

**WA WINNING ACTION
INVESTMENTS, INC.**

February 14, 1992

Alameda County Health Care Services Agency
Attn: Mr. Ravi Arulanantham
80 Swan Way, Suite 500
Oakland, CA 94621

Dear Mr. Arulanantham:

Enclosed is the copy of Quarterly Monitoring Report, Property located at 6310 Houston Place, Dublin, CA 94568 from the Environmental Geosciences Engineering Division out of Phoenix, Arizona.

Please review and if you would like to discuss this report, please call.

Sincerely,



Fred L. Houston

Enclosures



February 14, 1992

Environmental Geosciences Engineering

a division of Water Resources Associates, Inc. Phoenix, Arizona

Mr. Fred L. Houston
Winning Action Investments, Inc.
7080 Donlon Way, Ste. 208
Dublin, CA 94568

Subject: Quarterly Monitoring Report, Property Located at 6310 Houston Place, Dublin, California

Dear Mr. Houston:

This letter report presents the results of quarterly monitoring performed on January 17, 1992 for the above referenced property, shown in Figure 1, Attachment A. Previous soil and groundwater analytical results have been summarized in reports dated April 9, 1991, titled "Well Installation Report and Results of Quarterly Monitoring, American City Truck Stop, 6310 Houston Court, Dublin, CA", in the "Quarterly Monitoring Report" dated August 5, 1991 and in previous reports referenced therein. To evaluate the potential impact on beneficial uses of groundwater due to the previous hydrocarbon release, a quarterly monitoring program has been recommended and voluntarily implemented.

Groundwater Sample Collection Protocol

A proposal to collect water samples from four of the six groundwater monitoring wells was submitted for approval to Mr. Ravi Arulanantham, Hazardous Materials Specialist with Alameda County Health Care Services. Mr. Arulanantham approved collection of water samples from five of the six groundwater monitoring wells and indicated that Well MW-4 was to be monitored for water level elevation. The groundwater samples have been collected in accordance with protocol presented in the report dated 9 April, 1991. Initially, the wells were purged by bailing until a non turbid discharge was obtained. During sampling, well discharge was monitored for temperature, pH and conductivity until these indicator parameters had stabilized completely. Once the indicator parameters had stabilized, a teflon bailer equipped with a bottom emptying device was used for collection of groundwater samples, reducing the risk of volatilization of hydrocarbon constituents. Water samples were transferred directly from the bottom emptying device into glass vessels equipped with teflon septa. Samples were appropriately preserved and delivered to the certified analytical laboratory under appropriate chain of custody protocol.

Groundwater Analytical Results

The groundwater samples have been submitted for analysis of total petroleum hydrocarbons as diesel (TPHD), total oil and grease (TOG) and benzene, toluene, ethylbenzene and xylenes (BTEX) by appropriate methods. Analytical results are summarized in Table 1, Attachment B. Certified analytical reports and chain of custody documentation are

presented in Attachment C. TOG and benzene are not present in detectable concentrations. Trace concentrations of toluene and ethylbenzene have been detected in MW-1. Low to trace levels of TPHD and xylenes have been detected in Wells MW-1, MW-2, MW-3 and MW-5. A TPHD concentration isopleth map is presented in Figure 3. The detected concentrations of TPHD, the primary constituent present, are fairly consistent with previous data. Well MW-6, installed to provide for lateral downgradient definition of petroleum hydrocarbons, contained no detectable petroleum constituents.

Groundwater Elevation Data

Groundwater elevation data are summarized in Table 2, Attachment B. A potentiometric map is presented in Figure 2. The wells were allowed to equilibrate for 24 hours prior to water level measurement. The length of time required for equilibrium water level conditions to be established is associated with the very fine grained, semiconfining site soils, which are prone to a delayed yield from storage. The groundwater contour map presented in Figure 2 is generally consistent with previous site data.

Copies of this groundwater monitoring report should be submitted to:

RWQCB- S.F. Bay Region
Attn: Mr. Ed So
2101 Webster Street, Ste. 500
Oakland, CA 94612

Alameda County Health Care Services Agency
Attn: Mr. Ravi Arulanantham
80 Swan Way, Ste. 500
Oakland, CA 94621

Additional copies of this report have been provided for the purpose of regulatory submittal. Should you have any questions or comments, please call.

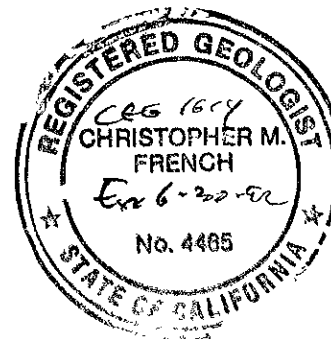
Very truly yours,

ENVIRONMENTAL GEOSCIENCES ENGINEERING

Valentin Constantinescu

Valentin Constantinescu, M.Sc.
Senior Project Hydrogeologist

Christopher M. French
Christopher M. French, R.G., R.E.A.
Certified Engineering Geologist #1614 (Exp. 6/30/92)



VC/CMF/nr

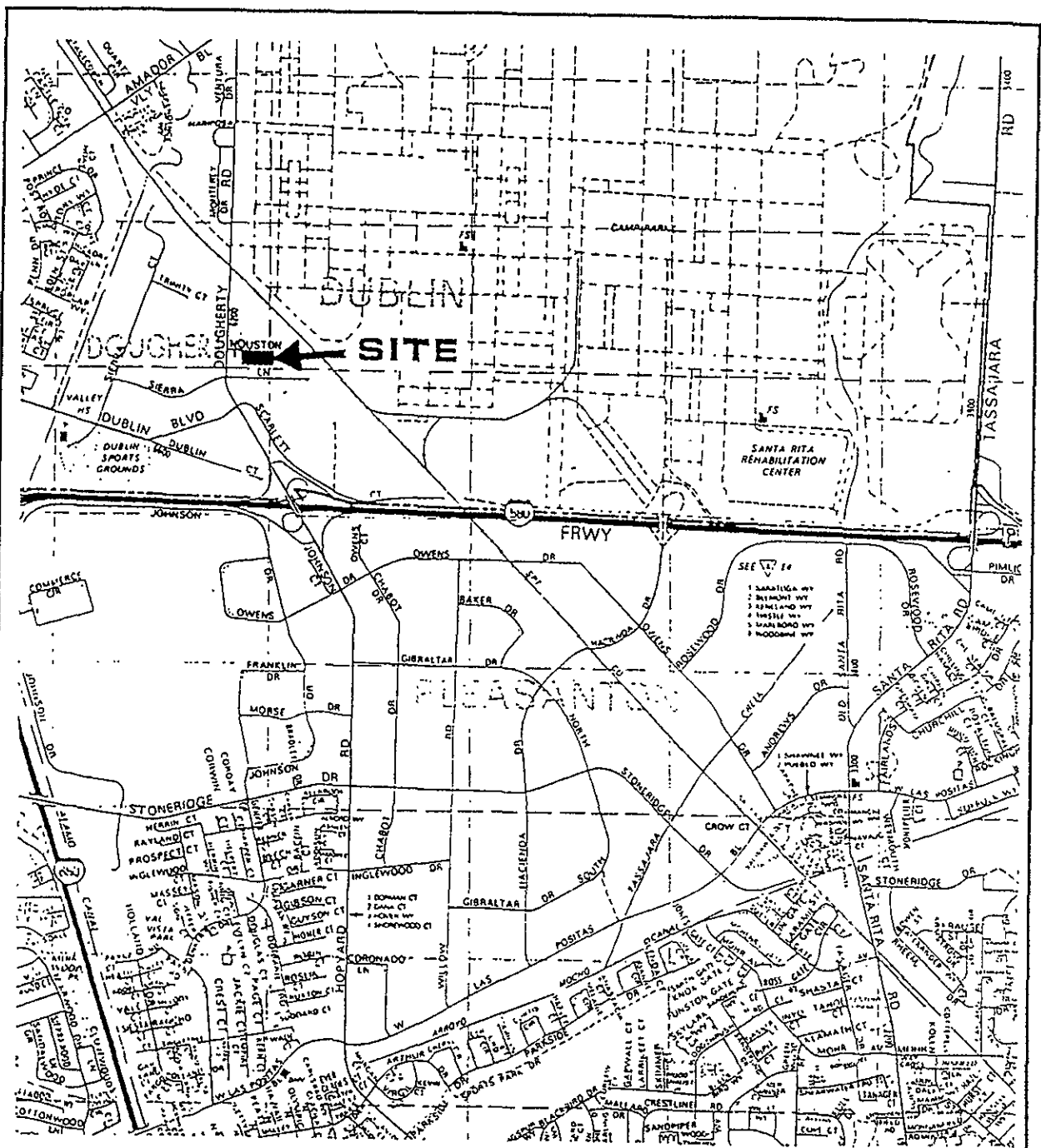
Attachments (2)



ATTACHMENT A

Figures





Source: Thomas Bros. Maps,
Alameda County, 1989

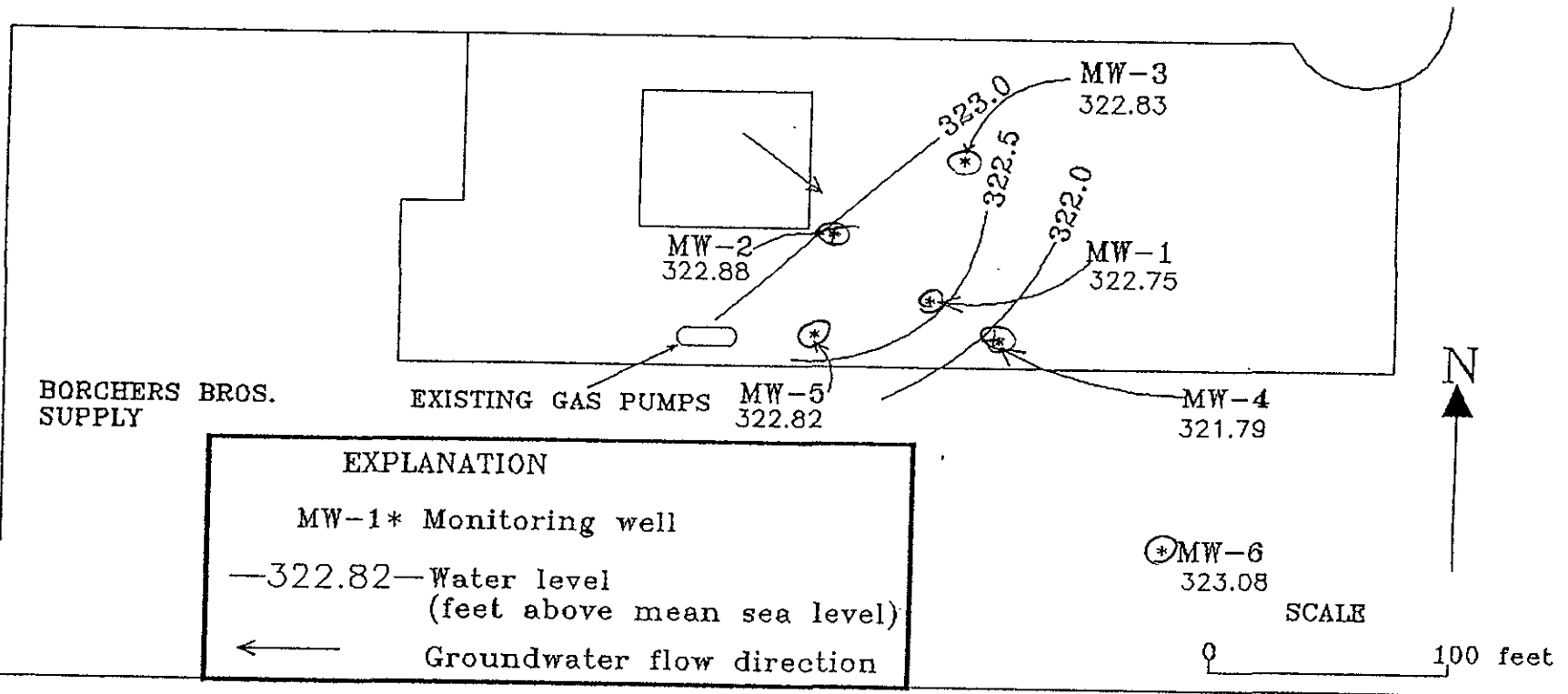


0 2,000 feet
SCALE

	Environmental Geosciences Engineering		WINNING ACTION INVESTMENTS SITE LOCATION MAP	Figure 1
	a division of Water Resources Associates, Inc. Phoenix, Arizona			
	Project No. 70121	Drawn by: Y. N. C.		
	Date: 2/10/92	Checked by: C. M. F.		

HOUSTON PLACE

DOUGHERTY ROAD



Note: Well MW-6 was not used in contouring.
Contours may be influenced by geologic inhomogeneities and/or other factors.

Jan 1992



ENVIRONMENTAL GEOSCIENCES ENGINEERING

a division of Water Resources Associates, Inc. Phoenix, Arizona

Project No.: 70121

Drawn by: V. N. C

Date: 2/10/92

Checked by: C. H. P.

WINNING ACTION INVESTMENTS GROUNDWATER LEVEL CONTOUR MAP

Figure

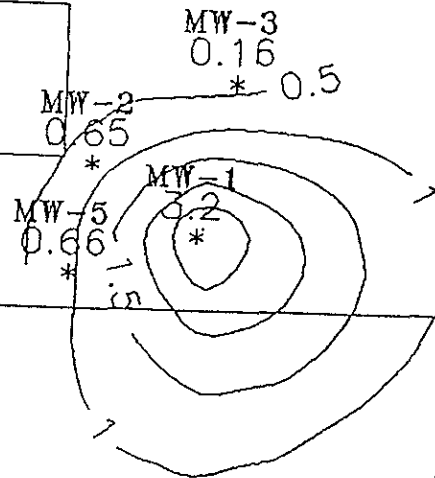
2

HOUSTON PLACE

DOUGHERTY ROAD

BORCHERS BROS.
SUPPLY

EXISTING GAS PUMPS



0
* MW-6



EXPLANATION

MW-1* Monitoring well

SCALE

0 100 feet

——— 1 Concentration isopleth, ppm TPHD



ENVIRONMENTAL GEOSCIENCES ENGINEERING

a division of Water Resources Associates, Inc. Phoenix, Arizona

Project No: 70121

Drawn by: Y. H. C.

Date: 2/10/02

Checked by: C. M. F.

WINNING ACTION INVESTMENTS LEVELS OF TPH-DIESEL CONTOUR MAP

Figure

3

ATTACHMENT B

Tables



Table 1. Summary of historical groundwater monitoring results for American City Truck Stop, Winning Action Investment, Dublin, CA

MONITORING WELL MW-1

DATE	TPHD	TOG	B	T	E	X
8/15/89	10.6	N/A	0.016	ND	0.0024	0.0031
12/13/89	60.0	N/A	ND	ND	ND	ND
6/20/90	4.3	7.2	ND	ND	ND	ND
8/30/90	15.0	20.0	ND	ND	ND	ND
3/01/91	<0.05	<0.5	N/A	N/A	N/A	N/A
7/19/91	10.0	20.0	N/A	N/A	N/A	N/A
1/17/92	3.2	<5	<0.0003	0.0006	0.0004	0.0024

MONITORING WELL MW-2

DATE	TPHD	TOG	B	T	E	X
8/15/89	47.0	50.0	ND	ND	ND	ND
12/13/89	34.0	95.0	ND	ND	ND	ND
6/20/90	1.2	ND	ND	ND	ND	ND
8/30/90	1.8	2.5	ND	ND	ND	ND
3/01/91	<0.05	1.9	N/A	N/A	N/A	N/A
7/19/91	2.3	8.9	N/A	N/A	N/A	N/A
1/17/92	0.65	<5	<0.0003	<0.0003	<0.0003	0.0006

MONITORING WELL MW-3

DATE	TPHD	TOG	B	T	E	X
8/15/89	2.0	N/A	ND	ND	ND	ND
12/13/89	1.7	N/A	ND	ND	ND	ND
6/20/90	ND	ND	ND	ND	ND	ND
3/01/91	0.45	0.6	N/A	N/A	N/A	N/A
7/19/91	0.32	0.7	N/A	N/A	N/A	N/A
1/17/92	0.16	<5	<0.0003	<0.0003	<0.0003	0.0003

MONITORING WELL MW-4

DATE	TPHD	TOG	B	T	E	X
6/20/90	22.0	8.6	ND	ND	ND	ND
8/30/90	0.56	2.4	ND	ND	ND	ND
3/01/91	0.73	1.4	N/A	N/A	N/A	N/A
7/19/91	0.72	1.2	N/A	N/A	N/A	N/A
1/17/92	N/A	N/A	N/A	N/A	N/A	N/A

MONITORING WELL MW-5

DATE	TPHD	TOG	B	T	E	X
3/07/91	74.0	160	<0.0005	0.0012	0.001	0.0022
7/19/91	32.0	34	<0.0005	<0.0005	<0.0005	0.0020
1/17/92	0.66	<5	<0.0003	<0.0003	<0.0003	0.0009

MONITORING WELL MW-6

DATE	TPHD	TOG	B	T	E	X
3/07/91	<0.05	<0.5	N/A	N/A	N/A	N/A
7/19/91	<0.05	<0.5	N/A	N/A	N/A	N/A
1/17/92	<0.05	<5	<0.0003	<0.0003	<0.0003	<0.0003

Continued on following page



Table 1 (continued). Summary of historical groundwater monitoring results for American City Truck Stop, Winning Action Investment, Dublin, CA

Note: Concentrations expressed in milligrams per liter (mg/L), or ppm. 1989 and 1990 results reported in Winters Petroleum (1989), Safety Specialists (1989) and NSI (1990).

CAL-EPA Drinking Water Standards:

benzene - 0.001 mg/l
ethylbenzene - 0.680 mg/l
xylenes - 1.750 mg/l

Abbreviations

TPHD - total petroleum hydrocarbons as diesel
B - benzene
T - toluene
X - xylenes
E - ethylbenzene
TOG - total oil and grease
ND - not detected
N/A - not analyzed
Cal-EPA - California Environmental Protection Agency



Table 2. Summary of groundwater elevation data for American City Truck Stop, Winning Action Investment, Dublin, CA

MONITORING WELL MW-1

<u>DATE</u>	<u>WHE</u>	<u>DTW</u>	<u>GWE</u>
8/15/89	332.47	NR	323.13
12/13/89		9.34	323.13
6/20/90		8.84	323.63
8/30/90		8.83	323.64
4/08/91		7.73	324.74
7/12/91		9.25	323.22
1/17/92		9.72	322.75

MONITORING WELL MW-2

<u>DATE</u>	<u>WHE</u>	<u>DTW</u>	<u>GWE</u>
8/15/89	332.58	NR	323.27
12/13/89		9.21	323.37
6/20/90		8.82	323.76
8/30/90		8.82	323.76
4/08/91		7.81	324.77
7/12/91		9.42	323.16
1/17/92		9.70	322.28

322.88

MONITORING WELL MW-3

<u>DATE</u>	<u>WHE</u>	<u>DTW</u>	<u>GWE</u>
8/15/89	332.40	NR	323.33
12/13/89		9.10	323.30
6/20/90		8.57	323.83
8/30/90		8.58	323.82
4/08/91		7.58	324.82
7/12/91		9.11	323.29a
1/17/92		9.57	322.83

MONITORING WELL MW-4

<u>DATE</u>	<u>WHE</u>	<u>DTW</u>	<u>GWE</u>
6/20/90	331.55 ^a	8.06	323.49
8/30/90		8.07	323.48
4/08/91		7.70	323.85
7/12/91		9.00	322.55 ^a
1/17/92		9.76	321.79

MONITORING WELL MW-5

<u>DATE</u>	<u>WHE</u>	<u>DTW</u>	<u>GWE</u>
4/08/91	332.49	7.75	324.74
7/12/91		8.98	323.51 ^a
1/17/92		9.67	322.82

Continued on next page



Table 2. (continued) Summary of groundwater elevation data for American City Truck Stop, Winning Action Investment, Dublin, CA

MONITORING WELL MW-6

<u>DATE</u>	<u>WHE</u>	<u>DTW</u>	<u>GWE</u>
4/08/91	332.64	7.95	324.69
7/12/91		9.42	323.22 ^a
1/17/92		9.56	323.08

Note: Elevation data expressed in feet above mean sea level, City of Dublin datum. Elevation data from 1989 and 1990 reported in Safety Specialists (1989) and NSI (1990), respectively.

a Uncertain data.

Abbreviations

WHE - well-head elevation
DTW - depth to water
GWE - groundwater elevation



ATTACHMENT C

**Certified Analytical Report and
Chain of Custody Documentation**





84820

CHAIN OF CUSTODY

DATE: 1/17/92 PAGE: 1 OF 1

Environmental Geosciences Engineering
a division of Water Resources Associates Inc. Phoenix, Arizona

PROJ. MGR. VALENTIN CONSTANTINESCU

ANALYSIS REQUEST

COMPANY E.G.E.
ADDRESS 200 Brown Road, Suite 210
Fremont, California 94539
(510) 770-5733 Telefax (510) 770-5752

SAMPLER'S SIGNATURE Valentin
PHONE NO. (510) 770-5733

SAMPLE I.D.	DATE	TIME	MATRIX	TPHG	TPHG & BTEX	TPHD	BTEx	O & G	METALS <small>Cd, Cr Pb, Zn Ni</small>	HALO CARBONS PURGEABLE	VOLATILE ORGANICS	ORGANIC LEAD	TOTAL LEAD	SOLUBLE LEAD							
																					SOIL
MW-1	1/17/92		SOIL / WATER			X	X	X													
MW-2	1/17/92		SOIL / WATER			X	X	X													
MW-3	1/17/92		SOIL / WATER			X	X	X													
MW-5	1/17/92		SOIL / WATER			X	X	X													
MW-6	1/17/92		SOIL / WATER			X	X	X													
			SOIL / WATER																		

NUMBER OF CONTAINERS

4

Please Initial: BW
 Samples Stored in cc. BW
 appropriate containers BW
 Samples preserved BW
 VOA's without headspace BW
 Comments: _____

1
2
3
4
5

PROJECT INFORMATION:
WINNING ACTION

LABORATORY INSTRUCTIONS/COMMENTS:
Turn Around Time (Circle One)
Same Day 24 Hrs 48 Hrs
72 Hrs Normal
5 DAYS TURNAROUND

ANALYTICAL LABORATORY
CITY _____

RELINQUISHED BY:
Valentin Constantinescu
Signature
VALENTIN
Printed Name
E.G.E.
Company
Time 16:45 Date 1/17/92

RELINQUISHED BY:
Paul Stewart
Signature
PAUL STEWART
Printed Name
EXPRESS-IT
Company
Time 17:15 Date 1-17-92

RELINQUISHED BY:
Paul Stewart
Signature
PAUL STEWART
Printed Name
EXPRESS-IT
Company
Time 08:50 Date 1-20-92

RECEIVED BY:
Paul Stewart
Signature
PAUL STEWART
Printed Name
EXPRESS-IT
Company
Time 17:04 Date 1-17-92

RECEIVED BY:
Paul Stewart
Signature
PAUL STEWART
Printed Name
EXPRESS-IT
Company
Time 07:07 Date 1-20-92

RECEIVED BY:
Paul Stewart
Signature
PAUL STEWART
Printed Name
Company
Time 8:45 Date 1-20-92

→ picked up on 1/17/92 (BKH)



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E C F A N A L Y S I S

LABORATORY NO.: 84820
CLIENT: ENVIRONMENTAL GEOSCIENCES ENG.
CLIENT JOB NAME: WINNING ACTION

DATE RECEIVED: 01/17/92
DATE REPORTED: 01/24/92
DATE SAMPLED : 01/17/92

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 METHODS 5030 and 8020

LAB #	Sample Identification	Concentration(ug/kg)			
		Benzene	Toluene	Ethyl Benzene	Xylenes
1	MW-1	ND<0.3	0.6	0.4	2.4
2	MW-2	ND<0.3	ND<0.3	ND<0.3	0.6
3	MW-3	ND<0.3	ND<0.3	ND<0.3	0.3
4	MW-5	ND<0.3	ND<0.3	ND<0.3	0.9
5	MW-6	ND<0.3	ND<0.3	ND<0.3	ND<0.3

ug/kg - parts per billion (ppb)

Method Detection Limit in Water: 0.3 ug/L

QAQC Summary:

Daily Standard run at 20ug/L: RPD = < 15%
MS/MSD Average Recovery = 104%: Duplicate RPD = < 1

Richard Srna, Ph.D.

Silvina Mangini (for)
Laboratory Director



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84820
CLIENT: ENVIRONMENTAL GEOSCIENCES ENG.
CLIENT JOB NAME: WINNING ACTION

DATE RECEIVED: 01/17/92
DATE REPORTED: 01/24/92
DATE SAMPLED : 01/17/92

ANALYSIS FOR TOTAL OIL AND GREASE by STANDARD METHODS 5520F

LAB #	Sample Identification	Concentration(mg/L) Oil & Grease
1	MW-1	ND<5
2	MW-2	ND<5
3	MW-3	ND<5
4	MW-5	ND<5
5	MW-6	ND<5

mg/L - parts per million (ppm)

Method Detection Limit for Oil and Grease in Water: 5 mg/L

QAQC Summary: MS/MSD Average Recovery: 72%
Duplicate RPD : 4

Richard Srna, Ph.D.

Ilomina V. Jangiel (for)
Laboratory Director



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84820

DATE RECEIVED: 01/17/92

CLIENT: ENVIRONMENTAL GEOSCIENCES ENG.

DATE REPORTED: 01/24/92

CLIENT JOB NAME: WINNING ACTION

DATE SAMPLED : 01/17/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/L) Diesel Range
1	MW-1	3.2
2	MW-2	0.65
3	MW-3	0.16
4	MW-5	0.66
5	MW-6	ND<0.05

mg/L - parts per million (ppm)

Method Detection Limit for Diesel in Water: 0.05 mg/L

QAQC Summary:

Daily Standard run at 200mg/L: RPD Gasoline = 9

RPD Diesel = 0

MS/MSD Average Recovery = 90%: Duplicate RPD = 1

Richard Srna, Ph.D.

Delomina V Janjulyj (for)
Laboratory Director

WELL MONITORING FORM:

CLIENT: Fred L. Houston DATE: 1/17/92

ADDRESS: 6310 Houston Place COUNTY _____
REPRESENTATIVE: Mr. Ravi Arulanathan

Dublin, California CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 20.30 MONITORING WELL # MW-1

- DEPTH TO WATER 9.72

= WATER COLUMN HEIGHT 10.58 X 0.66 = 6.98 Gallons (1 well volume)

water to be purged from monitoring well prior to taking samples.

3 X 6.98 = 20.95 (3 well volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY µmhos/cm
12:15	1	62.0	7.28	6.06
12:24	3	61.7	7.35	6.08
12:33	5	60.0	7.25	6.09
12:40	7	62.0	7.15	6.03
12:47	9	61.8	7.18	4.25
12:52	11	65.4	7.23	3.21
12:58	13	65.2	7.25	3.26
13:07	15	65.1	7.29	3.25
13:15	17	64.6	7.27	3.20
13:22	19	64.4	7.25	3.70
13:29	21	64.7	7.27	3.55

CONTAMINANT ODOR? NO TIME OF SAMPLE COLLECTION: 16:00

TURBIDITY LEVEL: MODERATE WITNESSED BY: NO WITNESS

SHEEN ON WATER? NO SAMPLER'S SIGNATURE: Valentin Yarn

WELL MONITORING FORM:

CLIENT: Fred L. Houston DATE: 1/17/92

ADDRESS: 6310 Houston Place COUNTY _____
REPRESENTATIVE: Mr. Ravi Arulananthan

Dublin, California CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 19.09 MONITORING WELL # MW-2
- DEPTH TO WATER 9.70

= WATER COLUMN HEIGHT 9.39 X 0.66 = 6.197 Gallons (1 well volume)

Multiply 1 well volume by 3 to obtain the minimum number of gallons of water to be purged from monitoring well prior to taking samples.

3 X 6.1974 = 18.592 (3 well volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY μmhos/cm
14:40	1	63.9	7.86	3.39
14:48	3	64.2	7.82	3.37
14:53	5	62.9	7.69	3.26
15:00	7	62.1	7.67	3.32
15:06	9	62.3	7.52	3.29
15:13	11	61.8	7.48	3.31
15:18	13	62.3	7.23	3.35
15:24	15	61.2	7.44	3.22
15:32	17	61.0	7.42	3.19
15:36	19	61.3	7.45	3.23

CONTAMINANT ODOR? NO TIME OF SAMPLE COLLECTION: 16:05

TURBIDITY LEVEL: MODERATE WITNESSED BY: NO WITNESS

SHEEN ON WATER? NO SAMPLER'S SIGNATURE: *Ravi Arulananthan*

WELL MONITORING FORM:

CLIENT: Fred L. Houston

DATE: 1/17/92

ADDRESS: 6310 Houston Place

COUNTY
REPRESENTATIVE: Mr. Ravi Arulanathan

Dublin, California

CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 17.44

MONITORING WELL # MW-3

- DEPTH TO WATER 9.57

= WATER COLUMN HEIGHT 7.87 X 0.66 = 5.194 Gallons (1 well volume)

Multiply 1 well volume by 3 to obtain the minimum number of gallons of water to be purged from monitoring well prior to taking samples.

3 X 5.194 = 15.58 (3 well volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY µmhos/cm
13:25	1	65.3	7.42	10.31
13:32	3	65.2	7.47	10.95
13:40	5	65.8	7.39	10.86
13:47	7	66.2	7.48	10.83
14:03	9	66.7	7.45	10.97
14:06	11	66.9	7.63	10.82
14:13	13	67.1	7.58	10.93
14:21	15	66.7	7.60	11.02
14:30	17	66.5	7.62	11.05

CONTAMINANT ODOR? NO

TIME OF SAMPLE COLLECTION: 16:15

TURBIDITY LEVEL: MODERATE

WITNESSED BY: NO WITNESS

SHEEN ON WATER? NO

SAMPLER'S SIGNATURE: Valambur Gurne

WELL MONITORING FORM:

CLIENT: Fred L. Houston DATE: 1/17/92
ADDRESS: 6310 Houston Place COUNTY _____
Dublin, California REPRESENTATIVE: Mr. Ravi Arulananthan
CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 18.15 MONITORING WELL # MW-5
- DEPTH TO WATER 9.07
= WATER COLUMN HEIGHT 8.48 X 0.17 = 1.442 Gallons (1 well volume)

water to be purged from monitoring well prior to taking samples.

3 X 1.442 = 4.325 (3 well volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY µmhos/cm
11:30	1	55.6	7.14	8.02
11:40	2	57.2	7.33	8.05
11:45	3	57.1	7.20	8.09
11:55	4	59.6	7.18	8.30
12:10	5	60.1	7.16	8.31

CONTAMINANT ODOR? NO TIME OF SAMPLE COLLECTION: 16:20
TURBIDITY LEVEL: MODERATE WITNESSED BY: NO WITNESS
SHEEN ON WATER? NO SAMPLER'S SIGNATURE: Valentín E. G. [Signature]

WELL MONITORING FORM:

CLIENT: Fred L. Houston

DATE: 1/17/92

ADDRESS: 6310 Houston Place

COUNTY

REPRESENTATIVE: Mr. Ravi Arulananthan

Dublin, California

CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 18.80

MONITORING WELL # MW-6

- DEPTH TO WATER 9.56

= WATER COLUMN HEIGHT 9.24 X 0.17 = 1.6 Gallons (1 well volume)

Multiply 1 well volume by 3 to obtain the minimum number of gallons of water to be purged from monitoring well prior to taking samples.

3 X 1.6 = 4.8 (3 well volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY µmhos/cm
15:40	1	61.5	8.10	4.01
15:43	2	61.0	8.15	3.91
15:45	3	61.2	8.22	4.02
15:50	4	60.9	7.62	4.00
15:55	5	60.7	7.57	3.89

CONTAMINANT ODOR? NO

TIME OF SAMPLE COLLECTION: 15:57

TURBIDITY LEVEL: MODERATE

WITNESSED BY: NO WITNESS

SHEEN ON WATER? NO

SAMPLER'S SIGNATURE: Valentin Gorman