cc
4/1/03

BP OIL

October 30, 1995

BP Oil Company
Environmental Resources Management
Building 13, Suite N
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667
Fax No: (206) 251-0736

Ms Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway Suite 250
Alameda, CA 94502-6577

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

Dear Ms Chu:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED September 15, 1995** for the above referenced facility. Plans for next quarter include continuing groundwater monitoring.

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

Respectfully,

Scott T. Hooton
Environmental Resources Management

STH:mu msword\ERM11120

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

Mr. Brady Nagle, Alisto Engineering Group, 1575 Treat Blvd, Ste 201, Walnut Creek, CA 94598

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

Site File

GROUNDWATER MONITORING AND SAMPLING REPORT

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

Project No. 10-170-02-004

Prepared for:

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

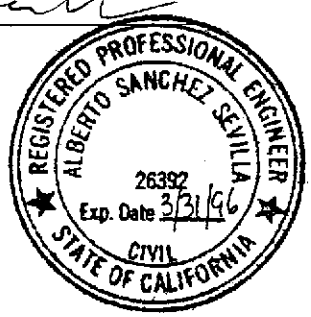
Prepared by:

Alisto Engineering Group
1575 Treat Boulevard, Suite 201
Walnut Creek, California

September 15, 1995

Dale Swain
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. 10-170-02-004

September 15, 1995

INTRODUCTION

This report presents the results and findings of the June 28, 1995 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, electrical conductivity, and dissolved oxygen. 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 (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	TOG (ug/l)	HVOC (ug/l)	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-1	12/20/94	328.96	6.34	322.62	---	---	---	---	---	---	---	---	---	---
MW-1	03/16/95	328.96	4.37	324.59	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	5.6	ATI
MW-1	06/28/95	328.96	5.35	323.61	---	---	---	---	---	---	---	---	---	---
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-2	12/20/94	328.50	5.86	322.64	---	---	---	---	---	---	---	---	---	---
MW-2	03/16/95	328.50	3.77	324.73	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	6.6	ATI
MW-2	03/16/95	328.50	3.77	324.73	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	6.6	ATI
MW-2	06/28/95	328.50	4.33	324.17	---	---	---	---	---	---	---	---	---	---
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	3200	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-3	12/20/94	329.36	6.41	322.95	18000	9600	79	28	89	9.3	---	---	7.3	PACE
QC-1 (c)	12/20/94	---	---	---	17000	---	79	33	80	ND<2.5	---	---	---	PACE
MW-3	03/16/95	329.36	4.39	324.97	6300	7000	470	ND<5.0	210	9.9	---	---	5.5	ATI
QC-1 (c)	03/16/95	---	---	---	6300	---	500	ND<5.0	230	13	---	---	---	ATI
MW-3	06/28/95	329.36	5.50	323.86	9000	3000	ND<10	ND<10	ND<10	ND<20	---	---	7.4	ATI
QC-1 (c)	06/28/95	---	---	---	8800	---	ND<10	ND<10	ND<10	ND<20	---	---	---	ATI

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 (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
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	2000	2700	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.2	PACE
MW-4	12/20/94	329.45	6.68	322.77	9200	2400	ND<5.0	ND<5.0	ND<5.0	ND<5.0	---	---	6.1	PACE
MW-4	03/16/95	329.45	4.66	324.79	1400	960	140	ND<2.5	58	14	---	---	5.5	ATI
MW-4	06/28/95	329.45	5.93	323.52	5000	5400	240	ND<5.0	220	ND<10	---	---	7.4	ATI
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
MW-5	12/20/94	329.60	6.63	322.97	---	---	---	---	---	---	---	---	---	---
MW-5	03/16/95	329.60	4.65	324.95	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	4.9	ATI
MW-5	06/28/95	329.60	5.69	323.91	---	---	---	---	---	---	---	---	---	---
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	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-6	12/20/94	329.55	6.82	322.73	---	---	---	---	---	---	---	---	---	---
MW-6	03/16/95	329.55	4.78	324.77	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	6.1	ATI
MW-6	06/28/95	329.55	5.97	323.58	---	---	---	---	---	---	---	---	---	---

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 (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
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
MW-7	12/20/94	329.49	6.77	322.72	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	6.5	PACE
MW-7	03/16/95	329.49	4.77	324.72	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	5.9	ATI
MW-7	06/28/95	329.49	5.94	323.55	ND<50	320	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	7.8	ATI
QC-2 (f)	08/25/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (f)	11/22/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (f)	03/07/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (f)	06/09/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (f)	09/12/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (f)	12/20/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (f)	03/16/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2 (f)	06/28/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI

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
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not analyzed/applicable/measured
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.

NOTES:

(a) Top of casing elevations surveyed to an arbitrary datum.

(b) Groundwater elevations relative to an arbitrary datum.

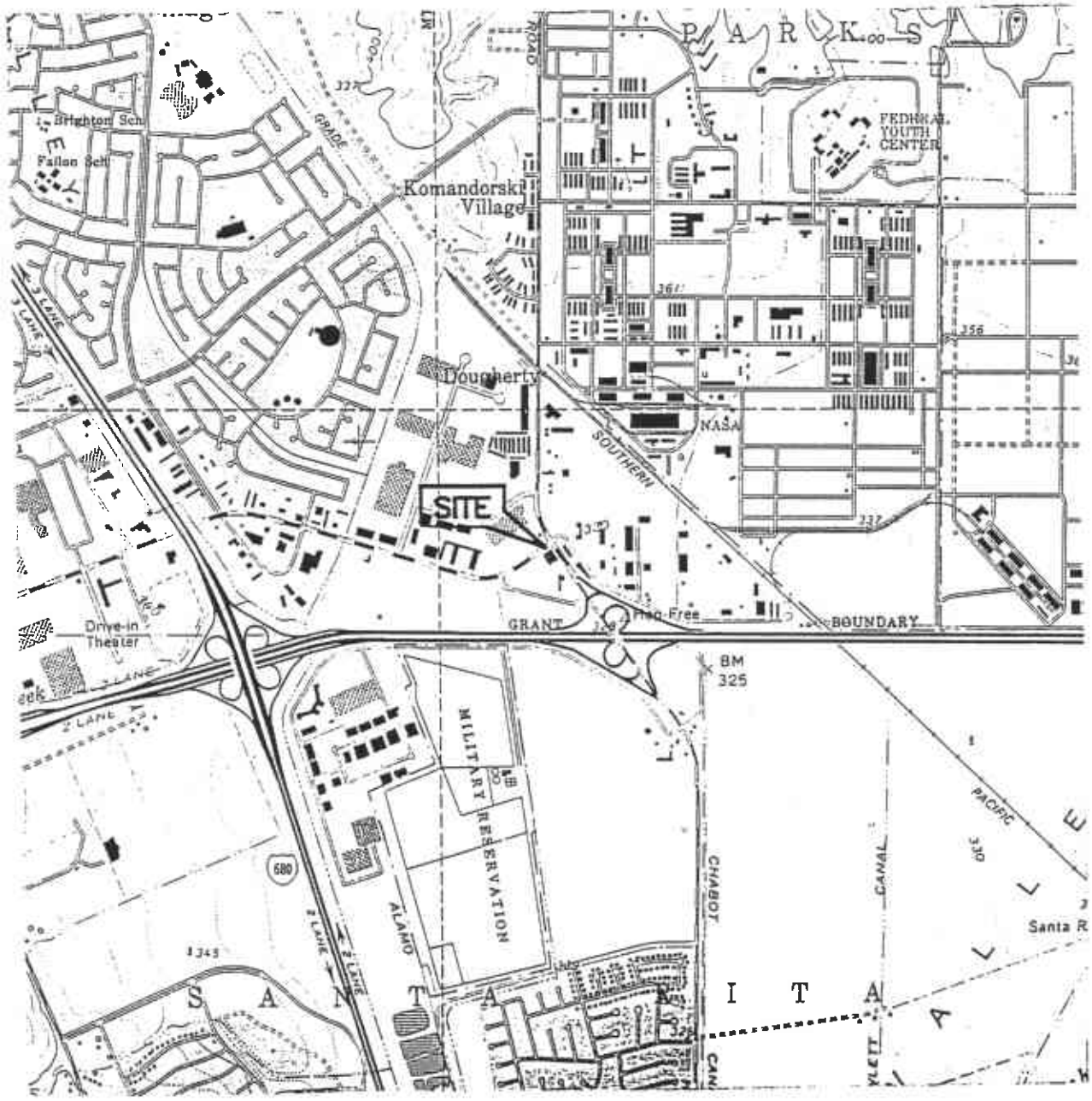
(c) Blind Duplicate.

(d) Sample pattern does not match the diesel standard pattern.

(e) Sample chromatogram does not resemble a fuel hydrocarbon.

(f) Travel blank.

E:\0\10-170\170-2-4.WQ2



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

N

0 1000' 2000'

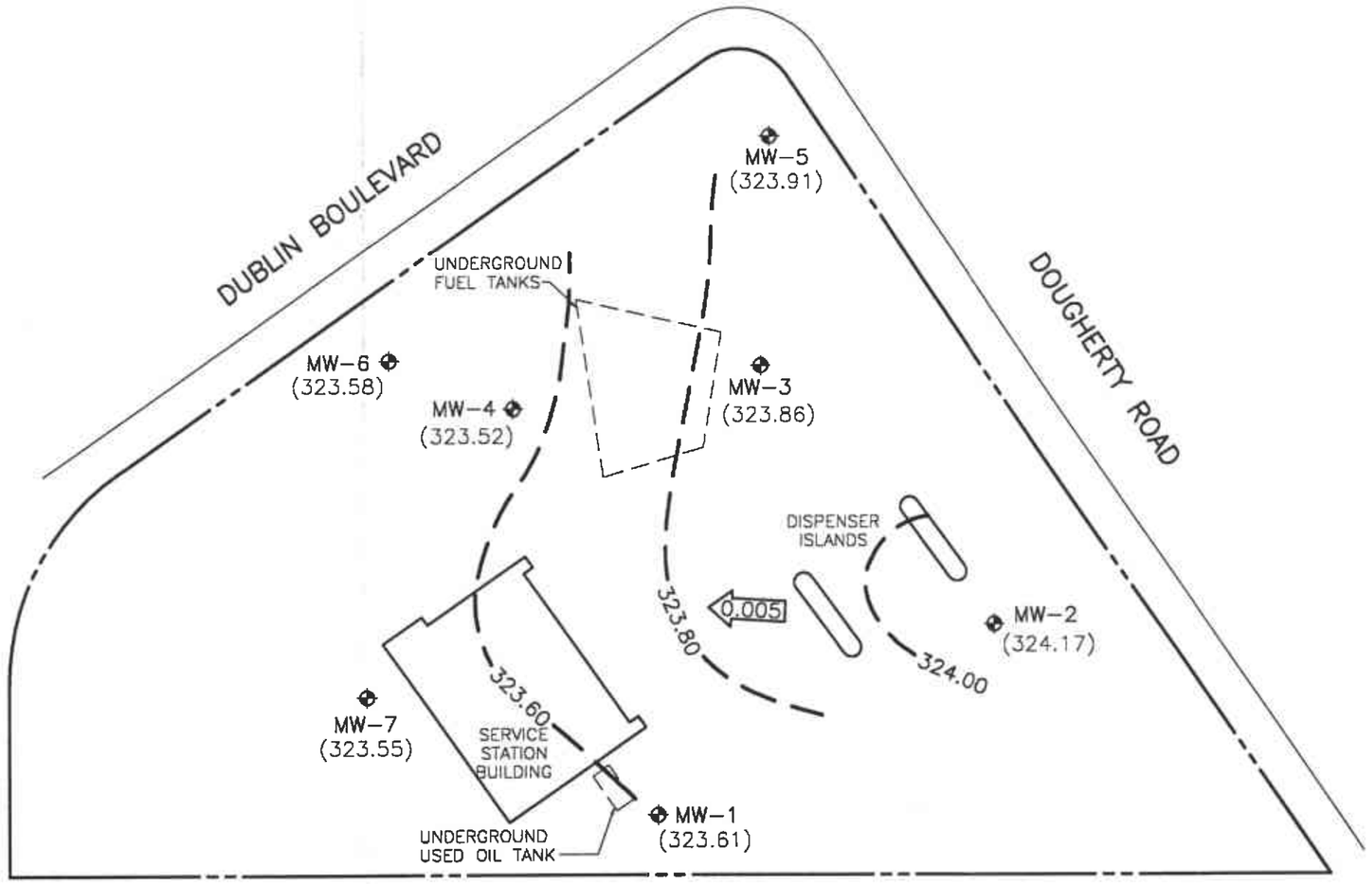
FIGURE 1

SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11120
6400 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 10-170

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA



N

0 30 60

SCALE IN FEET

LEGEND

- ◆ GROUNDWATER MONITORING WELL
- (324.17) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 324.00 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–0.20 FOOT)
- 0.005 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

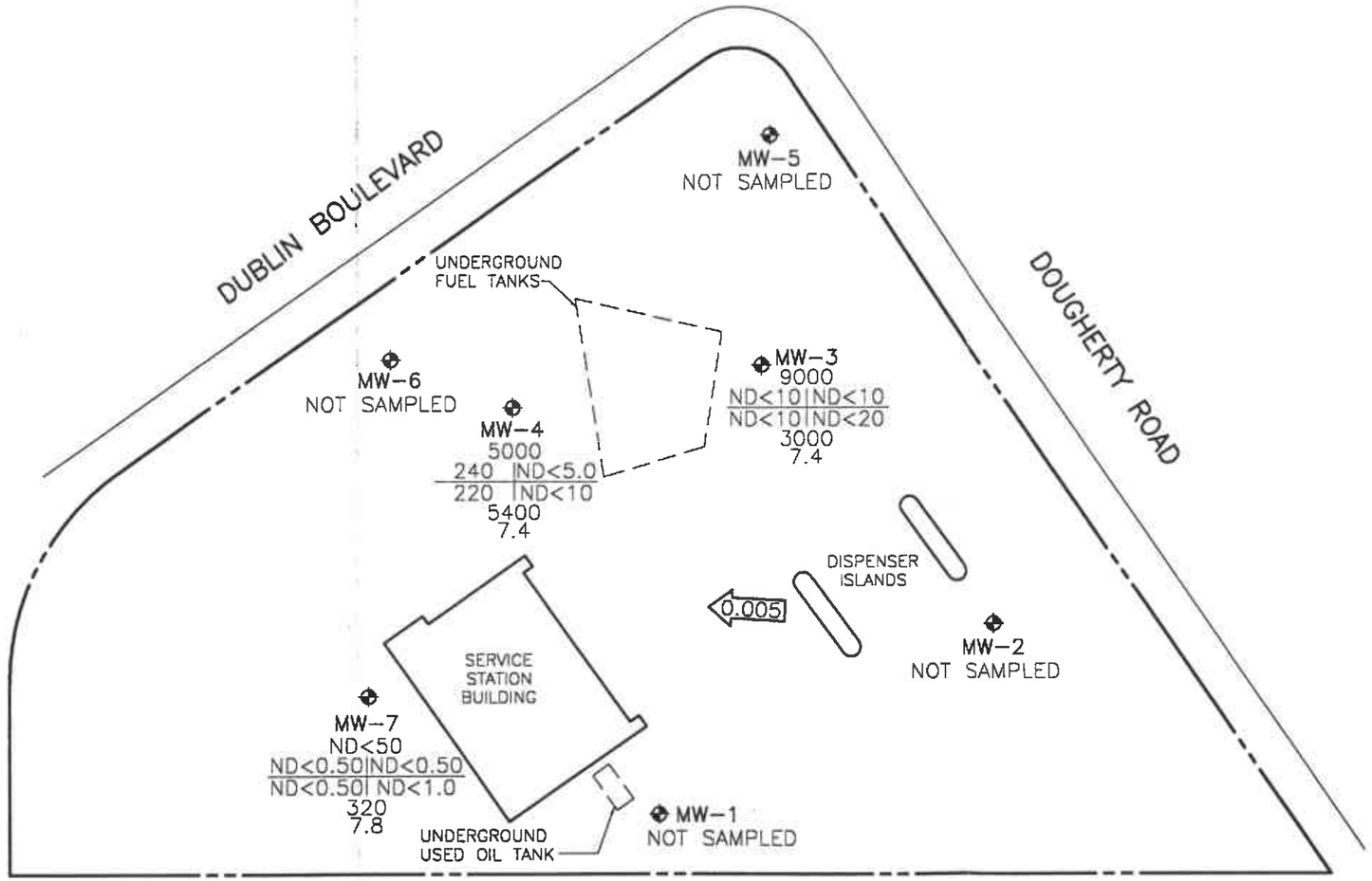
JUNE 28, 1995

BP OIL SERVICE STATION NO. 11120
6400 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 10–170

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10170D-N.DWG 8-8-95 RMW 1=30



N

0 30 60

SCALE IN FEET

LEGEND

◆	GROUNDWATER MONITORING WELL
TPH-G / B | T / E | X / TPH-D / DO	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
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
0.005	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

JUNE 28, 1995

BP OIL SERVICE STATION NO. 11120
6400 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 10-170

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10170C-N.DWG 8-8-95 MKW 1=30

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING
GROUP
1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Project No. 10-170-02-004 Date: 6/27/95
Address I-580 & Dougherty Day: M T (W) TH F
Contract No. G317864 City: Dublin
Station No. BP 11120 Sampler: DC

WELL ID	SAMPLE ID	DEPTH TO WATER	TIME	COMMENTS:
MW-1	not sampled	5.35	1456	
MW-2	not sampled	4.33	1500	
MW-3	S-3	5.50	1512	
MW-4	S-2	5.93	1510	
MW-5	not sampled	5.69	1504	
MW-6	not sampled	5.97	1507	
MW-7	S-1	5.94	1452	

FIELD INSTRUMENT CALIBRATION DATA

Ph METER Hydac 4.00 ✓ 7.00 ✓ 10.00 ___ TEMPERATURE COMPENSATED (Y) N TIME 1530 WEATHER Sunny

D.O. METER Ion ZERO d.O. SOLUTION ✓ BAROMETRIC PRESSURE 761 TEMP 78°F

CONDUCTIVITY METER Hydac 10,000 ✓ TURBIDITY METER ___ 5.0 NTU ___ OTHER ___

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Irridensence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-7	5.94	2"	OK	Φ	Y (N)	2.5	1537	75.8	7.63	1.22	7.9
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			5	1540	74.0	7.59	1.12	
20.25 - 5.94 = 14.31 x .16 = 2.29 x 3 = 6.87						7	1543	73.5	7.61	1.10	7.8

Purge Method: (X) Surface Pump O Disp.Tube O Winch O Disp. Baller(s) ___ O Sys Port

Comments:

(X) TPH-G/BTEX Hydac ( ) EPA 601 ___ (X) TPH Diesel ___ ( ) TOG 5520 ___

TIME/SAMPLE ID: 1546 / S-1

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Irridensence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-4	5.93	2"	OK	Φ	Y (N)	2.5	1557	75.2	7.79	0.97	7.7
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			5	1602	74.4	7.81	0.93	
20.00 - 5.93 = 14.07 x .16 = 2.25 x 3 = 6.75						6.75	1604	74.4	7.88	0.92	7.4

Purge Method: (X) Surface Pump O Disp.Tube O Winch O Disp. Baller(s) ___ O Sys Port

Comments:

(X) TPH-G/BTEX Hydac ( ) EPA 601 ___ (X) TPH Diesel ___ ( ) TOG 5520 ___

TIME/SAMPLE ID: 1609 / S-2

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Irridensence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-3	5.50	2"	OK	Φ	Y (N)	2.5	1618	75.4	7.60	0.96	7.6
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			5	1622	74.3	7.60	0.93	
20.00 - 5.50 = 14.5 x .16 = 2.32 x 3 = 6.96						7	1625	74.2	7.59	0.90	7.4

(X) TPH-G/BTEX Hydac ( ) EPA 601 ___ (X) TPH Diesel ___ ( ) TOG 5520 ___

1630 / S-3

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 506372

July 13, 1995

ALISTO ENGINEERING
1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK, CA 94598

Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA
Project # : G317864/10-170-02-004

Attention: BILL HOWELL

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
June 30, 1995	5	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. If any flags appear next to the analytical data in this report, please see the attached list of flag definitions.

The results of these analyses and the quality control data are enclosed. Please note that the Sample Condition Upon Receipt Checklist is included at the end of this report.

GARY STEWART
VOLATILES SUPERVISOR

for ALAN J. KLEINSCHMIDT
LABORATORY MANAGER

Analytical Technologies, Inc.

SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

Report Date: July 13, 1995
ATI I.D. : 506372

ATI #	Client Description	Matrix	Date Collected
1	S-1	WATER	28-JUN-95
2	S-2	WATER	28-JUN-95
3	S-3	WATER	28-JUN-95
4	S-4	WATER	28-JUN-95
5	S-5	WATER	28-JUN-95

---TOTALS---

Matrix	# Samples
WATER	5

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc. ANALYTICAL SCHEDULE

Client : ALISTO ENGINEERING
Project # : G317864/10-170-02-004 ATI I.D.: 506372
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

Analysis	Technique/Description
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)	GC/FLAME IONIZATION DETECTOR
MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)	GC/FLAME ION./PHOTO IONIZATION DETECTOR

Analytical Technologies, Inc GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)
Client : ALISTO ENGINEERING ATI I.D. : 506372
Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	28-JUN-95	05-JUL-95	07-JUL-95	1.00
2	S-2	WATER	28-JUN-95	05-JUL-95	07-JUL-95	1.00
3	S-3	WATER	28-JUN-95	05-JUL-95	07-JUL-95	1.00

Parameter	Units	1	2	3
FUEL HYDROCARBONS	MG/L	0.32@Z	5.4@C	3.0@C
HYDROCARBON RANGE		C7-C24	C7-C24	C7-C24
HYDROCARBONS QUANTITATED USING		GASOLINE	DIESEL	DIESEL
SURROGATES				
BIS(2-ETHYLHEXYL)PHTHALATE	%	85	88	95

@C SAMPLE CONTAINS DIESEL AND GASOLINE

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank I.D. : 36000
Client : ALISTO ENGINEERING
Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

ATI I.D. : 506372
Date Extracted: 05-JUL-95
Date Analyzed : 07-JUL-95
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.050
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
SURROGATES		
BIS(2-ETHYLHEXYL)PHTHALATE	%	94

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 76972
Client : ALISTO ENGINEERING

Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

ATI I.D. : 506372
Date Extracted: 05-JUL-95
Date Analyzed : 07-JUL-95
Sample Matrix : WATER
REF I.D. : REAGENT WATER

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
FUEL HYDROCARBONS	MG/L	<0.050	1.0	0.73	73	0.72	72	1

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 506372
Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	28-JUN-95	N/A	11-JUL-95	1.00
2	S-2	WATER	28-JUN-95	N/A	11-JUL-95	10.00
3	S-3	WATER	28-JUN-95	N/A	11-JUL-95	20.00

Parameter	Units	1	2	3
BENZENE	UG/L	<0.50	240	<10
TOLUENE	UG/L	<0.50	<5.0	<10
ETHYLBENZENE	UG/L	<0.50	220	<10
XYLENES (TOTAL)	UG/L	<1.0	<10	<20
FUEL HYDROCARBONS	UG/L	<50	5000	9000
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	102	98	99

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 506372
Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	28-JUN-95	N/A	11-JUL-95	20.00
5	S-5	WATER	28-JUN-95	N/A	11-JUL-95	1.00

Parameter	Units	4	5
BENZENE	UG/L	<10	<0.50
TOLUENE	UG/L	<10	<0.50
ETHYLBENZENE	UG/L	<10	<0.50
XYLENES (TOTAL)	UG/L	<20	<1.0
FUEL HYDROCARBONS	UG/L	8800	<50
HYDROCARBON RANGE		C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE
SURROGATES			
TRIFLUOROTOLUENE	%	99	102

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 36022
Client : ALISTO ENGINEERING
Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

ATI I.D. : 506372
Date Extracted: N/A
Date Analyzed : 11-JUL-95
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
TRIFLUOROTOLUENE	%	98

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
MSMSD # : 77003
Client : ALISTO ENGINEERING

Project # : G317864/10-170-02-004
Project Name: BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

ATI I.D. : 506372
Date Extracted: N/A
Date Analyzed : 10-JUL-95
Sample Matrix : WATER
REF I.D. : 506347-02

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.5	90	4.9	98	9
TOLUENE	UG/L	<0.50	5.0	4.7	94	5.1	102	8

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 57579
Client : ALISTO ENGINEERING
Project # : G317864/10-170-02-004
Project Name : BP SITE#11120/I-S80 & DOUGHERTY, DUBLIN CA

ATI I.D. : 506372
Date Extracted: N/A
Date Analyzed : 11-JUL-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	5.1	5.0	102
TOLUENE	UG/L	<0.50	5.2	5.0	104

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

ANALYTICAL TECHNOLOGIES, INC.
SAN DIEGO
FLAGS

ORGANICS

FLAG	MESSAGE DESCRIPTION
A	A TIC IS A SUSPECTED ALDOL-CONDENSATION PRODUCT
B	ANALYTE FOUND IN THE ASSOCIATED REAGENT BLANK
C	PESTICIDE, WHERE THE IDENTIFICATION WAS CONFIRMED BY GC/MS
CO	THESE COMPOUNDS CO-ELUTE AND ARE QUANTITATED AS ONE PEAK
D	COMPOUND IDENTIFIED IN AN ANALYSIS AT SECONDARY DILUTION
E	ANALYTE AMOUNT EXCEEDS THE CALIBRATION RANGE
J	ESTIMATED VALUE
H	QUANTIFIED AS DIESEL BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH THAT OF DIESEL
K	QUANTIFIED AS KEROSENE BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH THAT OF KEROSENE
L	QUANTIFIED AS GASOLINE BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH THAT OF GASOLINE
N	PRESUMPTIVE EVIDENCE OF A COMPOUND
P	PESTICIDE/AROCLOR TARGET ANALYTE, WHERE THERE IS GREATER THAN 25% DIFFERENCE FOR DETECTED CONCENTRATION BETWEEN 2 GC COLUMNS
TR	COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL
U	COMPOUND WAS ANALYZED FOR BUT NOT DETECTED
X	SEE CASE NARRATIVE
Y	SEE CASE NARRATIVE
Z	SEE CASE NARRATIVE
*	OUTSIDE OF QUALITY CONTROL LIMITS
*D	COMPOUND ANALYZED FROM A SECONDARY ANALYSIS
*F	RESULT OUTSIDE OF ATI'S QUALITY CONTROL LIMITS
*G	RESULT OUTSIDE QUALITY CONTROL LIMITS. INSUFFICIENT SAMPLE FOR RE-EXTRACTION/ANALYSIS
*H	RESULT OUTSIDE OF LIMITS DUE TO SAMPLE MATRIX INTERFERENCE
*I	BECAUSE OF NECESSARY SAMPLE DILUTION, VALUE WAS OUTSIDE QC LIMITS
*K	DUE TO THE NECESSARY DILUTION OF THE SAMPLE, RESULT WAS NOT ATTAINABLE
*L	ANALYTE IS A SUSPECTED LAB CONTAMINANT
*P	A STANDARD WAS USED TO QUANTITATE THIS VALUE
*R	DATA IS NOT USABLE
*T	SURROGATE RECOVERY IS OUTSIDE QC CONTROL LIMITS. NO CORRECTIVE ACTION INDICATED BY METHOD
*V	SAMPLE RESULT IS >4X SPIKED CONCENTRATION, THEREFORE SPIKE IS NOT DETECTABLE
*Y	RESULT NOT ATTAINABLE DUE TO SAMPLE MATRIX INTERFERENCE
@A	RESULTS OUT OF LIMITS DUE TO SAMPLE NON-HOMOGENEITY
@C	*VARIABLE MESSAGE*
@D	RESULT COULD NOT BE CONFIRMED DUE TO MATRIX INTERFERENCE ON THE CONFIRMATION COLUMN
@E	RESULT MAY BE FALSELY ELEVATED DUE TO SAMPLE MATRIX INTERFERENCE
@F	RESULT OUTSIDE OF CONTRACT SPECIFIED QUALITY CONTROL LIMITS
@G	RESULT OUTSIDE OF CONTRACT SPECIFIED ADVISORY LIMITS
@H	DETECTION LIMIT ELEVATED DUE TO MATRIX INTERFERENCE
@M	RESULT NOT CONFIRMED BY U.V. DUE TO SAMPLE MATRIX INTERFERENCE
@N	RESULT NOT CONFIRMED BY FLUORESCENCE DUE TO SAMPLE MATRIX INTERFERENCE
@P	RESULT QUANTITATED USING FLUORESCENCE ONLY DUE TO THE LOW CONCENTRATION
@Q	DETECTION LIMIT ELEVATED DUE TO LIMITED SAMPLE FOR ANALYSIS
@T	RESULT DUE TO TCLP EXTRACTION MATRIX INTERFERENCE. NO QC LIMITS HAVE BEEN ESTABLISHED
@U	SAMPLE CHROMATOGRAM DOES NOT RESEMBLE COMMON FUEL HYDROCARBON FINGERPRINTS
@Z	SAMPLE CHROMATOGRAM DOES NOT RESEMBLE A FUEL HYDROCARBON

ACCESSION #: 506372 INITIALS:

ATI-SanDiego
SAMPLE CONDITION UPON RECEIPT CHECKLIST
(FOR RE-ACCESSIONS, COMPLETE #7 THRU #9)

1	Does this project require special handling according to NEESC Levels C, D, AFCEE or CLP protocols? If yes, complete a) and b) a) pH sample aliquoted: yes /no /na b) Either 1) Record Bottle Lot #'s: Or 2) Attach Sample Kit Request Form(s)	YES	(NO)
2	Number of Coolers Received If more than one cooler received attach Multiple Cooler Documentation Form (MCD) Indicate "see MCD" on Item 11 below	1	
3	Are custody seals required for this project ?	YES	(N/A)
	a) are Custody Seals present on Cooler(s) ?	YES	(NO)
	If yes, are seals intact ? (NA)	YES	NO
	b) are Custody Seals present on the sample ?	YES	(NO)
	If yes, are seals intact ? (NA)	YES	NO
4	Is there a Chain-Of-Custody (COC)* per cooler ? if not, if a problem is found indicate which samples/test were in the affected cooler on the MCD.	(YES)	NO
5	Is the COC* complete per cooler ? Relinquished: (yes)/no Requested analysis: (yes)/no	(YES)	NO
6	Is the COC* in agreement with the samples received? # Samples: (yes)/no Sample ID's: (yes)/no Date sampled: (yes)/no Matrix: (yes)/no # containers: (yes)/no	(YES)	NO
7	Are the samples preserved correctly?	(YES)	NO
8	Is there enough sample for all the requested analyses?	(YES)	NO
9	Are all samples within holding times for the requested analyses?	(YES)	NO
10	Record cooler temperature. Contact PM if temperature is not 4°C ± 2°C.	2.0 °C	
	Is ice present in cooler?	(YES)	NO
11	Were all sample containers received intact (ie. not broken, leaking, etc.)?	(YES)	NO
12	Are samples requiring no headspace, headspace free? N/A	(YES)	NO
13	Are VOA Set stickers required?	YES	(NO)
14	Are there special comments on the Chain of Custody which require client contact?	YES	(N/A)
15	If yes, was ATI Project Manager notified?	YES	NO

Describe "no" items: _____

Was client contacted? yes / no

If yes, Date: _____ Name of Person contacted:

Describe actions taken or client instructions: _____

*Or other representative documents, letters, and/or shipping memo

BP

CHAIN OF CUSTODY

No. 055822

Page 1 of 1

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Alisto Engineering	1575 Treat Blvd	Walnut Creek	CA	94598

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11120	I-580 & Dougherty, Dublin CA	10-170-02-004

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Bill Howell	(510) 295 1650	(510) 295 1823	C317864

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
DC ~~ATI Inc.~~ Scott Hooton	~~[illegible]~~ DC [illegible] WA		

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
ATI Inc	San Diego CA		Fedex 1819211182

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
Dave [illegible]	[signature]	6-29-95	Fed-ex

AIRBILL NUMBER

TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☒ Standard 2 Weeks

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH Gas BTEX	TPH Diesel									COMMENTS
S-1 1546	6/28/95	H2O	3	VOA	01	X	X									
S-2 1609	↓	↓	↓	↓	02	↓	X									
S-3 1630	↓	↓	↓	↓	03	↓	X									
S-4 —	↓	↓	2	VOA	04	↓										
S-5 —	↓	↓	2	↓	~~06~~ 05 6/30/95	↓										

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] Alisto	6/29/95	1600	[signature] / ATI (LAB)	6/30/95	930

ADDITIONAL COMMENTS

506372

CIV 16722

Distribution: White - Original (with Data) Yellow - BP Pink - Lab Blue - Consultant Field Staff