April 22, 1997

pHss = followells
nd for pursue

Susan Hugo Alameda County Environmental Health Services 1131 Harbor Bay Parkway #250 Alameda, California 94502-6577

Re:

STID #819

Fourth Quarter 1996 and First Quarter 1997 Groundwater Monitoring Reports for the former City of Paris Cleaners, 3516 Adeline Oakland, California 94608

Dear Susan,

I am enclosing the monitoring reports for the fourth quarter of 1996 and the first quarter of 1997. We have now completed three monitoring events in a row. Our numbers are up and down. There are several categories in each well that we are testing at every event that have minimal or no detection levels. Is it possible if we are not at a closing stage, that we could eliminate some of our individual tests?

I look forward to hearing from you and await your advice as to which direction to go next.

Thank you,

Linda Champion

9441 Laguna Lake Way

Elk Grove, California 95758

(916) 684-2993

Enclosures

61 VASST BH 3130 ENAMEDITOR ENVIRONMENTAL SERVICES 1023B Martin Ave, Santa Clara, CA. 95050 408/988-5946 FAX 988-5947

INVOICE # 218-1.1 Invoice Date: August 6, 1996

Ms. Linda Champion 9441 Laguna Lake Way Elk Grove, California 95758

Services Provided:

Billing for sampling monitoring wells MW-1, MW-2, and MW-3 (2nd Quarter 1996 sampling event), preparing a chain of custody record, submitting the groundwater samples to Monroe Laboratories Inc. for laboratory analysis, and preparation of a monitoring report.

TOTAL AMOUNT DUE		<u>\$660.00</u>
TOTAL AMOUNT RECIEVED		\$513.00
TOTAL		\$1,173.00
Registered Geologist	6 hrs @ \$85/hr	\$255.00
Report writing, drafting and clerical		\$150.00
Task 3: REPORT PREPARATION &	PROJECT SUPERVISION	•
TPHss	(1 Qtrs x 3 Wells @ \$57/each)	\$171.00
TPIId	(1 Qirs x 3 Wells @ \$57/each)	\$171.00
PHg, BTEX, and MTBE	(1 Qirs x 3 Wells @ \$57/each)	\$171.00
Task 2: LABORATORY ANALYSES	(Standard turnaround)	
Sampling Rig and Crew, Travel	(2 Qis x 3 Wells @ \$85/Well)	\$255.00
Task 1: FIELD WORK		****

Remit to:

Dugan Associates 1023B Martin Avenue Santa Clara, CA 95050

TERMS: DUE UPON RECEIPT - SUBJECT TO INTEREST CHARGE AT 1.5% PER MONTH AFTER 30 DAYS PLEASE PAY FROM THIS INVOICE

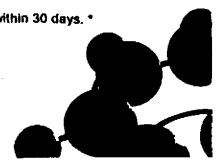
PH (408) 453-8090 + FAX (408) 453-8092 2128 N. First St. Suite E + San Jose, California 95131

INVOICE

Company:	Dugan Associates	Date Analyzed:	7/17/96	Batch #:	M1-268
Address;	1023 Martin Avenue	Project Name/#:	Champion	- 	
Santa Clara, CA 95050		3516 Adelin	e St.		
		Altn: Bill Duga	n	Project #:	218

Qty	Description	Turn-Around	Price	Total
3	MTBE, BTEX / GAS	Normal	50.00	150.00
3	DIESEL	Normal	50.00	
3	STODDARD	Normal	50.00	150.00 150.00
		· 		
				
				
			+	
			Total Due:	450.00

* A monthly service charge of 1.5% will be added if payment is not recieved within 30 days. *



Third-Party Well Sampling Groundwater Geology License # RG 6253

DUGAN ASSOCIATES

1023B Martin Avenue, Santa Clara, CA. 95050 Telephone 408/287-2175 Fax 408/287-2176

Bill Dugan, R.G.

INVOICE # 218-1.2 Invoice Date: April 16, 1997

Ms. Linda Champion 9441 Laguna Lake Way Elk Grove, California 95758

Services Provided:

Billing for sampling monitoring wells MW-1, MW-2, and MW-3 (4th Quarter 1996), preparing a chain of custody record, submitting the groundwater samples to Monroe Laboratories Inc. for laboratory analysis, and preparation of a monitoring report.

Task 1:	FIELD	WORK	
Samplin	g Rig ar	d Crew,	Travel

(1 Qts x 3 Wells @ \$85/Well)

\$255.00

Task 2: LABORATORY ANALYSES (Standard turnaround) TPHss and BTEX

(1 Qtrs x 3 Wells @ \$99.00/each)

\$297.00

Task 3: REPORT PREPARATION & PROJECT SUPERVISION

Report writing, drafting and clerical Registered Geologist

6 hrs @ \$85/hr

\$150.00 \$255.00

TOTAL AMOUNT DUE

\$957.00

Remit to:

Pet 513 hy

4 Champions Dugan Associates 1023B Martin Avenue Santa Clara, CA 95050

3444 5

TERMS: DUE UPON RECEIPT - SUBJECT TO INTEREST CHARGE AT 1.5% PER MONTH AFTER 30 DAYS PLEASE PAY FROM THIS INVOICE

04/18/97

INVOICE FOR OVERSIGHT COSTS

Send Payment to:

State Water Resources Control Board

Underground Storage Tank Local Oversight Program Bill Date:

PO Box 944212

Sacramento, CA 94244-2120

Local Agency: COUNTY OF ALAMEDA

Site Location:

94608

SITE # 819

LINDA CHAMPION 9441 LAGUNA LAKE WAY ELK GROVE, CA 95758

CITY OF PARIS CLEANING/DYEING 3516 ADELINE ST OAKLAND, CA

Total previously billed: \$ 1,614.42
Payment(s) received as of 06/19/96 \$ 1,891.08
**New Charges - Billing Period:07/01/96 through 12/31/96 \$ 409.32

FUND: F Total amount due: \$ 132.66

State Health and Safety Code Sections 25297.1 and 25360 and Title 42 of the United States Code Section 6991b(h)(6) require recovery of costs associated with the local oversight program. When your site was put in the local oversight program, you received a letter explaining that the State Water Resources Control Board (State Board) would bill you for public costs of cleanup oversight.

This bill includes site specific and program management charges. Site specific charges <u>directly relate</u> to your site. Examples are sampling for soil and ground water contamination, site inspections, and reviewing reports and workplans. A description of activity codes follows the itemized charges. Program management includes other costs associated with program operation. Such costs may include: space rental, office services and supplies, purchase of sampling equipment, training and the salary and benefits of support personnel (i.e., clerical staff, accountant, program supervisor). Program management charges are calculated at not more than 50 percent of site specific charges. The exact rate is shown on the last page of your bill. If you received an invoice for a previous billing period, those charges are shown as "Total Previously Billed". Any payments you made on the previous billing are shown as "Payment Received". The total of any unpaid previous balance plus new charges is shown as "Total Amount Due".

** See itemized list of new charges on next page(s).

FOR INFORMATION CALL: LORI CASIAS

(916) 227-4325

PAYMENT IS DUE IN 30 DAYS--PLEASE NOTE--Recent legislation eliminated cost recovery. There will be no cost recovery for oversight services performed on or after January 1, 1997. This change does not forgive any past due amounts or any invoices covering services provided through December 31, 1996.

Return this part with your check made payable to SWRCB. Use the enclosed envelope and send to the address above.

Local Agency: COUNTY OF ALAMEDA

LINDA CHAMPION 9441 LAGUNA LAKE WAY ELK GROVE, CA 95758 Site #: 819
Site Location:

CITY OF PARIS CLEANING/DYEING 3516 ADELINE ST OAKLAND, CA 94608

Total amount due: \$ 132.66

Enter amount paid: \$_____

Local agency: COUNTY OF ALAMEDA

Site number: 819

Billing date: 04/18/97

ITEMIZED NEW CHARGES

Site specific charges for billing period: 07/01/96 - 12/31/96

			нов	JRS	RAT	E			
DATE NAME	*ACT	S T	OT	ST	OT	IND	TRAVEL	TOTAL	
07/02/96	Hugo, Susan	212	0.50	0.0	47.98	0.00	D 1510		
07/02/96	Hugo, Susan	215	0.80	0.0	47.98	0.00	0.1510 0.1510	0.00	27.61
07/08/96	Hugo, Susan	210	1.20	0.0	47.98	0.00	0.1510	0.90 7.80	44.18
07/17/96	Hugo, Susan	215	1.00	0.0	47.98	0.00	0.1510	0.00	74.07 55.22
08/13/96	Hugo, Susan	212	0.30	0.0	47.98	0.00	0.1510	0.00	35.22 16.57
08/13/96	Hugo, Susan	215	0.80	0.0	47.98	0.00	0.1510	0.00	44.18
10/04/96	Hugo, Susan	215	0.20	0.0	47.98	0.00	0.1510	0.00	11.05
		SITE SPECIFIC TOTALS:	4.8	0.0				\$	272.88
		PROGRAM M	anagement (HARGE (ca.	lculated at So	of site spe	cific charges);	\$	136.44
						TOTAL NEW CH	ARGES	\$	409.32

- ACTIVITY CODES	AND	DESCRIPTIONS:	(ACT)
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^{300 (200)} Responsible Party identification and notification

^{304 (204)} Meeting with Regional Board or other affected agencies regarding a specific site

^{306 (206)} Development of enforcement actions against a Responsible Party

^{307 (207)} Issuance of a closure document

^{310 (210)} Site visits

^{311 (211)} Sampling activities

^{312 (212)} Meetings with responsible parties or responsible party consultants

^{315 (215)} Review of reports, workplans, preliminary assessments, remedial action plans, or post remedial monitoring

Third-Party Well Sampling Groundwater Geology License # RG 6253

DUGAN ASSOCIATES

1023B Martin Avenue, Santa Clara, CA. 95050 Telephone 408/287-2175 Fax 408/287-2176 Bill Dugan, R.G.

GROUNDWATER SAMPLING REPORT [DA-218-97Q1]

Report Date:

April 16, 1997

Client:

Ms. Linda Champion 9441 Laguna Lake Way Elk Grove, California 95758

Site Address:

3516 Adeline Street, Oakland, California.

Site Description:

Former cleaners at the southeastern corner of the intersection of Adeline Street with

35th Street.

Report Scope:

This report summarizes third party sampling performed by Dugan Associates at the project site. Supporting documentation provided by an independent State-certified laboratory are included in Attachment A.

Work Performed:

The following tasks were performed by Dugan Associates for the three monitoring wells (MW-1, MW-2, and MW-3) at the site:

- 1) measured depth to water level;
- 2) performed subjective analyses for floating product;
- 3) purged at least three well volumes of water from the well;
- 4) collected groundwater samples; and
- 5) transported the groundwater samples to a State- certified laboratory for the analyses requested;

Sampling Date:

Monitoring wells MW-1, MW-2, and MW-3 were sampled by personnel of Dugan Associates on March 18, 1997.

Laboratory:

Laboratory analyses were performed at Entech Analytical Labs, Inc, in Sunnyvale, California (DHS Certified Number 1369). Chain of custody record and laboratory data sheets are presented in Appendix A.

Analytical Methods:

Groundwater samples from wells MW-1, MW-2, and MW-3 were analyzed for the following:

- the volatile hydrocarbon constituents benzene, toluene, ethylbenzene, total xylenes (BTEX) and MTBE by EPA Test Method 8020 / 602.
- 2) Total Petroleum Hydrocarbons as stoddard (TPHd) by GCFID (LUFT Method) following sample purge and trap by EPA Method 8015

Field Methods:

Groundwater Monitoring. The static water level in each well is measured to the nearest 0.01-foot using an electric water-level sounder or oil/water interface probe (if the wells contain floating product) cleaned with Alconox® and water before use in each well. The liquid in the onsite wells is examined for visual evidence of hydrocarbons by gently lowering approximately half the length of a clean disposable bailer past the air/water interface. The sample is then retrieved and inspected for floating product, sheen, emulsion, color, and clarity. The thickness of floating product detected is recorded to the nearest 1/8-inch.

Groundwater Sampling. Wells which do not contain floating product are purged using a submersible pump or bailer. The pump, cables, and hoses are steam-cleaned or cleaned with Alconox® and water prior to use in each well. The wells are purged until withdrawal is of sufficient duration to result in stabilized pH, temperature, and electrical conductivity of the water, as measured using portable meters calibrated to a standard buffer and conductivity standard. If the well becomes dewatered, the water level is allowed to recover to at least 80 percent of the initial water level. A sample of the formation water is then collected from each of the wells using either a disposable bailer or cleaned stainless-steel bailer. The water samples are then gently poured into laboratory-supplied, 40-milliliter (ml) glass vials, 500 ml plastic bottles, or 1-liter glass bottles (as required per specific laboratory analysis), sealed with Teflon®lined caps, and inspected for air bubbles to check for headspace, which would allow volatilization to occur. The samples are then labeled and promptly placed in iced storage. A field log of well exacuation procedures and parameter monitoring is maintained. Water generated by the purging of wells is stored in 55-gallon drums onsite and remains the responsibility of the client. A Chain of Custody Record is initiated by the field geologist and updated throughout handling of the samples, and accompanies the samples to a laboratory certified by the State of California for the analyses requested. Samples are transported to the laboratory promptly to help ensure that recommended sample holding times are not exceeded. Samples are properly disposed of after their useful life has expired.

Field Data Sheets:

May						
MARAMITERS TPHES, BTEX T	WRLL NO	MW-1		SAMPL:	R LD.:	W-MW-1
DETECTION AND RESERVATIVE: 13 0 AND ASSESSED ASSESSED AND ASSESSED AND ASSESSED AND ASSESSED ASSESSED ASSESSED ASSESSED ASSESSED AND ASSESSED AS						
DEFTH TO WATER: WELL DEFTH: 30 ft. PRESERVATIVE: 1) HCI WATER: WELL DEFTH: 30 ft. LABORATORY: Eacher (DHS LAB 1369)						
Note						
Disposable Baller COMMENTS Product door, spotty sheen.				INESE	CALLE.	1) IICI
Disposable Baller Disp				TARAR	ATODY.	Entach (DUC LAR 1369)
Bill Dugan CUMULATIVE GAL. TURBIDITY* PH E.C.# TEMP*						
CUMULATIVE GAL. PURGED TURBIDITY* PH E.C.# TEMP*				COMM	EN15:	ridduct odor, sporty sincen.
TIME	SAMPLED BY:					
11:30					= - "	man and
Time						
11:40	11:30	•	_			
WELL NO. MW-2	-:-					
WELL NO. MW-2 SAMPLE I.D.: W-MW-1	11:40	8 gallons	41	6.5	1300	66.3
DATE 03/18/97	* = ml/liter	# = umhos/cm	^ = fahrer	nheit		
DATE 03/18/97						
DATE 03/18/97						
DATE 03/18/97	WRLL NO.	MW-2		SAMPL	E I.D.:	W-MW-1
WELL DIAMETER: 2-in. CONTAINERS: 1) 3 VOAs (40 mi) 2) 2 liter amber						
DEPTH TO WATER: 10.61 ft. PRESERVATIVE: 1) HC						
WELL DEPTH: 29.5 ft. Disposable Baller						
PURGE METHOD: SAMPLE METHOD: Disposable Bailer Disposable Bail				I MONTH	XTALITIE.	1/1101
SAMPLE METHOD: Bill Dugan CUMULATIVE GAL.				r a non	amounts.	TAPTTO I (DAID I AD 1960)
Bill Dugan CUMULATIVE GAL PURGED TURBIDITY* PH E.C.# TEMP*						
CUMULATIVE GAL. TIME PURGED TURBIDITY* pH E.C.# TEMP* 10:30 2 gallons 4 6.7 1320 63.2 7 gallons 4 6.8 1360 63.2 * - ml/iter # - umhos/cm - fahrenheit W-MW-1 WELL NO. MW-3 SAMPLE I.D.: W-MW-1 DATE: 03/18/97 PARAMETERS: TPHss, TPHd, TPHg, BTEX, MTBE WELL DIAMETER: 2-In. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 liter amber DEPTH TO WATER: 30 ft. PRESERVATIVE: 1) HCl WELL DEPTE: 30 ft. PRESERVATIVE: 1) HCl SAMPLE BETHOD: Disposable Bailer COMMENTS: Product odor, spotty sheen. SAMPLE BETHOD: CUMULATIVE GAL. TURBIDITY* PH E.C.# <td< td=""><td></td><td></td><td></td><td>COMM</td><td>ENTS:</td><td>Product odor, spouy sneen.</td></td<>				COMM	ENTS:	Product odor, spouy sneen.
TIME PURGED TURBIDITY* pH E.C.# TEMP* 10:30 2 gallons d 6.7 1320 63.2 7 gallons d 6.9 1360 63.2 10:40 9 gallons d 6.8 1360 63.2 * - ml/iter # - umhos/cm - fahrenheit W-W-U WELL NO. MW-3 SAMPLE I.D.: W-MW-1 DATE: 03/18/97 PARAMETERS: TPHss, TPHd, TPHg, BTEX, MTBE WELL DIAMETER: 2-ln. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 fiter amber DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl WELL DEPTE: 30 ft. PURGE METHOD: Disposable Baller LABORATORY: MONROE ANALYTICAL (DHS LAB 2034) SAMPLED BY: Bill Dugan CUMULATIVE GAL. TIMB E.C.# TEMP* 10:50 2 gallons d 6.7 1380 62.8 11:10	SAMPLED BY:					
10:30 2 gallons 3		<u>CUMULATIVE GAL.</u>				
-: 7 gallons d 6.9 1360 63.2 10:40 9 gallons d 6.8 1360 63.2 * - ml/iter # - umbos/cm - fahrenheit WELL NO.	<u>TIME</u>	<u>PURGED</u>	TURBIDITY*			
10:40 9 gallons 41 6.8 1360 63.2 * - ml/liter # - umhos/cm - fahrenheit	10:30	2 gallons	4 1	6.7	1320	63.2
** - ml/liter # - umhos/cm - fahrenheit WELL NO. MW-3 SAMPLE I.D.: W-MW-1 DATE: 03/18/97 PARAMETERS: TPHss, TPHd, TPHg, BTEX, MTBE WELL DIAMETER: 2-ln. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 fiter amber DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl WELL DEPTH: 30 ft. HONROE ANALYTICAL (DHS LAB 2034) SAMPLE METHOD: Disposable Bailer COMMENTS: Product odor, spotty sheen. SAMPLED BY: Bill Dugan CUMULATIVE GAL. PURGED TURBIDITY* pH E.C.# TEMP^* 10:50 2 gallons 1 6.7 1380 62.8 11:10 10 gallons 41 7.0 13890 62.8	nça	7 gallons	∢1	6.9	1360	63.2
** - ml/liter # - umhos/cm - fahrenheit WELL NO. MW-3 SAMPLE I.D.: W-MW-1 DATE: 03/18/97 PARAMETERS: TPHss, TPHd, TPHg, BTEX, MTBE WELL DIAMETER: 2-ln. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 liter amber DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl WELL DEPTE: 30 ft. HCl WESERVATIVE: 1) HCl WELL DEPTE: 30 ft. MONROE ANALYTICAL (DHS LAB 2034) COMMENTS: Product odor, spotty sheen. SAMPLED BY: Bill Dugan CUMULATIVE GAL. PRESERVATIVE: Product odor, spotty sheen. TIME PURGED TURBIDITY* pH E.C.# TEMP^* 10:50 2 gallons -1 6.7 1380 62.8 11:10 10 gallons -1 7.0 13890 62.8	10:40	9 gallons	4	6.8	1360	63.2
DATE: 03/18/97 FARAMETERS: TPHss, TPHd, TPHg, BTEX, MTBE WELL DIAMETER: 2-in. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 liter amber DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl WELL DEPTH: 30 ft. WELL DEPTH: MONROE ANALYTICAL (DHS LAB 2034) PURGE METHOD: Disposable Bailer COMMENTS: Product odor, spotty sheen. SAMPLED BY: Bill Dugan CUMULATIVE GAL. Product odor, spotty sheen. TIME PURGED TURBIDITY* pH E.C.# TEMP^* 10:50 2 gallons 4 6.7 1380 62.9 7 gallons 4 7.1 1380 62.8 11:10 10 gallons 4 7.0 13890 62.8	* = ml/liter		^ = fabrer	uheit		
DATE: 03/18/97 FARAMETERS: TPHss, TPHd, TPHg, BTEX, MTBE WELL DIAMETER: 2-in. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 liter amber DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl WELL DEPTH: 30 ft. WELL DEPTH: MONROE ANALYTICAL (DHS LAB 2034) PURGE METHOD: Disposable Bailer COMMENTS: Product odor, spotty sheen. SAMPLED BY: Bill Dugan CUMULATIVE GAL. Product odor, spotty sheen. TIME PURGED TURBIDITY* pH E.C.# TEMP^* 10:50 2 gallons 4 6.7 1380 62.9 7 gallons 4 7.1 1380 62.8 11:10 10 gallons 4 7.0 13890 62.8						
DATE: 03/18/97 FARAMETERS: TPHss, TPHd, TPHg, BTEX, MTBE WELL DIAMETER: 2-in. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 liter amber DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl WELL DEPTH: 30 ft. WELL DEPTH: MONROE ANALYTICAL (DHS LAB 2034) PURGE METHOD: Disposable Bailer COMMENTS: Product odor, spotty sheen. SAMPLED BY: Bill Dugan CUMULATIVE GAL. Product odor, spotty sheen. TIME PURGED TURBIDITY* pH E.C.# TEMP^* 10:50 2 gallons 4 6.7 1380 62.9 7 gallons 4 7.1 1380 62.8 11:10 10 gallons 4 7.0 13890 62.8	WILLING	MD0-3		SAMPI	RID.	W.MW.1
WELL DIAMETER: 2-In. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 liter amber DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl WELL DEPTE: 30 ft. I) HCl PURGE METHOD: Disposable Baller LABORATORY: MONROE ANALYTICAL (DH\$ LAB 2034) SAMPLED BY: Bill Dugan CUMULATIVE GAL. Product odor, spotty sheen. TIME PURGED TURBIDITY* pH E.C.# TEMP^ 10:50 2 gallons 41 6.7 1380 62.9 ∴ 7 gallons 41 7.1 1380 62.8 11:10 10 gallons 41 7.0 13890 62.8						
DEPTH TO WATER: 10.16 ft. PRESERVATIVE: 1) HCl						
WELL DEFTH: 30 ft. PURGE METHOD: Disposable Baller LABORATORY: MONROE ANALYTICAL (DHS LAB 2034) SAMPLE METHOD: Disposable Baller COMMENTS: Product odor, spotty sheen. SAMPLED BY: Bill Dugan CUMULATIVE GAL. TIME PURGED TURBIDITY* PH E.C.# TEMP^* 10:50 2 gallons 41 6.7 1380 62.9 ∴ 7 gallons 41 7.1 1380 62.8 11:10 10 gallons 41 7.0 13890 62.8						
PURGE METHOD: Disposable Baller LABORATORY: MONROE ANALYTICAL (DHS LAB 2034) SAMPLED BY: Disposable Baller COMMENTS: Product odor, spotty sheen. TIMB PURGED TURBIDITY* pH E.C.# TEMP^ 10:50 2 gallons 41 6.7 1380 62.9 ∴- 7 gallons 41 7.1 1380 62.8 11:10 10 gallons 41 7.0 13890 62.8				LKESE	KYAJIVE:	I) no
SAMPLE METHOD: Disposable Bailer COMMENTS: Product odor, spotty sheen. SAMPLED BY: Bill Dugan CUMULATIVE GAL. TURBIDITY* pH E.C.# TEMP^ 10:50 2 gallons 41 6.7 1380 62.9 ∴ 7 gallons 41 7.1 1380 62.8 11:10 10 gallons 41 7.0 13890 62.8				<u> </u>		MONDOT INTEREST (DIET AR 2024)
SAMPLED BY: CUMULATIVE GAL. TIME PURGED TURBIDITY* pH E.C.# TEMP^ 10:50 2 gallons 41 6.7 1380 62.9 7 gallons 41 7.1 1380 62.8 11:10 10 gallons 41 7.0 13890 62.8						
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10:50 2 gailons 41 6.7 1380 62.9 ∴ 7 gailons 41 7.1 1380 62.8 11:10 10 gailons 41 7.0 13890 62.8	TIME	PURGED	TURBIDITY*	рĦ	E.C.#	<u>TEMP</u>
-: 7 gallons 41 7.1 1380 62.8 11:10 10 gallons 41 7.0 13890 62.8						62.9
11:10 10 gallons 41 7.0 13890 62.8						
		•				
- MANAGEMENT - AND CONTROL			_			
	- white	- Anniostrii	- 14111 €1			

Gradient:

Depth to water in wells MW-1, MW-2, and MW-3 were measured from a straight edge placed in a north-south orientation on the top of each christy box. The gradient was calculated to be approximately 0.16 ft/ft flowing approximately due north as illustrated in Figure 2.

Analytical Results:

Summarized in Table 1, and presented in Attachment A. See Figure 3.

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
3516 Adeline Street
Oakland, California

<u>Well</u> Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater
<u>MW-1</u>			
11/18/92	17.44	13.99	3.45
11/04/93		16.79	0.65
03/08/94		14.14	3.30
08/02/94		13.18	4.26
02/08/95		10.92	6.52
07/08/96		11.62	5.82
10/09/96		14.11	3.33
03/18/97		12.37	5.07
MW-2			
11/18/92	17.31	13.18	4.13
11/04/93		14.84	2.47
03/08/94		11.50	5.81
08/02/94		13.14	4.17
02/08/95		8.18	9.13
07/08/96		11.06	6.25
10/09/96		12.38	4.93
03/18/97		10.61	6.70
MW-3			
11/18/92	17.44	13.93	3.51
11/04/93		15.16	2.28
03/08/94		13.43	4.01
08/02/94		12.82	4.62
02/08/95		7.62	9.82
07/08/96		10.97	6,47
10/09/96		11.84	5.60
03/18/97		10.16	7.28

Well Elevation per BT Associates . BM taken as 20 ft located at cement at gate entrance

TABLE 2
RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES
3516 Adeline Street
Oakland, California

11/04/93 2 03/28/94 2 08/02/94 2 02/08/95 07/08/96 37 10/09/96 42 03/18/97 2 11/18/92 11/04/93 3 03/28/94 08/02/94 02/08/95 07/08/96 1 10/09/96 03/18/97 4	1,800 2,000 150 2,100 620 67,000 12,000 2,600 630 3,200 45 170 570	<50 <50 <50 <50 <50 <50 NA NA V50 <50 <50 <50	<0.5 <0.5 35 <0.5 <0.5 1.6 <0.5 <0.5 <0.5 <1.4 <0.5	<0.5 <0.5 40 <0.5 <0.5 <0.5 5.0 1.5 <0.5 <0.5 <0.5	<0.5 <0.5 72 <0.5 <0.5 <0.5 <0.5 1.5	<0.5 <0.5 120. <0.5 <0.5 74. <0.5 9.6 <0.5	NA NA NA NA 7,91 NA <6.0 NA NA	NA <50 NA <50 <50 10,000* NA NA
11/04/93 2 03/28/94 08/02/94 2 02/08/95 07/08/96 37 10/09/96 42 03/18/97 2 11/18/92 11/18/92 11/18/97 MW-3 11/18/92 11 11/04/93 03/28/94 08/02/94 08/02/94	2,000 150 2,100 620 67,000 12,000 2,600 630 3,200 45 170	<50 <50 <50 <50 <50 NA NA <50 <50 <50	<0.5 <0.5 <0.5 1.6 <0.5 <0.5 <0.5 <0.5	<0.5 40 <0.5 <0.5 <0.5 5.0 1.5 <0.5 <0.5	<0.5 72 <0.5 <0.5 <0.5 <0.5 1.5 <0.5 1.1	<0.5 120. <0.5 <0.5 74. <0.5 9.6	NA NA NA 7,91 NA <6.0	<50 NA <50 <50 10,000* NA NA NA
03/28/94 08/02/94 02/08/95 07/08/96 37/08/96 37/08/96 37/18/97 211/18/92 11/18/92 11/04/93 03/28/94 02/08/95 07/08/96 10/09/96 03/18/97 MW-3 11/18/92 11/04/93 03/28/94 08/02/94	150 2,100 620 57,000 12,000 2,600 630 3,200 45 170	<50 <50 <50 <50 NA NA <50 <50 <50	35 <0.5 <0.5 1.6 <0.5 <0.5 <0.5	40 <0.5 <0.5 <0.5 5.0 1.5 <0.5 <0.5	72 <0.5 <0.5 <0.5 <0.5 1.5 <0.5 <0.5	120. <0.5 <0.5 74. <0.5 9.6 <0.5 <0.5	NA NA 7,91 NA <6.0	NA <50 <50 10,000* NA NA NA
08/02/94 02/08/95 07/08/96 37 10/09/96 03/18/97 2 11/18/92 11/04/93 03/28/94 02/08/95 07/08/96 10/09/96 03/18/97 MW-3 11/18/92 11/04/93 03/28/94 08/02/94	2,100 620 67,000 12,000 2,600 630 3,200 45 170	<50 <50 <50 NA NA <50 <50 <50	<0.5 <0.5 1.6 <0.5 <0.5 <0.5 <0.5 1.4 <0.5	<0.5 <0.5 <0.5 5.0 1.5 <0.5 <0.5 2	<0.5 <0.5 <0.5 <0.5 1.5 <0.5 <0.5	<0.5 <0.5 74. <0.5 9.6 <0.5 <0.5	NA NA 7,91 NA <6.0 NA NA	<50 <50 10,000* NA NA NA
02/08/95 07/08/96 37/08/96 37/08/96 42 03/18/97 2 11/18/92 11/04/93 03/28/94 02/08/95 07/08/96 10/09/96 03/18/97 311/18/92 11/04/93 03/28/94 08/02/94	620 67,000 12,000 2,600 630 3,200 45 170	<50 <50 NA NA <50 <50 <50 <50	<0.5 1.6 <0.5 <0.5 <0.5 <0.5 1.4 <0.5	<0.5 <0.5 5.0 1.5 <0.5 <0.5 2	<0.5 <0.5 <0.5 1.5 <0.5 <0.5	<0.5 74. <0.5 9.6 <0.5 <0.5	NA 7,91 NA <6.0 NA NA	<50 10,000* NA NA NA NA <50
07/08/96 37 10/09/96 42 03/18/97 2 MW-2 11/18/92 11/04/93 3 03/28/94 08/02/94 02/08/95 07/08/96 1 10/09/96 03/18/97 MW-3 11/18/92 11 1/04/93 03/28/94 08/02/94	630 3,200 45 17,000	<50 NA NA <50 <50 <50 <50	1.6 <0.5 <0.5 <0.5 <0.5 1.4 <0.5	<0.5 5.0 1.5 <0.5 <0.5 2	<0.5 <0.5 1.5 <0.5 <0.5 11	74. <0.5 9.6 <0.5 <0.5	7.91 NA <6.0 NA NA	10,000* NA NA NA NA <50
10/09/96 03/18/97 2 11/18/92 11/04/93 03/28/94 08/02/94 02/08/95 07/08/96 10/09/96 03/18/97 11/18/92 11/04/93 03/28/94 08/02/94	630 3,200 45 170	NA NA <50 <50 <50 <50	<0.5 <0.5 <0.5 <0.5 1.4 <0.5	5.0 1.5 <0.5 <0.5 2	<0.5 <0.5 <0.5 11	<0.5 9.6 <0.5 <0.5	NA <6.0 NA NA	NA NA NA <50
03/18/97 2 MW-2 11/18/92 11/04/93 3 03/28/94 08/02/94 02/08/95 07/08/96 1 0/09/96 4 03/18/97 MW-3 11/18/92 11 1/04/93 03/28/94 08/02/94	630 3,200 45 170	<50 <50 <50 <50 <50	<0.5 <0.5 <0.5 1.4 <0.5	<0.5 <0.5 2	<0.5 <0.5 11	9.6 <0.5 <0.5	<6.0 NA NA	NA NA <50
MW-2 11/18/92 11/04/93 03/28/94 08/02/94 02/08/95 07/08/96 10/09/96 03/18/97 MW-3 11/18/92 11/04/93 03/28/94 08/02/94	630 3,200 45 170	<50 <50 <50 <50	<0.5 <0.5 1.4 <0.5	<0.5 <0.5 2	<0.5 <0.5 11	<0.5 <0.5	NA NA	NA <50
11/18/92 11/04/93 03/28/94 08/02/94 02/08/95 07/08/96 10/09/96 03/18/97 MW-3 11/18/92 11/04/93 03/28/94 08/02/94	3,200 45 170	<50 <50 <50	<0.5 1.4 <0.5	<0.5 2	<0.5 11	< 0.5	NA	< 50
11/18/92 11/04/93 03/28/94 08/02/94 02/08/95 07/08/96 10/09/96 03/18/97 MW-3 11/18/92 11/04/93 03/28/94 08/02/94	3,200 45 170	<50 <50 <50	<0.5 1.4 <0.5	<0.5 2	<0.5 11	< 0.5	NA	< 50
11/04/93 3 03/28/94 08/02/94 02/08/95 07/08/96 1 10/09/96 4 03/18/97 <u>MW-3</u> 11/18/92 11 11/04/93 03/28/94 08/02/94	3,200 45 170	<50 <50 <50	1.4 <0.5	2	11			
03/28/94 08/02/94 02/08/95 07/08/96 10/09/96 03/18/97 <u>MW-3</u> 11/18/92 11/04/93 03/28/94 08/02/94	45 170	<50 <50	< 0.5	2	11	19	NIA	B.T.A
08/02/94 02/08/95 07/08/96 10/09/96 03/18/97 <u>MW-3</u> 11/18/92 11/04/93 03/28/94 08/02/94	170	< 50		< 0.5			TAIN	NA
02/08/95 07/08/96 10/09/96 03/18/97 <u>MW-3</u> 11/18/92 11/04/93 03/28/94 08/02/94					< 0.5	< 0.5	NA	< 50
07/08/96 1 10/09/96 4 03/18/97 4 03/18/97 1 11/18/92 11 11/04/93 03/28/94 08/02/94		<du< td=""><td>< 0.5</td><td>< 0.5</td><td>< 0.5</td><td>< 0.5</td><td>NA</td><td>< 50</td></du<>	< 0.5	< 0.5	< 0.5	< 0.5	NA	< 50
10/09/96 03/18/97 <u>MW-3</u> 11/18/92 11/04/93 03/28/94 08/02/94	1,800	< 50	< 0.5	2.6	15	24	6.3	2,800*
03/18/97 <u>MW-3</u> 11/18/92 11 11/04/93 03/28/94 08/02/94	4,100	NA	< 0.5	0.57	< 0.5	< 0.5	NA	NA
11/18/92 11 11/04/93 03/28/94 08/02/94	240	NA	<0.5	0.57	< 0.5	< 0.5	5.3	NA
11/18/92 11 11/04/93 03/28/94 08/02/94								
11/04/93 03/28/94 08/02/94	1,000	< 50	< 0.5	<0.5	< 0.5	< 0.5	NA	NA
03/28/94 08/02/94	320	< 50	<0.5	<0.5	< 0.5	< 0.5	NA	< 50
08/02/94	45	< 50	0.8	0.9	5	10	NA	NA
02/08/95	< 20	<50	<0.5	<0.5	< 0.5	< 0.5	NA	< 50
	<20	<50	<0.5	<0.5	< 0.5	< 0.5	NA	< 50
07/08/96 2	2,500	< 50	1.0	<0.5	8.8	8	10	2,200*
10/09/96 2	2,600	NA	< 0.5	<0.5	< 0.5	< 0.5	NA	NA
03/18/97 2	2,500 2,500	NA	< 0.5	0.61	0.63	5.2	NA	NA
VJ 10 7/ 2	∠₩ ₩	14/1	~ V.J	0.01	0.00	J.	141	1 14 1
MCLs	,			- -				
DWALs		1.0		680	1,750			

Results in micrograms/liter $(\mu g/l)$ = parts per billion (ppb).

ND: Less than the detection limit for the method of analysis (See laboratory data sheets).

MCLs: Maximum Contaminant Levels in Drinking Water, DHS (October 1990)

DWALs: Drinking Water Action Levels, DHS (October 1990) MtBE: Methyl-tert-Butyl-Ether

^{*:} Components found in the gasoline range, however they are not characteristic of gasoline components.

Recommendation:

This report should be forwarded to the following regulatory agencies:

Alameda County Environmental Health Services 1131 Harbor Bay Parkway, #250 Alameda, CA 94502-6577 Attn: Susan Hugo

<u>Limitations</u>: This report summarizes third party sampling performed by Dugan Associates at the project site for groundwater quality assessment purposes. No soil engineering or geotechnical references are implied nor should be inferred.

<u>Third-Party Statement:</u> Dugan Associates is a third-party groundwater sampling company which maintains a valid registration with the State of California to collect and interpret groundwater monitoring data at fuel leak sites. In order to maintain third-party status as a groundwater sampling organization, Dugan Associates does not install groundwater remediation or treatment systems [limited to Class A Contractors], and does not install monitoring wells [limited to C-57 Contractors].

<u>License Statement</u>: The UST Fund will only reimburse for activities of firms that maintain necessary registrations for legal operations in the State of California. Dugan Associates is recognized by the California UST Cleanup Fund, and by the California Board of Registration of Geologists as an qualified groundwater sampling firm.

<u>Certification</u>: I certify that the work presented in this report was performed under my supervision. To the best of my knowledge, the data contained herein are true and accurate, and the work was performed in accordance with professional standards.

William R. Dugan

Field Services Manager, R.G.

4/16/47 Date



Figure 1. Site Vicinity Map

Figure 2. Groundwater Gradient Map for October 9, 1996

Figure 3. TPHss and Benzene in Groundwater October 9, 1996

Attached: Laboratory Data Sheets and Chain of Custody Record





Source: U.S. Geological Survey

7.5-Minute Quadrangle Oakland West, California

2,000'

Scale: 1" = 2,000'

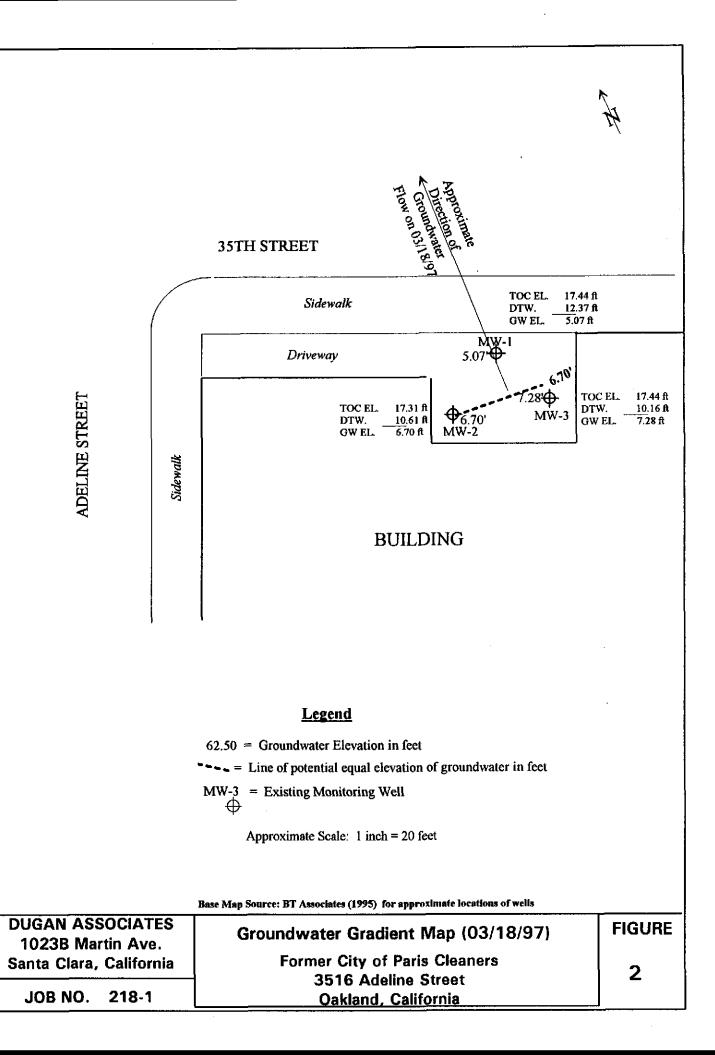
DUGAN ASSOCIATES 1023B Martin Ave. Santa Clara, California

JOB NO. 218-1

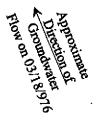
Site Vicinity Map

Former City of Paris Cleaner 3516 Adeline Street Oakland, California **FIGURE**

1

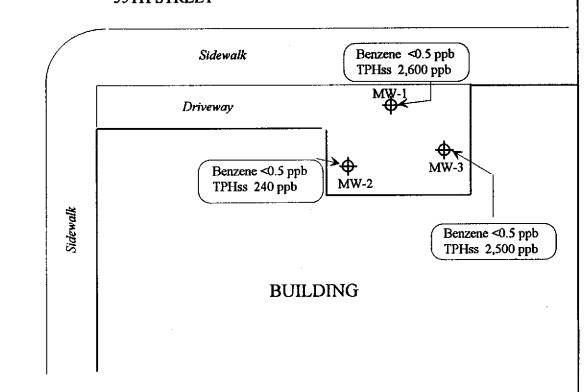






35TH STREET

ADELINE STREET



Legend

MW-3 = Existing Monitoring Well

Approximate Scale: 1 inch = 20 feet

Base Map Source: BT Associates (1995) for approximate locations of wells

DUGAN ASSOCIATES
1023B Martin Ave.
Santa Clara, California

JOB NO. 218-1

TPHss and Benzene in Groundwater (03/18/97)
FIGURE

Former City of Paris Cleaners
3516 Adeline Street
Oakland, California

ATTACHMENT A

CHAIN OF CUSTODY RECORDS

AND

LABORATORY DATA SHEETS

04/04/97

Dear Bill:

Enclosed are:

- 1). the results of 3 samples from your # 218.1; City Of Paris Cleaners project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

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

Dugan Associates	Client Project ID: #218.1; City Of Paris	Date Sampled: 03/18/97
1023B Martin Avenue	Cleaners	Date Received: 03/25/97
Santa Clara, CA 95050	Client Contact: Bill Dugan	Date Extracted: 03/26-03/28/97
	Client P.O:	Date Analyzed: 03/26-03/28/97

Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons as Stoddard Solvent*, with Methyl tert-Butyl Ether* & BTEX*

Lab ID	Client ID	Matrix	TPH(ss) ⁺	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Rec. Surrogate
74678	W-MW-1	W	2600,e/j,h	ND< 6	ND	1.5	1.5	9.6	99
74679	W-MW-2	w	240,e/j	5.3	ND	ND	ND	ND	100
74680	W-MW-3	w	2500,e/j,h	ND	ND	0.61	0.63	5.2	93
· · · · · · · · · · · · · · · · · · ·									
Reporting	g Limit unless	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	
otherwise stated; ND means not detected above the reporting limit		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

^{*} water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP extracts in mg/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 (stoddard solvent?); 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.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/26/97

Matrix: Water

	Concent	ration	(mg/L)		% Reco	very	
Analyte	Sample			Amount	1		RPD
	(#74673)	MS	MSD	Spiked	MS	MSD	
	<u></u>		" 	- -	} . <u></u>		
TPH (gas)	0.0	105.3	97.0	100.0	105.3	97.0	8.2
Benzene	0.0	8.8	9.3	10.0	88.0	93.0	5.5
Toluene	0.0	9.1	9.7	10.0	91.0	97.0	6.4
Ethyl Benzene	0.0	9.9	10.1	10.0	99.0	101.0	2.0
Xylenes	0.0	29.9	30.6	30.0	99.7 	102.0	2.3
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0	26500	26400	23700	112	111	0.4

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

[%] Rec. = (MS - Sample) / amount spiked x 100

Dugan Associates
1023B Martin Avenue, Santa Clara, CA 95050

1023B Martin Avenue, Santa Clara, CA 95050 Phone: (408) 287-2175 FAX: (408) 287-2176

Chain of Custody

Third Party Geoservices

DAES C.O.C Form #:

Sample Delivery: Work Scope: Sample 3 well	Project/PO#: 2					of Paris Cleaners (Furner) and, C4						CAM 17.)	S Metals (Cd,Cr,Pb,Ni,Zn))				
Project Manager: Bill Dugan Phone: 408-287-2175 Fax: 408-287-217	Laboratory:	Laboratory: McCampbell		Turn Around Standard				LUFT Method TPH-Diesel	LUFT Method TPH-Gass	DIEA/MIDE Purgeable Aromatics (602/8020) & TPH-Gasoline	pea	Title 22 Metals (CAM 17)	s (Cd,Cr,	EPA Method 8270	EPA Method 8240 EPA Method 8010		TPH as Motor Oil	-
SAMPLE LOC	ATION JPTION	SAMPLED Time Date	Received Time	# of Ctrs.	Soil	MATRE Water	Air	LUFT	TPT T	Purgeat & TPH	Total Lead	Title 22	5 Metal	EPA M	EPA M		TPH as	Acidificd
W-mw-1		3/19/47	· · · · · · · · · · · · · · · · · · ·	3					>	.	-	_		\vdash	\perp	-		+
W- MW-3		3/15/47		3						<								
													<u> </u>		78		:	
							<u>.</u>				- 4 L				5 <u>7</u> 9			
											- <u> </u>			74(580	Ì	+	
ICE/T*	PRESERVATIVE S						3'											
Sampler's name : William R.Dugan		Commen	ts:		,							<u> </u>						
Relinquished by: Relinquished by:	3/25/47 . 10:45AM	Received Received	by:	n (a	iter Lidi	The	·éa-						<u> </u>	I	Date:	3-2 3-2	<u>3-</u> 5-5	91

Third-Party Well Sampling Groundwater Geology License # RG 6253

DUGAN ASSOCIATES

1023B Martin Avenue, Santa Clara, CA. 95050 Telephone 408/287-2175 Fax 408/287-2176 Bill Dugan, R.G.

GROUNDWATER SAMPLING REPORT [DA-218-96Q4]

Report Date:

April 16, 1997

Client:

Ms. Linda Champion 9441 Laguna Lake Way Elk Grove, California 95758

Site Address:

3516 Adeline Street, Oakland, California.

Site Description:

Former cleaners at the southeastern corner of the intersection of Adeline Street with

35th Street.

Report Scope:

This report summarizes third party sampling performed by Dugan Associates at the project site. Supporting documentation provided by an independent State-certified laboratory are included in Attachment A.

Work Performed:

The following tasks were performed by Dugan Associates for the three monitoring wells (MW-1, MW-2, and MW-3) at the site:

- 1) measured depth to water level;
- 2) performed subjective analyses for floating product;
- 3) purged at least three well volumes of water from the well;
- 4) collected groundwater samples; and
- 5) transported the groundwater samples to a State- certified laboratory for the analyses requested;

Sampling Date:

Monitoring wells MW-1, MW-2, and MW-3 were sampled by personnel of Dugan Associates on October 9, 1996.

Laboratory:

Laboratory analyses were performed at Entech Analytical Labs, Inc, in Sunnyvale, California (DHS Certified Number 1369). Chain of custody record and laboratory data sheets are presented in Appendix A.

Analytical Methods:

Groundwater samples from wells MW-1, MW-2, and MW-3 were analyzed for the following:

- the volatile hydrocarbon constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Test Method 8020 / 602.
- Total Petroleum Hydrocarbons as stoddard (TPHd) by GCFID (LUFT Method) following sample purge and trap by EPA Method 8015

Field Methods:

Groundwater Monitoring. The static water level in each well is measured to the nearest 0.01-foot using an electric water-level sounder or oil/water interface probe (if the wells contain floating product) cleaned with Alconox® and water before use in each well. The liquid in the onsite wells is examined for visual evidence of hydrocarbons by gently lowering approximately half the length of a clean disposable bailer past the air/water interface. The sample is then retrieved and inspected for floating product, sheen, emulsion, color, and clarity. The thickness of floating product detected is recorded to the nearest 1/8-inch.

Groundwater Sampling. Wells which do not contain floating product are purged using a submersible pump or bailer. The pump, cables, and hoses are steam-cleaned or cleaned with Alconox® and water prior to use in each well. The wells are purged until withdrawal is of sufficient duration to result in stabilized pH, temperature, and electrical conductivity of the water, as measured using portable meters calibrated to a standard buffer and conductivity standard. If the well becomes dewatered, the water level is allowed to recover to at least 80 percent of the initial water level. A sample of the formation water is then collected from each of the wells using either a disposable bailer or cleaned stainless-steel bailer. The water samples are then gently poured into laboratory-supplied, 40-milliliter (ml) glass vials, 500 ml plastic bottles, or 1-liter glass bottles (as required per specific laboratory analysis), sealed with Teflon®lined caps, and inspected for air bubbles to check for headspace, which would allow volatilization to occur. The samples are then labeled and promptly placed in iced storage. A field log of well exacuation procedures and parameter monitoring is maintained. Water generated by the purging of wells is stored in 55-gallon drums onsite and remains the responsibility of the client. A Chain of Custody Record is initiated by the field geologist and updated throughout handling of the samples, and accompanies the samples to a laboratory certified by the State of California for the analyses requested. Samples are transported to the laboratory promptly to help ensure that recommended sample holding times are not exceeded. Samples are properly disposed of after their useful life has expired.

Field Data Sheets:

WELL DEFTH: 30 ft. PURCE METHOD: Disposable Baller LABORATORY: Entech (DHS LAB 1369) SAMPLE METHOD: Disposable Baller COMMENTS: Product odor, spotty sheen. SAMPLED BY: CUMULATIVE GAL. TIME PURGED TURBIDITY* BH B.C.# TEMP* 11:30 2 gallons 4 6.5 1300 66.4 7 gallons 4 6.5 1320 66.3 11:40 8 gallons 4 6.5 1300 66.3 * - ml/liter # - umhos/cm - fabrenheit W-MW-1 WELL NO. MW-2 SAMPLE LD.: W-MW-1 DATE: 10/09/96 PARAMETERS: TPHss, BTEX	
11:30 2 gallons 4 6.5 1300 66.4 -:- 7 gallons 4 6.5 1320 66.3 11:40 8 gallons 4 6.5 1300 66.3 * - ml/liter # - umhos/cm - fahrenhelt WELL NO. MW-2 SAMPLE LD.: W-MW-1	
-:- 7 gallons 41 6.5 1320 66.3 11:40 8 gallons 41 6.5 1300 66.3 * = mU/iter # = umhos/cm	
11:40	
* = ml/liter # = umhos/cm	
WELL NO. MW-2 SAMPLE I.D.: W-MW-1	
BATE: 19/09/96 PAKAMETERS; ITELS, DICA	
WELL DIAMETER: 2-in. CONTAINERS: 1) 3 VOAs (40 ml) 2) 2 liter amber	
DEPTH TO WATER: 12.38 ft. PRESERVATIVE: 1) HCl	
WELL DEPTH: 29.5 ft.	
PURGE METHOD: Disposable Baller LABORATORY: ENTECH (DHS LAB 1369)	
<u>SAMPLE METHOD:</u> Disposable Baller <u>COMMENTS:</u> Product odor, spotty sheen.	
SAMPLED BY: Bill Dugan	
CUMULATIVE GAL.	
TIME PURGED TURBIDITY PH E.C.# TEMP	
10:30 2 gallons 1 6.9 1320 62.9	
7 gallons d 6.9 1400 63.1	
10:40 9 gallons 4 6.9 1400 63.0	
a mi/liter # = umhos/cm = fabrenheit	
WELL NO. MW-3 SAMPLE LD.: W-MW-1	
DEPTH TO WATER: 11.84 ft. PRESERVATIVE: 1) HCI	
WELL DEPTH: 30 ft.	
PURGE METHOD: Disposable Bailer LABORATORY: MONROE ANALYTICAL (DHS LAB 2034)	
<u>SAMPLE METHOD:</u> Disposable Bailer <u>COMMENTS:</u> Product odor, spotty sheen.	
SAMPLED BY: Bill Dugan	
CUMULATIVE GAL.	
TIME PURGED TURBIDITY* pH B.C.# TEMP^	
10:50 2 gallons 4 6.85 1380 63.0	
7 gallons 4 7.01 1390 62.7	
11:10 10 gailons 1 6.93 1390 62.7	
* = ml/liter # = umhos/cm = fahrenheit	

Gradient:

Depth to water in wells MW-1, MW-2, and MW-3 were measured from a straight edge placed in a north-south orientation on the top of each christy box. The gradient was calculated to be approximately 0.17 ft/ft flowing approximately due north as illustrated in Figure 2.

Analytical Results:

Summarized in Table 1, and presented in Attachment A. See Figure 3.

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
3516 Adeline Street
Oakland, California

Well Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater
MW-1			
11/18/92	17.44	13.99	3.45
11/04/93	17.77	16.79	0.65
03/08/94		14.14	3.30
08/02/94		13.18	4.26
02/08/95		10.92	6.52
07/08/96		11.62	5.82
10/09/96		14.11	3.33
N 6517 A			
MW-2	17 21	13.18	4.13
11/18/92	17.31	14.84	2.47
11/04/93		14.84	5.81
03/08/94		13.14	4.17
08/02/94		8.18	9.13
02/08/95		11.06	6.25
07/08/96			4.93
10/09/96		12.38	4.93
<u>MW-3</u>			
11/18/92	17.44	13.93	3.51
11/04/93		15.16	2.28
03/08/94		13.43	4.01
08/02/94		12.82	4.62
02/08/95		7.62	9.82
07/08/96		10.97	6.47
10/09/96		11.84	5.60

Well Elevation per BT Associates . BM taken as 20 ft located at cement at gate entrance

TABLE 2
RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES
3516 Adeline Street
Oakland, California

MW-1 11/18/92 1,800 <50 <0.5 <0.5 <0.5 NA 11/04/93 2,000 <50 <0.5 <0.5 <0.5 NA 03/28/94 150 <50 <0.5 <0.5 <0.5 NA 08/02/94 2,100 <50 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 620 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 37,000 <50 1.6 <0.5 <0.5 <0.5 NA 07/08/96 37,000 <50 1.6 <0.5 <0.5 <0.5 NA 11/09/96 42,000 NA <0.5 5.0 <0.5 <0.5 NA 11/04/93 3,200 <50 <0.5 <0.5 <0.5 <0.5 NA 11/04/93 3,200 <50 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 570 <50 <0.5	ТРНд	MtBE	Xylenes	Total benzene	Ethyl- Toluene	Benzene	TPHd	TPHss	Well Date
11/04/93									<u>MW-1</u>
03/28/94	NA								
08/02/94	< 50								11/04/93
02/08/95 620 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 37,000 <50 1.6 <0.5 <0.5 <0.5 74. 7.9 10/09/96 42,000 NA <0.5 5.0 <0.5 <0.5 NA MW-2 11/18/92 630 <50 <0.5 <0.5 <0.5 <0.5 NA 11/04/93 3,200 <50 <0.5 <0.5 <0.5 <0.5 NA 03/28/94 45 <50 1.4 2 11 19 NA 08/02/94 170 <50 <0.5 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 570 <50 <0.5 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 1,800 <50 <0.5 <0.5 <0.5 <0.5 <0.5 NA MW-3 11/18/92 11,000 <50 <0.5 <0.5 <0.5 <0.5 <0.5 NA 03/28/94 4,100 NA <0.5 0.5 <0.5 <0.5 <0.5 NA 03/28/94 4,100 NA <0.5 0.5 <0.5 <0.5 NA 07/08/96 1,800 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 4,100 NA <0.5 0.5 <0.5 <0.5 <0.5 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 08/02/94 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 2,500 <50 1.0 <0.5 8.8 8 10	NA								03/28/94
07/08/96 37,000 <50	< 50								08/02/94
10/09/96	< 50								02/08/95
10/09/96	110,000*				< 0.5	1.6	< 50	37,000	
11/18/92 630 <50 <0.5 <0.5 <0.5 <0.5 NA 11/04/93 3,200 <50 <0.5 <0.5 <0.5 <0.5 NA 03/28/94 45 <50 1.4 2 11 19 NA 08/02/94 170 <50 <0.5 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 570 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 1,800 <50 <0.5 <0.5 <0.5 <0.5 <0.5 NA 11/04/93 320 <50 <0.5 0.5 <0.5 <0.5 NA 11/04/93 320 <50 <0.5 <0.5 <0.5 NA 11/04/93 320 <50 <0.5 <0.5 <0.5 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 08/02/94 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 <20 <50 <0.5 <0.5 <0.5 NA 03/08/96 2,500 <50 <0.5 <0.5 <0.5 <0.5 NA	NA	NA	< 0.5	< 0.5	5.0	< 0.5	NA	42,000	10/09/96
11/04/93 3,200 <50									<u>MW-2</u>
11/04/93	NA			< 0.5	<0.5	< 0.5	< 50	630	11/18/92
03/28/94 45 <50	< 50			< 0.5	< 0.5	< 0.5	< 50	3,200	
08/02/94 170 <50	NA			11	2	1.4	< 50		03/28/94
02/08/95 570 <50	< 50			< 0.5	< 0.5	< 0.5	< 50		
07/08/96 1,800 <50	< 50		< 0.5	< 0.5	< 0.5	< 0.5			
10/09/96 4,100 NA <0.5 0.57 <0.5 <0.5 NA MW-3 11/18/92 11,000 <50 <0.5 <0.5 <0.5 <0.5 NA 11/04/93 320 <50 <0.5 <0.5 <0.5 <0.5 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 08/02/94 <20 <50 <0.5 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 2,500 <50 1.0 <0.5 8.8 8	2,800*		24	15	2.6				
11/18/92 11,000 <50 <0.5 <0.5 <0.5 NA 11/04/93 320 <50 <0.5 <0.5 <0.5 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 08/02/94 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 2,500 <50 1.0 <0.5 8.8 8 8 10	NA	NA	< 0.5	< 0.5					10/09/96
11/04/93 320 <50 <0.5 <0.5 <0.5 NA 03/28/94 45 <50 0.8 0.9 5 10 NA 08/02/94 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 2,500 <50 1.0 <0.5 8.8 8 10									<u>MW-3</u>
11/04/93 320 <50	NA	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 50	11,000	11/18/92
03/28/94 45 <50	< 50		< 0.5	< 0.5	< 0.5	< 0.5	< 50		
08/02/94 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 02/08/95 <20 <50 <0.5 <0.5 <0.5 <0.5 NA 07/08/96 2,500 <50 1.0 <0.5 8.8 8 10	NA	NA	10		0.9				
02/08/95 <20 <50 <0.5 <0.5 <0.5 NA 07/08/96 2,500 <50 1.0 <0.5 8.8 8 10	< 50	NA							
07/08/96 2,500 <50 1.0 <0.5 8.8 8 10	< 50								
2,700/20	2,200*								
	ΝA	NA	<0.5						
MCLs 1.0 680 1,750				1 750	680		1.0		MCI s
DWALs 100				1,750					

Results in micrograms/liter ($\mu g/l$) = parts per billion (ppb).

ND: Less than the detection limit for the method of analysis (See laboratory data sheets).

MCLs: Maximum Contaminant Levels in Drinking Water, DHS (October 1990)

DWALs: Drinking Water Action Levels, DHS (October 1990) MtBE: Methyl-tert-Butyl-Ether

^{*:} Components found in the gasoline range, however they are not characteristic of gasoline components.

Recommendation:

This report should be forwarded to the following regulatory agencies:

Alameda County Environmental Health Services 1131 Harbor Bay Parkway, #250 Alameda, CA 94502-6577 Attn: Susan Hugo

<u>Limitations</u>: This report summarizes third party sampling performed by Dugan Associates at the project site for groundwater quality assessment purposes. No soil engineering or geotechnical references are implied nor should be inferred.

<u>Third-Party Statement:</u> Dugan Associates is a third-party groundwater sampling company which maintains a valid registration with the State of California to collect and interpret groundwater monitoring data at fuel leak sites. In order to maintain third-party status as a groundwater sampling organization, Dugan Associates does not install groundwater remediation or treatment systems [limited to Class A Contractors], and does not install monitoring wells [limited to C-57 Contractors].

<u>License Statement</u>: The UST Fund will only reimburse for activities of firms that maintain necessary registrations for legal operations in the State of California. Dugan Associates is recognized by the California UST Cleanup Fund, and by the California Board of Registration of Geologists as an qualified groundwater sampling firm.

<u>Certification</u>: I certify that the work presented in this report was performed under my supervision. To the best of my knowledge, the data contained herein are true and accurate, and the work was performed in accordance with professional standards.

William R. Dugan

Field Services Manager, R.G.

Date

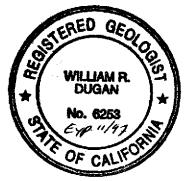


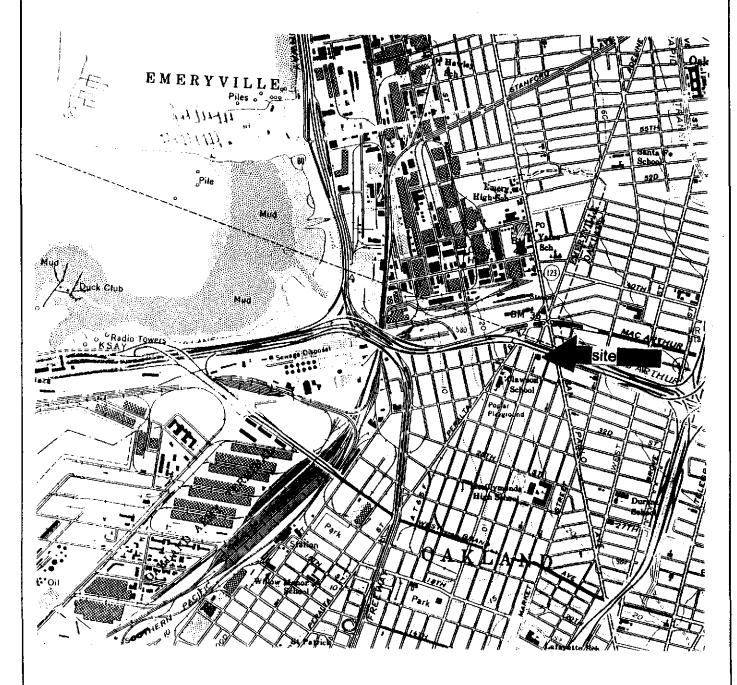
Figure 1. Site Vicinity Map

Figure 2. Groundwater Gradient Map for October 9, 1996

Figure 3. TPHss and Benzene in Groundwater October 9, 1996

Attached: Laboratory Data Sheets and Chain of Custody Record





Source: U.S. Geological Survey

7.5-Minute Quadrangle Oakland West, California

2,000'

Scale: 1" = 2,000'

DUGAN ASSOCIATES								
1023B Martin Ave.								
Santa Clara, California								

JOB NO. 218-1

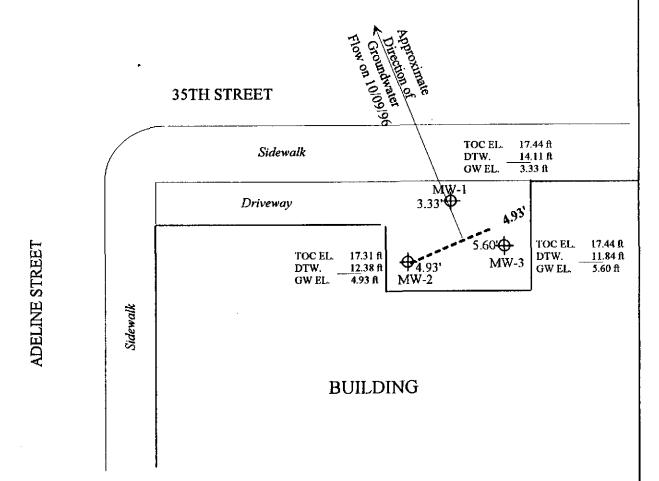
Site Vicinity Map

Former City of Paris Cleaner 3516 Adeline Street Oakland, California

FIGURE

1





Legend

62.50 = Groundwater Elevation in feet

--- = Line of potential equal elevation of groundwater in feet

MW-3 = Existing Monitoring Well

Approximate Scale: 1 inch = 20 feet

Base Map Source: BT Associates (1995) for approximate locations of wells

DUGAN ASSOCIATES 1023B Martin Ave.	Groundwater Gradient Map (10/09/96)	FIGURE
Santa Clara, California	Former City of Paris Cleaners	2
JOB NO. 218-1	3516 Adeline Street Oakland, California	_



Approximate

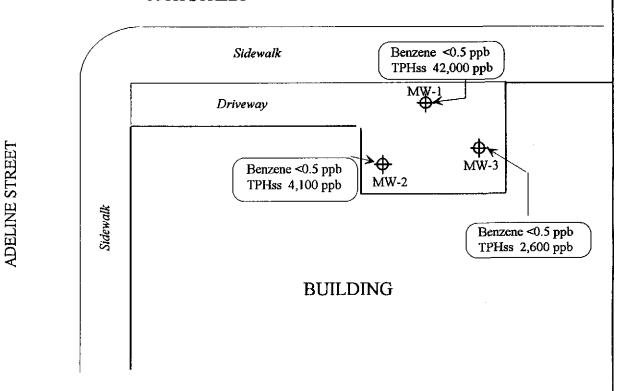
Approximate

Direction of

Croundwater

10109196

35TH STREET



Legend

MW-3 = Existing Monitoring Well

Approximate Scale: 1 inch = 20 feet

Base Map Source: BT Associates (1995) for approximate locations of wells

DUGAN ASSOCIATES 1023B Martin Ave.	TPHss and Benzene in Groundwater (10/09/96)	FIGURE
Santa Clara, California	Former City of Paris Cleaners 3516 Adeline Street	3
JOB NO. 218-1	Oakland, California	

ATTACHMENT A CHAIN OF CUSTODY RECORDS

LABORATORY DATA SHEETS

AND

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Attn: Bill Dugan Dugan Associates 1023B Martin Avenue Santa Clara, CA 95050

Date:	10/22/96
Date Received:	10/11/96
Date Analyzed:	10/18-10/22/96
Project:	
Sampled By:	Client

Certified Analytical Report

Water Sample Analysis:

Test	MW-1	MW-2	MW-3	Units	PQL	EPA Method #
Sample Matrix	Water	Water	Water			
Sample Date						
Sample Time						
Lab#	C14152	C14153	C14154			
DF-Stoddard	12.5	1	1			
TPH-Stoddard	42,000	4,100	$2,600^{2}$	μg/liter	50.0 µg/l	8015M
DF-BTEX	10	2	2			
Benzene	ND	ND	ND	μg/liter	0.5 μg/l	8020
Toluene	5.0	0.57	ND	μg/liter	0.5 μ g/l	8020
Ethyl Benzene	ND	ND	ND	μ g /liter	0.5 μ g/l	8020
Xylenes	ND	ND	ND	μg/liter	0.5 μg/l	8020

- 1. DLR=DF x PQL
- 2. TPH-Stoddard chromatogram for Lab #C14154, although within the reporting range, does not match the typical Stoddard pattern
- 3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #1369)

Michael N. Golden, Lab Directo

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

Entech Analytical Labs, Inc.

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5961022

Date Analyzed: 10/22/96

Matrix: Water Units: μg/L

PARAMETER	Method #	MB μg/L	SA μg/L	SR μg/L	SP μg/L	SP % R	SPD μg/L	SPD %R	RPD	`	LIMITS VISORY) %R
MTBE	8020	<5.0	25i	NDi	26.31	105	24.21	97i	8.3	25 i	50-150
Benzene	8020	<0.5	25	ND	27.8	111	26.2	105	5.9	25	50-150
Toluene	8020	<0.5	25!	ND!	22.0	88	22.0	881	0.0	25	50-150
Ethyl Benzene	8020	<0.5	25	ND	25.2	101	24.9	100	1.2	25	50-150
Xylenes	8020	<0.5	75	ND	71.0	95	69.0¦	92	2.9	25	50-150

Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank SA: Spike Added SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5961018

Date Analyzed: 10/18/96

Matrix: Water Units: µg/L

PARAMETER	Method #	MB	SA ug/l	SR	SP μg/L	SP % R	SPD	SPD %R	RPD	•	LIMITS VISORY) %R
MTBE	8020	μg/L <5.0	μg/L 25	μg/L NDi	μg/L 24.9i		μg/L 24.4i	981	2.0		50-150
Benzene	8020	< 0.5	25	ND	25.6			99 ¹	3.2	25	50-150
Toluene	8020	< 0.5	25	ND	22.6	90	21.4	86	5.5	25	50-150
Ethyl Benzene	8020	< 0.5	25	ND	24.7	99	24.1	96	2.5	25	50-150
Xylenes	8020	<0.5	75	ND	70.0	93	70.0	93	0.0	25	50-150

Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank SA: Spike Added SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: DW961007

Date analyzed:

10/19/96

Matrix: Water

Date extracted:

10/18/96

Units: µg/L

PARAMETER	Method #	MB μg/L	SA μg/L	SR μg/L	SP μg/L	SP %R	SPD μg/L	SPD %R	RPD	QC RPD	LIMITS %R
Diesel	i 8015M i	<50.0	950	NDi	1002	105	992	104i	l	i 25 i	50-150
! !			l		l) , 	

Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank

SA: Spike Added SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R) Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R) Spike Duplicate % Recovery

NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • Telephone: (408) 735-1550 (800) 287-1799 • Fax: (408) 735-1554

Chain of Custody/Analysis Work Order

Client: Dugan					Project ID:						LAB USE ONLY				
Address:					Purchase Order #:										
				S	Sampler/Company: Telephone #				<i>‡</i> :	Samples arrived chilled and intact:					
Contact: Telephone #: Date Received: Turn Around:					- !						Yes No Notes:				
			Sample I	nformation	tion				1/2/	A CONTROL OF THE CONT					
Lab#	Sample ID	Grab/ Composite	Matrix	Date Collected	Time Collected	Pres.	Sample Container		多	T V)				
014152	mu+1						3 VOAS 24	m B	K	X					
	mw-z						200AS, ZA	tares		X					
	mw-3.)					3VUAS 2	ans	X	X					
								<u> </u>	I Date						
Reling. By:					Received By: Date						Time				
										10/1	10/11/96 Time 6:30pm				
Relinq/ By:					Received By: Date						Time				