



ALISTO ENGINEERING GROUP

LOP  
3878

July 14, 1995

~~Mr. Barney Chan~~  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room 250  
Alameda, California 94502-6577

10-024-04-002

Subject: Sewer Discharge Permit - Semi-Annual Report  
BP Oil Company Service Station No. 11132  
3201 35th Street  
Oakland, California  
Wastewater Discharge Permit No. 502-62901

Dear Mr. Chan:

On behalf of BP Oil Company, we have enclosed a summary of analytical results for the remediation system sampling events and quantity discharged for BP Oil Company Service Station No. 11132, 3201 35th Street, Oakland, California. The previous report covered the period from January 1 to March 31, 1995, therefore, this report covers the period from April 1 to June 30, 1995. The next report will cover the period from July 1 to December 31, 1995.

The total volume discharged for the period is presented in Table 1. The results of influent, intermediate, and effluent sample analysis are presented in Table 2. The sampling locations are shown in Figure 1. The laboratory reports and chain of custody records are presented in Attachment A.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RECEIVED  
JUL 19 PM 2:16

Mr. Barney Chan  
July 14, 1995  
Page 2

Please call if you have questions regarding this report.

Sincerely,

ALISTO ENGINEERING GROUP

A handwritten signature in black ink, appearing to read 'Peter Beaver', written in a cursive style.

Peter Beaver  
Engineering Manager

Enclosures

cc: Florencio Gonzalez, East Bay Municipal Utility District  
Scott Hooton, BP Oil Company



ALISTO ENGINEERING GROUP

July 14, 1995

Mr. Florencio Gonzalez  
East Bay Municipal Utility District  
Source Control Division  
P.O. Box 24055  
Oakland, California 94623

10-024-04-002

Subject: Sewer Discharge Permit - Semi-Annual Report  
BP Oil Company Service Station No. 11132  
3201 35th Street  
Oakland, California  
Wastewater Discharge Permit No. 502-62901

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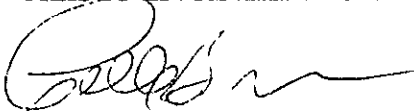
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Mr. Florencio Gonzalez  
July 14, 1995  
Page 2

Please call if you have questions regarding this report.

Sincerely,

ALISTO ENGINEERING GROUP

A handwritten signature in black ink, appearing to read 'Peter Beaver', with a long horizontal flourish extending to the right.

Peter Beaver  
Engineering Manager

Enclosures

cc: Barney Chan, Alameda County Health Care Services Agency  
Scott Hooton, BP Oil Company

TABLE 1 - FLOW DATA FOR GROUNDWATER TREATMENT SYSTEM  
 BP OIL COMPANY SERVICE STATION NO. 11132  
 3201 35TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

DATE	FLOW METER READING (Gallons)	EFFLUENT DISCHARGED (Gallons)	AVERAGE FLOW RATE (GPD)	AVERAGE FLOW RATE (GPM)
01/22/93	48860	48860	---	0.00
02/23/93	48860 (a)	0	---	0.00
07/14/93	50770	1910	---	0.00
07/19/93	0 (b)	---	---	0.00
07/26/93	13700	13700	1957	1.36
08/17/93	37367	23667	1076	0.75
09/28/93	64180	26813	638	0.44
10/25/93	86610	22430	831	0.58
11/26/93	95550	8940	279	0.19
12/28/93	116960	21410	669	0.46
01/28/94	117200	240	8	0.01
02/28/94	164070	46870	1512	1.05
03/29/94	208760	44690	1541	1.07
04/29/94	243380	34620	1117	0.78
05/31/94	292140	48760	1524	1.06
09/03/94	410710	118570	1248	0.87
10/05/94	454250	43540	1361	0.94
10/31/94	464410	10160	391	0.27
11/29/94	482970	18560	640	0.44
12/07/94	508770	25800	3225	2.24
01/04/95	508770	0	0	0.00
01/30/95	547720	38950	1498	1.04
02/21/95	570040	22320	1015	0.70
03/30/95	623360	53320	1441	1.00
05/02/95	670240	46880	1421	0.99
05/31/95	705540	35300	1217	0.85
06/28/95	755067	49527	1769	1.23
<b>TOTAL FOR QUARTER</b>		<b>131707</b>	<b>2311</b>	<b>1.60</b>

ABBREVIATIONS:

GPD Gallons per day  
 GPM Gallons per minute  
 --- Not available/applicable

NOTE:

(a) Flow meter not operating.  
 System shut down.  
 (b) Flow meter replaced.

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER TREATMENT SYSTEM OPERATION  
 BP OIL COMPANY SERVICE STATION NO. 11132  
 3201 35TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

Sample ID	Date	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	Acetone (ug/l)	MEK (ug/l)	LAB
I-1	11/06/92	22000	---	4500	1600	760	3900	---	---	PACE
I-1	01/22/93	---	120	ND<0.5	250	84	590	54	---	PACE
I-1	07/26/93	---	620	2600	210	120	960	78	96	PACE
I-1	08/17/93	---	520	1200	58	35	300	ND<5.0	ND<5.0	PACE
I-1	09/22/93	4200	370	1000	110	38	520	---	---	PACE
I-1	10/20/93	---	140	930	32	8	190	---	---	PACE
I-1	(a) 11/18/93	---	470	970	72	19	410	ND<50	ND<50	PACE
I-1	12/07/93	---	2100	780	(b) ND<5	ND<5	97	ND<50	ND<50	PACE
I-1	02/08/94	---	410000	3400	1400	610	7300	ND<2500	ND<2500	PACE
I-1	02/15/94	42000	6400	4400	2500	820	9400	ND<1200	ND<1200	PACE
I-1	03/15/94	---	1500	1200	200	38	780	ND<50	ND<50	PACE
I-1	04/15/94	---	2500	580	27	38	700	ND<50	ND<50	PACE
I-1	05/12/94	---	430	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
I-1	06/16/94	---	ND<50	150	11	ND<5	ND<5	---	---	PACE
I-1	07/14/94	---	ND<50	ND<5	ND<5	ND<5	ND<5	---	---	PACE
I-1	08/23/94	---	1100	330	7	200	---	---	---	PACE
I-1	09/19/94	---	580	280	62	ND<5	---	---	---	PACE
I-1	10/17/94	---	ND<50	ND<25	ND<25	ND<25	61	---	---	GTEL
I-1	11/18/94	---	4600	2200	880	140	2300	---	---	GTEL
I-1	01/17/95	---	960	960	83	6	300	---	---	ATI
I-1	02/21/95	---	4400	980	130	10	450	ND<50	ND<50	ATI
I-1	03/14/95	---	3000	740	ND<10	10	300	390 (c)	ND<50	ATI
I-1	04/18/95	---	---	890	80	2	270	82	ND<50	ATI
I-1	04/19/95	---	1800	---	---	---	---	---	---	ATI
QC-1	04/19/95	---	1500	---	---	---	---	---	---	ATI
I-1	05/16/95	---	1700	910	84	26	250	ND<50	ND<50	ATI
QC-1	05/16/95	---	1700	780	52	20	170	ND<50	ND<50	ATI
I-1	06/19/95	---	370	6	ND<2	ND<1	ND<1	15	ND<10	ATI
A-1	11/06/92	---	---	---	---	---	---	---	---	PACE
A-1	01/22/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	07/26/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	08/17/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	09/22/93	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	10/20/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	(a) 11/18/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	12/07/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	02/08/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	02/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	03/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	04/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	05/12/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	06/16/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
A-1	07/14/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
A-1	08/23/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
A-1	09/19/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
A-1	10/17/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
A-1	11/18/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
A-1	01/17/95	---	---	ND<1	ND<5	ND<1	ND<2	---	---	ATI
A-1	02/21/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
A-1	03/14/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
A-1	04/18/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
A-1	05/16/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
A-1	06/19/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER TREATMENT SYSTEM OPERATION  
 BP OIL COMPANY SERVICE STATION NO. 11132  
 3201 35TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

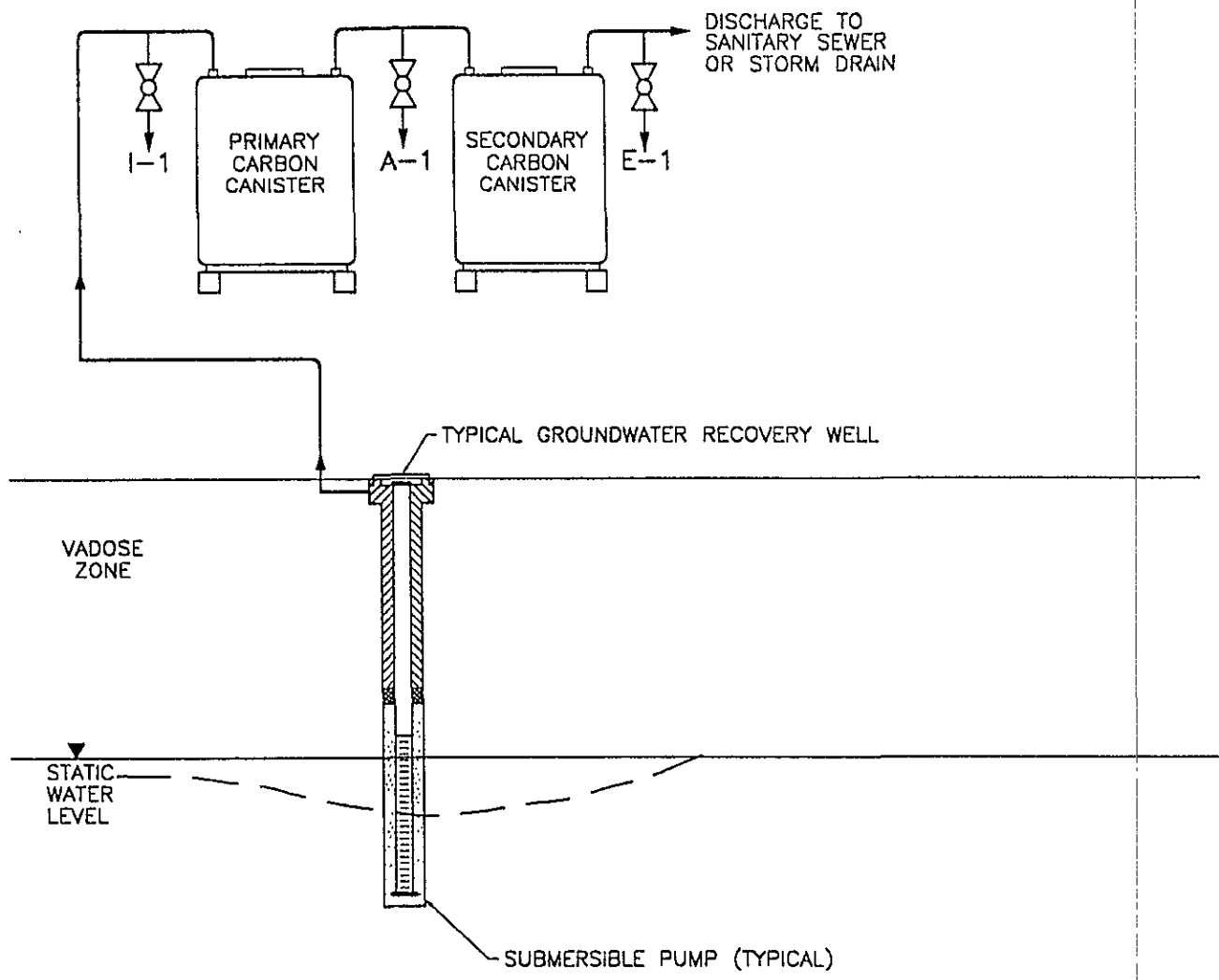
Sample ID	Date	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	Acetone (ug/l)	MEK (ug/l)	LAB
E-1	11/06/92	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
E-1	01/22/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	07/26/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	08/17/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	09/22/93	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	10/20/93	---	---	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<5	PACE
E-1	(a) 11/18/93	---	---	400	22	5	120	ND<50	ND<5	PACE
E-1	12/07/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	140	PACE
E-1	02/08/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	02/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	03/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	04/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	05/12/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	06/16/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
E-1	07/14/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
E-1	08/23/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
E-1	09/19/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
E-1	10/17/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
E-1	11/18/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
E-1	01/17/95	---	---	ND<1	ND<5	ND<1	ND<2	---	---	ATI
E-1	02/21/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
E-1	03/14/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
QC-1	03/14/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
E-1	04/18/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
QC-1	04/18/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
E-1	05/16/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
E-1	06/19/95	---	---	ND<1	ND<2	ND<1	ND<1	11	ND<10	ATI
QC-1	06/19/95	---	---	ND<1	ND<2	ND<1	ND<1	13	ND<10	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  
 MEK 2-Butanone  
 ug/l Micrograms per liter  
 ND Not detected above reported detection limit  
 --- Not analyzed/available  
 QC-1 Field blank  
 PACE Pace, Inc.  
 GTEL GTEL Environmental Laboratories, Inc.  
 ATI Analytical Technologies, Inc.

NOTES:

(a) Suspected sample identification error.  
 (b) Sample dilution required to bring compound within linear calibration range.  
 (c) Analyte detected in the associated reagent blank.



**LEGEND**

- I = INFLUENT
- A = INTERMEDIATE
- E = EFFLUENT
-  SAMPLE PORT

**FIGURE 1**

**ACTIVATED CARBON TREATMENT SYSTEM SAMPLING LOCATIONS**

BP OIL SERVICE STATION NO. 11132  
 3201 35TH AVENUE  
 OAKLAND, CALIFORNIA

PROJECT NO. 10-024



**ALISTO ENGINEERING GROUP**  
 WALNUT CREEK, CALIFORNIA



**ATTACHMENT A**

**LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS**



Analytical**Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 504212

May 01, 1995

ALISTO ENGINEERING  
1777 OAKLAND BOULEVARD, SUITE 200  
WALNUT CREEK, CA 94596

Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA  
Project # : G247985/10-024-04-001

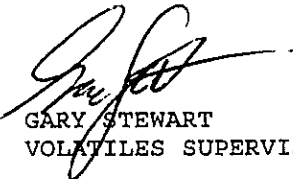
Attention: PETE BEAVER

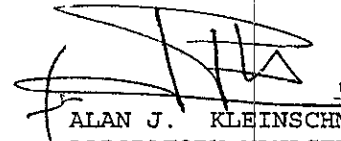
Analytical Technologies, Inc. has received the following sample(s):

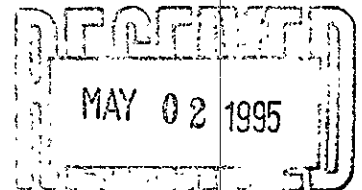
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
April 20, 1995	6	WATER

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





SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

Report Date: May 01, 1995  
ATI I.D. : 504212

ATI #	Client Description	Matrix	Date Collected
1	STA #11132 INF	WATER	18-APR-95
2	STA #11132 A	WATER	18-APR-95
3	STA #11132 EFF	WATER	18-APR-95
4	STA #11132 FIELD BLANK	WATER	18-APR-95
5	STA #11132 INF	WATER	19-APR-95
6	STA #11132 FIELD BLANK	WATER	19-APR-95

---TOTALS---

<u>Matrix</u>	<u># Samples</u>
WATER	6

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 # : G247985/10-024-04-001  
Project Name: BP SITE#111132/3201 35TH AVENUE, OAKLAND CA

ATI I.D.: 504212

Analysis	Technique/Description
EPA 624 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)	GC/FLAME IONIZATION DETECTOR



GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
5	STA #11132 INF	WATER	19-APR-95	24-APR-95	25-APR-95	1.00
6	STA #11132 FIELD BLANK	WATER	19-APR-95	24-APR-95	25-APR-95	1.00
Parameter	Units	5	6			
FUEL HYDROCARBONS	MG/L	1.8	1.5			
HYDROCARBON RANGE		C7-C14	C7-C14			
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE			
<u>SURROGATES</u>						
BIS (2-ETHYLHEXYL) PHTHALATE	%	99	94			



GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)  
Blank I.D. : 35145  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212  
Date Extracted: 24-APR-95  
Date Analyzed : 25-APR-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	%	51



GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 75108
Client : ALISTO ENGINEERING

ATI I.D. : 504212
Date Extracted: 24-APR-95
Date Analyzed : 25-APR-95
Sample Matrix : WATER
REF I.D. : 504211-01

Project # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Row 1: FUEL HYDROCARBONS, MG/L, 46, 1.0, 51, N/A\*V, 49, N/A\*V, 4

% 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)  
 Blank Spike #: 56051  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name : BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212  
 Date Extracted: 24-APR-95  
 Date Analyzed : 24-APR-95  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
FUEL HYDROCARBONS	MG/L	<0.05	0.76	1.0	76

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





## GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING ATI I.D. : 504212  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA #11132 INF	WATER	18-APR-95	N/A	26-APR-95	5.00
2	STA #11132 A	WATER	18-APR-95	N/A	26-APR-95	1.00
3	STA #11132 EFF	WATER	18-APR-95	N/A	26-APR-95	1.00

Parameter	Units	1	2	3
CHLOROMETHANE	UG/L	<50	<10	<10
VINYL CHLORIDE	UG/L	<25	<5	<5
BROMOMETHANE	UG/L	<50	<10	<10
CHLOROETHANE	UG/L	<25	<5	<5
ACETONE	UG/L	82	<10	<10
1,1-DICHLOROETHENE	UG/L	<5	<1	<1
METHYLENE CHLORIDE	UG/L	<25	<5	<5
CARBON DISULFIDE	UG/L	<10	<2	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
1,1-DICHLOROETHANE	UG/L	<5	<1	<1
CIS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
CHLOROFORM	UG/L	<5	<1	<1
2-BUTANONE (MEK)	UG/L	<50	<10	<10
1,1,1-TRICHLOROETHANE	UG/L	<5	<1	<1
CARBON TETRACHLORIDE	UG/L	<5	<1	<1
1,2-DICHLOROETHANE	UG/L	<5	<1	<1
BENZENE	UG/L	890	<1	<1
TRICHLOROETHENE	UG/L	<5	<1	<1
1,2-DICHLOROPROPANE	UG/L	<5	<1	<1
BROMODICHLOROMETHANE	UG/L	<5	<1	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<50	<10	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
TOLUENE	UG/L	80	<2	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
2-HEXANONE (MBK)	UG/L	<50	<10	<10
1,1,2-TRICHLOROETHANE	UG/L	<5	<1	<1
TETRACHLOROETHENE	UG/L	<5	<1	<1
DIBROMOCHLOROMETHANE	UG/L	<5	<1	<1
CHLOROBENZENE	UG/L	<5	<1	<1
ETHYLBENZENE	UG/L	2	<1	<1
XYLENES (TOTAL)	UG/L	270	<1	<1
STYRENE	UG/L	<10	<2	<2
BROMOFORM	UG/L	<25	<5	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<5	<1	<1
DICHLORODIFLUOROMETHANE	UG/L	<50	<10	<10
TRICHLOROFLUOROMETHANE	UG/L	<25	<5	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<25	<5	<5
1,2-DICHLOROBENZENE	UG/L	<25	<5	<5



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA #11132 INF	WATER	18-APR-95	N/A	26-APR-95	5.00
2	STA #11132 A	WATER	18-APR-95	N/A	26-APR-95	1.00
3	STA #11132 EFF	WATER	18-APR-95	N/A	26-APR-95	1.00

Parameter	Units	1	2	3
1,3-DICHLOROBENZENE	UG/L	<25	<5	<5
1,4-DICHLOROBENZENE	UG/L	<25	<5	<5
<u>SURROGATES</u>				
1,2-DICHLOROETHANE-D4	%	104	106	105
TOLUENE-D8	%	101	101	100
BFB	%	99	99	97



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

WATER  
ATI I.D.: 504212

Sample Parameters	Units	Results
1 ALIPHATIC HYDROCARBON C5	UG/L	200
ALIPHATIC HYDROCARBON C6	UG/L	80
OXYGENATED HYDROCARBON	UG/L	2000
TRIMETHYL BENZENE ISOMER	UG/L	70
UNKNOWN HYDROCARBON	UG/L	70
2 OXYGENATED HYDROCARBON	UG/L	20
3 OXYGENATED HYDROCARBON	UG/L	20



## GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	STA #11132 FIELD BLANK	WATER	18-APR-95	N/A	26-APR-95	1.00

Parameter	Units	4
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	<10
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROENZENE	UG/L	<5



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212

Table with 7 columns: Sample #, Client ID, Matrix, Date Sampled, Date Extracted, Date Analyzed, Dil. Factor. Row 1: 4, STA #11132 FIELD BLANK, WATER, 18-APR-95, N/A, 26-APR-95, 1.00

Table with 3 columns: Parameter, Units, Value. Rows: 1,3-DICHLOROBENZENE (UG/L, <5), 1,4-DICHLOROBENZENE (UG/L, <5)

Table with 3 columns: SURROGATES, Units, Value. Rows: 1,2-DICHLOROETHANE-D4 (% 104), TOLUENE-D8 (% 100), BFB (% 96)



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

WATER  
ATI I.D.: 504212

Sample Parameters	Units	Results
4 OXYGENATED HYDROCARBON	UG/L	20

**GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL**
**REAGENT BLANK**

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
 Blank I.D. : 35162  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212  
 Date Extracted: N/A  
 Date Analyzed : 26-APR-95  
 Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	<10
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLORO BENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5
<b>SURROGATES</b>		
1,2-DICHLOROETHANE-D4	%	104
TOLUENE-D8	%	100
BFB	%	97



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GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK  
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Page 14

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
Blank I.D. : 35162  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212

Parameters	Units	Results
NONE DETECTED	N/A	N/A





GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 75151
Client : ALISTO ENGINEERING

ATI I.D. : 504212
Date Extracted: N/A
Date Analyzed : 26-APR-95
Sample Matrix : WATER
REF I.D. : 504212-02

Project # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Rows include 1,1-DICHLOROETHENE, BENZENE, TRICHLOROETHENE, TOLUENE, and CHLOROENZENE.

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



## GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

## BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
Blank Spike #: 56081  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name : BP SITE#11132/3201 35TH AVENUE, OAKLAND CA

ATI I.D. : 504212  
Date Extracted: N/A  
Date Analyzed : 26-APR-95  
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	51	50	102
BENZENE	UG/L	<1	48	50	96
TRICHLOROETHENE	UG/L	<1	49	50	98
TOLUENE	UG/L	<2	51	50	102
CHLOROBENZENE	UG/L	<1	54	50	108

% 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

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

1	Does this project require special handling according to NEESC Levels C, D, AFCEE or CLP protocols? If yes, complete a) and b) a) pH sample aliquoted: yes /no /na b) Either 1) Record Bottle Lot #'s: Or 2) Attach Sample Kit Request Form(s)	YES	<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.	2.0	°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	YES	<input checked="" type="radio"/> 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:  
11132 IAF for T<sub>2</sub>-1; 1<sup>st</sup> 2-16 bottles; 5-1870  
will use other bottle.

11132 Field Blank for T<sub>2</sub>-1; 1<sup>st</sup> 1 bottles; 5-1870 headspace.

Was client contacted? yes / no OK per Gary, MLH 4-20-95  
 If yes, Date: \_\_\_\_\_ Name of Person contacted: \_\_\_\_\_

Describe actions taken or client instructions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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



504212

# CHAIN OF CUSTODY

No. 055453

Page 1 of 1

CONSULTANT'S NAME <b>ALISTO ENGINEERING GROUP</b>		ADDRESS <b>1777 OAKLAND BLVD. WALNUT CREEK CA</b>		CITY <b>CA</b>	STATE <b>CA</b>	ZIP CODE <b>94596</b>
BP SITE NUMBER <b>11132</b>	BP CORNER ADDRESS/CITY <b>3201 35th AVENUE OAKLAND CA</b>			CONSULTANT PROJECT NUMBER <b>10-024-04-001</b>		
CONSULTANT PROJECT MANAGER <b>PETE BEAVER</b>		PHONE NUMBER <b>510 295-1650</b>	FAX NUMBER <b>510 295-1823</b>		CONSULTANT CONTRACT NUMBER <b>624 7985</b>	
BP CONTACT <b>SCOTT HOOTON</b>		BP ADDRESS <b>RENTON WA</b>	PHONE NUMBER		FAX NO	
LAB CONTACT <b>GARY STEWART</b>		LABORATORY ADDRESS <b>SAN DIEGO, CA</b>	PHONE NUMBER		FAX NO	
SAMPLED BY (Please Print Name) <b>JOHN BICKING</b>		SAMPLED BY (Signature) <i>John Bicking</i>		SHIPMENT DATE <b>4/19/95</b>	SHIPMENT METHOD <b>FED EX</b>	

TAT.  24 Hours  48 Hours  1 Week  Standard 2 Weeks

### ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	HCL	COMMENTS
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #		
STA# 11132 INF	4/18/95 1502	GW	3	VOA	01	✓	
STA# 11132 A	1505	↓	3	↓	02	✓	
STA# 11132 EFF	1508	↓	3	↓	03	✓	
STA# 11132 FIELD BLANK	4511	↓	3	↓	04	✓	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>John Bicking</i>	4/18/95	2215	<i>Michael Holloman</i>	4/20/95	1930	received in good condition 2.0°C. M4 4-20-95



504212

### CHAIN OF CUSTODY

No. 055455

Page 1 of 1

CONSULTANT'S NAME: **ALISTO ENGINEERING** ADDRESS: **1777 OAKLAND Blvd #200 Walnut Creek CA 94596** CITY: **Walnut Creek** STATE: **CA** ZIP CODE: **94596**

BP SITE NUMBER: **11132** BP CORNER ADDRESS/CITY: **3201 35th Avenue OAKLAND CA** CONSULTANT PROJECT NUMBER: **10-024-04-001**

CONSULTANT PROJECT MANAGER: **PETE BEAVER** PHONE NUMBER: **510 295-1650** FAX NUMBER: **510-295-1823** CONSULTANT CONTRACT NUMBER: **6247985**

BP CONTACT: **SCOTT HOOTON** BP ADDRESS: **RENTON, WA** PHONE NUMBER: FAX NO:

LAB CONTACT: **GARY STEWART** LABORATORY ADDRESS: **San Diego, CA** PHONE NUMBER: FAX NO:

SAMPLED BY (Please Print Name): **JOHN BICKING** SAMPLED BY (Signature): *John K. Bicking* SHIPMENT DATE: **4/19/95** SHIPMENT METHOD: **FED EX**

TAT:  24 Hours  48 Hours  1 Week  Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE		COMMENTS
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #		
STA# 11132 INF	0700	GW	2	LT	05	TPH-D ✓	
STA# 11132 FIELD BLANK	0705	GW	1	LT	06	✓	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>John K. Bicking</i>	<b>4/19/95</b>		<i>Michael Haller</i>	<b>4/20/95</b>	<b>1030</b>	
			<b>ATI</b>			



Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 505178

May 24, 1995

ALISTO ENGINEERING  
1777 OAKLAND BOULEVARD, SUITE 200  
WALNUT CREEK, CA 94596

Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA  
Project # : G247985/10-024-04-001

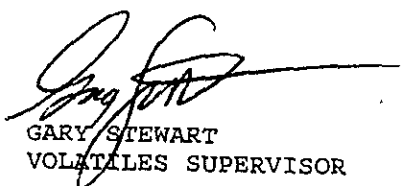
Attention: PETE BEAVER

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

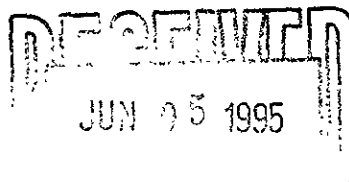
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
May 18, 1995	4	WATER

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 # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

Report Date: May 24, 1995
ATI I.D. : 505178

Table with 4 columns: ATI #, Client Description, Matrix, Date Collected. Rows include STA#11132 INF, STA#11132 A, STA#11132 EFF, and STA#11132 FIELD BLANK.

---TOTALS---

Summary table with 2 columns: Matrix, # Samples. Row for WATER with 4 samples.

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 # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D.: 505178

Analysis	Technique/Description
EPA 624 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)	GC/FLAME IONIZATION DETECTOR



Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D. : 505178

Table with 7 columns: Sample #, Client ID, Matrix, Date Sampled, Date Extracted, Date Analyzed, Dil. Factor. Rows include STA#11132 INF and STA#11132 FIELD BLANK.

Table with 4 columns: Parameter, Units, 1, 4. Rows include FUEL HYDROCARBONS, HYDROCARBON RANGE, and SURROGATES.



REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)  
 Blank I.D. : 35466  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D. : 505178  
 Date Extracted: 19-MAY-95  
 Date Analyzed : 22-MAY-95  
 Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.050
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
<u>SURROGATES</u>		
BIS (2-ETHYLHEXYL) PHTHALATE	%	59



MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 75838
Client : ALISTO ENGINEERING

ATI I.D. : 505178
Date Extracted: 19-MAY-95
Date Analyzed : 20-MAY-95
Sample Matrix : WATER
REF I.D. : REAGENT WATER

Project # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

Table with 10 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Row 1: FUEL HYDROCARBONS, MG/L, <0.050, 1.0, 1.1, 110, 1.0, 100, 10.

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



Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)

Client : ALISTO ENGINEERING

ATI I.D. : 505178

Project # : G247985/10-024-04-001

Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA#11132 INF	WATER	16-MAY-95	N/A	24-MAY-95	5.00
2	STA#11132 A	WATER	16-MAY-95	N/A	24-MAY-95	1.00
3	STA#11132 EFF	WATER	16-MAY-95	N/A	24-MAY-95	1.00

Parameter	Units	1	2	3
CHLOROMETHANE	UG/L	<50	<10	<10
VINYL CHLORIDE	UG/L	<25	<5	<5
BROMOMETHANE	UG/L	<50	<10	<10
CHLOROETHANE	UG/L	<25	<5	<5
ACETONE	UG/L	<50	<10	<10
1,1-DICHLOROETHENE	UG/L	<5	<1	<1
METHYLENE CHLORIDE	UG/L	<25	<5	<5
CARBON DISULFIDE	UG/L	<10	<2	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
1,1-DICHLOROETHANE	UG/L	<5	<1	<1
CIS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
CHLOROFORM	UG/L	<5	<1	<1
2-BUTANONE (MEK)	UG/L	<50	<10	<10
1,1,1-TRICHLOROETHANE	UG/L	<5	<1	<1
CARBON TETRACHLORIDE	UG/L	<5	<1	<1
1,2-DICHLOROETHANE	UG/L	14	<1	<1
BENZENE	UG/L	910	<1	<1
TRICHLOROETHENE	UG/L	<5	<1	<1
1,2-DICHLOROPROPANE	UG/L	<5	<1	<1
BROMODICHLOROMETHANE	UG/L	<5	<1	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<50	<10	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
TOLUENE	UG/L	84	<2	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
2-HEXANONE (MBK)	UG/L	<50	<10	<10
1,1,2-TRICHLOROETHANE	UG/L	<5	<1	<1
TETRACHLOROETHENE	UG/L	<5	<1	<1
DIBROMOCHLOROMETHANE	UG/L	<5	<1	<1
CHLOROBENZENE	UG/L	<5	<1	<1
ETHYLBENZENE	UG/L	26	<1	<1
XYLENES (TOTAL)	UG/L	250	<1	<1
STYRENE	UG/L	<10	<2	<2
BROMOFORM	UG/L	<25	<5	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<5	<1	<1
DICHLORODIFLUOROMETHANE	UG/L	<50	<10	<10
TRICHLOROFLUOROMETHANE	UG/L	<25	<5	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<25	<5	<5
1,2-DICHLOROBENZENE	UG/L	<25	<5	<5



Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING ATI I.D. : 505178  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA#11132 INF	WATER	16-MAY-95	N/A	24-MAY-95	5.00
2	STA#11132 A	WATER	16-MAY-95	N/A	24-MAY-95	1.00
3	STA#11132 EFF	WATER	16-MAY-95	N/A	24-MAY-95	1.00

Parameter	Units	1	2	3
1,3-DICHLOROBENZENE	UG/L	<25	<5	<5
1,4-DICHLOROBENZENE	UG/L	<25	<5	<5

SURROGATES

1,2-DICHLOROETHANE-D4	%	94	94	96
TOLUENE-D8	%	96	99	100
BFB	%	96	93	94



Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

WATER  
ATI I.D.: 505178

Sample Parameters	Units	Results
1 ALIPHATIC HYDROCARBON C4	UG/L	100
ALIPHATIC HYDROCARBON C5	UG/L	300
ALIPHATIC HYDROCARBON C6	UG/L	100
OXYGENATED HYDROCARBON	UG/L	2000
TRIMETHYLBENZENE ISOMER	UG/L	60
2 OXYGENATED HYDROCARBON	UG/L	30
3 OXYGENATED HYDROCARBON	UG/L	20



Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D. : 505178

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	STA#11132 FIELD BLANK	WATER	16-MAY-95	N/A	24-MAY-95	5.00
Parameter	Units	4				
CHLOROMETHANE	UG/L	<50				
VINYL CHLORIDE	UG/L	<25				
BROMOMETHANE	UG/L	<50				
CHLOROETHANE	UG/L	<25				
ACETONE	UG/L	<50				
1,1-DICHLOROETHENE	UG/L	<5				
METHYLENE CHLORIDE	UG/L	<25				
CARBON DISULFIDE	UG/L	<10				
TRANS-1,2-DICHLOROETHENE	UG/L	<5				
1,1-DICHLOROETHANE	UG/L	<5				
CIS-1,2-DICHLOROETHENE	UG/L	<5				
CHLOROFORM	UG/L	<5				
2-BUTANONE (MEK)	UG/L	<50				
1,1,1-TRICHLOROETHANE	UG/L	<5				
CARBON TETRACHLORIDE	UG/L	<5				
1,2-DICHLOROETHANE	UG/L	13				
BENZENE	UG/L	780				
TRICHLOROETHENE	UG/L	<5				
1,2-DICHLOROPROPANE	UG/L	<5				
BROMODICHLOROMETHANE	UG/L	<5				
4-METHYL-2-PENTANONE (MIBK)	UG/L	<50				
CIS-1,3-DICHLOROPROPENE	UG/L	<5				
TOLUENE	UG/L	52				
TRANS-1,3-DICHLOROPROPENE	UG/L	<5				
2-HEXANONE (MBK)	UG/L	<50				
1,1,2-TRICHLOROETHANE	UG/L	<5				
TETRACHLOROETHENE	UG/L	<5				
DIBROMOCHLOROMETHANE	UG/L	<5				
CHLOROBENZENE	UG/L	<5				
ETHYLBENZENE	UG/L	20				
XYLENES (TOTAL)	UG/L	170				
STYRENE	UG/L	<10				
BROMOFORM	UG/L	<25				
1,1,2,2-TETRACHLOROETHANE	UG/L	<5				
DICHLORODIFLUOROMETHANE	UG/L	<50				
TRICHLOROFLUOROMETHANE	UG/L	<25				
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<25				
1,2-DICHLOROBENZENE	UG/L	<25				





Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D. : 505178

Table with 6 columns: Sample Client ID #, Matrix, Date Sampled, Date Extracted, Date Analyzed, Dil. Factor. Row 1: 4, STA#11132 FIELD BLANK, WATER, 16-MAY-95, N/A, 24-MAY-95, 5.00

Table with 3 columns: Parameter, Units, 4. Rows: 1,3-DICHLOROBENZENE (UG/L, <25), 1,4-DICHLOROBENZENE (UG/L, <25)

Table with 3 columns: SURROGATES, %, %. Rows: 1,2-DICHLOROETHANE-D4 (96), TOLUENE-D8 (99), BFB (95)



Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

WATER  
ATI I.D.: 505178

Sample Parameters	Units	Results
4 ALIPHATIC HYDROCARBON C4	UG/L	80
ALIPHATIC HYDROCARBON C4	UG/L	100
ALIPHATIC HYDROCARBON C5	UG/L	200
ALIPHATIC HYDROCARBON C6	UG/L	90
OXYGENATED HYDROCARBON	UG/L	2000



## REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
 Blank I.D. : 35502  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-04-001  
 Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D. : 505178  
 Date Extracted: N/A  
 Date Analyzed : 24-MAY-95  
 Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	<10
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5
<u>SURROGATES</u>		
1,2-DICHLOROETHANE-D4	%	95
TOLUENE-D8	%	98
BFB	%	94



Analytical **Technologies, Inc.**

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK  
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
Blank I.D. : 35502  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-04-001  
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D. : 505178

Parameters	Units	Results
NONE DETECTED	N/A	N/A



MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 75895
Client : ALISTO ENGINEERING

ATI I.D. : 505178
Date Extracted: N/A
Date Analyzed : 24-MAY-95
Sample Matrix : WATER
REF I.D. : 505178-02

Project # : G247985/10-024-04-001
Project Name: BP SITE#11132/3201 35TH AVE. OAKLAND, CA

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Rows include 1,1-DICHLOROETHENE, BENZENE, TRICHLOROETHENE, TOLUENE, and CHLOROBENZENE.

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



BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
 Blank Spike #: 56705  
 Client : ALISTO ENGINEERING  
 Project #: G247985/10-024-04-001  
 Project Name : BP SITE#11132/3201 35TH AVE. OAKLAND, CA

ATI I.D. : 505178  
 Date Extracted: N/A  
 Date Analyzed : 24-MAY-95  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	56	50	112
BENZENE	UG/L	<1	53	50	106
TRICHLOROETHENE	UG/L	<1	51	50	102
TOLUENE	UG/L	<2	54	50	108
CHLOROBENZENE	UG/L	<1	56	50	112

% 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 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 type="radio"/> N/A
	a) are Custody Seals present on Cooler(s) ?	YES	<input type="radio"/> NO
	If yes, are seals intact ?	YES	<input type="radio"/> NO
	b) are Custody Seals present on the sample ?	YES	<input type="radio"/> NO
	If yes, are seals intact ?	YES	<input type="radio"/> 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	<input type="radio"/> NO
5	Is the COC' complete per cooler ? Relinquished: yes/no Requested analysis: yes/no	<input checked="" type="radio"/> YES	<input type="radio"/> 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	<input checked="" type="radio"/> YES	<input type="radio"/> NO
7	Are the samples preserved correctly?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
8	Is there enough sample for all the requested analyses?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
9	Are all samples within holding times for the requested analyses?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
10	Record cooler temperature. Contact PM if temperature is not 4°C ± 2°C.		2.0 °C
	Is ice present in cooler?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
11	Were all sample containers received intact (ie. not broken, leaking, etc.)?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
12	Are samples requiring no headspace, headspace free? N/A	<input checked="" type="radio"/> YES	<input type="radio"/> NO
13	Are VOA 1st stickers required?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
14	Are there special comments on the Chain of Custody which require client contact?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
15	If yes, was ATI Project Manager notified?	<input checked="" type="radio"/> YES	<input type="radio"/> 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







Analytical **Technologies, Inc.**

Corporate Offices, 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 506267

July 12, 1995

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

Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA  
Project # : G247985/10-024-07-001

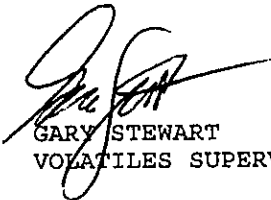
Attention: PETE BEAVER


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

<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
June 22, 1995	4	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 13 1995



Client : ALISTO ENGINEERING
Project # : G247985/10-024-07-001
Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

Report Date: July 12, 1995
ATI I.D. : 506267

Table with 4 columns: ATI #, Client Description, Matrix, Date Collected. Rows include STA# 11132 INF, STA# 11132 A, STA# 11132 EFF, and STA# 11132 FIELD BLANK.

---TOTALS---

Summary table with 2 columns: Matrix, # Samples. Row: WATER, 4.

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 # : G247985/10-024-07-001  
Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D.: 506267

Analysis	Technique/Description
EPA 624 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)	GC/FLAME IONIZATION DETECTOR



Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C7-C24)  
 Client : ALISTO ENGINEERING ATI I.D. : 506267  
 Project # : G247985/10-024-07-001  
 Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA# 11132 INF	WATER	19-JUN-95	26-JUN-95	26-JUN-95	1.00

Parameter	Units	1
FUEL HYDROCARBONS	MG/L	0.37
HYDROCARBON RANGE		C7-C14
HYDROCARBONS QUANTITATED USING		GASOLINE
<u>SURROGATES</u>		
BIS(2-ETHYLHEXYL) PHTHALATE	%	97



REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)  
Blank I.D. : 35861  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-07-001  
Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267  
Date Extracted: 26-JUN-95  
Date Analyzed : 26-JUN-95  
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.050
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
<u>SURROGATES</u>		
BIS(2-ETHYLHEXYL) PHTHALATE	%	96



MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 76723
Client : ALISTO ENGINEERING

ATI I.D. : 506267
Date Extracted: 26-JUN-95
Date Analyzed : 27-JUN-95
Sample Matrix : WATER
REF I.D. : REAGENT WATER

Project # : G247985/10-024-07-001
Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Row 1: FUEL HYDROCARBONS, MG/L, <0.050, 1.0, 0.97, 97, 0.95, 95, 2

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



Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-07-001  
 Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA# 11132 INF	WATER	19-JUN-95	N/A	30-JUN-95	1.00
2	STA# 11132 A	WATER	19-JUN-95	N/A	30-JUN-95	1.00
3	STA# 11132 EFF	WATER	19-JUN-95	N/A	30-JUN-95	1.00

Parameter	Units	1	2	3
CHLOROMETHANE	UG/L	<10	<10	<10
VINYL CHLORIDE	UG/L	<5	<5	<5
BROMOMETHANE	UG/L	<10	<10	<10
CHLOROETHANE	UG/L	<5	<5	<5
ACETONE	UG/L	15	<10	11
1,1-DICHLOROETHENE	UG/L	<1	<1	<1
METHYLENE CHLORIDE	UG/L	<5	<5	<5
CARBON DISULFIDE	UG/L	<2	<2	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<1	<1
1,1-DICHLOROETHANE	UG/L	<1	<1	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1	<1	<1
CHLOROFORM	UG/L	<1	<1	<1
2-BUTANONE (MEK)	UG/L	<10	<10	<10
1,1,1-TRICHLOROETHANE	UG/L	<1	<1	<1
CARBON TETRACHLORIDE	UG/L	<1	<1	<1
1,2-DICHLOROETHANE	UG/L	<1	<1	<1
BENZENE	UG/L	6	<1	<1
TRICHLOROETHENE	UG/L	<1	<1	<1
1,2-DICHLOROPROPANE	UG/L	<1	<1	<1
BROMODICHLOROMETHANE	UG/L	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	<10	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<1	<1
TOLUENE	UG/L	<2	<2	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<1	<1
2-HEXANONE (MBK)	UG/L	<10	<10	<10
1,1,2-TRICHLOROETHANE	UG/L	<1	<1	<1
TETRACHLOROETHENE	UG/L	<1	<1	<1
DIBROMOCHLOROMETHANE	UG/L	<1	<1	<1
CHLOROBENZENE	UG/L	<1	<1	<1
ETHYLBENZENE	UG/L	<1	<1	<1
XYLENES (TOTAL)	UG/L	<1	<1	<1
STYRENE	UG/L	<2	<2	<2
BROMOFORM	UG/L	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<1	<1
DICHLORODIFLUOROMETHANE	UG/L	<10	<10	<10
TRICHLOROFLUOROMETHANE	UG/L	<5	<5	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5	<5	<5
1,2-DICHLOROBENZENE	UG/L	<5	<5	<5



Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-07-001  
 Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA# 11132 INF	WATER	19-JUN-95	N/A	30-JUN-95	1.00
2	STA# 11132 A	WATER	19-JUN-95	N/A	30-JUN-95	1.00
3	STA# 11132 EFF	WATER	19-JUN-95	N/A	30-JUN-95	1.00

Parameter	Units	1	2	3
1,3-DICHLOROBENZENE	UG/L	<5	<5	<5
1,4-DICHLOROBENZENE	UG/L	<5	<5	<5
<u>SURROGATES</u>				
1,2-DICHLOROETHANE-D4	%	84	83	86
TOLUENE-D8	%	97	95	94
BFB	%	89	87	88





Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-07-001  
Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

WATER  
ATI I.D.: 506267

Sample Parameters	Units	Results
1 ALIPHATIC HYDROCARBON C5	UG/L	50
OXYGENATED HYDROCARBON	UG/L	900
ALIPHATIC HYDROCARBON C7	UG/L	20
ALIPHATIC HYDROCARBON C8	UG/L	10
ALIPHATIC HYDROCARBON C8	UG/L	30
2 OXYGENATED HYDROCARBON	UG/L	100
METHYL PROPANOL ISOMER	UG/L	20
3 METHYL PROPANOL ISOMER	UG/L	30



Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-07-001  
 Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	STA# 11132	FIELD BLANK	WATER	19-JUN-95	N/A	30-JUN-95 1.00

Parameter	Units	4
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	13
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5



Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-07-001  
 Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	STA# 11132	FIELD BLANK	WATER	19-JUN-95	N/A	30-JUN-95 1.00

Parameter	Units	4
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5

SURROGATES

1,2-DICHLOROETHANE-D4	%	84
TOLUENE-D8	%	95
BFB	%	89



Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-07-001  
Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

WATER  
ATI I.D.: 506267

Sample Parameters	Units	Results
4 METHYL PROPANOL ISOMER	UG/L	30



REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
 Blank I.D. : 35933  
 Client : ALISTO ENGINEERING  
 Project # : G247985/10-024-07-001  
 Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267  
 Date Extracted: N/A  
 Date Analyzed : 30-JUN-95  
 Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	<10
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5
<u>SURROGATES</u>		
1,2-DICHLOROETHANE-D4	%	81
TOLUENE-D8	%	96
BFB	%	84



REAGENT BLANK  
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
Blank I.D. : 35933  
Client : ALISTO ENGINEERING  
Project # : G247985/10-024-07-001  
Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267

Parameters	Units	Results
NONE DETECTED	N/A	N/A



MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
 MSMSD # : 76771  
 Client : ALISTO ENGINEERING

ATI I.D. : 506267  
 Date Extracted: N/A  
 Date Analyzed : 29-JUN-95  
 Sample Matrix : WATER  
 REF I.D. : 506272-01

Project # : G247985/10-024-07-001  
 Project Name: BP SITE#11132/35TH AVE. OAKLAND, CA

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
1,1-DICHLOROETHENE	UG/L	<1	50	49	98	44	88	11
BENZENE	UG/L	<1	50	53	106	50	100	6
TRICHLOROETHENE	UG/L	<1	50	52	104	48	96	8
TOLUENE	UG/L	<2	50	53	106	50	100	6
CHLOROBENZENE	UG/L	<1	50	56	112	54	108	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 : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)  
 Blank Spike #: 57443  
 Client : ALISTO ENGINEERING  
 Project #: G247985/10-024-07-001  
 Project Name : BP SITE#11132/35TH AVE. OAKLAND, CA

ATI I.D. : 506267  
 Date Extracted: N/A  
 Date Analyzed : 30-JUN-95  
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	48	50	96
BENZENE	UG/L	<1	49	50	98
TRICHLOROETHENE	UG/L	<1	46	50	92
TOLUENE	UG/L	<2	50	50	100
CHLOROBENZENE	UG/L	<1	53	50	106

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



• ACCESSION #: 506267

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	(#471)
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"/> <input checked="" type="radio"/> <input checked="" type="radio"/> YES YES	<input checked="" type="radio"/> N/A NO NO <input checked="" type="radio"/> NO 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?	3.9 °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



ATI # 506267

CHAIN OF CUSTODY

No. 061516

Page 1 of 4

CONSULTANT'S NAME: Alisha Engineering Group ADDRESS: 1575 TREAT Blvd Ste 201 Walnut Creek CA 94596 CITY: Walnut Creek STATE: CA ZIP CODE: 94596

BP SITE NUMBER: 11132 BP CORNER ADDRESS/CITY: 35th Ave. OAKLAND, CA

CONSULTANT PROJECT NUMBER: 10-024-01-001

CONSULTANT CONTRACT NUMBER: 02-17985

CONSULTANT PROJECT MANAGER: Paul Bonner PHONE NUMBER: 510 295-1650 FAX NUMBER: 510 295-1823

BP CONTACT: Scott Hodson BP ADDRESS: Denton, WA PHONE NUMBER:  FAX NO:

LAB CONTACT: Gary Stenaki LABORATORY ADDRESS: San Diego, CA PHONE NUMBER:  FAX NO:

SAMPLED BY (Please Print Name): John Becking SAMPLED BY (Signature): John K. Becking SHIPMENT DATE:  SHIPMENT METHOD: Bellair

AIRBILL NUMBER: 774148

TAT:  24 Hours  48 Hours  1 Week  Standard 2 Weeks

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	HCC	none											COMMENTS	
	POST		NO.	TYPE (VOL.)	LAB SAMPLE #														
STA# 11132 INF	6/19/95	aw	5	2L 3V	00801	✓	✓												
STA# 11132 A	1612		3	VOA	00802	✓													
STA# 11132 EFF	1614		3		00803	✓													
STA# 11132 FIELD BLANK	1616		3		00804	✓													

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<u>John K. Becking</u>	<u>6/20/95</u>	<u>1100</u>	<u>John T. Tucker (ATT)</u>	<u>6-22-95</u>	<u>08:30</u>	<u>double # 471 = 3.9%</u>