1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



7/11/95 - Cooking good.

January 25, 1995

for ages, surge 15000

Mr. Rick Oliver Environmental Analyst BANK OF AMERICA 555 Anton Boulevard, Suite 1025 Costa Mesa, California 92626

Clayton Project No. 62009.01

Subject:

Quarterly Groundwater Sampling at 1528 Webster Street in Alameda,

California

Dear Mr. Oliver:

Clayton Environmental Consultants, Inc. is pleased to present five copies of our first quarterly report for the groundwater sampling activities at Bank of America property located at 1528 Webster Street in Alameda, California.

If you have any questions please contact me or Mr. John Vargas at (510) 426-2600.

Sincerely,

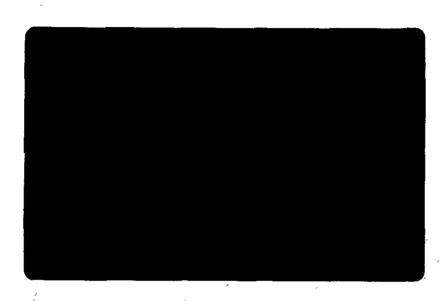
Dariush Dastmalchi

Geologist

DD/dd

cc: Ms. Eva Chu, Alameda County Health Care Services Agency





Clayton
ENVIRONMENTAL
CONSULTANTS

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



Quarterly Groundwater Sampling at the Bank of America Facility located at 1528 Webster Street Alameda, California ES#302412

Clayton Project No. 62009.01 July 7, 1995



CONTENTS

Secti	<u>Pa</u>	age
1.0	<u>INTRODUCTION</u>	1
2.0	BACKGROUND	1
3.0	SAMPLING ACTIVITIES	2
4.0	ANALYTICAL RESULTS	3
5.0	GROUNDWATER FLOW DIRECTION	3
6.0	RECOMMENDATIONS	4
<u>Figu</u>	<u>res</u>	
1. 2. 3.	Site Location Map Site Vicinity Map Historical Groundwater Flow Directions Map	
Table	<u>es</u>	
1. 2.	Analytical Summary Groundwater Measurements and Elevations	
Appe	endices endices	
A B	GROUNDWATER SAMPLING FIELD SURVEY FORM ANALYTICAL REPORTS	



1.0 INTRODUCTION

Mr. Rick Oliver, Environmental Analyst with Bank of America, retained Clayton Environmental Consultants, Inc. to conduct quarterly groundwater sampling and monitoring activities at the Bank of America facility located at 1528 Webster Street in Alameda, California (Figure 1). On March 30, 1995, Clayton collected the first quarterly groundwater samples for laboratory analysis from monitoring wells MW-1 through MW-5 (Figure 2). In addition, groundwater elevations were measured in April and May 1995.

2.0 BACKGROUND

On August 3, 1993, an underground storage tank (UST) was removed from beneath the sidewalk adjacent to the subject site (Figure 2). Soil samples collected from the UST excavation pit contained total petroleum hydrocarbons as diesel (TPH-D) concentration ranging from 300 to 1,300 milligrams per kilograms (mg/kg).

Because of the elevated concentration of TPH-D in the soil samples the UST pit was overexcavated on September 14, 1993.

After overexcavation was complete, eight samples were collected from the excavation walls. At the request of Alameda County Health Care Services Agency (ACHCSA), one sample from each wall was analyzed for TPH-D and benzene, toluene, ethylbenzene, and xylenes (BTEX).

The analytical reports indicated TPH-D concentrations ranging from 107 to 1,005 mg/kg in soil samples collected from the east, west, and south walls of the excavation. The soil samples from the excavation pit did not contain BTEX concentrations at or above the analytical detection limits. After sampling was complete, the excavation was backfilled using Class II base rock material.

During April and May 1994, Clayton installed three monitoring wells (MW-1, MW-2, and MW-3) near the former UST locations. These monitoring wells were installed to assess the extent of soil and possible groundwater contamination from the former UST.

According to the analytical reports, TPH-D concentrations in the groundwater samples ranged from 110 micrograms per liter (µg/L) in MW-1 to 4,100 µg/L in MW-2. The TPH-D concentrations in the soil sample ranged from less than the detection limite in the soil samples from MW-3 to 6 mg/kg in the soil sample from MW-1.

analyze for PNAS in MW-7 Done-

Based on the groundwater elevation data collected on April 7, 1994, the groundwater flow direction was calculated to be toward the south.

In September 1994 Clayton installed two additional monitoring wells (MW-4 and MW-5) near the subject facility (Figure 2).

The analytical results identified TPH-D concentrations ranging from below the analytical detection limit in the groundwater samples from MW-1 and MW-5 to 4,400 µg/L in MW-2. BTEX were not detected in the soil or groundwater samples.



Based on the groundwater measurements on October 24, 1994, groundwater flow direction was calculated to the northwest. Groundwater measurements in November 1994 indicated groundwater flow directions to be to the southeast.

On February 22, 1995 ACHCSA requested that groundwater elevations to be measured on a monthly basis. In addition, ACHCSA requested that the monitoring wells MW-1 through MW-5 be sampled on a quarterly basis.

3.0 SAMPLING ACTIVITIES

The water was purged from wells MW-1 though MW-5 using a 4-inch submersible pump. Approximately four well volumes were pumped from each well to ensure a water representative of the aquifer was present in the well. The well purge volume was calculated by using the measured depth to groundwater and bottom of the well casing to the nearest 0.01 foot upon arrival at the site.

The following parameters were noted during the sampling activities:

- · Monitoring well identification
- Static water level
- · Well depth
- Condition of water prior to purging (e.g., amount of free product)
- · Purge rate and volume
- pH, temperature, and conductivity during purging
- Time purged
- · Time of sample collection
- Sampling method
- Name of sampler
- Climatic conditions

The groundwater sample was collected using a new disposable bailer, after a sufficient volume of water had been purged for pH, temperature, and electrical conductivity to stabilize. All equipment coming into contact with groundwater was thoroughly cleaned and decontaminated before use at the site.

Groundwater was decanted in clean laboratory-supplied containers that were closed, labeled, placed immediately into an ice chest, and transported to Clayton's state-certified laboratory for analysis. One trip blank was furnished in accordance with Clayton's quality assurance/quality control (QA/QC) program.

The sample was collected in such a manner so as to minimize the volatilization of a sample due to agitation and/or transfer from bailer to sample container. To document and trace samples from time of collection, a signed chain-of-custody record was filled out by the sampler and accompanies the samples through the laboratory analyses. The completed chain-of-custody was included with the analytical report from the laboratory. Details of the groundwater sampling event is provided in the water sampling field survey forms (Appendix A).

4.0 ANALYTICAL RESULTS

The groundwater samples were analyzed using the following United States Environmental Protection Agency (USEPA) methods:

- USEPA Method 8015 for TPH-D
- USEPA Method 8020 for BTEX
- USEPA Method 160.1 for total dissolved solids (TDS)

In addition, the sample from well MW-2 was analyzed using USEPA Method 8310 for polynuclear aromatic hydrocarbons (PNAs)¹.

According to the analytical reports, TPH-D was detected only in the groundwater sample from monitoring well MW-2 at a concentration of 280 μ g/L. BTEX was not detected in any of the groundwater samples. PNAs were not detected in the groundwater sample from MW-2. Analytical results are summarized in Table 1. Analytical reports are included in Appendix B.

5.0 GROUNDWATER FLOW DIRECTION

Using the groundwater elevations measured during the monthly inspection of the monitoring wells and during groundwater sampling activities, Clayton calculated the groundwater flow to be south-southeast at an approximate gradient of 0.002 feet per feet. Groundwater measurement and elevation are summarized in Table 2, Figure 3 shows dominant groundwater flow direction calculated for the first quarter of 1995. Groundwater flow direction was calculated to the southeast, based on the November 1994 groundwater elevations. The cause for fluctuation in the groundwater flow direction could not be determined during this investigation. However, it is possible that the groundwater levels fluctuate seasonally, due to the recent excessive rain events, or as the result of local landscape irrigation or discharge.

At the request of ACHCSA, the groundwater sample from monitoring well MW-2 was analyzed using this method.

6.0 RECOMMENDATIONS

Because no PNAs were detected in the groundwater samples from well MW-2 we recommend that the future quarterly groundwater sample not to be tested for PNAs.

rest ofte to MW-2 has TPH-D, then andersely (NAS

This report prepared by:

Dariush Dastmalchi

Geologist

This report reviewed by:

John F. Vargas, R.G.

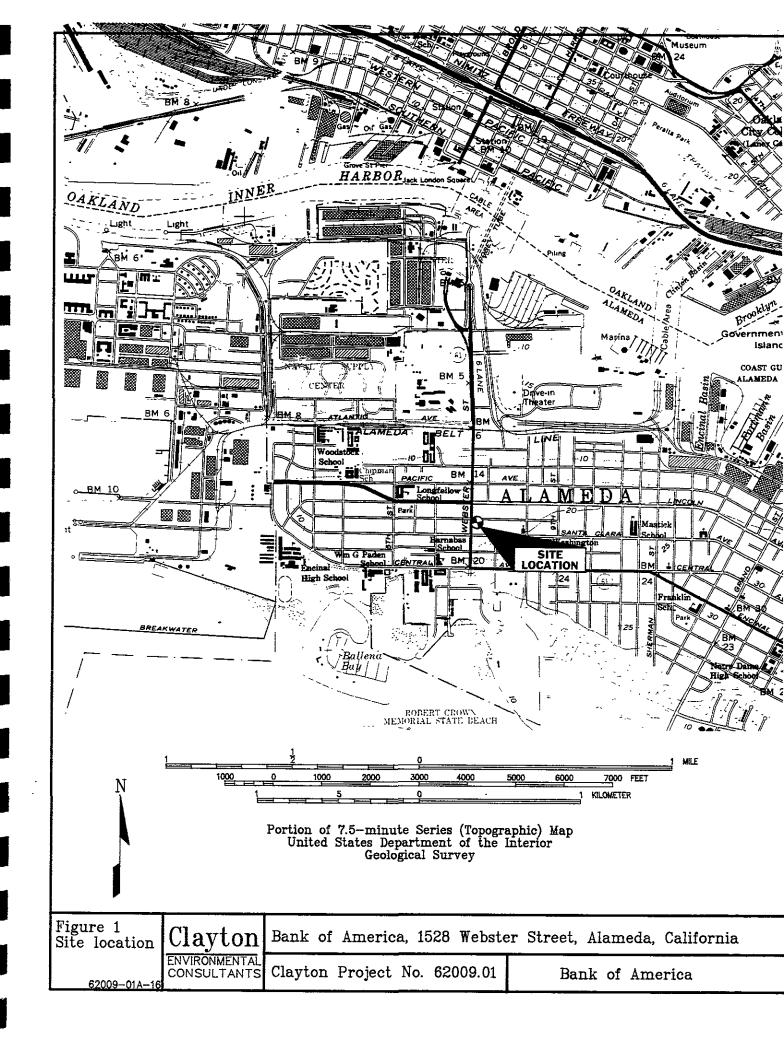
Supervisor, Geosciences and Remediation

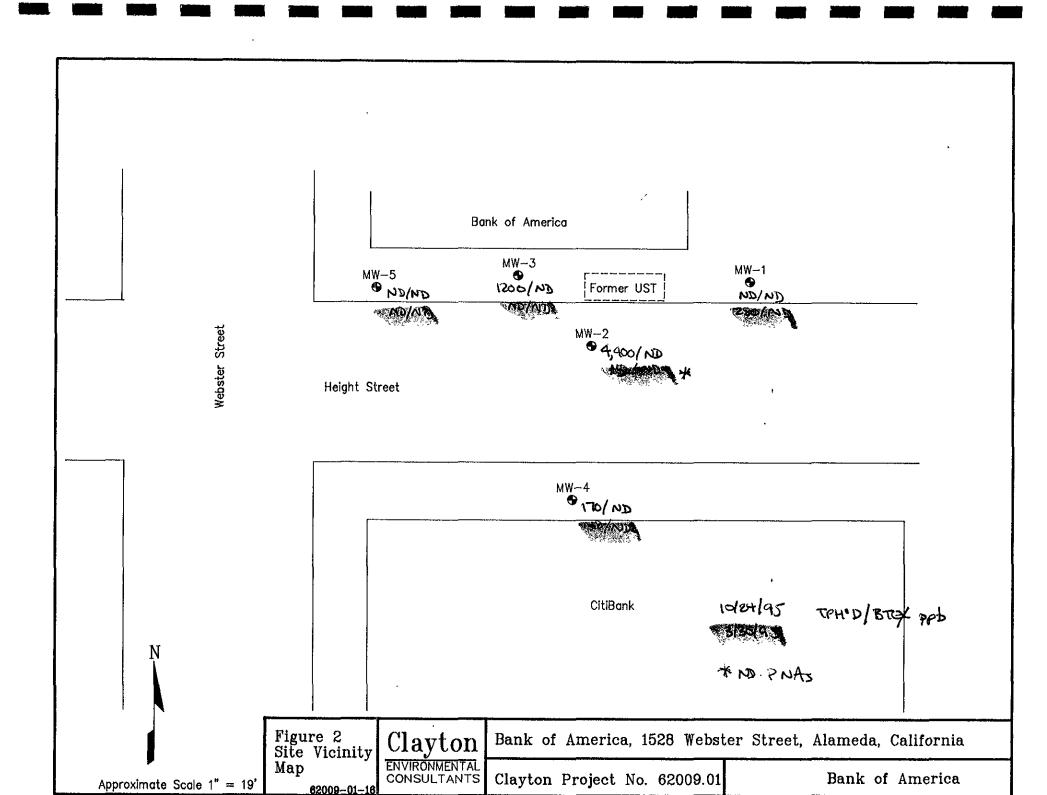
San Francisco Regional Office

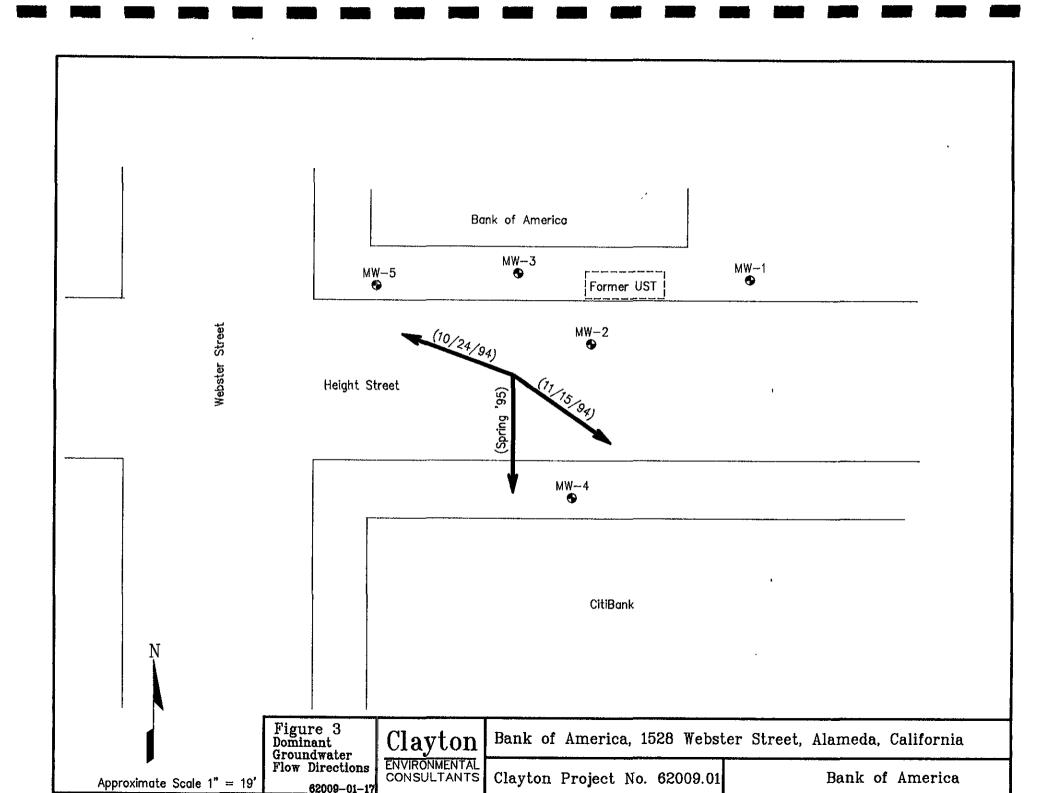
July 7, 1995



FIGURES









TABLES

Table 1
Analytical Summary for Groundwater Samples
Collected in October 1994 and March 1995
All Concnetrations in micrograms per liter (ug/L)

	T	PH-D	В	TEX	F	PNA	T	os -
	10/24/94	3/30/95	10/24/94	3/30/95	10/24/94	3/30/95	10/24/94	3/30/95
MW-1	ND	280.00	ND	ND	NA	NA	22,000,000	280,000
MW-2	4,400.00	ND	ND	ND	NA	ND	260,000	260,000
MW-3	1,200.00	ND _	ND .	ND	NA	NA	140,000	280,000
MW-4	170.00	ND	ND	ND	NA	NA	200,000	340,000
MW-5	ND	ND	ND	ND	NA	NA	180,000	170,000

TPH-D Total petroleum hydrocarbons as diesel BTEX Benzene, toluene, ethylbenzene, and xylenes

PNA Polynuclear aromatics

ND Not detected at or above analytical detection limits

NA Not analyzed

MW-2, 9700

Table 2
Groundwater Measurments and Elevation
October 1994 through May 1995
All measurments in feet

	MW-1	MW-2	MW-3	MW-4	MW-5
Top of Casing Elevation 10/24/94	13.07	13.52	13.34	13.69	13.52
Depth to Water 10/24/94	7.60	8.10	7.94	8.25	8.14
Groundwater Elevation 11/15/94	5.47	5.42	5.40	5.44	5.38
Depth to Water 11/15/95	6.38	6.79	6.44	7.02	6.58
Groundwater Elevation 3/30/95	6.69	6.73	6.90	6.67	6.94
Depth to Water 3/30/95	4.00	4.52	4.28	4.74	4.49
Groundwater Elevation 4/26/95	9.07	9.00	9.06	8.95	9.03
Depth to Water 4/26/95	4.48	4.98	4.78	5.18	4.93
Groundwater Elevation 4/26/95	8.59	8.54	8.56	8.51	8.59
Depth to Water 5/24/95	4.83	5.39	5.01	5.55	5.21
Groundwater Elevation 5/24/95	8.24	8.13	8.33	8.14	8.31



APPENDIX A

GROUNDWATER SAMPLING FIELD SURVEY FORM

Well # MW Sampling Met	Site: The sampling thod: Dispositions: Clear	Team: 1	M Springman ler	Date:	3.30-95
	ipment D-Con Be		10:00	Depth to Water Before Pumping	
Volume Height of Water Column: /5.0 Depth Purging	<u>∕∕</u> feet • From: <u>/9.0</u> f .al Discharge:	2-inch 16	Ameter 4-inch Volum .65 = 2.4 Time Surging B	Pi 19 gal * 4	urge actor To Purge = 9,96
_	Volume Purged 2 4 6 8 10	5,2 5,3 5,3 5,4	Conductivity /80 172 173 175	19.0 18.4 18.4 18.4 18.4	Notes Turbid

Well # Mw. Sampling Metho Field Condition		of A- Team: M Mw-1	Mameda 1 Springme	Date:	3 30-95
Describe Equips	ent D-Con Bef	ore Samplin	g This Well:		
Total Depth of Well: Volume Height of Water Column: 14,71 Depth Purging Fr	_ feet * om: <u>19.0</u> fe	2-inch .16	eter	95 gal • C	tenturge
Notes on Initial Time Vol 3:40 2:42 2:44	Discharge: Lume Purged 2 6 7 10	5,2 5,2 5,4 5,4 5,4	Conductivity 266 246 243 240 237	18.9 18.6 18.7 18.8 18.8	Notes Turbid Clear Clear Clear Clear Clear

	thod: <u>Sec</u>	AR LEWE:	Alanche	Date:	3.30 95
Describe Equ	uipment D-Con	Before Sampli	ng This Well:	·	
Volume Height of		2-inch (16) feet	4-inch Volu .65 = 2,4 Time Surging E	me <u>F</u> 49 gal *	Purge actor To Purge 9.96
	Volume Purged 2 4 6 8		Conductivity 075 79 8/	19.9 19.5 19.5 19.5	Turbid Pursed

Well # Mw-4 Sampling Method: Field Conditions:	Soc Mu	$\mathbf{r}: \mathbf{V} \mathbf{v} \cdot \mathbf{v}$	rla XIngria	Date: _	33020
Describe Equipment	D-Con Before	Sampling This	: Well:		
Total Depth 19.9 Volume Height of Water Column: 15.06 Depth Purging From:	feet +	Diameter 2-inch 4-inc (16) .65		gal * _ 4	or To Purge
1:54 1:55 1:57	Purged	5,0 2 5,3 2 5,3	100 100 100	18.3 18.3 18.7 18.7 18.9	Notes

Job # Well # [Site:	B = A -	Alameda M 6-	Date:	3-30.95
Sampling	Method:	e Nw-			
Describe	Equipment D-Con B	afore Sampli	ng This Well:	-	
Total Dep	th 19.7 te	et Time:	3:30	Depth to Water Before Pumping	. <u>U.52</u>
Volume Height of Vater Column: _ Hepth Purg	/5./8 feet *	2-inch	meter 4-inch Volum .65 = Δ. Time Surging E	<u>re</u> <u>F</u>	/
T1me	nitial Discharge: <u>Volume Purged</u>	Torbid			
3 - 2 3 - 44 8 - 46 3 - 48	2 4 <u>6</u> 8	5.2 5.3 5.4	450 450 450 440	18 7 18 7 18 7	Notes Tirked Clear
3:50	10	5.4	<u>376</u> <u>370</u>	18.7 18.7	→

EWATER.TBL (11/21/88)



APPENDIX B

ANALYTICAL REPORTS

1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



April 12, 1995

Mr. Dariush Dastmalchi CLAYTON ENVIRONMENTAL CONSULTANTS, INC. 1252 Quarry Lane Pleasanton, CA 94566

> Client Ref.: 69009.00 Clayton Project No.: 95034.45

Dear Mr. Dastmalchi:

Attached is our analytical laboratory report for the samples received on March 30, 1995. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after May 12, 1995, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH

Director, Laboratory Services

San Francisco Regional Office

HAH/caa

Attachments

Page 2 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 69009.00 Clayton Project No. 95034.45

Sample Identification: MW-2

Lab Number:

9503445-03F

Sample Matrix/Media:

WATER

Extraction Method: Method Reference:

EPA 3510 EPA 8310 Date Sampled:

03/30/95

Date Received: 03/30/95 Date Extracted: 04/04/95

Date Analyzed:

04/05/95

Analyst: ASC

		MIGTARC:	ASC
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Polynuclear Aromatic Hydrocarbons			
Acenaphthene Acenaphthylene Anthracene Benzo(a) anthracene Benzo(b) fluoranthene Benzo(g,h,i) perylene Benzo(k) fluoranthene Chrysene Dibenzo(a,h) anthracene Fluoranthene Fluorene Indeno(1,2,3-c,d) pyrene Naphthalene Phenanthrene Pyrene	83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	ND N	0.2 0.5 0.05 0.02 0.02 0.02 0.02 0.02 0.02 0.05 0.05 0.05 0.05
Surrogates		Recovery (%)	OC Limits (%)
Triphenylene	217-59-4	93	30 - 150
_			

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

Page 3 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 69009.00

Clayton Project No. 95034.45

Sample Identification: METHOD BLANK

Date Sampled:

Lab Number:

9503445-06A

Date Received:

Sample Matrix/Media: Extraction Method:

WATER Date Extracted: 04/04/95 EPA 3510 Date Analyzed: 04/05/95

Method Reference:

EPA 8310

Analyst: ASC

		*	
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Polynuclear Aromatic Hydrocarbons			
Acenaphthene Acenaphthylene Anthracene Benzo(a) anthracene Benzo(a) pyrene Benzo(b) fluoranthene Benzo(g,h,i) perylene Benzo(k) fluoranthene Chrysene Dibenzo(a,h) anthracene Fluoranthene Fluorene Indeno(1,2,3-c,d) pyrene Naphthalene Phenanthrene Pyrene	83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 91-20-3 85-01-8 129-00-0	ND N	0.2 0.5 0.05 0.02 0.02 0.04 0.02 0.02 0.02 0.05 0.05 0.04 0.2 0.05
Surrogates		Recovery (%)	OC Limits (%)
Triphenylene	217-59-4	89	30 - 150

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

Page 4 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 69009.00

Clayton Project No. 95034.45

Sample Identification: MW-1

Lab Number:

9503445-01A

Sample Matrix/Media:

WATER

Preparation Method: EPA 5030 Method Reference:

EPA 8015/8020

Date Sampled:

03/30/95 Date Received: 03/30/95

Date Prepared: 04/04/95 Date Analyzed: 04/04/95

Analyst:

WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p.m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4 50
Surrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	93	50 - 150

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

Page 5 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 69009.00

Clayton Project No. 95034.45

Sample Identification: MW-3

Lab Number:

Sample Matrix/Media: Preparation Method:

WATER

Method Reference:

9503445-02A

EPA 5030

EPA 8015/8020

Date Sampled: 03/30/95

Date Received: 03/30/95 Date Prepared: 04/04/95

Date Analyzed:

04/04/95

Analyst: WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p.m-Xylenes		ND	0.4
Gasoline		ND	50
Surrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	79	50 - 150

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

Page 6 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 69009.00 Clayton Project No. 95034.45

Sample Identification: MW-2

Lab Number:

9503445-03A

Sample Matrix/Media: Preparation Method: Method Reference:

WATER EPA 5030

EPA 8015/8020

Date Sampled: Date Received:

03/30/95 03/30/95

Date Prepared: Date Analyzed:

04/04/95 04/04/95

Analyst:

WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline		_	
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4 50
Surrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	77	50 - 150

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

Page 7 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 69009.00 Clayton Project No. 95034.45

Sample Identification: MW-4

Lab Number:

9503445-04A

Sample Matrix/Media:

WATER

Preparation Method: Method Reference:

VATER

EPA 5030

EPA 8015/8020

Date Sampled:

Date Received:
Date Prepared:

03/30/95 03/30/95 04/04/95

Date Analyzed:

04/04/95

Analyst: WAS

			inidijbe.	MILD			
Analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)			
BTEX/Gasoline							
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline		71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4 50			
Surrogates			Recovery (%)	OC Limits (%)			
a,a,a-Trifluorotolu	ene	98-08-8	91	50 - 150			

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



Page 8 of 11

03/30/95

03/30/95

04/04/95

Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 69009.00 Clayton Project No. 95034.45

Sample Identification: MW-5

Lab Number:

Sample Matrix/Media: Preparation Method:

Method Reference:

9503445-05A

WATER EPA 5030

EPA 8015/8020

Date Sampled:

Date Received: Date Prepared:

Date Analyzed:

04/04/95 WAS

Analyst:

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4
<u>Surrogates</u>		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	98	50 - 150

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

Page 9 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 69009.00

Clayton Project No. 95034.45

Sample Identification: METHOD BLANK

Lab Number:

Sample Matrix/Media: Preparation Method:

Method Reference:

9503445-06A

WATER EPA 5030

EPA 8015/8020

Date Sampled:

Date Received: --

Date Prepared: 04/04/95 Date Analyzed: 04/04/95

Analyst: WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline	71-43-2 100-41-4 108-88-3 95-47-6	ND ND ND ND ND	0.4 0.3 0.3 0.4 0.4
Surrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	101	50 ~ 150

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

Page 10 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 69009.00

Clayton Project No. 95034.45

Sample Identification: See Below

Date Received: 03/30/95

Lab Number:

9503445

Date Extracted: 04/05/95 Date Analyzed: 04/07/95

Sample Matrix/Media:

WATER

Extraction Method: EPA 3510 Method Reference:

EPA 8015 (Modified)

Lab Number	Sample Identification	Date Sampled	TPH-D (ug/L)	Method Detection Limit (ug/L)
-01	MW - 1	03/30/95	280	50
-02	MW-3	03/30/95	ND	50
-03	MW-2	03/30/95	ND	50
-04	MW-4	03/30/95	ND	50
-05	MW - 5	03/30/95	ND	50
-06	METHOD BLANK		ND	50

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

TPH-D = Extractable petroleum hydrocarbons from C10 to C42 quantitated as diesel.

Page 11 of 11

Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 69009.00 Clayton Project No. 95034.45

Sample Identification: See Below

Date Received: 03/30/95 Date Analyzed: 04/06/95

Lab Number:

9503445

Sample Matrix/Media:

WATER

Method Reference: EPA 160.1

Lab Number	Sample Identification	Date Tota Sampled	al Dissolved Solids (mg/L)	Method Detection Limit (mg/L)
-01	MW-1	03/30/95	280	10
-02	MW - 3	03/30/95	260	10
-03	MW-2	03/30/95	280	10
-04	MW-4	03/30/95	340	10
-05	MW-5	03/30/95	170	10
-06	METHOD BLANK		<10	10

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

Quality Assurance Results Summary

Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 95034.45

Clayton Project No. 95034.45

Clayton Lab Number: Ext./Prep. Method:

9503445-LCS EPA3510 04/05/95

Date: Analyst:

HYT

Std. Source:

E950330-01W

Sample Matrix/Media:

WATER

Analytical Method: Instrument ID: Date: Time:

Analyst:

Units:

ι,

02893 04/07/95 14:37 · , FAK UG/L

EPA8015

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD	UCL (%RPD)
DIESEL	ND	1,000	1,110	111	1,110	111	111	56	137	0.0	25

Clayton Lab Number: Ext./Prep. Method:

9503440-02B EPA 5030 04/04/95

Date: Analyst: Std. Source:

WAS V950301-02W

Sample Matrix/Media:

WATER

Analytical Method: Instrument ID:

Instrument
Date:
Time:
Analyst:

Units:

EPA8015_8020 05587 04/04/95 11:05 WAS UG/L

301-02W R

Analyte		Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID)	ND	10.2	11.1	109	10.4	102	105	81	118	6.5	20
ETHYLBENZENE	(PID)	ND	8.67	9.29	107	8.96	103	105	81	114	3,6	20
GASOLINE	(FID)	ND	500	534	107	511	102	105	80	150	4.4	25
TOLUENE	(PID)	ND	42.2	45.5	108	43.3	103	105	84	118	5.0	20
TOTAL XYLENE	(PID)	ND	48.9	53.5	109	50.3	103	106	85	115	6.2	20

Clayton Lab Number: Ext./Prep. Method:

9504041-LCS

EPA 3510 04/04/95 HYT

Std. Source:

Date:

Analyst:

G950123-02W

Sample Matrix/Media:

WATER

Analytical Method: Instrument ID: Date: Time: Analyst:

Units:

EPA8310 07478 04/05/95 14:43 ASC UG/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
(A) Naphthalene	ND	2.00	1.45	72	1.50	75	74	50	140	3.3	25
(B) Acenaphthene	ND	2.00	1.58	79	1.69	85	82	50	140	6.7	25
(C) Fluorene	ND	2.00	1.62	81	1.72	86	84	50	140	6.1	25
(D) Phenanthrene	ND	2.00	1.67	83	1.77	89	86	50	140	6.1	25
(E) Anthracene	ND	2.00	1.53	76	1.62	81	79	50	140	5.7	25
(F) Fluoranthene	ND	0.200	0.179	90	0.198	99	94	50	140	10	25
(G) Pyrene	ND	0.200	0.170	85	0.179	90	' · 87	50	140	5.2	25
(H) Benzo(a)anthracene	ND	0.200	0.173	87	0.176	88	87	50	140	1.5	25
(I) Chrysene	ND	0,200	0.177	88	0.186	93	91	50	140	5.1	25
(J) Benzo(b)fluoranthene	ND	0.200	0.174	87	0.181	90	89	50	140	3.5	25
(K) Benzo(k)fluoranthene	ND	0.100	0.0867	87	0.0887	89	88	50	140	2.3	25
(L) Benzo(a)pyrene	ND	0.200	0.179	90	0.181	91	90	50	140	1.2	25
(M) Dibenzo(a,h)anthracene	ND	0.200	0.186	93	0.188	94	94	50	140	1.1	25
(N) Benzo(g,h,i)perylene	ND	0.200	0.186	93	0.190	95	94	50	140	2,1	25
(0) Indeno(1,2,3-c,d)pyrene	ND	0.200	0.181	91	0.184	92	' ' 91	50	140	1.4	25
(P) Acenaphthylene	ND	2.00	1.43	72	1.58	79	75	50	140	9.8	25



REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

For Clayton Use Only Page	of 2
Project No.	
Batch No. 950	3445
nd. Code	W.P.
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	(Client Signature Must Accompany Re	equest)															
<u> </u>		. ,															

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

Novi, MI 48375 (810) 344-1770

22345 Roethel Drive Raritan Center 160 Fieldcrest Ave. Edison, NJ 08837

(908) 225-6040

400 Chastain Center Blvd., N.W. Suite 490

Kennesaw, GA 30144 (404) 499-7500

1252 Quarry Lane Pleasanton, CA 94566 (510) 426-2657

DISTRIBUTION:

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



REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

For Clayton U	se Only Pa	ıge <u> </u>	1_2
Project No.			
Batch No.	950	3445	
Ind. Code	- /	W.P.	

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Date Results Req.: Rush Charges Authorized? Phone / Fax Results Samples are:						T [C)	, State	, <u>Z</u> ID		ANI	AL VOIO	DEOLIG	OTER				
TANDITE Yes LAND Check if applicable)					ANALYSIS REQUESTED (Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added.												
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* Explanation of Preservative: P. Hcl State of New York							/ \\\$	M	1/1/		7 /						
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Authorized by:) No				()		forbidii	''	
(Client Signature Must Accompany Request)						· •	-	-	1	_ /	•						
Please return completed form and samples to one of the Clauton Environmental Consultants to										· · · · · · · · · · · · · · · · · · ·							

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