



93 NOV -2 AM 10: 53

November 1, 1993
BEI Job No. 93121

Mr. Bud Weymouth
Meyer Plumbing Supply
311 Second Street
Oakland, CA 94607

4616

Subject: Underground Storage Tank Closure Assessment
 Meyer Plumbing Supply
 311 Second Street
 Oakland, CA 94607

Dear Mr. Weymouth:

Blymyer Engineers, Inc. was retained by Meyer Plumbing Supply to perform a closure site assessment for one 1,000-gallon underground storage tank (UST) at the subject site. The UST was filled with concrete by an unidentified previous owner of the site some time before 1976. According to Meyer Plumbing Supply, the UST was known to store motor vehicle fuel, but it was not known whether it was gasoline or diesel. The UST was located in a fenced area south of the building at the site (Figure 1).

The purpose of the closure site assessment was to obtain formal closure approval for this UST from the Alameda County Department of Environmental Health (ACDEH). The following scope of work was performed to complete the closure site assessment:

- An Underground Tank Closure Plan, site plan, and site-specific health and safety plan were prepared and submitted to and approved by the ACDEH.
- A drilling permit was obtained from the Zone 7 Water Agency.
- Two angled soil bores were drilled at opposite ends of the UST and soil and groundwater samples were collected.
- The soil and groundwater samples were analyzed for Total Extractable Petroleum Hydrocarbons (TEPH); Total Purgeable Petroleum Hydrocarbons (TPPH); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and total lead.

The following sections describe the closure site assessment and present conclusions and recommendations from the investigation.

Methods of Investigation

On September 15, 1993, two soil bores (SB-1 and SB-2, Figure 2) were installed by Precision Sampling, Inc. (PSI), under the supervision of a geologist from Blymyer Engineers. The bore

logs are included as Appendix A. The two soil bores were installed at an angle of approximately 30 degrees from vertical in order to obtain soil samples from beneath the ends of the UST.

A hydraulic hammer was used to drive two nested sampling rods simultaneously. As the rods were advanced, soil was driven into a 1-5/8-inch-diameter, 3-foot-long sample barrel attached to the end of the inner rods. Soil samples were collected in 1-1/2-inch-diameter by 6-inch-long stainless steel sleeves inside the sample barrel as both rods were advanced. The inner rods were removed from the borehole with a hydraulic winch and the stainless steel sleeves were removed.

Soil samples were field-screened for volatile organic compounds using a photoionization detector (PID). The PID readings are presented in the bore logs (Appendix A). The sampler was decontaminated between samples by steam cleaning.

Soil bore SB-1 met refusal at approximately 6 feet below grade surface (bgs), so the soil sample for laboratory analysis from this soil bore was collected at a depth of 5.5 to 6 feet bgs. One soil sample was selected for laboratory analysis from soil bore SB-2 at the water table, at a depth of 7 to 7.5 feet bgs. The ends of the soil samples were sealed with Teflon® sheets, plastic end caps, and adhesiveless silicone tape, and the soil samples were labeled and placed on ice for transportation to the analytical laboratory. Proper chain-of-custody procedures were observed.

Soil bore SB-2 was advanced to a total depth of 10.5 feet bgs and a temporary slotted PVC casing was installed in the borehole to facilitate collection of a grab groundwater sample. The groundwater sample was collected using a pre-cleaned bailer and placed in appropriate containers provided by the laboratory. The groundwater sample was labeled and placed on ice for transportation to the laboratory. Proper chain-of-custody procedures were observed.

The soil bores were grouted to grade surface with neat cement upon completion. The limited amount of cuttings generated from the drilling operation along with the decontamination liquids were properly stored on-site for disposal by the property owner.

The soil and groundwater samples were analyzed by Sequoia Analytical for TEPH and TPPH using modified EPA Method 8015, BTEX using EPA Method 8020, and total lead using EPA Method 6010. The analytical results are summarized in Table I and the certified laboratory reports are included as Appendix B.

Discussion of Results

The soil encountered during the investigation was fill, generally consisting of fine sand or clayey, silty fine sand with gravel. A charred material was noted in the fill. Groundwater was encountered in soil bore SB-2 at a depth of 7 feet bgs, which corresponds to a vertical depth of

approximately 6 feet bgs. Petroleum contamination was noted in soil bore SB-2 based on odors and PID readings.

TEPH and xylenes were detected in the soil sample from soil bore SB-1 at concentrations of 4.2 and 0.0090 milligrams per kilogram (mg/kg) or parts per million, respectively. TEPH (diesel) and TPPH were detected in the soil sample from soil bore SB-2 at concentrations of 15,000 and 34 mg/kg, respectively. The TPPH result was noted by the laboratory to be a non-gas mixture greater than C8, indicating that this is probably the lighter end of the diesel found in the sample. Ethylbenzene and xylenes were detected in the soil sample from soil bore SB-2 at concentrations of 0.65 and 0.82 mg/kg, respectively. Benzene and toluene were not detected in either soil sample. Total lead was detected in both samples at concentrations of 71 and 84 mg/kg, respectively.

The grab groundwater sample from soil bore SB-2 was found to contain TEPH and TPPH at concentrations of 5,500 and 85 micrograms per liter ($\mu\text{g/L}$) or parts per billion, respectively. The TEPH was noted by the laboratory to contain both diesel and non-diesel C10-C21 and the TPPH was noted to be non-gas C6-C12. Benzene, toluene, and xylenes were detected in the groundwater sample at concentrations of 2.7, 0.66, and 0.51 $\mu\text{g/L}$, respectively.

Conclusions and Recommendations

Based on field evidence and the laboratory analytical results, Blymyer Engineers concludes that a diesel release, and possibly a gasoline release, has occurred at this site. An *Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report* was completed by Blymyer Engineers and submitted to the ACDEH on October 5, 1993.

Blymyer Engineers recommends that a Preliminary Site Assessment be performed to meet the following objectives:

- Provide further information to better define geologic conditions at the site, including depth to groundwater and direction of groundwater flow.
- Determine if groundwater within 10 feet of the UST in the verified downgradient direction has been impacted by petroleum hydrocarbons.
- Assess the extent of petroleum hydrocarbons in soil at the site.
- Determine if there may be an upgradient, off-site source(s) for contamination found at the site.

Mr. Bud Weymouth
Meyer Plumbing Supply

November 1, 1993
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Limitations

Services performed by Blymyer Engineers, Inc. have been provided in accordance with generally accepted professional practices for the nature and conditions of similar work completed in the same or similar localities, at the time the work was performed. The scope of work for the project was conducted within the limitations prescribed by the client. This report is not meant to represent a legal opinion. No other warranty, expressed or implied, is made. This report was prepared for the sole use of Meyer Plumbing Supply.

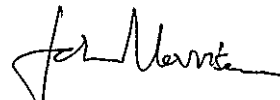
If you have any questions, please give me a call at (510) 521-3773.

Cordially,

Blymyer Engineers, Inc.



Michael S. Lewis
Director, UST Services



John Morrison
Registered Geologist

Enclosures

cc: ✓ Ms. Jennifer Eberle, Alameda County Department of Environmental Health
Mr. Richard Heitt, San Francisco Bay Regional Water Quality Control Board
Don Anderson, Esq.

ml\93121clo.rpt

Table I, Summary of Soil and Groundwater Sample Analytical Results
Meyer Plumbing Supply
311 Second Street, Oakland, California
BEI Job No. 93121

Sample I.D.	Date	Matrix	TPH-D	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead
			8015M	8015M	8020	8020	8020	8020	6010
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-1 5.5 - 6.0'	9/15/93	Soil	4.2	<1.0	<0.0050	<0.0050	<0.0050	0.0090	71
SB-2 7.0 - 7.5'	9/15/93	Soil	15,000	34	<0.0050	<0.0050	0.65	0.82	84
			μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	mg/L
SB-2	9/15/93	Water	5,500	85	2.7	0.66	<0.50	0.51	<0.0050

*not bgs
(slant
borings)*

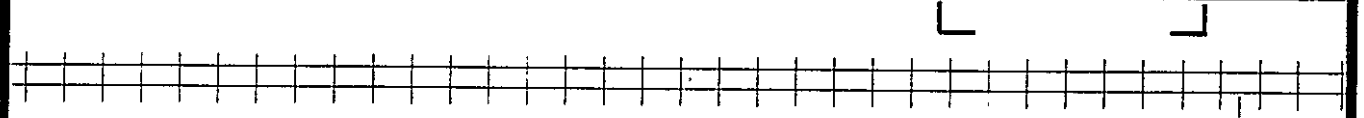
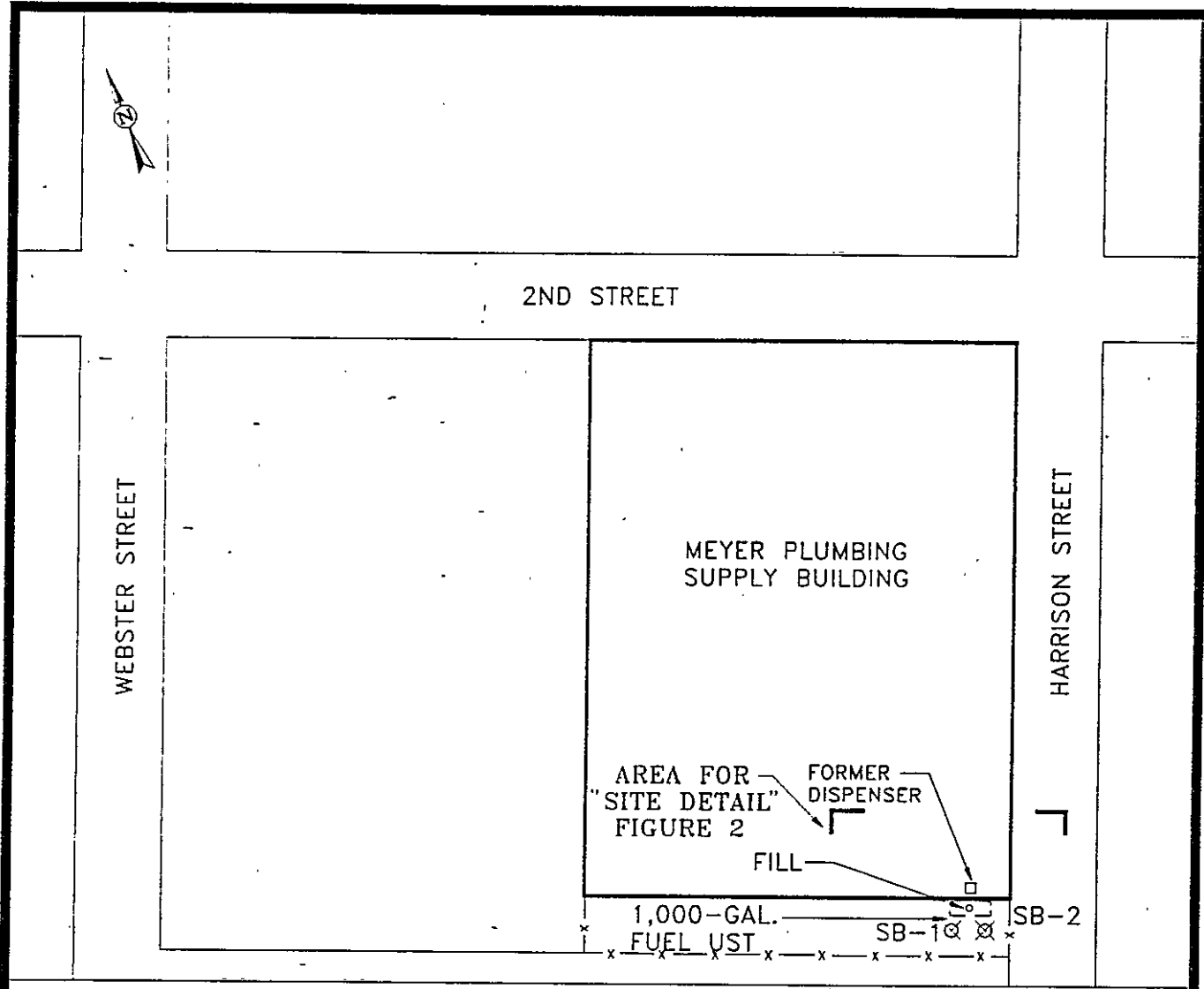
- mg/kg = milligrams per kilogram (parts per million)
- μg/L = micrograms per liter (parts per billion)
- mg/L = milligrams per liter (parts per million)
- TPH-D = Total Petroleum Hydrocarbons as Diesel
- TPH-G = Total Petroleum Hydrocarbons as Gasoline

Note:

For results shown as <x, x represents the method reporting limit.

100

data



0 25 50
SCALE IN FEET

BLYMYER ENGINEERS, INC.		LEGEND ⊗ ANGLED SOIL BORE LOCATION	PROJECT MEYER PLUMBING SUPPLY 311 SECOND STREET OAKLAND, CA SITE PLAN	FIGURE 1
BEI JOB NO. 93121	DATE 10/26/93			



BUILDING

FORMER —
DISPENSER



1,000-GAL.
FUEL UST

FILL

SB-1

SB-2

HARRISON
STREET

HARRISON
STREET



BLYMYER
ENGINEERS, INC.



BEI JOB NO.
93121

DATE
10/26/93

LEGEND

 ANGLED SOIL BORE
LOCATION

PROJECT
MEYER PLUMBING SUPPLY
311 SECOND ST.
OAKLAND, CA
SITE DETAIL

FIGURE

2

Appendix A

LOG OF BORE: SB-2

BLMYER
ENGINEERS, INC.

Job No.: 93121
Client: Meyer Plumbing
Site: Oakland, CA
Date Drilled: 9/15/93

Driller: Mike Casey
Drilling Contractor: Precision Sampling, Inc.
Logged By: John Morrison
Drilling Equipment: Pneumatic hammer
Bore Diameter: 2 inches
Total Depth: 10.5 Ft.

This bore was angled 30 degrees from vertical No correction has been made for true depth

Initial Water Level: ∇ 7.0 ft.
Stabilized water level: ∇ NA ft.

Depth (ft)

Blows/8 In.

P.I.D. (ppm)

Samples

Unified Soil Classification

Graphic Log

Water Depth

DESCRIPTION

Depth (ft)	Blows/8 In.	P.I.D. (ppm)	Samples	DESCRIPTION	Unified Soil Classification	Graphic Log	Water Depth
0		0		0.0-0.5' asphalt	ASPHLT	[Solid black pattern]	∇ NA'
1.5		3		0.5-1.0' mottled yellow brown clayey, silty fine sand with gravel, petroleum odor		[Mottled pattern]	
3		15		poor recovery from 2.0' to 5.0'		[Mottled pattern]	
5		22		1.0-9.5' dark gray/black fine sand with gravel, moist, petroleum odor, charred material present, moist to wet, water at 7.0'	FILL	[Dark pattern]	∇ 7.0'
6.5		14				[Dark pattern]	
8		20				[Dark pattern]	
9.5		24		9.5-10.0' seam of plastic green clay		[Dark pattern]	
10.5		23		10.0-10.5' black/dark gray fine sand		[Dark pattern]	
		4				[Dark pattern]	
		2				[Dark pattern]	
		2				[Dark pattern]	
15						[Dark pattern]	
20						[Dark pattern]	
25						[Dark pattern]	
30						[Dark pattern]	

Appendix B



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Sample Descript: Soil
Analysis for: Lead
First Sample #: 3194201

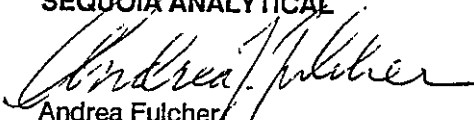
Sampled: Sep 15, 1993
Received: Sep 16, 1993
Analyzed: 9/21-22/1993
Reported: Sep 30, 1993

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
3194201	SB-1 5.5-6.0	5.0	71
3194202	SB-2 7.0-7.5	5.0	84

Analytes reported as N.D. were not present above the stated limit of detection.

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Andrea Fulcher
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Sample Descript: Water
Analysis for: Lead
First Sample #: 3194203

Sampled: Sep 15, 1993
Received: Sep 16, 1993


Analyzed: Sep 23, 1993
Reported: Sep 30, 1993

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
9194203	SB-2	0.0050	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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Andrea Fulcher
Project Manager



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680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Blymyer Engineers	Client Project ID: 93121 Meyer Plumbing	Sampled: Sep 15, 1993
1829 Clement Street	Sample Matrix: Soil	Received: Sep 16, 1993
Alameda, CA 94501-1396	Analysis Method: EPA 5030/8015/8020	Reported: Sep 30, 1993
Attention: Mike Lewis	First Sample #: 3194201	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3194201 SB-1 5.5-6.0	Sample I.D. 3194202 SB-2 7.0-7.5
Purgeable Hydrocarbons	1.0	N.D. ✓	34 ✓
Benzene	0.0050	N.D. ✓	N.D. ✓
Toluene	0.0050	N.D. ✓	N.D. ✓
Ethyl Benzene	0.0050	N.D.	0.65
Total Xylenes	0.0050	0.0090	0.82

Chromatogram Pattern:

Non-Gas
Mix >C8

Quality Control Data

Report Limit		
Multiplication Factor:	1.0	25
Date Analyzed:	9/21/93	9/21/93
Instrument Identification:	GCHP-18	GCHP-18
Surrogate Recovery, %: (QC Limits = 70-130%)	109	97

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Project Manager



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Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Sample Matrix: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 3194203

Sampled: Sep 15, 1993
Received: Sep 16, 1993
Reported: Sep 30, 1993

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3194203 SB-2
Purgeable Hydrocarbons	50	85 ✓
Benzene	0.50	2.7 ✓
Toluene	0.50	0.66
Ethyl Benzene	0.50	N.D.
Total Xylenes	0.50	0.51

Chromatogram Pattern:

Non-Gas
Mix C6-C12

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	9/24/93
Instrument Identification:	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	97

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Andrea Fulcher
Project Manager

3194201.BBB <4>



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680 Chesapeake Drive • Redwood City, CA 94063
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Blymyer Engineers 1829 Clement Street Alameda, CA 94501-1396 Attention: Mike Lewis	Client Project ID: 93121 Meyer Plumbing Sample Matrix: Soil Analysis Method: EPA 3550/8015 First Sample #: 3194201	Sampled: Sep 15, 1993 Received: Sep 16, 1993 Reported: Sep 30, 1993 Revised: Oct 4, 1993
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TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 3194201 SB-1 5.5-6.0	Sample I.D. 3194202 SB-2 7.0-7.5
Extractable Hydrocarbons	1.0	4.2	15,000

Chromatogram Pattern:

Non-Diesel
Mix C14-C20

Diesel

Quality Control Data

Report Limit		
Multiplication Factor:	1.0	1,000
Date Extracted:	9/21/93	9/21/93
Date Analyzed:	9/23/93	9/21/93
Instrument Identification:	GCHP-5	GCHP-5

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Andrea Fulcher
Andrea Fulcher
Project Manager



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Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Sample Matrix: Water
Analysis Method: EPA 3510/3520/8015
First Sample #: 3194203

Sampled: Sep 15, 1993
Received: Sep 16, 1993
Reported: Sep 30, 1993

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 3194203 SB-2
Extractable Hydrocarbons	50	5,500

Chromatogram Pattern:

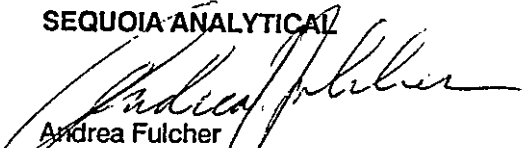
Diesel + Non-D.
Mix C10-C21

Quality Control Data

Report Limit	
Multiplication Factor:	1.0
Date Extracted:	9/20/93
Date Analyzed:	9/22/93
Instrument Identification:	GCHP-5

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Andrea Fulcher
Project Manager

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Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Matrix: Soil

QC Sample Group: 3194201-02

Reported: Sep 30, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Beryllium	Cadmium	Chromium	Nickel
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	M.M/W.T.	M.M/W.T.	M.M/W.T.	M.M/W.T.
Conc. Spiked:	100	100	100	100
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	BLK092193	BLK092193	BLK092193	BLK092193
Date Prepared:	9/21/93	9/21/93	9/21/93	9/21/93
Date Analyzed:	9/21/93	9/21/93	9/21/93	9/21/93
Instrument I.D.#:	MTJA-2	MTJA-2	MTJA-2	MTJA-2
LCS % Recovery:	93	93	97	95
Control Limits:	75-125	75-125	75-125	75-125

MS/MSD Batch #:	3194201	3194201	3194201	3194201
Date Prepared:	9/21/93	9/21/93	9/21/93	9/21/93
Date Analyzed:	9/21/93	9/21/93	9/21/93	9/21/93
Instrument I.D.#:	MTJA-2	MTJA-2	MTJA-2	MTJA-2
Matrix Spike % Recovery:	94	100	93	110
Matrix Spike Duplicate % Recovery:	92	105	90	107
Relative % Difference:	2.2	4.9	3.3	2.8

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Andrea Fulcher
Andrea Fulcher
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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680 Chesapeake Drive • Redwood City, CA 94063
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Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Matrix: Water

QC Sample Group: 3194203

Reported: Sep 30, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Lead
---------	------

Method: EPA 239.2
Analyst: J. Martinez
Conc. Spiked: 0.050
Units: mg/L

LCS Batch#: BLK092393

Date Prepared: 9/23/93
Date Analyzed: 9/23/93
Instrument I.D.#: MV-1

LCS %
Recovery: 83

Control Limits: 75-125

MS/MSD
Batch #: 3194203

Date Prepared: 9/23/93
Date Analyzed: 9/23/93
Instrument I.D.#: MV-1

Matrix Spike
% Recovery: 78

Matrix Spike
Duplicate %
Recovery: 80

Relative %
Difference: 2.5

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Andrea Fulcher
Project Manager

Please Note:

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Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Matrix: Soil

QC Sample Group: 3194201-02

Reported: Sep 30, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl- Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	B. Ali	B. Ali	B. Ali	B. Ali
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK092193	GBLK092193	GBLK092193	GBLK092193
Date Prepared:	9/21/93	9/21/93	9/21/93	9/21/93
Date Analyzed:	9/21/93	9/21/93	9/21/93	9/21/93
Instrument I.D.#:	GCHP-18	GCHP-18	GCHP-18	GCHP-18
LCS % Recovery:	100	100	100	100
Control Limits:	60-140	60-140	60-140	60-140

MS/MSD				
Batch #:	3169001	3169001	3169001	3169001
Date Prepared:	9/21/93	9/21/93	9/21/93	9/21/93
Date Analyzed:	9/21/93	9/21/93	9/21/93	9/21/93
Instrument I.D.#:	GCHP-18	GCHP-18	GCHP-18	GCHP-18
Matrix Spike % Recovery:	95	95	95	95
Matrix Spike Duplicate % Recovery:	95	95	100	97
Relative % Difference:	0.0	0.0	5.1	2.1

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Andrea Fulcher
Andrea Fulcher
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

3194201.BBB <9>



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680 Chesapeake Drive • Redwood City, CA 94063
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Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Matrix: Water

QC Sample Group: 3194203

Reported: Sep 30, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. MirafTAB	A. MirafTAB	A. MirafTAB	A. MirafTAB
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK092493	GBLK092493	GBLK092493	GBLK092493
Date Prepared:	N/A	N/A	N/A	N/A
Date Analyzed:	9/24/93	9/24/93	9/24/93	9/24/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	97	96	94	93
Control Limits:	80-120	80-120	80-120	80-120

MS/MSD Batch #:	G3IA9303	G3IA9303	G3IA9303	G3IA9303
Date Prepared:	N/A	N/A	N/A	N/A
Date Analyzed:	9/24/93	9/24/93	9/24/93	9/24/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	94	93	93	90
Matrix Spike Duplicate % Recovery:	99	97	95	93
Relative % Difference:	5.2	4.2	2.1	3.3

SEQUOIA-ANALYTICAL

Andrea Fulcher
Andrea Fulcher
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Matrix: Soil

QC Sample Group: 3194201-02

Reported: Sep 30, 1993

QUALITY CONTROL DATA REPORT

ANALYTE Diesel

Method: EPA 8015
Analyst: Vartan H.
Conc. Spiked: 15
Units: mg/kg
LCS Batch#: DBLK091793
Date Prepared: 9/17/93
Date Analyzed: 9/17/93
Instrument I.D.#: GCHP-5
LCS % Recovery: 93
Control Limits: 50-150

MS/MSD
Batch #: D3173406
Date Prepared: 9/17/93
Date Analyzed: 9/17/93
Instrument I.D.#: GCHP-5
Matrix Spike % Recovery: 93
Matrix Spike Duplicate % Recovery: 107
Relative % Difference: 14

SEQUOIA ANALYTICAL

Andrea Fulcher
Project Manager

Please Note:

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Blymyer Engineers
1829 Clement Street
Alameda, CA 94501-1396
Attention: Mike Lewis

Client Project ID: 93121 Meyer Plumbing
Matrix: Water

QC Sample Group: 3194203

Reported: Sep 30, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
---------	--------

Method: EPA 8015
Analyst: Vartan H.
Conc. Spiked: 300
Units: $\mu\text{g/L}$

LCS Batch#: DBLK092193

Date Prepared: 9/21/93
Date Analyzed: 9/22/93
Instrument I.D.#: GCHP-5

LCS %
Recovery: 65

Control Limits: 50-150

MS/MSD
Batch #: 3188401

Date Prepared: 9/21/93
Date Analyzed: 9/22/93
Instrument I.D.#: GCHP-5

Matrix Spike
% Recovery: 0.0

Matrix Spike
Duplicate %
Recovery: 0.0

Relative %
Difference: 0.0

SEQUOIA ANALYTICAL

Andrea Fulcher
Andrea Fulcher
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

3194201.BBB <12>

BLYMYER

ENGINEERS, INC.

1829 Clement Avenue

Alameda, CA 94501 (415) 521-3773



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

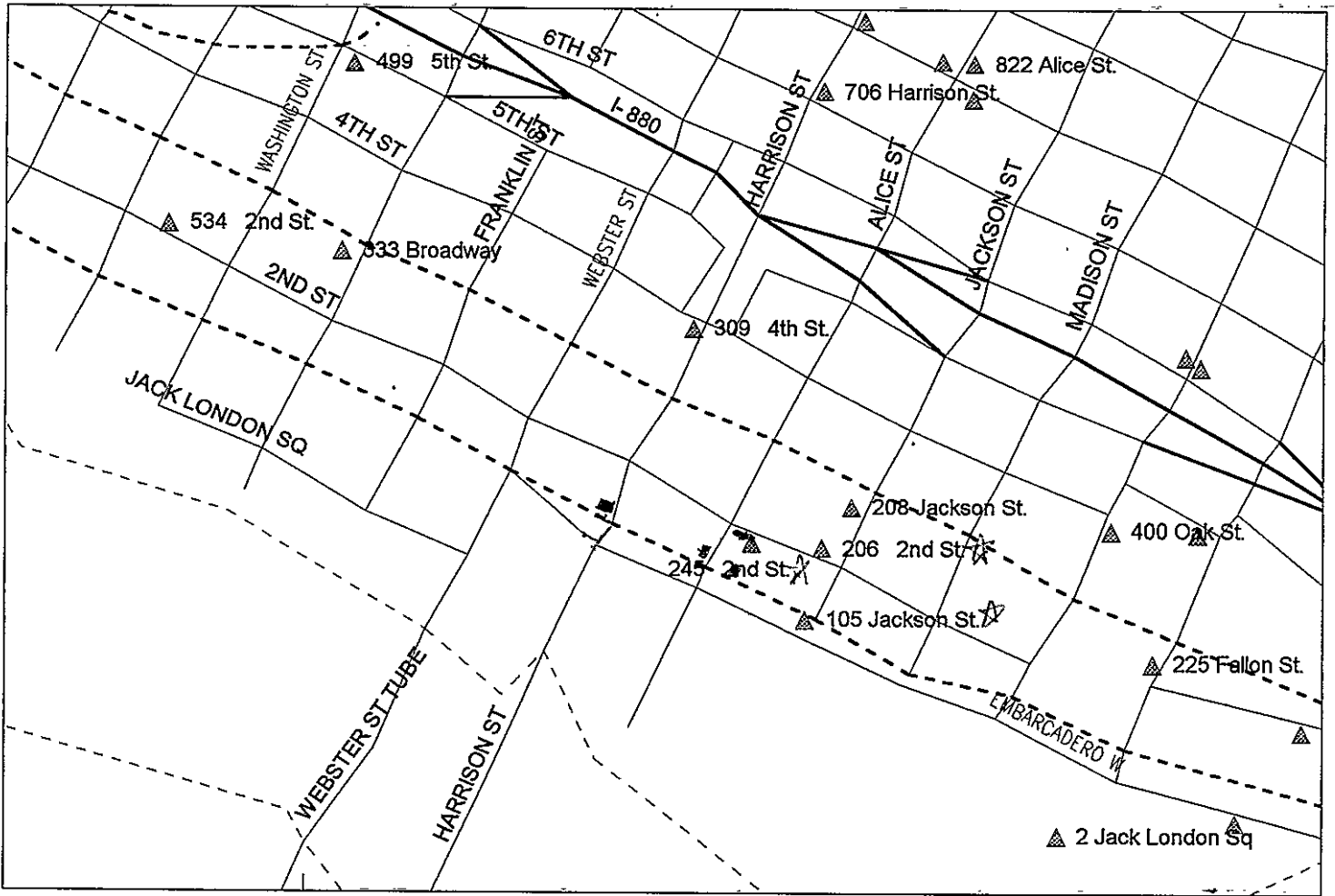
JOB #		PROJECT NAME/LOCATION				# OF CONTAINERS	TPH AS GASOLINE + BTXE (MOD EPA 8015/8020)	TPH AS DIESEL (MOD EPA 8015)	VOC (EPA 624/8240)	SEMI-VOC (EPA 625/8270)	TRPH (EPA 418.1)	BTXE (EPA 8020/602)	TOTAL LEAD	HOLD	TURNAROUND TIME: 10 DAY(S)	
93121		METER PLUMBING / OAKLAND, CA													REMARKS:	
SAMPLERS (SIGNATURE)																
JOHN MORRISON																
DATE	TIME	COMP	GRAB	SAMPLE NAME/LOCATION	# OF CONTAINERS	TPH AS GASOLINE + BTXE (MOD EPA 8015/8020)	TPH AS DIESEL (MOD EPA 8015)	VOC (EPA 624/8240)	SEMI-VOC (EPA 625/8270)	TRPH (EPA 418.1)	BTXE (EPA 8020/602)	TOTAL LEAD	HOLD	REMARKS		
9/15/93			X	SB-1 5.5-6.0	1	X	X					X		9309942-01A		
9/15/93			X	SB-2 7.0-7.5	1	X	X					X		-02A		
9/15/93			X	SB-2	5	X	X					X		03 please filter sample before analyzing for total lead		
REQUESTED BY: MIKE LEWIS						RESULTS AND INVOICE TO: MIKE LEWIS, BLYMYER ENGINEERS										
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)						
John Morrison		9/14/93 0829		Bill Jay #653		Bill Jay #653		9/16/93 12:00 PM								
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED FOR LABORATORY BY: (SIGNATURE)		DATE / TIME		REMARKS:								
				M Lewis		9/16/93 1000										

WHITE: Accompany Sample

YELLOW: BEI, After Lab Signs

PINK: Original Sampler

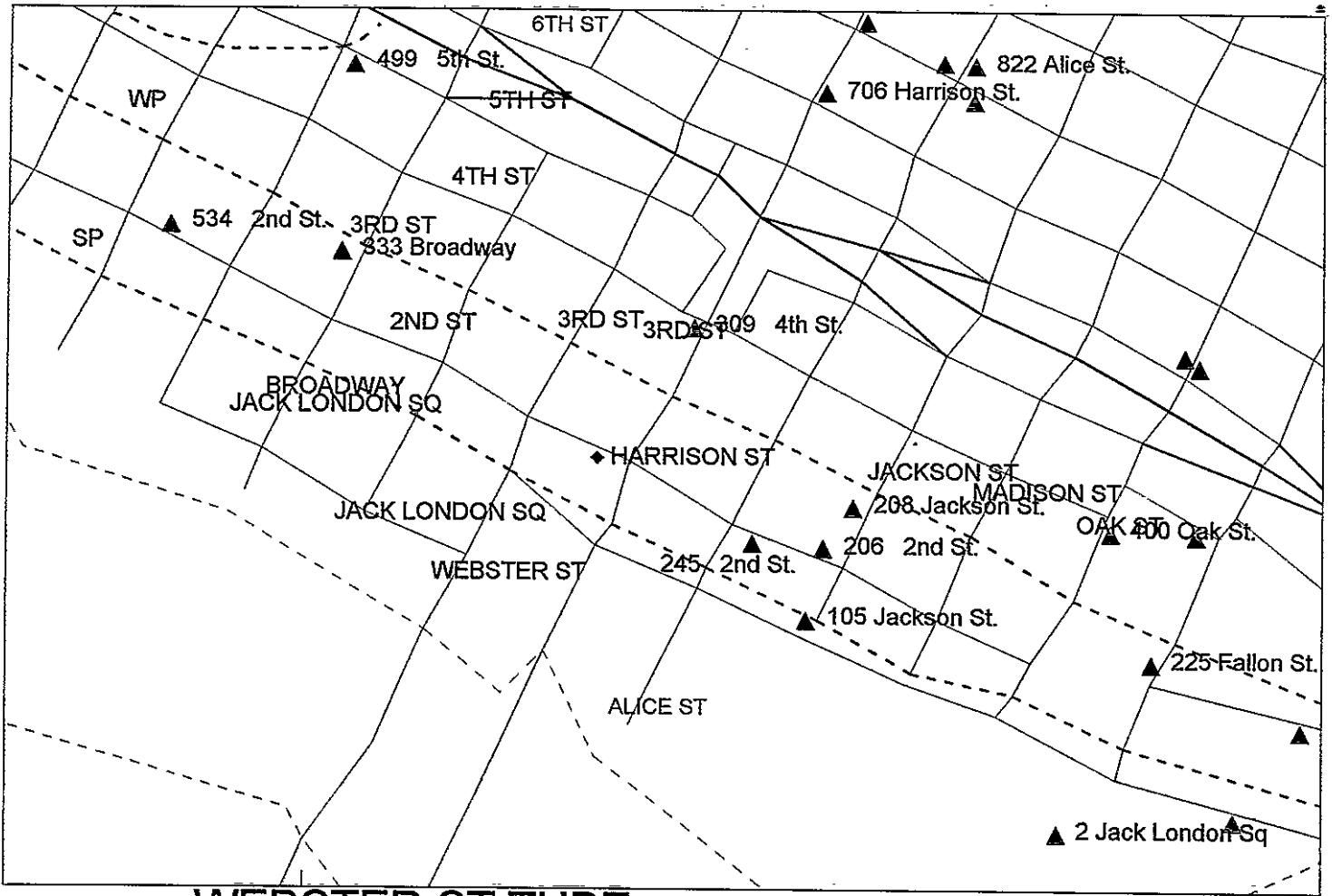
309-4th St. nearest site w/ 3 MUs.
Sid 3697



■ UST
Meyer Plumbing Supply
311-2nd St.

★ no MUs

NG



WEBSTER ST TUBE
POSEY LOOP