GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11127
5425 Martin Luther King, Jr. Way
Oakland, California

Project No. 10-022-05-001

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

August 29, 1995

Ken Simas
Project Manager

Al Sevilla, P.E.
Principal

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INTRODUCTION

This report presents the results and findings of the July 6, 1995 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11127, 5425 Martin Luther King, Jr. Way, Oakland, 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 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. 11127
5425 MARTIN LUTHER KING, JR. WAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-022

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)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	1,1,1-TCA (ug/l)	Chloroform (ug/l)	DO (ug/l)	LAB
MW-1	08/29/91	82.35	10.54	71.81	ND<50	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	---
MW-1	11/20/91	82.35	10.24	72.11	55	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	---
MW-1	02/28/92	82.35	8.17	74.18	400	---	6.7	0.7	11	170	---	---	---	---	---	---	SUP
MW-1	06/08/92	82.35	10.25	72.10	250	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-1	09/03/92	82.35	10.68	71.67	160	---	1.2	3.8	1.7	5.4	---	---	---	---	---	---	ANA
QC-1 (c)	09/03/92	---	---	---	190	---	0.7	2.6	1.3	5.2	---	---	---	---	---	---	ANA
MW-1	11/12/92 (d)	82.35	10.22	72.13	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-1 (c)	11/12/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-1	02/05/93	82.35	8.77	73.58	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-1 (c)	02/05/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-1	08/16/93	82.35	10.25	72.10	300	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-1	03/14/94	82.35	9.53	72.82	130	---	ND<0.5	ND<0.5	0.8	2.7	---	---	---	---	---	---	PACE
MW-1	12/15/94	82.35	7.88	74.47	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-1	07/06/95	82.35	10.84	71.51	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	08/29/91	83.49	11.56	71.93	950	66	ND<0.3	ND<0.3	17	50	---	ND	ND	ND	---	---	---
MW-2	11/20/91	83.49	11.25	72.24	1400	ND<50	0.3	ND<0.3	32	90	---	ND	0.8	0.7	---	---	---
MW-2	02/28/92	83.49	9.02	74.47	2300	70	4.2	1.8	47	360	---	ND	ND	4.1	---	---	SUP
MW-2	06/08/92	83.49	11.37	72.12	470	---	ND<0.5	ND<0.5	7.7	12	---	6.6	ND<0.5	4.2	---	---	ANA
MW-2	09/03/92	83.49	11.81	71.68	530	---	1.6	3.5	23	46	---	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
MW-2	11/12/92	83.48	11.27	72.21	250	88	ND<0.5	ND<0.5	5.0	10	ND<5000	ND<0.5	0.5	ND<0.5	---	---	PACE
MW-2	02/05/93	83.48	9.85	73.63	330	ND<50	0.7	ND<0.5	3.6	15	---	ND<0.5	0.9	8.3	---	---	PACE
MW-2	08/16/93	83.48	11.33	72.15	270	---	ND<0.5	ND<0.5	ND<0.5	19	---	---	---	---	---	---	PACE
MW-2	03/14/94	83.48	10.80	72.68	ND<50	ND<50	ND<0.5	ND<0.5	0.6	3.1	ND<5000	0.8	0.7	1.3	---	---	PACE
QC-1 (c)	03/14/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-2	12/15/94	83.48	8.66	74.82	79	ND<50	ND<0.5	0.6	1.3	1.6	ND<5000	ND<0.5	ND<0.5	4.8	2.3	6.2	PACE
QC-1 (c)	12/15/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-2	07/06/95	83.48	11.12	72.36	120	160	ND<0.50	ND<0.50	0.52	ND<1.0	ND<50	0.28	0.24	0.47	ND<0.20	7.4	ATI
QC-1 (c)	07/06/95	---	---	---	87	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	---	---	ATI
MW-3	11/12/92	84.96	12.24	72.72	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-3	02/05/93	84.96	10.95	74.01	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-3	08/16/93	84.96	12.46	72.50	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-3	03/14/94	84.96	11.61	73.35	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-3	12/15/94	84.96	10.08	74.88	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	07/06/95	84.96	11.93	73.03	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11127
5425 MARTIN LUTHER KING, JR. WAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-022

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)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	1,1,1-TCA (ug/l)	Chloroform (ug/l)	DO (ug/l)	LAB
MW-4	11/12/92	82.70	10.44	72.26	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-4	02/05/93	82.70	9.14	73.56	92	---	0.7	ND<0.5	ND<0.5	1.2	---	---	---	---	---	---	PACE
MW-4	08/16/93	82.70	10.57	72.13	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-1 (c)	08/16/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-4	03/14/94	82.70	9.70	73.00	220	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
MW-4	12/15/94	82.70	8.39	74.31	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	07/06/95	82.70	10.03	72.67	---	---	---	---	---	---	---	---	---	---	---	---	---
QC-2 (e)	09/03/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	ANA
QC-2 (e)	11/12/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2 (e)	02/05/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2 (e)	08/16/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2 (e)	03/14/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2 (e)	12/15/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2 (e)	07/06/95	---	---	---	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
1,1-DCA	1,1-Dichloroethane
1,2-DCA	1,2-Dichloroethane
1,1,1-TCA	1,1,1-Trichloroethane
DO	Dissolved oxygen
ug/l	Parts per billion
ND	Not detected above reported detection limit
---	Not analyzed/applicable/measured
SUP	Superior Analytical Laboratory
ANA	Anametrix, Inc.
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.

NOTES:

(a) Top of casing elevations surveyed in reference to the City of Oakland Benchmark No. 1967, on the curb at the southwest corner of Martin Luther King, Jr. Way and 55th Street.

(b) Groundwater elevations in feet above mean sea level.

(c) Blind duplicate.

(d) A sheen of unknown origin was observed before groundwater purging.

(e) Travel blank.

E:\0\10-022\022-4-1.WQ2

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

N

0 1000' 2000'

FIGURE 1

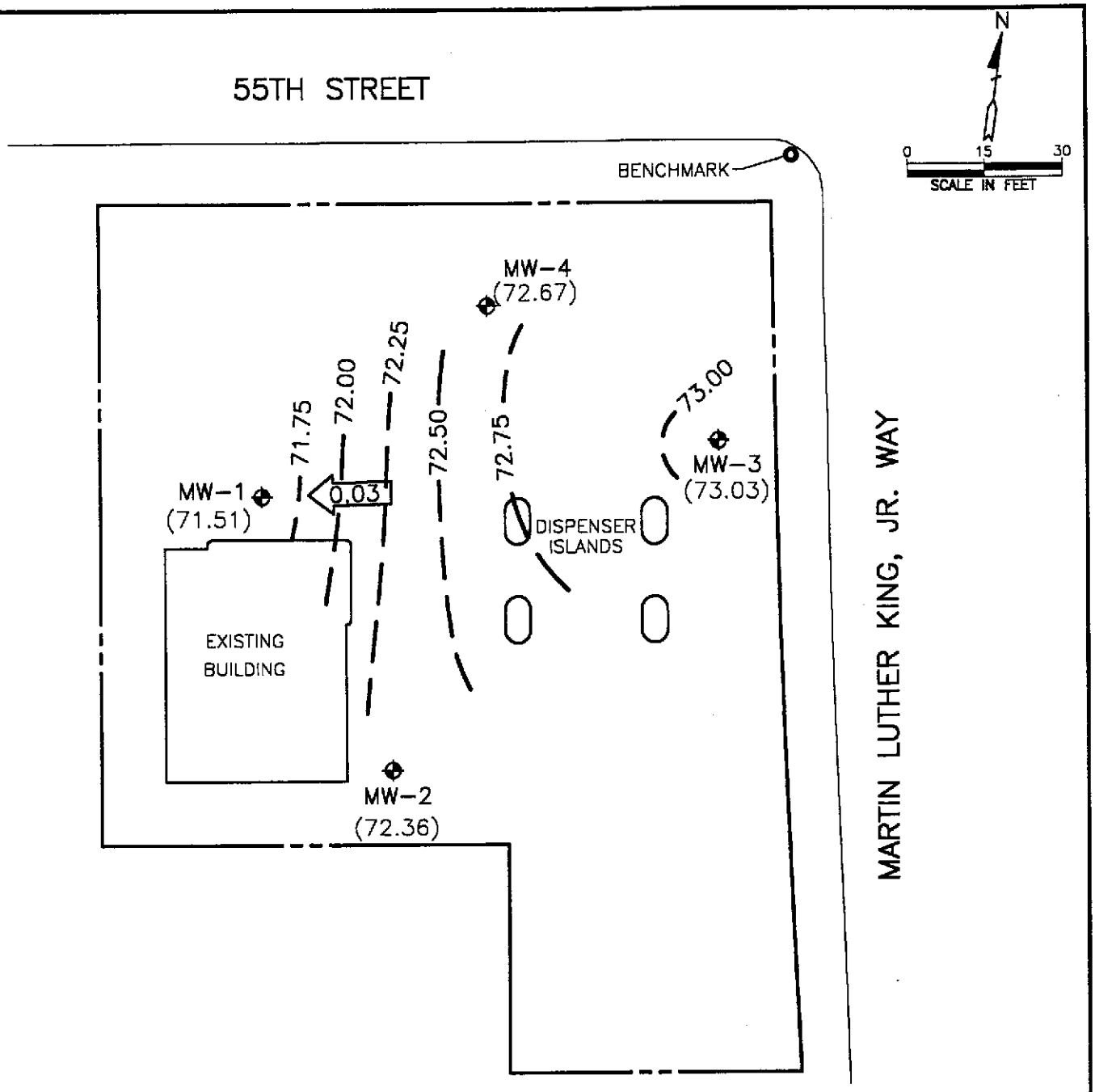
SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11127
5425 MARTIN LUTHER KING, JR. WAY
OAKLAND, CALIFORNIA

PROJECT NO. 10-022

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10022B---.DWG 10-21-93 RKM 1=1



LEGEND

⊕	GROUNDWATER MONITORING WELL
(71.51)	GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
71.75	GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL–0.25 FOOT)
0.03	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

JULY 6, 1995

BP OIL SERVICE STATION NO. 11127
5425 MARTIN LUTHER KING, JR. WAY
OAKLAND, CALIFORNIA

PROJECT NO. 10–022

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10022D-0.DWG 8-11-95 ROW 1=30

APPENDIX A

WATER SAMPLING FIELD SURVEY FORMS

ALISTO

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

Field Report / Sampling Data Sheet

☒ Groundwater Sampling

Date: 7/6/95 Project No. 10-022-04-002
Day: Thur Station No. 11127
Weather: Sunny Address 5475 M Luther King Wy Oakland CA
SAMPLER:

Well ID	SAMPLE#	WATER	DEPTH	Well ID	SAMPLE #	WATER	DEPTH	Well ID	SAMPLE	WATER DEPTH
MW-1	not	10.84	1915							
MW-4	not	10.03	1920							
MW-3	not	11.93	1924							
MW-2	S-1	11.12	1930							

FIELD INSTRUMENT CALIBRATION DATA

Ph METER Hach 4.00 ✓ 7.00 ✓ 10.00 ____ TEMPERATURE COMPENSATED (Y) N TIME 0940
D.O. METER YSI BAROMETRIC PRESSURE 760 TEMP 68°F ZERO d.O. SOLUTION ✓
CONDUCTIVITY METER Hach 10,000 ✓ TURBIDITY METER ____ 5.0 NTU ____ OTHER ____

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-2	11.12	4"	OK	Ø	Ø	20	0947	67.5	7.94	0.99	7.2
						40	0956	68.5	7.89	0.94	
						50	1001	67.8	7.99	0.95	7.4

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge= PurgeVol.
26.81 - 11.12 = 25.69 x .65 = 16.69 x 3 = 50
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Baller(s)___ OSys Port
Comments: QC-1 from this well (S-2)

☒ EPA 601 ✓ ☒ TPH-G/BTEX ✓ ☒ TPH Diesel ✓ ☒ TOG 5520 ___

Time Sampled

1008	S-1

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge= PurgeVol.
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Baller(s)___ OSys Port
Comments:

○ EPA 601 ___ ○ TPH-G/BTEX ___ ○ TPH Diesel ___ ○ TOG 5520 ___

Time Sampled

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.

Total Depth - Water Level= x Well Vol. Factor= x#vol. to Purge= PurgeVol.
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Baller(s)___ OSys Port
Comments:

○ EPA 601 ___ ○ TPH-G/BTEX ___ ○ TPH Diesel ___ ○ TOG 5520 ___

Time Sampled

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.: 507031

July 18, 1995

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

Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA
Project # : G341893/10-022-04-002

Attention: BILL HOWELL

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

Date Received	Quantity	Matrix
July 07, 1995	3	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

RECEIVED
JUL 20 1995

Analytical Technologies, Inc.

SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

Report Date: July 18, 1995
ATI I.D. : 507031

ATI #	Client Description	Matrix	Date Collected
1	S-1 1008	WATER	06-JUL-95
2	S-2	WATER	06-JUL-95
3	S-3	WATER	06-JUL-95

---TOTALS---

Matrix	# Samples
WATER	3

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 # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D.: 507031

Analysis	Technique/Description
EPA 413.2 (OIL & GREASE)	INFRARED SPECTROMETER
EPA 601 (HALOGENATED VOLATILE ORGANICS)	GC/ELECTROLYTIC CONDUCTIVITY DETECTOR
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

GENERAL CHEMISTRY RESULTS

Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002 ATI I.D.: 507031
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Received
1	S-1 1008	WATER	06-JUL-95	07-JUL-95

Parameter	Units	1
OIL AND GREASE	MG/L	<0.05

GENERAL CHEMISTRY - QUALITY CONTROL

DUP/MS

Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002 ATI I.D. : 507031
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
OIL AND GREASE	507026-02	MG/L	<0.05	<0.05	0	4.1	5.0	82

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

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031

Parameters	Blank Spike ID#	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
OIL AND GREASE	57612	MG/L	<0.05	4.4	5.0	88

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

GAS CHROMATOGRAPHY RESULTS

Test : EPA 601 (HALOGENATED VOLATILE ORGANICS)
Client : ALISTO ENGINEERING ATI I.D. : 507031
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1 1008	WATER	06-JUL-95	N/A	11-JUL-95	1.00

Parameter	Units	1
BROMODICHLOROMETHANE	UG/L	<0.20
BROMOFORM	UG/L	<1.0
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.20
CHLOROBENZENE	UG/L	<0.50
CHLOROETHANE	UG/L	<1.0
CHLOROFORM	UG/L	<0.20
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.20
1,2-DICHLOROBENZENE	UG/L	<0.50
1,3-DICHLOROBENZENE	UG/L	<0.50
1,4-DICHLOROBENZENE	UG/L	<0.50
DICHLORODIFLUOROMETHANE	UG/L	<1.0
1,1-DICHLOROETHANE	UG/L	0.28
1,2-DICHLOROETHANE	UG/L	0.24
1,1-DICHLOROETHENE	UG/L	<0.20
CIS-1,2-DICHLOROETHENE	UG/L	<0.20
TRANS-1,2-DICHLOROETHENE	UG/L	<0.20
1,2-DICHLOROPROPANE	UG/L	<0.20
CIS-1,3-DICHLOROPROPENE	UG/L	<0.20
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.20
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.50
TETRACHLOROETHENE	UG/L	<0.20
1,1,1-TRICHLOROETHANE	UG/L	0.47
1,1,2-TRICHLOROETHANE	UG/L	<0.20
TRICHLOROETHENE	UG/L	<0.20
TRICHLOROFLUOROMETHANE	UG/L	<2.0
VINYL CHLORIDE	UG/L	<0.20
SURROGATES		
BROMOFLUOROBENZENE (ELCD)	%	80
BROMOFLUOROBENZENE (PID)	%	103

REAGENT BLANK

Test : EPA 601 (HALOGENATED VOLATILE ORGANICS)
Blank I.D. : 36091
Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: N/A
Date Analyzed : 11-JUL-95
Dil. Factor : 1.00

Parameters	Units	Results
BROMODICHLOROMETHANE	UG/L	<0.20
BROMOFORM	UG/L	<1.0
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.20
CHLOROBENZENE	UG/L	<0.50
CHLOROETHANE	UG/L	<1.0
CHLOROFORM	UG/L	<0.20
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.20
1,2-DICHLOROBENZENE	UG/L	<0.50
1,3-DICHLOROBENZENE	UG/L	<0.50
1,4-DICHLOROBENZENE	UG/L	<0.50
DICHLORODIFLUOROMETHANE	UG/L	<1.0
1,1-DICHLOROETHANE	UG/L	<0.20
1,2-DICHLOROETHANE	UG/L	<0.20
1,1-DICHLOROETHENE	UG/L	<0.20
CIS-1,2-DICHLOROETHENE	UG/L	<0.20
TRANS-1,2-DICHLOROETHENE	UG/L	<0.20
1,2-DICHLOROPROPANE	UG/L	<0.20
CIS-1,3-DICHLOROPROPENE	UG/L	<0.20
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.20
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.50
TETRACHLOROETHENE	UG/L	<0.20
1,1,1-TRICHLOROETHANE	UG/L	<0.20
1,1,2-TRICHLOROETHANE	UG/L	<0.20
TRICHLOROETHENE	UG/L	<0.20
TRICHLOROFLUOROMETHANE	UG/L	<2.0
VINYL CHLORIDE	UG/L	<0.20
SURROGATES		
BROMOFLUOROBENZENE (ELCD)	%	99
BROMOFLUOROBENZENE (PID)	%	117

MSMSD

Test : EPA 601 (HALOGENATED VOLATILE ORGANICS)
MSMSD # : 77112
Client : ALISTO ENGINEERING

Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: N/A
Date Analyzed : 12-JUL-95
Sample Matrix : WATER
REF I.D. : 507031-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
CHLOROBENZENE	UG/L	<0.50	4.0	3.8	95	3.6	90	5
CHLOROFORM	UG/L	<0.20	2.0	2.1	105	1.8	90	15
1,1-DICHLOROETHENE	UG/L	<0.20	2.0	2.2	110	1.8	90	20
TETRACHLOROETHENE	UG/L	<0.20	2.0	1.9	95	1.8	90	5
TRICHLOROETHENE	UG/L	<0.20	2.0	1.9	95	1.9	95	0

% 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 : EPA 601 (HALOGENATED VOLATILE ORGANICS)
Blank Spike #: 57704
Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002
Project Name : BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: N/A
Date Analyzed : 11-JUL-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CHLOROBENZENE	UG/L	<0.50	3.6	4.0	90
CHLOROFORM	UG/L	<0.20	1.7	2.0	85
1,1-DICHLOROETHENE	UG/L	<0.20	1.8	2.0	90
TETRACHLOROETHENE	UG/L	<0.20	1.7	2.0	85
TRICHLOROETHENE	UG/L	<0.20	1.8	2.0	90

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

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)
Client : ALISTO ENGINEERING ATI I.D. : 507031
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1 1008	WATER	06-JUL-95	11-JUL-95	12-JUL-95	1.00

Parameter	Units	1
FUEL HYDROCARBONS	MG/L	0.16
HYDROCARBON RANGE		C7-C14
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATES		
BIS(2-ETHYLHEXYL)PHTHALATE	%	87

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank I.D. : 36048
Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: 11-JUL-95
Date Analyzed : 12-JUL-95
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.05
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
SURROGATES		
BIS(2-ETHYLHEXYL)PHTHALATE	%	95

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 77082
Client : ALISTO ENGINEERING

Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: 11-JUL-95
Date Analyzed : 12-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	0.66	66	10

% 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 ATI I.D. : 507031
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1 1008	WATER	06-JUL-95	N/A	15-JUL-95	1.00
2	S-2	WATER	06-JUL-95	N/A	15-JUL-95	1.00
3	S-3	WATER	06-JUL-95	N/A	15-JUL-95	1.00

Parameter	Units	1	2	3
BENZENE	UG/L	<0.50	<0.50	<0.50
TOLUENE	UG/L	<0.50	<0.50	<0.50
ETHYLBENZENE	UG/L	0.52	<0.50	<0.50
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<1.0
FUEL HYDROCARBONS	UG/L	120	87	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	105	110	100

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 36089
Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: N/A
Date Analyzed : 15-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	%	100

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
MSMSD # : 77124
Client : ALISTO ENGINEERING

Project # : G341893/10-022-04-002
Project Name: BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: N/A
Date Analyzed : 13-JUL-95
Sample Matrix : WATER
REF I.D. : 507021-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	5.1	102	5.0	100	2
TOLUENE	UG/L	<0.50	5.0	5.2	104	5.2	104	0

% 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 #: 57702
Client : ALISTO ENGINEERING
Project # : G341893/10-022-04-002
Project Name : BP SITE#11127/5425 MARTIN L. KING WY, OAKLAND, CA

ATI I.D. : 507031
Date Extracted: N/A
Date Analyzed : 15-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

ACCESSION #: 507031 INITIALS: LM

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	(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 ? (N/A)	YES	NO
	b) are Custody Seals present on the sample ?	YES	(NO)
	If yes, are seals intact ? (N/A)	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.	2.3 °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 1st 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 memos

507031

CHAIN OF CUSTODY

No. 055470 | 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
11129	5425 Martin L. King Wy, Oakland CA	10-022-01-002

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Bill Howell	(510) 255 1650	(510) 255 1823	6341893

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
Scott Hooton	Renton WA		

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
ATL Inc	San Diego CA		

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
Dave Cusick			Fed-ex

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

AIRBILL NUMBER: 181892 1005

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	1 TPH Gas BTEX	1 TOG	1 TPH Diesel	1 HVOC	COMMENTS
S-1 1009	7/6/05	H2O	6	VOA	01	X	X	X	X	
S-2	↓	↓	↓	VOA	02	↓				
S-3	↓	↓	↓	↓	03	↓				

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Alisto	7/6		ATL-SD	7/7/05	9:05

ADDITIONAL COMMENTS: 2.3°C

CLV-16722

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