



BP OIL

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

*See
12/28*

December 14, 1994

adding to receive QMP

Ms Eva Chu
Alameda County Health Care Services Agency
80 Swan Way Room 200
Oakland CA 94621

**RE: BP OIL FACILITY #11120
6400 Dublin Blvd
Dublin, CA**

Dear Ms Chu:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING
REPORT DATED NOVEMBER 23, 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\ERM11120

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

Mr. Scott Kellstedt, HETI, 2363 Mariner Square Drive, Suite 243, Alameda CA
94501

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

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

NOV 29 1994

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11120
6400 Dublin Boulevard
Dublin, California

Project No. 10-170-02-001

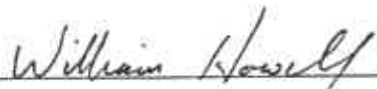
Prepared for:

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

Prepared by:

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

November 23, 1994



William Howell
Project Manager



Al Sevilla, P.E.
Principal



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11120
6400 Dublin Boulevard
Dublin, California

Project No. 10-170-02-001

November 23, 1994

INTRODUCTION

This report presents the results and findings of the September 12, 1994 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11120, 6400 Dublin Boulevard, Dublin, 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 in reference to mean sea level. 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. 11120
 6400 DUBLIN BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-170

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	TPH-D (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TOG (ppb)	HVOC (ppb)	DO (ppm)	LAB
MW-1	10/27/92	328.96	8.19	320.77	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ND	---	PACE
MW-1	04/09/93	328.96	4.79	324.17	ND<50	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-1	08/25/93	328.96	6.85	322.11	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-1	11/22/93	328.96	7.38	321.58	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-1	03/07/94	328.96	5.89	323.07	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	4.3	PACE
MW-1	06/09/94	328.96	6.42	322.54	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	8.8	PACE
MW-1	09/12/94	328.96	7.33	321.63	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.8	PACE
MW-2	10/27/92	328.50	7.64	320.86	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-2	04/09/93	328.50	4.12	324.38	ND<50	80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-2	08/25/93	328.50	6.31	322.19	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-2	11/22/93	328.50	7.12	321.38	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-2	03/07/94	328.50	5.60	322.90	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	4.3	PACE
MW-2	06/09/94	328.50	5.91	322.59	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	8.2	PACE
MW-2	09/12/94	328.50	6.87	321.63	ND<50	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.5	PACE
MW-3	10/27/92	329.36	8.43	320.93	210	ND<50	3	0.7	0.9	30	---	---	---	PACE
MW-3	04/09/93	329.36	4.90	324.46	400	260	6.1	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-3	08/25/93	329.36	7.13	322.23	2000	440	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-3	11/22/93	329.36	7.60	321.76	1800	360	ND<2.5	ND<2.5	ND<2.5	ND<2.5	---	---	---	PACE
MW-3	03/07/94	329.36	6.08	323.28	1300	5000	22	4.0	2.2	3.8	---	---	3.7	PACE
MW-3	06/09/94	329.36	6.51	322.85	8500	2600	25	8.3	0.5	15	---	---	7.2	PACE
QC-1 (c)	06/09/94	---	---	---	8800	---	23	6.3	0.5	10	---	---	---	PACE
MW-3	09/12/94	329.36	7.63	321.73	2100	---	ND<5.0	ND<5.0	8.8	20	---	---	7.3	PACE
QC-1 (c)	09/12/94	---	---	---	1800	---	ND<5.0	ND<5.0	8.0	10	---	---	---	PACE
MW-4	10/27/92	329.45	8.61	320.84	2300	190	23	54	50	320	---	---	---	PACE
MW-4	04/09/93	329.45	5.25	324.20	1600	500	78	3.5	68	1.0	---	---	---	PACE
MW-4	08/25/88	329.45	7.32	322.13	1800	380	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-1 (c)	08/25/93	---	---	---	1600	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-4	11/22/93	329.45	7.83	321.62	610	260	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-1 (c)	11/22/93	---	---	---	1700	---	ND<2.5	ND<2.5	ND<2.5	ND<2.5	---	---	---	PACE
MW-4	03/07/94	329.45	6.29	323.16	710	1400	0.5	0.8	ND<0.5	ND<0.5	---	---	3.8	PACE
QC-1 (c)	03/07/94	---	---	---	1600	---	ND<0.5	ND<0.5	1.4	0.6	---	---	---	PACE
MW-4	06/09/94	329.45	6.76	322.69	6400	1800	ND<10	ND<10	ND<10	ND<10	---	---	7.5	PACE
MW-4	09/12/94	329.45	7.83	321.62	2300	2700	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.2	PACE
MW-5	04/09/93	329.60	5.18	324.42	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	08/25/93	329.60	7.28	322.32	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	11/22/93	329.60	7.82	321.78	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	03/07/94	329.60	6.27	323.33	ND<50	120	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	5.7	PACE
MW-5	06/09/94	329.60	6.73	322.87	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.7	PACE
MW-5	09/12/94	329.60	7.78	321.82	ND<50	120	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. 11120
 6400 DUBLIN BOULEVARD, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-170

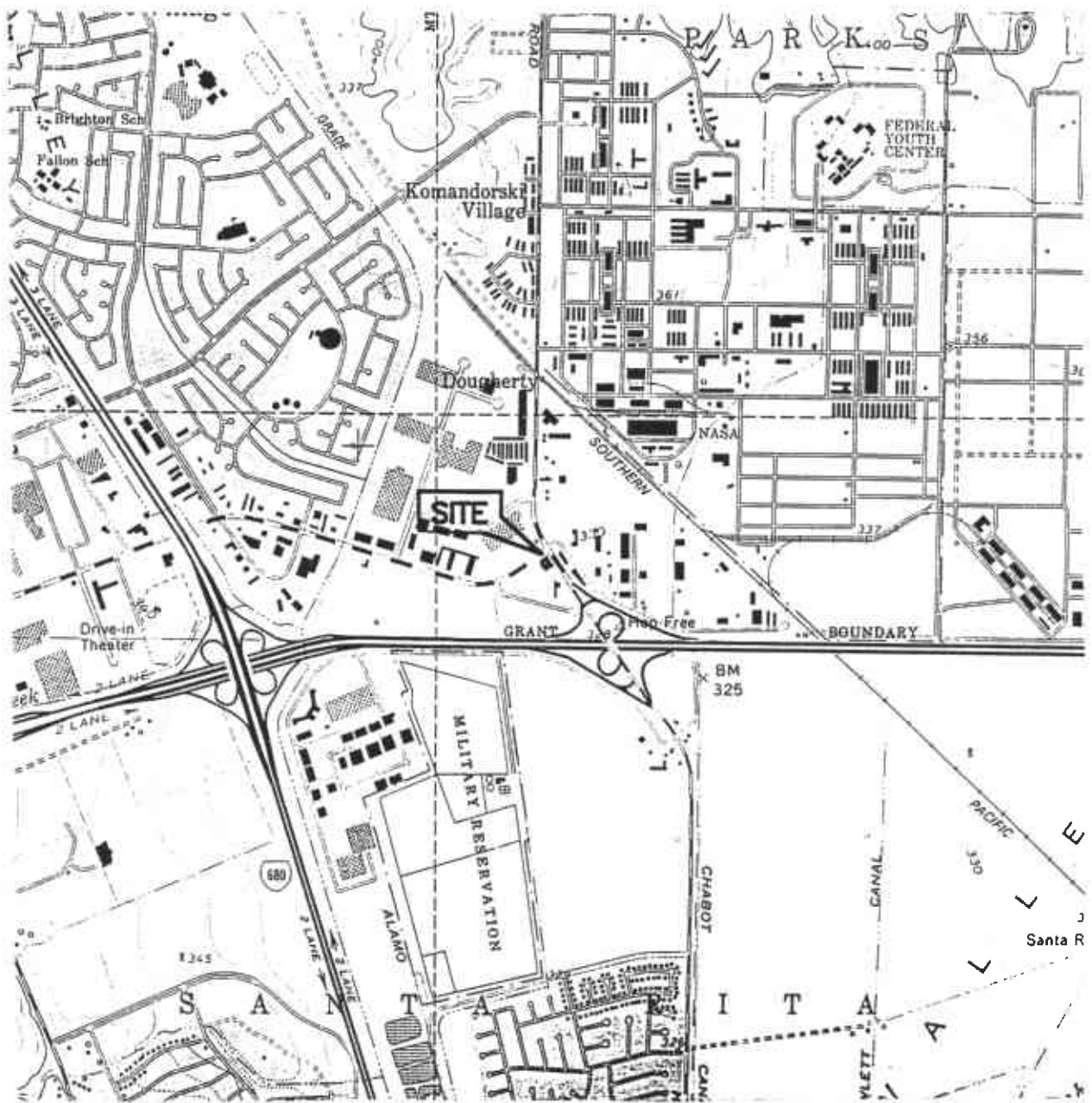
WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	TPH-D (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TOG (ppb)	HVOC (ppb)	DO (ppm)	LAB
MW-6	04/09/93	329.55	5.37	324.18	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-6	08/25/93	329.55	7.42	322.13	ND<50	170	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-6	11/22/93	329.55	7.93	321.62	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-6	03/07/94	329.55	6.25	323.30	ND<50	90 (d)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	4.2	PACE
MW-6	06/09/94	329.55	6.85	322.70	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	7.0	PACE
MW-6	09/12/94	329.55	7.91	321.64	ND<50	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	6.7	PACE
MW-7	04/09/93	329.49	5.36	324.13	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-7	08/25/93	329.49	7.44	322.05	ND<50	150	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-7	11/22/93	329.49	7.92	321.57	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
MW-7	03/07/94	329.49	6.20	323.29	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	3.7	PACE
MW-7	06/09/94	329.49	6.89	322.60	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	6.8	PACE
MW-7	09/12/94	329.49	7.87	321.62	ND<50	50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	6.8	PACE
QC-2 (e)	08/25/93	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (e)	11/22/93	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (e)	03/07/94	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (e)	06/09/94	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE
QC-2 (e)	09/12/94	--	--	--	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	PACE

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
TOG	Total oil and grease
HVOC	Halogenated volatile organic compounds
DO	Dissolved oxygen
ppb	Parts per billion
ppm	Parts per million
ND	Not detected above reported detection limit
--	Not analyzed/applicable/measured
PACE	Pace, Inc.

NOTES:

- (a) Top of casing elevations surveyed to an arbitrary datum.
- (b) Groundwater elevations relative to an arbitrary datum.
- (c) Blind duplicate.
- (d) Sample pattern does not match the diesel standard pattern.
- (e) Travel blank.

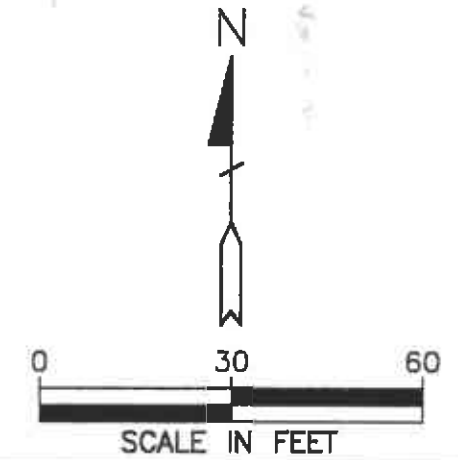
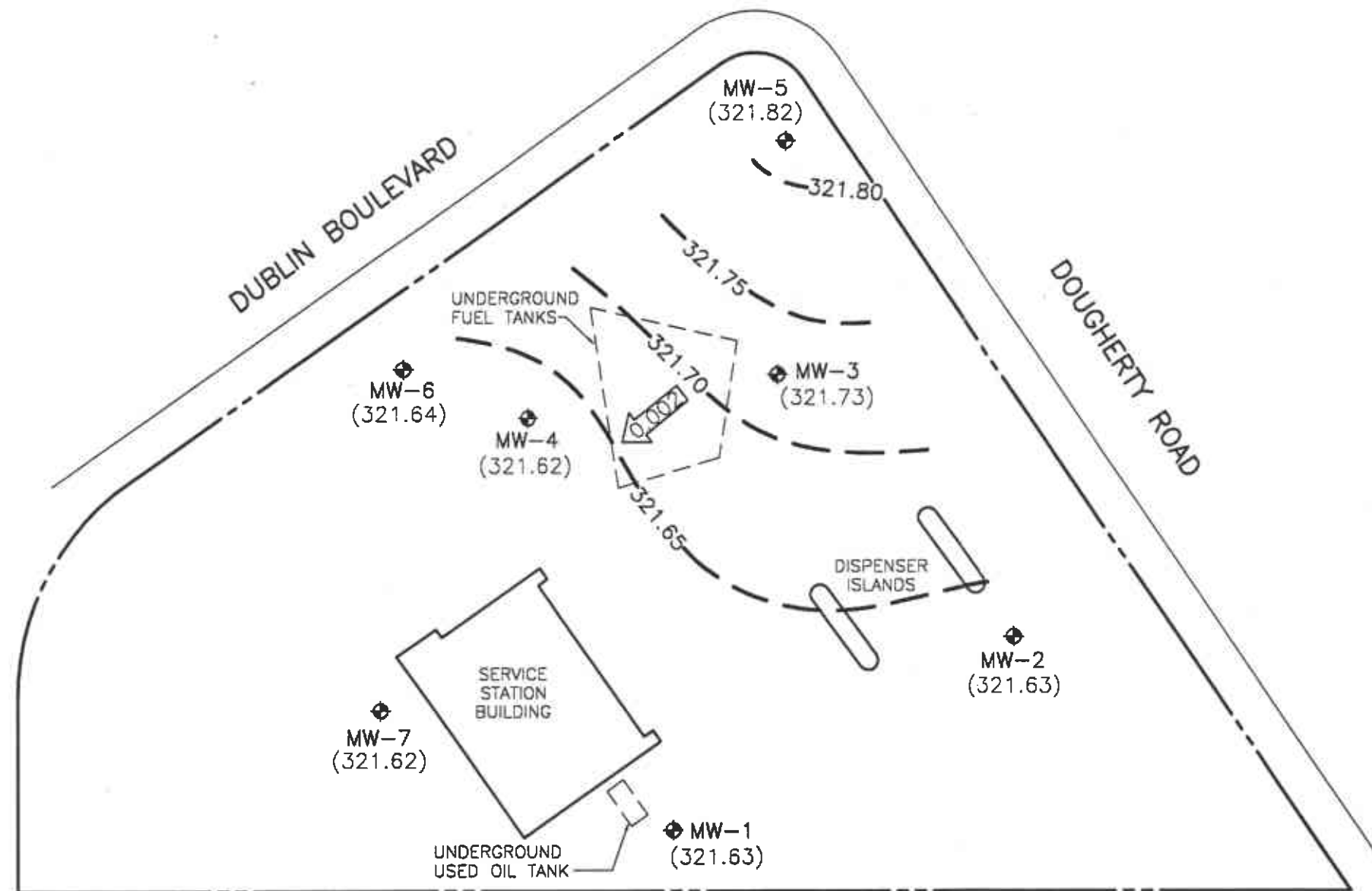


SOURCE:
 USGS MAP, DUBLIN QUADRANGLE,
 CALIFORNIA. 7.5 MINUTE SERIES. 1961.
 PHOTOREVISED 1980.

FIGURE 1
SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11120
 6400 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA
 PROJECT NO. 10-170

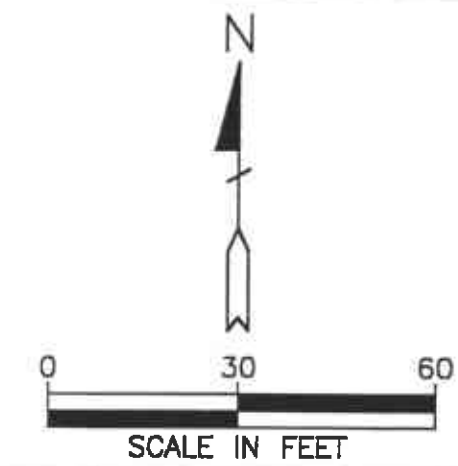
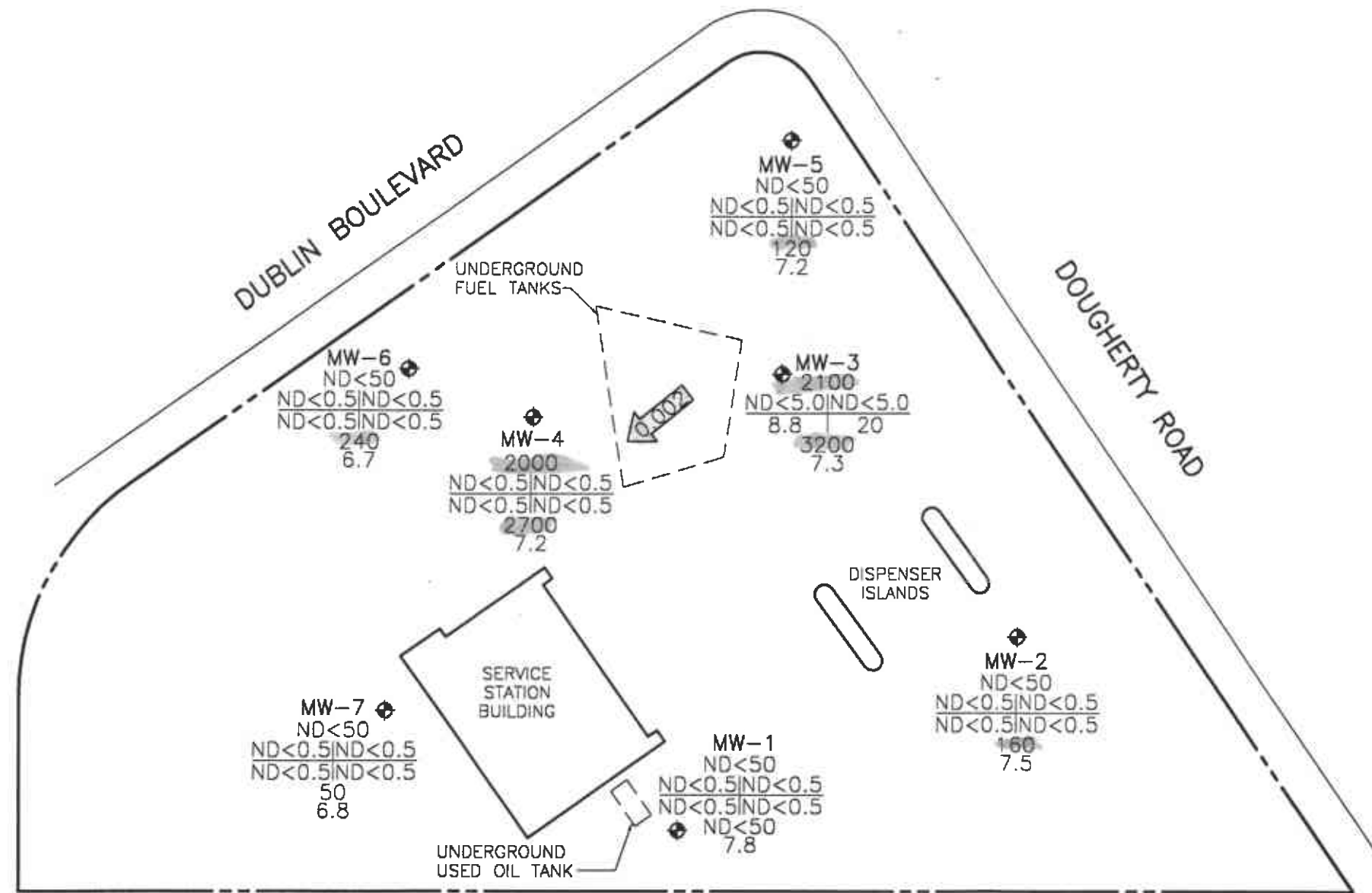




LEGEND

- ◆ GROUNDWATER MONITORING WELL
- (321.82) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- - - 321.80 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL=0.05 FOOT)
- ← 0.002 ← CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
SEPTEMBER 12, 1994
 BP OIL SERVICE STATION NO. 11120
 6400 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA
 PROJECT NO. 10-170



LEGEND

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

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
SEPTEMBER 12, 1994
 BP OIL SERVICE STATION NO. 11120
 6400 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA
 PROJECT NO. 10-170

WATER SAMPLING FIELD SURVEY FORMS

APPENDIX A

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING

Groundwater Sampling

Date: 9/12/04

Project No. 10-170-02-001

GROUP

Day: M T W Th F

Facility No. 11120

1777 OAKLAND BLVD, STE 200

Barometric pres. 761

Temp. 79°

Address 5580 S. Daybody, Dublin, CA

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

SAMPLER:

Well ID	SAMPLE #	WATER	time	Well ID	SAMPLE #	WATER/	time	Well ID	SAMPLE	WATER / time
MW1	S-1	7.33	1235	MW4	S-6	7.83	1244			
MW7	S-2	7.87	1237	MW3	S-7	7.63	1247			
MW6	S-3	7.91	1238							
MW5	S-4	7.78	1240							
MW2	S-5	6.87	1242							

FIELD INSTRUMENT CALIBRATION DATA

PH METER 4.00 7.00 10.00 TIME 1300 TEMPERATURE COMPENSATED N
 TURBIDI METER 5.0 NTU STANDARD OTHER DO reading LA @ 1315
 CONDUCTIVITY METER ✓ 10,000 OTHER

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW1	7.33	2"	OK	Ø	Y (N)	2	1327	72.0	7.56	2.16	7.9	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $17.20 - 7.33 = 10.87 \times .16 = 1.74 \times 3 = 5.22$						4	1330	73.0	8.13	2.03		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port						5.25	1333	73.0	8.12	1.98	7.8	<input checked="" type="checkbox"/> TPH Diesel <u>none</u>
Comments:												<input type="checkbox"/> TOG 5520
												Time/Sample
												S-1/1337
MW7	7.87	2"	OK	Ø	Y (N)	2	1350	74.4	7.49	2.54	7.4	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $20.25 - 7.87 = 12.38 \times .16 = 1.98 \times 3 = 5.94$						4	1354	72.4	7.51	2.46		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port						6	1357	72.4	7.33	2.48	6.8	<input checked="" type="checkbox"/> TPH Diesel <u>none</u>
Comments:												<input type="checkbox"/> TOG 5520
												Time/ Sample
												S-2/1401
MW6	7.91	4"	OK	Ø	Y (N)	7	1415	72.7	7.78	2.46	6.9	<input type="checkbox"/> EPA 601
Total Depth - Water Level = $19.25 - 7.91 = 11.34 \times .65 = 7.37 \times 3 = 22.11$						14	1417	71.8	7.67	2.40		<input type="checkbox"/> TPH-G/BTEX
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port						22.25	1421	70.9	7.64	2.35	6.7	<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520
												Time /Sample
												S-3/1425

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING GROUP

Groundwater Sampling

Date: 9/12/94 Project No. 10-170-02-001
 Day: Mon Station No. 11120
 Weather: Sunny Address 1580 De-graffy, Dublin CA
 SAMPLER: 0 DC

1777 OAKLAND BLVD, STE 200
 WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW5	7.78	2"	repurp	⊕	⊕	2.5	1440	73.3	7.31	1.92	6.7	<input type="checkbox"/> EPA 601
Total Depth - Water Level =						3	1443	72.4	7.41	1.95		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HCL</u>
$21.35 - 7.78 = 13.57 \times .16 = 2.17 \times 3 = 6.51$						6.75	1446	72.4	7.47	2.03	7.2	<input checked="" type="checkbox"/> TPH Diesel <u>none</u>
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments:												Time Sampled <u>1450</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW2	6.87	2"	OK	⊕	⊕	2	1505	76.2	7.31	5.12	7.8	<input type="checkbox"/> EPA 601
Total Depth - Water Level =						4	1507	75.1	7.26	4.99		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HCL</u>
$18.25 - 6.87 = 11.37 \times .16 = 1.82 \times 3 = 5.46$						5.5	1510	74.0	7.19	4.97	7.5	<input checked="" type="checkbox"/> TPH Diesel <u>none</u>
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments:												Time Sampled <u>1512</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW4	7.83	2"	OK	⊕	⊕	2	1535	74.8	7.49	2.96	7.7	<input type="checkbox"/> EPA 601
Total Depth - Water Level =						4	1527	74.2	7.42	2.81		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HCL</u>
$18.15 - 7.83 = 10.32 \times .16 = 1.65 \times 3 = 4.95$						5	1531	73.8	7.37	2.75	7.2	<input checked="" type="checkbox"/> TPH Diesel <u>low</u>
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments:												Time Sampled <u>1533</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW3	7.63	2"	OK	⊕	⊕	2	1550	76.0	7.65	2.25	7.4	<input type="checkbox"/> EPA 601
Total Depth - Water Level =						4	1552	75.2	7.33	2.81		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HCL</u>
$17.61 - 7.63 = 10.98 \times .16 = 1.76 \times 3 = 5.27$						5.5	1554	74.6	7.28	2.75	7.3	<input checked="" type="checkbox"/> TPH Diesel <u>none</u>
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TOG 5520
Comments: <u>QC-1 from this well (5-8) casing needs to be up graded</u>												Time Sampled <u>1600</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
												<input type="checkbox"/> EPA 601
Total Depth - Water Level =												<input type="checkbox"/> TPH-G/BTEX
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520
												Time Sampled

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



REPORT OF LABORATORY ANALYSIS

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

September 22, 1994
 PACE Project Number: 440913522

Attn: Mr. Bill Howell

Client Reference: BP Site #11120

PACE Sample Number: 70 0392764
 Date Collected: 09/12/94
 Date Received: 09/13/94
 S-1 1337

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
<u>ORGANIC ANALYSIS</u>			
PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	09/21/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	09/21/94
Toluene	ug/L	0.5	09/21/94
Ethylbenzene	ug/L	0.5	09/21/94
Xylenes, Total	ug/L	0.5	09/21/94
EXTRACTABLE FUELS EPA 3510/8015			
Extractable Fuels, as Diesel	mg/L	0.05	09/20/94
Date Extracted			09/16/94



REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
Page 2

September 22, 1994
PACE Project Number: 440913522

Client Reference: BP Site #11120

PACE Sample Number: 70 0392772
Date Collected: 09/12/94
Date Received: 09/13/94
Client Sample ID: S-2 1401

<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):		-	09/17/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 09/17/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	09/17/94
Benzene	ug/L	0.5	ND 09/17/94
Toluene	ug/L	0.5	ND 09/17/94
Ethylbenzene	ug/L	0.5	ND 09/17/94
Xylenes, Total	ug/L	0.5	ND 09/17/94

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel	mg/L	0.05	0.05 09/20/94
Date Extracted			09/16/94

Mr. Bill Howell
 Page 3

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PACE Sample Number: 70 0392780
 Date Collected: 09/12/94
 Date Received: 09/13/94
 Client Sample ID: S-3 1425

<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):			-	09/17/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	09/17/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	09/17/94
Benzene	ug/L	0.5	ND	09/17/94
Toluene	ug/L	0.5	ND	09/17/94
Ethylbenzene	ug/L	0.5	ND	09/17/94
Xylenes, Total	ug/L	0.5	ND	09/17/94

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel	mg/L	0.05	0.24	09/20/94
Date Extracted			09/16/94	

Mr. Bill Howell
 Page 4

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PACE Sample Number: 70 0392799
 Date Collected: 09/12/94
 Date Received: 09/13/94
 Client Sample ID: S-4 1450

<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):			-	09/17/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	09/17/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	09/17/94
Benzene	ug/L	0.5	ND	09/17/94
Toluene	ug/L	0.5	ND	09/17/94
Ethylbenzene	ug/L	0.5	ND	09/17/94
Xylenes, Total	ug/L	0.5	ND	09/17/94

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel	mg/L	0.05	0.12	09/20/94
Date Extracted			09/16/94	

Mr. Bill Howell
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September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PACE Sample Number: 70 0392802
 Date Collected: 09/12/94
 Date Received: 09/13/94
 Client Sample ID: S-5 1512

<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):			-	09/19/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	09/19/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	09/19/94
Benzene	ug/L	0.5	ND	09/19/94
Toluene	ug/L	0.5	ND	09/19/94
Ethylbenzene	ug/L	0.5	ND	09/19/94
Xylenes, Total	ug/L	0.5	ND	09/19/94

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel	mg/L	0.05	0.16	09/20/94
Date Extracted			09/16/94	

Mr. Bill Howell
 Page 6

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PACE Sample Number: 70 0392810
 Date Collected: 09/12/94
 Date Received: 09/13/94
 Client Sample ID: S-6 1533

<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):			09/21/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	2000 09/21/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 09/21/94
Toluene	ug/L	0.5	ND 09/21/94
Ethylbenzene	ug/L	0.5	ND 09/21/94
Xylenes, Total	ug/L	0.5	ND 09/21/94
EXTRACTABLE FUELS EPA 3510/8015			
Extractable Fuels, as Diesel	mg/L	0.05	2.7 09/20/94
Date Extracted			09/16/94

Mr. Bill Howell
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September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PACE Sample Number: 70 0392829
 Date Collected: 09/12/94
 Date Received: 09/13/94
 Client Sample ID: S-7 1600

<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):			-	09/21/94
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	2100	09/21/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	09/21/94
Benzene	ug/L	5.0	ND	09/21/94
Toluene	ug/L	5.0	ND	09/21/94
Ethylbenzene	ug/L	5.0	8.8	09/21/94
Xylenes, Total	ug/L	5.0	20	09/21/94

EXTRACTABLE FUELS EPA 3510/8015

Extractable Fuels, as Diesel	mg/L	0.05	3.2	09/20/94
Date Extracted			09/16/94	

Mr. Bill Howell
 Page 8

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PACE Sample Number: 70 0392837
 Date Collected: 09/12/94
 Date Received: 09/13/94
 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):			-	09/21/94
Purgeable Fuels, as Gasoline (EPA 8015M) ug/L	500	1800		09/21/94
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	09/21/94
Benzene ug/L	5.0	ND		09/21/94
Toluene ug/L	5.0	ND		09/21/94
Ethylbenzene ug/L	5.0	8.0		09/21/94
Xylenes, Total ug/L	5.0	10		09/21/94

Mr. Bill Howell
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September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

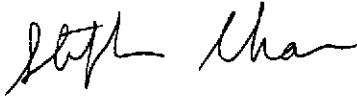
PACE Sample Number: 70 0392845
 Date Collected: 09/12/94
 Date Received: 09/13/94
 Client Sample ID: S-9

<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	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

These data have been reviewed and are approved for release.



for Darrell C. Cain
 Regional Director

Mr. Bill Howell
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FOOTNOTES
for pages 1 through 9

September 22, 1994
PACE Project Number: 440913522

Client Reference: BP Site #11120

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

Mr. Bill Howell
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QUALITY CONTROL DATA

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

EXTRACTABLE FUELS EPA 3510/8015

Batch: 70 34171

Samples: 70 0392764, 70 0392772, 70 0392780, 70 0392799, 70 0392802
 70 0392810, 70 0392829

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Extractable Fuels, as Diesel	mg/L	0.05	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dup1 Recv	RPD
Extractable Fuels, as Diesel	mg/L	0.05	1.00	180%	143%	23%

Mr. Bill Howell
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QUALITY CONTROL DATA

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PURGEABLE FUELS AND AROMATICS
 Batch: 70 34159
 Samples: 70 0392772, 70 0392780

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	700392780 S-3 1425	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	1000	88%	87%	1%

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	110%	103%	7%

Mr. Bill Howell
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QUALITY CONTROL DATA

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PURGEABLE FUELS AND AROMATICS

Batch: 70 34163
 Samples: 70 0392802, 70 0392845

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	700392780 S-3 1425	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	1000	88%	87%	1%

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	110%	103%	7%

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
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QUALITY CONTROL DATA

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PURGEABLE FUELS AND AROMATICS
 Batch: 70 34206
 Samples: 70 0392799

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	700392799 S-4 1450	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	1000	90%	86%	5%

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	99%	102%	3%

Mr. Bill Howell
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QUALITY CONTROL DATA

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PURGEABLE FUELS AND AROMATICS

Batch: 70 34223
 Samples: 70 0392810, 70 0392829, 70 0392837

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	700392780 S-3 1425	Spike	Spike Recv	Spike Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	1000	88%	87%	1%

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	110%	103%	7%

REPORT OF LABORATORY ANALYSIS

Mr. Bill Howell
 Page 16

QUALITY CONTROL DATA

September 22, 1994
 PACE Project Number: 440913522

Client Reference: BP Site #11120

PURGEABLE FUELS AND AROMATICS
 Batch: 70 34225
 Samples: 70 0392764

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	700392705	Spike	Spike Recv	Spike Dupl Recv	RPD
Benzene	ug/L	0.5	ND	100	108%	104%	4%
Toluene	ug/L	0.5	ND	100	103%	101%	2%
Ethylbenzene	ug/L	0.5	0.5	100	98%	97%	1%
Xylenes, Total	ug/L	0.5	1.2	300	102%	101%	1%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Benzene	ug/L	0.5	100	97%	98%	1%
Toluene	ug/L	0.5	100	96%	98%	2%
Ethylbenzene	ug/L	0.5	100	95%	97%	2%
Xylenes, Total	ug/L	0.5	300	99%	100%	1%

Mr. Bill Howell
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FOOTNOTES
for pages 11 through 16

September 22, 1994
PACE Project Number: 440913522

Client Reference: BP Site #11120

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



440913-572

CHAIN OF CUSTODY

No.063409

Page 1 of 1

CONSULTANT'S NAME <i>Alisto Engineering</i>		ADDRESS <i>1777 Oakland Blvd, Ste 200 Walnut Creek CA 94596</i>		CITY <i>Walnut Creek</i>	STATE <i>CA</i>	ZIP CODE <i>94596</i>
BP SITE NUMBER <i>11120</i>	BP CORNER ADDRESS/CITY <i>1-580 c Dougherty, Dublin CA</i>	CONSULTANT PROJECT NUMBER <i>10-170-02-001</i>			CONSULTANT CONTRACT NUMBER <i>(510) 215 1823</i>	
CONSULTANT PROJECT MANAGER <i>Bill Howell</i>		PHONE NUMBER <i>(510) 215 1650</i>	FAX NUMBER <i>(510) 215 1823</i>	CONSULTANT CONTRACT NUMBER <i>(415) 883 2673</i>		
BP CONTACT <i>Scott Hoctor</i>	BP ADDRESS <i>Renton WA</i>	PHONE NUMBER <i>(415) 883 6100</i>	FAX NO. <i>(415) 883 2673</i>	FAX NO. <i>↓</i>		
LAB CONTACT <i>Pave, Inc</i>	LABORATORY ADDRESS <i>Novato CA</i>	PHONE NUMBER <i>↓</i>	FAX NO. <i>↓</i>	SHIPMENT DATE		
SAMPLED BY (Please Print Name) <i>David Wask</i>		SAMPLED BY (Signature) <i>David Wask</i>		SHIPMENT DATE		SHIPMENT METHOD <i>Carrier</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	TPH	
S-1 1337	9/12/94	H2O	4	300A	392764	X	X	1 VOA has air bubble
S-2 1401					392772			
S-3 1425					392780			
S-4 1450					392799			
S-5 1512					392802			
S-6 1533					392810			
S-7 1600			↓	↓	392829			
S-8 -				300A	VOA 392837			
S-9 -				200A	VOA 392845			

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>David Wask Alisto</i>	<i>9/12/94</i>	<i>9/12/94</i>	<i>Yvonda DAD</i>	<i>9/12/94</i>	<i>3:30</i>	
			<i>David Wask Pave</i>	<i>9/13/94</i>	<i>3:30</i>	