



**BP OIL**

BP Oil Company  
Environmental Resources Management  
Building 13, Suite N  
295 SW 41st Street  
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April 23, 1996

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

**RE: BP OIL FACILITY #11266  
1541 Park Street  
Alameda, CA**

Dear Ms Chu:

Attached please find our **GROUNDWATER MONITORING AND SAMPLING REPORT DATED MARCH 14, 1996** for the above referenced facility. Plans for the following quarter include additional 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  
Corrective Action Manager

STH:sb msword\ERM11266

cc: Mr. Eddy So, CRWQCB, San Francisco Bay Region, 2101 Webster St. 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, 601 Union Street, Suite 2500, Seattle, WA 98101

Mr. Gary Pischke, Hydro Environmental Technologies Inc., 2363 Mariner Square Drive,  
Ste 243, Alameda, CA 94501

Site File

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11266  
1541 Park Street  
Alameda, California

Project No. 10-050-06-002

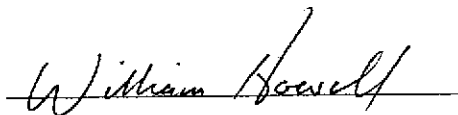
Prepared for:

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

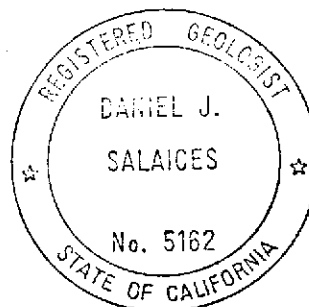
March 14, 1996



William Howell  
Project Manager



Dan Salaices  
Registered Geologist



# GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11266  
1541 Park Street  
Alameda, California

Project No. 10-050-06-002

March 14, 1996

## INTRODUCTION

This report presents the results and findings of the January 11, 1996 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11266, 1541 Park Street, Alameda, 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 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 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. 11266  
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet) (a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet) (b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-1	03/04/88	19.19	---	---	95000	2000	5900	1100	10000	---	---	---
MW-1	03/29/89	19.19	---	---	25000	930	2600	24	3100	---	---	---
MW-1	11/28/89	19.19	---	---	15000	280	880	340	1200	---	---	---
MW-1	02/13/91	19.19	---	---	25000	680	2700	1100	3200	---	---	---
MW-1	01/08/92	19.19	---	---	10000	260	1100	570	2000	---	---	---
MW-1	03/30/92	19.19	8.15	11.04	5800	290	570	500	1100	---	---	PACE
MW-1	07/02/92	19.19	9.38	9.81	2500	170	60	310	300	---	---	ANA
MW-1	07/22/92	19.19	9.62	9.57	---	---	---	---	---	---	---	---
MW-1	10/02/92	19.19	9.98	9.21	4000	86	190	270	350	---	---	ANA
QC-1 (c)	10/02/92	---	---	---	3600	89	180	270	340	---	---	ANA
MW-1	12/14/92	19.19	9.90	9.29	6800	75	540	200	670	---	---	ANA
QC-1 (c)	12/14/92	---	---	---	5900	68	480	190	600	---	---	ANA
MW-1	03/24/93	19.19	8.52	10.67	6400	150	310	370	710	---	---	PACE
MW-1	06/17/93	19.19	9.37	9.82	3800	110	160	310	480	---	---	PACE
MW-1	09/29/93	19.19	10.80	8.39	1100	22	16	54	110	---	---	PACE
MW-1	12/28/93	19.19	9.27	9.92	1800	26	110	77	300	---	---	PACE
MW-1	03/29/94	19.19	8.77	10.42	22000	990	560	970	2000	---	3.1	PACE
MW-1	07/07/94	19.19	9.18	10.01	18000	67	32	250	140	---	---	PACE
MW-1	10/18/94	19.19	9.85	9.34	270	1.9	0.6	ND<0.5	3.2	---	3.6	PACE
MW-1	02/01/95	19.19	7.04	12.15	5400	260	350	1100	980	---	6.5	ATI
MW-1	04/12/95	19.19	7.74	11.45	13000	260	620	960	2600	---	5.0	ATI
MW-1	09/13/95	19.19	9.58	9.61	5800	110	110	510	830	4300	5.2	ATI
QC-1 (c)	09/13/95	---	---	---	5800	110	100	490	800	4500	---	ATI
MW-1	01/11/96	19.19	8.95	10.24	5400	91	130	510	1000	1700	5.2	ATI
QC-1 (c)	01/11/96	---	---	---	5100	89	120	490	950	2000	---	ATI
MW-2	03/04/88	19.32	---	---	ND	ND	ND	ND	ND	---	---	---
MW-2	03/29/89	19.32	---	---	ND	1.1	0.78	ND	1.7	---	---	---
MW-2	11/28/89	19.32	---	---	170	ND	ND	ND	ND	---	---	---
MW-2	02/13/91	19.32	---	---	150	1.4	ND	ND	0.9	---	---	---
MW-2	01/08/92	19.32	---	---	ND	1.4	ND	ND	1.1	---	---	---
MW-2	03/30/92	19.32	9.03	10.29	91	0.7	ND	ND	ND	---	---	PACE
MW-2	07/02/92	19.32	9.96	9.36	150	3.1	0.6	0.6	1.1	---	---	ANA
MW-2	07/22/92	19.32	10.12	9.20	---	---	---	---	---	---	---	---
MW-2	10/02/92	19.32	10.42	8.90	56	ND<0.5	0.8	0.8	1.2	---	---	ANA
MW-2	12/14/92	19.32	10.77	8.55	210	1.5	ND<0.5	0.9	2.7	---	---	ANA
MW-2	03/24/93	19.32	9.33	9.99	94	0.8	ND<0.5	ND<0.5	0.9	---	---	PACE
QC-1 (c)	03/24/93	---	---	---	150	1.8	0.6	1.3	1.3	---	---	PACE
MW-2	06/17/93	19.32	9.91	9.41	ND<50	ND<0.5	ND<0.5	ND<0.5	0.7	---	---	PACE
MW-2	09/29/93	19.32	11.39	7.93	68	ND<0.5	0.9	0.7	1.9	---	---	PACE
MW-2	12/28/93	19.32	9.75	9.57	260	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-1 (c)	12/28/93	---	---	---	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-2	03/29/94	19.32	9.39	9.93	150	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	4.9	PACE
QC-1 (c)	03/29/94	---	---	---	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-2	07/07/94	19.32	9.68	9.64	1100	0.6	1.7	0.6	3.2	---	---	PACE
MW-2	10/18/94	19.32	10.22	9.10	290	3.1	0.8	ND<0.5	5.1	---	3.3	PACE
MW-2	02/01/95	19.32	8.03	11.29	100	ND<0.5	ND<0.5	ND<0.5	ND<1	---	6.0	ATI
MW-2	04/12/95	19.32	8.71	10.61	1200	ND<1.0	ND<1.0	ND<1.0	ND<2.0	---	8.3	ATI
MW-2	09/13/95	19.32	10.19	9.13	480	ND<2.5	ND<2.5	ND<2.5	ND<5.0	2300	7.8	ATI
MW-2	01/11/96	19.32	9.59	9.73	3400	ND<25	ND<25	ND<25	ND<50	11000	5.4	ATI

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11266  
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-3	03/04/88	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	03/29/89	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	11/28/89	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	02/13/91	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	01/08/92	19.99	---	---	ND	ND	ND	ND	ND	---	---	---
MW-3	03/30/92	19.99	9.71	10.28	ND	ND	ND	ND	ND	---	---	PACE
MW-3	07/02/92	19.99	10.52	9.47	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	07/22/92	19.99	10.62	9.37	---	---	---	---	---	---	---	---
MW-3	10/02/92	19.99	10.86	9.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	12/14/92	19.99	10.53	9.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-3	03/24/93	19.99	9.06	10.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	06/17/93	19.99	10.44	9.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	09/29/93	19.99	11.06	8.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	12/28/93	19.99	9.43	10.56	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-3	03/29/94	19.99	10.01	9.98	---	---	---	---	ND<0.5	---	---	---
MW-3	07/07/94	19.99	10.14	9.85	ND<50	ND<0.5	0.7	ND<0.5	ND<0.5	---	---	PACE
QC-1 (c)	07/07/94	---	---	---	ND<50	ND<0.5	0.7	ND<0.5	ND<0.5	---	---	PACE
MW-3	10/18/94	19.99	10.56	9.43	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.2	PACE
MW-3	02/01/95	19.99	8.98	11.01	ND<50	ND<0.5	1.0	0.5	1.9	---	5.9	ATI
MW-3	04/12/95	19.99	9.70	10.29	---	---	---	---	---	---	---	---
MW-3	09/13/95	19.99	10.70	9.29	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.7	ATI
MW-3	01/11/96	19.99	10.18	9.81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.5	ATI
MW-4	03/04/88	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	03/29/89	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	11/28/89	20.17	---	---	430	6.2	0.8	12	3.3	---	---	---
MW-4	02/13/91	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	01/08/92	20.17	---	---	ND	ND	ND	ND	ND	---	---	---
MW-4	03/30/92	20.17	8.73	11.44	ND	ND	ND	ND	ND	---	---	PACE
MW-4	07/02/92	20.17	10.04	10.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-4	07/22/92	20.17	10.26	9.91	---	---	---	---	---	---	---	---
MW-4	10/02/92	20.17	10.63	9.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-4	12/14/92	20.17	10.02	10.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-4	03/24/93	20.17	9.08	11.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	06/17/93	20.17	10.03	10.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	09/29/93	20.17	10.96	9.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	12/28/93	20.17	9.33	10.84	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	03/29/94	20.17	9.42	10.75	---	---	---	---	---	---	---	---
MW-4	07/07/94	20.17	9.82	10.36	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-4	10/18/94	20.17	10.36	9.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.1	PACE
MW-4	02/01/95	20.17	7.50	12.67	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	9.3	ATI
MW-4	04/12/95	20.17	8.21	11.96	---	---	---	---	---	---	---	---
MW-4	09/13/95	20.17	10.20	9.97	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.3	ATI
MW-4	01/11/96	20.17	9.57	10.60	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	5.1	ATI

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 BP OIL COMPANY SERVICE STATION NO. 11266  
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-5	03/04/88	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	03/29/89	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	11/28/89	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	02/13/91	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	01/08/92	19.41	---	---	ND	ND	ND	ND	ND	---	---	---
MW-5	03/30/92	19.41	7.85	11.56	ND	ND	ND	ND	ND	---	---	PACE
MW-5	07/02/92	19.41	9.27	10.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-5	07/22/92	19.41	9.55	9.86	---	---	---	---	---	---	---	---
MW-5	10/02/92	19.41	9.97	9.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-5	12/14/92	19.41	9.14	10.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-5	03/24/93	19.41	8.17	11.24	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	06/17/93	19.41	8.29	11.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-1 (c)	06/17/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	09/29/93	19.41	10.31	9.10	ND<50	ND<0.5	ND<0.5	ND<0.5	0.6	---	---	PACE
MW-5	12/28/93	19.41	8.91	10.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	03/29/94	19.41	8.50	10.91	---	---	---	---	---	---	---	---
MW-5	07/07/94	19.41	8.99	10.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-5	10/18/94	19.41	9.61	9.80	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.5	PACE
MW-5	02/01/95	19.41	6.55	12.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	7.6	ATI
MW-5	04/12/95	19.41	7.27	12.14	---	---	---	---	---	---	---	---
MW-5	09/13/95	19.41	9.49	9.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.9	ATI
MW-5	01/11/96	19.41	8.82	10.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	4.9	ATI
MW-6	03/04/88	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	03/29/89	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	11/28/89	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	02/13/91	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	01/08/92	19.40	---	---	ND	ND	ND	ND	ND	---	---	---
MW-6	03/30/92	19.40	8.86	10.54	ND	ND	ND	ND	ND	---	---	PACE
MW-6	07/02/92	19.40	9.94	9.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-6	07/22/92	19.40	10.10	9.30	---	---	---	---	---	---	---	---
MW-6	10/02/92	19.40	10.48	8.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-6	12/14/92	19.40	10.76	8.64	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-6	03/24/93	19.40	9.19	10.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	06/17/93	19.40	9.91	9.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	09/29/93	19.40	11.49	7.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	12/28/93	19.40	9.88	9.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	03/29/94	19.40	9.36	10.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	5.0	PACE
MW-6	07/07/94	19.40	9.75	9.65	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
MW-6	10/18/94	19.40	10.30	9.10	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	3.3	PACE
MW-6	02/01/95	19.40	7.92	11.48	ND<50	ND<0.5	0.9	ND<0.5	1.1	---	5.4	ATI
MW-6	04/12/95	19.40	8.41	10.99	220	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	4.7	ATI
MW-6	09/13/95	19.40	10.05	9.35	180	ND<1.0	ND<1.0	ND<1.0	ND<2.0	770	4.9	ATI
MW-6	01/11/96	19.40	9.52	9.88	670	ND<2.5	ND<2.5	ND<2.5	ND<5.0	2400	4.6	ATI

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 BP OIL COMPANY SERVICE STATION NO. 11266  
 1541 PARK STREET, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-050

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
RW-1	07/22/92	---	9.66	---	13000	1000	3400	360	2800	---	---	ANA
RW-1	10/02/92	---	10.28	---	---	---	---	---	---	---	---	---
RW-1	12/14/92	---	23.28	---	---	---	---	---	---	---	---	---
RW-1	03/24/93	---	8.93	---	660	21	25	8.3	100	---	---	PACE
RW-1	06/17/93	---	9.66	---	850	13	1.0	15	100	---	---	PACE
RW-1	09/29/93	19.27	23.40	-4.13	1200	26	27	11	150	---	---	PACE
QC-1 (c)	09/29/93	---	---	---	1200	26	28	11	160	---	---	PACE
RW-1	12/28/93	19.27	9.76	9.51	3500	300	220	180	480	---	---	PACE
RW-1	03/29/94	19.27	8.93	10.34	12000	640	1700	450	2200	---	6.3	PACE
RW-1	07/07/94	19.27	9.45	9.82	7600	530	1100	380	1800	---	---	PACE
RW-1	10/18/94	19.27	10.11	9.16	5300	47	100	150	280	---	3.4	PACE
QC-1 (c)	10/18/94	---	---	---	430	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
RW-1	02/01/95	19.27	8.54	10.73	27000	2400	6100	1800	5300	---	4.5	ATI
QC-1 (c)	02/01/95	---	---	---	15000	1300	3300	970	2900	---	---	ATI
RW-1	04/12/95	19.27	8.21	11.06	6200	330	910	350	1500	---	5.2	ATI
QC-1 (c)	04/12/95	---	---	---	7600	400	1100	440	1900	---	---	ATI
RW-1	09/13/95	19.27	9.84	9.43	920	140	60	34	110	1200	5.1	ATI
RW-1	01/11/96	19.27	9.25	10.02	ND<50	0.95	0.61	ND<0.50	2.1	43	5.4	ATI
QC-2 (d)	10/02/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2 (d)	12/14/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2 (d)	03/24/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (d)	06/17/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (d)	09/29/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (d)	12/28/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (d)	03/29/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (d)	07/07/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (d)	10/18/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (d)	02/01/95	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	ATI
QC-2 (d)	04/12/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2 (d)	09/13/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2 (d)	01/11/96	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI

*Remediation system off*

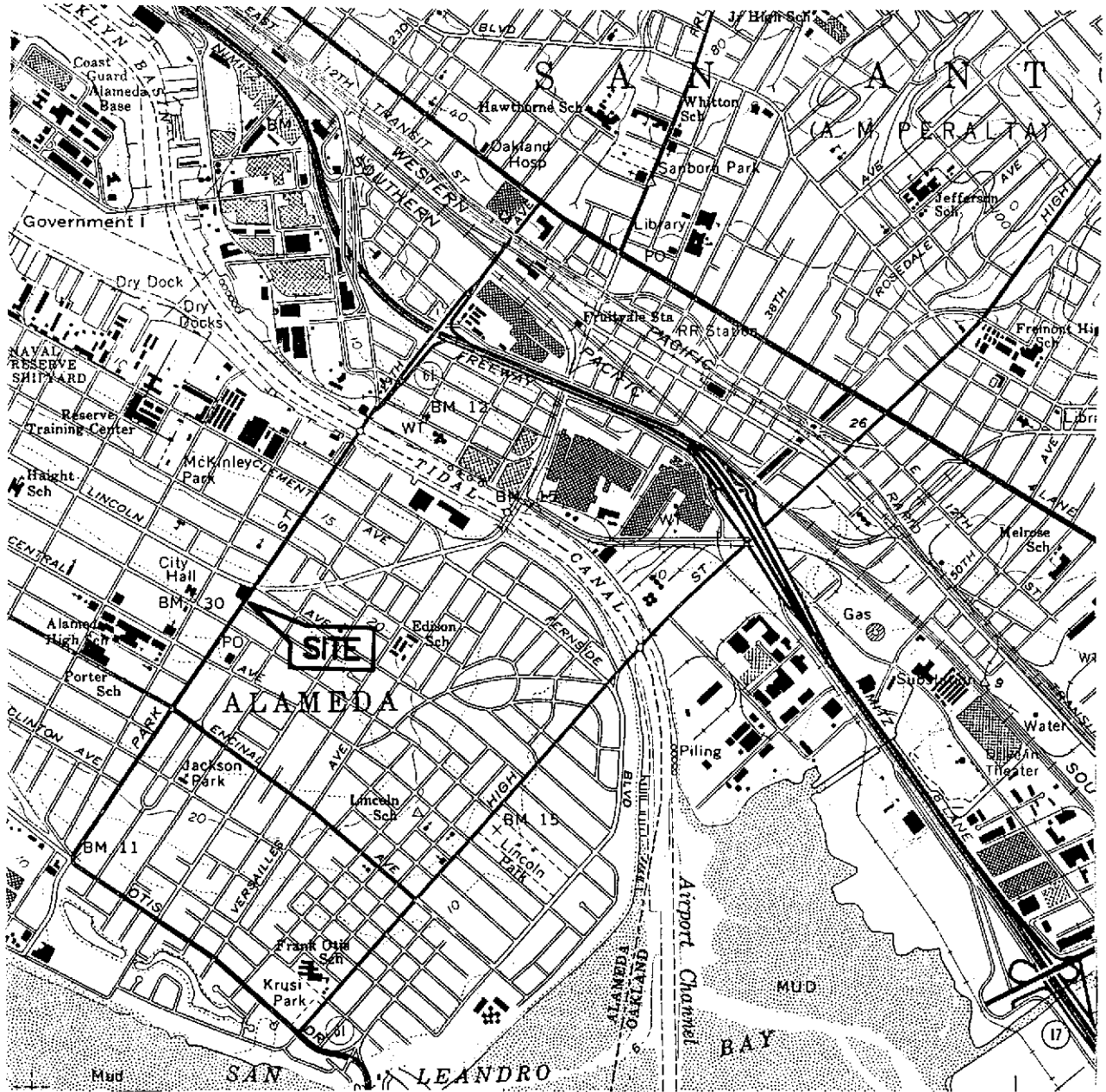
ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
---	Not measured/applicable/analyzed
ND	Not detected above reported detection limit
PACE	Paca, Inc.
ANA	Anamatrix, Inc.
ATI	Analytical Technologies, Inc.

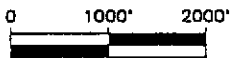
NOTES:

- (a) Casing elevations surveyed to nearest 0.01 foot above mean sea level, with an assigned elevation of 22.82 feet (City datum).
- (b) Groundwater elevations in feet above mean sea level.
- (c) Blind duplicate.
- (d) Travel blank.

F:\010-05\0050-6-1.W02



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



**FIGURE 1**

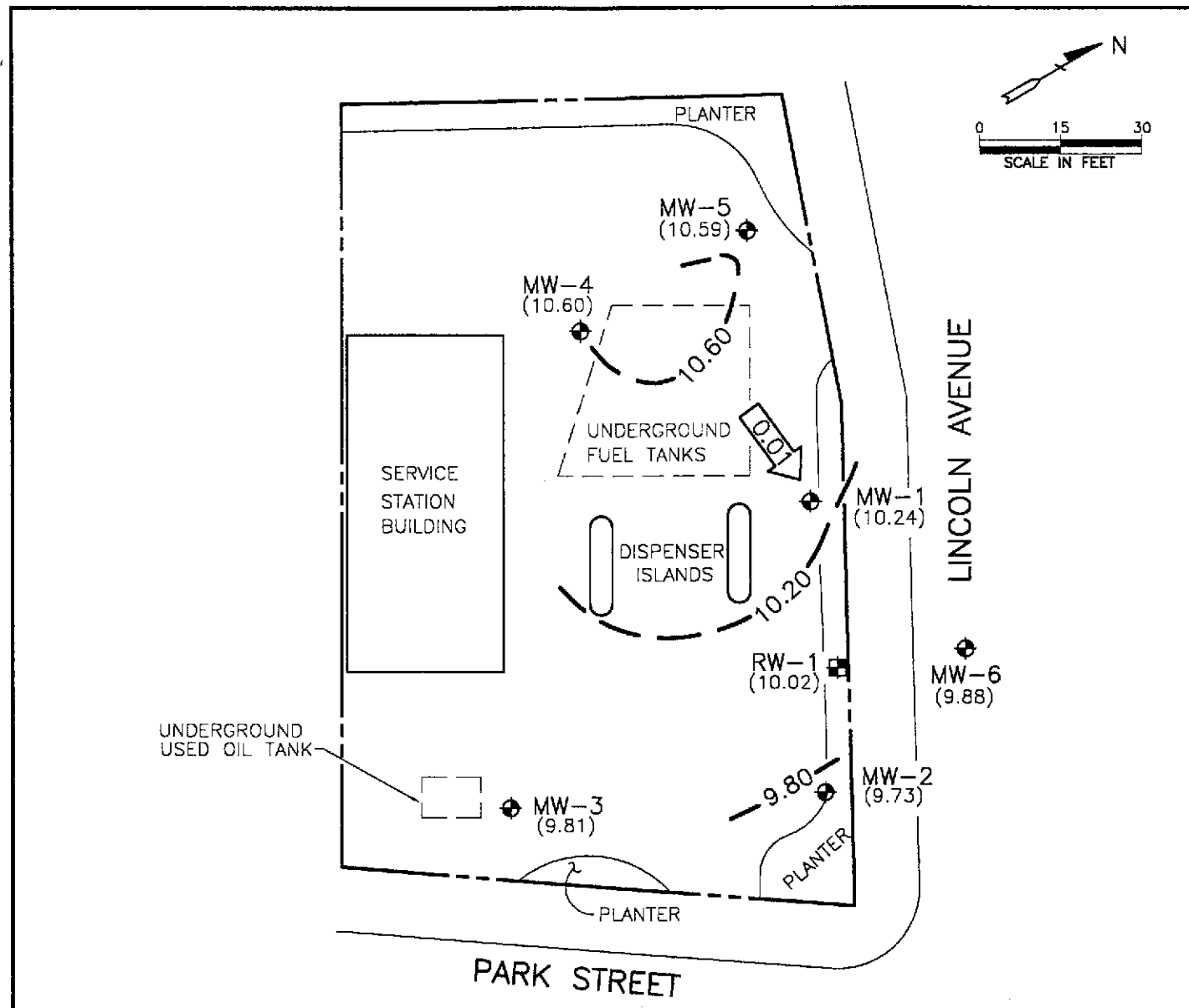
**SITE VICINITY MAP**

BP OIL SERVICE STATION NO. 11266  
 1541 PARK STREET  
 ALAMEDA, CALIFORNIA  
 PROJECT NO. 10-050



**ALISTO ENGINEERING GROUP**  
 WALNUT CREEK, CALIFORNIA





**LEGEND**



GROUNDWATER MONITORING WELL



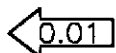
GROUNDWATER RECOVERY WELL

(9.73)

GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

9.80

GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL - 0.40 FOOT)



CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

**FIGURE 2**

**POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP**

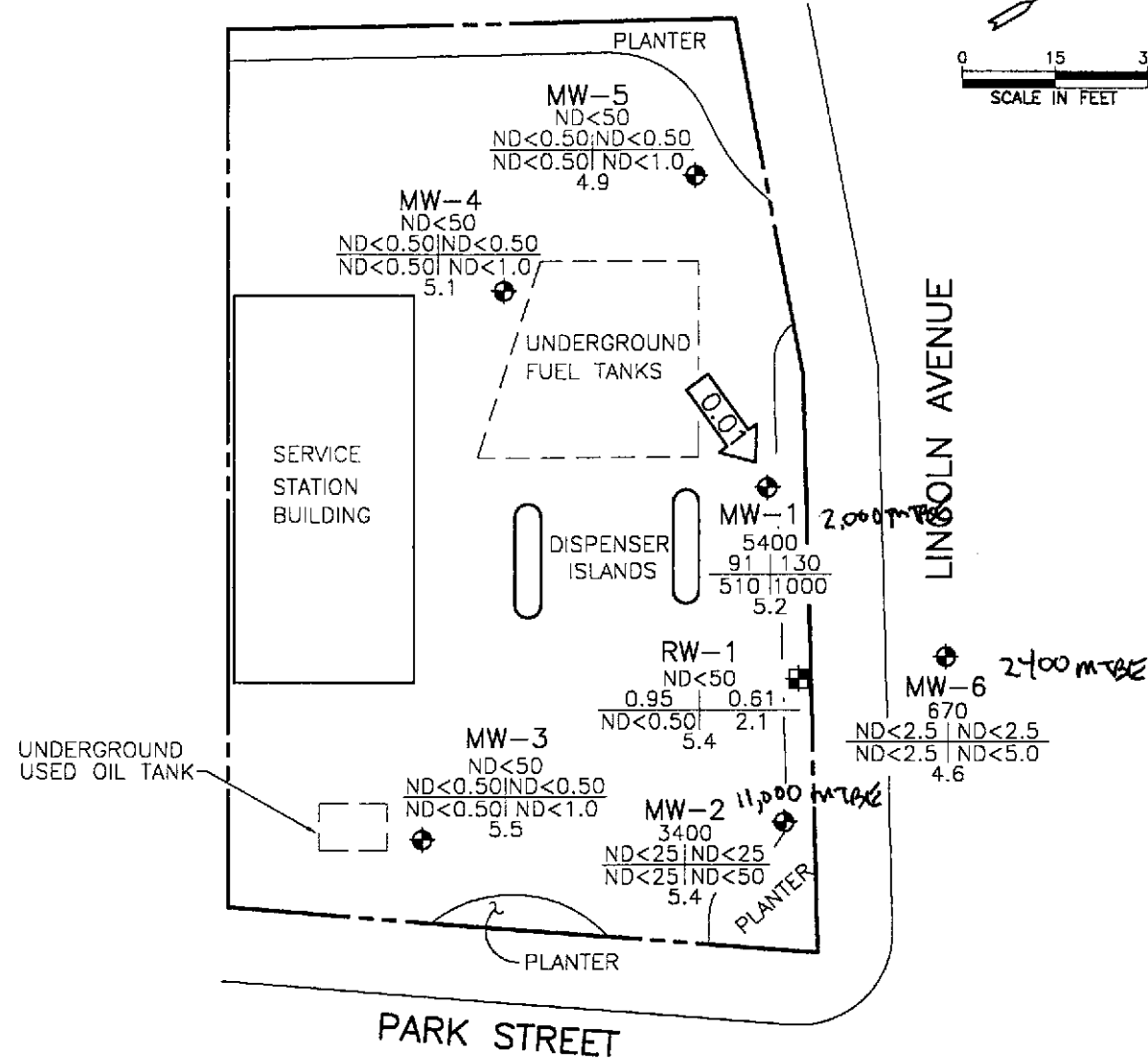
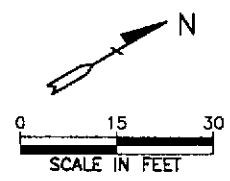
**JANUARY 11, 1996**

BP OIL SERVICE STATION NO. 11266  
1541 PARK STREET  
ALAMEDA, CALIFORNIA

PROJECT NO. 10-050



**ALISTO ENGINEERING GROUP**  
WALNUT CREEK, CALIFORNIA



**LEGEND**

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

**FIGURE 3**  
**CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER**  
**JANUARY 11, 1996**  
 BP OIL SERVICE STATION NO. 11266  
 1541 PARK STREET  
 ALAMEDA, CALIFORNIA  
 PROJECT NO. 10-050



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

# ALISTO

## Field Report / Sampling Data Sheet

ENGINEERING  
GROUP  
1575 TREAT BOULEVARD, SUITE 201

Project No. 10-050-06-002  
Address 1541 Park St.  
Contract No. G620640  
Station No. BP 11266

Date: 1/11/96 *BAH*  
Day: WED  
City: Alameda  
Sampler: LS

### DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME SAMPLED	COMMENTS:
MW-1	S-7	2"	21.88	8.95	Ø	1510	Qc-1 (S-8) from this well
MW-2	S-5		21.88	9.59		1422	
MW-3	S-3		25.00	10.18		1330	Replaced 2" locking Cap + Lock
MW-4	S-1		24.00	9.57		1153	
MW-5	S-2		24.00	8.82		1225	
MW-6	S-4	↓	24.24	9.52	↓	1401	
RW-1	S-6	6"	29.54	9.25	↓	1449	

Semi=June/Dec

### FIELD INSTRUMENT CALIBRATION DATA

pH METER Tem 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED (Y) N TIME 0830  
D.O. METER Tem ZERO d.O. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 62 WEATHER Clear  
CONDUCTIVITY METER Tem 10,000 other 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-4	9.57	2"	o/c	Ø	Y (N)	2	1137	70.7	7.11	494µs	5.1	<input type="radio"/> EPA 601 _____
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.												<input checked="" type="radio"/> TPH-G/BTEX <u>HCL</u>
24.00 - 9.57 = 14.43 x .16 = 2.31 x 3 = 6.93												<input type="radio"/> TPH Diesel _____
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port												<input type="radio"/> TOG 5520 _____
Comments:												TIME/SAMPLE ID
												1153
MW-5	8.82	2"	o/c	Ø	Y (N)	2.5	1210	69.7	6.85	917µs	4.7	<input type="radio"/> EPA 601 _____
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.												<input checked="" type="radio"/> TPH-G/BTEX <u>HCL</u>
24.00 - 8.82 = 15.18 x .16 = 2.43 x 3 = 7.29												<input type="radio"/> TPH Diesel _____
Purge Method: <input checked="" type="checkbox"/> Surface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port												<input type="radio"/> TOG 5520 _____
Comments:												TIME/SAMPLE ID
												1225

# 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.

10-050-06-002

Address

1541 Park St.

Contract No.

G620640

Station No.

BP 11266

Sampler:

Date:

7/11/96 ASH  
1/10/96

Day:

MTWTHF

City:

Alameda

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-3	10.18	2"	Replaced	Ø	Y ⊕	2.5	1310	69.8	7.19	742µs	5.7	<input type="checkbox"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						5.0		69.1	7.11	721µs		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$25.00 - 10.18 = 14.82 \times .16 = 2.37 \times 3 = 7.11$						7.5	1323	68.7	7.06	718µs	5.5	<input type="checkbox"/> 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="checkbox"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1330
MW-6	9.52	2"	OK	Ø	Y ⊕	2.5	1342	69.1	7.21	739µs	4.9	<input type="checkbox"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						5.0		68.3	7.07	714µs		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$24.24 - 9.52 = 14.72 \times .16 = 2.36 \times 3 = 7.08$						7.5	1354	67.3	6.94	708µs	4.6	<input type="checkbox"/> 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="checkbox"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1401
MW-2	9.59	2"	OK	Ø	Y ⊕	2	1410	69.4	7.73	592µs	5.1	<input type="checkbox"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						4		68.3	7.64	581µs		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$21.88 - 9.59 = 12.29 \times .16 = 1.97 \times 3 = 5.91$						6	1420	68.0	7.51	575µs	5.4	<input type="checkbox"/> 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="checkbox"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1422
RW-1	9.25	2"	OK	Ø	Y ⊕	3	1434	68.9	6.93	810µs	5.0	<input type="checkbox"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						6		68.2	6.77	760µs		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$29.54 - 9.25 = 20.29 \times .16 = 3.25 \times 3 = 9.75$						10	1447	67.1	6.74	755µs	5.4	<input type="checkbox"/> 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="checkbox"/> TOG 5520
Comments:												TIME/SAMPLE ID
												1449
MW-4	8.95	2"	OK	Ø	Y ⊕	2	1501	69.1	7.14	589µs	4.6	<input type="checkbox"/> EPA 601
Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge PurgeVol.						4		68.6	6.89	574µs		<input checked="" type="checkbox"/> TPH-G/BTEX HCL
$21.88 - 8.95 = 12.93 \times .16 = 2.07 \times 3 = 6.21$						6.5	1507	67.4	6.79	567µs	5.2	<input type="checkbox"/> 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="checkbox"/> TOG 5520
Comments:												TIME/SAMPLE ID
OC-1 (S-8) from this well												1510

MW-3 Replaced 2" locking cap + lock.

**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.: 601100

January 23, 1996

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

Project Name: BP SITE #11266/ALAMEDA, CA  
Project # : G620640/10-050-061


Attention: BRADY NAGLE


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

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
January 12, 1996	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

  
ALAN J. KLEINSCHMIDT  
LABORATORY MANAGER



Client : ALISTO ENGINEERING
Project # : G620640/10-050-061
Project Name: BP SITE #11266/ALAMEDA, CA

Report Date: January 23, 1996
ATI I.D. : 601100

Table with 4 columns: ATI #, Client Description, Matrix, Date Collected. Rows 1-9 showing sample S-1 to S-9, all with Matrix WATER and Date Collected 11-JAN-96.

---TOTALS---

Summary table with 2 columns: Matrix, # Samples. Row 1: 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.





Client : ALISTO ENGINEERING  
Project # : G620640/10-050-061  
Project Name: BP SITE #11266/ALAMEDA, CA

ATI I.D.: 601100

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



Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)  
 Client : ALISTO ENGINEERING ATI I.D. : 601100  
 Project # : G620640/10-050-061  
 Project Name: BP SITE #11266/ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	11-JAN-96	N/A	18-JAN-96	1.00
2	S-2	WATER	11-JAN-96	N/A	16-JAN-96	1.00
3	S-3	WATER	11-JAN-96	N/A	16-JAN-96	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
KYLENES (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
<b>SURROGATES</b>				
TRIFLUOROTOLUENE	%	98	94	88



Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)  
 Client : ALISTO ENGINEERING ATI I.D. : 601100  
 Project # : G620640/10-050-061  
 Project Name: BP SITE #11266/ALAMEDA, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	11-JAN-96	N/A	16-JAN-96	5.00
5	S-5	WATER	11-JAN-96	N/A	16-JAN-96	50.00
6	S-6	WATER	11-JAN-96	N/A	17-JAN-96	1.00

Parameter	Units	4	5	6		
METHYL T-BUTYL ETHER	UG/L	2400	11000	43		
BENZENE	UG/L	<2.5	<25	0.95		
TOLUENE	UG/L	<2.5	<25	0.61		
ETHYLBENZENE	UG/L	<2.5	<25	<0.50		
XYLENES (TOTAL)	UG/L	<5.0	<50	2.1		
FUEL HYDROCARBONS	UG/L	670	3400	<50		
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12		
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE		
<u>SURROGATES</u>						
TRIFLUOROTOLUENE	%	98	96	100		



Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)  
 Client : ALISTO ENGINEERING  
 Project # : G620640/10-050-061  
 Project Name: BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7	S-7	WATER	11-JAN-96	N/A	16-JAN-96	10.00
8	S-8	WATER	11-JAN-96	N/A	18-JAN-96	10.00
9	S-9	WATER	11-JAN-96	N/A	16-JAN-96	1.00

Parameter	Units	7	8	9
METHYL T-BUTYL ETHER	UG/L	1700	2000	<5.0
BENZENE	UG/L	91	89	<0.50
TOLUENE	UG/L	130	120	<0.50
ETHYLBENZENE	UG/L	510	490	<0.50
XYLENES (TOTAL)	UG/L	1000	950	<1.0
FUEL HYDROCARBONS	UG/L	5400	5100	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
<u>SURROGATES</u>				
TRIFLUOROTOLUENE	%	93	101	92



REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank I.D. : 37877  
 Client : ALISTO ENGINEERING  
 Project # : G620640/10-050-061  
 Project Name: BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100  
 Date Extracted: N/A  
 Date Analyzed : 18-JAN-96  
 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



REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
Blank I.D. : 37880  
Client : ALISTO ENGINEERING  
Project # : G620640/10-050-061  
Project Name: BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100  
Date Extracted: N/A  
Date Analyzed : 17-JAN-96  
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	%	100



REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
Blank I.D. : 37884  
Client : ALISTO ENGINEERING  
Project # : G620640/10-050-061  
Project Name: BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100  
Date Extracted: N/A  
Date Analyzed : 16-JAN-96  
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	%	97



MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 MSMSD # : 81356  
 Client : ALISTO ENGINEERING  
 Project # : G620640/10-050-061  
 Project Name: BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100  
 Date Extracted: N/A  
 Date Analyzed : 20-JAN-96  
 Sample Matrix : WATER  
 REF I.D. : 601100-02

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.7	94	5.0	100	6
TOLUENE	UG/L	<0.50	5.0	4.8	96	5.0	100	4

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





BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
Blank Spike #: 61052  
Client : ALISTO ENGINEERING  
Project # : G620640/10-050-061  
Project Name : BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100  
Date Extracted: N/A  
Date Analyzed : 18-JAN-96  
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	5.1	5.0	102

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



BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank Spike #: 61061  
 Client : ALISTO ENGINEERING  
 Project # : G620640/10-050-061  
 Project Name : BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100  
 Date Extracted: N/A  
 Date Analyzed : 17-JAN-96  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.6	5.0	92
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



BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)  
 Blank Spike #: 61067  
 Client : ALISTO ENGINEERING  
 Project # : G620640/10-050-061  
 Project Name : BP SITE #11266/ALAMEDA, CA

ATI I.D. : 601100  
 Date Extracted: N/A  
 Date Analyzed : 16-JAN-96  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.5	5.0	90
TOLUENE	UG/L	<0.50	4.6	5.0	92

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

*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 ?  a) are Custody Seals present on Cooler(s) ?  If yes, are seals intact ?  b) are Custody Seals present on the sample ?  If yes, are seals intact ?	YES	<input checked="" type="radio"/> N/A
		YES	<input checked="" type="radio"/> NO
		YES	NO
		YES	<input checked="" type="radio"/> NO
		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.  Is ice present in cooler?	3.0°c	
		<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: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\*Or other representative documents, letters, and/or shipping memos



1-12-96  
ATC

ATI#601100

# CHAIN OF CUSTODY

No. 071177

Page 1 of 1

CONSULTANT'S NAME <b>Alisto Engineering</b>		ADDRESS <b>1575 Treat Blvd #201</b>		CITY <b>W.C.</b>	STATE <b>Ca</b>	ZIP CODE <b>94578</b>
BP SITE NUMBER <b>11266</b>	BP CORNER ADDRESS/CITY <b>Alameda, Ca</b>			CONSULTANT PROJECT NUMBER <b>10-050-06/</b>		
CONSULTANT PROJECT MANAGER <b>Brady Nagle</b>		PHONE NUMBER <b>(510) 275-1650</b>	FAX NUMBER <b>295-1823</b>		CONSULTANT CONTRACT NUMBER <b>6620640</b>	
BP CONTACT <b>Scott Hooton</b>		BP ADDRESS <b>Renton, WA</b>	PHONE NUMBER		FAX NO.	
LAB CONTACT <b>ATI</b>		LABORATORY ADDRESS <b>San Diego</b>	PHONE NUMBER		FAX NO.	
SAMPLED BY (Please Print Name) <b>Larry Suenwaida</b>		SAMPLED BY (Signature) <i>[Signature]</i>		SHIPMENT DATE <b>1-11-96</b>		SHIPMENT METHOD <b>Fed Express</b>

TAT:  24 Hours  48 Hours  1 Week  Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER **6680234886**

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	TPH-61	RTX	MTBE											COMMENTS
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #														
S-1	1/11/96	W	2	HCL	01	X	X												
S-2	↓	↓	↓	↓	02	↓	↓												
S-3	↓	↓	↓	↓	03	↓	↓												
S-4	↓	↓	↓	↓	04	↓	↓												
S-5	↓	↓	↓	↓	05	↓	↓												
S-6	↓	↓	↓	↓	06	↓	↓												
S-7	↓	↓	↓	↓	07	↓	↓												
S-8	↓	↓	↓	↓	08	↓	↓												
S-9	↓	↓	↓	↓	09	↓	↓												

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>[Signature]</i>	1/11/96		<i>[Signature]</i>	1-11-96	1:00	3.0°C
<i>[Signature]</i>	1-11-96	13:00	<i>[Signature]</i> / ATI	1-12-96	09:30	