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Alameda County  
Environmental Health



**ENVIRONMENTAL ENGINEERING, INC.**  
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May 14, 2009

Ms. Audrey Comeaux  
East Bay Municipal Utility District  
P. O. Box 24055  
Oakland, CA 94623-1055

Re: 3820 Manila Avenue, Oakland, CA  
**Wastewater Discharge Permit No. 50638151**

Dear Ms. Comeaux:

As you requested, enclosed is SOMA's "Technical Report Treatment System Discharge to EBMUD Sewer March 10 through May 12, 2009" for the subject permit. This report has been uploaded to the State's GeoTracker database.

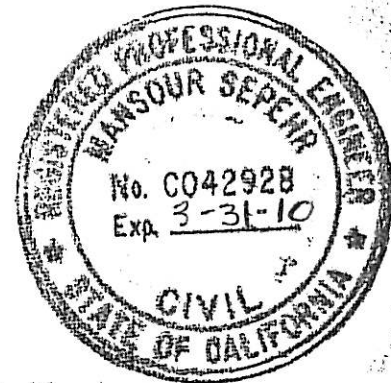
Thank you for your time in reviewing our report. If you have any questions or comments, please call me at (925) 734-6400.

Sincerely,

A handwritten signature in black ink, appearing to read "Mansour Sepehr", written over a horizontal line.

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist

Enclosure



cc: Mr. Jerry Wickham, Alameda County Dept. of Env. Health w/o enclosure  
Mr. Albert M. Cohen, LOEB&LOEB LLP w/enclosure

**Technical Report  
Treatment System Discharge to EBMUD Sewer  
For Permit No. 50638151  
March 10, 2009 through May 12, 2009**

**The Former Glovatorium Facility  
3820 Manila Avenue  
Oakland, California**

**May 14, 2009**

**Project 2515**

**Prepared for:**

**Loeb & Loeb LLP  
10100 Santa Monica Boulevard, Suite 2200  
Los Angeles, California 90067-4164**



**ENVIRONMENTAL ENGINEERING, INC.**

6620 Owens Drive Suite A Pleasanton CA 94588 Ph: 925.734.6400 F: 925.734-6401 [www.somaenv.com](http://www.somaenv.com)

## Certification Statement

Stuart Depper  
Name


Responsible Party  
Title

3820 Manila Avenue  
Street Address

Oakland  
City

94609  
Zip

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

  
Signature

5/14/09  
Date

## CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report for the Law Offices of Loeb & Loeb LLP, to comply with East Bay Municipal Utility District requirements for discharge of extracted and treated groundwater resulting from cleanup of groundwater using Multi-Phase Extraction technology.



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Mansour Sepehr, PhD, PE  
Principal Hydrogeologist



## **TABLE OF CONTENTS**

CERTIFICATION .....	i
LIST OF TABLES.....	ii
LIST OF APPENDICES .....	ii
1. INTRODUCTION .....	1
2. Multi-PHASE EXTRACTION PILOT TESTING AND TREATMENT SYSTEM OPERATION.....	1
3. CONCLUSIONS .....	1

## **LIST OF TABLES**

Table 1:	Total Volume of Water Treated, Operational Data, and Effluent and GAC-1 Analytical Results
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## **LIST OF APPENDICES**

Appendix A:	Log of Totalizer Readings
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## **1. INTRODUCTION**

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report for the Law Offices of Loeb & Loeb LLP on behalf of their client, the owners of the subject property. The property, the former Glovatorium, is located at 3820 Manila Avenue (formerly known as 3815 Broadway), Oakland, California.

This report presents a record of wastewater discharged from the remediation system located at 3815 Broadway, Oakland, California into the East Bay Municipal Utility District (EBMUD) sewer system for the reporting period of March 10, 2009 through May 12, 2009. The remediation system was operated by SOMA Environmental Engineering, Inc. (SOMA).

## **2. MULTI-PHASE EXTRACTION PILOT TESTING AND TREATMENT SYSTEM OPERATION**

SOMA began discharging treated groundwater from operation of Multi-Phase Extraction (MPE) pilot testing into the EBMUD sewer system on September 15, 2008. The extraction was discontinued in October 2008. Therefore no discharge occurred between October 22, 2008 and December 17, 2008.

Extraction was resumed on December 17, 2008. During the reporting period of March 10, 2009 through May 12, 2009, approximately 36,264 gallons of groundwater were treated and discharged into the EBMUD sewer system during the MPE event.

The groundwater extracted during the MPE was treated by the treatment system consisting of one 1000-lb granular activated carbon unit followed by one 55 gallon carbon polishing vessel. SOMA conducted regular system maintenance to ensure compliance with the EBMUD wastewater discharge permit. Carbon change-out was conducted on both carbon units on May 8, 2009.

Table 1 shows the daily and total volume of effluent discharged into the EBMUD sewer system and laboratory analysis results of samples collected from effluent of the treatment system. Appendix A includes the log of totalizer readings as required by the discharge permit.

## **3. CONCLUSIONS**

From March 10, 2009 through May 12, 2009, approximately 36,264 gallons of groundwater was treated and discharged into the on-site sewer main;

1. The permit specifies an allowable discharge rate of 100 gallons per minute or approximately 144,000 gallons per day. During the above mentioned

reporting period, approximately 585 gallons/day were discharged to the site sewer main.

2. Therefore, based on the discharge flow rate, the remedial system has remained in compliance with the EBMUD permit conditions.

# **TABLE 1**

## **Total Volume of Water Treated, Operational Data, and Effluent Analytical Results**



**Table 1**  
**Total Volume of Water Treated, Operational Data,**  
**and Laboratory Analytical Results for Effluent Samples**  
**3815 Broadway, Oakland, California**

Date	Effluent Totalizer Reading (gallons)	Lab Results and for Effluent Samples and Operation of Treatment System											pH
		2-Butanone (ug/L)	Arsenic (ug/L)	Chromium (ug/L)	Copper (ug/L)	Iron (ug/L)	Lead (ug/L)	Mercury (ug/L)	Nickel (ug/L)	Silver (ug/L)	Zinc (ug/L)	Total Oil & Grease (HEM) (ug/L)	
9/15/2008	1,010	Started discharging to EBMUD Sewer											
9/16/2008	1,312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/17/2008	1,417	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/18/2008	1,582	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/19/2008	2,071	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/22/2008	2,327	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/23/2008	2,440	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/9/2008	2,490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/13/2008	2,490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/14/2008	3,178	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/15/2008	3,378	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/16/2008	3,568	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/17/2008	3,842	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>10/20/2008</b>	<b>3,894</b>	<b>36</b>	<b>1.9</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;50</b>	<b>&lt;1.0</b>	<b>3.1</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>5.2</b>	<b>&lt;4.7</b>	<b>7.6</b>
10/22/2008	3,904	Discharge to EBMUD sewer system discontinued											
12/17/2008	3,904	Discharge to EBMUD sewer system resumed											
12/18/2008	4,461	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/19/2008	4,620	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		No discharge on Dec 20 and 21, 2008											
12/22/2008	4,620	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		No discharge from Dec 23 to Dec 28, 2008											
12/29/2008	4,640	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2008	5,414	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2008	5,632	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Total Volume of Water Treated, Operational Data,**  
**and Laboratory Analytical Results for Effluent Samples**  
**3815 Broadway, Oakland, California**

Date	Effluent	Lab Results and for Effluent Samples and Operation of Treatment System											
	Totalizer Reading (gallons)	2-Butanone (ug/L)	Arsenic (ug/L)	Chromium (ug/L)	Copper (ug/L)	Iron (ug/L)	Lead (ug/L)	Mercury (ug/L)	Nickel (ug/L)	Silver (ug/L)	Zinc (ug/L)	Total Oil & Grease (HEM) (ug/L)	pH
		No discharge from Jan 1 to Jan 4 , 2009											
1/5/2009	5,632	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>1/6/2009</b>	<b>6,374</b>	<b>&lt;50</b>	<b>5.5</b>	<b>15</b>	<b>5.6</b>	<b>430</b>	<b>&lt;1.0</b>	<b>&lt;0.20</b>	<b>1.6</b>	<b>&lt;1.0</b>	<b>5.3</b>	<b>4,910</b>	<b>7.1</b>
1/7/2009	6,988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/8/2009	7,988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/9/2009	8,299	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/12/2009	9,025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/13/2009	9,029	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/14/2009	9,029	System shut down and remained off overnight											
1/16/2009	9,195	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/19/2009	9,242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/20/2009	9,570	System down upon arrival and restarted shortly after inspection											
1/21/2009	10,075	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/26/2009	10,299	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/27/2009	10,805	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/28/2009	12,517	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/29/2009	13,373	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/30/2009	14,313	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/2/2009	14,992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/3/2009	15,962	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/4/2009	15,989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/5/2009	15,989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/13/2009	16,213	Installed new transfer pump motor on 2/16/09											
2/19/2009	18,332	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/20/2009	19,272	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/24/2009	21,299	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/27/2009	21,387	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/28/2009	21,595	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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	Totalizer Reading (gallons)	2-Butanone (ug/L)	Arsenic (ug/L)	Chromium (ug/L)	Copper (ug/L)	Iron (ug/L)	Lead (ug/L)	Mercury (ug/L)	Nickel (ug/L)	Silver (ug/L)	Zinc (ug/L)	Total Oil & Grease (HEM) (ug/L)	pH
3/9/2009	27,066	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/10/2009	27,863	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/11/2009	29,562	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/12/2009	31,885	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/13/2009	31,944	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/16/2009	33,184	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/17/2009	33,298	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/18/2009	33,471	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/19/2009	35,947	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/20/2009	36,472	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/23/2009	38,962	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/24/2009	40,307	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/25/2009	40,396	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/26/2009	42,445	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/27/2009	43,427	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/30/2009	43,457	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/31/2009	45,845	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/1/2009	46,532	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/2/2009	46,589	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/3/2009	47,758	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/6/2009	50,877	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/7/2009	52,058	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/8/2009	52,507	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/13/2009	53,805	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/14/2009	54,061	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/15/2009	54,271	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Total Volume of Water Treated, Operational Data,**  
**and Laboratory Analytical Results for Effluent Samples**  
**3815 Broadway, Oakland, California**

Date	Effluent	Lab Results and for Effluent Samples and Operation of Treatment System											
	Totalizer Reading (gallons)	2-Butanone (ug/L)	Arsenic (ug/L)	Chromium (ug/L)	Copper (ug/L)	Iron (ug/L)	Lead (ug/L)	Mercury (ug/L)	Nickel (ug/L)	Silver (ug/L)	Zinc (ug/L)	Total Oil & Grease (HEM) (ug/L)	pH
4/16/2009	54,457	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/17/2009	54,665	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/20/2009	55,381	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/21/2009	55,603	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/22/2009	55,803	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/23/2009	55,997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/24/2009	56,224	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/27/2009	56,839	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/28/2009	57,046	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/29/2009	57,258	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/30/2009	57,454	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/1/2009	57,623	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/7/2009	59,779	5/4-5/6 System shut down for on-site soil investigation											
5/8/2009	59,779	Carbon change-out of 1000 lb liquid phase vessel and 55 gal. polishing vessel											
5/11/2009	63,401	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/12/2009	64,127	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Discharge Limits (µg/L)</b>		<b>100,000</b>	<b>2,000</b>	<b>1,000</b>	<b>5,000</b>	<b>100,000</b>	<b>2,000</b>	<b>50</b>	<b>5,000</b>	<b>1,000</b>	<b>5,000</b>	<b>100,000</b>	<b>&gt;5.5</b>

Notes:

ND, < : Not Detected above laboratory reporting limits

NA: Not Analyzed

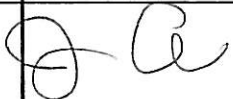
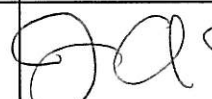
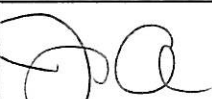



Y: Sample exhibits fuel pattern which does not resemble standard

# **APPENDIX A**

## **Log of Totalizer Readings**







O & M Log  
3815 Broadway, Oakland

O&M Checklist

	3/10/9	3/11/9	3/12/9	3/13/9	3/16/9	3/17/9
Date & Time	3/10/9	3/11/9	3/12/9	3/13/9	3/16/9	3/17/9
Record Totalizer Reading	27,863	29,562	31,885	31,944	33,184	33,298
Check for water leaks in system	✓	✓	✓	✓	✓	✓
Carbon change-out performed	no	no	no	no	no	no
Signature (Site Manager)						
Notes:						


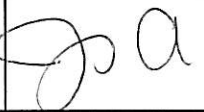




**O & M Log**  
**3815 Broadway, Oakland**

**O&M Checklist**

Date & Time	3/18/9	3/19/9	3/20/9	3/23/9	3/24/9	3/25/9
Record Totalizer Reading	33,471	35,947	36,472	38,962	40,367	40,396
Check for water leaks in system	✓	✓	✓	✓	✓	✓
Carbon change-out performed	no	no	no.	no	no	no
Signature (Site Manager)						
Notes:						

**O & M Log**  
3815 Broadway, Oakland



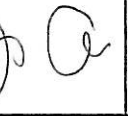

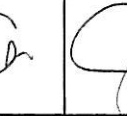

**O&M Checklist**

Date & Time	3/26/9	3/27/9	3/30/9	3/31/9	4/1/9	4/2/9
Record Totalizer Reading	42,445	43,427	43,457	45,845	46,532	46,589
Check for water leaks in system	✓	✓	✓	✓	✓	✓
Carbon change-out performed	no	no	no	no	no	no
Signature (Site Manager)						
Notes:						






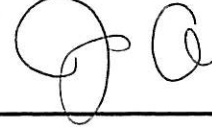

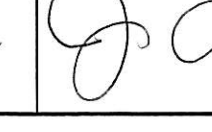
O & M Log  
3815 Broadway, Oakland

O&M Checklist

	4/3/9	4/4/9	4/7/9	4/8/9	4/13/9	4/14/9
Date & Time	4/3/9	4/4/9	4/7/9	4/8/9	4/13/9	4/14/9
Record Totalizer Reading	47,758	50,877	52,058	52,507	53,805	54,061
Check for water leaks in system	✓	✓	✓	✓	✓	✓
Carbon change-out performed	no	no	no	no	no	no
Signature (Site Manager)						
Notes:						



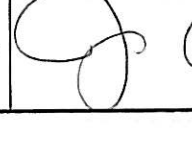



**O & M Log**  
**3815 Broadway, Oakland**

**O&M Checklist**

Date & Time	4/15/9	4/16/9	4/17/9	4/20/9	4/21/9	4/22/9
Record Totalizer Reading	54,271	54,457	54,665	55,381	55,603	55,803
Check for water leaks in system	✓	✓	✓	✓	✓	✓
Carbon change-out performed	no	no	no	no	no	no
Signature (Site Manager)						
Notes:						

**O & M Log**  
3815 Broadway, Oakland

**O&M Checklist**

Date & Time	4/23/9	4/24/9	4/27/9	4/28/9	4/29/9	4/30/9
Record Totalizer Reading	55,997	56,224	56,839	57,046	57,258	57,454
Check for water leaks in system	✓	✓	✓	✓	✓	✓
Carbon change-out performed	no	no	no	no	no	no
Signature (Site Manager)						
Notes:	<div style="border: 1px solid black; height: 100px; width: 100%;"></div>					

**O & M Log**  
3815 Broadway, Oakland

**O&M Checklist**

Date & Time	5/11/9	<del>5/7/9</del> 5/7/9	5/8/9	5/11/9	5/12/9	
Record Totalizer Reading	57,623	59,779	59,779	63,401	64,127	
Check for water leaks in system	✓	✓	✓	✓	✓	
Carbon change-out performed	no	no	yes.	no	no	
Signature (Site Manager)	[Signature]	[Signature]	[Signature]	[Signature]	[Signature]	
Notes:	5/4 & 5/6 System shut down for onsite soil investigation & sampling					
	5/8 - carbon change out of 1000 lb liquid phase vessel and					
	SS gal. vessel for polishing.					