

LUSH GEOSCIENCES

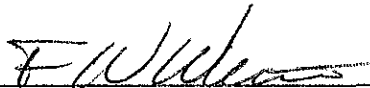
GEOLOGICAL AND ENVIRONMENTAL SERVICES

QUARTERLY MONITORING REPORT
JANUARY 20, 1995
BECK ROOFING

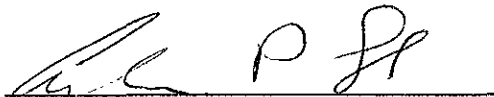
HAYWARD, CALIFORNIA

LUSH GEOSCIENCES JOB NO. 423-001

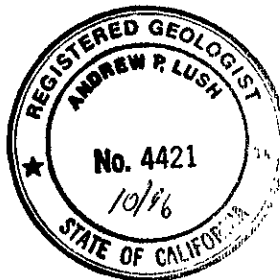
JANUARY 27, 1995



F. William Welter
Project Manager



Andrew P. Lush
RG 4421



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 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 January 20, 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 the 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.

LUSH GEOSCIENCES

GEOLOGICAL AND ENVIRONMENTAL SERVICES

February 1, 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 if you have any questions.

Sincerely,

LUSH GEOSCIENCES



Bill Welter
Project Manager

Enclosure

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

K = Conductivity in micromhos

* Data for previous sampling events are not available

3.2 Groundwater Analyses

Groundwater samples from each 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**

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
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
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
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

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

The groundwater gradient was approximated from calculations made using surveyed wellhead elevations and locations in combination with depth to groundwater measurements made on January 20, 1995 (Table 3)(Figure 2). The groundwater elevation data indicate that groundwater was flowing South with a gradient of 0.0002 ft per ft at the time the measurements were made.

TABLE 3				
GROUNDWATER ELEVATION DATA BECK ROOFING FACILITY HAYWARD, CALIFORNIA				
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	0.0009
MW2	58.65	30.15	28.50	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	0.0002
MW2	58.65	26.65	32.00	ft/ft
MW3	58.52	26.54	31.98	S0°W
MW4	58.01	26.03	31.98	
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 wells MW1 and MW4. Benzene was detected in MW2 at a concentration of 0.001 ppm during this sampling event. Gasoline and benzene were detected in MW3, at concentrations of 4.4 and 0.58 ppm respectively. The contaminant concentrations detected in MW3, while higher than the most recent earlier sampling, are consistent with historic groundwater data and are likely due to a significant rise in groundwater elevation since the previous sampling event. Benzene concentrations in MW2 are very low and will warrant further monitoring.

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 there remains significant contaminant concentrations 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 until completion of all remedial action, or until otherwise directed.

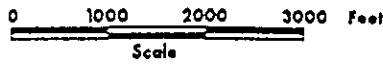
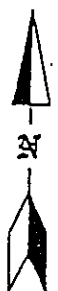
6.0 LIMITATIONS

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.

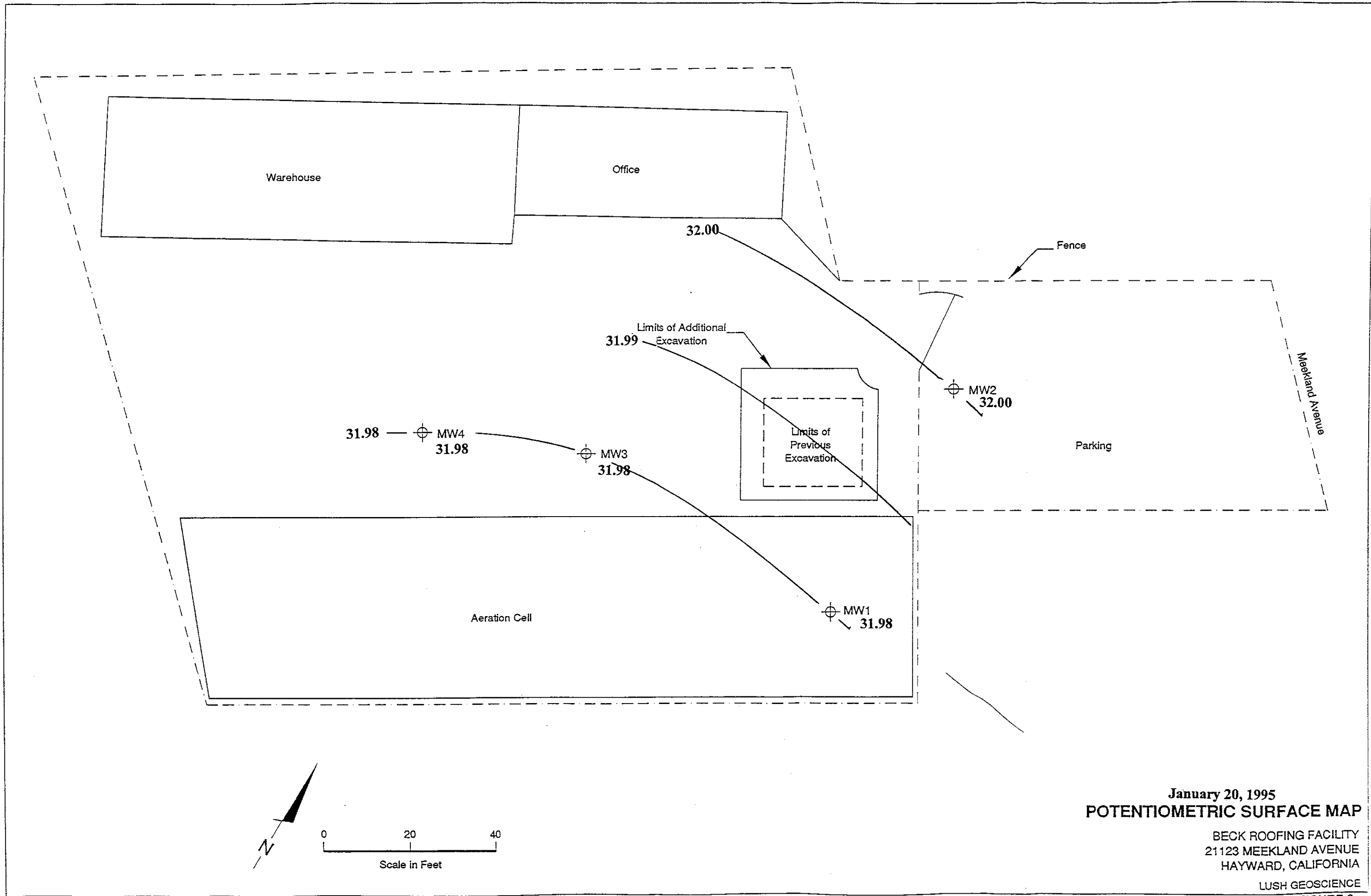
Our conclusions are based on groundwater sample analyses representative of contaminant concentrations at the locations sampled. These results are considered indicative of site conditions, but such conditions may vary away from the points sampled. Further investigation, including additional subsurface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



SITE LOCATION MAP
BECK ROOFING FACILITY
21123 MEEKLAND AVENUE
HAYWARD, CALIFORNIA



Warehouse

Office

32.00

Fence

Limits of Additional
Excavation

31.99

MW2
32.00

31.98 — MW4
31.98

MW3
31.98

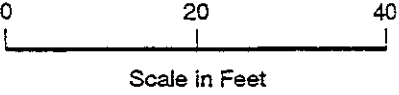
Limits of
Previous
Excavation

Parking

Meekland Avenue

Aeration Cell

MW1
31.98



January 20, 1995
POTENTIOMETRIC SURFACE MAP

BECK ROOFING FACILITY
21123 MEEKLAND AVENUE
HAYWARD, CALIFORNIA

LUSH GEOSCIENCE

FIGURE 2

SPARGER TECHNOLOGY, INC.

Analytical Laboratory

3050 Fite Circle, #112 Sacramento, CA 95827

Phone: (916) 362-8947

FAX: (916) 362-0947

CHAIN OF CUSTODY RECORD

4306

Company: *LUSH GEO*

Phone: *737-9294*

Project Manager: *Bill Welter*

FAX: *737-9298*

STAL Invoice Number:

Report Address:

Billing Name & Address:

*3500 BUSINESS DR. Suite 120
Sacto*

ANALYSIS REQUEST

Project Name:

Beck Roofing

Project/Job #:

423-001

REMARKS:

Project Location:

HAYWARD

P.O. #:

WET (STLC)

TCLP

Total

TAT

SAMPLE ID	Sampling		Container				Preservative Used			Matrix			TCLP										Total			TAT									
	Date	Time	40 mL VOA (2 cal)	Breath Sleeve	1 L amber bottle	250 mL Plastic	Other:	HCl/HNO3/HCE	None	Other:	Water	Soil	Air	Other:	BTEX (602/8020)/503.1	BTEX/TPHgas (602/8020/8015)	TPHdicisal/TPHmotor oil/kerosene(8015)	EPA 601/8010/502.2/504	EPA 602/8020	EPA 608/8080 (Pesticides)/505/508	EPA 608/8080 (PCB's)	EPA 824/8240/524.2	EPA 825/8270/525	Total Oil & Grease (5520)	Non-Polar O & G/TRPH (418.1)	Organic Lead	RCI	CAM-17 Metals	CAM-5 Metals (Cd, Cr, Pb, Ni, Zn)	Lead	Standard	Rush Services (72hr / 48hr / 24hr / 12hr)	Holiday/Weekend Rush		
07-20-95-MW1	<i>1-20-95</i>	<i>1210</i>	<i>X</i>					<i>/</i>			<i>X</i>				<i>X</i>																		<i>X</i>		
07-20-95-MW2	<i>✓</i>	<i>1230</i>	<i>X</i>					<i>/</i>			<i>X</i>				<i>X</i>																		<i>X</i>		
07-20-95-MW3	<i>✓</i>	<i>1250</i>	<i>X</i>					<i>/</i>			<i>X</i>				<i>X</i>																		<i>X</i>		
07-26-95-MW4	<i>✓</i>	<i>1249</i>	<i>X</i>					<i>/</i>			<i>X</i>				<i>X</i>																		<i>X</i>		

Relinquished by: *Bill Welter*

Received by: *[Signature]*

Relinquished by: *[Signature]*

Received by: *[Signature]*

Date: *1/27/95*

Time: *6:00*

Date: *1/23/95*

Time: *6:00*

Date: *1/23/95*

Time: *10:20*

Date: *1/23/95*

Time: *10:20*

8020/8015 Modified Analysis Report

Project: Beck Roofing (423-001)

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

Date Sampled: Jan 20, 1995
 Date Received: Jan 23, 1995
 Date Analyzed: Jan 24, 1995
 Invoice #: 4306

Sparger
 Technology, Inc.
 With Automation in Mind

Matrix: Water

Unit = ug/L

Lab ID	Client ID	B	Det Limit	T	Det Limit	E	Det Limit	X	Det Limit	TPHgas	Det Limit	Surrogate % Recovery of Trifluorotoluene	Dilution 1:
ST95-01-493A	MW-1	ND	0.3	ND	0.3	ND	0.3	ND	0.3	ND	50	76%	1
ST95-01-494A	MW-2	1.0	0.3	ND	0.3	ND	0.3	ND	0.3	ND	50	96%	1
ST95-01-495A	MW-3	580	3.0	2.0	0.3	130	3.0	160	3.0	4400	50	116%	1
ST95-01-496A	MW-4	ND	0.3	ND	0.3	ND	0.3	ND	0.3	ND	50	116%	1

ppb = parts per billion = ug/l = micrograms per liter
 ppm = parts per million = ug/g = micrograms per gram
 ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

* Dilution 1:10 for BEX.



R. L. James, Principal Chemist

Jan 26, 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)

Analytical Laboratory Division
 Mobile Laboratory Division
 Scientific Division

3050 Fire Circle, Suite 112 • Sacramento, California 95827 • (916) 362-8947 • FAX (916) 362-0947

SPARGER TECHNOLOGY, INC.

Analytical Laboratory

3050 Fite Circle, #112 Sacramento, CA 95827

Phone: (916) 362-8947

FAX: (916) 362-0947

Company: LUSH GEO

Phone: 737-9294

Project Manager: BILL WELTER

FAX: 737-9298

Report Address:

Billing Name & Address:

3560 BUSINESS DR. SUITE 120
SACTO

Project Name: BELK Roofing

Project/Job #: 423-001

Project Location: HAYWARD

P.O. #:

CHAIN OF CUSTODY RECORD

4306

STAL Invoice Number:

ANALYSIS REQUEST

REMARKS:

WET (STLC)

TCLP

Total

TAT

SAMPLE ID	Sampling		Container			Preservative Used			Matrix			TCLP							Total			TAT													
	Date	Time	40 mL VOA (2 each)	Brass Sleeve	1 L amber bottle	250 mL Plastic	Other:	HCl/HNO3/HCl	None	Other:	Water	Soil	Air	Other:	BTEX (602/8020)/503.1	BTEX/TPHgas (602/8020/8015)	TPHdiesel/TPHmotor oil/kerosene(8015)	EPA 601/8010/502.2/504	EPA 602/8020	EPA 608/8080 (Pesticides)/505/508	EPA 608/8080 (PCB's)	EPA 624/8240/524.2	EPA 625/8270/525	Total Oil & Grease (5520)	Non-Polar O & G/TRPH (418.1)	Organic Lead	FCI	CAM-17 Metals	CAM-5 Metals (Cd, Cr, Pb, Ni, Zn)	Lead	Standard	Rush Services (72hr / 48hr / 24hr / 12hr)	Holiday/Weekend Rush		
W-20-95-MW1	1-20-95	1210	X				/			X				X																			X		
W-20-95-MW2	✓	1230	X				/			X				X																		X			
W-20-95-F1W3	✓	1250	X				/			X				X																		X			
W-20-95-MW4	✓	1249	X				/			X				X																		X			

Relinquished by:

Bill Welter

Received by:

[Signature]

Relinquished by:

[Signature]

Received by:

[Signature]

Date: 1/23/95

Time: 8:00

Date: 1/23/95

Time: 8:00

Date: 1/23/95

Time: 10/20

Date: 1/23/95

Time: 10:20 AM

January 31, 1995

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

Dear Mr. Lush:

Enclosed is the report for the four (4) water samples. The samples were received at Sparger Technology Analytical Lab on January 23, 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

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:

<u>Lab ID</u>	<u>Your ID</u>	<u>Analysis Description</u>
ST95-01-493A	MW-1	TPHgas & BTEX
ST95-01-494A	MW-2	TPHgas & BTEX
ST95-01-495A	MW-3	TPHgas & BTEX
ST95-01-496A	MW-4	TPHgas & BTEX

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.
- C. **Laboratory Control Spike.** A Laboratory Control Spike (LCS) is a sample which is spiked with 30 ppb BTEX, 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 8020 Modified LCS BTEX Analysis Report.
- D. **Matrix Spike Results.** A Matrix Spike is a sample which is spiked with 30 ppb BTEX, 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 8020 Modified Matrix-Spike BTEX Analysis Report.

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.

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.

8020/8015 Modified Analysis Report

Project: Beck Roofing (423-001)

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

Date Sampled: Jan 20, 1995
 Date Received: Jan 23, 1995
 Date Analyzed: Jan 24, 1995
 Invoice #: 4306

Sparger
 Technology, Inc.
 With Automation in Mind

Matrix: Water

Unit = ug/L

Lab ID	Client ID	B	Det Limit	T	Det Limit	E	Det Limit	X	Det Limit	TPHgas	Det Limit	Surrogate % Recovery of Trifluorotoluene	Dilution 1:
ST95-01-493A	MW-1	ND	0.3	ND	0.3	ND	0.3	ND	0.3	ND	50	76%	1
ST95-01-494A	MW-2	1.0	0.3	ND	0.3	ND	0.3	ND	0.3	ND	50	96%	1
ST95-01-495A	MW-3	580	3.0	2.0	0.3	130	3.0	160	3.0	4400	50	116%	*
ST95-01-496A	MW-4	ND	0.3	ND	0.3	ND	0.3	ND	0.3	ND	50	116%	1

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

* Dilution 1:10 for BEX.



R. L. James, Principal Chemist

Jan 26, 1995
 Date Reported

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

Analytical Laboratory Division
 Mobile Laboratory Division
 Scientific Division

3050 The Circle Jite #12 • Sacramento, California 95827 • (916) 362-8947 • FAX (916) 362-0947

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

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

Date Sampled: Jan 20, 1995
 Date Received: Jan 23, 1995
 Date Analyzed: Jan 24, 1995

Project ID: 423-001

Project Name: Beck Roofing

Client ID: LCS/LCSD

LAB ID: ST95-01-024 LCS
 ST95-01-024 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	31	30	ug/L	103%	100%	3%
Toluene	30 ppb	ND	31	30	ug/L	103%	100%	3%
Ethylbenzene	30 ppb	ND	31	30	ug/L	103%	100%	3%
Xylenes	30 ppb	ND	31	30	ug/L	103%	100%	3%

Surrogate % Recovery of Trifluorotoluene =

108% LCS

100% 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

Jan 26, 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 1814)

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

Attention: Mr. Andy Lush
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Date Sampled: Jan 20, 1995
 Date Received: Jan 23, 1995
 Date Analyzed: Jan 24, 1995

Project ID: 423-001

Project Name: Beck Roofing

Client ID: MW-4 MS
 MW-4 MSD

LAB ID: ST95-01-496A MS
 ST95-01-496A 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	30	29	ug/L	100%	97%	3%
Toluene	30 ppb	ND	30	29	ug/L	100%	97%	3%
Ethylbenzene	30 ppb	ND	30	29	ug/L	100%	97%	3%
Xylenes	30 ppb	ND	31	29	ug/L	103%	97%	7%

Surrogate % Recovery of Trifluorotoluene = 104% MS 108% 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

Jan 26, 1995

Date

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