



BP OIL

SEP 26 1994 9:29

BP Oil Company
Environmental Resources Management
Building 13, Suite N
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667

September 26, 1994

Mr. Brian Oliva
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

**RE: BP OIL FACILITY #11104
1716 Webster Street
Alameda, CA**

Dear Mr. Oliva:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING
REPORT DATED SEPTEMBER 14, 1994** for the above referenced facility.

If you should have any questions regarding this site, I may be reached at (206) 251-0689.

Respectfully,

Scott T. Hooton
Environmental Resources Management
Group Leader

STH:mu msword/ERM11104

cc: Mr. Eddy So, CRWQCB, San Francisco Bay Region, 2101 Webster Street,
Suite 500, Oakland, CA 94612

Mr. Scott Kellstedt, Hydro Environmental Technologies, 2363 Mariner Square
Drive, Suite 243, Alameda, California 94501

Mr. Larry Silva, TOSCO Northwest Co., 601 Union Street, Suite 2500, Seattle,
WA 98101

Mr. Brady Nagle, Alisto, 1777 Oakland Blvd., Suite 200, Walnut Creek, CA
94596

Site File

MAINT

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9:57:29

GROUNDWATER MONITORING AND SAMPLING REPORT

**BP Oil Company Service Station No. 11104
1716 Webster Street
Alameda, California**

Project No. 10-155-03-001

Prepared for:

**BP Oil Company
Environmental Resources Management
295 S.W. 41st Street
Building 13, Suite N
Renton, Washington 98055**

Prepared by:

**Alisto Engineering Group
1777 Oakland Boulevard, Suite 200
Walnut Creek, California**

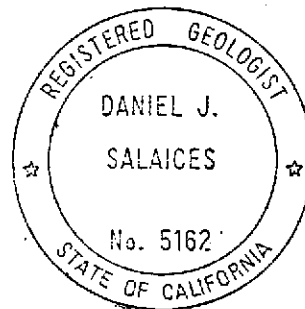
September 14, 1994

William Howell

**William Howell
Project Manager**

Daniel Salaices

**Daniel Salaices
Registered Geologist**



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11104
1716 Webster Street
Alameda, California

Project No. 10-155-03-001

September 14, 1994

INTRODUCTION

This report presents the results and findings of the July 25, 1994 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11104, 1716 Webster Street, Alameda, California. A site vicinity map is shown in Figure 1.

FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

Before sample collection, each well was purged of 3 casing volumes, while recording field readings of pH, temperature, and electrical conductivity. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.

SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown in Figure 2. The results of groundwater analysis are shown in Figure 3. The laboratory report and chain of custody record are presented in Appendix B.



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11104
 1716 WEBSTER STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-155

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-1	07/21/92	8.51	5.91	2.60	34000	7000	1700	2500	6900	--	--
MW-1	10/20/92	8.51	6.66	1.85	--	--	--	--	--	--	--
MW-1	03/05/93	8.51	4.56	3.95	--	--	--	--	--	--	--
MW-1	04/01/93	8.51	4.57	3.94	--	--	--	--	--	--	--
MW-1	07/09/93	8.51	5.25	3.26	77000	15000	1400	2100	7400	--	PACE
QC-1 (c)	07/09/93	--	--	--	79000	16000	1500	2200	7700	--	PACE
MW-1	10/08/93	8.51	6.01	2.50	42000	7100	270	2700	4700	--	PACE
MW-1	01/06/94	8.51	6.24	2.27	45000	12000	4300	3000	6700	--	PACE
MW-1	04/26/94	8.51	5.26	3.25	39000	6500	500	1800	1200	6.3	PACE
MW-1	07/25/94	8.51	5.60	2.91	38000	6300	240	1500	1100	1.7	PACE
MW-2	07/21/92	9.41	6.44	2.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--
MW-2	10/20/92	9.41	7.39	2.02	--	--	--	--	--	--	--
MW-2	03/05/93	9.41	4.91	4.50	--	--	--	--	--	--	--
MW-2	04/01/93	9.41	4.92	4.49	--	--	--	--	--	--	--
MW-2	07/09/93	9.41	5.60	3.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-2	10/08/93	9.41	6.50	2.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
QC-1 (c)	10/08/93	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-2	01/06/94	9.41	6.25	3.16	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-2	04/26/94	9.41	5.73	3.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.5	PACE
MW-2	07/25/94	9.41	6.07	3.34	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.4	PACE
MW-3 (d)	07/21/92	9.91	7.07	2.84	ND<50	0.95	ND<0.5	ND<0.5	ND<0.5	--	--
MW-3	10/20/92	9.91	8.06	1.85	--	--	--	--	--	--	--
MW-3	03/05/93	9.91	5.16	4.75	--	--	--	--	--	--	--
MW-3	04/01/93	9.91	5.25	4.66	--	--	--	--	--	--	--
MW-3	07/09/93	9.91	5.80	4.11	ND<50	0.6	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-3	10/08/93	9.91	7.17	2.74	ND<50	0.6	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-3	01/06/94	9.91	6.94	2.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-3	04/26/94	9.91	6.18	3.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.1	PACE
MW-3	07/25/94	9.91	6.67	3.24	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.2	PACE
MW-4	03/05/93	8.33	4.81	3.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--
MW-4	04/01/93	8.33	4.80	3.53	--	--	--	--	--	--	--
MW-4	07/09/93	8.33	5.54	2.79	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	10/08/93	8.33	6.28	2.05	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	01/06/94	8.33	5.82	2.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-4	04/26/94	8.33	5.50	2.83	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.4	PACE
MW-4	07/25/94	8.33	5.83	2.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.2	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11104
 1716 WEBSTER STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-155

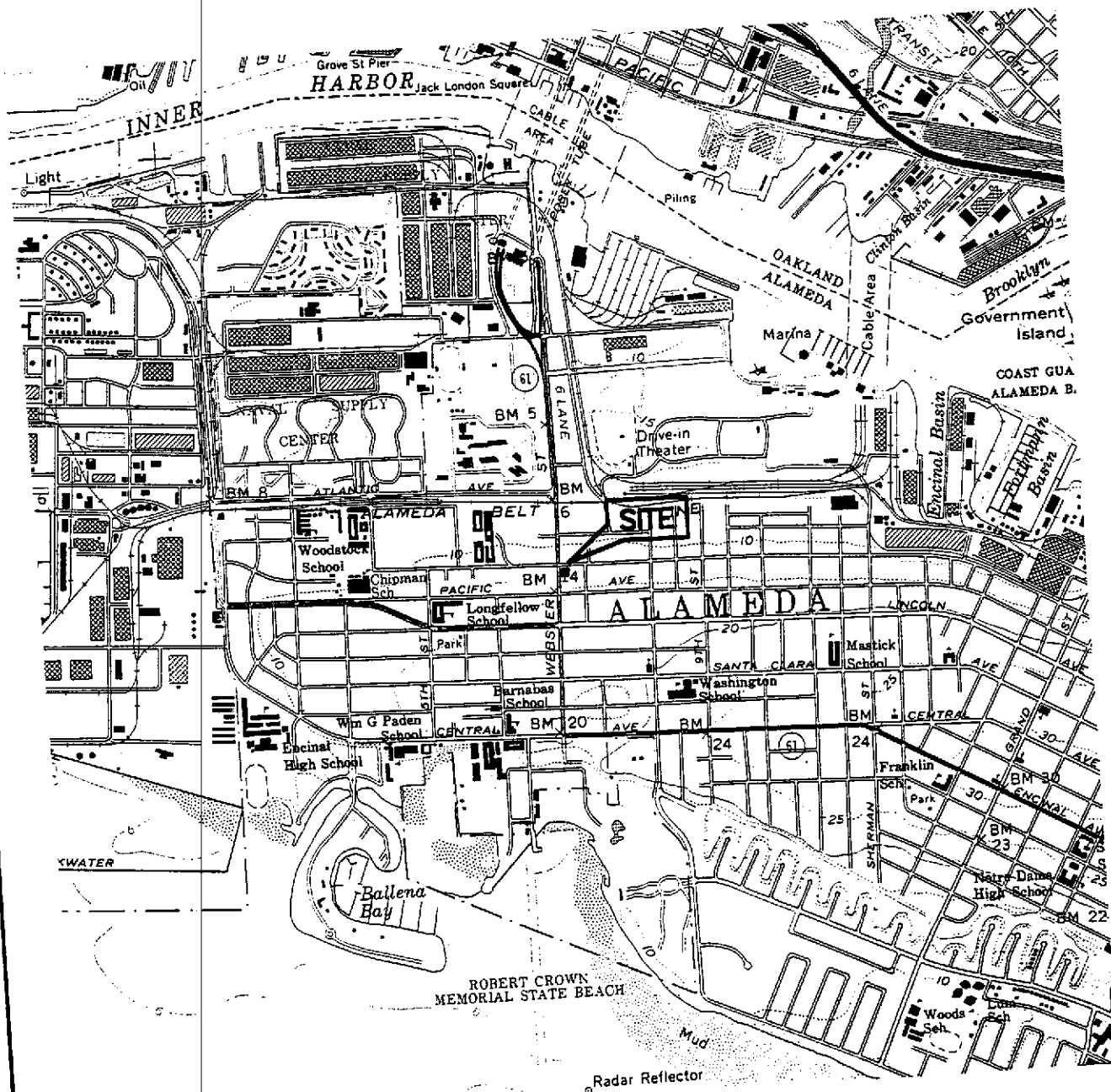
WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-5	04/01/93	8.17	4.77	3.40	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---
MW-5	07/09/93	8.17	5.40	2.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
MW-5	10/08/93	8.17	5.87	2.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
MW-5	01/06/94	8.17	5.75	2.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
MW-5	04/26/94	8.17	5.49	2.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.1	PACE
MW-5	07/25/94	8.17	5.69	2.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.6	PACE
RW-1	01/06/94	8.37	5.59	2.78	23000	3800	210	840	2100	---	PACE
QC-1 (c)	01/06/94	---	---	---	24000	3700	210	830	2000	---	PACE
RW-1	04/26/94	8.37	5.21	3.16	24000	3500	120	800	1700	6.4	PACE
QC-1 (c)	04/26/94	---	---	---	22000	3300	110	700	1700	---	PACE
RW-1	07/25/94	8.37	5.52	2.85	31000	4800	290	1100	1700	5.5	PACE
QC-1 (c)	07/25/94	---	---	---	28000	4400	240	960	1400	---	PACE
QC-2 (e)	07/09/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (e)	10/08/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (e)	01/06/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (e)	04/26/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
QC-2 (e)	07/25/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 DO Dissolved oxygen
 ppb Parts per billion
 ppm Parts per million
 --- Not applicable/analyzed/measured
 ND Not detected above reported detection limit
 PACE Pace, Inc.

NOTES:

- (a) Top of casing elevations surveyed in reference to USGS benchmark (7.68 feet above mean sea level) at northwest corner of Webster Street and Buena Vista Avenue.
- (b) Groundwater elevations in feet above mean sea level.
- (c) Blind duplicate.
- (d) Sample also analyzed for cadmium, nickel, chromium, lead, and zinc. None were detected above the reported detection limit.
- (e) Travel blank.



SOURCE:
USGS MAP, OAKLAND WEST QUADRANGLE,
CALIFORNIA, 7.5 MINUTE SERIES, 1959.
PHOTOREVISED 1980.

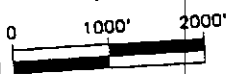


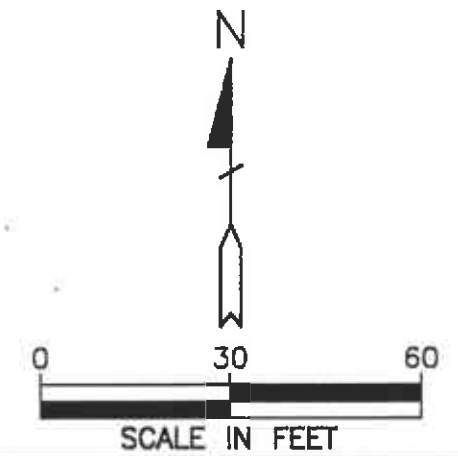
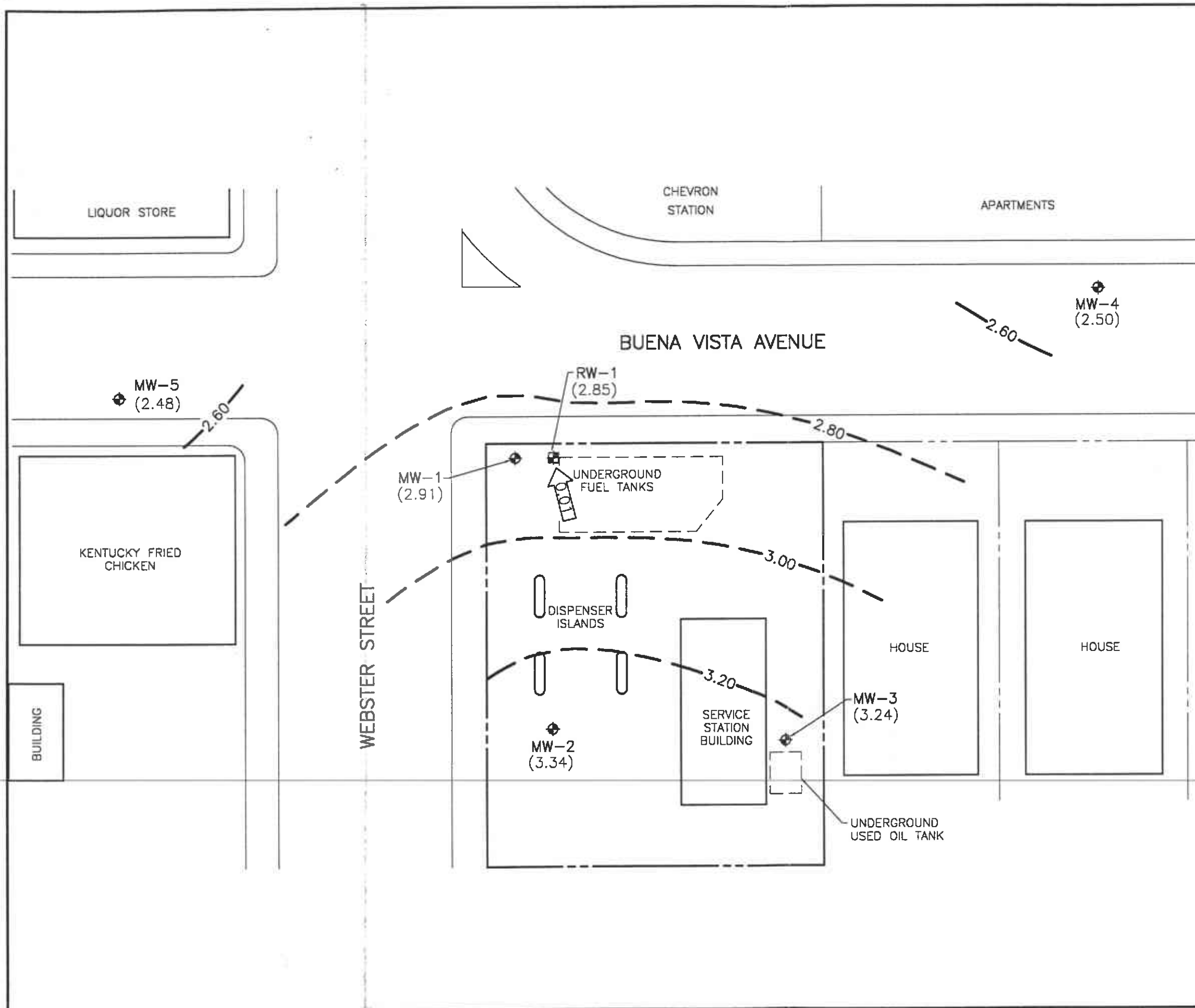
FIGURE 1

SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11104
1716 WEBSTER STREET
ALAMEDA, CALIFORNIA
PROJECT NO. 10-155



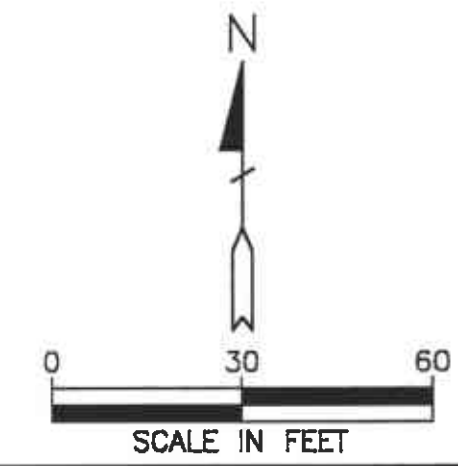
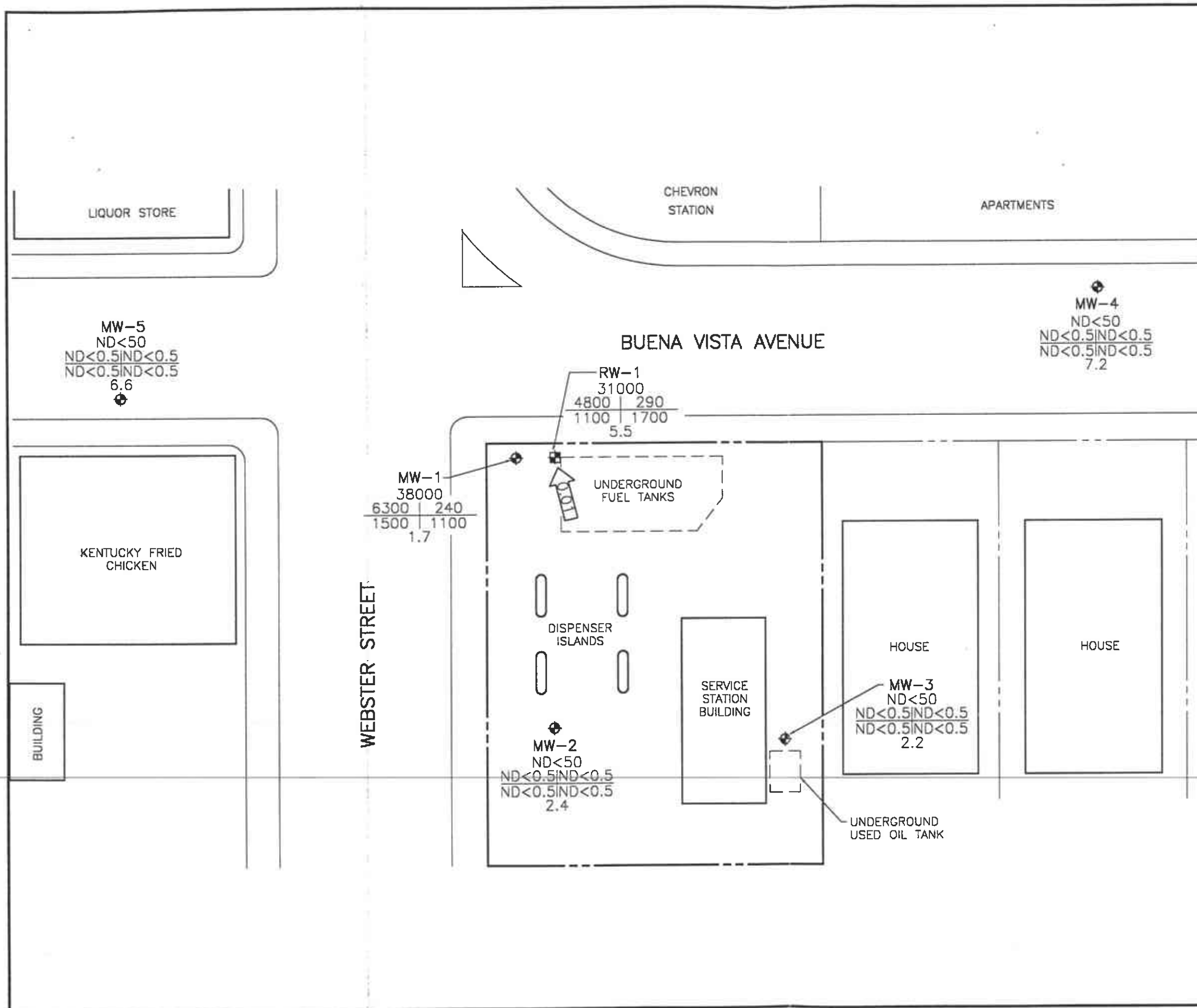
ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA



- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
 - ⊠ GROUNDWATER RECOVERY WELL
 - (2.50) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 2.60 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL - 0.20 FOOT)
 - ← 0.01 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
JULY 25, 1994
 BP OIL SERVICE STATION NO. 11104
 1716 WEBSTER STREET
 ALAMEDA, CALIFORNIA
 PROJECT NO. 10-155

101550-ALISTO E-3-94 RW 1-20



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊞ GROUNDWATER RECOVERY WELL
- TPH-G CONCENTRATION OF CONSTITUENTS IN PARTS PER BILLION, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
- B | T
- E | X
- DO
- TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- DO DISSOLVED OXYGEN
- ND NOT DETECTED ABOVE REPORTED DETECTION LIMIT
- ←0.01 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
JULY 25, 1994
BP OIL SERVICE STATION NO. 11104
1716 WEBSTER STREET
ALAMEDA, CALIFORNIA
PROJECT NO. 10-155

VISION-PLANNING 8-8-88 RW 1-30

APPENDIX A
WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP

Groundwater Sampling

1777 OAKLAND BLVD, STE 200

WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Date: 7/25/94

Project No. 10-155-02-001

Day: Mon

Station No. 11104

Weather: Sunny

Address 15055 85 St, Newark CA

SAMPLER: DC

Well ID	SAMPLE #	WATER DEPTH	Well ID	SAMPLE #	WATER DEPTH	Well ID	SAMPLE	WATER DEPTH
MW5	5-1	5.69	RW-1	5-6	5.52			
MW4	5-2	5.83						
MW3	5-3	6.67						
MW2	5-4	6.07						
MW1	5-5	5.60						

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	EPA 601	TPH-G/BTEX	TPH Diesel	TOG 5520	Time Sampled
MW5	5.69	2"	ng/lock	CP	CP	1.5	1420	78.6	8.47	0.62	6.6	<input type="checkbox"/>	<input checked="" type="checkbox"/> HCL	<input type="checkbox"/>	<input type="checkbox"/>	1430
Total Depth - Water Level =						3	1424	77.9	8.19	0.59		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Purge Method: <input checked="" type="checkbox"/> Surface Pump						4.5	1426	77.7	8.23	0.60	6.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Comments:																

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	EPA 601	TPH-G/BTEX	TPH Diesel	TOG 5520	Time Sampled
MW4	5.83	2"	OK	CP	CP	1.5	1439	77.9	7.51	0.39	6.1	<input type="checkbox"/>	<input checked="" type="checkbox"/> HCL	<input type="checkbox"/>	<input type="checkbox"/>	1447
Total Depth - Water Level =						3	1441	75.8	8.00	0.34		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Purge Method: <input checked="" type="checkbox"/> Surface Pump						5	1443	75.4	8.23	0.34	7.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Comments:																

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	EPA 601	TPH-G/BTEX	TPH Diesel	TOG 5520	Time Sampled
MW3	6.67	2"	OK	CP	CP	1.5	1501	67.9	7.49	0.38	7.2	<input type="checkbox"/>	<input checked="" type="checkbox"/> HCL	<input type="checkbox"/>	<input type="checkbox"/>	1512
Total Depth - Water Level =						3	1504	66.7	7.25	0.38		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Purge Method: <input type="checkbox"/> Surface Pump						5	1508	67.2	7.20	0.38	7.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Comments:																

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	EPA 601	TPH-G/BTEX	TPH Diesel	TOG 5520	Time Sampled
MW2	6.07	2"	OK	CP	CP	1.5	1527	76.2	6.90	0.62	2.0	<input type="checkbox"/>	<input checked="" type="checkbox"/> HCL	<input type="checkbox"/>	<input type="checkbox"/>	1540
Total Depth - Water Level =						3	1530	76.4	6.80	0.59		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Purge Method: <input type="checkbox"/> Surface Pump						4.75	1534	76.7	6.88	0.59	2.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Comments:																

6/20/94
Do - 7.9
Pres - 761
Temp - 83°
Time - 1347

Hydric \downarrow 10
Temp 82.8 \downarrow 7
Time 1355 \downarrow 4

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP

1777 OAKLAND BLVD, STE 200

WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Groundwater Sampling

Date: 7/25/94 Project No. 10-155-02-001
 Day: Mon Station No. 1104
 Weather: Sunny Address Webster St Alameda
 SAMPLER: DOC

Well ID	SAMPLE #	WATER	DEPTH	Well ID	SAMPLE #	WATER	DEPTH	Well ID	SAMPLE	WATER DEPTH

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.
<u>MW-1</u>	<u>5.60</u>	<u>2 1/2"</u>	<u>OL</u>	<u>Ø</u>	<u>Ø</u>	<u>1.5</u>	<u>1550</u>	<u>73.6</u>	<u>6.81</u>	<u>0.83</u>	<u>1.6</u>
Total Depth - Water Level =						<u>3</u>	<u>1553</u>	<u>72.9</u>	<u>6.89</u>	<u>0.81</u>	
<u>16.88 - 5.60 = 11.28 x .26 = 1.81 x 3 = 5.41</u>						<u>5.5</u>	<u>1555</u>	<u>72.2</u>	<u>6.94</u>	<u>0.81</u>	<u>1.7</u>

Purge Method: Surface Pump Disp. Tube Winch Disp. Bailer(s) OSys Port
 Comments: Head to head bail because gas truck was filling underground fuel tanks

- EPA 601
- TPH-G/BTEX HCL
- TPH Diesel
- TOG 5520
- Time Sampled 1605

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.
<u>RW-1</u>	<u>5.52</u>	<u>6"</u>	<u>OL</u>	<u>Ø</u>	<u>Ø</u>	<u>30</u>	<u>1612</u>	<u>73.8</u>	<u>7.31</u>	<u>0.74</u>	<u>5.5</u>
Total Depth - Water Level =						<u>40.50</u>	<u>1616</u>	<u>74.1</u>	<u>7.24</u>	<u>0.71</u>	
<u>21.61 - 5.52 = 16.09 x 1.47 = 23.65 x 3 = 70.96</u>						<u>30.71</u>	<u>1621</u>	<u>74.2</u>	<u>7.27</u>	<u>0.73</u>	

Purge Method: Surface Pump Disp. Tube Winch Disp. Bailer(s) OSys Port
 Comments: QC-1 (5-7) from this well state & Soqals

- EPA 601
- TPH-G/BTEX HCL
- TPH Diesel
- TOG 5520
- Time Sampled 1630

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.

Purge Method: Surface Pump Disp. Tube Winch Disp. Bailer(s) OSys Port
 Comments:

- EPA 601
- TPH-G/BTEX
- TPH Diesel
- TOG 5520
- Time Sampled

6/20/94

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

Alisto Engineering Group
 1777 Oakland Blvd., Ste. 200
 Walnut Creek, CA 94596

August 03, 1994
 PACE Project Number: 440727514

Attn: Mr. Bill Howell

Client Reference: BP Site #11104/10-155-02-001

PACE Sample Number: 70 0361974
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
------------------	--------------	------------	----------------------

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 08/01/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 08/01/94
Toluene	ug/L	0.5	ND 08/01/94
Ethylbenzene	ug/L	0.5	ND 08/01/94
Xylenes, Total	ug/L	0.5	ND 08/01/94

Mr. Bill Howell
 Page 2

August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

PACE Sample Number: 70 0361982
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 08/01/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 08/01/94
Toluene	ug/L	0.5	ND 08/01/94
Ethylbenzene	ug/L	0.5	ND 08/01/94
Xylenes, Total	ug/L	0.5	ND 08/01/94

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August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

PACE Sample Number: 70 0361990
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-3

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 08/01/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 08/01/94
Toluene	ug/L	0.5	ND 08/01/94
Ethylbenzene	ug/L	0.5	ND 08/01/94
Xylenes, Total	ug/L	0.5	ND 08/01/94

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August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

PACE Sample Number: 70 0362008
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-4

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 08/01/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 08/01/94
Toluene	ug/L	0.5	ND 08/01/94
Ethylbenzene	ug/L	0.5	ND 08/01/94
Xylenes, Total	ug/L	0.5	ND 08/01/94

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August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

PACE Sample Number: 70 0362016
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-5

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	2500	38000
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-
Benzene	ug/L	25	6300
Toluene	ug/L	25	240
Ethylbenzene	ug/L	25	1500
Xylenes, Total	ug/L	25	1100

Mr. Bill Howell
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August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

PACE Sample Number: 70 0362024
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-6

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	2500	31000
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	08/01/94
Benzene	ug/L	25	4800
Toluene	ug/L	25	290
Ethylbenzene	ug/L	25	1100
Xylenes, Total	ug/L	25	1700

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August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

PACE Sample Number: 70 0362032
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-7

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	08/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	2500	28000	08/01/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	08/01/94
Benzene	ug/L	25	4400	08/01/94
Toluene	ug/L	25	240	08/01/94
Ethylbenzene	ug/L	25	960	08/01/94
Xylenes, Total	ug/L	25	1400	08/01/94

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

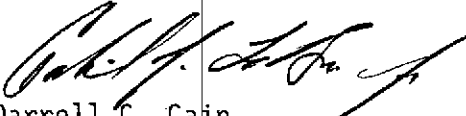
PACE Sample Number: 70 0362040
 Date Collected: 07/25/94
 Date Received: 07/27/94
 Client Sample ID: S-8

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	08/01/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 08/01/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	08/01/94
Benzene	ug/L	0.5	ND 08/01/94
Toluene	ug/L	0.5	ND 08/01/94
Ethylbenzene	ug/L	0.5	ND 08/01/94
Xylenes, Total	ug/L	0.5	ND 08/01/94

These data have been reviewed and are approved for release.


 Darrell C. Cain
 Regional Director

Mr. Bill Howell
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FOOTNOTES
for pages 1 through 8

August 03, 1994
PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

MDL Method Detection Limit
ND Not detected at or above the MDL.

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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QUALITY CONTROL DATA

August 03, 1994
 PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

PURGEABLE FUELS AND AROMATICS

Batch: 70 32495

Samples: 70 0361974, 70 0361982, 70 0361990, 70 0362008, 70 0362016
 70 0362024, 70 0362032, 70 0362040

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	700361761	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	1000	102%	104%	2%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	114%	106%	7%

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FOOTNOTES
for page 10

August 03, 1994
PACE Project Number: 440727514

Client Reference: BP Site #11104/10-155-02-001

MDL Method Detection Limit
ND Not detected at or above the MDL.
RPD Relative Percent Difference



440727.514

CHAIN OF CUSTODY

No. 053121

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CONSULTANT'S NAME <i>Aliso Engineering</i>		ADDRESS <i>1777 OAKLAND Blvd Ste 200 WARMACK CA, 94596</i>		CITY	STATE	ZIP CODE
BP SITE NUMBER <i>11104</i>	BP CORNER ADDRESS/CITY <i>Webster Ave Alameda CA</i>		CONSULTANT PROJECT NUMBER <i>10-155-02-001</i>			
CONSULTANT PROJECT MANAGER <i>Bill Howell</i>		PHONE NUMBER <i>510 295 1650</i>	FAX NUMBER <i>510 295 1823</i>		CONSULTANT CONTRACT NUMBER	
BP CONTACT <i>Scott Houston</i>		BP ADDRESS <i>Renton WA</i>	PHONE NUMBER <i>415 883 2673</i>		FAX NO.	
LAB CONTACT <i>Pace Inc</i>		LABORATORY ADDRESS <i>(415) 6883 6100</i>	PHONE NUMBER <i>Fax 415 883 2673</i>		FAX NO <i>Address Novato CA</i>	
SAMPLED BY (Please Print Name) <i>DAVID WSACK</i>		SAMPLED BY (Signature) <i>David Wsack</i>		SHIPMENT DATE		SHIPMENT METHOD <i>Courier</i>

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	HCL	COMMENTS	
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #	TPH Gas Box		
S-1	1430	7/25/04	420	3	(vol)	36197.4	X	
S-2	1447	↓	↓	↓	↓	36198.2	↓	
S-3	1512					36199.0		
S-4	1540					362008		
S-5	1605					362016		
S-6	1630					36202.4		
S-7	—					36203.2		
S-8	—					36204.0		↓

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>David Wsack</i>	<i>7/27/04</i>	<i>1500</i>	<i>Ed Kelly - Pace</i>	<i>7/27/04</i>	<i>1500</i>	<i>10/2</i>
<i>Ed Kelly - Pace</i>	<i>7/27</i>	<i>1715</i>	<i>D. Q. - Pace</i>	<i>7/27</i>	<i>1715</i>	