Reviewed by Afreen 12/14/95.
→ Missing 3/95 data on historical GWM Table.
→ MW1-MW3 not sampled this quarter. MW1-MW3 are on a semi-annual schedule at this time.

GROUNDWATER MONITORING AND SAMPLING REPORT

→ Evaluate future the need for investig. after reviewing next QMR (9/95).

BP Oil Company Service Station No. 11107
18501 Hesperian Boulevard
San Lorenzo, California

Project No. 10-060-04-001

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 23, 1995

Bill Howell
Project Manager

Dan Salaices
Registered Geologist

REGISTERED GEOLOGIST
DANIEL J. SALAICES
No. 5162
STATE OF CALIFORNIA

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11107
18501 Hesperian Boulevard
San Lorenzo, California

Project No. 10-060-04-001

August 23, 1995

INTRODUCTION

This report presents the results and findings of the June 6, 1995 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11107, 18501 Hesperian Boulevard, San Lorenzo, 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. 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 collected during this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown in Figure 2. The results of laboratory analysis are shown in Figure 3. The laboratory report and chain of custody record are presented in Appendix B.

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11107
18501 HESPERIAN BOULEVARD, SAN LORENZO, CALIFORNIA

ALISTO PROJECT NO. 10-060

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)	1,1,1-TCA (ug/l)	PCE (ug/l)	DO (ppm)	LAB
MW-1	11/04/92	41.07	20.78	20.29	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	2.8	ND	—	PACE
QC-1 (c)	11/04/92	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	PACE
MW-1	02/24/94	41.07	20.70	20.37	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	1.5	0.9	—	PACE
MW-1	05/12/94	41.07	18.12	22.95	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	1.0	ND<0.5	7.0	PACE
MW-1	09/09/94	41.07	21.74	19.33	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ND<0.5	ND<0.5	2.3	PACE
MW-1	11/03/94	41.07	20.01	21.06	ND<50	50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ND<0.5	ND<0.5	4.3	PACE
MW-1	06/06/95	41.07	17.55	23.52	—	—	—	—	—	—	—	—	—	—	—
MW-2	11/04/92	40.56	20.16	20.40	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	PACE
MW-2	02/24/94	40.56	20.12	20.44	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	PACE
MW-2	05/12/94	40.56	17.49	23.07	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	7.4	PACE
MW-2	09/09/94	40.56	21.12	19.44	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	2.1	PACE
MW-2	11/03/94	40.56	19.36	21.20	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	4.2	PACE
MW-2	06/06/95	40.56	16.96	23.60	—	—	—	—	—	—	—	—	—	—	—
MW-3	11/04/92	40.45	20.23	20.22	760	—	3.7	15	1.9	57	—	—	—	—	PACE
MW-3	02/24/94	40.45	20.24	20.21	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	PACE
MW-3	05/12/94	40.45	17.61	22.84	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	7.3	PACE
MW-3	09/09/94	40.45	21.22	19.23	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	2.0	PACE
MW-3	11/03/94	40.45	19.48	20.97	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	3.6	PACE
MW-3	11/03/94	40.45	17.21	23.24	—	—	—	—	—	—	—	—	—	—	—
MW-4	11/04/92	39.24	19.18	20.06	900	—	150	4.1	0.8	53	—	—	—	—	PACE
MW-4	02/24/94	39.24	19.22	20.02	240	—	110	3.8	1.8	11	—	—	—	—	PACE
QC-1 (c)	02/24/94	—	—	—	310	—	95	5.3	2.2	17	—	—	—	—	PACE
MW-4	05/12/94	39.24	16.62	22.62	ND<50	—	2.2	1.0	ND<0.5	ND<0.5	—	—	—	7.3	PACE
QC-1 (c)	05/12/94	—	—	—	430	—	2.6	1.3	ND<0.5	ND<0.5	—	—	—	—	PACE
MW-4	09/09/94	39.24	20.27	18.97	240	—	9.1	1.3	0.6	2.5	—	—	—	2.2	PACE
QC-1 (c)	09/09/94	—	—	—	57	—	1.7	ND<0.5	ND<0.5	0.5	—	—	—	—	PACE
MW-4	11/03/94	39.24	18.46	20.78	250	—	3.1	2.8	1.0	3.3	—	—	—	3.2	PACE
QC-1 (c)	11/03/94	—	—	—	110	—	2.4	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	PACE
MW-4	06/06/95	39.24	16.28	22.96	3100	—	530	25	170	85	—	—	—	—	ATI
QC-1 (c)	06/06/95	—	—	—	3000	—	530	27	170	92	—	—	—	—	ATI
MW-5	06/06/95	39.07	16.16	22.91	1100	—	42	ND<2.5	15	4.0	—	—	—	—	ATI
MW-6	06/06/95	38.46	15.82	22.64	220	—	2.3	ND<0.50	ND<0.50	ND<1.0	—	—	—	—	ATI
MW-7	06/06/95	39.50	16.34	23.16	540	—	5.5	ND<0.50	15	1.1	—	—	—	—	ATI

Note: 3/1/95 data is missing on this table but will be included in future reports.

Where is 3/1/95 data?

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11107
18501 HESPERIAN BOULEVARD, SAN LORENZO, CALIFORNIA

ALISTO PROJECT NO. 10-060

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)	1,1,1-TCA (ug/l)	PCE (ug/l)	DO (ppm)	LAB
QC-2 (d)	11/04/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	11/04/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	05/12/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	09/09/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	11/03/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	PACE
QC-2 (d)	06/06/95	---	---	---	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
1,1,1-TCA	1,1,1-Trichloroethane
PCE	Tetrachloroethene
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not measured/analyzed/applicable
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.

NOTES:

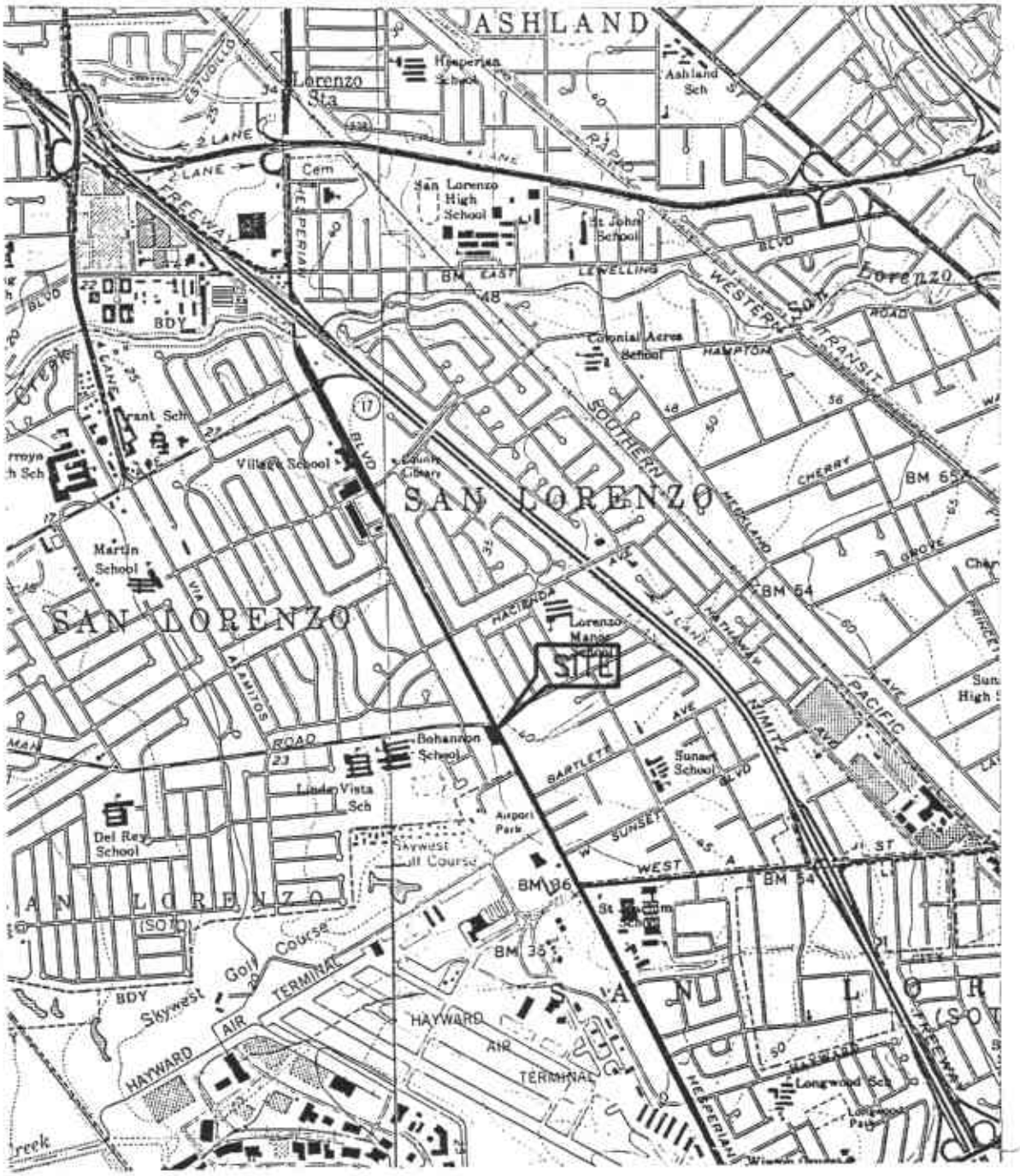
(a) Top of casing elevations surveyed relative to an established benchmark with an elevation of 39.95 feet above mean sea level.

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

(c) Blind duplicate.

(d) Travel blank.

E\0\10-060\060-4-1.WQ1



SOURCE:
USGS MAP, HAYWARD & SAN LEANDRO QUADRANGLES,
7.5 MINUTE SERIES, 1959,
PHOTOREVISED 1980.

N

0 1000' 2000'

FIGURE 1

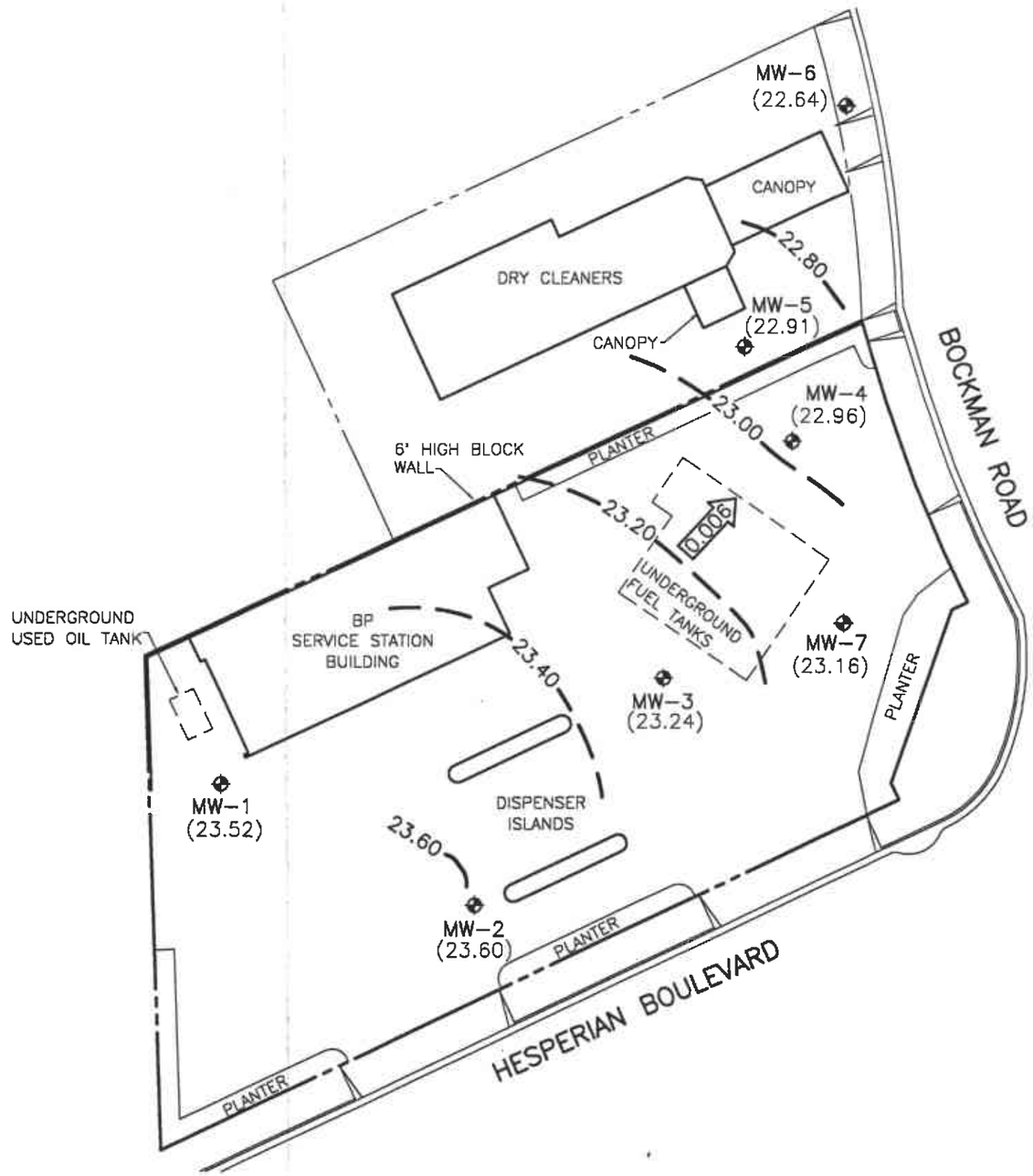
VICINITY MAP

BP OIL SERVICE STATION NO. 11107
18501 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA

PROJECT NO. 10-060

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10060--.DWG 3-12-94 RKW 1=1



N

0 30 60

SCALE IN FEET

LEGEND

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

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

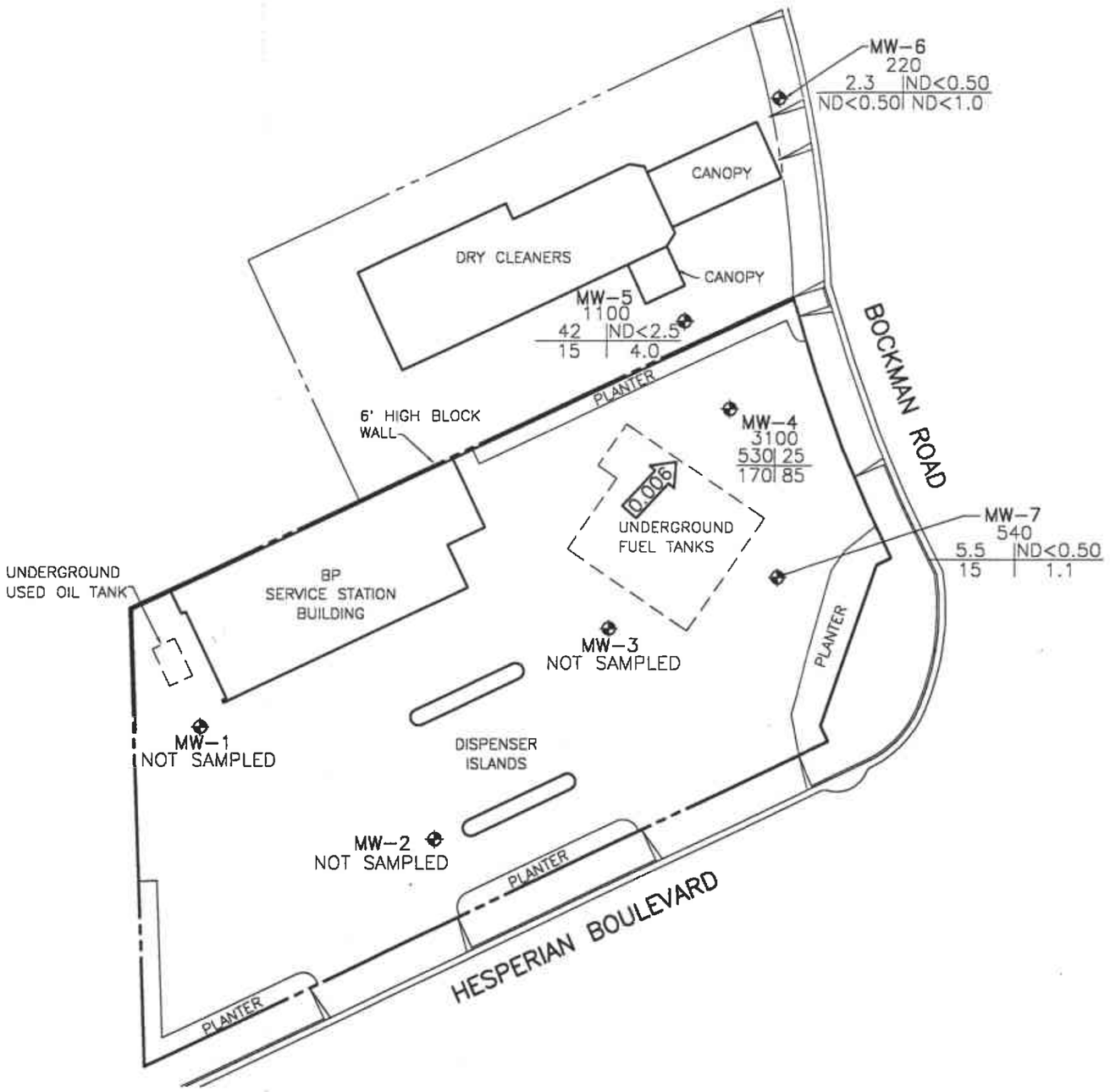
JUNE 6, 1995

BP OIL SERVICE STATION NO. 11107
18501 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA

PROJECT NO. 10–060

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10060-H.DWG 7-18-95 REV 1=30



N

0 30 60

SCALE IN FEET

LEGEND

⊕	GROUNDWATER MONITORING WELL
TPH-G / B | T / E | X	CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
ND	NOT DETECTED ABOVE REPORTED DETECTION LIMIT
⇦ 0.006	CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3

CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER

JUNE 6, 1995

BP OIL SERVICE STATION NO. 11107
18501 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA

PROJECT NO. 10-060

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

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

Project No. 10-060-04-001 Date: 6-6-95
Address 18501 Hesperian Blvd Day: M (T) W TH F
Contract No. G463056 City: San Lorenzo
Station No. 11107 Sampler: John D

WELL ID	SAMPLE ID	DEPTH TO WATER	TIME	COMMENTS:
MW-1	not sampled	17.55'	1310	
MW-2	not sampled	16.96'	1315	
MW-3	not sampled	17.21'	1320	
MW-4	S-4	16.28'	1333	
MW-5	S-2	16.16'	1344	
MW-6	S-1	15.82	1341	
MW-7	S-3	16.34'	1326	

FIELD INSTRUMENT CALIBRATION DATA

Ph METER HY 9212 4.00 ✓ 7.00 ✓ 10.00 ✓ TEMPERATURE COMPENSATED (Y) N TIME 0700 WEATHER In house

D.O. METER LM-DO-594 ZERO d.O. SOLUTION Factory Calibrated & Air BAROMETRIC PRESSURE — TEMP In house

CONDUCTIVITY METER HY 92√2 10,000 ✓ TURBIDITY METER — 5.0 NTU — OTHER —

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Irridensence	Gal.	Time	Temp *F	pH	E.C. x100	D.O.
MW-6	15.82	2	OK	Ø	Y / N	1.5	1422	72.8	6.70	10,97	0.03
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2	1428	72.0	6.70	9.42	
25.00 - 15.82 : 9.18 x .16 = 1.5 x 3 = 4.5						3.5	1433	72.2	6.69	9.22	
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port						4.5	1436	71.8	6.72	9.17	0.02
Comments:											

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

TIME/SAMPLE ID: 1440 S-1

Well ID	Depth to Wate	Diam	Cap/Lock	Product Dept	Irridensence	Gal.	Time	Temp *F	pH	E.C.	D.O.
MW-5	16.16	2	OK	Ø	Y N	1.5	1459	76.0	6.89	9.50	
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2.5	1504	76.3	6.82	9.11	
26.00 - 16.16 = 9.84 x .16 = 1.6 x 3 = 4.7						3.5	1507	76.0	6.76	8.91	
Purge Method: OSurface Pump ODisp.Tube OWinch ODisp. Bailer(s) OSys Port						4.7	1512	76.3	6.79	8.88	
Comments:						4.7+					

O EPA 601 O TPH Diesel
(Y) TPH-G/BTEX O TOG 5520

TIME/SAMPLE ID: 1520 S-2

DO meter not functioning properly

ALISTO

Field Report / Sampling Data Sheet

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

Project No. 10-060-04-001 Date: 6-6-95
Address 18501 Hesperian Blvd Day: M (T) W TH F
Contract No. G463056 City: San Lorenzo
Station No. 11107 Sampler: John O.

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Irridensence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-7	16.34	2	OK	Ø	Y N	1.5	1533	75.5	6.78	9.28	
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2.5	1536	72.9	6.75	8.92	
26.00 - 16.34 = 9.66	x .16 = 1.5	x 3 =	4.5			3.5	1540	72.4	6.73	8.85	
Purge Method: OSurface Pump ODisp.Tube OWinch ⊗Disp. Baller(s)___ OSys Port						4.5	1543	72.3	6.69	8.81	
Comments:											

O EPA 601_____
⊗ TPH-G/BTEX___
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1547 S-3

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Irridensence	Gal.	Time	Temp °F	pH	E.C.	D.O.
MW-4	16.28	2	OK	Ø	Y N	1.5	1602	75.6	6.88	9.05	
Total Depth - Water Level=	x Well Vol. Factor=	x#vol. to Purge	PurgeVol.			2.5	1606	74.0	6.62	8.98	
25.32 - 16.28 = 9.04	x .16 = 1.4	x 3 =	4.3			3.5	1609	72.7	6.64	8.81	
Purge Method: OSurface Pump ODisp.Tube OWinch ⊗Disp. Baller(s)___ OSys Port						4.3	1611	71.8	6.67	8.83	
Comments: QC-1 from this well											

O EPA 601_____
O TPH-G/BTEX___
O TPH Diesel____
O TOG 5520 ___
TIME/SAMPLE ID
1615 S-4

QC-1 labelled S-5

QC-2 labelled S-6

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.: 506110

June 20, 1995

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

Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA
Project # : G463056/10-060-04-01

Attention: BRADY NAGLE

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

Date Received	Quantity	Matrix
June 09, 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

Analytical Technologies, Inc.

SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G463056/10-060-04-01
Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

Report Date: June 20, 1995
ATI I.D. : 506110

ATI #	Client Description	Matrix	Date Collected
1	S-1	WATER	06-JUN-95
2	S-2	WATER	06-JUN-95
3	S-3	WATER	06-JUN-95
4	S-4	WATER	06-JUN-95
5	S-5	WATER	06-JUN-95
6	S-6	WATER	06-JUN-95

---TOTALS---

Matrix	# Samples
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 Technologies, Inc.

ANALYTICAL SCHEDULE

Client : ALISTO ENGINEERING
Project # : G463056/10-060-04-01 ATI I.D.: 506110
Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

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

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 506110
Project # : G463056/10-060-04-01
Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	S-1	WATER	06-JUN-95	N/A	18-JUN-95	1.00
2	S-2	WATER	06-JUN-95	N/A	19-JUN-95	5.00
3	S-3	WATER	06-JUN-95	N/A	19-JUN-95	1.00

Parameter	Units	1	2	3
BENZENE	UG/L	2.3	42	5.5
TOLUENE	UG/L	<0.50	<2.5	<0.50
ETHYLBENZENE	UG/L	<0.50	15	15
XYLENES (TOTAL)	UG/L	<1.0	4.0@E	1.1@E
FUEL HYDROCARBONS	UG/L	220	1100	540
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	104	110	104

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING ATI I.D. : 506110
Project # : G463056/10-060-04-01
Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	S-4	WATER	06-JUN-95	N/A	18-JUN-95	10.00
5	S-5	WATER	06-JUN-95	N/A	18-JUN-95	10.00
6	S-6	WATER	06-JUN-95	N/A	18-JUN-95	1.00

Parameter	Units	4	5	6
BENZENE	UG/L	530	530	<0.50
TOLUENE	UG/L	25	27	<0.50
ETHYLBENZENE	UG/L	170	170	<0.50
XYLENES (TOTAL)	UG/L	85	92	<1.0
FUEL HYDROCARBONS	UG/L	3100	3000	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	95	102	98

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 35747
Client : ALISTO ENGINEERING
Project # : G463056/10-060-04-01
Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

ATI I.D. : 506110
Date Extracted: N/A
Date Analyzed : 17-JUN-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	%	101

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 35748
Client : ALISTO ENGINEERING
Project # : G463056/10-060-04-01
Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

ATI I.D. : 506110
Date Extracted: N/A
Date Analyzed : 19-JUN-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	%	101

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
MSMSD # : 76468
Client : ALISTO ENGINEERING

Project # : G463056/10-060-04-01
Project Name: BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

ATI I.D. : 506110
Date Extracted: N/A
Date Analyzed : 17-JUN-95
Sample Matrix : WATER
REF I.D. : 506091-05

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.9	98	5.0	100	2
TOLUENE	UG/L	<0.50	5.0	5.1	102	5.2	104	2

% 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 #: 57160
Client : ALISTO ENGINEERING
Project # : G463056/10-060-04-01
Project Name : BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

ATI I.D. : 506110
Date Extracted: N/A
Date Analyzed : 17-JUN-95
Sample Matrix : WATER

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

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

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 57162
Client : ALISTO ENGINEERING
Project # : G463056/10-060-04-01
Project Name : BP SITE#11107/18501 HESPERIAN BLVD, SAN LORENZO, CA

ATI I.D. : 506110
Date Extracted: N/A
Date Analyzed : 19-JUN-95
Sample Matrix : WATER

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

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

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

BP

ATI#506110

CHAIN OF CUSTODY

No. 055640

Page ____ of ____

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Alisto Engineering Group	1575 Treat Blvd #201	Walnut Creek	CA	94598

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11107	18501 Hesperian Blvd, San Lorenzo, CA	10-060-04-01

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Brady Nagle	510-295-1650	510-295-1823	G463056

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
Scott Hooton	Renton, WA	206-251-0689	

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
Gary Stuart	San Diego, CA	619-458-9141	

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
John DeGeorge	[signature]		Fed Ex

AIRBILL NUMBER: 2416709002

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

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE 6-6-95 / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	TPH-G BTEX										COMMENTS
S-1	1440	W	2	VoA	01	X										
S-2	1520	↓	2	↓	02	X										
S-3	1547	↓	2	↓	03	X										
S-4	1615	↓	2	↓	04	X										
S-5	1617	↓	2	↓	05	X										
S-6	1620	↓	2	↓	06	X										

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] Alisto	6-8-95				
			[signature] / ATI	6-9-95	09:30

ADDITIONAL COMMENTS

CLV-16722

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