

July 16, 1997

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

Re: STID #819

**Second Quarter 1997 Groundwater Monitoring Reports for the
former City of Paris Cleaners, 3516 Adeline Oakland, California
94608**

Dear Susan,

I am enclosing the monitoring report for the second quarter of 1997. We have now completed four consecutive monitoring events. You indicated in our telephone conversation last month that after this event was completed we would discuss our next step. I look forward to hearing from you and await your advice.

Thank you,

Linda Champion

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

Enclosures

97 JUL 18 PM 2:54
ENVIRONMENTAL
PROTECTION

Third-Party Well Sampling
Groundwater Geology
License # RG 6253

DUGAN ASSOCIATES

1792 Rogers Avenue, San Jose, CA. 95112
Telephone 408/287-2175 Fax 408/287-2176

Bill Dugan, R.G.

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

Site: 3516 Adeline Street
Oakland, CA

Date: June 19, 1997 [Sample Date]
July 15, 1997 [Report Date]

GROUNDWATER SAMPLING REPORT [DA-218-97Q2]

Dugan Associates performs third-party groundwater monitoring services at commercial properties. This report summarizes groundwater well sampling performed by Dugan Associates at the project site. It is our understanding that this report will be submitted to the California Underground Storage Tank Cleanup Fund (USTCF) for reimbursement purposes by our client, and to Alameda County Environmental Health Services. The USTCF requires a licensed professional to be in responsible charge of all site activities [USTCF Cost Guidelines, Policies Section, Page 2]. To comply with USTCF responsible charge requirements, all work performed for this phase of monitoring was supervised by an in-house Dugan Associates Registered Geologist.

The following inspection, measurement, purge, and sample collection tasks were performed for the three monitoring wells (MW-1, MW-2, and MW-3) at the site:

- 1) measured depth to water, and total depth for each well;
- 2) inspected water surfaces for floating product, and petroleum odors;
- 3) purged at least three well volumes of water from each well;
- 4) measured electrical conductivity, pH, and temperature readings of purged water;
- 5) collected groundwater samples in laboratory supplied containers; and
- 6) transported the groundwater samples to a State-certified laboratory for the analyses requested;

Laboratory analyses [TPH-Stoddard, BTEX, and MTBE] were performed at Envirochem Analytical, Inc, in San Jose, California (DHS Certified Number 2186). Field methods and measurement data is presented in Attachment A. Supporting documentation provided by an independent State-certified laboratory are included in Attachment B. Cumulative groundwater monitoring data is presented in Table 1. Cumulative results of laboratory analyses of groundwater samples is presented in Table 2. A site location map is presented in Figure 1. A groundwater elevation map is presented in Figure 2. A map showing concentrations of stoddard, benzene, and MTBE in groundwater is presented in Figure 3.

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

<u>Well</u> <u>Date</u>	<u>Elevation of</u> <u>Wellhead</u>	<u>Depth</u> <u>to Water</u>	<u>Elevation of</u> <u>Groundwater</u>
<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
06/19/97		13.26	4.18
<u>MW-2</u>			
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
06/19/97		11.68	5.63
<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
03/18/97		10.16	7.28
03/19/97		11.40	6.04

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

Well Date	TPHss	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MtBE	TPHg
MW-1								
11/18/92	1,800	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
11/04/93	2,000	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
03/28/94	150	<50	35	40	72	120.	NA	NA
08/02/94	2,100	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
02/08/95	620	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
07/08/96	37,000	<50	1.6	<0.5	<0.5	74.	7.9	110,000*
10/09/96	42,000	NA	<0.5	5.0	<0.5	<0.5	NA	NA
03/18/97	2,600	NA	<0.5	1.5	1.5	9.6	<6.0	NA
06/19/97	660	NA	<0.5	<0.5	1.2	0.71	<5.0	NA
MW-2								
11/18/92	630	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
11/04/93	3,200	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
03/28/94	45	<50	1.4	2	11	19	NA	NA
08/02/94	170	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
02/08/95	570	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
07/08/96	1,800	<50	<0.5	2.6	15	24	6.3	2,800*
10/09/96	4,100	NA	<0.5	0.57	<0.5	<0.5	NA	NA
03/18/97	240	NA	<0.5	0.57	<0.5	<0.5	5.3	NA
06/19/97	2,500	NA	<0.5	<0.5	9.1	<0.5	<5.0	NA
MW-3								
11/18/92	11,000	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
11/04/93	320	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
03/28/94	45	<50	0.8	0.9	5	10	NA	NA
08/02/94	<20	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
02/08/95	<20	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
07/08/96	2,500	<50	1.0	<0.5	8.8	8	10	2,200*
10/09/96	2,600	NA	<0.5	<0.5	<0.5	<0.5	NA	NA
03/18/97	2,500	NA	<0.5	0.61	0.63	5.2	NA	NA
06/19/97	21,000	NA	<0.5	<0.5	11	<0.5	<5.0	NA
MCLs	----	1.0	----	680	1,750	-----	-----	-----
DWALs	----	--	100	----	-----	-----	-----	-----

Results in micrograms/liter ($\mu\text{g/l}$) = 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

Limitations: 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.

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.

 7/15/97

William R. Dugan Date
Field Services Manager, R.G.

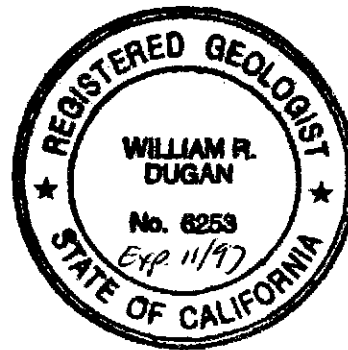
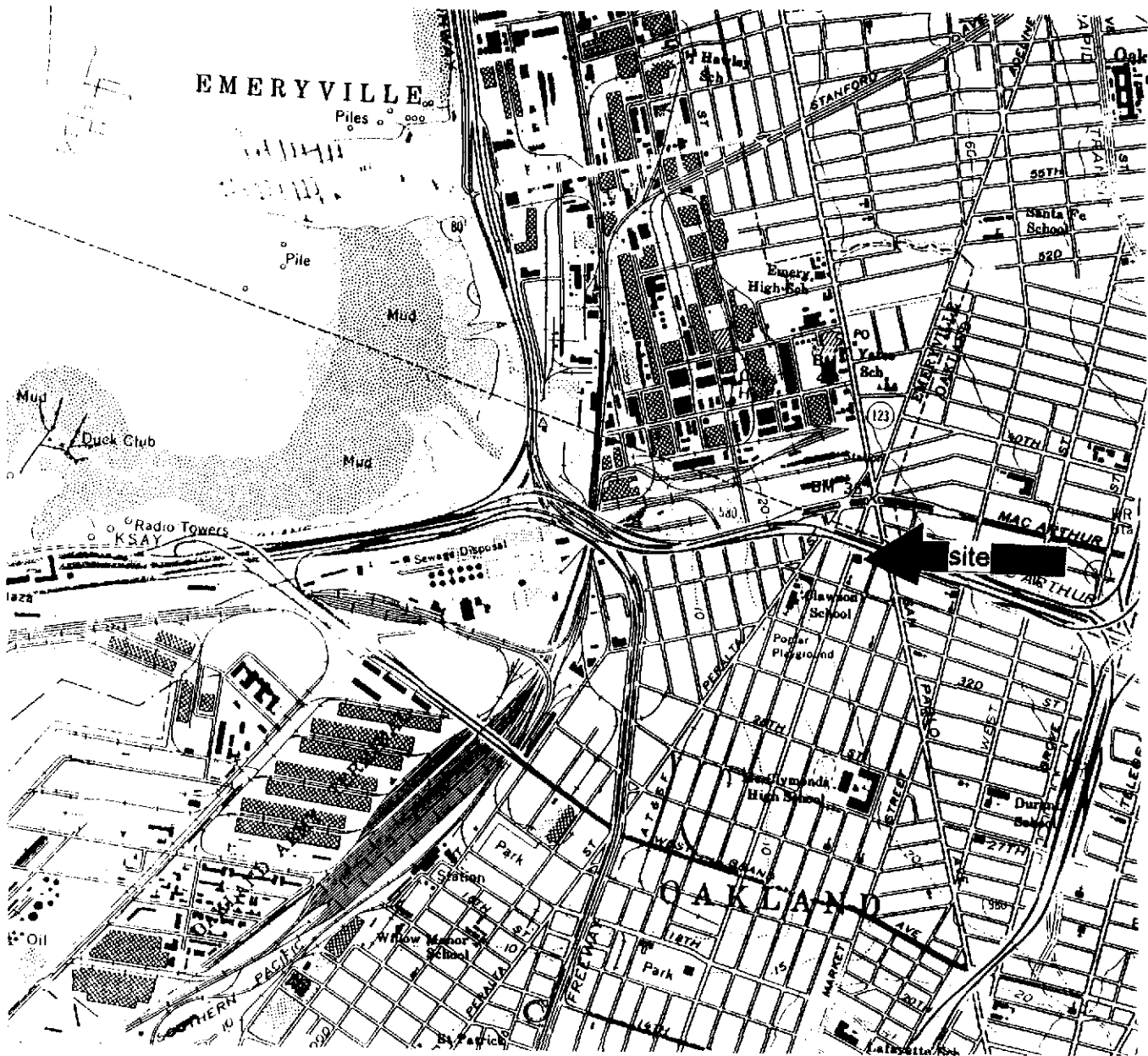


Figure 1. Site Vicinity Map
Figure 2. Groundwater Gradient Map for June 19, 1997
Figure 3. TPHss and Benzene in Groundwater June 19, 1997

Attachment A: Field Methods and MEasurement Data
Attachment B: 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'



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Third-Party Sampling & Data Evaluation

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

FIGURE
1



Approximate
Direction of
Groundwater
Flow on 06/19/97

35TH STREET

Sidewalk

TOC EL. 17.44 ft
DTW. 13.26 ft
GW EL. 4.18 ft

Driveway

MW-1
4.18'

5.63'

TOC EL. 17.31 ft
DTW. 11.68 ft
GW EL. 5.63 ft

MW-2
5.63'

6.04'

TOC EL. 17.44 ft
DTW. 11.40 ft
GW EL. 6.04 ft

MW-3

ADELINE STREET

Sidewalk

BUILDING

Legend

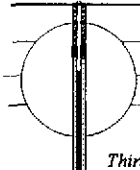
- - - = Line of potential equal elevation of groundwater in feet

MW-3 = Existing Monitoring Well



Approximate Scale: 1 inch = 20 feet

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



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GROUNDWATER
MONITORING
SERVICES

Third-Party Sampling & Data Evaluation

Groundwater Gradient Map (06/19/97)

Former City of Paris Cleaners
3516 Adeline Street
Oakland, California

FIGURE

2

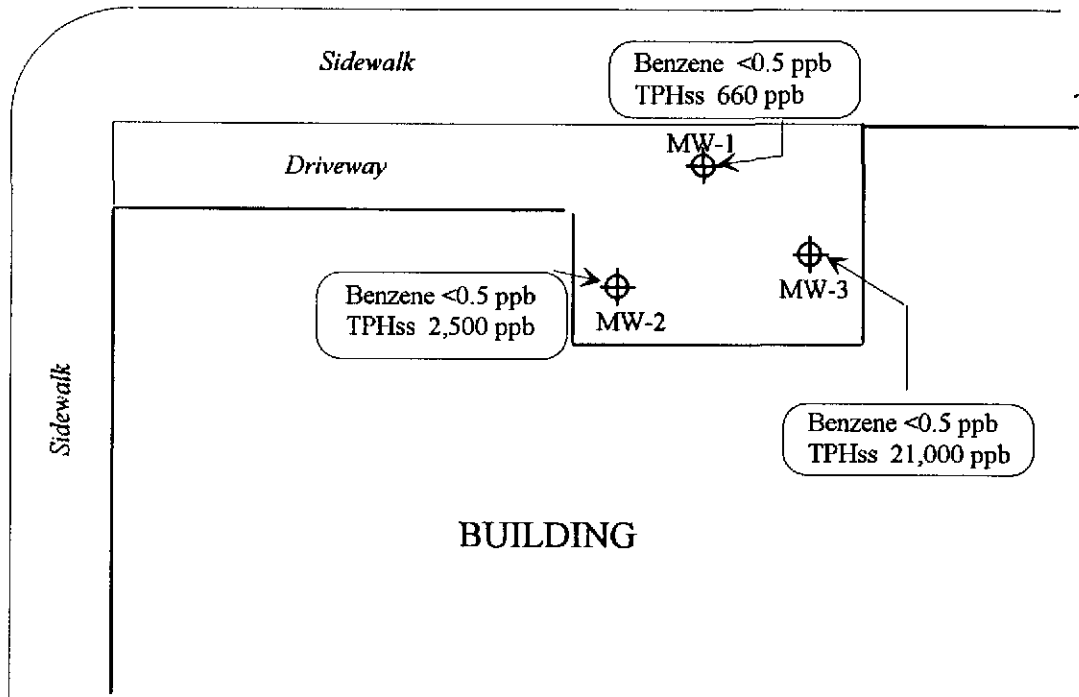
Job No. 218



Approximate
Direction of
Groundwater
Flow on 06/19/97

35TH STREET

ADELINE STREET



BUILDING

Legend

MW-3 = Existing Monitoring Well

Approximate Scale: 1 inch = 20 feet

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

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	GROUNDWATER
	MONITORING SERVICES
Third-Party Sampling & Data Evaluation	

TPHss and Benzene in Groundwater (06/19/97)
Former City of Paris Cleaners
3516 Adeline Street
Oakland, California

FIGURE

3

Job No. 218

ATTACHMENT A

FIELD METHODS

AND

MEASUREMENT DATA

Field Data Sheets:

WELL NO.:	MW-1	SAMPLE I.D.:	W-MW-1
DATE:	06/19/97	PARAMETERS:	TPHss, BTEX
WELL DIAMETER:	2-in.	CONTAINERS:	1) 3 VOAs (40 ml) 2) 2 liter amber
DEPTH TO WATER:	13.26 ft.	PRESERVATIVE:	1) HCl
WELL DEPTH:	30 ft.	LABORATORY:	EnviroChem Analytical (DHS LAB 2186)
PURGE METHOD:	Disposable Baller	COMMENTS:	Product odor, spotty sheen.
SAMPLE METHOD:	Disposable Baller		
SAMPLED BY:	Bill Dugan		

<u>TIME</u>	<u>PURGED</u>	<u>TURBIDITY*</u>	<u>pH</u>	<u>E.C.#</u>	<u>TEMP^</u>
11:00	2 gallons	<1	6.8	1310	66.8
-:-	7 gallons	<1	6.8	1310	67.0
11:45	8 gallons	<1	6.7	1310	67.0

* = ml/liter # = umhos/cm ^ = fahrenheit

WELL NO.:	MW-2	SAMPLE I.D.:	W-MW-1
DATE:	03/18/97	PARAMETERS:	TPHss, BTEX
WELL DIAMETER:	2-in.	CONTAINERS:	1) 3 VOAs (40 ml) 2) 2 liter amber
DEPTH TO WATER:	10.61 ft.	PRESERVATIVE:	1) HCl
WELL DEPTH:	29.5 ft.	LABORATORY:	ENTECH (DHS LAB 1369)
PURGE METHOD:	Disposable Baller	COMMENTS:	Product odor, spotty sheen.
SAMPLE METHOD:	Disposable Baller		
SAMPLED BY:	Bill Dugan		

<u>TIME</u>	<u>PURGED</u>	<u>TURBIDITY*</u>	<u>pH</u>	<u>E.C.#</u>	<u>TEMP^</u>
10:30	2 gallons	<1	6.7	1340	66.4
-:-	7 gallons	<1	6.7	1340	64.7
10:40	9 gallons	<1	6.7	1340	65.9

* = 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-in.	CONTAINERS:	1) 3 VOAs (40 ml) 2) 2 liter amber
DEPTH TO WATER:	10.16 ft.	PRESERVATIVE:	1) HCl
WELL DEPTH:	30 ft.	LABORATORY:	MONROE ANALYTICAL (DHS LAB 2034)
PURGE METHOD:	Disposable Baller	COMMENTS:	Product odor, spotty sheen.
SAMPLE METHOD:	Disposable Baller		
SAMPLED BY:	Bill Dugan		

<u>TIME</u>	<u>PURGED</u>	<u>TURBIDITY*</u>	<u>pH</u>	<u>E.C.#</u>	<u>TEMP^</u>
10:50	2 gallons	<1	6.7	1300	64.8
-:-	7 gallons	<1	6.8	1310	64.8
11:10	10 gallons	<1	6.8	1330	64.8

* = ml/liter # = umhos/cm ^ = fahrenheit

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 excavation 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.

ATTACHMENT B

CHAIN OF CUSTODY RECORDS

AND

LABORATORY DATA SHEETS



enviro

Chem Analytical Inc.

Batch #. M1-163

Company: Dugan Associates E.S.		Project Name: City of Paris Cleaners	
Address: 1023B Marlin Avenue San Clara, CA 95050		Date Sampled: 6/19/97	Project #: 218
Attn.: William R. Dugan		Date Received: 6/25/97	Sample Matrix: Water
		Date Analyzed: 7/1/97	Reporting Units: ug/L

ELAP Certificate #: 2186

Sample ID	TPH-Gasoline	TPH Stoddard	MTBE	8020			
				B	T	E	X
Reporting Limit	50	50	5.0	0.50	0.50	0.50	0.50
W - MW - 1	ND	660	ND	ND	ND	1.2	0.71
W MW - 2	ND	2500	ND	ND	ND	9.1	ND
W - MW - 3	ND	21000	ND	ND	ND	11	ND

Quality Control Results

MS Recovery	105%	81%	89%	117%	98%	113%	104%
MSD Recovery	115%	82%	92%	114%	92%	110%	98%
RPD	9%	1%	3%	3%	6%	2%	5%

ND - Not detected above the reporting limit.

Reviewed and Approved by *Hamid Enamifar*
 Hamid Enamifar
 Laboratory Director

Dugan Associates

10238 Martin Avenue, Santa Clara, CA 95050
Phone: (408) 988-5946 FAX: (408) 287-2176

Third Party Geoserv...

Chain of Custody

MI-163

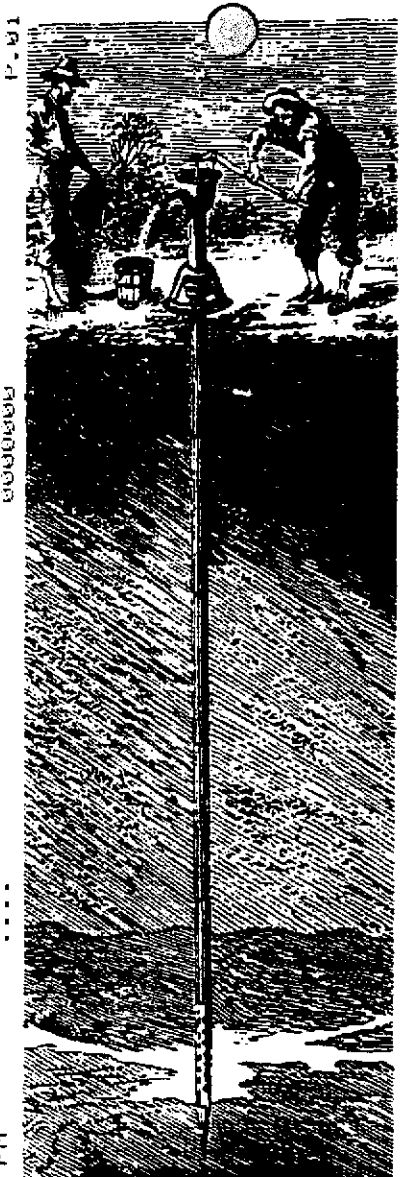
DAES C O C Form #

Sample Delivery: Work Scope: **Sample 3 wells**
 Project Name: **City of Paris Cleaners**
 Site address: **Oakland, CA**
 Project PO #: **Z15**
 Project Manager: **Bill Dugan**
 Phone: **408-988-5946** Fax: **408-287-2176**
 Laboratory: **ENVIROCHEM** Turn Around: **Standard**

SAMPLE ID	LOCATION DESCRIPTION	SAMPLED		# of Cts	MATRIX			TPH Method TOX (Distill)	TPH Method TOX (Gasoline)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	TPH Method TOX (MTBE*)	
		Time	Date		Soil	Water	Air												
W-MW-1		6/14/97		45		X													
W-MW-2				5		X													
W-MW-3				45		X													

Sampler's name: **William R. Dugan**
 Sampler's signature: *[Signature]*
 Relinquished by: *[Signature]*
 Relinquished by: *[Signature]*

Comments: *** TPH₅₅/BTEX/MTBE**
 Note: MW-1 2 UCLs
 MW-2 3 UCLs
 MW-3 2 UCLs
 Received by: *[Signature]* Date: **6/25/97**
 Received by: *[Signature]* Date: **6/25/97**



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