5000 2.000 0.5000 2.000 0.500 0.500 0.500	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " "	"	" " " 11-Mar-08 "	11 11 11 11 11	
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME	ND	0.5000 0.5000 2.000 0.5000 2.000 0.500 0.500 0.500 2.00	11 11 11 11 11 11 11 11 11 11 11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " "	"	" " " 11-Mar-08 " "	11 11 11 11 11	
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TBA 1,2-dichloroethane	ND N	0.5000 0.5000 2.000 0.5000 2.000 0.500 0.500 0.500 2.00 2.	11 11 11 11 11 11 11 11 11 11 11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " "	"	" " " 11-Mar-08 " "		
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TAME TBA 1,2-dichloroethane 1,2-Dibromoethane (EDB)	ND N	0.5000 0.5000 2.000 0.5000 2.000 0.500 0.500 0.500 2.00 2.00 0.500 0.500	11 11 11 11 11 11 11 11 11 11 11 11 11	"" "" "" "" "" "" "" "" "" "" "" "" ""	11 11 11 11 11 11 11 11 11 11 11 11 11		" " 11-Mar-08 " " "		
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TBA 1,2-dichloroethane	ND N	0.5000 0.5000 2.000 0.5000 2.000 0.500 0.500 0.500 2.00 2.00 0.500	11 11 11 11 11 11 11 11 11 11 11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " "	"" "" "" "" "" "" "" "" "" "" "" "" ""	" " " 11-Mar-08 " " " "	11 11 11 11 11 11	



6620 Owens Drive, Suite AProject Number: 3042Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr27-Mar-08 17:19

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB1-W (8030006-03) Water Sampled: 03	-Mar-08 11:09 Reco	eived: 05-Mar	-08 17:45						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BC81601	11-Mar-08	14-Mar-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	11-Mar-08	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	2.00	"	"	"	"	"	"	
1,2-Dibromoethan	ND	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.2 %	70-1	30	"	"	"	"	
Surrogate: Dibromofluoromethane		94.4 %	70-1	30	"	"	"	"	
Surrogate: Perdeuterotoluene		97.6 %	70-1	30	"	"	"	"	
SB2-15 (8030006-04RE1) Soil Sampled: 0	03-Mar-08 13:01 Re	eceived: 05-M	ar-08 17:45						
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BC81901	11-Mar-08	11-Mar-08	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	ND	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	2.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
						"	"	"	
Toluene	ND	2.000	"	"	"				
Toluene MTBE	ND ND	2.000 0.500	"	"	"	"	11-Mar-08	"	
				"		"	11-Mar-08	"	
MTBE	ND	0.500	"		"			" "	
MTBE DIPE	ND ND	0.500 0.500	"	"	"	"	"		
MTBE DIPE ETBE	ND ND ND	0.500 0.500 0.500	" "	"	"	"	"	"	
MTBE DIPE ETBE TAME	ND ND ND ND	0.500 0.500 0.500 2.00	" "	" "	""	" "	" "	"	
MTBE DIPE ETBE TAME TBA	ND ND ND ND ND	0.500 0.500 0.500 2.00 2.00	" " " " "	" " "	" " " " "	" " " "	" " " " " " " " " " " " " " " " " " " "	" " "	
MTBE DIPE ETBE TAME TBA 1,2-dichloroethane	ND ND ND ND ND	0.500 0.500 0.500 2.00 2.00 0.500	" " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " "	11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	S-04
MTBE DIPE ETBE TAME TBA 1,2-dichloroethane 1,2-Dibromoethane (EDB)	ND ND ND ND ND	0.500 0.500 0.500 2.00 2.00 0.500 0.500	" " " " " " " "	30	11 11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11	S-04



6620 Owens Drive, Suite AProject Number: 3042Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr27-Mar-08 17:19

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB2-50 (8030006-05RE1) Soil Sa	mpled: 03-Mar-08 13:25	Received: 05-M	ar-08 17:45						
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BC81901	11-Mar-08	11-Mar-08	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	ND	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	2.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	11-Mar-08	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		66.6 %	70-1.	30	"	"	"	"	
Surrogate: Dibromofluoromethane		107 %	70-1.	30	"	"	"	"	
Surrogate: Perdeuterotoluene		86.0 %	70-1.	30	"	"	"	"	
SB2-W (8030006-06RE1) Water	Sampled: 03-Mar-08 14:2	23 Received: 05-	Mar-08 17:	45					
Gasoline (C6-C12)	ND	50.0	ug/l	1	BC81601	11-Mar-08	16-Mar-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	11-Mar-08	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
	ND	2.00	"	"	"	"	"	"	
TAME	ND					,,	,,	"	
TAME TBA	ND ND	2.00	"	"	"	"			
			"	"	"	"	"	"	
TBA	ND	2.00				"	"	"	
TBA 1,2-Dibromoethan	ND ND	2.00 2.00	"	"	"	"		"	
TBA 1,2-Dibromoethan 1,2-dichloroethane	ND ND	2.00 2.00 0.500	"	" " " " " " " " " " " " " " " " " " " "	"	"	"	"	



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Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control Pacific Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BC81801 - EPA 3550A										
Blank (BC81801-BLK1)				Prepared &	t Analyzed:	20-Mar-08	3			
Surrogate: Pentacosane	48.3		mg/kg	50.0		96.6	70-130			
Diesel (C10-C24)	ND	50.0	"							
LCS (BC81801-BS1)				Prepared &	t Analyzed:	20-Mar-08	3			
Surrogate: Pentacosane	48.2		mg/kg	50.0		96.4	70-130			
Diesel (C10-C24)	732	50.0	"	1000		73.2	50-140			
LCS Dup (BC81801-BSD1)				Prepared &	t Analyzed:	20-Mar-08	3			
Surrogate: Pentacosane	47.1	·	mg/kg	50.0	·	94.2	70-130	·	·	·
Diesel (C10-C24)	768	50.0	"	1000		76.8	50-140	4.80	40	
Matrix Spike (BC81801-MS1)	Sourc	e: 8030006-	02	Prepared &	t Analyzed:	20-Mar-08	3			
Surrogate: Pentacosane	47.2		mg/kg	50.0		94.4	70-130			
Diesel (C10-C24)	720	50.0	"	1000	ND	72.0	0-200			
Matrix Spike Dup (BC81801-MSD1)	Sourc	e: 8030006-0	02	Prepared &	t Analyzed:	20-Mar-08	3			
Surrogate: Pentacosane	50.1		mg/kg	50.0		100	70-130			
Diesel (C10-C24)	841	50.0	"	1000	ND	84.1	0-200	15.5	200	
Batch BC81802 - EPA 3510B										
Blank (BC81802-BLK1)				Prepared &	t Analyzed:	19-Mar-08	3			
Surrogate: Pentacosane	52.2		ug/l	50.0	·	104	50.4-137	·		
Diesel (C10-C24)	ND	50.0	"							
LCS (BC81802-BS1)				Prepared &	t Analyzed:	19-Mar-08	3			
Surrogate: Pentacosane	43.6		ug/l	50.0		87.2	50.4-137			
Diesel (C10-C24)	705	50.0	"	1000		70.5	70-130			



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Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BC81802 - EPA 3510B

LCS Dup (BC81802-BSD1)				Prepared & Ana	alyzed: 19-Mar-08	8			
Surrogate: Pentacosane	56.2		ug/l	50.0	112	50.4-137			
Diesel (C10-C24)	789	50.0	"	1000	78.9	70-130	11.2	40	



RPD

Limit

Notes

SOMA Environmental Engineering Inc. Project: 1544 Stanley Blvd, Pleasanton

Result

6620 Owens Drive, Suite AProject Number: 3042Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr27-Mar-08 17:19

Reporting

Limit

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Units

Spike

Level

Source

Result

%REC

%REC

Limits

RPD

Blank (BC81601-BLK2)				Prepared & Ana	lyzed: 11-Mar-08		
Surrogate: 4-Bromofluorobenzene	41.1		ug/l	50.0	82.2	70-130	
Surrogate: Dibromofluoromethane	57.8		"	50.0	116	70-130	
Surrogate: Perdeuterotoluene	44.1		"	50.0	88.2	70-130	
MTBE	ND	0.500	"				
DIPE	ND	0.500	"				
ETBE	ND	0.500	"				
TAME	ND	2.00	"				
TBA	ND	2.00	"				
Gasoline (C6-C12)	ND	50.0	"				
1,2-Dibromoethan	ND	2.00	"				
1,2-dichloroethane	ND	0.500	"				
Benzene	ND	0.500	"				
Ethylbenzene	ND	0.500	"				
m&p-Xylene	ND	2.00	"				
o-xylene	ND	0.500	"				
Toluene	ND	2.00	"				
LCS (BC81601-BS1)				Prepared & Ana	lyzed: 11-Mar-08		
Surrogate: 4-Bromofluorobenzene	45.9		ug/l	50.0	91.8	70-130	
Surrogate: Dibromofluoromethane	53.4		"	50.0	107	70-130	
Surrogate: Perdeuterotoluene	41.7		"	50.0	83.4	70-130	
MTBE	118	0.500	"	100	118	70-130	
ETBE	ed as there are as sa	0.500	"	100	66.7	70-130	
Gasoline (C6-C12)	1830	50.0	"	2000	91.5	70-130	
TBA	643	2.00	"	500	129	70-130	
Benzene	86.1	0.500	"	100	86.1	70-130	
Toluene	80.2	2.00	"	100	80.2	70-130	

Analyte



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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BC81601 - EPA 5030 Water MS

LCS Dup (BC81601-BSD1)	Prepared & Analyzed: 11-Mar-08									
Surrogate: 4-Bromofluorobenzene	49.8		ug/l	50.0	99.6	70-130				
Surrogate: Dibromofluoromethane	53.6		"	50.0	107	70-130				
Surrogate: Perdeuterotoluene	44.9		"	50.0	89.8	70-130				
MTBE	76.9	0.500	"	100	76.9	70-130	42.2	20	QR-02	
ETBE	very was accepted.	0.500	"	100	69.8	70-130	4.54	20		
Gasoline (C6-C12)	1860	50.0	"	2000	93.0	70-130	1.63	20		
TBA	639	2.00	"	500	128	70-130	0.624	20		
Benzene	83.8	0.500	"	100	83.8	70-130	2.71	20		
Toluene	87.7	2.00	"	100	87.7	70-130	8.93	20		



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Notes and Definitions

Z-02 <a 69.8 % recovery was accepted.

Z-01a Low recovery for this surrogate was accepted since remaining surrogate have acceptable recovery.

Z-01 66% spike recovery was accepted as there are as samples for this site had no Oxygenate hit.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch

were accepted based on percent recoveries and completeness of QC data.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Print of window 38: Current Chromatogram(s)

Injection Date : 3/18/08 8:54:18 PM Sample Name : BC81801-BLK1

Seq. Line : Vial: 4

> Inj: 1

Acq. Operator : jz

Inj Volume : 2 ul

7.5

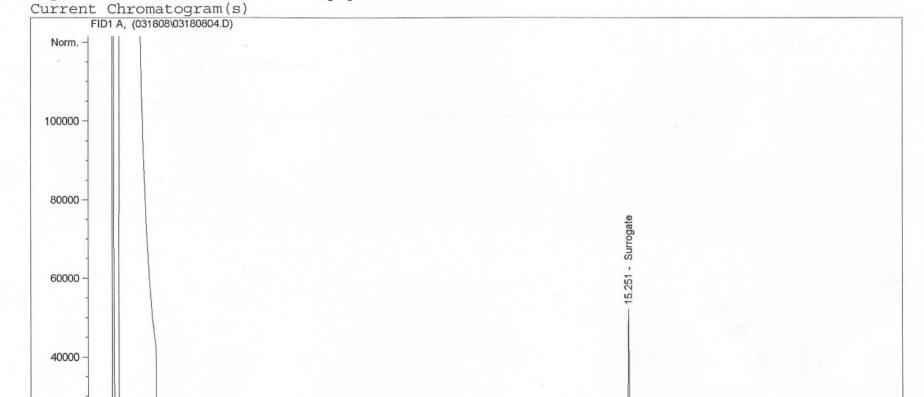
5

Acq. Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/7/08 1:00:28 PM by jz

Analysis Method: C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/19/08 5:09:20 PM by jz



10

Instrument 1 3/26/08 5:21:55 PM jz

2.5

20000

0 -

min

18.950 - Motor Oil

20

14.823 - Diesel

15

12.5

Area: 792817

17.5

Injection Date : 3/18/08 9:25:53 PM Sample Name : BC81801-BS1

Seq. Line : Vial:

Acq. Operator : jz

Inj: 1 Inj Volume : 2 ul

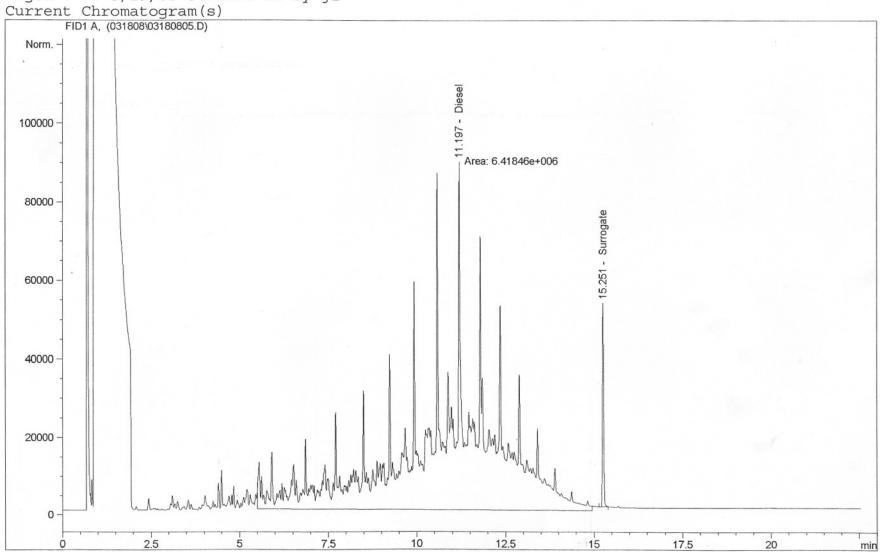
Acq. Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/7/08 1:00:28 PM by jz

Analysis Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/19/08 5:09:20 PM by jz





Back 1 of 1

Print of window 38: Current Chromatogram(s)

Injection Date : 3/18/08 10:29:00 PM Sample Name : BC81801-MS1

Seq. Line : Vial: 7

Acq. Operator : jz

Inj: Inj Volume : 2 ul

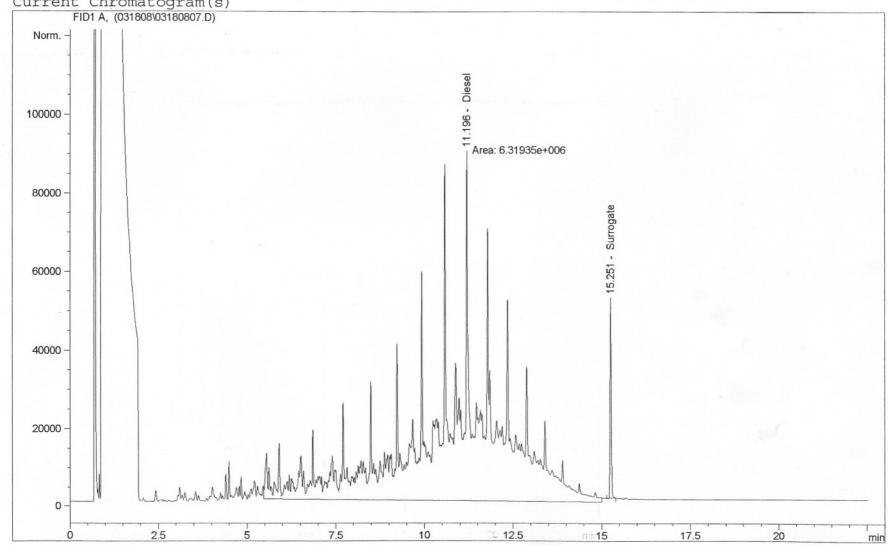
Acq. Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/7/08 1:00:28 PM by jz

Analysis Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/19/08 5:09:20 PM by jz

Current Chromatogram(s)



Injection Date : 3/19/08 2:09:21 AM : BC81802-BLK1 Sample Name Acq. Operator

Seq. Line: 14 Vial : 13

Inj: 1 Inj Volume : 2 ul

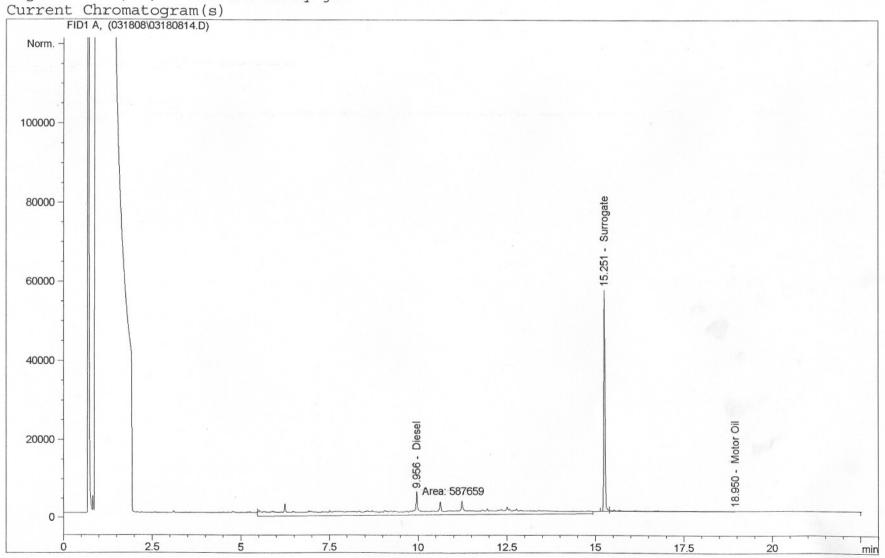
Acq. Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/7/08 1:00:28 PM by jz

Analysis Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/19/08 5:09:20 PM by jz

: jz



CIII OMatogram (S)

Injection Date : 3/19/08 2:40:47 AM Sample Name : BC81802-BS1

Seq. Line :

Vial : 14 Inj: 1

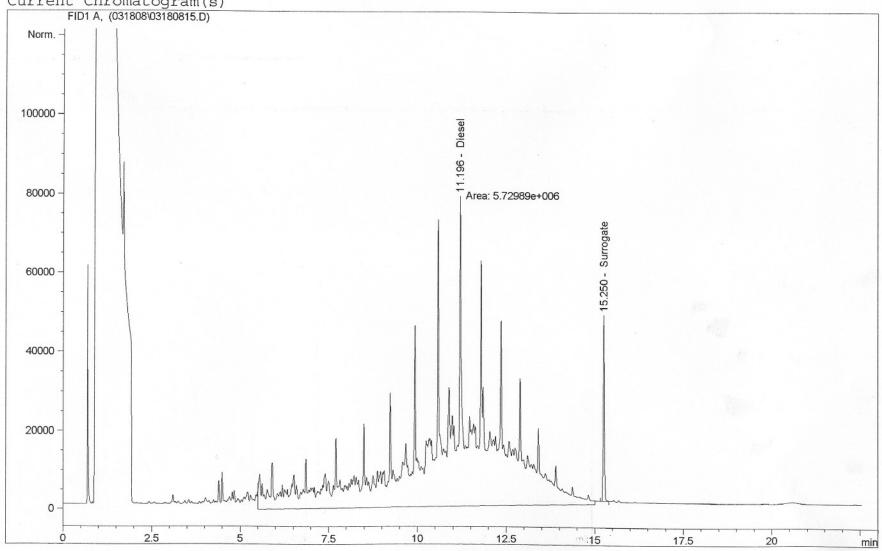
Acq. Operator : jz Inj Volume : 2 ul Acq. Method : C:\HPCHEM\1\METHODS\GC122607.M

: 3/7/08 1:00:28 PM by jz Last changed

Analysis Method : C:\HPCHEM\1\METHODS\GC122607.M

Last changed : 3/19/08 5:09:20 PM by jz





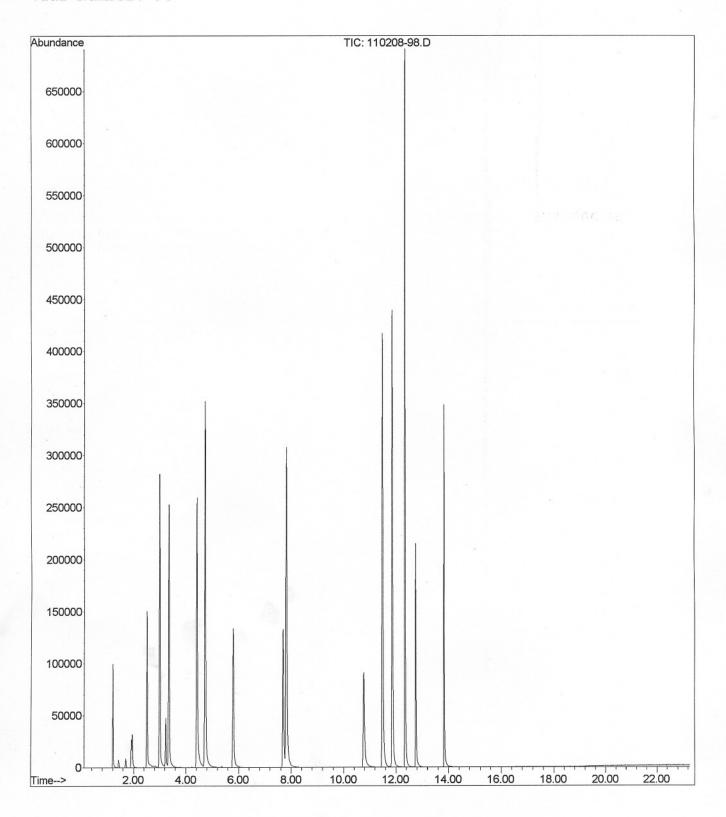
File :C:\MSDChem\1\DATA\2008-Mar-11-1036.b\110208-98.D

Operator :

: 16 Mar 2008 10:32 pm using AcqMethod OXY21506.M Acquired

Instrument : PAL GCMS Sample Name: BC81601-BSD1

Misc Info : Vial Number: 98





File :C:\MSDChem\1\DATA\2008-Mar-11-1036.b\110208-99.D

Operator :

Acquired : 16 Mar 2008 11:03 pm using AcqMethod OXY21506.M

Instrument: PAL GCMS Sample Name: BC81601-BSD1

Misc Info : Vial Number: 99

