ALCO HAZMAT 99.JUL19 FH 2012

QUARTERLY MONITORING REPORT

Bo K. Gin 706 Harrison Street Oakland, CA

May 94

PREPARED FOR:

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OAKLAND AUTO PARTS & TIRES
288 11th Street
Oakland, CA 94706

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Dennis Bates Associates, Inc. 1020 Railroad Avenue, Suite E Novato, CA 94945

DBA Project #93026.00

May, 1994

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1. INTRODUCTION

This report summarizes the methods and results of sampling conducted in April, 1994 at Oakland Auto Parts located at 706 Harrison Street in Oakland, California (Figure 1).

The site was operated by Mr. Gin as a service station with two pump islands from 1963 to 1985 when retail operations ceased. The site contained two 6000-gallon underground storage tanks (USTs), four 1000-gallon USTs which were used to store various gasolines and one small waste oil tank (See Figure 2). All USTs were removed in January, 1991 and overexcavation of the main tank area was performed. In July, 1993, three groundwater monitoring wells and two vapor extraction wells were installed (See Figure 2). Groundwater monitoring was initiated at this site in August, 1993.

2. GROUNDWATER LEVEL ELEVATIONS AND FLOW DIRECTION

Groundwater levels were measured in wells MW1, MW2, and MW3 prior to sampling on April 15, 1994. Water level depths were converted to elevations by subtracting the depth of water from top of casing elevations. Water level measurements for April, 1994, along with previous measurements made at these wells, are included in Table 1. Water level measurements made in April, 1994 indicate that the groundwater flow direction is to the southwest, which is consistent with previous groundwater elevation measurements made for this site (See Figure 3).

3. GROUNDWATER SAMPLING

3.1 Sampling and Analytical Methods

Groundwater samples were collected from wells MW1, MW2, and MW3 on April 15, 1994. Prior to sampling, each of the wells was purged of approximately four casing volumes using a dedicated submersible pump. Sampling data sheets are included in Appendix A.

Groundwater samples from each well were collected using the dedicated submersible pumps and pouring directly into the sample containers. Volatile organics (TPHG/BTEX) were collected in 40-milliliter vials. Sample containers were placed in a cooler with blue ice for shipment to the analytical laboratory. Groundwater samples were submitted for total petroleum hydrocarbons (TPH) as gasoline and diesel (EPA Method 8015M), and benzene, toluene, ethylbenzene and xylenes (BTEX; EPA Method 8020M).

3.2 Analytical Results

A summary of sample results for April, 1994, in addition to previous sampling periods, are included in Table 2 and copies of original laboratory data are included in Appendix B. In April, 1994, TPH as gasoline and BTEX were present in MW1 and MW2, but were not present above laboratory detection limits in MW3. In MW1, TPH as gasoline was detected at 9,500 parts per billion (ppb). BTEX constituents were detected at 3,600 ppb, 530 ppb, 160 ppb and 280 ppb, respectively. In MW2, TPH as gasoline was detected at 230,000 ppb and BTEX constituents were detected at 2,500 ppb, 4,200 ppb, 470 ppb, and 1,800 ppb, respectively.

4. VAPOR EXTRACTION TESTING

Just following the monitoring program, a vapor extraction feasibility test (VEFT) was performed by Remedial Testing and Design (RTD) at vapor extraction wells VW-1 and VW-2 (See Figure 2). The purpose of this test was to design a vapor extraction system to remediate residual hydrocarbons in soil and groundwater. At that time, several inches of floating product was observed at both extraction wells. These activities and findings will be more fully described in a report to be prepared by RTD.

5. DISCUSSION

Comparison of water level measurements indicate a consistent flow direction toward the south/southwest.

Comparison of chemical concentrations measured in MW1 in April, 1994 with previous sampling periods indicate that petroleum hydrocarbon concentrations in this well are consistently decreasing over time. Petroleum hydrocarbons have been consistently ND in well MW3.

TPH in MW2 decreased between August and December, 1993, but increased in April, 1994. Well MW2 is located upgradient of the "main tank" area and downgradient of the 6,000-gallon tank area. MW2 is not expected to contain high hydrocarbon concentrations since chemical analysis of soils during tank removal indicated that high levels of petroleum hydrocarbons were not present in surrounding soil.

To investigate other potential sources of petroleum hydrocarbons, a review of information available for an upgradient facility (the Unocal service station located approximately 200 feet north of the 706 Harrison site at the corner of 8th and Harrison Streets) was conducted. These data indicate that petroleum hydrocarbons in several wells, particularly MW3, contained high hydrocarbon concentrations at least since June, 1990 (up to 2,100 µg/l in December, 1991). These data suggest that a slug of petroleum hydrocarbons may have flowed past 8th Street toward the 706 Harrison site. Therefore, the continuing, and recently rising concentrations of petroleum constituents in well MW2 may have resulted from downgradient migration of

A except MWs or low Further site investigation desired

petroleum hydrocarbons in groundwater. Further site investigation, described in Section 6 may resolve this possibility.

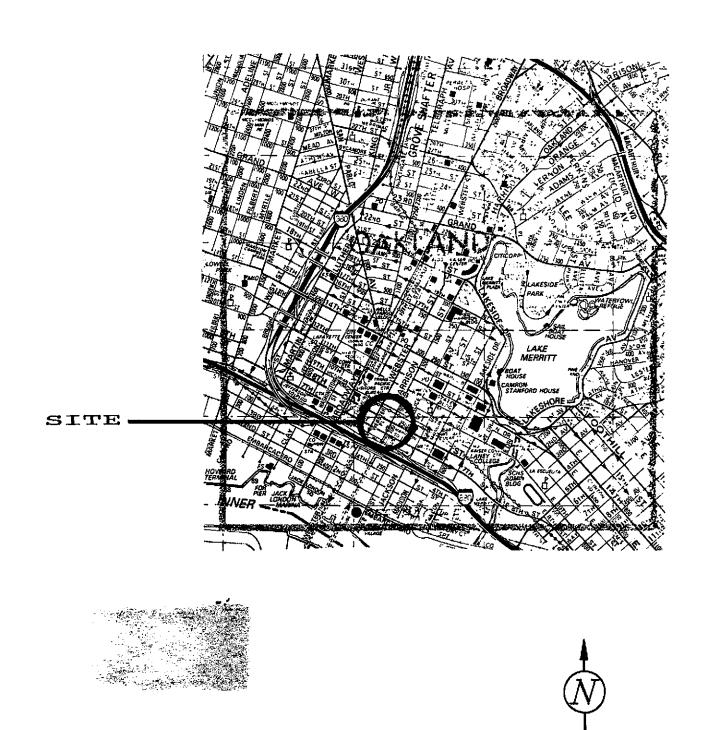
6. RECOMMENDATIONS

DBA recommends that a product recovery system be installed in the two existing extraction wells. The product recovery system recommended is the Soak-ease oil absorbent kit which requires monitoring and replacement on a daily to weekly basis.

To investigate the potential for residual petroleum hydrocarbons in the "main tank" area and in the 6,000-gallon tank area, DBA recommends that borings be drilled through both areas and sampled in underlying natural materials. We recommend that one boring be drilled along the east side of the previous 6,000-gallon tank, where previous sampling data suggest that residual petroleum hydrocarbons may be present, and four borings be drilled within the "main tank" area. The locations of the proposed borings is shown on Figure 4.

Based on findings of the VEFT, DBA recommends that three of the borings to be drilled in the "main tank" area should be converted to vapor extraction wells. The wells should be constructed similarly to the existing monitoring wells so that they may be used both for vapor extraction and sparging of groundwater.

To investigate the potential for migration of petroleum hydrocarbons on to the 706 Harrison site from upgradient facilities, DBA recommends that a monitoring well be constructed along the northern boundary of the site (See Figure 4).



TITLE: SITE LOCATION

SITE OAKLAND AUTO PARTS ADDRESS: 706 HARRISON STREET, OAKLAND, CA.

SCALE: 1" = 2200'

PROJECT 93026.00

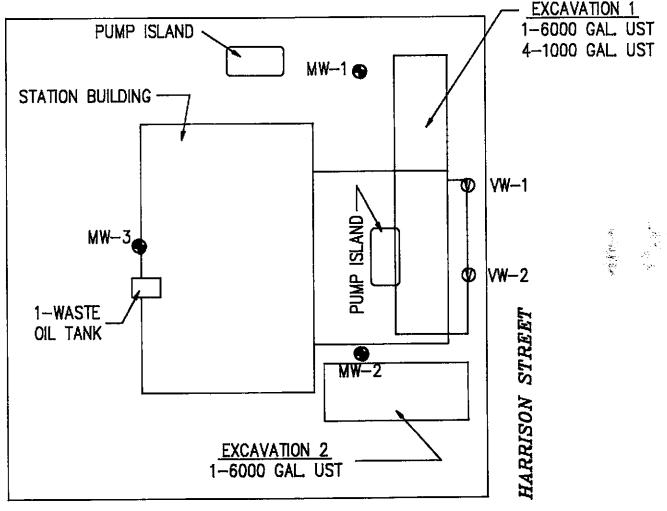
DATE: MAY 13, 1994

DENNIS BATES ASSOCIATES, INC.

494 Alvarado Street, Suite B Monterey, CA. 93940 1020 RAILROAD AVE. SUITE E, NOVATO, CA. 94945

FIGURE:

SEVENTH STREET







TITLE: SITE PLAN SHOWING EXCAVATIONS & MONITORING WELL LOCATIONS

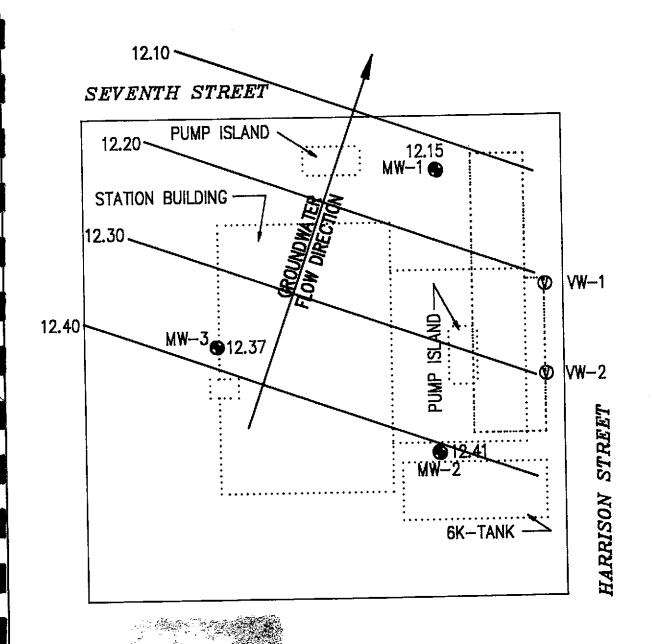
SITE OAKLAND AUTO PARTS
ADDRESS: 706 HARRISON STREET, OAKLAND, CA.

SCALE: 1 INCH = 20 FEET PROJECT # 93026.00 DATE: MAY 13, 1994

DENNIS BATES ASSOCIATES, INC.

494 Alvarado Street, Suite B Monterey, CA. 93940 1020 RAILROAD AVE. SUITE E, NOVATO, CA. 94945 FIGURE:

2



EXPLANATION - GROUNDWATER ELEVATION CONTOURS 12.40-



SITE PLAN SHOWING GROUNDWATER FLOW DIRECTION TITLE: OAKLAND AUTO PARTS SITE

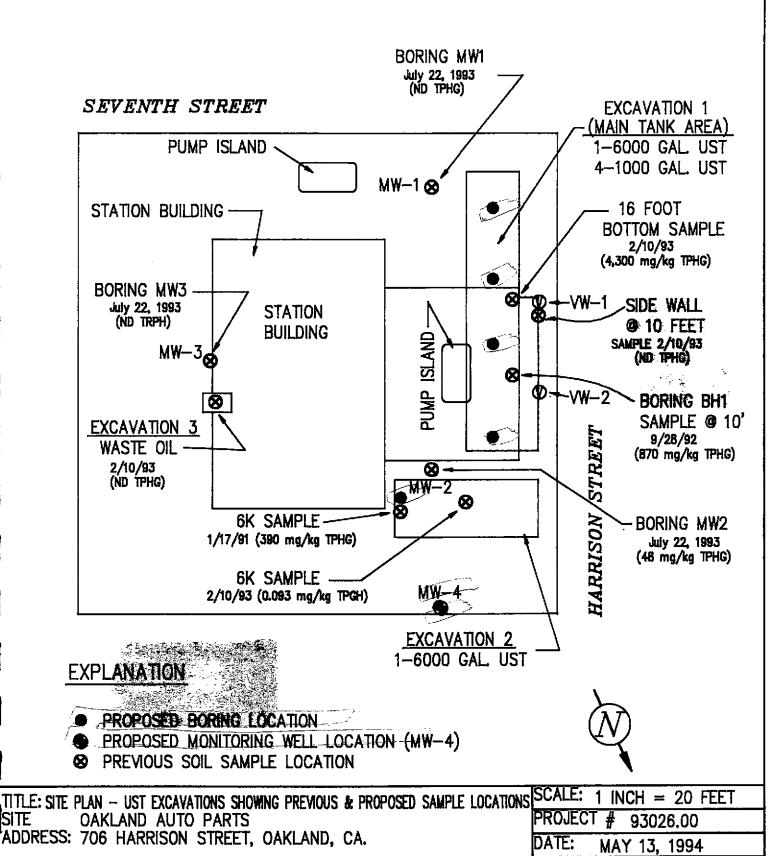
ADDRESS: 706 HARRISON STREET, OAKLAND, CA.

SCALE: 1 INCH = 20 FEET 93026.00 PROJECT #

DATE: MAY 13, 1994

494 Alvarado Street, Suite B Monterey, CA. 93940 1020 RAILROAD AVE. SUITE E, NOVATÓ, CA. 94945

FIGURE:



DENNIS BATES ASSOCIATES, INC.

494 Alvarado Street, Suite B Monterey, CA. 93940 1020 RAILROAD AVE. SUITE E, NOVATO, CA. 94945 FIGURE:



TABLE 1

SUMMARY OF DEPTHS TO GROUNDWATER

AND

GROUNDWATER ELEVATIONS ABOVE MEAN SEA LEVEL

WELL	DATE	DEPTH TO GROUND WATER	TOC ELEVATION AMSL	GROUNDWATER ELEVATION AMSL
MW1	08/10/93	17.1	29.15	12.05
MW2	08/10/93	17.05	30.51	13.46
MW3	08/10/93	16.9	29.77	12.87
MW1	08/13/93	17.4	29.15	11.75
MW2	08/13/93	17.05	30.51	13.46
MW3	08/13/93	17.05	29.77	12.72
MW1	12/14/93	17.27	29.15	11.88
MW2	12/14/93	18.28	30.51	12.23
мwз	12/14/93	17.7	29.77	12.07
MW1	4/15/94	17.00	29.15	12.15
MW2	4/15/94	18.10	30.51	12.41
MW3	4/15/94	17.40	29.77	12.37

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TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

TPH AS GASOLINE (TPHg) BENZENE (B), TOLUENE (T), ETHYL BENZENE (EB), XYLENES (X) ALL RESULTS REPORTED IN MICROGRAMS/LITER (mg/l)

WELL	DATE	TPHg	В	Т	EB	Х
MW1	08/13/93	20,000	8,500	640	280	440
MW1	12/14/93	17,000	9,200	1,200	4400	540
MW1A	12/14/93	12,000	6,400	360	330	200
MW1	4/15/94	9,500 🗸	3,600 🗸	530	160	280
MW2	08/13/93	34,000	6,800	10,000	740	3,900
MW2	12/14/93	16,000	3,200	4,200	500	1,700
MW2/	4/15/94 ^V	230,000	2,500 🗸	4,200	470	1,800
MW3	08/13/93	ND	D	ND	ND	ND
MW3	12/14/93	ND	ND	ND	ND	ND
MW3	4/15/94	ND i	NDV	ND	ND	ND

MW1 on 12/14/93 was collected using the 12 VOC submersible pump.

MW1A on 12/14/93 was collected using a disposable bailer immediately after MW1 was collected.

ND = NOT DETECTED AT THE METHOD REPORTING LIMIT

NA = NOT ANALYZED

NS = NOT SAMPLED

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APPENDIX A SAMPLING DATA SHEETS



CLIENT:	Pc	Gin	
PROJECT #:			

SAMPLING DATA SHEET

	· · · · · · · · · · · · · · · · · · ·				<u> </u>
JOB LOCATION: 🔘	akland Av	to Posts	DATE PURGED:	4)15)94	
			PURGE METHOD:	سارم طادی	P
Rel TOC	black mas	rk	DATE & TIME SAMPLE	D: 4)15	•
SAMPLING LOCATION:			SAMPLING METHOD:	sub pump	
DEPTH TO WATER:	217.0'	(spect dem)	SAMPLE TYPE: 👱 GI	RABCOMPOSITE _	
WELL BOTTOM DEPTH	: 27.70		PRESERVATIVES:		
WELL CASING VOLUM	B: 10.7'=1	7/2-gol	# OF CONTAINERS:		
CASING VOLUMES PUR			PIELD TECH:		
PURGE RATE:	19pl /385ee		WEATHER CONDITIONS	3:	
TIME (24 lar)	VOLUME REMOVED (gal)	ELECTRICAL CONDUCTIVITY	PH	TEMPERATURE	TURPIDITY (=to)
1320	logal	25.4×100	6.34	75.1	modtorb
1320	3gal	8,46 ×100	6.46	71.4	И
1340	4 cal	8-42+100	6.54	71.9	И
1345	God	8,40×100	6.56	712	ęł
1350	75al	8.44×100	6.55	70,9	И
	U			,	
	·				
		·	<u> </u>		

CIDBAISAMPLING (asing wolome 1.71 gd xy = 6.84



CLIENT:	Ro Gin	
PROJECT #	!:	

SAMPLING DATA SHEET

^							
JOB LOCATION:	Civi Auk	· Parts	DATE PURGED:	4)15/94			
			PURGE METHOD:	amug dei			
Red: TOC (black mork	>	DATE & TIME SAMPLED: 4 15 44				
SAMPLING LOCATION:	mw2		SAMPLING METHOD:	Sub po mus			
DEPTH TO WATER:	18.10		SAMPLE TYPE: XG	ABCOMPOSITE			
WELL BOTTOM DEPTH	27.0		PRESERVATIVES:				
WELL CASING VOLUM	B: 8,91		# OF CONTAINERS:				
CASING VOLUMES PUR	RGED:		PRELID TECH: E	anik			
PURGE RATE: 2	al/37sec		WEATHER CONDITIONS	: fair			
TIME (24 hr)	VOLUME REMOVED (gal)	BLECTRICAL CONDUCTIVITY	PH	TEMPERATURE	TURPIDITY (sta)		
1120	lyst	F. BOXIO	6.15	77.6	med turbed		
1125	2 gal	7.72×100	6 25	76.0	71		
1/30	3gal	7.62× 100	6.35	13.5	Ħ		
U 35	4 gol	7.55×100	6.42	71.4	νI		
1140	Scal	7.424 100	6.38	70.8	ų		
1145	logal	7.40 × 100	6-41	70.4	1)		
	v	·					
San	ple						
	·						
					<u></u>		
			· · · · · · · · · · · · · · · · · · ·				

CHOBASAMPLING Casing volume - 1.424 gal x 4 = 5.696



CLIENT:	Bofon	
PROJECT #:_		

SAMPLING DATA SHEET

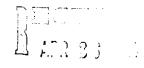
JOB LOCATION: (California A	up Parts	DATE PURGED: 4	115/94	
,			PURGE METHOD:	Sabo	mg
Ref 70	C black a	uark	DATE & TIME SAMPLE	D: 4/15/94	
SAMPLING LOCATION: MW3			SAMPLING METHOD:	Subpu	up
DEPTH TO WATER:	217.41/8	feel dance)	SAMPLE TYPE:	RABCOMPOSITE	0
WELL BOTTOM DEPTH	27.51		PRESERVATIVES:	ACL	
WELL CASING VOLUM	B: 10.5 = 1	68 gal	# OF CONTAINERS:		
CASING VOLUMES PUT	RGED: 4		PIELD TECH:		
PURGE RATE:	(gal/35	L C	WEATHER CONDITIONS	3:	
TIME (24 hr)	VOLUME REMOVED (gal)	BLECTRICAL CONDUCTIVITY	PH	TEMPERATURE	TURPIDITY (ath)
1420	Igal	5.35 × 100	6.38	74.0	mid fire.
1425	Boal	4. 98×190	6.52	69.7	
150°	4gal	4.81×10	663	68.3	
1505	5 gal	4.84×100	6.64	67.7	
1510	Gal	4.85×100	6.71	67.4	
1515	Teal	4.84×100	6.70	67.Z	
. 🗸	•				
				% .	
		,			

C:\DBA\SAMPLING

(asing 1.68 gol x 4 = 6.72 gol

APPENDIX B LABORATORY ANALYTICAL SHEETS





April 21, 1994

Mr. John Sammons Dennis Bates Associates, Inc. 1020 Railroad Avenue, Suite E Novato, CA 94945

RE: PACE Project No. 440415.508

Client Reference: Oakland Auto

Dear Mr. Sammons:

Enclosed is the report of laboratory analyses for samples received April 15, 1994.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Carol Reid Project Manager

Enclosures



Dennis Bates Associates, Inc. 1020 Railroad Avenue, Suite E Novato, CA 94945 April 21, 1994

PACE Project Number: 440415508

Attn: Mr. John Sammons

Client Reference: Oakland Auto

PACE Sample Number: Date Collected:

Date Received:

Client Sample ID:

70 0304156 04/15/94 04/15/94 MW2

Parameter Units MDL DATE ANALYZED

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS TOTAL FUEL HYDROCARBONS, (LIGHT): 04/19/94 Purgeable Fuels, as Gasoline (EPA 8015M) ug/L 23000 L 250 04/19/94 PURGEABLE AROMATICS (BTXE BY EPA 8020M): 04/19/94 0.5 2500 2 Benzene ug/L 04/19/94 Toluene ug/L 10 4200 04/19/94 **Ethylbenzene** 0.5 470 04/19/94 ug/L 1800 Xylenes, Total 0.5 04/19/94 ug/L



Mr. John Sammons

Page 2

April 21, 1994

PACE Project Number: 440415508

Client Reference: Oakland Auto

PACE Sample Number:

Date Collected:

Date Received: Client Sample ID: 70 0304164

04/15/94 04/15/94

MW1 ____

Parameter Units MDL

DATE ANALYZED

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT): Purgeable Fuels, as Gasoline (EPA 8015M) ug/L

PURGEABLE AROMATICS (BTXE BY EPA 8020M):
Benzene

Benzene Toluene Ethylbenzene

Xylenes, Total

- 04/19/94 L 250 95001 04/19/94 - 04/19/94 L 10 3600 04/19/94

ug/L 10 3600 ε ug/L 2.5 530 ug/L 2.5 160

160 04/19/94

04/19/94



Mr. John Sammons

Page 3

April 21, 1994

PACE Project Number: 440415508

Client Reference: Oakland Auto

PACE Sample Number:

Date Collected:

Date Received:

Client Sample ID:

70 0304172

04/15/94

04/15/94 MW3

Parameter Units MDL DATE ANALYZED

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS TOTAL FUEL HYDROCARBONS, (LIGHT): 04/19/94 Purgeable Fuels, as Gasoline (EPA 8015M) ug/L ND 04/19/94 50 PURGEABLE AROMATICS (BTXE BY EPA 8020M): 04/19/94 Benzene 0.5 ND 04/19/94 ug/L Toluene uq/L 0.5 ND 04/19/94 Ethylbenzene 04/19/94 0.5 ug/L ND

Xylenes, Total ug/L 0.5 ND 04/19/94

These data have been reviewed and are approved for release.

Darrell C. Cain Regional Director



Mr. John Sammons Page 4 FOOTNOTES for pages 1 through 3

April 21, 1994

PACE Project Number: 440415508

Client Reference: Oakland Auto

MDL

Method Detection Limit

ND

Not detected at or above the MDL.



Mr. John Sammons Page 5 QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 440415508

Client Reference: Oakland Auto

PURGEABLE FUELS AND AROMATICS

Batch: 70 29776

Samples: 70 0304156, 70 0304164, 70 0304172

METHOD BLANK:

nits !		Method Blank
j/L !	50	ND -
j/L (0.5	ND ND ND
		ND
,	/L :	its MDL /L 50 /L 0.5 /L 0.5 /L 0.5

SPIKE AND SPIKE DUPLICATE:

						Spike	
			700304172		Spike	Dupl	
Parameter	Units	MDL	MW3	Spike	Recv	Recv	RPD
Benzene	ug/L	$\overline{0.5}$	ND	100	95%	96%	1%
Toluene	ug/L	0.5	ND	100	100%	100%	0%
Ethylbenzene	ug/L	0.5	ND	100	98%	98%	0%
Xylenes, Total	ug/L	0.5	ND	300	99%	98%	1%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

			Reference		Dupl	
Parameter	Units	MDL	Value	Recv	Recv	RPD
Benzene	ug/L	0.5	100	98%	93%	5%
Toluene	ug/L	0.5	100	103%	104%	1%
Ethylbenzene	ug/L	0.5	100	102%	104%	2%
Xylenes, Total	ug/L	0.5	300	103%	104%	1%



Mr. John Sammons

FOOTNOTES

April 21, 1994

Page 6 for page 5

PACE Project Number: 440415508

Client Reference: Oakland Auto

MDL

Method Detection Limit

ND

Not detected at or above the MDL.

RPD Relative Percent Difference



CHAIN-OF-CUSTODY RECORD Analytical Request

				441415	\$ ^\$	
Client	DBA		Report To:	440415.5	Pace Client No.	
Address	1020 Railroad		Bill To:		Pace Project Manager	
	novato		P.O. # / Billing Reference	ce	Pace Project No.	
Phone	892-4131		Project Name / No.	Palland Auto	*Requested Due Date:	
Sampled	By (PRINT): Signature Date Sampled W. Venek	5/94	ESERVED	ALYSES EQUEST	routine T.O.	
ITEM NO.	SAMPLE DESCRIPTION	TIME MATRIX PACE NO	NO. ON UND'H H ₂ SO ₄ HNO ₃ VOA	// / / / / / /	/ / REMARKS	
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2		A Chiral See	The total metaline	to the pulper was properties of the		
3	MW1 MW3	1515 91 3041	ne grove consider	4 76 1		
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	COOLER NOS. BAILERS	SHIPMENT METHOD OUT - DATE RETURNED	ITEM RELINQUISHED BY	/ AFFILIATION ACCEPTED	BY / AFFILIATION DATE TIME	
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Addition	al Comments		Divolted .	work made in	164 830 45194 1700	
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5/Pack						
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