

May 19, 1998

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

Re: STID #819

**Soil and Grab Groundwater Sampling Report for the Former
City of Paris Cleaners, 3516 Adeline Oakland, California 94608**

Dear Susan,

I am enclosing the report for the Soil and the Grab Water Tests that Bill Dugan performed on March 19, 1998. These are the tests we decided upon at our meeting with you on January 6, 1998, in your office. As you can see from the results, Table II, all sites tested within acceptable levels. We are contemplating our next step. Please give me a call at your convenience to set us in our next step towards closure.

Thank You,



Linda Champion
9441 Laguna Lake Way
Elk Grove, California 95758
(916) 684-2993
(916) 684-9799 fax

Enclosures

59 MAY 26 AM 11:21
ENVIRONMENTAL
PROTECTION

**SOIL and GRAB GROUNDWATER
SAMPLING REPORT
[1-218-98Q2]**

- Report Date:** May 4, 1998
- Site Address:** 3516 Adeline Street
Oakland, California
- Site Location:** See Figure 1, Site Vicinity Map.
- 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 attached to this report.
- Work Performed:** The following sampling and documentation tasks were performed by Dugan Associates:
- 1) The drilling of 6 exploratory borings (EB-1 through EB-6) drilled by Exploration GeoServices Inc. (See Figure 2);
 - 2) Collection of soil samples from each boring (5, 10, and 15 feet bgs);
 - 3) Collection of grab groundwater samples from each boring (18 feet bgs);
 - 4) Submitted the soil and water samples to a State-certified laboratory for the analyses requested.
- Date of Sampling:** March 19, 1998.
- Subsurface Materials:** See Figures 4 through 9 for logs for borings EB-1 through EB-6. Groundwater was encountered approximately 18 feet below ground surface (bgs).
- Field Methods:**
- Soil Sampling.** Soil samples were collected by advancing the boring to a point immediately above the sampling depth, and then driving a California-modified, split-spoon sampler containing brass sample sleeves through the hollow center of the auger into the soil. The sampler and brass sleeves were laboratory-cleaned, steam-cleaned, or washed thoroughly with Alconox® and water, prior to use. The sample selected for laboratory analysis was removed from the sampler and quickly sealed in a brass sleeve with aluminum foil, plastic caps, and aluminized duct tape. The sample was then labeled, promptly placed in iced storage, and delivered to a laboratory certified by the State of California to perform the analyses requested.
- Grab Groundwater Sampling.** A sample of the formation water was collected using a disposable bailer. The water was gently poured into laboratory-supplied, 40-milliliter (ml) glass vials and 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 grab water sample was labeled and promptly placed in iced storage for delivery to a laboratory certified by the State of California for the analyses requested.

Analytical Laboratory: Laboratory analyses were performed at McCampbell Analytical Labs, in Pacheco, California (CA ELAP #1644). Chain of custody record and laboratory data sheets are presented in Appendix A.

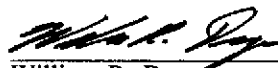
Analytical Methods: The samples were analyzed for the following:

- 1) Total Petroleum Hydrocarbons as stoddard (TPHss) by EPA Method 8015M;
- 2) BTEX and MTBE by EPA Test Method 8020;

Analytical Results: Summarized in Tables 1 and 2. Laboratory data sheets are attached to this report.

Limitations: This report summarizes third party sampling performed by Dugan Associates at the project site. No soil engineering or geotechnical references are implied nor should be inferred.

Certification: 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 Date
Registered Geologist No. 6253

5/4/98

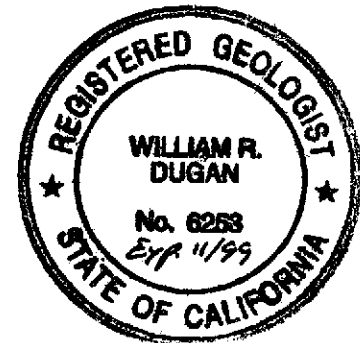


Figure 1: Site Vicinity Map
Figure 2: Generalized Site Plan
[Showing Sample Points and Data Summary]

Table 1. TPHss, BTEX & MTBE Results [Soil Samples]
Table 2. TPHss, BTEX & MTBE Results [Water Samples]

Chain of Custody Record
Laboratory Data Sheets [McCampbell Analytical, Inc.; 2 pages]

Figure 3: Boring Log Symbol Key
Figure 4: Log of Exploratory boring EB-1.
Figure 5: Log of Exploratory boring EB-2.
Figure 6: Log of Exploratory boring EB-3.
Figure 7: Log of Exploratory boring EB-4.
Figure 8: Log of Exploratory boring EB-5.
Figure 9: Log of Exploratory boring EB-6.

TABLE 1
 RESULTS OF TPH_{ss}, BTEX & MTBE LABORATORY ANALYSES [SOIL SAMPLES]
 3516 Adeline Street
 Oakland, California
 [03/19/98 Sample Date]

Boring Sample I.D.	TPH _{ss}	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<u>EB-1</u>						
S-EB1-5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB1-10	310	<0.40	0.02	0.10	<0.02	1.8
S-EB1-15	340	<0.2	0.01	<0.004	<0.01	1.6
<u>EB-2</u>						
S-EB2-5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB2-10	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB2-15	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
<u>EB-3</u>						
S-EB3-5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB3-10	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB3-15	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
<u>EB-4</u>						
S-EB4-5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB4-10	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB4-15	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
<u>EB-5</u>						
S-EB5-5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB5-10	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB5-15	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
<u>EB-6</u>						
S-EB6-5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB6-10	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
S-EB6-15	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005

Results in mg/kg = parts per million (ppm).
 <: Less than the detection limit for the method of analysis.

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 ENVIRONMENTAL PROTECTION

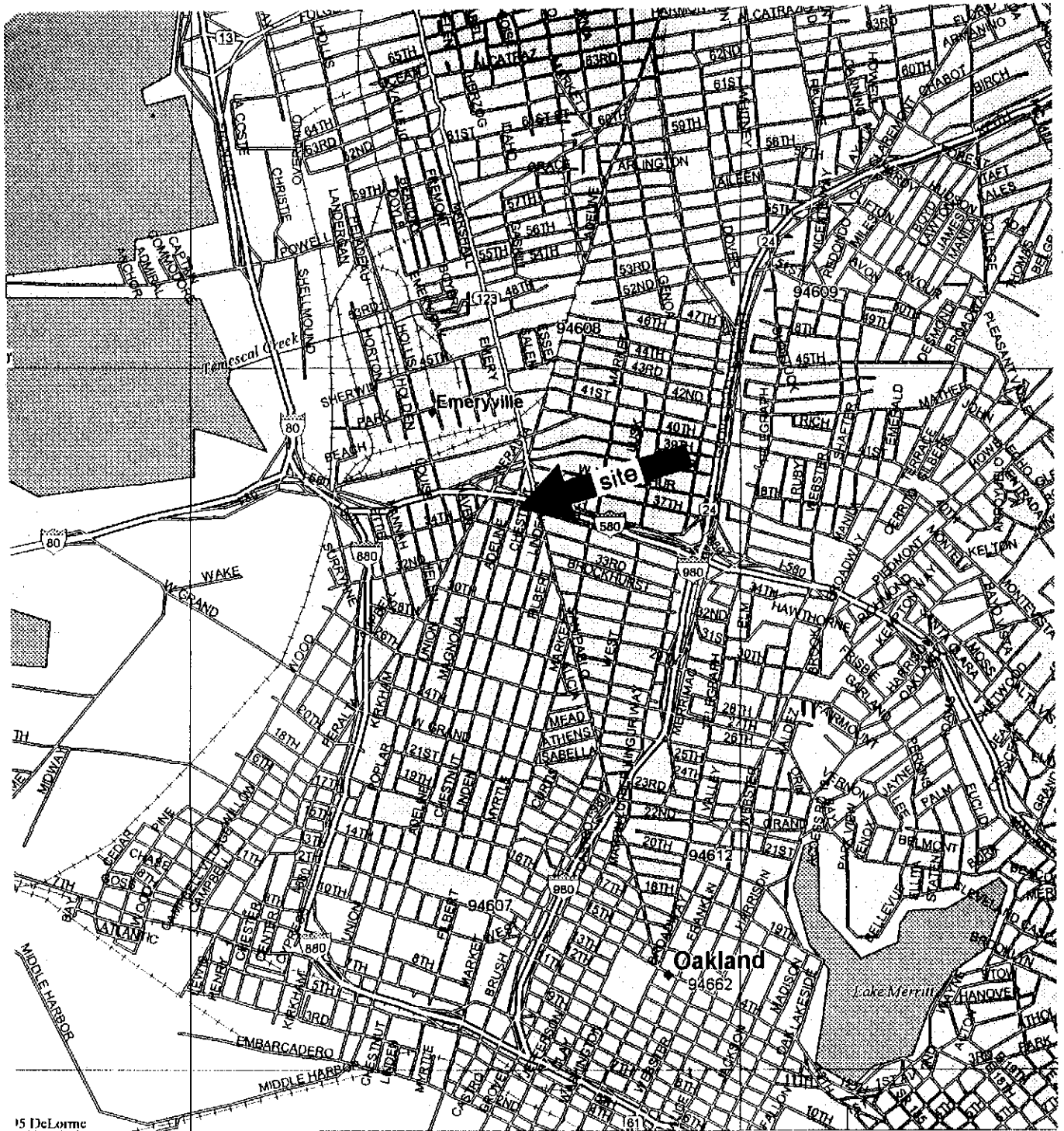
TABLE 2
 RESULTS OF TPHss, BTEX & MTBE LABORATORY ANALYSES [WATER SAMPLES]
 3516 Adeline Street
 Oakland, California
 [03/19/98 Sample Date]

<u>Boring</u> Sample I.D.	TPHss	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<u>EB-1</u> W-EB1-18	270,000	<100.	<5.0	93.	66.	1,700.
<u>EB-2</u> W-EB2-18	<1.0	<5.0	<0.5	<0.5	<0.5	<0.5
<u>EB-3</u> W-EB3-18	<1.0	<5.0	<0.5	<0.5	<0.5	<0.5
<u>EB-4</u> W-EB4-18	<1.0	<5.0	<0.5	<0.5	<0.5	<0.5
<u>EB-5</u> W-EB5-18	780	<5.0	<0.5	<0.5	<0.5	<0.5
<u>EB-6</u> W-EB6-18	<1.0	<5.0	<0.5	<0.5	<0.5	<0.5

Results in micrograms/liter ($\mu\text{g/l}$) = parts per billion (ppb).
 <: Less than the detection limit for the method of analysis.



North



Scale 1:31,250 (at center)

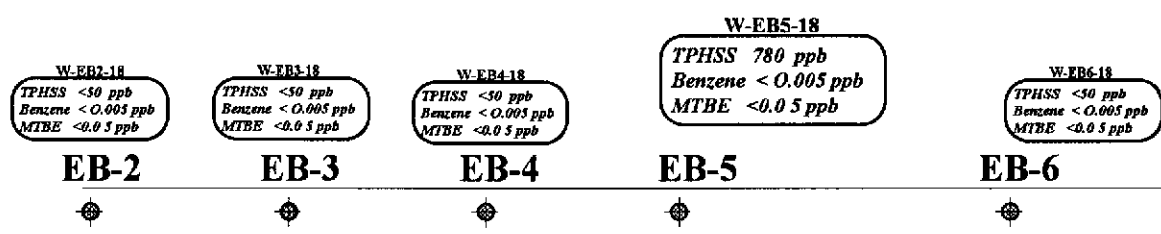
**DUGAN ASSOCIATES
SAMPLING
SERVICES**
Subsurface Environmental Sampling

1180 DELMAS AVE. Tel. (408) 287-2175
SAN JOSE, CA 95125 Fax. (408) 287-2176

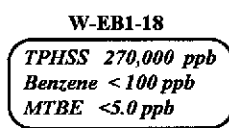
Site Vicinity Map
Former City of Paris Cleaner
3516 Adeline Street
Oakland, California

FIGURE

1



Approximate Direction of Groundwater Flow Based on Cumulative Depth to Water Data from Wells MW-1, MW-2, and MW-3.



ADELINE STREET

Sidewalk

Approximate Direction of Ground Surface Slope from USGS TOPO Sheet [0.013 slope]

BUILDING

Southern and Western Flanks of Stoddard Plume in Groundwater not Bounded by Data Points

Legend

EB-6 ⊕ = Exploratory Boring

MW-1 ⊕ = Groundwater Monitoring Well

APPROX. SCALE 1-in = 30 ft.

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

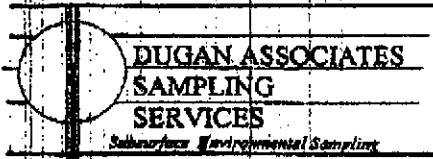
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 SAN JOSE, CA 95125 Fax. (408) 287-2176

Generalized Site Plan
Former City of Paris Cleaners
3516 Adeline Street
Oakland, California

FIGURE
2

10901 xda 16.doc



Chain of Custody Record

UST FUND PROJECT SITE 7
 YES NO

1180 DELMAS AVE. Tel: (408) 287-2175
 SAN JOSE, CA 95125 Fax: (408) 287-2176

SUPERVISING SAMPLING PROFESSIONAL: BILL DUGAN REGISTRATION NO.: 3/17/98 P.G. #6283
 CERTIFIED ANALYTICAL LABORATORY: MCCAMPBELL CALIFORNIA STATE-CERTIFIED LABORATORY NO.: 1644 D.O.H. #1644

PROJECT NAME: **FORMER CITY OF PARIS CLEANERS** JOB: 218 SITE ADDRESS: **3516 ADELENE STREET, OAKLAND, CA** TURNAROUND TIME: STANDARD

SAMPLE I.D.#	DATE		NUMBER OF CONTAINERS	SAMPLE MATRIX (SOIL OR WATER)	TPH/MSD	BTEX/MTBE	TPH (EPA)	EPA END USE SUBSTITUTES/PCB/PAH	TOTAL LEAD	6 METALS (CALIF. 26, 27, 28)	EPA METHOD 8210	EPA METHOD 8210	EPA METHOD 8210	700 8210	ACIDIFIED
	DATE	TIME													
W-EB1-18	03/19/98		4	WATER	X	X									yes
W-EB2-18	03/19/98		4	WATER	X	X									yes
W-EB3-18	03/19/98		4	WATER	X	X									yes
W-EB4-18	03/19/98		4	WATER	X	X									yes
W-EB5-18	03/19/98		4	WATER	X	X									yes
W-EB6-18	03/19/98		4	WATER	X	X									yes
S-EB1-05	03/19/98		1	SOIL	X	X									
S-EB1-10	03/19/98		1	SOIL	X	X									
S-EB1-15	03/19/98		1	SOIL	X	X									
S-EB2-06	03/19/98		1	SOIL	X	X									
S-EB2-10	03/19/98		1	SOIL	X	X									
S-EB2-15	03/19/98		1	SOIL	X	X									
S-EB3-05	03/19/98		1	SOIL	X	X									
S-EB3-10	03/19/98		1	SOIL	X	X									
S-EB3-15	03/19/98		1	SOIL	X	X									
S-EB4-05	03/19/98		1	SOIL	X	X									
S-EB4-10	03/19/98		1	SOIL	X	X									
S-EB4-15	03/19/98		1	SOIL	X	X									
S-EB5-05	03/19/98		1	SOIL	X	X									
S-EB5-10	03/19/98		1	SOIL	X	X									
S-EB5-15	03/19/98		1	SOIL	X	X									
S-EB6-05	03/19/98		1	SOIL	X	X									
S-EB6-10	03/19/98		1	SOIL	X	X									
S-EB6-15	03/19/98		1	SOIL	X	X									
S-EB6-05	03/19/98		1	SOIL	X	X									
S-EB6-10	03/19/98		1	SOIL	X	X									
S-EB6-15	03/19/98		1	SOIL	X	X									

+ 10901 +

ICE/GOOD CONDITION/HEAD SPACE ABSENT
 PRESERVATION APPROPRIATE CONTAINERS
 VOAS/O&G/METALS/OTHER

COMMENTS / SPECIAL NOTATIONS BY LABORATORY:

REQUESTED BY (SIGNATURE): DUGAN ASSOCIATES REQUESTED BY (SIGNATURE): APPLICATION: <u>Environmental Sampling</u> RECEIVED BY (SIGNATURE): AFFILIATION: <u>601</u>	RECEIVED BY (SIGNATURE): AFFILIATION: <u>HR Decker</u> RECEIVED BY (SIGNATURE): AFFILIATION: <u>James Fields</u> RECEIVED BY (SIGNATURE): AFFILIATION: <u>Wanda Tessa MAI</u>	DATE: <u>3/23/98</u> TIME: <u>5:02</u> DATE: <u>3-25-98</u> TIME: <u>7:00 AM</u> DATE: <u>3/25/98</u> TIME: <u>0932</u>
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GOOD CONDITION/HEAD SPACE ABSENT
 PRESERVATION APPROPRIATE CONTAINERS

VOAS/O&G/METALS/OTHER
 Environmental Sampling Since 1986


McCAMPBELL ANALYTICAL INC.

 110 Second Avenue South, #D7, Pacheco, CA 94553
 Telephone: 925-798-1620 Fax: 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Dugan Associates 1180 Delmas Avenue San Jose, CA 95125	Client Project ID: #218; Former City Of Paris Cleaners	Date Sampled: 03/19/98
	Client Contact: Bill Dugan	Date Received: 03/25/98
	Client P.O.:	Date Extracted: 03/25-04/01/98
		Date Analyzed: 03/25-04/01/98

Stoddard Solvent Range (C8-C12) Volatile Hydrocarbons as Stoddard Solvent*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 402; California RWQCB (SF Bay Region) method (C/F11)(5030)

Lab ID	Client ID	Matrix	TPH(ss)*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
87206	W-EB1-18	W	270,000,e,j,h,i	ND<100	ND<5.0	93	66	1700	98
87207	W-EB2-18	W	ND,i	ND	ND	ND	ND	ND	104
87208	W-EB3-18	W	ND,i	ND	ND	ND	ND	ND	96
87209	W-EB4-18	W	ND	ND	ND	ND	ND	ND	92
87210	W-EB5-18	W	780,e,i	ND	ND	ND	ND	2.0	97
87211	W-EB6-18	W	ND	ND	ND	ND	ND	ND	93
87212	S-EB1-05	S	ND	ND	ND	ND	ND	ND	95
87213	S-EB1-10	S	310,c	ND<0.40	ND<0.02	0.10	ND<0.02	1.8	98
87214	S-EB1-15	S	340,c	ND<0.2	ND<0.01	ND<0.04	ND<0.01	1.6	101
87215	S-EB2-05	S	ND	ND	ND	ND	ND	ND	103
87216	S-EB2-10	S	ND	ND	ND	ND	ND	ND	98
87217	S-EB2-15	S	ND	ND	ND	ND	ND	ND	102
87218	S-EB3-05	S	ND	ND	ND	ND	ND	ND	100
87219	S-EB3-10	S	ND	ND	ND	ND	ND	ND	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit.		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	


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

* clustered 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 phase is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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

Dugan Associates 1180 Delmas Avenue San Jose, CA 95125	Client Project ID: #218; Former City Of Paris Cleaners	Date Sampled: 03/19/98
	Client Contact: Bill Dugan	Date Received: 03/25/98
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		Date Analyzed: 03/25-04/01/98

Stoddard Solvent Range (C8-C12) Volatile Hydrocarbons as Stoddard Solvent*, with Methyl tert-Butyl Ether* & BTEX*

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


Lab ID	Client ID	Matrix	TPH(ss) ^a	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
87220	S-EB3-15	S	ND	ND	ND	ND	ND	ND	99
87221	S-EB4-05	S	ND	ND	ND	ND	ND	ND	99
87222	S-EB4-10	S	ND	ND	ND	ND	ND	ND	99
87223	S-EB4-15	S	ND	ND	ND	ND	ND	ND	98
87224	S-EB5-05	S	ND	ND	ND	ND	ND	ND	98
87225	S-EB5-10	S	ND	ND	ND	ND	ND	ND	100
87226	S-EB5-15	S	ND	ND	ND	ND	ND	ND	99
87227	S-EB6-05	S	ND	ND	ND	ND	ND	ND	98
87228	S-EB6-10	S	ND	ND	ND	ND	ND	ND	98
87229	S-EB6-15	S	ND	ND	ND	ND	ND	ND	97
Reporting Limit (unless otherwise stated, ND means not detected above the reporting limit)	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

^a cluttered chromatogram; sample peak coelutes with surrogate peak

^b 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.

DHS Certification No. 1644

 Edward Hamilton, Lab Director

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISION		LTR	DESCRIPTION	MAJOR DIVISION		LTR	DESCRIPTION	
COARSE-GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded Gravels or Gravel-Sand mixtures, little or no fines.	FINE-GRAINED SOILS	SILTS AND CLAYS LL<50	ML	Inorganic Silts and very fine sands, rock flour, Silty or Clayey fine Sands, or Clayey Silts with slight plasticity.	
		GP	Poorly-graded Gravels or Gravel-Sand mixtures, little or no fines			CL	Inorganic Clays of low to medium plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays.	
		GM	Silty Gravels, Gravel-Sand-Silt mixtures.			OL	Organic Silts and Organic Silt-Clays of low plasticity.	
		GC	Clayey Gravel, Gravel-Sand-Clay mixtures.			MH	Inorganic Silts, micaceous or diatomaceous fine Sandy or Silty Soils, Elastic Silts.	
	SAND AND SANDY SOILS	SW	Well-graded Sand or Gravelly Sands, little or no fines.		SILTS AND CLAYS LL>50	CH	Inorganic Clays of high plasticity, fat Clays.	
		SP	Poorly-graded Sands or Gravelly Sands, little or no fines.			OH	Organic Clays of medium to high plasticity, organic Silts.	
		SM	Silty Sands, Sand-Silt mixtures.			HIGHLY ORGANIC SOILS	PT	Peat and other highly Organic Soils.
		SC	Clayey Sands, Sand-Clay mixtures.					

Well Construction Symbols

- Depth through which sampler is driven
- Relatively undisturbed sample retained
- No lab analysis on sample
- Static water level observed in well/boring
- Initial water level observed in well/boring
- S-10 Sample number

- Sand pack (Monterey Sand #3)
- Bentonite
- Neat cement
- Blank PVC
- Machine-slotted PVC

Soil Symbols

- FILL
- CLAY
- SILT
- SAND
- GRAVEL

Note: Blows represent the number of blows of a 140-pound hammer falling 30-inches to drive the sampler through each 6 inch increments of an 18-inch penetration.

Dashed lines separating units on the log represent approximate boundaries only. Actual boundaries may be gradual. Logs represent subsurface conditions at the boring location at the time of drilling only.

DUGAN ASSOCIATES
SAMPLING
SERVICES
Subsurface Environmental Sampling

1180 DELMAS AVE. Tel. (408) 287-2175
SAN JOSE, CA 95125 Fax. (408) 287-2176





















BORING LOG SYMBOL KEY
Former City of Paris Cleaners
3516 Adeline Street
Oakland, California

FIGURE

3

Job No. 218




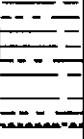







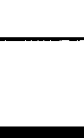
Boring Number EB-1 **Client** Former City of Paris Cleaners
Job Number 218 **Drilling Co.** Exploration Geoservices, Inc.
Location 3516 Aleline St., Oakland, CA **Drilling Method** Hollow Stem Auger
Date Drilled 03/19/98 **Sampling Method** 2-in I.D. - split spoon Sampler
Logged By B. Dugan [R.G. #6253] **Well Casing** Backfilled with Bentonite

Recovery	Sample Type	Sample Depth (feet)	Blows per 6 in.	Moisture Content	Product Odor	Depth in Feet	Graphic Log	Soil Description
						0		Cement [Four inches]
						1		Silty Clay (CL), dark brown, damp to moist, low plasticity, stiff; no petroleum odor.
						2		
						3		
						4		
18"	CA	3-1/2 to 5 ft.	5 7 9	DAMP	NO	5		
						6		
						7		Light brown.
						8		
						9		
18"	CA	8-1/2 to 10 ft.	11 12 14	MOIST	YES	10		Gravelly Clay (GC), light brown, moist, low plasticity, stiff, slight petroleum odor.
						11		
						12		Silty Clay (CL), greenish-gray, moist, low plasticity, stiff, minor sand, no petroleum odor.
						13		
						14		Clayey Gravel (GC), greenish-gray, moist, medium dense, no petroleum odor.
18"	CA	13-1/2 to 15 ft.	6 7 8	MOIST	YES	15		
						16		
						17		
18"	CA	17-1/2 to 19 ft.	5 7 7	WET	YES	18		Free groundwater initially encountered at 18 ft bgs.
						19		Total depth Explored 19 ft bgs.
						20		

Boring Number EB-2 **Client** Former City of Paris Cleaners
Job Number 218 **Drilling Co.** Exploration Geoservices, Inc.
Location 3516 Aleline St., Oakland, CA **Drilling Method** Hollow Stem Auger
Date Drilled 03/19/98 **Sampling Method** 2-in I.D. - split spoon Sampler
Logged By B. Dugan [R.G. #6253] **Well Casing** Backfilled with Bentonite

Recovery	Sample Type	Sample Depth (feet)	Blows per 6 in.	Moisture Content	Product Odor	Depth in Feet	Graphic Log	Soil Description
						0		Asphalt [four inches]
						1		Base Rock; No petroleum odor.
						2		
						3		Silty Clay (CL), dark brown, damp to moist, low plasticity, stiff; no petroleum odor.
						4		
18"	CA	3-1/2 to 5 ft.	5 8 9	DAMP	NO	5		
						6		
						7		Light brown.
						8		
						9		Clayey Gravel (GC), light brown, moist, medium dense, no petroleum odor.
18"	CA	8-1/2 to 10 ft.	13 14 15	MOIST	NO	10		
						11		
						12		
						13		Silty Clay (CL), light gray, moist, low plasticity, stiff; minor sand, no petroleum odor.
						14		Clayey Gravel (GC), dark brown, moist, medium dense, no petroleum odor.
18"	CA	13-1/2 to 15 ft.	5 7 8	MOIST	NO	15		
						16		Silty Clay (CL), light gray, moist, low plasticity, stiff; minor sand, no petroleum odor.
						17		Clayey Gravel (GC), light gray, wet, medium dense, no petroleum odor.
						18		Free groundwater initially encountered at 18 ft bgs.
18"	CA	18-1/2 to 20 ft.	5 6 8	WET	NO	19		
						20		Total depth Explored 20 ft bgs.

Boring Number EB-3 **Client** Former City of Paris Cleaners
Job Number 218 **Drilling Co.** Exploration Geoservices, Inc.
Location 3516 Aleline St., Oakland, CA **Drilling Method** Hollow Stem Auger
Date Drilled 03/19/98 **Sampling Method** 2-in I.D. - split spoon Sampler
Logged By B. Dugan [R.G. #6253] **Well Casing** Backfilled with Bentonite

Recovery	Sample Type	Sample Depth (feet)	Blows per 6 in.	Moisture Content	Product Odor	Depth in Feet	Graphic Log	Soil Description
						0		Asphalt [Four inches]
						1		Base Rock; No petroleum odor.
						2		
						3		Silty Clay (CL), dark brown, damp to moist, low plasticity, stiff, no petroleum odor.
						4		
18"	CA	3-1/2 to 5 ft.	7 8 9	DAMP	NO	5		
						6		
						7		Silty Clay (CL), light brown, moist, low plasticity, stiff, no petroleum odor.
						8		
						9		Clayey Gravel (GC), dark brown, moist, medium dense, no petroleum odor.
18"	CA	8-1/2 to 10 ft.	8 11 10	MOIST	NO	10		
						11		
						12		Silty Clay (CL), light gray, moist, low plasticity, stiff, minor sand, no petroleum odor.
						13		
						14		Clayey Gravel (GC), dark brown, moist, medium dense, no petroleum odor.
18"	CA	13-1/2 to 15 ft.	4 5 9	MOIST	NO	15		
						16		Silty Clay (CL), light gray, moist, low plasticity, stiff, minor sand, no petroleum odor.
						17		
						18		Clayey Gravel (GC), light gray, wet, medium dense, no petroleum odor.
						19		Free groundwater initially encountered at 18 ft bgs.
18"	CA	18-1/2 to 20 ft.	5 6 8	WET	NO	20		Total depth Explored 20 ft bgs.

DUGAN ASSOCIATES
 SOIL & GROUNDWATER SAMPLING LIC. RG#6253

LOG FOR BORING EB-3

Figure
6

Boring Number EB-4 **Client** Former City of Paris Cleaners
Job Number 218 **Drilling Co.** Exploration Geoservices, Inc.
Location 3516 Aleline St., Oakland, CA **Drilling Method** Hollow Stem Auger
Date Drilled 03/19/98 **Sampling Method** 2-in I.D. - split spoon Sampler
Logged By B. Dugan [R.G. #6253] **Well Casing** Backfilled with Bentonite

Recovery	Sample Type	Sample Depth (feet)	Blows per 6 in.	Moisture Content	Product Odor	Depth in Feet	Graphic Log	Soil Description
						0		Asphalt (Four inches)
						1		Base Rock; No petroleum odor.
						2		
						3		Silty Clay (CL), dark brown, damp to moist, low plasticity, stiff, no petroleum odor.
						4		
18"	CA	3-1/2 to 5 ft.	8 11 12	DAMP	NO	5		
						6		
						7		Light brown.
						8		
						9		Clayey Gravel (GC), light brown, moist, medium dense, no petroleum odor.
18"	CA	8-1/2 to 10 ft.	8 11 12	MOIST	NO	10		
						11		
						12		
						13		Silty Clay (CL), light gray, moist, low plasticity, stiff; minor sand, no petroleum odor.
						14		
						15		Clayey Gravel (GC), dark brown, moist, medium dense, no petroleum odor.
18"	CA	13-1/2 to 15 ft.	5 7 11	MOIST	NO	15		
						16		Silty Clay (CL), light gray, moist, low plasticity, stiff, minor sand, no petroleum odor.
						17		
						18		Clayey Gravel (GC), light gray, wet, medium dense, no petroleum odor.
						19		Free groundwater initially encountered at 18 ft bgs.
18"	CA	18-1/2 to 20 ft.	5 6 8	WET	NO	19		
						20		Total depth Explored 20 ft bgs.

Boring Number EB-5 **Client** Former City of Paris Cleaners
Job Number 218 **Drilling Co.** Exploration Geoservices, Inc.
Location 3516 Aleline St., Oakland, CA **Drilling Method** Hollow Stem Auger
Date Drilled 03/19/98 **Sampling Method** 2-in I.D. - split spoon Sampler
Logged By B. Dugan [R.G. #6253] **Well Casing** Backfilled with Bentonite

Recovery	Sample Type	Sample Depth (feet)	Blows per 6 in.	Moisture Content	Product Odor	Depth in Feet	Graphic Log	Soil Description
						0		Asphalt (Four inches)
						1		Base Rock; No petroleum odor.
						2		
						3		Silty Clay (CL), dark brown, damp to moist, low plasticity, stiff; no petroleum odor.
						4		
18"	CA	3-1/2 to 5 ft.	5 7 9	DAMP	NO	5		
						6		
						7		Light brown.
						8		
						9		Clayey Gravel (GC), light brown, moist, medium dense, no petroleum odor.
18"	CA	8-1/2 to 10 ft.	11 12 14	MOIST	NO	10		
						11		
						12		Silty Clay (CL), light gray, moist, low plasticity, stiff; minor sand, no petroleum odor.
						13		
						14		Clayey Gravel (GC), dark brown, moist, medium dense, no petroleum odor.
18"	CA	13-1/2 to 15 ft.	6 7 8	MOIST	NO	15		
						16		Silty Clay (CL), light gray, moist, low plasticity, stiff; minor sand, no petroleum odor.
						17		Clayey Gravel (GC), light gray, wet, medium dense, no petroleum odor.
						18		Free groundwater initially encountered at 18 ft bgs.
18"	CA	18-1/2 to 20 ft.	5 7 7	WET	YES	19		
						20		Total depth Explored 20 ft bgs.

Boring Number EB-6 **Client** Former City of Paris Cleaners
Job Number 218 **Drilling Co.** Exploration Geoservices, Inc.
Location 3516 Aleline St., Oakland, CA **Drilling Method** Hollow Stem Auger
Date Drilled 03/19/98 **Sampling Method** 2-in I.D. - split spoon Sampler
Logged By B. Dugan [R.G. #6253] **Well Casing** Backfilled with Bentonite

Recovery	Sample Type	Sample Depth (feet)	Blows per 6 in.	Moisture Content	Product Odor	Depth in Feet	Graphic Log	Soil Description
						0		Asphalt [Four inches]
						1		Base Rock; No petroleum odor.
						2		
						3		Silty Clay (CL), dark brown, damp to moist, low plasticity, stiff; no petrolcum odor.
						4		
18"	CA	3-1/2 to 5 ft.	5 7 9	DAMP	NO	5		
						6		
						7		Light brown.
						8		
						9		Clayey Gravel (GC), light brown, moist, medium dense, no petroleum odor.
18"	CA	8-1/2 to 10 ft.	10 12 15	MOIST	NO	10		
						11		Silty Clay (CL), light gray, moist, low plasticity, stiff, minor sand, no petroleum odor.
						12		
						13		
						14		Clayey Gravel (GC), dark brown, moist, medium dense, no petroleum odor.
18"	CA	13-1/2 to 15 ft.	5 7 9	MOIST	NO	15		
						16		Silty Clay (CL), light gray, moist, low plasticity, stiff, minor sand, no petroleum odor.
						17		Clayey Gravel (GC), light gray, wet, medium dense, no petroleum odor.
						18		Free groundwater initially encountered at 18 ft bgs.
18"	CA	18-1/2 to 20 ft.	5 7 8	WET	NO	19		
						20		Total depth Explored 20 ft bgs.

November 29, 1999

ENVIRONMENTAL
PROTECTION
99 NOV 31 PM 2:35

Alameda County
Health Care Services Agency
ATTN: Juliet Shin
Department of Environmental Health
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

STID: 819

Claim #: 002192

Re: City of Paris Cleaners, 3516 Adeline Street, Oakland, Ca. 94608

Dear Juliet,

Enclosed please find the work plan you have requested regarding well testing, as well as locating and destroying the newly discovered industrial well. Bill Dugan will start work as soon as I have your approval. I am also still waiting for a projected cost from Dugan so I can submit for pre-approval with the SWRCB. I look forward to hearing from you.

Thank you,



Linda Champion
9441 Laguna Lake Way
Elk Grove, California 95758
(916) 684-2993
(916) 684-9799 fax

Enclosure

License # RG 6253
Soil & Groundwater Sampling
Sampling Plans & Reports

DUGAN ASSOCIATES
1180 Delmas Avenue, San Jose, CA. 95125
Telephone 408/287-2175 Fax 408/287-2176

Bill Dugan, R.G.

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

November 23 , 1999
Job# 218

Subject: Work Plan for Monitoring Wells Sampling
& for Industrial Well Destruction [Sealing]
Former City of Paris Cleaners, 3516 Adeline Street, Oakland, California.

Dear Ms. Champion:

At your request, and the request of Juliet Shin of the Alameda County Health Care Services Agency, Dugan Associates presents herein the proposed scope of work to: (1) Collect groundwater samples form monitoring wells MW-1, MW-2, and MW-3 for halongentaed volatiles (VOCs) and semi-volatile organics (VOCs); (2) Prepare a technical sampling report, signed by a California Registered Geologist; and (3) locate, inspect, permit, [destruction application] and seal a reported 97 feet deep industrial well at the site.

Scope of Proposed Work: Proposed activities to be performed during this phase of work include:

Monitoring Well Sampling Tasks

- 1) measure depth to water levels;
- 2) perform subjective analyses for floating product;
- 3) purge at least three well volumes of water from the wells;
- 4) allow the wells to recover to near static water level conditions;
- 5) collect groundwater samples;
- 6) transport the groundwater samples to a State-certified laboratory for the analyses requested [VOCs by EPA 8010 and SVOCs by EPA Method 8270];
- 7) preparation of a site investigation report signed by a California Registered Geologist.

Industrial Well Location, Inspection, and Sealing [Abandonment] Tasks

- 8) Inspect the site to locate the reported industrial well;
- 9) Inspect and document the wellhead assembly to identify the pump type [centrifugal pump, vertical-turbine pump, submersible pump, or other pump assembly type];
- 10) Inspect liner pipe to determine if it can be removed or if it needs to be perforated to ensure proper sealing [due to overhead ceiling if indoors etc.];
- 11) Measure the total depth of the industrial well to evaluate if obstructions may interfere with effective sealing operations;
- 12) Submit an application for the sealing and abandonment permit for the industrial well based on tasks 8 through 11;
- 13) Contract with a C-57 Well Drilling contractor to seal the industrial well in compliance with Alameda County Guidelines.

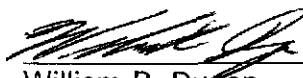
Timeline: Tasks 1 - 8 will be completed on or before 3 weeks from regulatory approval of this work plan. Tasks 9 - 12 will be completed on or before 2 weeks from submittal of the well sampling report. Task 13 will be completed at a client directed timeline once the variables of the well location and sealing constraints are known.

Reportage: This report should be forwarded to the following regulatory agencies:

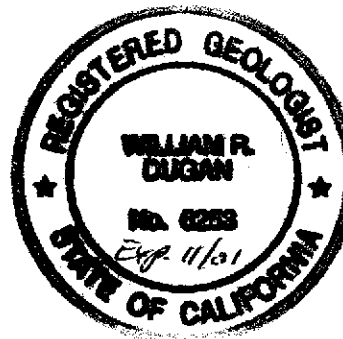
Alameda County Health Services
Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
Attn: Juliet shin, R.G.

If you have any questions, please contact me at 408-287-2175.

Sincerely,
Dugan Associates

 11/23/99

William R. Dugan Date
Registered Geologist No. 6253



- Figure 1. Site Location Map
- Figure 2. Generalized Site Map

- Attachment A: Field Methods - Well Sampling



35TH STREET

Sidewalk

Driveway

ADELINE STREET

Sidewalk

MW-1

MW-2

MW-3

Approximate Limits of Soil Over-excavation from the Removal of the Former UST

BUILDING

Legend

MW-3 = Existing Monitoring Well



Approximate Scale: 1 inch = 20 feet

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

Site Location: 1998 Thomas Bros. Bay Area Map, Page & Grid 649 F1 [See Attachment B].

DUGAN ASSOCIATES
SOIL & GROUNDWATER SAMPLING LIC. RG#6253

Subsurface Environmental Sampling Since 1986

Generalized Site Map
Former City of Paris Cleaners
3516 Adeline Street
Oakland, California

FIGURE

1

ATTACHMENT A

FIELD METHODS

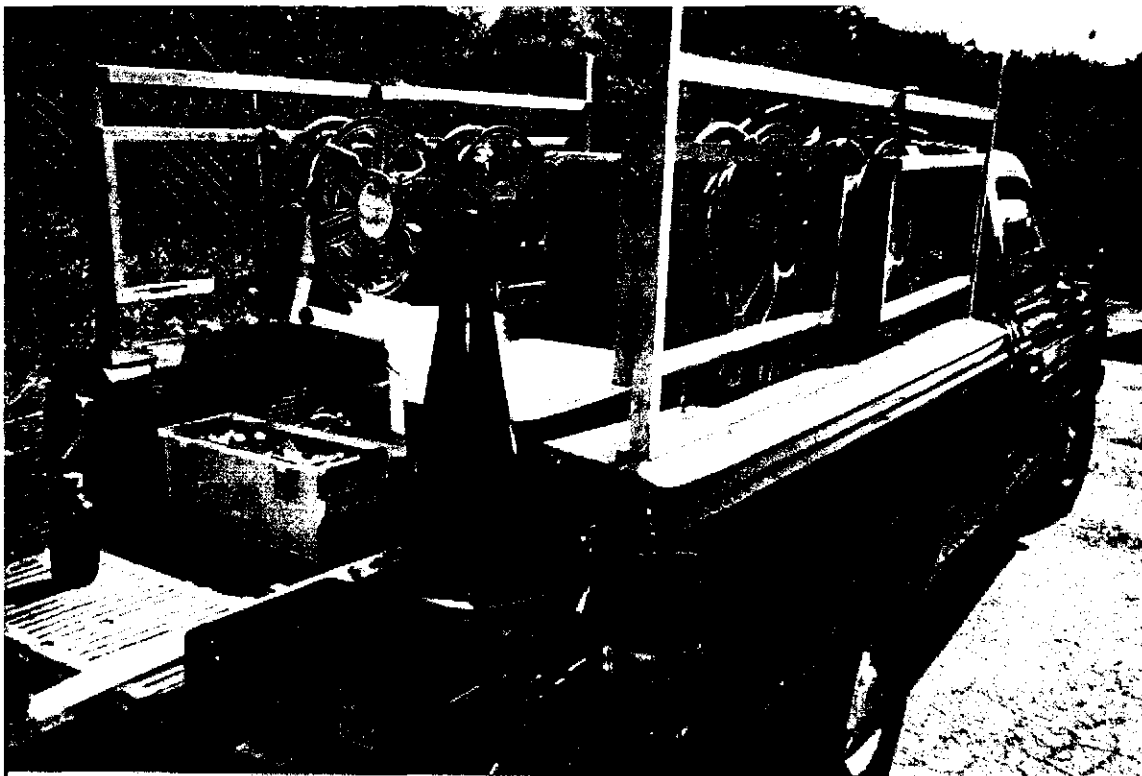


1180 DELMAS AVE.
SAN JOSE, CA 95125

Tel. (408) 287-2175
Fax. (408) 287-2176

**DUGAN ASSOCIATES
GROUNDWATER MONITORING AND SAMPLING PROTOCOL**

Sampling Methods: The static water level in each well is measured to the nearest 0.01-foot using an electric water-level sounder cleaned with Alconox® and water before use in each well. Surface liquids in wells are examined for visual evidence of hydrocarbons by gently lowering approximately half the length of a clean disposable bailer past the air/water interface. The bailer 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. 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 evacuation 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.



Dugan Associates specializes in the preparation of subsurface environmental sampling plans, the collection of environmental samples and hydrogeologic measurements, and the preparation of certified sampling reports in compliance with sections 6735, 7835, and 7835.1 of the Business and Professions Code.

ATTACHMENT B

THOMAS BROS. MAP SHOWING SITE



1180 DELMAS AVE.
SAN JOSE, CA 95125

Tel. (408) 287-2175
Fax. (408) 287-2176

