BP OIL

BP Oil Company
16400 Southcenter Parkway, Suite 301
Tukwila, Washington 98188
(206) 574-4077

93 AUG 10 PM 1:35

August 9, 1993

Mr. Rafat Shahid
Alameda County Health Agency
80 Swan Way, Room 200
Oakland, CA 94621

RE: BP OIL FACILITY #11116
7197 Village Parkway
Dublin, CA

Dear Mr. Shahid:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT** for the above referenced facility.

Please call me at (206) 394-5243 with questions regarding this submission.

Respectfully,

Scott T. Hooton
Environmental Resources Management
Group Leader

STH:jc ERM11116

cc: Mr. Eddy So, California Regional Water Quality Control Board, San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, Ca 94612

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

Mr. Robert Merriken, Mobil Oil Corp, 3225 Gallows Road, Fairfax, VA 22037

Site file

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11116
7197 Village Parkway
Dublin, California

Project No. 10-017-02-001

Prepared for:

BP Oil Company
Environmental Resource Management
16400 Southcenter Parkway, Suite 301
Tukwila, Washington

Prepared by:

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

July 26, 1993

Brady Nagle
Project Manager

Al Sevilla, P.E.
Principal

REGISTERED PROFESSIONAL ENGINEER
AL SEVILLA
No. 21902
Exp. Date 3/31/96
CIVIL
STATE OF CALIFORNIA

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11116
7197 Village Parkway
Dublin, California

Project No. 10-017-02-001

July 26, 1993

INTRODUCTION

This report presents the results and findings of the May 21, 1993 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11116, 7197 Village Parkway, 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 the 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.

During this event, groundwater samples were only collected from Monitoring Well AW-6. Before sample collection, the 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 collected for this and previous quarters are summarized in Table 1. The potentiometric surface elevations for groundwater are shown in Figure 2. 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. 11116
7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a)	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)	LAB
MW-1	10/12/90	335.17	9.92	325.25	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-1	11/15/90	335.17	10.16	325.01	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW 1	12/11/90	335.17	9.97	325.20	---	---	---	---	---	---	---	---	---
MW-1	02/15/91	335.17	9.89	325.28	ND<50	50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	41 (c)	SUP
MW-1	05/14/91	335.17	8.43	326.74	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	7,500	ND	SUP
MW-1	08/23/91	335.17	9.98	325.19	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	ANA
MW-1	11/13/91	335.17	10.09	325.08	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SEQ
MW-1	02/25/92	335.17	8.28	326.89	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SEQ
MW-1	04/15/92	335.17	8.50	326.67	---	---	---	---	---	---	---	---	---
MW-1	06/03/92	335.17	9.06	326.11	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-1	08/12/92	335.17	10.01	325.16	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-1	11/10/92	335.17	10.67	324.50	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-1	02/10/93	335.17	5.25	329.92	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	PACE
MW-1	05/21/93	335.17	5.73	329.44	---	---	---	---	---	---	---	---	---
MW-2	10/12/90	334.58	9.60	324.98	93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-2	11/15/90	334.58	9.68	324.90	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-2	12/11/90	334.58	9.47	325.11	---	---	---	---	---	---	---	---	---
MW-2	02/15/91	334.58	9.28	325.30	ND<50	60 (d)	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	45 (c)	SUP
MW 2	05/14/91	334.58	7.74	326.84	130 (e)	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	6,000	ND	SUP
MW-2	08/23/91	334.58	9.81	324.77	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	ANA
MW-2	11/13/91	334.58	9.73	324.85	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SEQ
MW-2	02/25/92	334.58	7.55	327.03	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SEQ
MW-2	04/15/92	334.58	8.00	326.58	---	---	---	---	---	---	---	---	---
MW-2	06/03/92	334.58	8.56	326.02	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-2	08/12/92	334.58	9.62	324.96	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-2	11/10/92	334.58	10.27	324.31	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-2	02/10/93	334.58	6.46	328.12	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-2	05/21/93	334.58	6.96	327.62	---	---	---	---	---	---	---	---	---

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7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a)	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)	LAB
MW-3	10/12/90	335.13	10.08	325.05	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-3	11/15/90	335.13	10.12	325.01	76	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	12/11/90	335.13	9.92	325.21	---	---	---	---	---	---	---	---	---
MW-3	02/15/90	335.13	9.84	325.29	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SUP
MW 3	05/14/91	335.13	8.40	326.73	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SUP
MW-3	08/23/91	335.13	10.27	324.86	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	ANA
MW-3	11/13/91	335.13	10.27	324.86	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SEQ
MW-3	02/25/92	335.13	8.15	326.98	ND<30	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<5,000	ND	SEQ
MW-3	04/15/92	335.13	8.63	326.50	---	---	---	---	---	---	---	---	---
MW-3	06/03/92	335.13	9.18	325.95	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-3	08/12/92	335.13	10.18	324.95	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-3	11/10/92	335.13	10.78	324.35	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	ANA
MW-3	02/10/93	335.13	7.16	327.97	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5,000	ND	PACE
MW-3	05/21/93	335.13	7.69	327.44	---	---	---	---	---	---	---	---	---
AW-4	11/15/90	333.41	8.51	324.90	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-4	12/11/90	333.41	9.19	324.22	---	---	---	---	---	---	---	---	---
AW-4	02/15/91	333.41	8.32	325.09	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
AW-4	05/14/91	333.41	6.97	326.44	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
AW-4	08/23/91	333.41	8.59	324.82	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	ANA
AW-4	11/13/91	333.41	8.57	324.84	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SEQ
AW-4	02/25/92	333.41	6.26	327.15	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SEQ
AW 4	04/15/92	333.41	7.05	326.36	---	---	---	---	---	---	---	---	---
AW-4	06/03/92	333.41	7.41	326.00	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-4	08/12/92	333.41	8.45	324.96	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-4	11/10/92	333.41	9.10	324.31	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-4 (c)	02/10/93	333.41	---	---	---	---	---	---	---	---	---	---	---
AW 4 (c)	05/21/93	333.41	---	---	---	---	---	---	---	---	---	---	---

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ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a)	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)	LAB
AW-5	11/15/90	334.81	9.67	325.14	ND<50	---	1.3	ND<0.5	ND<0.5	1.0	---	---	ANA
AW-5	12/11/90	334.81	9.44	325.37	---	---	---	---	---	---	---	---	---
AW-5	02/15/91	334.81	10.00	324.81	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
AW-5	05/14/91	334.81	8.64	326.17	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
AW-5	08/23/91	334.81	9.58	325.23	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	ANA
AW-5	11/13/91	334.81	9.80	325.01	100	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SEQ
AW-5	02/25/92	334.81	7.89	326.92	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SEQ
AW-5	04/15/92	334.81	8.54	326.27	---	---	---	---	---	---	---	---	---
AW-5	06/03/92	334.81	8.97	325.84	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-5	08/12/92	334.81	9.73	325.08	61	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-5	11/10/92	334.81	10.27	324.54	99	---	ND<0.5	ND<0.5	ND<0.5	0.8	---	---	ANA
QC-1 (f)	11/10/92	---	---	---	86	---	ND<0.5	ND<0.5	ND<0.5	0.7	---	---	ANA
AW-5	02/10/93	334.81	7.29	327.52	82	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
AW-5	05/21/93	334.81	7.77	327.04	---	---	---	---	---	---	---	---	---
AW-6	11/15/90	334.90	9.58	325.32	230	---	25	ND<0.5	ND<0.5	0.8	---	---	ANA
AW-6	12/11/90	334.90	9.58	325.32	---	---	---	---	---	---	---	---	---
AW-6	02/15/91	334.90	9.66	325.24	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
AW-6	05/14/91	334.90	8.38	326.52	90	---	2	ND<0.3	ND<0.3	ND<0.3	---	---	SUP
AW-6	08/23/91	334.90	9.61	325.29	57	---	ND<0.5	0.7	1.3	4.6	---	---	ANA
AW-6	11/13/91	334.90	9.58	325.32	200	---	ND<0.3	ND<0.3	ND<0.3	0.94	---	---	SEQ
AW-6	02/25/92	334.90	8.00	326.90	19000	---	8000	4700	600	2400	---	---	SEQ
AW 6	03/05/92	334.90	7.98	326.92	14000	---	5200	2500	550	2200	---	---	SEQ
AW-6	04/15/92	334.90	8.33	326.57	1100	---	400	ND<3.0	30	ND<3.0	---	---	SEQ
AW 6	06/03/92	334.90	8.91	325.99	77	---	4.4	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-6	08/12/92	334.90	9.61	325.29	80	---	4.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
AW-6	11/10/92	334.90	10.10	324.80	450	---	120	2.1	4.5	9.7	---	---	ANA
AW-6	02/10/93	334.90	7.13	327.77	14000	---	610	17	15	720	---	---	PACE
QC-1 (f)	02/10/93	---	---	---	12000	---	520	15	13	610	---	---	PACE
AW-6	05/21/93	334.90	7.64	327.26	7900	---	900	ND<12	20	ND<12	---	---	PACE
QC-1 (f)	05/21/93	---	---	---	7500	---	620	ND<10	13	ND<10	---	---	PACE

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BP OIL COMPANY SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a)	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)	LAB
QC-2 (g)	11/10/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2 (g)	02/10/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (g)	05/21/93	---	---	---	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
ppb	Parts per billion
ND	Not detected at or above reported detection limit
---	Not analyzed/available
ANA	Anametrix, Inc
SUP	Superior Analytical Laboratory
SEQ	Sequoia Analytical laboratory
PACE	Pace, Inc

NOTES:

(a) Top of casing elevation surveyed in reference to the City of Dublin monument at intersection of Village Parkway and Amador Valley Boulevard, with an elevation of 335.92 feet above mean sea level.

(b) In feet above mean sea level.

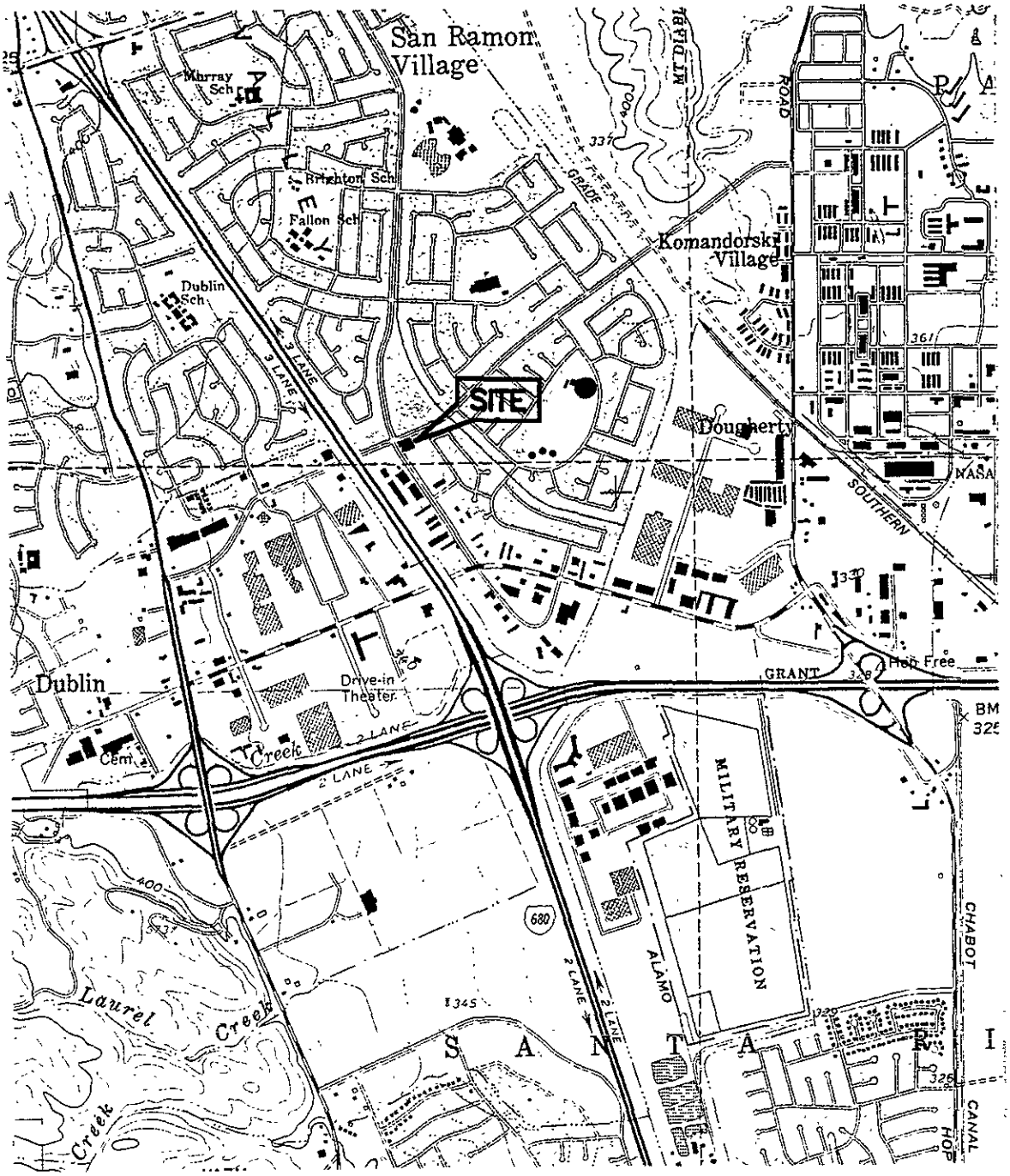
(c) Methylene chloride.

(d) Typical chromatogram patterns not present.

(e) Well could not be located.

(f) Blind duplicate.

(g) Travel blank.



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

N

0 1000' 2000'

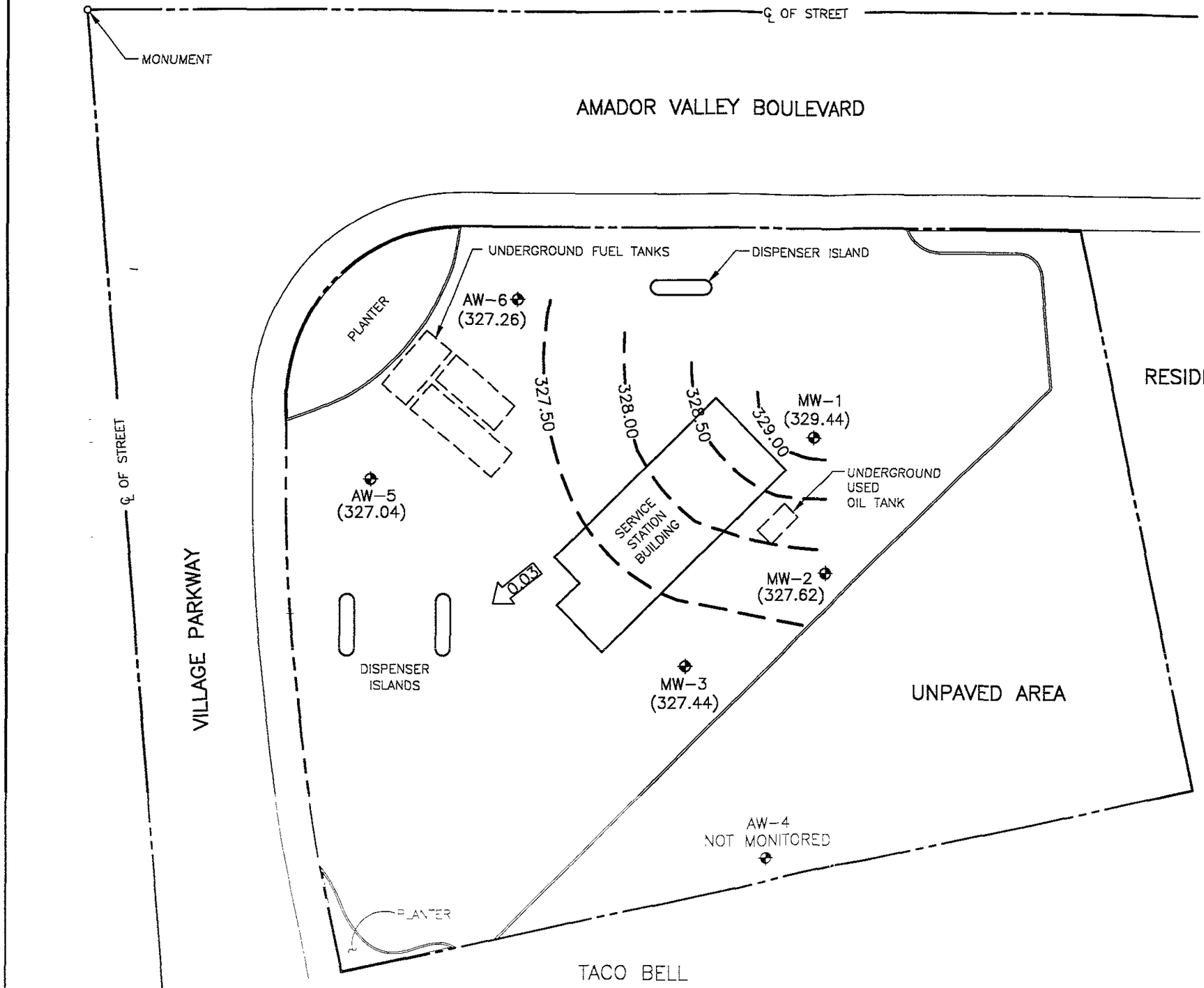
FIGURE 1

SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

PROJECT NO. 10-017

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA



N

0 30 60

SCALE IN FEET

LEGEND

- GROUNDWATER MONITORING WELL
- (327.26) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 327.50 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL-0.50 FOOT)
- 0.03 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

MAY 21, 1993

BP OIL SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

PROJECT NO. 10-017

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10017D1.DWG 7/20/93 1=30

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO ENGINEERING GROUP
GROUNDWATER MONITORING

Client: BP
Alisto Project No: 10-017-02
Service Station No: 11116

Date: 5/21/93
Field Personnel: LCB
Site Address: Dublin, Ca

FIELD ACTIVITY:

__ Groundwater Monitoring
X Groundwater Sampling
__ Well Development

QUALITY CONTROL SAMPLES:

Aw-6 QC-1 Sample Duplicate (Well ID)
X QC-2 Trip Blank
__ QC-3 Rinsate Blank

Well ID	Well Diam	Order Measured/ Sampled	Total Depth	Depth to Water	Depth to Product	Product Thick-ness	Comments
Aw-1		1	NM	5.73	Ø	Ø	
Mw-2		2	↓	6.96	↓	↓	
Mw-3		3	↓	7.69	↓	↓	
Aw-4	—	—	↓	—	—	—	Buried, Cannot Locate
Aw-5		4	↓	7.77	Ø	Ø	
Aw-6	4"	5	16.81	7.64	↓	↓	

Notes:

FORM FS2/121592

ALISTO ENGINEERING GROUP
Groundwater Development and Sampling Form

Client: BP
Alisto Project No: 10-017-02
Service Station No: 11116

Date: 5/21/93
Field Personnel: LCB
Address: Dublin, CA

Well ID: MW-6 Field Activity: ___Well Development X Well Sampling ___Product Bailing

Casing Diameter:
___2 Inch (0.16 Gal/foot)
___3 Inch (0.37 Gal/foot)
X 4 Inch (0.65 Gal/Foot)
___4.5 Inch (0.83 Gal/foot)
___6 Inch (1.47 Gal/foot)

Purge Method:
X Pump (dispos. Poly Tubing)
___Disposable Bailers
___Other
___1.66 PVC Standard Bailer
___3.50 PVC Standard Bailer

Well Data:
0 Depth to Product
0 Product Thickness
7.64 Depth to Water

Sampling Method:
X Disposable Bailer
___Pump

Decontamination Method:
X Triple Rinse (Liquinox)
___ Steam Cleaned

Calculated Purge Volume

16.81 - 7.64 = 9.17 ft X .65 Gal/Ft = 5.96 Gal X 3 = 17.88

Total Depth of Well | Depth to Water | Water Column | Conversion Factor | Casing Vol | Vols to Purge | Total Volume

Well Development/Sampling Parameters

Time	Temp °F	pH	Cond. (umhos/cm)	Purge Vol (Gal)	Comments/ Turbidity	Analysis Required	Container Type	Preserv
1604	77.3	7.80	X1000 1.85	3.50	Clear	X TPH-G/BTEX	VOA	HCL
1608	76.3	7.66	1.14	7.00		TPH-Diesel	Amber Liter	Solvent Rinsed
1612	75.0	7.61	1.09	10.50		EPA 601	VOA	
1616	74.7	7.59	1.07	14.00		TOG 5520BF	Amber Liter	H_2SO_4
1620	74.3	7.54	1.05	18.00	✓			

Begin 1600 Stop 1620 Sampled 1630

DC-1 duplicate Taken from this well

FORM FS3/122592

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

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

July 08, 1993
PACE Project Number: 430527509
PACE WPP# 2783

Attn: Mr. Brady Nagle

Client Reference: BP Station # 11116

PACE Sample Number:			70 0081440	
Date Collected:			05/21/93	
Date Received:			05/27/93	
			QC-2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	06/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	06/04/93
Benzene	ug/L	0.5	ND	06/04/93
Toluene	ug/L	0.5	ND	06/04/93
Ethylbenzene	ug/L	0.5	ND	06/04/93
Xylenes, Total	ug/L	0.5	ND	06/04/93

11 Digital Drive
Novato, CA 94949
TEL: 415 883 6100
FAX 415 883 2673

REPORT OF LABORATORY ANALYSIS

July 08, 1993
PACE Project Number: 430527509

Client Reference: BP Station # 11116

PACE Sample Number:			70 0081459	
Date Collected:			05/21/93	
Date Received:			05/27/93	
Client Sample ID:			AW-6	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1200	7900	06/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	06/04/93
Benzene	ug/L	12	900	06/04/93
Toluene	ug/L	12	ND	06/04/93
Ethylbenzene	ug/L	12	20	06/04/93
Xylenes, Total	ug/L	12	ND	06/04/93

11 Digital Drive
Novato CA 94949
TEL 415 883 6100
FAX 415 883 2673

REPORT OF LABORATORY ANALYSIS

July 08, 1993
PACE Project Number: 430527509

Client Reference: BP Station # 11116

PACE Sample Number:			70 0081467	
Date Collected:			05/21/93	
Date Received:			05/27/93	
Client Sample ID:			QC-1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1000	7500	06/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	06/04/93
Benzene	ug/L	10	620	06/04/93
Toluene	ug/L	10	ND	06/04/93
Ethylbenzene	ug/L	10	13	06/04/93
Xylenes, Total	ug/L	10	ND	06/04/93

These data have been reviewed and are approved for release.

Darrell C. Cain
Regional Director

1 Digital Drive
Novato CA 94949
TEL 415 883 6100
FAX 415 883 2573

Mr. Brady Nagle
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FOOTNOTES
for pages 1 through 3

July 08, 1993
PACE Project Number: 430527509

Client Reference: BP Station # 11116

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

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TEL 415 883 6100
FAX 415 883 2673

Mr. Brady Nagle
Page 5

QUALITY CONTROL DATA

July 08, 1993
PACE Project Number: 430527509

Client Reference: BP Station # 11116

PURGEABLE FUELS AND AROMATICS
Batch: 70 21672
Samples: 70 0081459

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

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	106%	97%	8%
Benzene	ug/L	0.5	40.0	104%	103%	0%
Toluene	ug/L	0.5	40.0	101%	100%	0%
Ethylbenzene	ug/L	0.5	40.0	97%	96%	1%
Xylenes, Total	ug/L	0.5	120	97%	98%	1%

Mr. Brady Nagle
Page 6

QUALITY CONTROL DATA

July 08, 1993
PACE Project Number: 430527509

Client Reference: BP Station # 11116

PURGEABLE FUELS AND AROMATICS
Batch: 70 21696
Samples: 70 0081440, 70 0081467

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

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%	95%	4%
Benzene	ug/L	0.5	40.0	90%	94%	4%
Toluene	ug/L	0.5	40.0	87%	89%	2%
Ethylbenzene	ug/L	0.5	40.0	88%	87%	1%
Xylenes, Total	ug/L	0.5	120	85%	83%	2%

Client Reference: BP Station # 11116

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

11 Digital Drive
Novato CA 94949
TEL 415-883 6100
FAX 415 883 2673

pace INCORPORATED THE ASSURANCE OF QUALITY

B.P. OIL COMPANY

430527.509

№ 0175

16400 Southcenter Parkway, Suite 301, Tukwila, WA 98188

CHAIN OF CUSTODY

☒ Novato, CA, 11 Digital Drive, 94949
Phone: (415) 883-6100 Fax: (415) 883-2673

☐ Huntington Beach, CA, 5702 Bolsa Avenue, 92649
Phone: (714) 892-2565 Fax: (714) 890-4032

Consultant's Name: Alisto Engineering	Consultant Project #: 10-017		Page 1 of 1
Address: 1777 Oakland Blvd #200, Walnut Creek, Ca 94596			
Project Contact: Brady Nagle	Phone #: 295-1650	Fax #: 295-1823	Consultant Work Order #:
Sampled by (print): Larry Brunels	Sampler's Signature: Larry Brunels		B.P. Site Location #: 11116
Shipment Method: Courier	Airbill #:	Shipment Date:	B.P. Site Location: Dublin

TAT ☐ 24 hr ☐ 48 hr ☐ 72 hr ☒ Standard (10 day)

Sample Condition as Received
Temperature ° C: ____
Cooler #: ____
Inbound Seal Yes No
Outbound Seal Yes No

Sample Description	Collection Date/Time	Matrix Soil/Water	Prsv	# of Cont	PACE Sample #	TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1	HVOC 8010								COMMENTS
QC-2	5/21/93	W	HCl	2	8144.0	X											
MW-6	↓	↓	↓	3	45.9	↓											
QC-1	↓	↓	↓	3	46.7	↓											
5/1																	

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Larry Brunels	5/24/93	9:00	Brady Nagle	5/24/93	9:00
Brady Nagle	5/27/93	1515	Ed Hathaway	5/27	1515
Ed Hathaway	5/27	1630	Sherry Stone, PACE	5/27	1630

Additional Comments:

Distribution: White - Original; Yellow - B.P. Oil; Pink - Lab; Goldenrod - Consultant Field Staff