

ERAS Fax 839-9630
Environmental, Inc.

20861 Wilbeam Avenue, Suite #4
Castro Valley, CA 94546-5832

(510) 247-9885 Facsimile: (510) 247-9885

Alameda County

MAR 24 2003

October 9, 2002

Environmental Health

Mr. Steve Burke
Burke Commercial Real Estate
2030 Franklin St., 4th Floor
Oakland, CA 94612

Subject: Report of Limited Groundwater Investigation
925 West Grand Avenue
Oakland, California
ERAS Project Number 02034A

Steve, draft report for shopping center. John Lee was calling us asking when we could get this report done.

Dear Mr. Burke,

ERAS Environmental is pleased to present the results of the Limited Groundwater Investigation for the above referenced site. Three soil borings were drilled on the site on September 13, 2002. Three groundwater samples were collected from the borings and submitted for laboratory chemical analysis. Low concentrations of gasoline hydrocarbons were detected in one of the samples. The results of the investigation are presented in the attached report.

Please call if you have any questions regarding the information presented in this report.

Respectfully,
ERAS Environmental, Inc.

Prior owner sold to S. Burke: not certain of gasoline source

need signatures ↓

~~need p 2 of borings log for GW 3 boring~~

David Siegel, R.E.A. II 20200
Project Manager

Gail Jones, R.G. 5725
Senior Geologist

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Figure 1 - Boring Location Map

Appendices

- Appendix A – Alameda County Drilling Permit
- Appendix B – Field Soil Boring Logs
- Appendix D - Laboratory Analytical Report

Background

This report presents the results of the Limited Groundwater Investigation conducted by ERAS Environmental (ERAS) at 925-949 West Grand Avenue in Oakland, California (hereinafter the "Property"). The Property consists of a retail shopping center bounded by Market Street on the southeast, West Grand Avenue on the northeast, Myrtle Street on the southwest and 21st Street to the southwest. The only part of this area not part of the Property is an abandoned gasoline station on the corner of West Grand Avenue and Market Street. The current layout of the Property is shown on Figure 2.

A Phase 2 soil and groundwater investigation was performed on the Property by AEI Consultants (AEI). The results of that investigation was presented in a report dated March 21, 2002. Three soil borings (SB-1, SB-2, SB-3) were drilled in the area of a former gas and oil storage area adjacent to Market Street. Two soil borings were drilled inside the 941 West Grand Avenue suite, this unit formerly contained a dry cleaning facility.

The soil and groundwater samples from the borings in the former gas and oil storage area did not contain detectable concentrations of petroleum hydrocarbons or the concentrations were low (below current Regional Water Quality Control Board (RWQCB) Risk Based Screening Levels (RBSLs) for non drinking water).

The soil and groundwater samples from the borings inside the former dry cleaning facility (SB-4 and SB-5) did not contain concentrations of solvents above the current RBSLs. However, the groundwater sample from SB-4 contained elevated concentrations of gasoline hydrocarbons (140,000 µg/L TPH-g and 810 µg/L benzene). The soil sample contained only low concentrations of gasoline hydrocarbons.

Purpose and Scope

There did no appear to be a source of the petroleum hydrocarbons contamination found in groundwater beneath the former dry cleaning facility since the current retail building has been present there since the early 1960s. The current investigation was undertaken to determine whether the groundwater in the area thought to be down-gradient of the abandoned gasoline station former underground storage tank (UST) was impacted with petroleum hydrocarbons (diesel or gasoline).

The proposed scope of work consisted of the following activities:

- Investigation of the proposed drilling area near estimated down-gradient side of the former USTs located on the abandoned gasoline station by an underground locating contractor;
- Application to Alameda County for soil boring permit;
- Soil boring and collection of three groundwater samples;
- Laboratory analysis of samples for petroleum hydrocarbons; and
- Evaluation of the findings from the field activities, sample analyses, and preparation

of this report.

Soil Boring and Sampling

On August 22, 2002, ERAS completed an Alameda County Public Works Agency Drilling Permit Application. A copy of the permit is included in **Appendix A**. The drilling area was marked with white paint and Underground Service Alert notified of the drilling project. Prior to drilling, on September 9, 2002, Subdynamic Locating Services of San Jose, performed a magnetometer search to check the potential drilling area for underground utility lines. The survey did not identify the presence of underground lines.

Drilling activities were conducted at the site by Vironex Incorporated (Vironex) of San Leandro, California on September 13, 2002. Prior to mobilization of the drill rig on-site, all associated drilling and sampling equipment was thoroughly cleaned to remove soil, oil, grease, mud, tar, etc. The cleaning process consisted of high pressure steam cleaning of the drilling equipment and a high pressure hot water final rinse. Before drilling each boring, all drilling and sampling equipment was cleaned with an Alconex™ soap solution and a clean water rinse. After all drilling was completed, the equipment was decontaminated by the same cleaning method.

The three soil boring locations were drilled by Vironex using a truck-mounted hydraulic push sampler drilling rig. Using a series of hollow, 4-foot long samplers lined with clear plastic tubing, soil cores were collected continuously to the total depths explored of approximately 25 feet below ground surface (bgs).

Each soil core was examined by ERAS field personnel for chemical odor and discoloration. A soil sample from near the bottom of each boring was submitted for chemical analyses. Lithologic descriptions of the cores were recorded on the boring log for each location. Details of the subsurface sediments are shown on the field soil boring logs included in **Appendix B**.

No petroleum product odor or other evidence of contamination such as discoloration was noted in any of the soil from the borings. Groundwater was not encountered in the three borings. A section of sample liner from the desired sampling depth was cut out, sealed with Teflon™ tape and plastic caps and stored in a cooler with blue ice until transport to the laboratory.

Subsurface Conditions

Subsurface materials beneath the asphalt surface consisted of interbedded sandy silt, clayey sand, clayey gravel, silt and silty sand. Groundwater was encountered at depths of approximately 21-24 feet.

Laboratory Methods and Results

The soil and groundwater samples were transported to Entech Analytical Labs, Inc., a State of California-certified analytical laboratory in Santa Clara, California. The soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethyl benzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE).

The laboratory report and chain-of-custody form are included as **Appendix C**.

No TPH-g, BTEX or MTBE was detected in samples from GW1 and GW2. The sample from GW3 contained TPH-g at a concentration of 210 micrograms per liter ($\mu\text{g/L}$), toluene at a concentration of 1.1 $\mu\text{g/L}$, ethyl benzene at a concentration of 2.3 $\mu\text{g/L}$ and xylenes at a concentration of 3.5 $\mu\text{g/L}$.

Conclusions and Recommendations

The Property contains a retail shopping center building that was constructed in approximately 1960. A fueling facility was previously located along the southeastern side of the Property. Samples from soil borings drilled by AEI Consultants indicated no significant contamination in soil or groundwater in the approximate area of the former USTs. Samples from soil borings drilled inside a former dry cleaning facility indicated no significant concentrations of solvents but a groundwater sample was found to contain elevated concentrations of petroleum hydrocarbons.

Groundwater samples were collected from three soil borings drilled by ERAS along the northwestern and southwestern sides of an abandoned gasoline service station (905 West Grand Ave.) located adjacent to the eastern corner of the Property. One groundwater sample was found to contain low concentrations of petroleum hydrocarbons. Therefore the former USTs at 905 West Grand do not appear to be the source of hydrocarbon contamination of the groundwater under unit 941 of the Property.

Based on the results of the investigations performed on the Property, ERAS recommends the following to attempt to ascertain the origin of the petroleum hydrocarbons under the building.

- 1) Review information on file regarding the former dry cleaning facility to determine if the facility contained a UST. (At the same time, review the original building plans to determine whether there was information pertaining to spills, leaks or a possible former UST.)
- 2) Review the fuel leak file for the former ARCO gasoline service station located to the southeast of the Property across Market Street. There may be information regarding groundwater flow direction in the immediate vicinity of the Property to assist in locating possible sources of the petroleum hydrocarbons under the Property and their direction of migration.
- 3) Review historical aerial photographs to assess the use of the area that contains petroleum hydrocarbons prior to construction of the shopping center building.

Limitations

This report has been prepared by ERAS according to the State and local agency suggested guidance documents for these investigations and in general accordance with the accepted standard of practice which exists in Northern California at the time the investigation was performed. The interpretations, conclusions and recommendations made herein are based upon the data and analysis for the soil and water samples collected on-site. ERAS is not responsible for errors in laboratory analysis and reporting, or for information withheld during the course of the study. The purpose of this study is to screen for the presence of

contamination that may affect the use or value of the Property. As such, the evaluation of the geologic and environmental conditions on this site are made with very limited data. Judgements leading to conclusions are generally made with an incomplete knowledge of the conditions present. Additional conditions and materials could exist at the site that were not encountered during this investigation. No warranty or guarantee is expressed or implied therein.

ERAS
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Castro Valley, CA 94546-5832

(510) 247-9885 Facsimile: (510) 886-5399

**LIMITED GROUNDWATER INVESTIGATION
925 West Grand Avenue
Oakland, California
Project Number 02034A**

Prepared for:

**Mr. Steve Burke
Burke Commercial Real Estate
2030 Franklin St., 4th Floor
Oakland, CA 94612**

Prepared by:

**ERAS Environmental
October 9, 2002**

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The Property contains a retail shopping center building that was constructed in approximately 1960. A fueling facility was previously located along the southeastern side of the Property. Samples from soil borings drilled by AEI Consultants indicated no significant contamination in soil or groundwater in the approximate area of the former USTs. Samples from soil borings drilled inside a former dry cleaning facility indicated no significant concentrations of solvents but a groundwater sample was found to contain elevated concentrations of petroleum hydrocarbons.

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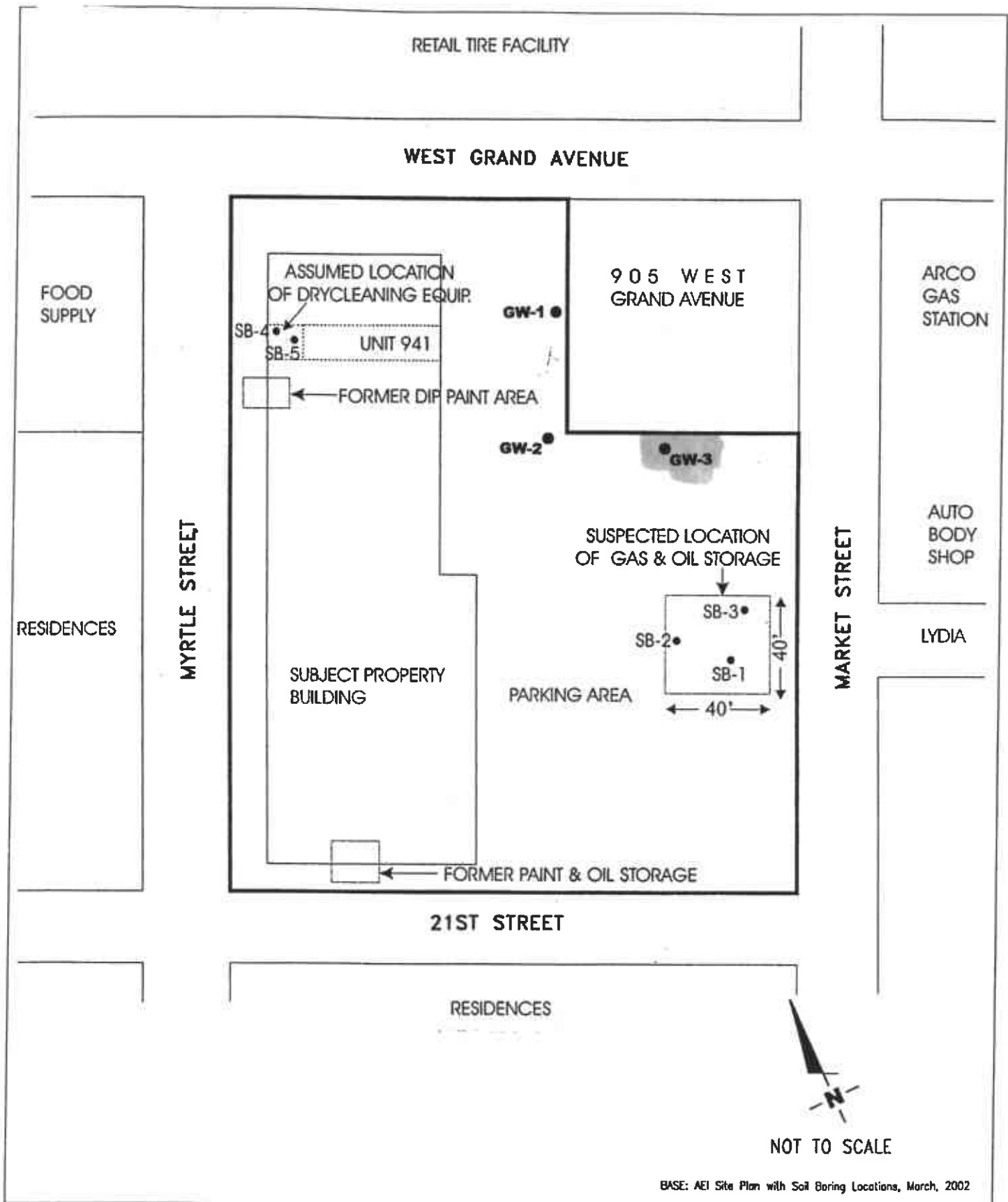
Based on the results of the investigations performed on the Property, ERAS recommends the following to attempt to ascertain the origin of the petroleum hydrocarbons under the building.

- 1) Review information on file at the City of Oakland fire and/or building department regarding the former dry cleaning facility to determine if the facility contained a UST.
- 2) Review the fuel leak file for the former ARCO gasoline service station located to the southeast of the Property across Market Street. There may be information regarding groundwater flow direction in the immediate vicinity of the Property to assist in locating possible sources of the petroleum hydrocarbons under the Property and their direction of migration.
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contamination that may affect the use or value of the Property. As such, the evaluation of the geologic and environmental conditions on this site are made with very limited data. Judgements leading to conclusions are generally made with an incomplete knowledge of the conditions present. Additional conditions and materials could exist at the site that were not encountered during this investigation. No warranty or guarantee is expressed or implied therein.



BASE: AEI Site Plan with Soil Boring Locations, March, 2002

BORING LOCATION MAP

DATE
10/02
REVIEWED BY
DS

925-949 West Grand Avenue
Oakland, California

JOB NUMBER
02034A
FIGURE

1

Appendix A
Alameda County Drilling Permit



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
388 ELMHURST ST. HAYWARD CA. 94541-1385
PHONE (510) 670-3344
FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT
925 - 949 West Grand Ave.
Oakland, CA

PERMIT NUMBER W02-0864
WELL NUMBER _____
APN _____

CLIENT Mr. Steve Burke
Name Burke Commercial Real Estate
Address 3030 Franklin St. #400
City Oakland CA

PERMIT CONDITIONS
Circled Permit Requirements Apply

APPLICANT
Name CRS Environmental, Inc.
Due Signat Paul James Fax 510 886 5349
Address 2056 Wilcox Ave #4 Phone 510 262 2575
City Castroville CA Zip 94698-5832

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Deprecation	<input type="checkbox"/>

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

DRILLING METHOD

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/> <u>Geo-probe dual-tube</u>		



D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout and mixture. Upper two-three feet replaced in kind or with compacted casing.

DRILLER'S NAME Virenex, Inc.

E. CATHODIC

Fill hole around pipe with concrete placed by tremie.

DRILLER'S LICENSE NO. C57-705927

F. WELL DESTRUCTION

See attached requirements for destruction of shallow wells. Send a map of work site. A different permit application is required for wells deeper than 45 feet.

WELL PROJECTS

Drill Hole Diameter _____ in.	Maximum
Casing Diameter _____ in.	Depth _____ ft.
Surface Seal Depth _____ ft.	Owner's Well Number _____

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

GEOTECHNICAL PROJECTS

Number of Borings <u>3</u>	Maximum
Hole Diameter <u>3</u> in.	Depth <u>25</u> ft.

ESTIMATED STARTING DATE Sept 10, 2002
ESTIMATED COMPLETION DATE Sept 10, 2002

APPROVED

DATE 9-5-02

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

APPLICANT'S SIGNATURE Paul James DATE 9/2/02

PLEASE PRINT NAME Paul James Rev 6-15-00



Appendix B
Field Soil Boring Logs

Environmental (20001 WILSON AVENUE, #4 Castro Valley, CA 94546

CLIENT <i>Brite</i>	SITE NUMBER 02034A	LOCATION <i>West Ground</i>
DRILLING AND SAMPLING METHODS <i>Comp probe dual tube 3"ø</i>		
WATER LEVEL 20' 17.2	DRILLING START FINISH	
TIME 1st start 10:03	TIME 8:10	TIME 10:00
DATE 9/13/02 9/13/02	DATE 9/17/02	DATE 9/17/02
REFERENCE <i>bgs 495</i>		

LOG OF SOIL BORING

Coordinates: *Gwl in Ground*

Elevation top of casing: *8.14*

Casing below surface: *8.30*

Inches Driven Recover	Blow Blow Sampler	CVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS <i>Asphalt 2"</i>	DESCRIPTION by: <i>GWT</i>
				0			
				1	ML		Sandy silt, dk brown 10YR 3/3, dry med stiff, non plastic, 25% fine sand, no odor
				2	SC		clayey sand, dk gray brown 10YR 5/6 dry to damp, dense, 30-40% low plasticity fines, no odor
				3			
				4			clayey gravel, dk gray brown to brown 10YR 4/2-4/1 damp to moist, med dense, low plasticity fines to 20%, 20-30% f-c sand, gravel to 1.5" no odor
				5	GC		
				6			
				7	SC		as at 2', damp
				8			
				9	SW		GRAY brown 2.5Y 5/2 moist yellow brown, damp to moist, 10% fines, f-c sand, 25% gravel to 1/4" rounded
				10			
				11	ML		silt, lt olive brown 2.5Y 5/3 moist to wet med stiff, low plasticity, minor clay, minor fine sand, black organics.
				12			
				13			increase fine sand with depth to 25% at 13.5ft
				14	SC		clayey sand, lt olive brown 2.5Y 5/4 moist, dense, ~25% fines, mostly
				15			fine-med sand, minor coarse sand
				16	SM		black organics. Wait 30 min at 15' no water
				17			
				18			silty sand, lt olive brown 2.5Y 5/4, moist med dense, 30-40% fines, fine sand, bounding
				19			fr of, no odor at 18.5 color change to olive 4Y 4/4, moist to wet no clay, med dense, 15-25% fines, fine sand, silt lt olive to dk 4.25 ft
				20	CL		

8.14

8.30

8.45

9.30

waited 30 minutes at 20' no water

Sandy Clay, dk olive gray, 5Y 3/2, damp, hard, 15-25% fine sand dk green gray 2 gley 41 10 BG

NES Environmental 20001 WILDCRAN AVENUE, #4 | CLIENT
 Castro Valley, CA 94546

SITE NUMBER: 02034A LOCATION: Burke
 925 West Grand

LOG OF SOIL BORING GW1
 Coordinates:

Elevation top of casing:
 Casing below surface:

DRILLING AND SAMPLING METHODS

WATER LEVEL	17.2	20'	DRILLING	
TIME	10:03	15:00	START	FINISH
DATE	9/13/02		TIME	10:00
REFERENCE	608	153	DATE	9/13/02

Inches Driven	Recover	Blow/B Sampler	CVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS
					2.8	water 5c	DESCRIPTION by: G.M.J. clayey sand, dk green grey 20% clay 58% wet, med dense, low plasticity fines, 15-25% F-med sand, no odor
					2.2	CL	
					2.3		clay, v dk gray 57 311, damp moist, med hard, minor fine sand, free water in rootlet holes, no odor
					2.4		
					2.5	SM	silty sand, olive gray 54 417 wet, dense 10-20% low plasticity fines, F-M sand no odor. Confined water
					5		
					6		
					7		Total depth 25 feet by
					8		Ground water sample GW1-25 10:10
					9		
					10		
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		

Environmental (Castro Valley, CA 94546) CLIENT
 20001 WILDCRAN AVENUE, #4

SITE NUMBER: 02031A
 LOCATION: 9/13/02

Burke

LOG OF SOIL BORING

Coordinates: *GW2*

Elevation top of casing: *W. Grand*
 Casing below surface: *Mark*

DRILLING AND SAMPLING METHODS		DRILLING	
WATER LEVEL	19.5	START TIME	10:50
TIME	13:48	FINISH TIME	
DATE	9/13/02	DATE	9/13/02
REFERENCE	695		

Inches	Driven	Recover	Blow/ft Sampler	OVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS	DESCRIPTION by:
						0		Asphalt 2"	MC
						1			sandy silt, dk brown 10yr 2/3 dry hard
						2			CC
						3			clay, yellow brown 10yr 2/6 (dry) hard, minor fine sand, abundant black organics
						4			
1040				2.3		5			
						6			
						7			SC
						8			clayey sand, brown 10yr 5/3 mottled yell brown, med dense, damp, low-plasticity fines, black organics
						9			
1050						10			MC
						11			silt, lt olive brown, 2-5% 5/4, med stiff, 10% fine sand, black organics no odor
				8.8		12			
						13			SP
						14			poorly graded sand, lt olive brown 25% 15/10 med stiff, med dense, 10% fines, med sand w. tr. less fine sand, no odor
1100				19		15			SM
						16			when auger reached 15 ft, pulled up 2.5 ft for GW sample, wait 15 minutes no water in hole, pull out casing. And let hole rest @ 320 Hole completely dry, resume
						17			Silty sand, lt olive brown 2-5% 5/4, damp med-dense, 15-25% iron-plastic fines, flak sand, no odor
						18			
						19			SP
						20			fine sand, dk gray 4/3/1, damp, med d no silty, fine sand, sub med ft & biotite

Environmental (20001 W. MULLER AVENUE, #4 Castro Valley, CA 94546

CLIENT <i>Burke</i>	SITE NUMBER <i>020347</i>	LOCATION <i>925 W. Grand</i>
DRILLING AND SAMPLING METHODS <i>Geo probe Dual tube 300</i>		
WATER LEVEL <i>19.5</i>		DRILLING START FINISH
TIME <i>1348</i>		TIME <i>1345</i>
DATE <i>9/13/02</i>		DATE <i>9/13/02</i>
REFERENCE <i>655</i>		

LOG OF SOIL BORING *GW2*
Coordinates:

Elevation top of casing:
Casing below surface:

Inches		Blow/B Sampler	CVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS
Driven	Recover						DESCRIPTION by: <i>GMJ</i>
					20		<i>Clayey Sand, dark gray 5Y4/1, clump to moist; high plasticity fines, 25-35% fines fine sand, no odor</i>
					21	<i>SC</i>	
					22		<i>fine sand, dk olive gray 5Y3/2, well, med dense, no fines, fine sand, red to sub red gtz w/ bit of mafic</i>
					23		
					24	<i>SP</i>	<i>no water at 25' pull up to 22.5' In str. dk gray clayey sand as at 20'</i>
					25		
					6		<i>Total depth 25'</i>
					7		
					8		
					9		
					10		
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		

1345

5.8

GW2-25 1355

Groundwater Sample GW2-25 1355

Environmental

20001 WILCOX AVENUE, #4 | CLIENT
Castro Valley, CA 94546

SITE NUMBER: 02034 A
LOCATION: 925 West Grand

DRILLING AND SAMPLING METHODS

WATER LEVEL	18.8	DRILLING	
TIME	1252	START	FINISH
DATE	7/13/02	TIME	12:50
REFERENCE		DATE	7/13/02

LOG OF SOIL BORING GW3

Coordinates:

Elevation top of casing:

Casing below surface:

Inches	Driven	Recover	Blowcount	Sampler	OVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS	DESCRIPTION by:
							0		Asphalt	GW3
					0.75		1	SM		silty sand w/ gravel, dk brown 10YR 3/3, dry, dense, 10-20% silt, fine sand locally gravelly to 3/4", angular
							2	SC		clayey sand, yell brown 10YR 5/6, dry, dense, 15-25% fines, no odor, black organics f-m sand, low plasticity
							3			
							4			
							5			
1138					1.3		6			
							7			
							8			
							9			
							10			at 10' fines 25-35% fine low plasticity f-m sand
1145					1.3		11			
							12	ML		silt, yell brown 10YR 5/6, moist, soft, low plasticity, little or no clay, little or no sand, no odor
							13			
							14	SP		poorly graded sand, olive brown, 10YR 4/1, moist, dense, 10% fines, trace clay, f-m sand, no odor
							15			
1150					1.0		16			
							17			fine sand, v. dk gray 5Y 3/1, clays, dense, 15% silt, fine sand, sub rounded, no odor
							18			
							19	SP		
1155					3.3		20			at 20' no water in hole pull up 1 ft

12:11 - 12:27 no water

Environmental (20001 WILKINSON AVENUE, #4) CLIENT
 (Castro Valley, CA 94546)

SITE NUMBER: *Burke*
 02034A
 LOCATION: 925 West Grand

LOG OF SOIL BORING *GW3*

Coordinates:
 Elevation top of casing:
 Casing below surface:

DRILLING AND SAMPLING METHODS				DRILLING	
WATER LEVEL	18.8			START	FINISH
TIME	12:52			TIME	1:3
DATE	9/13/02			DATE	9/13/02
REFERENCE	695				

Geoprobe drill to be

Inches	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS
		20	SP	DESCRIPTION by: <i>GMS</i> Clay, dk. olive gray (5Y 3/2) damp v. stiff, low plasticity, trace fine sand
		21		
		22	CL	
		23		
		24		No water came in at 24'
		25	SP	Fine sand, dk. olive gray 5Y 3/2 wet med dense, no silty, med. fine sand w/ 25% med sand
		6		Confined water
		7		Groundwater sample GW3-25 12:55
		8		
		9		
		10		
		11		
		12		
		13		
		14		
		15		
		16		
		17		
		18		
		19		
		20		

120

Appendix C
Laboratory Analytical Report

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

September 26, 2002

David Siegel
 ERAs Environmental
 20861 Wilbeam Avenue #4
 Castro Valley, CA 94546

Order: 31235
Project Name: 925 West Grand
Project Number:
Project Notes:

Date Collected: 9/13/2002
Date Received: 9/16/2002
P.O. Number: 925 West Grand

On September 16, 2002, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Liquid	Gas/BTEX/MTBE	EPA 8015 MOD. (Purgeable) EPA 8020

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,



Patti Sandrock
 QA/QC Manager

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

ERAs Environmental
20861 Wilbeam Avenue #4
Castro Valley, CA 94546
Attn: David Siegel

Date: 9/26/02
Date Received: 9/16/2002
Project Name: 925 West Grand
Project Number:
P.O. Number: 925 West Grand
Sampled By: Gail Jones

Certified Analytical Report

Order ID: 31235

Lab Sample ID: 31235-001

Client Sample ID: GW1-25

Sample Time:

Sample Date: 9/13/2002

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Xylenes, Total	ND		1	1	1	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Surrogate							Surrogate Recovery		Control Limits (%)	
4-Bromofluorobenzene							95.6		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether			1	5	5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Surrogate							Surrogate Recovery		Control Limits (%)	
4-Bromofluorobenzene							95.6		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline			1	50	50	µg/L	N/A	9/19/2002	WGC62564B	EPA 8015 MOD. (Purgeable)
Surrogate							Surrogate Recovery		Control Limits (%)	
4-Bromofluorobenzene							91.3		65 - 135	


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)


Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

ERAs Environmental

20861 Wilbeam Avenue #4

Castro Valley, CA 94546

Attn: David Siegel

Date: 9/26/02

Date Received: 9/16/2002

Project Name: 925 West Grand

Project Number:

P.O. Number: 925 West Grand

Sampled By: Gail Jones

Certified Analytical Report

Order ID: 31235

Lab Sample ID: 31235-002

Client Sample ID: [REDACTED]

Sample Time:

Sample Date: 9/13/2002

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Xylenes, Total	ND		1	1	1	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
				Surrogate			Surrogate Recovery		Control Limits (%)	
				4-Bromofluorobenzene			96.5		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
				Surrogate			Surrogate Recovery		Control Limits (%)	
				4-Bromofluorobenzene			96.5		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	[REDACTED]		1	50	50	µg/L	N/A	9/19/2002	WGC62564B	EPA 8015 MOD (Purgeable)
				Surrogate			Surrogate Recovery		Control Limits (%)	
				4-Bromofluorobenzene			102.5		65 - 135	

DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)


Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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ERAs Environmental
20861 Wilbeam Avenue #4
Castro Valley, CA 94546
Attn: David Siegel

Date: 9/26/02
Date Received: 9/16/2002
Project Name: 925 West Grand
Project Number:
P.O. Number: 925 West Grand
Sampled By: Gail Jones

Certified Analytical Report

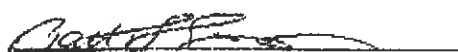
Order ID: 31235 Lab Sample ID: 31235-003 Client Sample ID: GW3-25
Sample Time: Sample Date: 9/13/2002 Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Toluene	1.1		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Ethyl Benzene	2.3		1	0.5	0.5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Xylenes, Total	3.5		1	1	1	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Surrogate							Surrogate Recovery		Control Limits (%)	
4-Bromofluorobenzene							115.8		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	9/19/2002	WGC62564B	EPA 8020
Surrogate							Surrogate Recovery		Control Limits (%)	
4-Bromofluorobenzene							115.8		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	210		1	50	50	µg/L	N/A	9/19/2002	WGC62564B	EPA 80:5 MOD. (Purgeable)
Surrogate							Surrogate Recovery		Control Limits (%)	
4-Bromofluorobenzene							82.4		65 - 135	

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit
Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)


Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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Quality Control Results Summary

QC Batch #: WGC62564B
 Matrix: Liquid

Units: µg/L
 Date Analyzed: 9/18/2002

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		100		80.8	LCS	80.8			65.0 - 135.0
Surrogate		Surrogate Recovery		Control Limits (%)							
	4-Bromofluorobenzene			96.9				65 - 135			
Test: BTEX											
Benzene	EPA 8020	ND		8		7.51	LCS	93.9			65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		8		7.75	LCS	96.9			65.0 - 135.0
Toluene	EPA 8020	ND		8		7.85	LCS	98.1			65.0 - 135.0
Xylenes, total	EPA 8020	ND		24		23.6	LCS	98.3			65.0 - 135.0
Surrogate		Surrogate Recovery		Control Limits (%)							
	4-Bromofluorobenzene			94.3				65 - 135			
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		100		93.6	LCSD	93.6	14.68	25.00	65.0 - 135.0
Surrogate		Surrogate Recovery		Control Limits (%)							
	4-Bromofluorobenzene			98.3				65 - 135			
Test: BTEX											
Benzene	EPA 8020	ND		8		8.28	LCSD	103.5	5.75	25.00	65.0 - 135.0
Ethyl Benzene	EPA 8020	ND		8		8.43	LCSD	105.4	8.41	25.00	65.0 - 135.0
Toluene	EPA 8020	ND		8		8.49	LCSD	106.1	7.83	25.00	65.0 - 135.0
Xylenes, total	EPA 8020	ND		24		23.6	LCSD	106.7	8.13	25.00	65.0 - 135.0
Surrogate		Surrogate Recovery		Control Limits (%)							
	4-Bromofluorobenzene			95.6				65 - 135			

Entech Analytical Labs, Inc.

3334 Victor Court
Santa Clara, CA 95054

(408) 588-0200
(408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: <i>Dave Siegel</i>	Phone No.: <i>570 2479885</i>	Purchase Order No.:	Send Invoice to (if Different):	Phone:
Company Name: <i>ERAS Environmental</i>	Fax No.: <i>210 9965 4641</i>	Project Number:	Company:	
Mailing Address: <i>20861 Wilbeam Ave #4</i>		Project Name: <i>925 West Grand</i>	Billing Address (if Different):	
City: <i>Castro Valley</i>	State: <i>CA</i>	Zip: <i>94546</i>	Project Location: <i>Oakland</i>	City: State: Zip

Sampler: <i>Cecil Jones</i>		Turn	Same Day <input type="checkbox"/>	Volatile Organics by GC/MS: Freeon 112 <input type="checkbox"/> PCBs <input type="checkbox"/> 822 <input type="checkbox"/> Fuel Organics by GC/MS: 8228 <input type="checkbox"/> MTBE <input type="checkbox"/> 8258 <input type="checkbox"/> Pesticides: 8081 <input type="checkbox"/> Herbicides or Aromatic Hydrocarbons: 8078 <input type="checkbox"/> PCBs - 8082 <input type="checkbox"/> TPH as GC/MS: 8250 <input type="checkbox"/> TPH as GC/MS/MS: 8250 <input checked="" type="checkbox"/> Heavy Metals: 8270 <input type="checkbox"/> Fuel Scan: 8270-8275 <input type="checkbox"/> Diesel: <input type="checkbox"/> w/ Silver Standard Cleanup <input type="checkbox"/> w/ Silver Standard Cleanup <input type="checkbox"/>
Date: <i>9/13/02</i>		24 Hour <input type="checkbox"/>	24 Hour <input type="checkbox"/>	
Order ID:		48 Hour <input type="checkbox"/>	48 Hour <input type="checkbox"/>	
		72 Hour <input type="checkbox"/>	72 Hour <input type="checkbox"/>	
		Standard <input checked="" type="checkbox"/>	Standard <input checked="" type="checkbox"/>	

Client ID	Laboratory No.	Date	Time	Matrix	Composite	Grab	Containers	Preservative	Remarks
<i>GW1-25</i>	<i>31235-00</i>	<i>9/13/02</i>		<i>W</i>		<i>4</i>	<i>4</i>	<i>141</i>	
<i>GW2-25</i>	<i>-002</i>	<i>9/13/02</i>		<i>W</i>		<i>4</i>	<i>4</i>	<i>141</i>	
<i>GW3-25</i>	<i>-003</i>	<i>9/13/02</i>		<i>W</i>		<i>4</i>	<i>4</i>	<i>141</i>	

Requested by: <i>Kathleen Jones</i>	Received by: <i>James Lee</i>	Date: <i>9/13/02</i>	Time: <i>16:20</i>	Special Instructions or Comments <input type="checkbox"/> NPDES Detection Limits Metals: Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W: CAM-17 <input type="checkbox"/> Plating <input type="checkbox"/> PPM-13 <input type="checkbox"/> LUFT-5 <input type="checkbox"/>
Relinquished by: <i>Kathleen Jones</i>	Relinquished by: <i>William Hedger</i>	Date: <i>9/14/02</i>	Time: <i>10:30</i>	
Requested by: <i>Kathleen Jones</i>	Received by: <i>James Lee</i>	Date: <i>9/16/02</i>	Time: <i>16:04</i>	
Relinquished by:	Relinquished by:	Date:	Time:	

See: 6002 11/18/02 11:08PM 11/08/02 11:08PM 11/08/02 11:08PM