



**BP OIL**

ENVIRONMENTAL  
PROTECTION

95 JAN -8 PM 3:00

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

January 4, 1996

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

*Cont. to watch MISE in MW 3 + 4  
could there be a recent release?  
(low/ND benzene though)*

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

*2/16/96 Hooton says Tosco is  
renovating site & MW-1 will  
be destroyed - OK - does not need  
to be replaced. However, if MW-4  
is destroyed, that well will need  
to be replaced*

Dear Ms Chu:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED November 9, 1995**, for the above referenced facility. Plans for coming quarter include continuing groundwater monitoring and sampling.

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:aa 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

ENVIRONMENTAL  
PROTECTION

55 JAN -8 PM 3:00

GROUNDWATER MONITORING AND SAMPLING REPORT

NOV 9 1995  
ENVIRONMENTAL DEPT.  
WEST COAST REGION OFFICE

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

Project No. 10-170-03-001

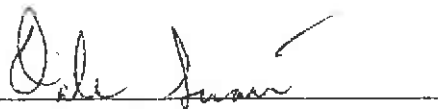
Prepared for:

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

Prepared by:

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

November 9, 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. 10-170-03-001

November 9, 1995

## INTRODUCTION

This report presents the results and findings of the September 6, 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 on 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 an arbitrary datum. 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 on Figure 2. The results of groundwater analysis are shown on 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)	MTBE (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-1	09/06/95	328.96	6.44	322.52	ND<50	340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	--	--	7.4	ATI
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-2	09/06/95	328.50	5.85	322.65	ND<50	210	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	--	--	7.0	ATI
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
MW-3	09/06/95	329.36	6.66	322.70	9000	2800	ND<50	ND<50	ND<50	ND<100	37000	--	--	7.1	ATI
QC-1 (c)	09/06/95	--	--	--	9700	--	ND<50	ND<50	ND<50	ND<100	36000	--	--	--	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)	MTBE (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-4	09/06/95	329.45	6.83	322.62	4400	4500	ND<13	ND<13	ND<13	ND<25	12000	---	---	7.6	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-5	09/06/95	329.60	6.82	322.78	ND<50	200	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	7.3	ATI
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	---	---	---	---	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	---	---	---	---	---	---	---	---	---	---	---
MW-6	09/06/95	329.55	6.94	322.61	ND<50	340	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	7.2	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

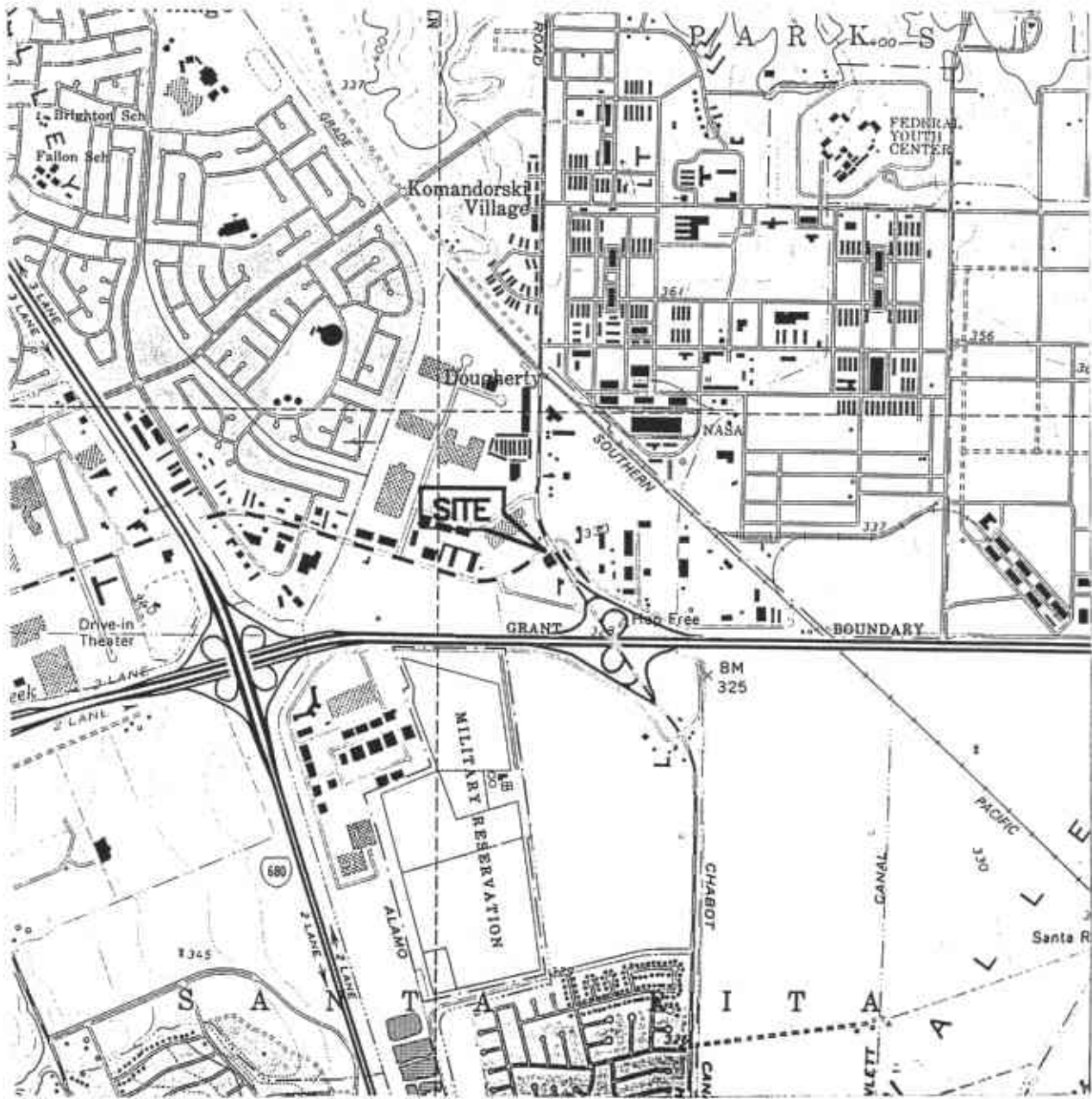
WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	HVOC (ug/l)	DO (ppm)	LAB
MW-7	04/09/93	329.49	5.36	324.13	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	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
MW-7	09/06/95	329.49	6.98	322.51	ND<50	240	ND<0.50	ND<0.50	ND<0.50	ND<1.0	8.5	---	---	7.5	ATI
QC-2 (d)	08/25/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	11/22/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	03/07/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	06/09/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	09/12/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	12/20/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	03/16/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2 (d)	06/28/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	ATI
QC-2 (d)	09/06/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	ATI

ABBREVIATIONS:

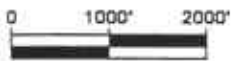
TPH-G Total petroleum hydrocarbons as gasoline  
 TPH-D Total petroleum hydrocarbons as diesel  
 B Benzene  
 T Toluene  
 E Ethylbenzene  
 X Total xylenes  
 MTBE Methyl tert butyl ether  
 TOG Total oil and grease  
 HVOC Halogenated volatile organic compounds  
 DO Dissolved oxygen  
 ug/l Micrograms 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) Travel blank.



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



### FIGURE 1

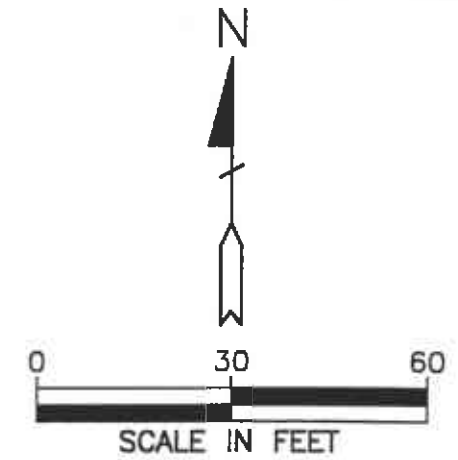
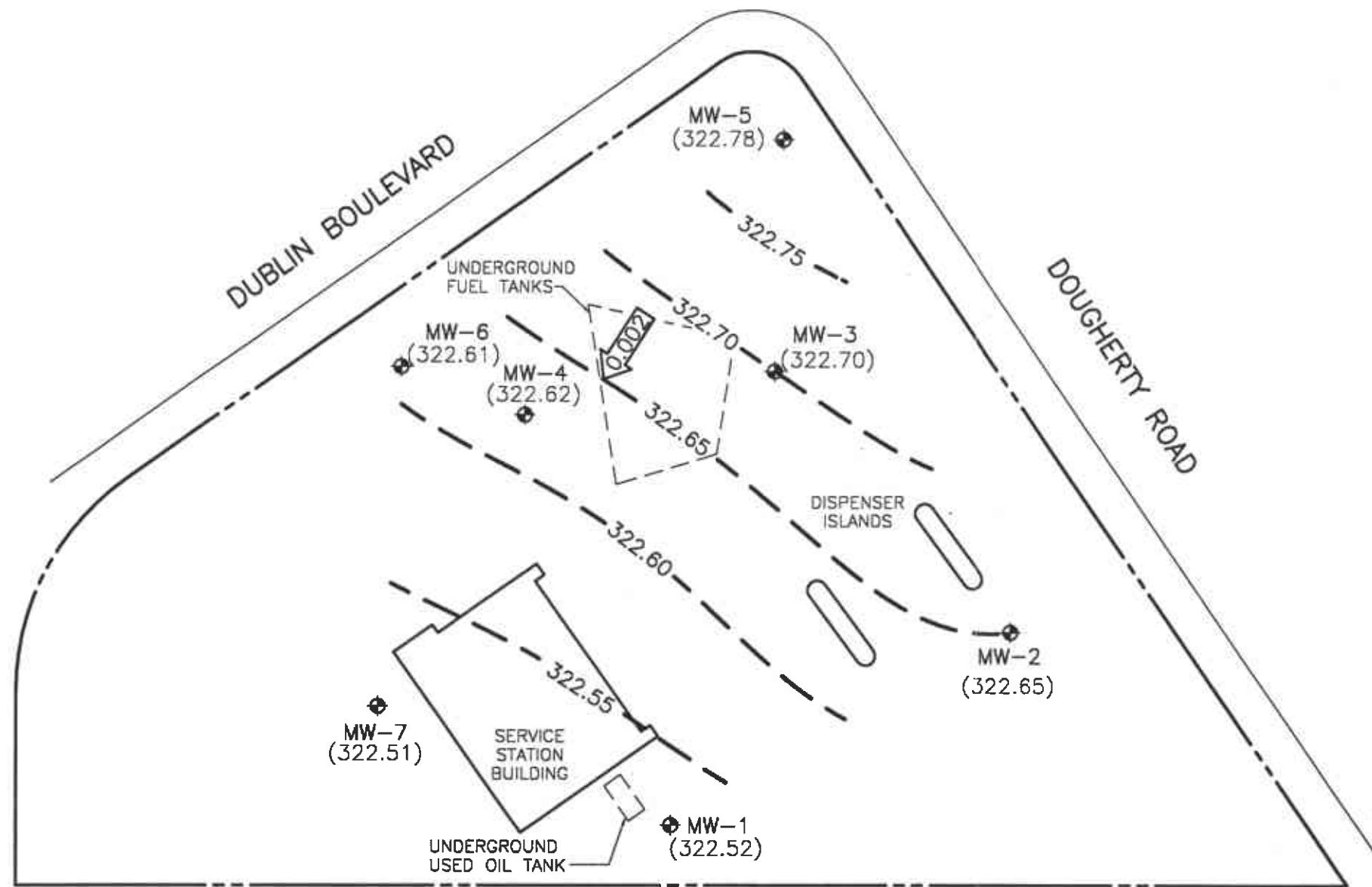
#### SITE VICINITY MAP

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

PROJECT NO. 10-170



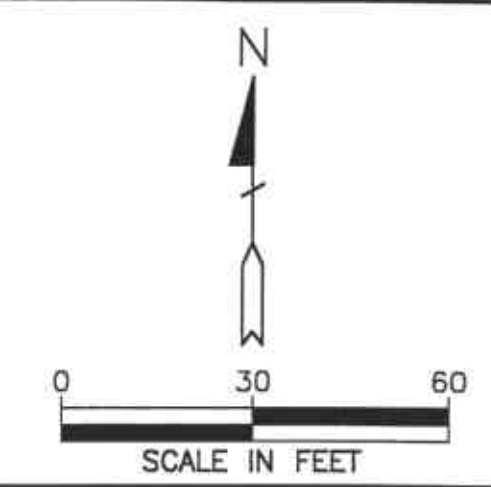
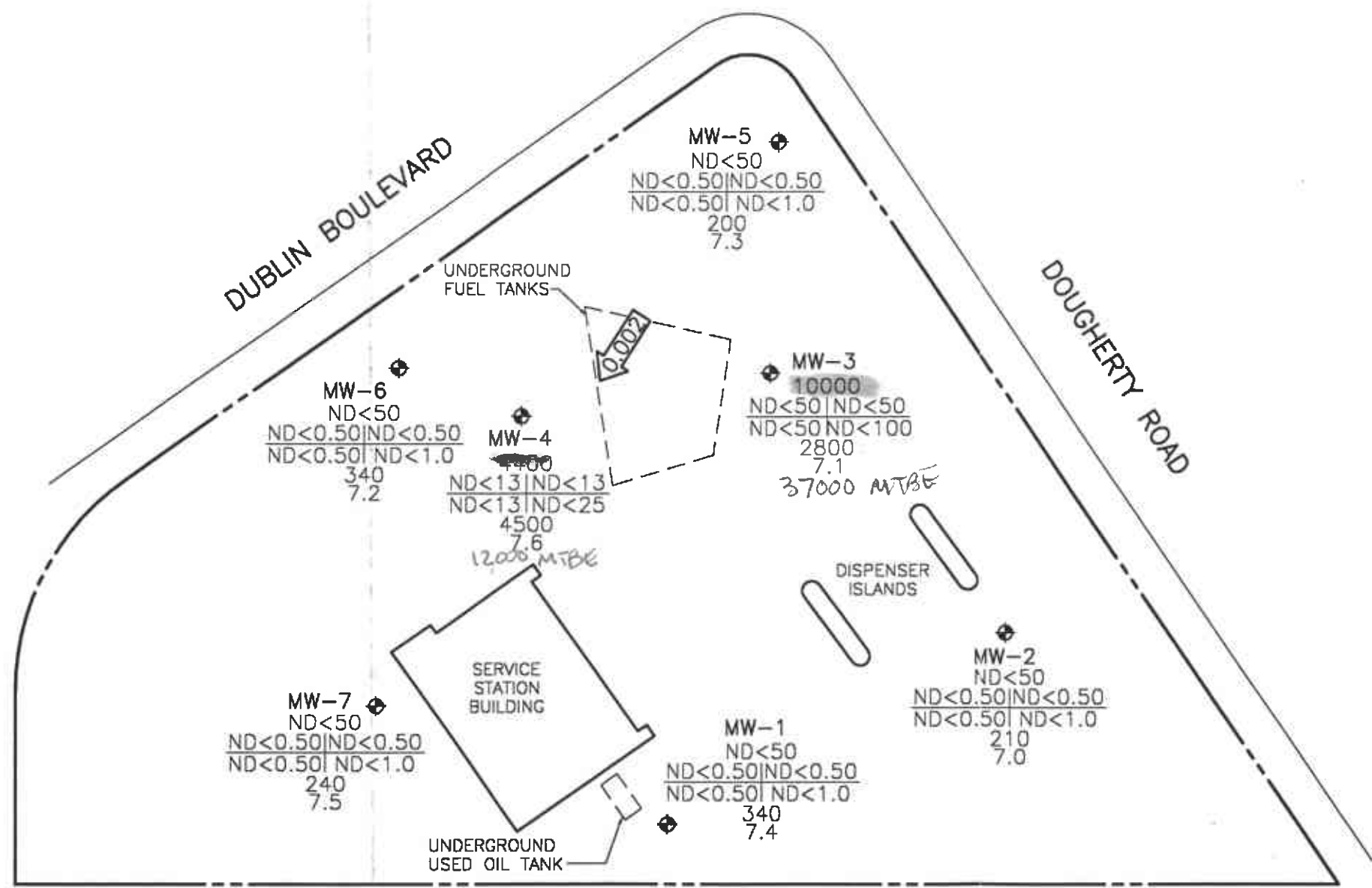
**ALISTO ENGINEERING GROUP**  
WALNUT CREEK, CALIFORNIA



- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
  - (322.78) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
  - 322.75 - 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 6, 1995**  
 BP OIL SERVICE STATION NO. 11120  
 6400 DUBLIN BOULEVARD  
 DUBLIN, CALIFORNIA  
 PROJECT NO. 10-170





**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
- ←0.002
- CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

**FIGURE 3**  
**CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER**  
**SEPTEMBER 6, 1995**  
 BP OIL SERVICE STATION NO. 11120  
 6400 DUBLIN BOULEVARD  
 DUBLIN, CALIFORNIA  
 PROJECT NO. 10-170

**APPENDIX A**  
**WATER SAMPLING FIELD SURVEY FORMS**

# ALISTO

## Field Report / Sampling Data Sheet

ENGINEERING  
GROUP

1575 TREAT BOULEVARD, SUITE 201  
WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No. 10-170-03-001 Date: 9/6/95  
Address I-580 & Dougherty Day: MTWTHF  
Contract No. G602092 City: Dublin  
Station No. BP11120 Sampler: LB

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME SAMPLED	COMMENTS:
MW-1	S-1	2"	18.20	6.44	∅	1130	
MW-2	S-2	↓	18.25	5.85	∅	1132	
MW-3	S-7	↓	20.00	6.66	∅	1144	
MW-4	S-6	↓	20.00	6.83	∅	1142	
MW-5	S-4	↓	21.35	6.82	∅	1137	
MW-6	S-3	4"	19.25	6.94	∅	1134	
MW-7	S-5	2"	20.25	6.98	✓	1139	

### FIELD INSTRUMENT CALIBRATION DATA

Ph METER ICM 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 1115 WEATHER Clear  
D.O. METER ICM ZERO d.O. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 78°F  
CONDUCTIVITY METER ICM 10,000 10,000 TURBIDITY METER \_\_\_\_\_ 5.0 NTU \_\_\_\_\_ OTHER \_\_\_\_\_

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-1	6.44	2"	O/C	∅	Y (N)	2	1220	73.8	7.51	1041µs	7.1	<input type="radio"/> EPA 601 _____ <input checked="" type="radio"/> TPH-G/BTEX <u>HU</u> <input type="radio"/> TPH Diesel _____ <input type="radio"/> TOG 5520 _____ TIME/SAMPLE ID
Total Depth - Water Level=						4		71.6	7.42	1037µs		
x Well Vol. Factor=						6	1235	71.1	7.33	1032µs	7.4	
x#vol. to Purge PurgeVol.												
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp. Tube OWinch ODisp. Bailer(s) _____ OSys Port												
Comments:												1240
Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-2	5.85	2"	O/C	∅	Y (N)	2	1246	72.3	6.90	376µs	7.3	<input type="radio"/> EPA 601 _____ <input checked="" type="radio"/> TPH-G/BTEX <u>HU</u> <input type="radio"/> TPH Diesel _____ <input type="radio"/> TOG 5520 _____ TIME/SAMPLE ID
Total Depth - Water Level=						4	1248	71.4	6.82	365µs		
x Well Vol. Factor=						6	1252	71.0	6.78	362µs	7.0	
x#vol. to Purge PurgeVol.												
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp. Tube OWinch ODisp. Bailer(s) _____ OSys Port												
Comments:												1300

# ALISTO

## Field Report / Sampling Data Sheet

ENGINEERING

GROUP

1575 TREAT BOULEVARD, SUITE 201

WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No.

10-170-03-001

Address

I-580 & Dougherty

Contract No.

G602092

Station No.

BP11120

Sampler:

Date:

9/6/95

Day:

M T W T H F

City:

Dublin

Well ID	Depth to Water	Diam	Cap/Lock	Product	Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-5	6.82	2"	OK	Ø	Y (N)		2	1303	69.9	7.42	1.27ms	6.9	<input type="radio"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.							4		69.3	7.34	1.23ms		<input checked="" type="radio"/> TPH-G/BTEX <i>HCL</i>
21.35 - 6.82 = 14.53 x .16 = 2.32 x 3 = 6.96							7	1311	68.9	7.30	1.20ms	7.3	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Bailer(s) <input type="checkbox"/> OSys Port													<input type="radio"/> TOG 5520
Comments:													TIME/SAMPLE ID
													1315
MW-6	6.94	4"	OK	Ø	Y (N)		8	1319	71.6	8.13	1.15ms	7.2	<input type="radio"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.							16		71.0	7.95	1.12ms		<input checked="" type="radio"/> TPH-G/BTEX <i>HCL</i>
19.25 - 6.94 = 12.31 x .65 = 8.00 x 3 = 24.00							24	1332	70.6	7.86	1.09ms	7.2	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Bailer(s) <input type="checkbox"/> OSys Port													<input type="radio"/> TOG 5520
Comments:													TIME/SAMPLE ID
													1340
MW-7	6.98	2"	OK	Ø	Y (N)		2	1346	69.5	7.35	1.82ms	7.2	<input type="radio"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.							4		69.0	7.26	1.77ms		<input checked="" type="radio"/> TPH-G/BTEX <i>HCL</i>
20.25 - 6.98 = 13.27 x .16 = 2.12 x 3 = 6.36							6.5	1352	68.5	7.22	1.73ms	7.5	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Bailer(s) <input type="checkbox"/> OSys Port													<input type="radio"/> TOG 5520
Comments:													TIME/SAMPLE ID
													1355
MW-4	6.83	2"	OK	Ø	Y (N)		2	1402	71.6	7.74	1.23ms	7.7	<input type="radio"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.							4		70.6	7.68	1.19ms		<input checked="" type="radio"/> TPH-G/BTEX <i>HCL</i>
20.00 - 6.83 = 13.17 x .16 = 2.11 x 3 = 6.33							6.5	1410	70.2	7.62	1.16ms	7.6	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Bailer(s) <input type="checkbox"/> OSys Port													<input type="radio"/> TOG 5520
Comments:													TIME/SAMPLE ID
													1413
MW-3	6.66	2"	OK	Ø	Y (N)		2	1417	75.9	7.52	1.40ms	6.7	<input type="radio"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.							4		74.2	7.41	1.32ms		<input checked="" type="radio"/> TPH-G/BTEX <i>HCL</i>
20.00 - 6.66 = 13.34 x .16 = 2.13 x 3 = 6.39							6.5	1422	73.7	7.36	1.28ms	7.1	<input type="radio"/> TPH Diesel
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Bailer(s) <input type="checkbox"/> OSys Port													<input type="radio"/> TOG 5520
Comments:													TIME/SAMPLE ID
dc-1 (S-8) from this well													1426

**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.: 509054

September 20, 1995

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

Project Name: BP SITE#11120/DUBLIN, CA  
Project # : G602092/10-170-03/001

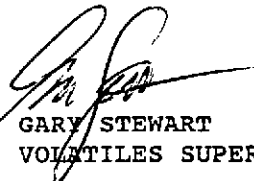
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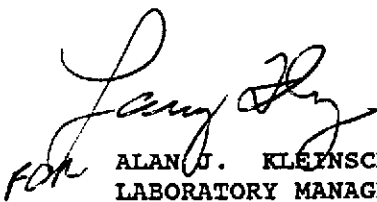
Analytical Technologies, Inc. has received the following sample(s):

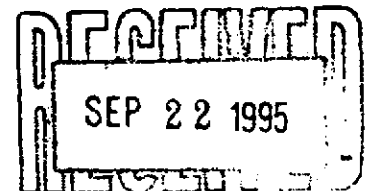
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
September 07, 1995	9	WATER

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



SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

Report Date: September 21, 1995  
 ATI I.D. : 509054

ATI #	Client Description	Matrix	Date Collected
1	S-1	WATER	06-SEP-95
2	S-2	WATER	06-SEP-95
3	S-3	WATER	06-SEP-95
4	S-4	WATER	06-SEP-95
5	S-5	WATER	06-SEP-95
6	S-6	WATER	06-SEP-95
7	S-7	WATER	06-SEP-95
8	S-8	WATER	06-SEP-95
9	S-9	WATER	06-SEP-95

---TOTALS---

<u>Matrix</u>	<u># Samples</u>
WATER	9

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 SCHEDULE

Client : ALISTO ENGINEERING  
Project # : G602092/10-170-03/001  
Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D.: 509054

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



GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	06-SEP-95	12-SEP-95	14-SEP-95	1.00
2	S-2	WATER	06-SEP-95	12-SEP-95	14-SEP-95	1.00
3	S-3	WATER	06-SEP-95	12-SEP-95	14-SEP-95	1.00

Parameter	Units	1	2	3
FUEL HYDROCARBONS	MG/L	0.34@Z	0.21	0.34@Z
HYDROCARBON RANGE		C7-C24	C15-C24	C7-C24
HYDROCARBONS QUANTITATED USING		GASOLINE	DIESEL	DIESEL
<u>SURROGATES</u>				
BIS(2-ETHYLHEXYL)PHTHALATE	%	87	86	59

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	06-SEP-95	12-SEP-95	14-SEP-95	1.00
5	S-5	WATER	06-SEP-95	12-SEP-95	14-SEP-95	1.00
6	S-6	WATER	06-SEP-95	12-SEP-95	14-SEP-95	1.00

Parameter	Units	4	5	6	
FUEL HYDROCARBONS	MG/L	0.20	0.24	4.5	
HYDROCARBON RANGE		C7-C24	C15-C24	C7-C24	
HYDROCARBONS QUANTITATED USING		DIESEL	DIESEL	DIESEL	
<u>SURROGATES</u>					
BIS(2-ETHYLHEXYL) PHTHALATE	%	85	83	84	

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054

Sample Client ID #	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7 S-7	WATER	06-SEP-95	12-SEP-95	14-SEP-95	1.00

Parameter Units 7

FUEL HYDROCARBONS MG/L 2.8  
 HYDROCARBON RANGE C7-C24  
 HYDROCARBONS QUANTITATED USING DIESEL

SURROGATES  
 BIS(2-ETHYLHEXYL)PHTHALATE % 85

## GAS CHROMATOGRAPHY - QUALITY CONTROL

## REAGENT BLANK

Page 6

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)  
Blank I.D. : 36730  
Client : ALISTO ENGINEERING  
Project # : G602092/10-170-03/001  
Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
Date Extracted: 12-SEP-95  
Date Analyzed : 13-SEP-95  
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.05
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
<u>SURROGATES</u>		
BIS(2-ETHYLHEXYL)PHTHALATE	%	83

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Page

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)  
 MSMSD # : 78521  
 Client : ALISTO ENGINEERING

ATI I.D. : 509054  
 Date Extracted: 12-SEP-95  
 Date Analyzed : 13-SEP-95  
 Sample Matrix : WATER  
 REF I.D. : REAGENT WATER

Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
FUEL HYDROCARBONS	MG/L	<0.050	1.0	0.84	84	0.82	82	2

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

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	06-SEP-95	N/A	17-SEP-95	1.00
2	S-2	WATER	06-SEP-95	N/A	17-SEP-95	1.00
3	S-3	WATER	06-SEP-95	N/A	18-SEP-95	1.00

Parameter	Units	1	2	3
METHYL T-BUTYL ETHER	UG/L	<5.0	<5.0	<5.0
BENZENE	UG/L	<0.50	<0.50	<0.50
TOLUENE	UG/L	<0.50	<0.50	<0.50
ETHYLBENZENE	UG/L	<0.50	<0.50	<0.50
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<1.0
FUEL HYDROCARBONS	UG/L	<50	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
<u>SURROGATES</u>				
TRIFLUOROTOLUENE	%	97	98	95

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	06-SEP-95	N/A	18-SEP-95	1.00
5	S-5	WATER	06-SEP-95	N/A	18-SEP-95	1.00
6	S-6	WATER	06-SEP-95	N/A	19-SEP-95	25.00

Parameter	Units	4	5	6
METHYL T-BUTYL ETHER	UG/L	<5.0	8.5	12000
BENZENE	UG/L	<0.50	<0.50	<13
TOLUENE	UG/L	<0.50	<0.50	<13
ETHYLBENZENE	UG/L	<0.50	<0.50	<13
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<25
FUEL HYDROCARBONS	UG/L	<50	<50	4400
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
<u>SURROGATES</u>				
TRIFLUOROTOLUENE	%	92	95	98

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7	S-7	WATER	06-SEP-95	N/A	19-SEP-95	100.00
8	S-8	WATER	06-SEP-95	N/A	19-SEP-95	100.00
9	S-9	WATER	06-SEP-95	N/A	19-SEP-95	1.00

Parameter	Units	7	8	9
METHYL T-BUTYL ETHER	UG/L	37000	36000	<5.0
BENZENE	UG/L	<50	<50	<0.50
TOLUENE	UG/L	<50	<50	<0.50
ETHYLBENZENE	UG/L	<50	<50	<0.50
XYLENES (TOTAL)	UG/L	<100	<100	<1.0
FUEL HYDROCARBONS	UG/L	10000	9700	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
<u>SURROGATES</u>				
TRIFLUOROTOLUENE	%	94	96	91



## GAS CHROMATOGRAPHY - QUALITY CONTROL

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Page 11

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
Blank I.D. : 36767  
Client : ALISTO ENGINEERING  
Project # : G602092/10-170-03/001  
Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
Date Extracted: N/A  
Date Analyzed : 17-SEP-95  
Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
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
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	%	96

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank I.D. : 36768  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
 Date Extracted: N/A  
 Date Analyzed : 18-SEP-95  
 Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
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
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	%	98

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTEX)  
 Blank I.D. : 36777  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
 Date Extracted: N/A  
 Date Analyzed : 18-SEP-95  
 Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
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
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	%	98

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank I.D. : 36778  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
 Date Extracted: N/A  
 Date Analyzed : 19-SEP-95  
 Dil. Factor : 1.00

Parameters	Units	Results
METHYL T-BUTYL ETHER	UG/L	<5.0
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
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	µg	104

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

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Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 MSMSD # : 78576  
 Client : ALISTO ENGINEERING

ATI I.D. : 509054  
 Date Extracted: N/A  
 Date Analyzed : 18-SEP-95  
 Sample Matrix : WATER  
 REF I.D. : 509054-03

Project # : G602092/10-170-03/001  
 Project Name: BP SITE#11120/DUBLIN, CA

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.9	98	5.2	104	6
TOLUENE	UG/L	<0.50	5.0	5.0	100	5.3	106	6

% 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 #: 58894  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name : BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
 Date Extracted: N/A  
 Date Analyzed : 17-SEP-95  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.8	5.0	96
TOLUENE	UG/L	<0.50	4.9	5.0	98

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

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank Spike #: 58895  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name : BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
 Date Extracted: N/A  
 Date Analyzed : 18-SEP-95  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.8	5.0	96
TOLUENE	UG/L	<0.50	5.0	5.0	100

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

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank Spike #: 58909  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name : BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
 Date Extracted: N/A  
 Date Analyzed : 18-SEP-95  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	5.0	5.0	100
TOLUENE	UG/L	<0.50	5.3	5.0	106

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



GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank Spike #: 58910  
 Client : ALISTO ENGINEERING  
 Project # : G602092/10-170-03/001  
 Project Name : BP SITE#11120/DUBLIN, CA

ATI I.D. : 509054  
 Date Extracted: 19-SEP-95  
 Date Analyzed : 19-SEP-95  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.7	5.0	94
TOLUENE	UG/L	<0.50	4.8	5.0	96

% 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 #: 509054

INITIALS: LJ

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

1	Does this project require special handling according to NFESC 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A
	a) are Custody Seals present on Cooler(s) ?	YES	<input checked="" type="radio"/> NO
	If yes, are seals intact ?	YES	NO
	b) are Custody Seals present on the sample ?	YES	<input checked="" type="radio"/> NO
	If yes, are seals intact ?	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.	<input checked="" type="radio"/> YES	NO
5	Is the COC complete per cooler ? Relinquished: <input checked="" type="radio"/> yes / no Requested analysis: <input checked="" type="radio"/> yes / no	<input checked="" type="radio"/> YES	NO
6	Is the COC in agreement with the samples received? # Samples: <input checked="" type="radio"/> yes / no Sample ID's: <input checked="" type="radio"/> yes / no Date sampled: <input checked="" type="radio"/> yes / no Matrix: <input checked="" type="radio"/> yes / no # containers: <input checked="" type="radio"/> yes / no	<input checked="" type="radio"/> YES	NO
7	Are the samples preserved correctly?	<input checked="" type="radio"/> YES	NO
8	Is there enough sample for all the requested analyses?	<input checked="" type="radio"/> YES	NO
9	Are all samples within holding times for the requested analyses?	<input checked="" type="radio"/> YES	NO
10	Record cooler temperature. Contact PM if temperature is not 4°C ± 2°C.	2.4 °C	
	Is ice present in cooler?	<input checked="" type="radio"/> YES	NO
11	Were all sample containers received intact (ie. not broken, leaking, etc.)?	<input checked="" type="radio"/> YES	NO
12	Are samples requiring no headspace, headspace free? N/A	<input checked="" type="radio"/> YES	NO
13	Are VOA 1st stickers required?	YES	<input checked="" type="radio"/> NO
14	Are there special comments on the Chain of Custody which require client contact?	YES	<input checked="" type="radio"/> 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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



ATI # 509054

CHAIN OF CUSTODY

No. 066902

Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering ADDRESS: 1575 Treat Blvd #201 W. C. Dublin, Ca CITY: Ca STATE: Ca ZIP CODE: 94596

BP SITE NUMBER: 1112.0 BP CORNER ADDRESS/CITY: Dublin, Ca CONSULTANT PROJECT NUMBER: 10-170-03/001

CONSULTANT PROJECT MANAGER: Bill Howell PHONE NUMBER: (510) 295-1650 FAX NUMBER: 295-1823 CONSULTANT CONTRACT NUMBER: 6602092

BP CONTACT: Scott Apton BP ADDRESS: Kenton, WA PHONE NUMBER: (206) 251-8208 FAX NO.:

LAB CONTACT: ATI LABORATORY ADDRESS: San Diego, Ca PHONE NUMBER: (619) 458-9141 FAX NO.: (619) 450-9181

SAMPLED BY (Please Print Name): Larry Buenavente SAMPLED BY (Signature): [Signature] SHIPMENT DATE: 9-6-95 SHIPMENT METHOD: Fed Express

TAT:  24 Hours  48 Hours  1 Week  Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER: 6680235914

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	TPH-G/STX	TPH-D							COMMENTS
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #	MTBE								
S-1	9/6/95	W	3		01	X	X							Time 1240
S-2	↓	↓	↓		02	↓	↓							1300
S-3	↓	↓	↓		03	↓	↓							1340
S-4	↓	↓	↓		04	↓	↓							1315
S-5	↓	↓	↓		05	↓	↓							1355
S-6	↓	↓	↓		06	↓	↓							1413
S-7	↓	↓	↓		07	↓	↓							1426
S-8	↓	↓	2		08	↓	↓							1428
S-9	↓	↓	2		09	↓	↓							1200

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<u>[Signature]</u>	<u>9/6/95</u>	<u>1500</u>	<u>Patricia Epton</u>	<u>9/6/95</u>	<u>1500</u>	
<u>Patricia Epton</u>	<u>9/6/95</u>	<u>1600</u>	<u>[Signature]</u>	<u>9/9/95</u>	<u>09:00</u>	<u>2.4°C</u>