LUSH
GEOSCIENCES
GEOLOGICAL AND ENVIRONMENTAL SERVICES

QUARTERLY MONITORING REPORT
BECK ROOFING
HAYWARD, CALIFORNIA
SAMPLE DATE: OCTOBER 10, 1995
LUSH GEOSCIENCES JOB NO. 423-001

NOVEMBER 8, 1995

F. William Welter
Project Manager

Andrew P. Lush
RG 4421

REGISTERED GEOLOGIST
ANDREW P. LUSH
No. 4421
10/96
STATE OF CALIFORNIA

LUSH
GEOSCIENCES

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1.0 INTRODUCTION

This report was prepared to summarize quarterly monitoring work performed in the investigation of contamination associated with one former 1,000-gallon underground gasoline storage tank at the Beck Roofing Facility in Hayward, California (site). The report describes methods and procedures used to evaluate groundwater quality near the former tank. The methods and procedures used during this phase of investigation included:

- Collecting groundwater samples from the four previously installed wells;
- Analyzing the groundwater samples; and,
- Preparing this report.

This report summarizes the field and laboratory operations conducted, the methods and procedures used, the data obtained, and presents conclusions and recommendations.

2.0 SITE BACKGROUND

The site is occupied by an operating roofing company. One wooden structure located on the northwest side of the site contains office and warehouse space. The remainder of the site is used for equipment and materials storage. In May of 1990, a 1,000-gallon underground fuel tank, used to store gasoline, was removed. When the tank was removed, evidence of leakage was noted in soil adjacent to the tank.

We have attached a Generalized Site Plan (Figure 2), showing the site configuration.

2.1 Previous Work

Previous work, performed by other consultants, includes excavation of approximately 350 cubic yards of contaminated soil, drilling and sampling 20 soil borings, installation of four groundwater monitoring wells, excavation of an additional 400 cubic yards of contaminated soil, and quarterly monitoring of the wells. Previous analyses have shown variable contaminant concentrations in one well (MW3), and slight to non-detectable levels in the remaining wells.

3.0 QUARTERLY GROUNDWATER SAMPLING

3.1 Field Procedures

Groundwater samples were collected from each well on October 10, 1995. Sampling activities were conducted as follows:

- Water and product levels were determined using an electronic water sensitive measuring device. Depth to water or product was measured to an accuracy of 0.01 ft. No free product was encountered.

- Prior to sampling, each well was purged with a submersible pump until at least 3 well volumes of water were removed. The purged water was monitored for temperature, pH, and electrical conductivity (Table 1). Purging continued until these parameters stabilized. The well was allowed to recover until at least 80% of he initial water level had been reached.

- After each well stabilized, a sample was collected with an unused, clean, disposable polyethylene bailer. The collected sample was transferred from the bailer to appropriate 40-ml glass sample vials. All sample containers were filled completely with a convex meniscus to eliminate any trapped air or headspace. Each sample container cap was fitted with a Teflon septum.

- After sampling, the samples were labeled, showing the sample number, well number, date, time, samplers name, and preservation. The samples were refrigerated in a cooler containing ice until delivery to the laboratory to perform the specified analyses. Chain-of-custody documentation was maintained from the sampling location to the laboratory. The chain-of custody was signed by the sampler and placed in the container holding the samples. Condition of the samples was noted on the chain-of-custody document by the laboratory.

TABLE 1

**PURGED WATER PARAMETERS
GROUNDWATER MONITORING WELLS
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA**

Well	Date	Subjective Evidence	T(°F)	pH	K	3WV	Volume Purged
MW1	10/25/94	No Odor	64.7	6.98	1930	27	30
MW2	10/25/94	No Odor	63.8	6.92	2600	27	30
MW3	10/25/94	No Odor	66.5	6.90	2600	27	30
MW4	10/25/94	No Odor	64.5	8.61	2400	27	30
MW1	1/20/95	No Odor	62.9	7.37	570	27	30
MW2	1/20/95	No Odor	62.1	7.20	775	27	30
MW3	1/20/95	No Odor	63.6	7.10	870	27	30
MW4	1/20/95	No Odor	63.3	7.26	728	27	30
MW1	4/11/95	No Odor	65.9	6.66	637	30	35
MW2	4/11/95	No Odor	72.9	6.63	926	30	35
MW3	4/11/95	Odor	70.8	6.62	873	30	35
MW4	4/11/95	No Odor	69.2	6.68	791	30	35
MW1	7/13/95	INACCESSIBLE					
MW2	7/13/95	No Odor	73.6	6.30	819	30	35
MW3	7/13/95	Odor	75.0	6.60	800	30	35
MW4	7/13/95	No Odor	75.0	7.0	739	30	35
MW1	10/10/95	No Odor	68.7	7.2	544	30	30
MW2	10/10/95	No Odor	68.4	7.05	732	30	30
MW3	10/10/95	Odor	68.0	7.79	704	30	30
MW4	10/10/95	No Odor	68.1	7.01	693	30	30

K = Conductivity in micromhos
T = Temperature in degrees Fahrenheit
pH = Hydrogen ion concentration
3WV = Calculated three well volumes in gallons

* Data for previous sampling events are not available

3.2 Groundwater Analyses

Groundwater samples from each accessible well were analyzed for TPHg using Environmental Protection Agency (EPA) Method 8015 (modified for gasoline) with purge and trap EPA Method 5030, and for the associated volatile constituents BTEX using EPA Method 602 with purge and trap EPA Method 5030. Results of the analyses are summarized in Table 2; copies of laboratory reports are attached as Appendix A. All analyses were conducted by Sparger Technology Laboratories, of Sacramento, California, which is certified by the State of California for the requested analyses.

TABLE 2
RESULTS OF LABORATORY ANALYSES
GROUNDWATER SAMPLES
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA
Page 1 of 2

Well Number and Date	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW1					
8/4/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0005
10/25/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
1/20/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
4/11/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
7/13/95			INACCESSIBLE		
10/10/95	<0.05	<0.0003	<0.0003	<0.0003	**0.0012**
MW2					
8/4/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0005
10/25/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
1/20/95	<0.05	**0.0010**	<0.0003	<0.0003	<0.0003
4/11/95	<0.05	**0.0012**	<0.0003	<0.0003	<0.0003
7/13/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
10/10/95	<0.05	**0.00069**	<0.0003	<0.0003	**0.052**

Continued on next page

TPHg = Total petroleum hydrocarbons
Results given in milligrams per liter (parts per million)
< = Less than laboratory minimum detection limits
MW1 = Monitoring well number

TABLE 2
RESULTS OF LABORATORY ANALYSES
GROUNDWATER SAMPLES
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA
Page 2 of 2

Well Number and Date	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW3					
8/4/94	**4.2**	**0.45**	<0.003	**0.18**	**0.16**
10/25/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
1/20/95	**4.4**	**0.58**	**0.002**	**0.130**	**0.160**
4/11/95	**1.8**	**0.088**	**0.0014**	**0.033**	**0.027**
7/13/95	**3.4**	**0.5**	<0.0003	**0.130**	**0.094**
10/10/95	**4.2**	**0.360**	**0.0024**	**0.190**	**0.096**
MW4					
8/4/94	<0.05	<0.003	0.0005	<0.0003	<0.0005
10/25/94	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
1/20/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
4/11/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
7/13/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003
10/10/95	<0.05	<0.0003	<0.0003	<0.0003	<0.0003

TPHg = Total petroleum hydrocarbons
Results given in milligrams per liter (parts per million)
< = Less than laboratory minimum detection limits
MW1 = Monitoring well number

3.3 Groundwater Gradient

As directed by the Alameda County Environmental Health Department, groundwater surface measurements have been taken on a monthly basis since the quarterly monitoring event in April 1995. Elevation data gathered during the monthly measurements indicate the groundwater has been receding since April. The groundwater gradient was approximated from calculations made using surveyed wellhead elevations and locations in combination with depth to groundwater measurements made on August 10, September 14, and October 10, 1995 (Table 3) (Figures 2 through 4). The groundwater elevation data indicate that groundwater was flowing S65°W with a gradient of 0.0013 ft per ft on August 10, S63°W with a gradient of 0.0011 ft per

ft on September 14, and S68°W with a gradient of 0.0013 ft per ft on October 10. Based on the monthly elevation data accumulated since April 1995, it appears the groundwater flow has remained consistently southwesterly.

TABLE 3
GROUNDWATER ELEVATION DATA
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA
Page 1 of 3

Well Number	Elevation of Top of Casing (ft. above MSL)	Depth to Water (ft. below top of casing)	Water-level Elevation (ft. above MSL)	Gradient and Direction
8/4/94				
MW1	58.55	29.96	29.29	
MW2	58.65	29.35	29.30	
MW3	58.52	29.27	29.25	
MW4	58.01	28.80	29.21	
10/25/94				
MW1	58.55	30.10	28.45	
MW2	58.65	30.15	28.50	0.0009 ft/ft
MW3	58.52	30.10	28.42	S22°W
MW4	58.01	29.60	28.41	
1/20/95				
MW1	58.55	26.57	31.98	
MW2	58.65	26.65	32.00	0.0002 ft/ft
MW3	58.52	26.54	31.98	S0°W
MW4	58.01	26.03	31.98	
4/11/95				
MW1	58.55	23.87	34.68	
MW2	58.65	23.92	34.73	0.0009 ft/ft
MW3	58.52	23.87	34.65	S24°W
MW4	58.01	23.38	34.63	

Continued on next page

TOC = Top of the well casing (elevation in ft. above mean sea level- AMSL)
Gradient = groundwater gradient in ft per ft
Direction = groundwater flow direction

TABLE 3
GROUNDWATER ELEVATION DATA
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA
Page 2 of 3

Well Number	Elevation of Top of Casing (ft. above MSL)	Depth to Water (ft. below top of casing)	Water-level Elevation (ft. above MSL)	Gradient and Direction
5/09/95				
MW2	58.55	24.65	33.90	
MW2	58.65	24.735	33.915	0.00125ft/ft
MW3	58.52	24.66	33.86	S65°W
MW4	58.01	24.20	33.81	
6/09/95				
MW1	58.55	25.39	33.16	
MW2	58.65	25.47	33.18	0.0008ft/ft
MW3	58.52	25.40	33.12	S59°W
MW4	58.01	24.92	33.10	
7/13/95				
MW1	58.55	INACCESSIBLE		
MW2	58.65	26.0	32.65	
MW3	58.52	25.95	32.57	
MW4	58.01	25.5	32.51	
8/10/95				
MW1	58.55	26.33	32.16	
MW2	58.65	26.48	32.17	0.0013 ft\ft
MW3	58.52	26.43	32.09	S65°W
MW4	58.01	25.97	32.04	

Continued on next page

TOC = Top of the well casing (elevation in ft. above mean sea level- AMSL)
Gradient = groundwater gradient in ft per ft
Direction = groundwater flow direction

TABLE 3
GROUNDWATER ELEVATION DATA
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA
Page 3 of 3

Well Number	Elevation of Top of Casing (ft. above MSL)	Depth to Water (ft. below top of casing)	Water-level Elevation (ft. above MSL)	Gradient and Direction
9/14/95				
MW1	58.55	26.84	31.71	
MW2	58.65	26.92	31.73	0.0011 ft\ft
MW3	58.52	26.87	31.65	S63°W
MW4	58.01	26.40	31.61	
10/10/95				
MW1	58.55	27.18	31.37	
MW2	58.65	27.27	31.38	0.0013 ft\ft
MW3	58.52	27.22	31.30	S68°W
MW4	58.01	26.76	31.25	

TOC = Top of the well casing (elevation in ft. above mean sea level- AMSL)
Gradient = groundwater gradient in ft per ft
Direction = groundwater flow direction

3.4 Quality Assurance/Quality Control

All field equipment was cleaned and decontaminated prior to being introduced into the sampling environment. Each sample was collected using a dedicated, disposable bailer. Care was taken to prevent the bailer from becoming contaminated prior to being introduced into the sampling environment.

3.4.1 Laboratory QA/QC

Sparger is certified by the CalEPA Hazardous Waste Testing Laboratory Certification Program to conduct the analyses requested. The methods used by the laboratory are published, approved analytical methods which have built-in QA/QC practices. Other QA/QC practices are part of CalEPA's certification program. The laboratory provided pertinent QA/QC documents pertaining to the analytical protocol. These QA/QC documents include surrogate recovery data and analytical charts including those of the spikes and matrix spike duplicates. Copies of these documents were incorporated into the laboratory reports of analyses (Appendix A).

4.0 CONCLUSIONS AND DISCUSSION

Consistent with data presented in previous quarterly monitoring reports, groundwater contamination was not detected in monitoring well MW4. Total xylenes were detected in MW1 at 0.0012 ppm. Benzene was not detected in MW2 during the previous event; it was detected during this event at a concentration of 0.00069 ppm. Gasoline and benzene were detected in MW3 at concentrations of 4.2 and 0.36 ppm, respectively. The contaminant concentrations detected in MW3 are consistent with historic analytical data for that well. The groundwater elevation has been dropping an average of 0.3-0.4 feet per month since the last regular quarterly sampling event, and the flow has remained consistently southwesterly.

5.0 RECOMMENDATIONS

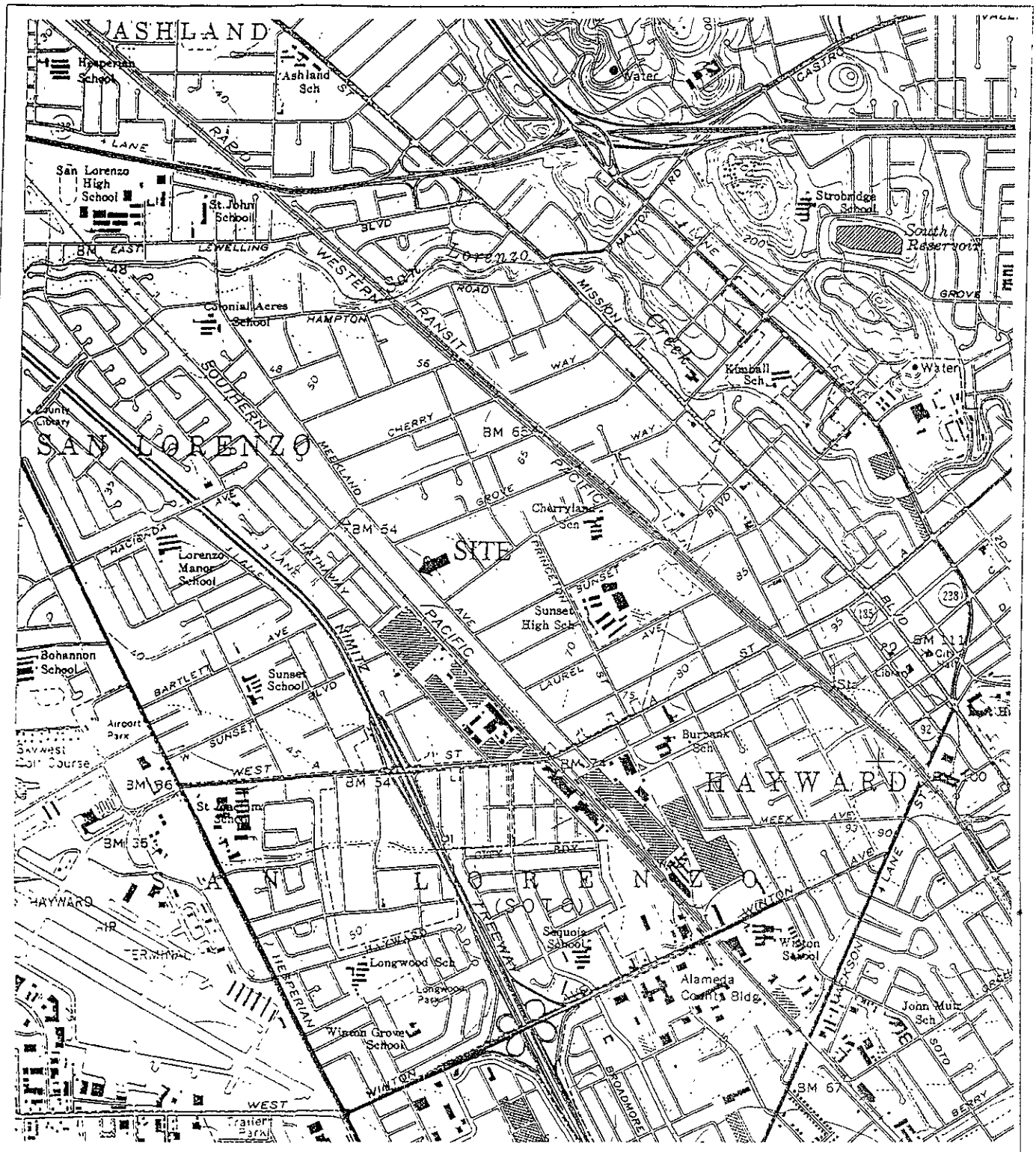
The present data suggest that there is minimal effect on, and minimal risk to, the public from the contamination present. Excavation of approximately 400 cubic yards of contaminated soil underlying the former tank location was completed in November 1994. Confirmation soil samples collected from the sidewalls indicated that significant contaminant concentrations remain in the subsurface at the perimeter of the excavation. Consequently, further remedial action is being considered. Sampling of all of the onsite monitoring wells should continue on a quarterly basis and monthly groundwater elevation measurements until completion of all remedial action, or until otherwise directed.

6.0 LIMITATIONS

The above conclusions are based on our assessment of conditions indicated to exist as of the dates of our field work. Our assessment included review of previous documents and interviews with state or local regulatory persons familiar with the area. This assessment was conducted in accordance with generally accepted standards of environmental geological practice at the time it was performed. The results of this assessment do not preclude the possibility that substances that are currently, or which in the future may be defined as hazardous, may be present on the property because of activities that we could not identify, or in locations which were not sampled.

Our conclusions are based on groundwater sample analyses representative of contaminant concentrations at the locations sampled. These results are considered indicative of site conditions, but such conditions may vary away from the points sampled. Further investigation,

including additional subsurface exploration and laboratory testing of soil and groundwater samples can reduce the uncertainties inherent in this type of limited environmental assessment. No soil engineering or geotechnical references are made, nor should they be inferred.



Reference: USGS 7 5'- series topographic map of the Hayward Quadrangle (photorevised 1980)

N

0 1000 2000 3000 Feet
Scale

SITE LOCATION MAP
BECK ROOFING FACILITY
21123 MEEKLAND AVENUE

HAYWARD, CALIFORNIA

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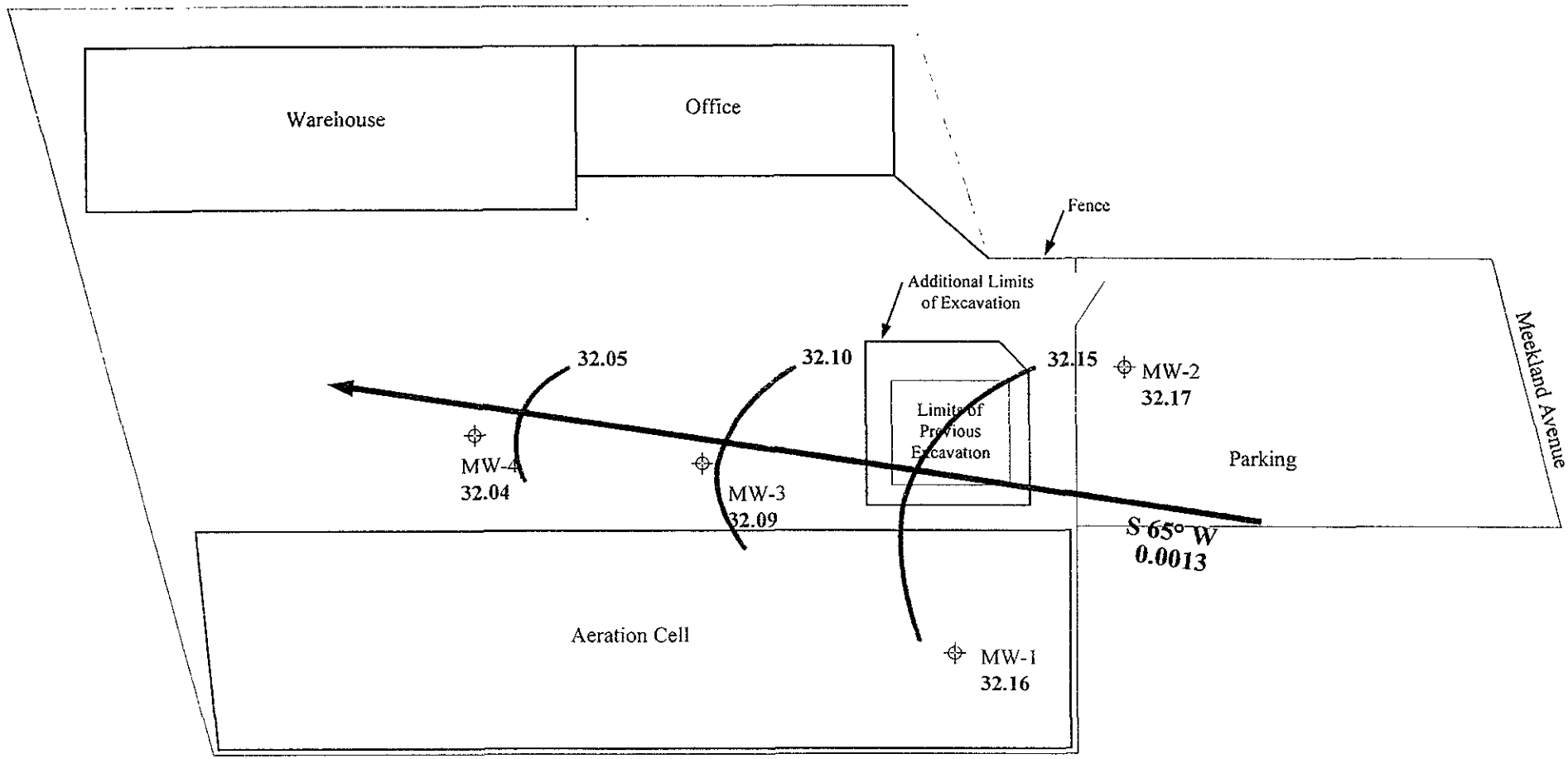
FIGURE 1



Monitoring Well Location

North

0' 20' 40'

POTENTIOMETRIC SURFACE MAP
AUGUST 10, 1995
BECK ROOFING FACILITY
21123 MEEKLAND AVENUE
HAYWARD, CALIFORNIA

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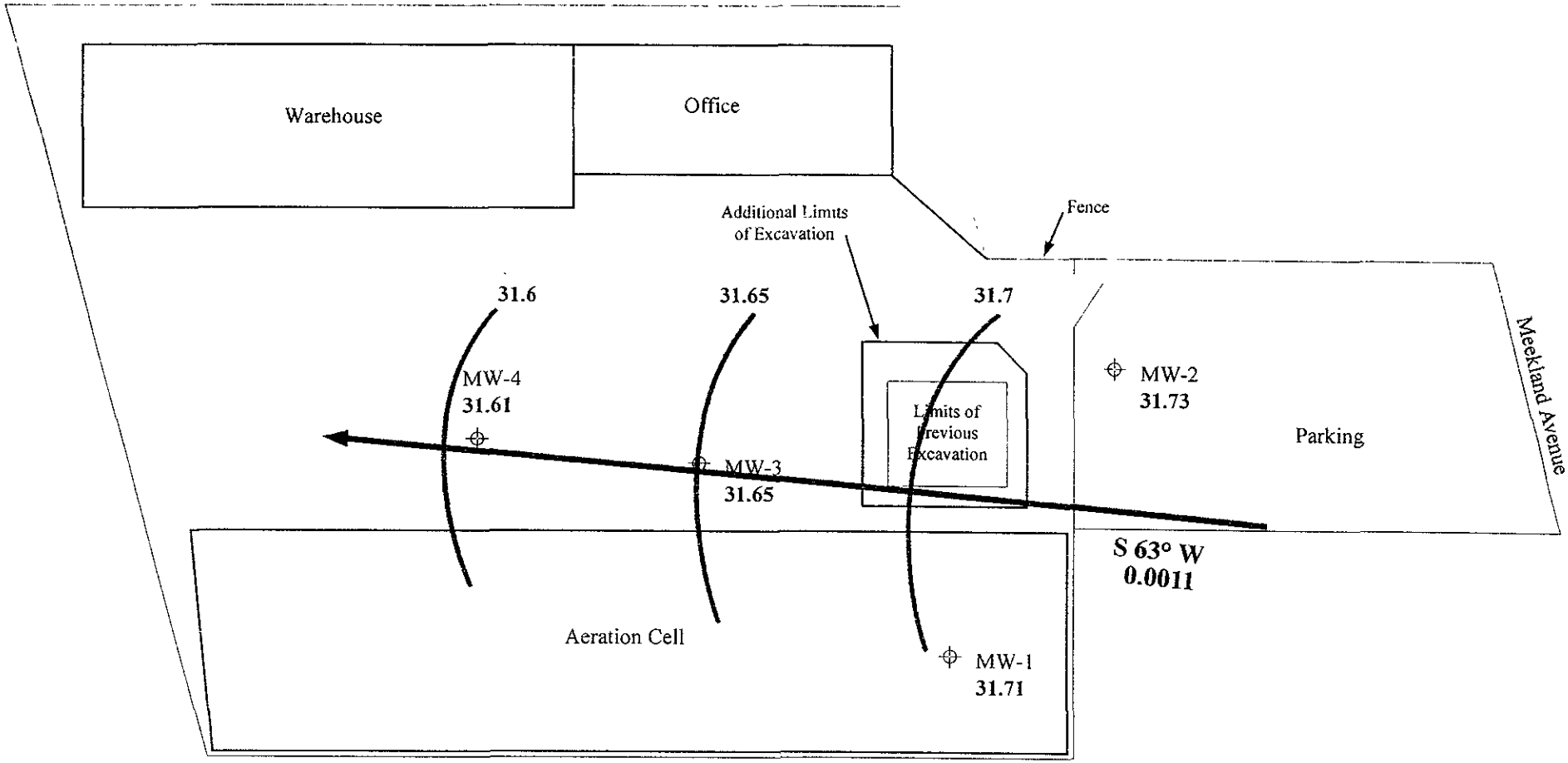
FIGURE 2



North

Monitoring Well Location

0' 20' 40'

POTENTIOMETRIC SURFACE MAP
SEPTEMBER 14, 1995
BECK ROOFING FACILITY
21123 MEEKLAND AVENUE
HAYWARD, CALIFORNIA

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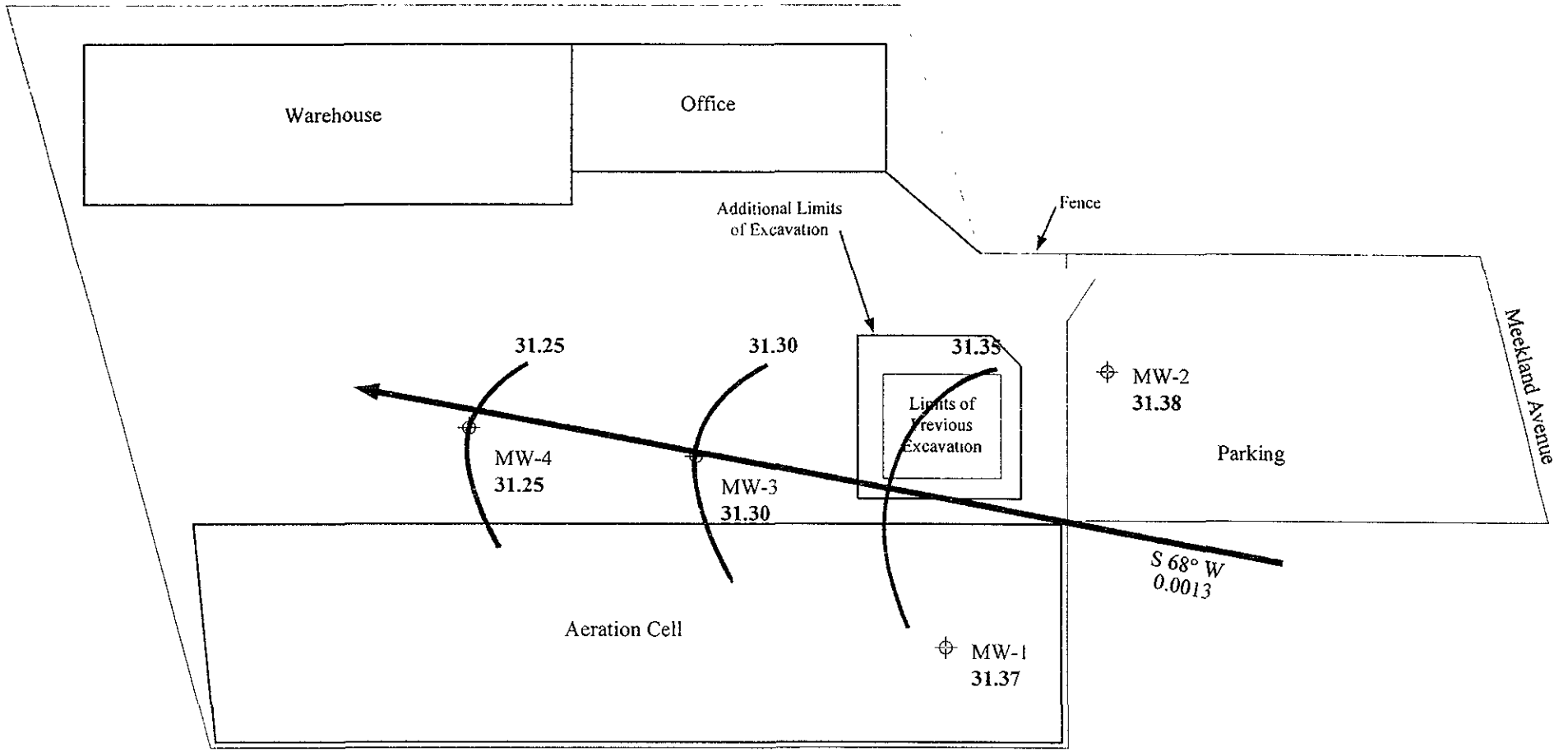
FIGURE 3



Monitoring Well Location

North

0' 20' 40'

POTENTIOMETRIC SURFACE MAP
OCTOBER 10, 1995
BECK ROOFING FACILITY
21123 MEEKLAND AVENUE
HAYWARD, CALIFORNIA

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FIGURE 4

APPENDIX A

LABORATORY REPORTS OF ANALYSES
CHAIN OF CUSTODY RECORD

Sparger Technology, Inc.
With Automation in Mind!

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

October 26, 1995

Mr. Bill Welter
Lush Geosciences
3560 Business Drive, Suite 120
Sacramento, CA 95820

Dear Mr. Welter:

Enclosed is the report for the four (4) water samples. The samples were received at Sparger Technology Analytical Lab on October 12, 1995.

The samples were received in eight (8) 40 mL VOA vials. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

The report consists of the following sections:

I. Sample Description
II. Analysis Request
III. Quality Control Report
IV. Analysis Results

No problems were encountered with the analysis of your samples.

If you have questions, please feel free to call.

Sincerely,

R. L. James
Principal Chemist

3050 ... California 95827 • (916) 362-3047 • FAX (916) 362-0...

Sparger Technology, Inc.

With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

I Sample Description

See attached Samples Description Information.

The samples were received under chain-of-custody.

II Analysis Request

The following analytical tests were requested:

Lab ID	Your ID	Analysis Description
ST95-10-753A	MW-1	TPHgas & BTEX
ST95-10-754A	MW-2	TPHgas & BTEX
ST95-10-755A	MW-3	TPHgas & BTEX
ST95-10-756A	MW-4	TPHgas & BTEX

3050 [illegible] California [illegible] • (916) [illegible] • FAX [illegible]

III Quality Control

A. **Project Specific QC.** No project specific QC (i.e., spikes and/or duplicates) was requested.

B. **Method Blank Results.** A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your sample.

No target parameters were detected in the method blank associated with your sample at the reporting limit levels noted on the data sheets in the Analytical Results section.

C. **Laboratory Control Spike.** A Laboratory Control Spike (LCS) is a sample which is spiked with known analyte concentrations, and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The LCS results associated with your samples are on the attached Laboratory Control Spike and Laboratory Control Spike Duplicate Analysis Report.

D. **Matrix Spike Results.** A Matrix Spike is a sample which is spiked with known analyte concentrations, and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The Matrix Spike results associated with your samples are on the attached Matrix Spike and Matrix Spike Duplicate Analysis Report.

Accuracy is measured by Percent Recovery as in:

$$\% \text{ recovery} = \frac{(\text{measured concentration}) \times 100}{(\text{actual concentration})}$$

IV Analysis Results

Results are on the attached data sheets.

[illegible] California 95827 • (916) 362-[illegible] • FAX [illegible] 362-[illegible]

Sparger Technology, Inc.

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015/8020 Modified Analysis Report

Attention: Mr. Bill Welter
Lush Geosciences
3560 Business Drive, Suite 120
Sacramento, CA 95820

Date Sampled: Oct 10, 1995
Date Received: Oct 12, 1995
Date Analyzed: Oct 17, 1995

Project #: 423-001

Project Name: Beck

Client ID: MW-1

LAB ID: ST95-10-753A

Matrix: Water

Dilution: 1 : 1

Name	Amount	Detection Limits	Units
Benzene	ND	0.3	ug/L
Toluene	ND	0.3	ug/L
Ethylbenzene	ND	0.3	ug/L
Xylenes	1.2	0.3	ug/L
TPHgas	ND	50	ug/L

Surrogate % Recovery of Trifluorotoluene = 118%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Oct 19, 1995
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No 1614)

... California 95827 • (916) 362-3947 • FAX (916) 362-0947

Sparger Technology, Inc.

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015/8020 Modified Analysis Report

Attention:	Mr. Bill Welter Lush Geosciences 3560 Business Drive, Suite 120 Sacramento, CA 95820	Date Sampled: Date Received: Date Analyzed:	Oct 10, 1995 Oct 12, 1995 Oct 17, 1995
Project #:	423-001	Project Name:	Beck
Client ID:	MW-2	LAB ID:	ST95-10-754A
Matrix:	Water	Dilution:	1 : 1

Name	Amount	Detection Limits	Units
Benzene	0.69	0.3	ug/L
Toluene	ND	0.3	ug/L
Ethylbenzene	ND	0.3	ug/L
Xylenes	0.52	0.3	ug/L
TPHgas	ND	50	ug/L

Surrogate % Recovery of Trifluorotoluene = 117%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Oct 19, 1995
Date Reported

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(Certification No 1614)

..., California 958.. • (916) 362-3247 • FAX (916) 362-0947

Sparger Technology, Inc.

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015/8020 Modified Analysis Report

Attention:	Mr. Bill Welter Lush Geosciences 3560 Business Drive, Suite 120 Sacramento, CA 95820	Date Sampled: Date Received: Date Analyzed:	Oct 10, 1995 Oct 12, 1995 Oct 19, 1995
Project #:	423-001	Project Name:	Beck
Client ID:	MW-3	LAB ID:	ST95-10-755A
Matrix:	Water	Dilution: 1 :	10 for TPHgas & BEX

Name	Amount	Detection Limits	Units
Benzene	360	3.0	ug/L
Toluene	2.4	0.3	ug/L
Ethylbenzene	190	3.0	ug/L
Xylenes	96	3.0	ug/L
TPHgas	4200	500	ug/L

Surrogate % Recovery of Trifluorotoluene = 84%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Oct 19, 1995
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC. IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY

(Certification No 1614)

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Sparger Technology, Inc.

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015/8020 Modified Analysis Report

Attention:	Mr. Bill Welter Lush Geosciences 3560 Business Drive, Suite 120 Sacramento, CA 95820	Date Sampled: Date Received: Date Analyzed:	Oct 10, 1995 Oct 12, 1995 Oct 17, 1995
Project #:	423-001	Project Name:	Beck
Client ID:	MW-4	LAB ID:	ST95-10-756A
Matrix:	Water	Dilution:	1 : 1

Name	Amount	Detection Limits	Units
Benzene	ND	0.3	ug/L
Toluene	ND	0.3	ug/L
Ethylbenzene	ND	0.3	ug/L
Xylenes	ND	0.3	ug/L
TPHgas	ND	50	ug/L

Surrogate % Recovery of Trifluorotoluene = 111%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Oct 19, 1995
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No 1614)

Sacramento, California • (916) 362-89[illegible] • FAX (916) 362-0947

Sparger Technology, Inc.

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8020 Modified Matrix Spike (MS) & Matrix Spike Duplicate (MSD) BTEX Analysis Report

Attention:	Mr. Bill Welter Lush Geosciences 3560 Business Drive, Suite 120 Sacramento, CA 95820	Date Sampled: Date Received: Date Analyzed:	Oct 10, 1995 Oct 12, 1995 Oct 18, 1995
Project ID:	423-001	Project Name:	Beck
Client ID:	MS/MSD (Batch)	LAB ID:	ST95-10-795A MS ST95-10-795A MSD
Matrix:	Water	Dilution:	

Name	Conc. Spike Added	Sample Result	MS Result	MSD Result	Units	MS % Recovery	MSD % Recovery	% RPD Recovery
Benzene	30 ppb	ND	29	35	ug/L	97%	117%	19%
Toluene	30 ppb	ND	27	32	ug/L	90%	107%	17%
Ethylbenzene	30 ppb	ND	31	34	ug/L	103%	113%	9%
Xylenes	30 ppb	ND	31	34	ug/L	103%	113%	9%

Surrogate % Recovery of Trifluorotoluene = 95% MS 107% MSD

ppb = parts per billion = ug/L = micrograms per liter
ppm= parts per million = ug/ml = micrograms per milliliter
ND = Not Detected Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Oct 19, 1995
Date

Sparger Technology, Inc.

With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8020 Modified Laboratory Control Spike (LCS) & Laboratory Control Spike Duplicate (LCSD) BTEX Analysis Report

Attention:	Mr. Bill Welter Lush Geosciences 3560 Business Drive, Suite 120 Sacramento, CA 95820	Date Sampled: Date Received: Date Analyzed:	Oct 10, 1995 Oct 12, 1995 Oct 18, 1995
Project ID:	423-001	Project Name:	Beck
Client ID:	LCS/LCSD	LAB ID:	ST95-10-018 LCS ST95-10-018 LCSD
Matrix:	Water	Dilution:	

Name	Conc. Spike Added	Sample Result	LCS Result	LCSD Result	Units	LCS % Recovery	LCSD % Recovery	% RPD Recovery
Benzene	30 ppb	ND	34	33	ug/L	113%	110%	3%
Toluene	30 ppb	ND	29	28	ug/L	97%	93%	4%
Ethylbenzene	30 ppb	ND	34	34	ug/L	113%	113%	0%
Xylenes	30 ppb	ND	34	33	ug/L	113%	110%	3%

Surrogate % Recovery of Trifluorotoluene = 91% LCS 89% LCSD

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Oct 19, 1995
Date Reported

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DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No 1614)

SPARGER TECHNOLOGY, INC.

Analytical Laboratory

3060 Fite Circle, #112 Sacramento, CA 95827

Phone: (916) 362-8947

FAX: (916) 362-8947

CHAIN OF CUSTODY RECORD

56665

Company: LUSH GEOSCIENCES Phone: (916) 737-9294

Project Manager: FAX (916) 737-9298

STAL Invoice Number:

Report Address: 3560 Business Drive, Suite 120, Sacramento, CA 95820

Billing Name & Address:

Project Name: Beck Project/Job #: 423-001

Project Location: Hayward P.O. #:

ANALYSIS REQUEST

REMARKS:

SAMPLE ID	Sampling: Date	Sampling: Time	Container: 40 mL VOA	Container: Brass Sleeve	Container: 1 L amber bottle	Container: 250 mL Plastic	Container: Other:	Preservative Used: HCl/HNO3/ICE	Preservative Used: None	Preservative Used: Other:	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix: Other:	TCLP: BTEX (602/8020/503.1)	TCLP: BTEX/TPHgas (602/8020/8015)	TCLP: TPHdiesel/TPHmotor oil/kerosene(8015)	TCLP: EPA 601/8010/502.2/504	TCLP: EPA 602/8020	TCLP: EPA 608/8080 (Pesticides)/505/508	TCLP: EPA 608/8080 (PCB's)	TCLP: EPA 624/8240/524.2	TCLP: EPA 625/8270/525	Total Oil & Grease (5520)	Non-Polar O & G/TRPH (418.1)	Organic Lead	RCI	WET (STLC): CAM-17 Metals	TCLP: CAM-5 Metals (Cd, Cr, Pb, Ni, Zn)	TCLP: Lead	Total: CAM-17 Metals	Total: CAM-5 Metals (Cd, Cr, Pb, Ni, Zn)	Total: Lead	TAT: Standard	TAT: Rush Services (72hr / 48hr / 24hr / 12hr)	TAT: Holiday/Weekend Rush
MW-1	10-10	1405	2								X					X																		X		
MW-2	10-10	1340	2								X					X																		X		
MW-3	10-10	1505	2								X					X																		X		
MW-4	10-10	1430	2								X					X																		X		

Relinquished by: Date: 10-12-95 Time: 0800

Received by: Date: 10-12-95 Time: 8:04a

Relinquished by: Date: 10-12-95 Time: 9:50

Received by: Date: 10/12/95 Time: 7:58

LUSH
GEOSCIENCES
GEOLOGICAL AND ENVIRONMENTAL SERVICES

November 8, 1995
423-001

Ms. Juliet Shin
Alameda County Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502

Subject: Transmittal of Quarterly Monitoring Report
Beck Roofing in Hayward, California

Dear Ms. Shin:

Enclosed, please find a copy of the Quarterly Monitoring Report for Beck Roofing in Hayward, California. Please call our office if you have any questions regarding this report or any other aspect of this project.

Sincerely,

LUSH GEOSCIENCES

Andrew P. Lush
President

Enclosure

3560 BUSINESS DRIVE, SUITE 120 • SACRAMENTO, CA 95820 • (916) 737-9294 • FAX (916) 737-9298