1252 Quarry Lane P.O. 8ox 9019 Pleasanton, CA 94566 (415) 426-2600 Fax (415) 426-0106



Results of Soil Sampling at South Shore Car Wash 2351 Shore Line Drive Alameda, California

Clayton Project No. 34063.00

March 20, 1991

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (415) 426-2600 Fax (415) 426-0106

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March 20, 1991

Clayton Project No. 34063.00

Ms. Cynthia Chapman
ALAMEDA COUNTY HEALTH AGENCY
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Dear Ms. Chapman:

As you requested in your telephone conversation with Ms. Laurene Compton on March 13, 1991, we have prepared a report on the results of soil sampling at the South Shore Car Wash, 2351 Shore Line Drive, Alameda, California. The report is attached.

We are continuing to proceed with implementation of Tasks 1 through 4 as outlined in our report titled, "Work Plan for Groundwater Remedial Investigation", dated February 28, 1991. We have already completed the tidal influence study. The results from this study will be presented a written report at a later date.

We are also enclosing the work plan for the monitoring well to be installed in Shore Line Drive, downgradient of the Texaco site. We have submitted this work plan to the City of Alameda Central Permits Department. We hope to install this well in early April 1991.

We trust that the soil sampling report will be satisfactory, and Harsch can proceed with paving over the lot. If you have any questions, please call Ms. Compton at (415) 426-2671 or myself at (415) 426-2608.

Sincerely,

Alan D. Gibbs, R.G. Supervisor, Geology Western Operations

ADG/Ic Enclosures

cc: Mr. V

Mr. Michael Dosen Ms. Rose Coughlin Mr. Roy Ikeda Mr. Murray Stevens



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1.0 INTRODUCTION

Clayton Environmental Consultants, Inc. was retained by Harsch Investment Corporation to sample surface soils at the former South Shore Car Wash site at 2351 Shore Line Drive in Alameda, California (Figure 1). Mr. Michael Dosen, vice president for Harsch, authorized this work by accepting Clayton's Proposal No. 91-B-032. This report provides details of sampling methods, rationale, and results of work conducted at the subject site.

2.0 BACKGROUND

The underground storage tanks at the South Shore Car Wash/Chevron service station were removed on July 12, 1990, by Zacor Corporation. Soil sampling was conducted by Environmental Bio-System, Inc. In the vicinity of the USTs, concentrations of gasoline in the soil ranged from 360 to 9,500 parts per million (ppm).

The environmental consultant for the car wash, Soil Tech Engineering (STE), excavated approximately 1,200 cubic yards of soil from the former location of the USTs and dispenser island and stockpiled them at the former location of the car wash. STE removed the stockpiled soil from the site on February 16, 1991. On March 5, 1991, Clayton collected soil samples from the area formerly covered by stockpiled soils.

3.0 PURPOSE

Harsch owns the subject site and is in the process of redeveloping it. Clayton performed this work to determine if soils remaining after removal of stockpiled soil contain residual gasoline hydrocarbon concentrations that pose an environmental concern.

4.0 **SAMPLING**

4.1 INITIAL SCREENING OF SURFACE SOILS

Clayton screened surface soil for volatile hydrocarbon contamination with an organic vapor meter (OVM). We selected twenty screening locations in a grid pattern across the site (Figure 2). We used the ambient temperature headspace method. A soil sample from each location was placed in a sealable plastic bag so that headspace was left in the bag. The sample was then allowed to reach ambient temperature (usually for 10 to 15 minutes), which caused any hydrocarbon vapors to volatilize into the headspace. We monitored the concentration of hydrocarbon vapors in headspace by piercing the bag with the OVM probe. This initial screening was used to identify areas of potential contamination from which soil samples would be collected for laboratory analysis.



4.2 SAMPLE COLLECTION FOR LABORATORY ANALYSIS

On March 5, 1991, Clayton collected 4 soil samples for laboratory analysis from areas that registered OVM readings ranging from 6 to 201 ppm, and appeared to contain residual gasoline based on visual and olfactory senses. Figure 2 shows the locations of the soil samples collected for analysis.

Soil samples were collected from approximately 3 to 6 inches below the ground surface for laboratory analysis. The samples were collected in 1.5-inch brass tubes, each measuring 6 inches long. The tube ends were covered with aluminum foil, capped with plastic caps, and sealed with tape, and the samples were labeled, and placed into a pre-cooled ice chest chilled to 4°C for shipment to Clayton's laboratory in Pleasanton, California. Upon delivery to the laboratory, a chain-of-custody form was completed listing analyses required.

5.0 LABORATORY RESULTS

Soil samples collected on March 5, 1991, were analyzed by Environmental Protection Agency (EPA) Method 8015/8020 for total petroleum hydrocarbons as gasoline and BTEX. In the following table, we summarize the results of laboratory analyses. Only low levels of gasoline and BTEX were detected in the samples. The laboratory analyses and chain-of-custody are included in Appendix A.

ANALYTICAL RESULTS OF SOIL SAMPLES COLLECTED ON MARCH 5, 1991 FROM SOUTH SHORE CAR WASH

Concentrations reported in mg/kg*										
Constituent	Area 3A	Area 10	Area 13	Area 18						
Gasoline	32	23	26	13						
Benzene	< 0.005	< 0.005	0.006	< 0.005						
Toluene	0.14	0.041	0.11	0.036						
Ethylbenzene	0.032	0.006	0.024	< 0.005						
Xylenes	1.1	0.68	0.92	0.13						

mg/kg is equal to parts per million (ppm)



6.0 CONCLUSIONS AND RECOMMENDATIONS

Soil from twenty areas across the entire site were screened for volatile hydrocarbons with an OVM. We collected soil samples from areas that appeared to have the highest potential for containing gasoline contamination based on OVM readings, and visual and olfactory observations.

The gasoline and BTEX concentrations detected in these samples are low and will continue to aerate and biodegrade onsite. Therefore we do not recommend any further soil investigation or remediation at this site.

Limitations

The information and opinions rendered in this report are exclusively for use by Client. Clayton Environmental Consultants, Inc. will not distribute this report without your consent except as may be required by law or court order. The information and opinions expressed in this report are given in response to our limited assignment and should be evaluated and implemented only in light of that assignment. We accept responsibility for the competent performance of our duties in executing the assignment and preparing this report in accordance with the normal standards of our profession but disclaim any responsibility for consequential damages.

This report prepared by:

Laurene Compton

Geologist

This report reviewed by:

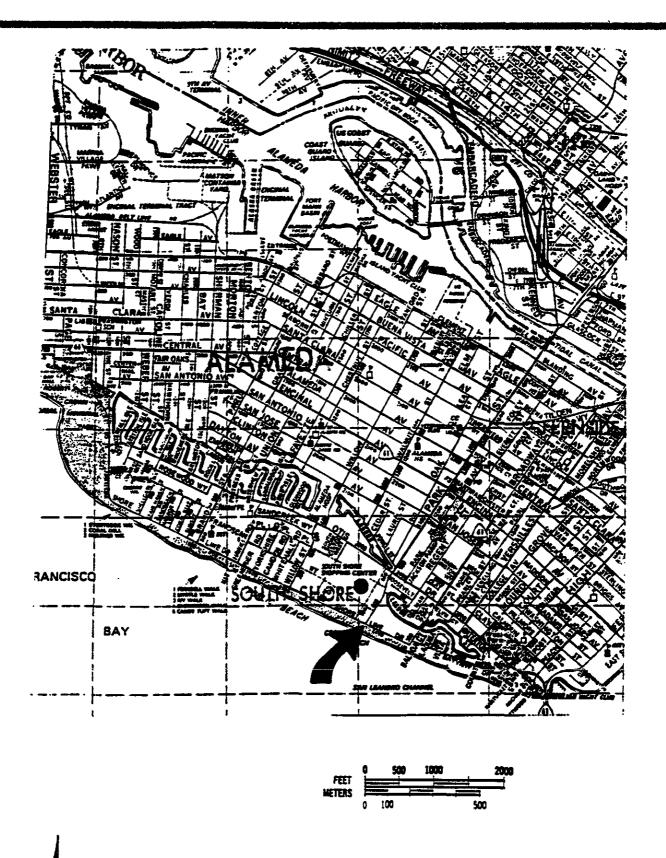
Alan D. Gibbs, R.G. Supervisor, Geology

Western Operations

March 20, 1991



FIGURES



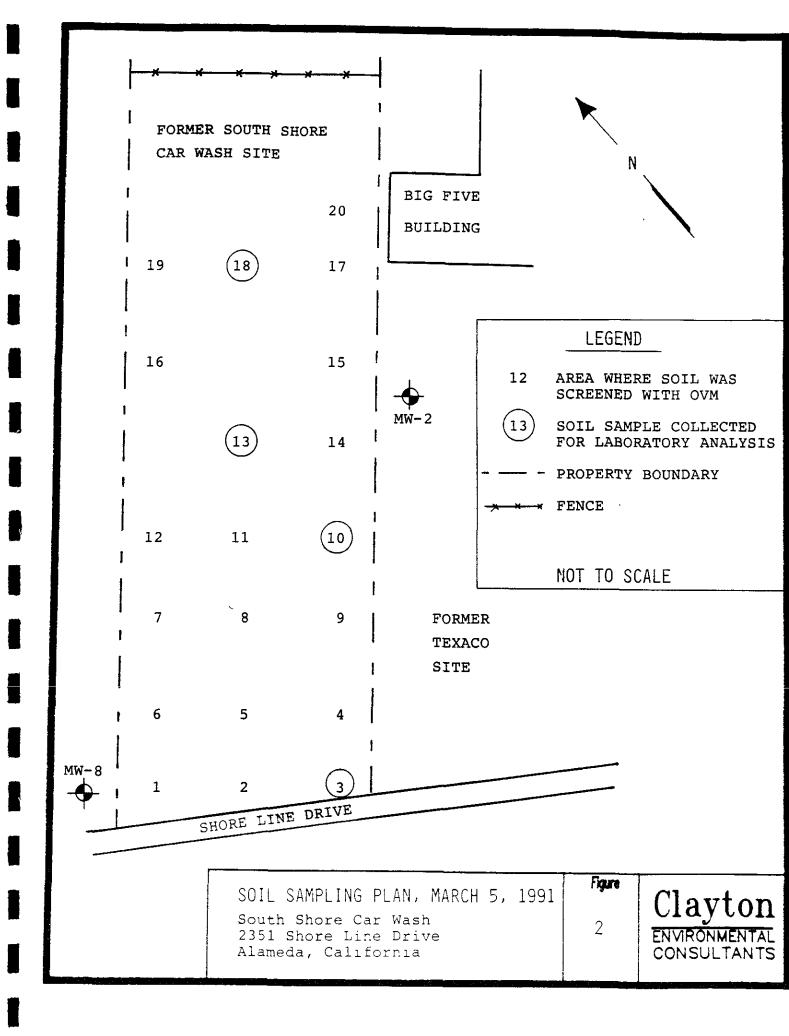
Site Location Map Harsch Investment Corporation Park Street and Shore Line Drive Alameda, California

Clayton Project No. 29196.00

Figure

Clayton ENVIRONMENTAL CONSULTANTS

29196-01-17





APPENDIX A

LABORATORY RESULTS AND CHAIN-OF-CUSTODY

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 4151 426-2600 Fax (415) 426-0106



March 8, 1991

Ms. Laurene Compton CLAYTON ENVIRONMENTAL CONSULTANTS, INC. 1252 Quarry Lane Pleasanton, Ca. 94566

> Client Ref. 34063.00 Clayton Project No. 91030.51

Dear Ms. Compton:

Attached is our analytical laboratory report for the samples received on March 6, 1991. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (415) 426-2657.

Sincerely,

Ronald H. Peters, CIH

Director, Laboratory Services

Western Operations

RHP/dt

Attachments



Page 2 of 6

Results of Analysis for Harsch Investments

Client Reference: 34063.00 Clayton Project No. 91030.51

Sample Identification: AREA 3A Lab Number:

9103051-01A SOIL

Date Sampled: 03/05/91 Date Received: 03/06/91 Date Prepared: 03/06/91 03/07/91

Sample Matrix/Media: Preparation Method: Analytical Method:

EPA 8015/8020

EPA 5030 Date Analyzed:

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.005
Toluene	108-88-3	0.14	0.005
Ethylbenzene	100-41-4	0.032	0.005
Xylenes	1330-20-7	1.1	0.005
Gasoline		32	0.3

Not detected at or above limit of detection Information not available or not applicable



Page 3 of 6

Results of Analysis for Harsch Investments

Client Reference: 34063.00 Clayton Project No. 91030.51

Sample Identification: AREA 10 Lab Number:

9103051-02A

Date Sampled: 03/05/91 Date Received: 03/06/91 Date Prepared:

Sample Matrix/Media: Preparation Method:

SOIL EPA 5030

03/06/91 Date Analyzed: 03/07/91

Analytical Method: EPA 8015/8020

Analyte	CAS #	Concentration (mg/kg)	Limit o Detectio (mg/kg)		
BTEX/Gasoline					
Benzene	71-43-2	ND	0.005		
Toluene	108-88-3	0.041	0.005		
Ethylbenzene	100-41-4	0.006	0.005		
Xylenes	1330-20-7	0.68	0.005		
Gasoline		23	0.3		

ND Not detected at or above limit of detection Information not available or not applicable



Page 4 of 6

Results of Analysis for Harsch Investments

Client Reference: 34063.00 Clayton Project No. 91030.51

Sample Identification: AREA 13

Lab Number:

9103051-03A

SOIL

Date Sampled: Date Received:

03/05/91 03/06/91

Sample Matrix/Media: Preparation Method:

Date Prepared: Date Analyzed:

03/06/91 03/07/91

Analytical Method:

EPA 5030

EPA 8015/8020

Limit of Concentration Detection Analyte CAS # (mg/kg) (mg/kg) BTEX/Gasoline Benzene 71-43-2 0.006 0.005 Toluene 108-88-3 0.11 0.005 Ethylbenzene 100-41-4 0.024 0.005 Xylenes 1330-20-7 0.92 0.005 Gasoline 26 0.3

ND Not detected at or above limit of detection Information not available or not applicable



Page 5 of 6

Results of Analysis for Harsch Investments

Client Reference: 34063.00 Clayton Project No. 91030.51

Sample Identification: AREA 18

Lab Number:

Sample Matrix/Media:

Analytical Method:

9103051-04A SOIL

Preparation Method:

EPA 5030

EPA 8015/8020

Date Sampled: 03/05/91 Date Received: 03/06/91

Date Prepared: 03/06/91 Date Analyzed: 03/07/91

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)		
BTEX/Gasoline					
Benzene	71-43-2	ND	0.005		
Toluene	108-88-3	0.036	0.005		
Ethylbenzene	100-41-4	ND	0.005		
Xylenes	1330-20-7	0.13	0.005		
Gasoline		13	0.3		

Not detected at or above limit of detection ND Information not available or not applicable



Page 6 of 6

Results of Analysis for

Harsch Investments

Client Reference: 34063.00 Clayton Project No. 91030.51

Sample Identification: METHOD BLANK Lab Number:

9103051-0#A

Date Sampled: Date Received:

Sample Matrix/Media: Preparation Method:

SOIL EPA 5030 Date Prepared: 03/06/91 Date Analyzed: 03/07/91

Analytical Method:

EPA 8015/8020

Limit of Concentration Detection Analyte CAS # (mg/kg) (mg/kg) BTEX/Gasoline Benzene 71-43-2 ND 0.005 Toluene 108-88-3 ND 0.005 Ethylbenzene 100-41-4 ND 0.005 Xylenes 1330-20-7 ND 0.005 Gasoline ND 0.3

ND Not detected at or above limit of detection Information not available or not applicable

Clayton ENVIRONMENTAL CONSULTANTS

A Marsh & McLennan Company

REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only Page	of)
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(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:
22345 Roethel Drive Raintan Center 400 Chastain Center Blvd., N.W. 1252 Quarry Lane

Novi, MI 48050 (313) 344 1770

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(If required) Method of Shipment

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OF

160 Fieldcrest Ave. £ dison, NJ 08837 (201) 225-6040

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400 Chastain Center Blvd., N.W Suite 490 Kennesaw, GA 30144

(404) 499-7500

Date/Time 3-4-9/

Date/Time

1252 Quarry Lane Pleasanton, CA 94566 (415) 426-2600

Received by:

Received at lab by:

Sample condition upon receipt:

DISTRIBUTION:

WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

Date/Time