REPORT OF OZONE REMEDIATION PILOT TEST SYSTEM INSTALLATION AND START UP

3800 San Pablo Avenue Emeryville, California ACDEH Fuel Leak Case: RO00002520

Prepared for:

San Pablo Avenue Venture c/o Banker, Marks & Kirk 1721 Broadway, Suite 202 Oakland, CA 94612

October 25, 2013

GEOLOGIC & ENVIRONMENTAL CONSULTING SERVICES

GRIBI ASSOCIATES 1090 Adams Street, Suite K Benicia, California, 94510 Phone: (707)748-7743 Fax: (707) 748-7763 www.gribiassociates.com



October 25, 2013

Ms. Elaine Kirk San Pablo Avenue Venture c/o Banker, Marks & Kirk 1721 Broadway, Suite 202 Oakland, CA 94612

Attention: Mr. Wei Liu

Subject: Report of Ozone Remediation Pilot Test System Installation and Startup

Report of Soil Boring and Well Installation Activities 3800 San Pablo Avenue, Emeryville, California

ACDEH Fuel Leak Case: RO00002520; Global ID: T06019788682

Ladies and Gentlemen:

Gribi Associates is pleased to submit this *Report of Ozone Remediation Pilot Test System Installation and Startup* for the underground storage tank (UST) site located at 3800 San Pablo Avenue in Emeryville, California (Site). Specific tasks conducted and reported herein included: (1) The installation and sampling of three ozone injection wells (OW-1, OW-2, and OW-3); (2) The installation of ozone delivery piping; (3) The installation of an ozone generation unit; (4) Remediation system start-up and system operational check; and (5) The monitoring of site wells in late September 2013.

We appreciate the opportunity to present this report for your review. Please call if you have any questions or require additional information.

Very truly yours,

Matthew A. Rosman

Project Engineer

James E. Gribi Registered Geologist California No. 5843

James & A

JEG:MAR/ct

TABLE OF CONTENTS

EXE	CUTIV	E SUMMARY	1
1.0	INTR	ODUCTION	2
	1.2	Limitations	2
2.0	SITE	BACKGROUND	2
	2.1	General Site Description	
	2.2	General Site Topography and Geologic Setting	3
	2.3	Summary of Previous Environmental Investigation Activities	
		2.3.1 UST Removal Activities	
		2.3.2 Site Investigation Activities	3
2.0	DESC	CRIPTION OF FIELD ACTIVITIES	6
	2.1	Installation of Ozone Injection and Groundwater Monitoring Wells	6
		2.1.1 Pre-Field Activities	6
		2.1.2 Location of Injection Wells	6
		2.1.3 Drilling and Installation of Wells	6
		2.1.4 Laboratory Analysis of Soil Samples	7
	2.2	Installation of Remediation Equipment	
		2.2.1 Installation of Below-Ground Ozone Delivery Piping	7
		2.2.2 Installation of Remediation Equipment	7
	2.3	Remediation Equipment Startup and Operation	8
	2.5	Groundwater Monitoring Activities	8
3.0	RESU	JLTS OF OZONE INJECTION REMEDIATION ACTIVITIES	8
	3.1	Results of Well Installation Activities	8
		3.1.1 General Subsurface Conditions	8
		3.1.2 Laboratory Analytical Results	9
	3.2	Results of Ozone Injection Remediation System Operation	9
	3.3	Results of Groundwater Monitoring Activities	
4.0	CON	CLUSIONS	9



FIGURES

Figure 1	Site Vicinity Map
Figure 2	Site Plan
Figure 3	New Well Locations and Soil Hydrocarbon Results
Figure 4	Remediation System Layout

TABLES

Table 1 Summary of Soil Analytical ResultsTable 2 Summary of Groundwater Analytical Results

APPENDICES

Appendix A: Regulatory Permits Appendix B: Well Boring Logs

Appendix C: Laboratory Data Reports and Chain-of-Custody Records



EXECUTIVE SUMMARY

This report documents the installation and startup of an ozone injection remediation pilot test at the site. Specific tasks conducted and reported herein included: (1) The installation and sampling of three ozone injection wells (OW-1, OW-2, and OW-3); (2) The installation of ozone delivery piping; (3) The installation of an ozone generation unit; (4) Remediation system start-up and system operational check; and (5) Post-system startup sampling of site monitoring wells.

On February 21 and 22, 2013, three ozone injection wells were drilled and installed by Gregg Drilling (C-57 No. 485165). Above ground piping, well head connections, and ozone remediation equipment were installed between September 4 and September 6, 2013. System startup was conducted on September 9, 2013. Groundwater monitoring of the project site wells was conducted on September 26, 2013.

After startup on September 9, 2013, , the system operated continuously until October 11, 2013, when an equipment malfunction required taking the equipment offline in order to repair. After repairs, the ozone injection system was restarted on Wednesday, October 23, 2013.

Groundwater samples collected on September 26, 2013, less than 3 weeks after the start of ozone remediation, showed significant reductions in groundwater hydrocarbon concentrations in two of the four Site wells. At MW-2, TPH-G and benzene concentrations dropped from 12,000 to 930 ug/L and 870 to 39 ug/L, respectively. At MW-3, TPH-G and benzene concentrations dropped from 12,000 to 5,500 ug/L and 1,400 to 190 ug/L, respectively. Groundwater hydrocarbon concentrations for samples from wells MW-1 and MW-4 were generally similar to previous results and did not show significant reductions.

Post- system startup groundwater samples showed significant reductions in hydrocarbon concentrations in a relatively short time, indicating that ozone remediation appears to be an effective technology to address subsurface soil and groundwater hydrocarbon impacts at the Site. Gribi Associates will continue to operate the remediation system and will perform Fourth Quarter 2013 groundwater monitoring and sampling at the site in December 2013.



1.0 INTRODUCTION

Gribi Associates is pleased to submit this *Report of Ozone Remediation Pilot Test System Installation and Startup* for the underground storage tank (UST) site located at 3800 San Pablo Avenue in Emeryville, California (Site) (Figure 1 and Figure 2). Specific tasks conducted and reported herein included: (1) The installation and sampling of three ozone injection wells (OW-1, OW-2, and OW-3); (2) The installation of ozone delivery piping; (3) The installation of an ozone generation unit; (4) Remediation system start-up and system operational check; and (5) Postsystem startup sampling of site monitoring wells.

1.1 Scope of Work

Gribi Associates was contracted by San Pablo Avenue Venture to conduct the following scope of work.

- Task 1 Conduct prefield activities.
- Task 2 Install three ozone injection wells.
- Task 3 Install remediation equipment.
- Task 4 Conduct remediation startup and monitoring
- Task 5 Prepare report of findings.

These tasks were conducted in accordance with the approved workplan and with generally accepted sampling guidelines and protocols.

1.2 Limitations

The services provided under this contract as described in this report include professional opinions and judgments based on data collected. These services have been provided according to generally accepted environmental protocol. The opinions and conclusions contained in this report are typically based on information obtained from:

- 1. Observations and measurements made by our field staff.
- 2. Contacts and discussions with regulatory agencies and others.
- 3. Review of available hydrogeologic data.

2.0 SITE BACKGROUND

2.1 General Site Description

The Site is located in a mixed commercial, light industrial, and residential area of southeast Emeryville near the Oakland/Emeryville city border. The Site is bordered to the south by Apgar Street, followed by the West MacArther Boulevard underpass. East from the Site is an auto repair facility, followed by residential properties. The Site is bordered on the west by the Adeline



Street and San Pablo Avenue intersection, which extends approximately 100 feet west from the Site. North from the Site are commercial and residential properties. The Site is currently used for storage.

2.2 General Site Topography and Geologic Setting

According to the USGS Oakland, West, California 7.5-Minute Quadrangle Map, the Site lies on a gently southwest-sloping plain approximately one mile east from San Francisco Bay. The elevation at the Site is approximately 40 feet above mean sea level. Based on site topography and location, we would expect groundwater flow in the site area to generally be to the west towards San Francisco Bay.

Subsurface soils at the site and in the site area generally consist of clays, with occasional thin, discontinuous silts, sands, and gravels. Groundwater at the site is generally encountered at depths below 10 feet below surface grade.

2.3 Summary of Previous Environmental Investigation Activities

The following sections describe previous underground storage tank (UST) removal and environmental investigation activities conducted at the Site.

2.3.1 UST Removal Activities

According to previous reports and records, there were previously two separate UST fueling systems on the Site. One system included two 1,000-gallon gasoline USTs and, while the exact location of these USTs is not known, these USTs were most likely located in the parking lot on the northeast side of the Site. The second system included one 1,000-gallon heating oil UST and one 550-gallon heating oil UST, both located in, and adjacent to, the Adeline Street sidewalk on the northwest property boundary.

The gasoline UST system was apparently removed in 1981, and there is no record of environmental sampling during the removal. The two heating oil USTs were removed in May 2002. One soil sample was collected beneath each of the removed USTs at a depth of approximately seven feet in depth. These soil samples showed up to 440 milligrams per kilogram (mg/kg) of Total Petroleum Hydrocarbons as Gasoline (TPH-G). The UST excavation cavities were subsequently overexcavated, and subsequent soil samples collected at approximately ten feet in depth showed relatively low levels of hydrocarbons.

2.3.2 Site Investigation Activities

In May 2007, Enviro Soil Tech Consultants (ESTC) drilled and sampled seven soil borings, B-1 through B-7, in the small parking lot on the northwest (Adeline Street) side of the Site (see Figure 2). Soil samples collected at five-foot intervals down to 20 feet in depth showed no significant hydrocarbon detections. Grab groundwater samples from borings B-2, B-4, and B-7, located on the extreme north and south sides of the parking lot, showed no significant hydrocarbon detections. Grab groundwater samples from borings B-1, B-3, B-5, and B-6, located on the middle of the parking lot from the extreme east (building) edge to the southwest (Adeline Street)



edge of the lot, showed TPH-G concentrations ranging from 4,500 micrograms per liter (ug/l) to 780,000 ug/l, and Benzene concentrations ranging from 7.5 ug/l to 6,400 ug/l. The configuration of these groundwater hydrocarbon detections seemed to point to a southwest aligned groundwater hydrocarbon plume that originated northeast of the small Adeline Street parking lot itself. This conclusion of a northeasterly source was bolstered by the lack of soil hydrocarbon detections or field evidence of shallow soil impacts in the seven soil borings.

In December 2011, Gribi Associates drilled and sampled seven investigative borings, B-8 through B-14, on the site (Report of Soil and Groundwater Investigation and Workplan to Conduct Additional Investigation Activities, 3899 San Pablo Avenue, Emeryville, California, Gribi Associates, January 26, 2012). Soils encountered in the borings generally consisted of clays, with relatively thin discontinuous silty and clayey gravels and sands present in some of the borings. Soil and grab groundwater samples from the seven borings were analyzed for both gasoline- and diesel-range hydrocarbons. Very low concentrations (below 50 milligrams per kilogram, mg/kg) of diesel-range hydrocarbons were encountered in soil samples below ten feet in depth in borings B-8 and B-11. Very low concentrations (below 5 mg/kg) of gasoline-range hydrocarbons were encountered in soil samples below ten feet in depth in borings B-8, B-12, B-13, and B-14. Low concentrations of gasoline-range hydrocarbons, with no BTEX constituents, were encountered in grab groundwater samples from B-8 and B-14. Moderate levels of gasoline-range hydrocarbons were encountered in grab groundwater samples from borings B-12 and B-13. Results of this investigation indicated that the previously-identified groundwater hydrocarbon plume beneath the Adeline Street parking lot is localized and did not originate from elsewhere on the Site. Further, it appeared that the source, or sources, of the groundwater hydrocarbon impacts in the Adeline Street parking lot are either the former USTs in the Adeline Street sidewalk (removed in 2002) or perhaps fuel dispensers associated with these former USTs. The report for this investigation included a workplan to: (1) The installation and monitoring of four groundwater monitoring wells in the Adeline Street parking lot; (2) The drilling and sampling of three soil borings on the west side of San Pablo Avenue, approximately 120 feet southwest from the Adeline Street parking lot.

Based on telephone and email correspondences with Mr. Mark Detterman of Alameda County Department of Environmental Health (ACEH), Gribi Associates submitted an amended investigative workplan for the Site in March 2012 (*Amended Workplan to Conduct Additional Investigation Activities, 3899 San Pablo Avenue, Emeryville, California*, Gribi Associates, March 6, 2012). This amended workplan provides results of preliminary Phase I environmental site assessment (ESA) activities and proposes additional investigative activities for the Site. Preliminary Phase I ESA activities included a review of historical Sanborn Maps, a city directories abstract, aerial photos, and City of Emeryville records for the Site and site vicinity. Results of the historical records review indicate the following relative to Site history and environmental conditions.

- The current Site building was constructed between 1911 and 1939, and was occupied by a GMC truck sales and repair facility from at least 1950 to 1980.
- A former gasoline dispenser kiosk, labeled as õGas & Oilö was present in the small Adeline Street parking lot directly adjacent to the site building (where the current front door to the building is located). The õGas & Oilö label is the standard designation on Sanborn Maps for a gas station or gasoline fueling facility. Note that it is possible that the



fuel dispenser island extended inside the Site building, immediately adjacent to the outside kiosk.

- The south wing of the GMC truck facility was apparently not used for truck repair activities, but rather was used for offices, parts department, and body shop.
- While the GMC truck facility was present, the southeast yard, adjacent to Apgar Street, was either not part of the facility (residences) or was used for truck parking. The northeast yard area, adjacent to 39th Street, extended further east to include the current adjacent auto repair facility and was apparently used for storage and auto painting.
- A possible dry cleaners (National French Laundry, Industrial Coat & Apron Supply, and Red Star Industrial Service Laundry) was apparently present at 1033 39th Street, approximately 150 feet northeast from the Site, from the 1920s to the 1960s.

Historical features most relevant to the currently environmental conditions on the Site include the following.

- (1) The former dispenser kiosk, located adjacent to the site building in the Adeline Street parking lot, was undoubtedly the main source for the groundwater hydrocarbon plume identified in the parking lot;
- (2) The southeast yard in the back of the building, adjacent to Apgar Street, was used either for residential housing or for truck parking, and does not appear to have been a suspect area relative to hydrocarbon releases on the Site; and
- (3) The northeast yard in the back of the building, adjacent to 39th Street, was used as part of the truck repair operation, and, based on review of historical aerial photos and Sanborn Maps and on recollections from the site owners, it is likely that the former 1,000-gallon gasoline USTs removed in 1981 were located in the northeast yard area.

In order to address investigative data gaps, the amended workplan proposed the installation and sampling of four groundwater monitoring wells and the drilling and sampling of approximately eight onsite and offsite soil borings. This amended workplan replaced the January 26, 2012 workplan. The goal of the investigation was to complete site investigative activities as necessary to develop a Conceptual Site Model and Corrective Action Plan for the Site.

In May 2012, nine investigative borings (B-15 through B-23) were drilled and four groundwater monitoring wells (MW-1 through MW-4) were installed at the Site. Both field and laboratory analytical results from this investigation indicate a relatively small, concentrated, predominately groundwater only, gasoline-range hydrocarbon plume present beneath the Adeline Street parking lot. The report for this investigation included a Conceptual Site Model and a workplan to conduct interim remedial measures (IRMs) for the Site. The IRM workplan proposed the drilling and sampling of additional borings and the implementation of an ozone injection pilot test on the Site. This workplan was conditionally approved on November 16, 2012.



2.0 DESCRIPTION OF FIELD ACTIVITIES

On February 21 and 22, 2013, three ozone injection wells were drilled and installed by Gregg Drilling (C-57 No. 485165). Above ground piping, well head connections, and ozone remediation equipment were installed between September 4 and September 6, 2013. System startup was conducted on September 9, 2013. Groundwater monitoring of the project site wells was conducted on September 26, 2013.

All activities were conducted in accordance with applicable guidelines and statutes.

2.1 Installation of Ozone Injection and Groundwater Monitoring Wells

2.1.1 Pre-Field Activities

Prior to beginning drilling activities, appropriate permits were obtained Alameda County Department of Public Works. Copies of these permits are provided in Appendix A.

Prior to beginning drilling activities, proposed well locations were marked with white paint, and Underground Services Alert was notified more than 48 hours prior to drilling. In addition, prior to beginning field activities, a subsurface utility locator conducted an underground utilities survey to attempt to clear proposed drilling locations. Prior to beginning field activities, a Site Safety Plan was issued to the drilling crew, and a tailgate safety meeting was conducted.

2.1.2 Location of Injection Wells

Locations of ozone injection wells OW-1, OW-2, and OW-3 are shown on Figure 3. The ozone injection wells were sited in the previously-identified groundwater hydrocarbon plume area in the Adeline Street parking lot. These wells were spaced in order to provide optimal coverage for the injection of ozone throughout the groundwater hydrocarbon plume.

2.1.3 Drilling and Installation of Wells

Ozone injection wells OW-1, OW-2, and OW-3 were drilled to approximately 28 feet in depth using both direct-push coring tools (for lithologic logging and soil sampling) and hollow stem auger equipment (well installation activities). Soils were first cored, logged and sampled using direct-push coring equipment as described in the previous section of this report. The soil boring logs for these wells are included in Appendix B. During coring and sampling activities, all sampling equipment were thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described previously in this report.

The three ozone injection wells were installed using hollow stem auger equipment and were constructed using 3/4-inch diameter Schedule 80 threaded PVC casing. Each of the three wells was installed according to the following general specifications: (1) The well boring was drilled to approximately 28 feet in depth; (2) A one foot long microporous silica-bonded diffuser was placed at or near the base of the well boring; (3) As the hollow stem augers were removed slowly, filter sand was placed around the well casing to approximately 21 feet in depth; (4) A three-foot bentonite seal was placed above the filter sand using time release bentonite pellets; and (5) The



remaining annulus was grouted using a cement/sand slurry (bentonite less than 5 percent) to approximate surface grade. The top of the well was enclosed in a traffic-rated locking box set in concrete slightly above grade. Well construction details are summarized on the boring logs in Appendix B. All downhole drilling equipment, including auger and drill bit, was steam cleaned before and after drilling the well boring. All soil cuttings and steam cleaning rinseate were contained in sealed drums pending laboratory results.

2.1.4 Laboratory Analysis of Soil Samples

A total of 8 soil samples and 8 groundwater samples were analyzed for the following parameters:

USEPA 8260 Total Petroleum Hydrocarbons as Gasoline (TPH-G) USEPA 8260 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) USEPA 8260 Oxygenates (TBA, MTBE, DIPE, ETBE, TAME, 1,2-DCA, EDB, and Ethanol

In addition, two groundwater samples were analyzed for the following parameters:

USEPA E218.6 Hexavalent Chromium USEPA E 300.1 Bromate

All samples were analyzed by a California State-certified analytical laboratory, with standard turn around time on results.

2.2 Installation of Remediation Equipment

Installation of ozone delivery piping and equipment was conducted between September 4 and 6, 2013. A brief description of these activities is provided in the following sections of this report.

2.2.1 Installation of Below-Ground Ozone Delivery Piping

Ozone delivery tubing, consisting of 3/8-inch inside diameter synthetic flexible tubing, was installed from each injection well to the equipment compound on the northwest corner of the site. The approximate locations of the delivery piping runs are shown on Figure 4. The tubing was placed inside 3/4-inch Schedule 40 PVC pipe. The PVC pipe (containing the tubing) was run above ground, and protected by running within rubber speed bumps.

2.2.2 Installation of Remediation Equipment

The ozone generation equipment consists of a 110-volt 30 grams per hour ozone injection unit made by McClain Ozone in Napa, California. The unit includes an oxygen concentrator, ozone generator, compressors, programmable logic controller (PLC), and valves. This unit supplies an ozone/air mixture under pressure to the three individual injection wells according to a set timed sequence. This unit included an ozone detector with automatic shut off in the event of an ozone leak. This unit is contained in an enclosed trailer and located in the southeast corner of the parking lot along Adeline Street.



2.3 Remediation Equipment Startup and Operation

Remediation equipment start up commenced on Monday, September 9, 2013. The ozone injection system was programmed to sequentially cycle through 5-minute per well injection intervals, resulting in sequential cycles of 15 minutes of ozone injection. During the system startup phase, Gribi personnel visited the site weekly or semi-weekly to ensure that the system was operating optimally. Each visit included a general check of system integrity, as well as monitoring for volatile organic compounds (VOCs) and ozone vapors in surrounding monitoring wells using field instruments.

After startup on September 9, 2013, , the system operated continuously until October 11, 2013, when an equipment malfunction required taking the equipment offline in order to repair. After repairs, the ozone injection system was restarted on Wednesday, October 23, 2013.

2.5 Groundwater Monitoring Activities

Groundwater monitoring and sampling of all site wells was conducted before and after system startup as part of the scheduled quarterly groundwater monitoring and sampling program for the Site. at the project site. Pre- system startup groundwater sampling was conducted on June 4, 2013 as part of the Second Quarter 2013 groundwater monitoring and sampling event. Post-system startup groundwater sampling was conducted on September 26, 2013 as part of the Third Quarter 2013 groundwater monitoring and sampling event. Both sampling are described in detail in separate reports. During each sampling event, groundwater samples from site wells were analyzed for for TPH-G, BTEX, and Oxygenates constituents. In addition, groundwater samples from the post- system startup were also analyzed for hexavalent chromium and bromate

3.0 RESULTS OF OZONE INJECTION REMEDIATION ACTIVITIES

3.1 Results of Well Installation Activities

3.1.1 General Subsurface Conditions

Soil boring logs for the three ozone injection wells are contained in Appendix B. Soils encountered in the borings generally consisted of clays, with relatively thin discontinuous silts and occasional clayey gravels and sands present in some of the borings below 20 feet in depth. Water-saturated soils were generally encountered in silt- and clay-dominated soils below 15 feet in depth, and rose slowly in the borings to approximately 14 feet in depth.

Slight to occasionally moderate hydrocarbon odors were encountered in relatively thin soil intervals in all wells. In OW-2, slight to moderate hydrocarbon odors (with PID readings of approximately 40) were encountered in clay soils between approximately seven and 16 feet in depth. Also, moderate hydrocarbon odors (with a PID reading of 148) were noted in clay soils between approximately six feet and 10 feet in depth in B-27. In addition, moderate hydrocarbon odors (with a PID reading of 28) were noted in a thin sand zone at 15 to 16 feet in depth in B-28. Slight to moderate hydrocarbon odors and staining were noted in sands from approximately 15 feet to 18 feet in depth in the injection and monitoring well borings.



3.1.2 Laboratory Analytical Results

Soil and groundwater laboratory analytical results are summarized in Table 1 and 2, and on Figure 4 and 5. The laboratory data reports and chain of custody records are contained in Appendix C.

3.2 Results of Ozone Injection Remediation System Operation

The ozone remediation was started on September 9, 2013 and ran continuously until October 11, 2013, at which time equipment malfunction required taking the system offline for repair. The ozone system was restarted on October 23, 2013.

3.3 Results of Groundwater Monitoring Activities

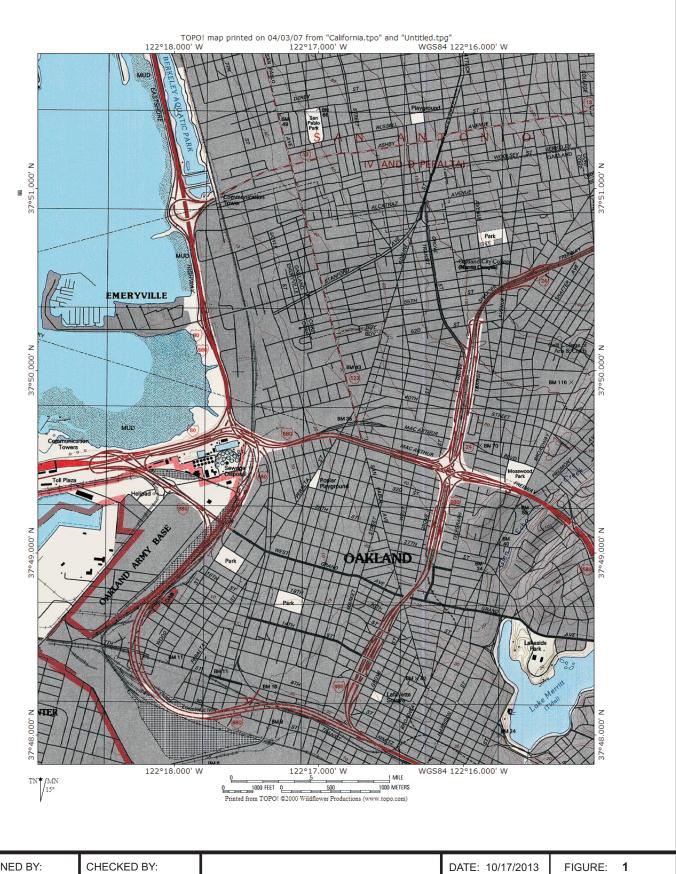
Groundwater samples collected on September 26, 2013, less than 3 weeks after the start of ozone remediation, showed significant reductions in groundwater hydrocarbon concentrations in two of the four Site wells. At MW-2, TPH-G and benzene concentrations dropped from 12,000 to 930 ug/L and 870 to 39 ug/L, respectively. At MW-3, TPH-G and benzene concentrations dropped from 12,000 to 5,500 ug/L and 1,400 to 190 ug/L, respectively. Groundwater hydrocarbon concentrations for samples from wells MW-1 and MW-4 were generally similar to previous results and did not show significant reductions.

4.0 CONCLUSIONS

Post- system startup groundwater samples after a relatively short time of ozone system operation, showed significant reductions in hydrocarbon concentrations two of the four monitoring wells. These results demonstrate that ozone remediation appears to be an effective technology to address subsurface soil and groundwater hydrocarbon impacts at the Site. Gribi Associates will continue to operate the remediation system and will perform Fourth Quarter 2013 groundwater monitoring and sampling at the site in December.







DESIGNED BY: CHECKED BY:

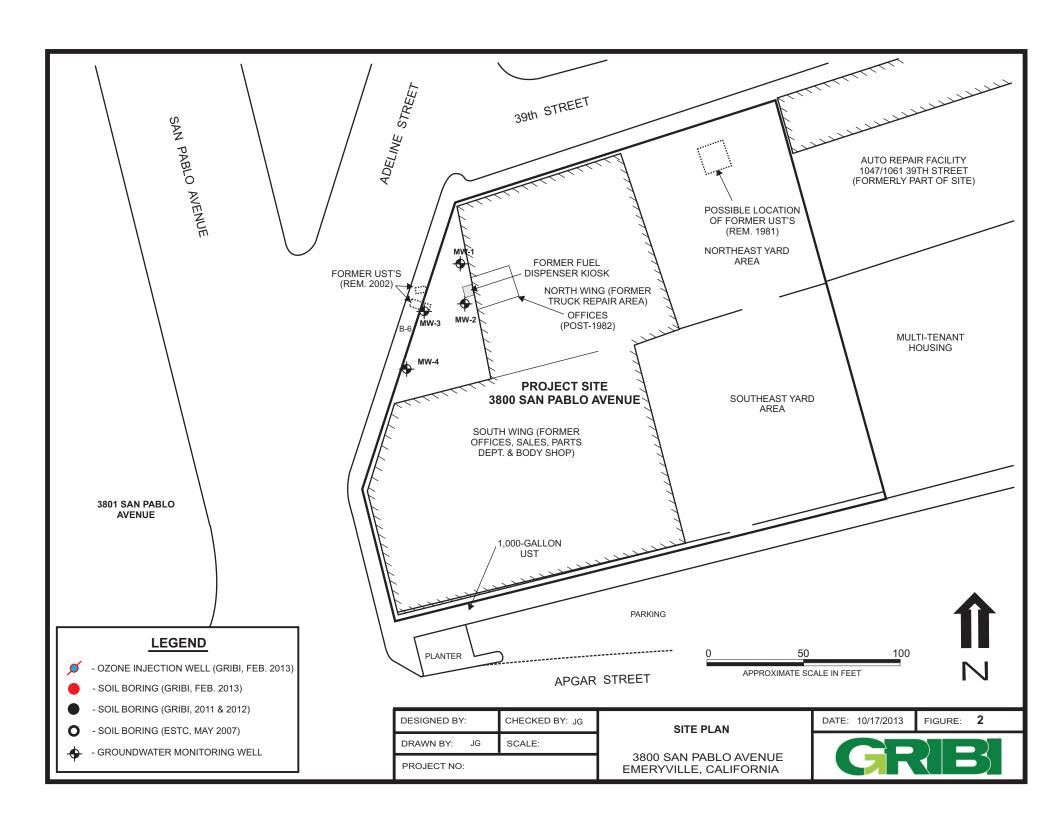
DRAWN BY: JG SCALE:

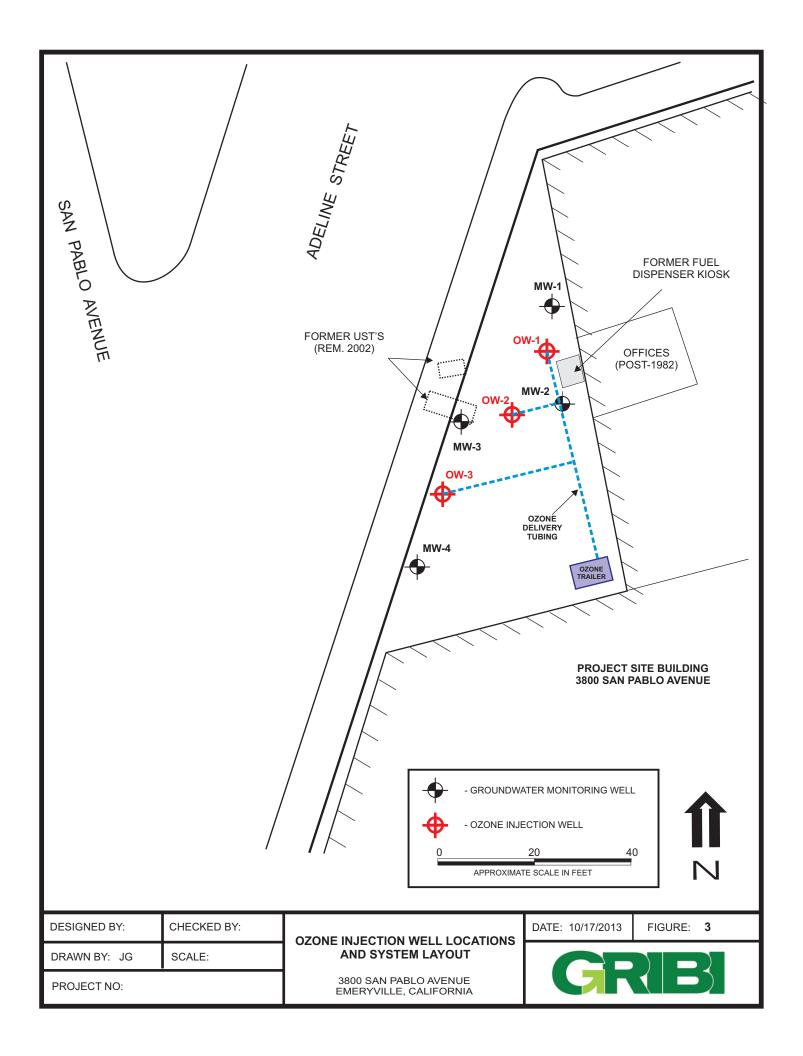
PROJECT NO:

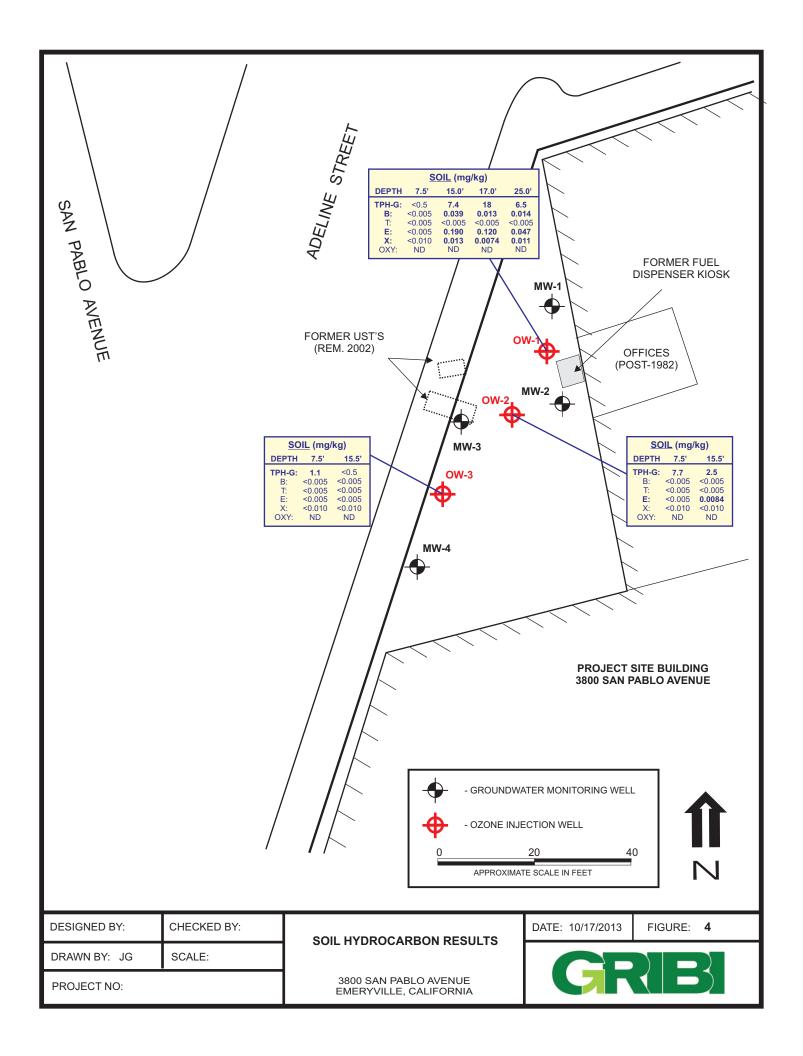
SITE VICINITY MAP

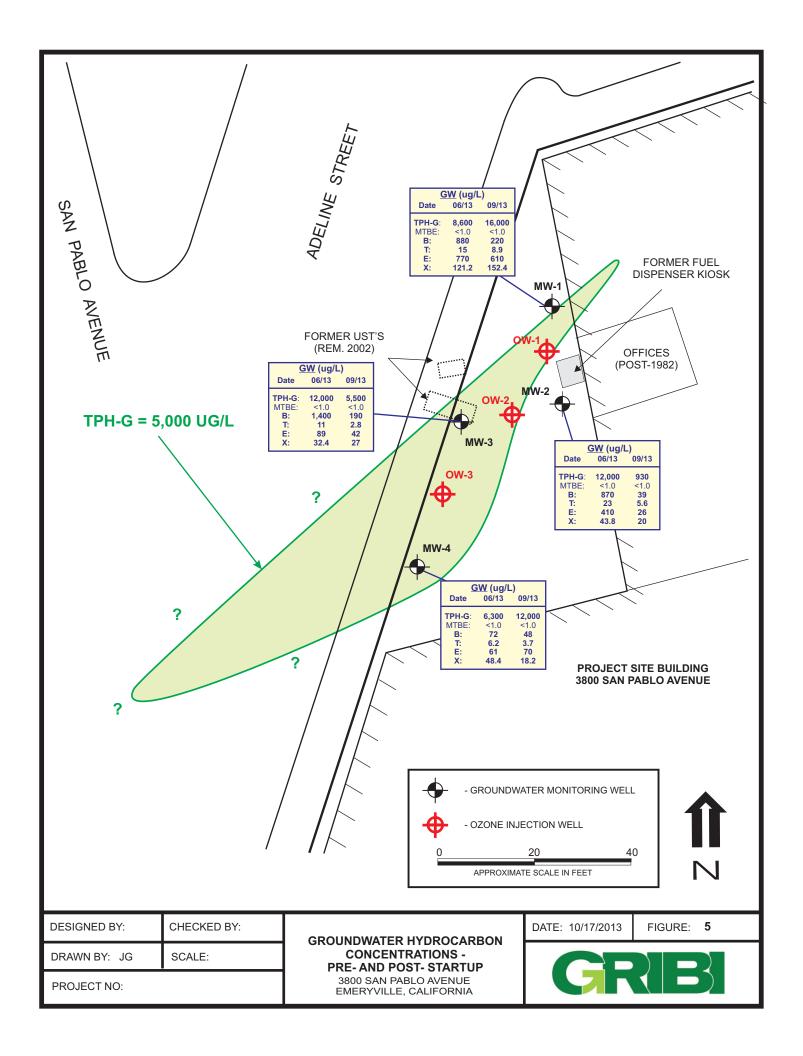
3800 SAN PABLO AVENUE EMERYVILLE, CALIFORNIA











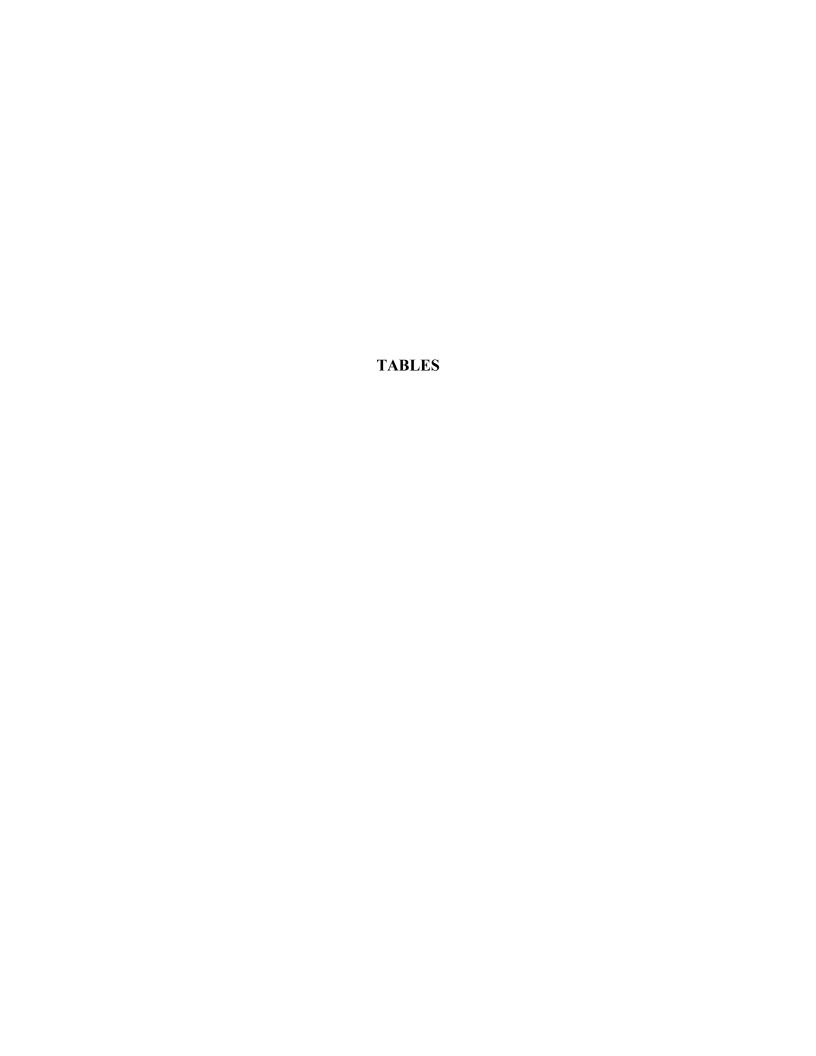


Table 1 SUMMARY OF SOIL AND GROUNDWATER ANALYTICAL RESULTS

Former Maz Glass UST Site 3800 San Pablo Avenue, Emeryville, California

Sample	Sample	Sample						
ID	Matrix	Depth	TPH-G	В	Т	E	X	OXY
OW-1-7.5	Soil	7.5 feet	< 0.5	< 0.005	< 0.005	< 0.005	< 0.010	All ND
OW-1-15.0	Soil	15.0 feet	7.4	0.039	< 0.005	0.190	0.013	All ND
OW-1-17.0	Soil	17.0 feet	18.0	0.013	< 0.005	0.120	0.0074	All ND
OW-1-25.0	Soil	25.0 feet	6.5	0.014	< 0.005	0.047	0.011	All ND
OW-2-7.5	Soil	7.5 feet	7.7	< 0.005	< 0.005	< 0.005	< 0.010	NA
OW-2-15.5	Soil	15.5 feet	2.5	< 0.005	< 0.005	0.0084	< 0.010	NA
OW-3-7.5	Soil	7.5 feet	1.1	< 0.005	< 0.005	< 0.005	< 0.010	NA
OW-3-15.5	Soil	15.5 feet	< 0.5	< 0.005	< 0.005	< 0.005	< 0.010	NA

Table Notes:

 $\label{eq:TPH-D/MO} Total \ petroleum \ hydrocarbons \ as \ diesel/motor \ oil \\ TPH-G = Total \ petroleum \ hydrocarbons \ as \ gasoline \\ OXY = Oxygenates, \ including \ Ter-Butanol \ (TBA), \ Di-isopropyl \ Ether \ (DIPE), \ Methyl \ Tertiary \ Butyl \ Ether \ (MTBE), \ Ethyl-t-butyl \ Ether \ (ETBE), \ and \ Tert-amyl \ Methyl \ Ether \ (TAME) \\ NA = Not \ analyzed \ for \ this \ analyte.$

<0.5 = Not detected above the expressed detection level.

ND = Not detected above laboratory detection limits

All ND = No detectable concentrations of full list of constituentsESL = Environmental Screening Levels, as contained in Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, San Francisco Bay Regional Water Quality Control Board, Interim Final, May 2008.

Table 2 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Former Maz Glass UST Site

117-11	C1-	CIV	GW			Conc	centration, mic	crograms per	liter (ug/l)		
Well ID	Sample Date	GW Depth	Elev.	ТРН-G	В	T	E	X	OXY	Cr6 / Br	Other
MW-1	05/18/12	8.42	30.54	17,000	1,300	29	770	260	All ND		
<38.96>	09/13/12	10.55	28.41	13,000	630	10	780	86.7	All ND		
	11/09/12	9.72	29.24	15,000	1,200	21	1,100	283	All ND		
	02/20/13	8.34	30.62	9,800	970	15	860	171.5	All ND		Naph = 75
	06/04/13	9.39	29.57	8,600	880	15	770	121.2	All ND		Naph = 74
	9/26/13	10.38	28.58	16,000	220	8.9	610	152.4	All ND	<0.20 / 0.091	Naph = 120
MW-2	05/18/12	8.78	30.18	10,000	610	26	340	69	All ND		
<38.96>	09/13/12	10.64	28.32	11,000	990	27	460	42.9	All ND		
	11/09/12	9.57	29.39	17,000	750	19	280	64.9	All ND		
	02/20/13	8.86	30.10	8,200	860	29	410	70	All ND		Naph = 29
	06/04/13	9.86	29.10	12,000	870	23	410	43.8	All ND		Naph = 46
	09/26/13	13.32	25.64	930	39	5.6	26	20	All ND	1.1 / 0.090	Naph = 13
MW-3	05/18/12	8.61	30.23	13,000	1,400	36	350	378	All ND		
<38.84>	09/13/12	10.30	28.54	12,000	1,800	25	680	565.5	All ND		
	11/09/12	9.25	29.59	17,000	2,000	32	540	318.6	All ND		
	02/20/13	8.80	30.04	12,000	1,400	15	330	43.9	All ND		Naph = 8.4
	06/04/13	9.49	29.35	12,000	1,400	11	89	32.4	All ND		Naph = 13
	09/26/13	10.89	27.95	5,500	190	2.8	42	27	All ND	<0.20 / 0.096	Naph = 18
MW-4	05/18/12	8.28	30.20	10,000	82	32	330	278	All ND		
<38.48>	09/13/12	8.80	29.68	10,000	110	24	270	178.1	All ND		
	11/09/12	8.06	30.42	11,000	110	13	170	124.4	All ND		
	02/20/13	8.16	30.32	4,500	100	9.5	190	65.3	All ND		Naph = 7.1
	06/04/13	8.73	29.75	6,300	72	6.2	61	48.4	All ND		Naph = 12
	09/26/13	9.76	28.72	12,000	48	3.7	70	18.2	All ND	<0.20 / 0.056	Naph = 13

TABLE NOTES

GW Elev = Groundwater mean sea level elevation TPH-G = Total Petroleum Hydrocarbons as gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

OXY = Oxygenates, including MTBE = Methyl-t-Butyl Ether, ter-Butanol (TBA), Di-isopropyl Ether (DIPE), Ethyl-t-butyl Ether (ETBE), and Tert-amyl Methyl Ether (TAME). Other = Lead scavengers 12-EDB and 1,2-DCA, and SVOCs.

<38.96> = Top of casing mean sea level elevation (Virgil Chavez Land Survey).

<0.50 = Not detected above the expressed value.

Hex Chrome = Hexavalent Chromium

Naph = Naphthalene.

APPENDIX A REGULATORY PERMITS

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 12/12/2012 By jamesy Permit Numb

Permit Numbers: W2012-0846 to W2012-0847 Permits Valid from 01/09/2013 to 01/11/2013

City of Project Site: Emeryville

Application Id: 1355254284054

Site Location: 3800 San Pablo Avenue, Emeryville, CA

Project Start Date: 01/09/2013 Completion Date:01/11/2013

Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: Gribi - James Gribi Phone: 707-748-7743

1090 Adams St, Ste K, Benecia, CA 94510 **Property Owner:** Banker, Marks & Kirk

1721 Broadway, Suite 202, Oakland, CA 94612

Client: ** same as Property Owner **

Total Due: \$530.00

Phone: 510-271-0600

Receipt Number: WR2012-0395 Total Amount Paid: \$530.00

Payer Name : Gribi Paid By: CHECK PAID IN FULL

Works Requesting Permits:

Remediation Well Construction-Injection - 3 Wells

Driller: Gregg Drilling - Lic #: 485165 - Method: hstem Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2012- 0846	12/12/2012	04/09/2013	OW1	8.00 in.	0.75 in.	23.00 ft	26.00 ft
W2012- 0846	12/12/2012	04/09/2013	OW2	8.00 in.	0.75 in.	23.00 ft	26.00 ft
W2012- 0846	12/12/2012	04/09/2013	OW3	8.00 in.	0.75 in.	23.00 ft	26.00 ft

Specific Work Permit Conditions

- 1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
- 3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit number and site map.
- 4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

APPENDIX B WELL BORING LOGS

LOG OF SOIL BORING

BORING NUMBER: OW-1

BORING LOCATION:

ADELINE STREET PARKING LOT

BORING TYPE: SOIL BORING

PROJECT NAME: FORMER MAZ GLASS SITE EMERYVILLE, CALIFORNIA

FIELD SCIENTIST: J. GRIBI M. ROSMAN



START DATE: 02/22/2013

COMPLETION DATE: 02/22/2013

DRILLING CONTRACTOR: GREGG DRILLING, INC.

DRILLING METHOD: DIRECT PUSH

BOREHOLE DIAMETER: 2.5 INCHES

COMPLETION METHOD: WELL

BORING TOTAL DEPTH: 28.0 FEET

GROUNDWATER DEPTH: NOT MEASURED

DEPTH SCALE (FEET)	SAMPLE NO.	SAMPLE DEPTH	INTERVAL	PID READING BLOW COUNTS - INITIAL - FINAL	USCS	LOG OF MATERIAL	WELL INSTALLATION & CONSTRUCTION
5 =	OW-1-7.5 8:25 OW-1-15.0 8:35	7.5 FT. 15.0 FT. 17.0 FT.		36 26		 0.0 - 1.0 ft. Concrete & base gravel. 1.0 - 4.0 ft. Silty Clay (CL)	A
25 - - - - - - 30 -	OW-1-25.0 9:00	25.0 FT.		41	ML ML	23.0 -24.5 ft. Silty Clay (CL) Brown, firm, dense, moist, no odor or staining. 24.5 -27.0 ft. Silty Sand (SM)/Sandy Silt (ML) Brown, Soft, moist to wet, Slightly hydrocarbon odor. 27.0 -28.0 ft. Clayey Silt (ML) Brown, moist, firm, no odor or staining. TOTAL DEPTH: 28.0 FEET WELL SPECIFICATIONS A - WELL DIFFUSER DEPTH: 24.50 FT CASING TYPE: SCH 40 PVC B - WELL DIFFUSER LENGTH: 1.00 FT CASING SIZE: 0.75 INCHES C - DEPTH TO TOP OF SAND: 21.40 FT D - DEPTH TO TOP OF BENTONITE SEAL: 17.50 FT	V A B V

LOG OF SOIL BORING

BORING NUMBER: OW-2

BORING LOCATION:

ADELINE STREET PARKING LOT

BORING TYPE: SOIL BORING

PROJECT NAME: FORMER MAZ GLASS SITE EMERYVILLE, CALIFORNIA

FIELD SCIENTIST: J. GRIBI

M. ROSMAN



START DATE: 02/22/2013

COMPLETION DATE: 02/22/2013

DRILLING METHOD: DIRECT PUSH

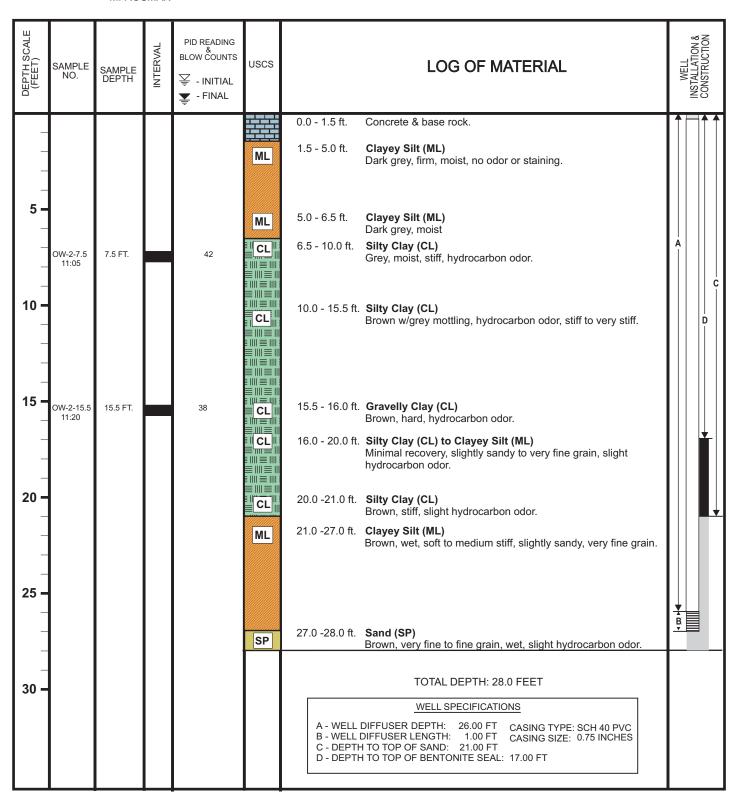
BOREHOLE DIAMETER: 2.5 INCHES

COMPLETION METHOD: WELL

BORING TOTAL DEPTH: 28.0 FEET

GROUNDWATER DEPTH: NOT MEASURED

DRILLING CONTRACTOR: GREGG DRILLING, INC.



LOG OF SOIL BORING

BORING NUMBER: OW-3

BORING LOCATION:

ADELINE STREET PARKING LOT

BORING TYPE: SOIL BORING

PROJECT NAME: FORMER MAZ GLASS SITE EMERYVILLE, CALIFORNIA

FIELD SCIENTIST: J. GRIBI

M. ROSMAN



START DATE: 02/22/2013

COMPLETION DATE: 02/22/2013

DRILLING METHOD: DIRECT PUSH

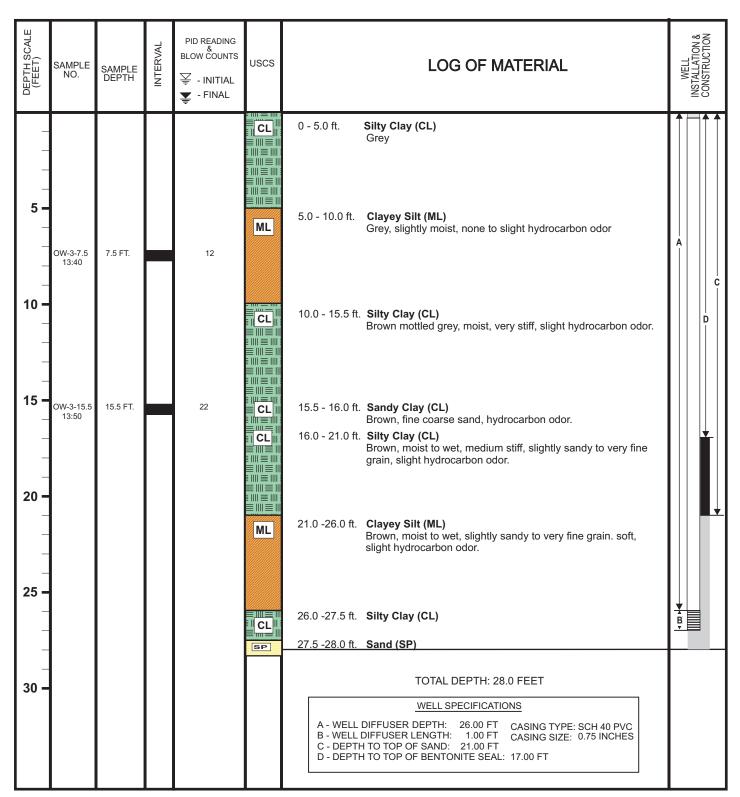
DRILLING CONTRACTOR: GREGG DRILLING, INC.

BOREHOLE DIAMETER: 2.5 INCHES

COMPLETION METHOD: WELL

BORING TOTAL DEPTH: 28.0 FEET

GROUNDWATER DEPTH: NOT MEASURED



APPENDIX C

LABORATORY DATA REPORTS AND CHAIN-OF-CUSTODY RECORD





05 March 2013

Jim Gribi Gribi Associates 1090 Adam Street, Suite K Benicia, CA 94510

RE: Maz Glass

Enclosed are the results of analyses for samples received by the laboratory on 02/23/13 10:38. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Daniel Chavez

Project Manager

Saniel & Chivy



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-27-7.0	T130428-01	Soil	02/21/13 14:10	02/23/13 10:38
B-27-15.5	T130428-02	Soil	02/21/13 14:20	02/23/13 10:38
B-27-W	T130428-03	Water	02/22/13 08:15	02/23/13 10:38
B-24-9.0	T130428-04	Soil	02/21/13 12:00	02/23/13 10:38
B-24-15.0	T130428-05	Soil	02/21/13 12:15	02/23/13 10:38
B-28-7.5	T130428-06	Soil	02/21/13 09:15	02/23/13 10:38
B-28-15.5	T130428-07	Soil	02/21/13 09:30	02/23/13 10:38
B-28-W	T130428-08	Water	02/22/13 10:00	02/23/13 10:38
B-24-W	T130428-09	Water	02/22/13 08:40	02/23/13 10:38
OW-1-7.5	T130428-10	Soil	02/22/13 08:25	02/23/13 10:38
OW-1-15.0	T130428-11	Soil	02/22/13 08:34	02/23/13 10:38
OW-1-17.0	T130428-12	Soil	02/22/13 08:45	02/23/13 10:38
OW-1-25.0	T130428-13	Soil	02/22/13 09:00	02/23/13 10:38

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

B-27-7.0 T130428-01 Soil

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
			•						
	Su	ınStar L	aboratoi	ries, Inc.					
Volatile Organic Compounds b	y EPA Method 8260B								
Benzene	ND	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	

50

20

20

20

C6-C12 GRO	25000	500	"
Surrogate Toluene-d8		1	811
Surrogate 4-Bromofluorobenzene		19	81.2-123
Surrogate Dibromofluoromethane		112	913

ND

ND

ND

ND

SunStar Laboratories, Inc.

Tert-butyl alcohol

Di-isopropyl ether

Ethyl tert-butyl ether

Methyl tert-butyl ether

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

B-27-15.5 T130428-02 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B										
Toluene	ND	5.0	"	"	"	"	"	"		
Ethylbenzene	120	5.0	"	"	"	"	"	"		
m,p-Xylene	8.0	5.0	"	"	"	"	"	"		
o-Xylene	ND	5.0	"	"	"	"	"	"		
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"		
Tert-butyl alcohol	ND	50	"	"	"	"	"	"		
Di-isopropyl ether	ND	20	"	"	"	"	"	"		
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"		
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"		
C6-C12 GRO	4400	500	"	"	"	"	"	"		
Surrogate Toluene-d8		98.	81	11						
Surrogate 4-Bromofluorobenzene		1	81.2-1	123						
Surrogate Dibromofluoromethane		1	91	13						

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite K Project Number: [none] Reported: Benicia CA, 94510 Project Manager: Jim Gribi 03/05/13 14:37

B-27-W T130428-03 Water

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Benzene	1100	10	ug/l	20	3022738	02/27/13	02/28/13	EPA 8260E
Toluene	99	0.50	"	1	"	"	"	"
Ethylbenzene	1500	10	"	20	"	"	"	"
m,p-Xylene	1100	20	"	"	"	"	"	"
o-Xylene	69	0.50	"	1	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	10	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"
C6-C12 GRO	7900	50	"	"	"	"	"	"
Surrogate Toluene-d8		1 4	4 88.8-11					
Surrogate 4-Bromofluorobenzene		1	83	119				
		110	011					

119 $Surrogate\ Dibromofluoromethane$ 81.1-13

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

B-24-9.0 T130428-04 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Volatile Organic Compounds by E								
Benzene	ND	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B
Toluene	ND	5.0	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"
m,p-Xylene	ND	5.0	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"
Tert-butyl alcohol	ND	50	"	"	"	"	"	"
Di-isopropyl ether	ND	20	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"
C6-C12 (GRO)	ND	500	"	"	"	"	"	"
Surrogate Toluene-d8		9 .4	81	11				
Commente A Doron Alexandra		1	012	122				

Surrogate Dibromofluorobenzene 1 81.2-123
Surrogate Dibromofluoromethane 1 2 9 . -13

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Saviel of Chivy



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite K Project Number: [none] Reported: Benicia CA, 94510 Project Manager: Jim Gribi 03/05/13 14:37

B-24-15.0 T130428-05 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories Inc

	i	SunStar L	aboratori	es, Inc.					
Volatile Organic Compounds by E	PA Method 8260	В							
Benzene	ND	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
C6-C12 GRO	1300	500	"	"	"	"	"	"	
Surrogate Toluene-d8		9 .8	81	11					
Surrogate 4-Bromofluorobenzene		1	81.2-1	123					
Surrogate Dibromofluoromethane		1 2	913						

Surrogate Dibromofluoromethane

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

B-28-7.5 T130428-06 Soil

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

				,				
Volatile Organic Compounds by EPA	Method 8260B	3						
Benzene	ND	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B
Toluene	ND	5.0	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"
m,p-Xylene	ND	5.0	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"
Tert-butyl alcohol	ND	50	"	"	"	"	"	"
Di-isopropyl ether	ND	20	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"
C6-C12 (GRO)	ND	500	"	"	"	"	"	"
Surrogate Toluene-d8		89.9	81	1				
Surrogate 4-Bromofluorobenzene		18	81.2-1	23				

Surrogate 4-Bromofluorobenzene 1 8 81.2-12.
Surrogate Dibromofluoromethane 1 3 9 . -13

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Saviel & Chivy



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

B-28-15.5 T130428-07 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Volatile Organic Compounds by 1	EPA Method 8260B	}						
Benzene	ND	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B
Toluene	ND	5.0	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"
m,p-Xylene	ND	5.0	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"
Tert-butyl alcohol	ND	50	"	"	"	"	"	"
Di-isopropyl ether	ND	20	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"
C6-C12 GRO	16000	500	"	"	"	"	"	"
Surrogate Toluene-d8		9.	81	11	·			
Surrogate 4-Bromoflyorohenzene		1 3	81 2-	123				

Surrogate Toluene-d898-11Surrogate 4-Bromofluorobenzene1381.2-123Surrogate Dibromofluoromethane149-13

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite K Project Number: [none] Reported: Benicia CA, 94510 Project Manager: Jim Gribi 03/05/13 14:37

B-28-W T130428-08 Water

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Benzene	ND	0.50	ug/l	1	3022738	02/27/13	02/28/13	EPA 8260E
Toluene	ND	0.50	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"
m,p-Xylene	ND	1.0	"	"	"	"	"	"
o-Xylene	ND	0.50	"	"	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	10	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"
C6-C12 GRO	910	50	"	"	"	"	"	"
Surrogate Toluene-d8	·	1 1	88.8-	11				·
Surrogate 4-Bromofluorobenzene		18	83	119				
Surrogate Dibromofluoromethane		123	81.1-	13				

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

B-24-W T130428-09 Water

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Sunstar Laboratories, Inc.													
Volatile Organic Compounds by EPA Method 8260B													
Benzene	ND	0.50	ug/l	1	3022738	02/27/13	02/28/13	EPA 8260B					
Toluene	ND	0.50	"	"	"	"	"	"					
Ethylbenzene	ND	0.50	"	"	"	"	"	"					
m,p-Xylene	ND	1.0	"	"	"	"	"	"					
o-Xylene	ND	0.50	"	"	"	"	"	"					
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"					
Tert-butyl alcohol	ND	10	"	"	"	"	"	"					
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"					
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"					
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"					
C6-C12 (GRO)	ND	50	"	"	"	"	"	"					
Surrogate Toluene-d8		1 2	88.8-	11									
Surrogate 4-Bromofluorobenzene		98.8	83	119									
Surrogate Dibromofluoromethane		13	81.1-	13									

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

OW-1-7.5 T130428-10 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

SunStar Laboratories, Inc.										
Volatile Organic Compounds by EPA Method	l 8260B									
Benzene	ID 5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B			
Toluene N	ID 5.0	"	"	"	"	"	"			
Ethylbenzene N	ID 5.0	"	"	"	"	"	"			
m,p-Xylene N	ID 5.0	"	"	"	"	"	"			
o-Xylene N	ID 5.0	"	"	"	"	"	"			
Tert-amyl methyl ether N	ID 20	"	"	"	"	"	"			
Tert-butyl alcohol N	ID 50	"	"	"	"	"	"			
Di-isopropyl ether N	ID 20	"	"	"	"	"	"			
Ethyl tert-butyl ether	ID 20	"	"	"	"	"	"			
Methyl tert-butyl ether	ID 20	"	"	"	"	"	"			
C6-C12 (GRO)	ID 500	"	"	"	"	"	"			
Surrogate Toluene-d8	9 .8	8	11							
Surrogate 4-Bromofluorobenzene	1 1	81.2-	123							
Surrogate Dibromofluoromethane	1 2	9	13							

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite K Project Number: [none] Reported: Benicia CA, 94510 Project Manager: Jim Gribi 03/05/13 14:37

OW-1-15.0 T130428-11 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Benzene	39	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B
Toluene	ND	5.0	"	"	"	"	"	"
Ethylbenzene	190	5.0	"	"	"	"	"	"
m,p-Xylene	13	5.0	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"
Tert-butyl alcohol	ND	50	"	"	"	"	"	"
Di-isopropyl ether	ND	20	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"
C6-C12 GRO	7400	500	"	"	"	"	"	"
Surrogate Toluene-d8		9.	81	11				
Surrogate 4-Bromofluorobenzene		1	81 2-	123				

81.2-123 Surrogate 4-Bromofluorobenzene 1 2 9. -13 $Surrogate\ Dibromofluoromethane$

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite K Project Number: [none] Reported: Benicia CA, 94510 Project Manager: Jim Gribi 03/05/13 14:37

OW-1-17.0 T130428-12 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Benzene	13	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	120	5.0	"	"	"	"	"	"	
m,p-Xylene	7.4	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
C6-C12 GRO	18000	500	"	"	"	"	"	"	
Surrogate Toluene-d8		9.	8	11					
Surrogate 4-Bromofluorobenzene		92.4	81.2-	123					

 $Surrogate\ Dibromofluoromethane$ 1 4 9. -13

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite K Project Number: [none] Reported: Benicia CA, 94510 Project Manager: Jim Gribi 03/05/13 14:37

OW-1-25.0 T130428-13 Soil

		Reporting							
A	nalyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

Benzene	14	5.0	ug/kg	1	3030109	03/01/13	03/02/13	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	47	5.0	"	"	"	"	"	"	
m,p-Xylene	11	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
C6-C12 GRO	6500	500	"	"	"	"	"	"	
Surrogate Toluene-d8		9.	8	·11					
Surrogate 4-Bromofluorobenzene		99.2	81.2-	123					

 $Surrogate\ Dibromofluoromethane$ 99. 9. -13

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3022738 -	EPA 5030 GCMS
-----------------	---------------

Blank 3022738-BLK1				Prepared: 02/27/13 Analyzed: 02/28/13
Bromobenzene	ND	1.0	ug/l	
Bromochloromethane	ND	1.0	"	
Bromodichloromethane	ND	1.0	"	
Bromoform	ND	1.0	"	
Bromomethane	ND	1.0	"	
n-Butylbenzene	ND	1.0	"	
sec-Butylbenzene	ND	1.0	"	
tert-Butylbenzene	ND	1.0	"	
Carbon tetrachloride	ND	0.50	"	
Chlorobenzene	ND	1.0	"	
Chloroethane	ND	1.0	"	
Chloroform	ND	1.0	"	
Chloromethane	ND	1.0	"	
2-Chlorotoluene	ND	1.0	"	
4-Chlorotoluene	ND	1.0	"	
Dibromochloromethane	ND	1.0	"	
1,2-Dibromo-3-chloropropane	ND	1.0	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	
Dibromomethane	ND	1.0	"	
1,2-Dichlorobenzene	ND	1.0	"	
1,3-Dichlorobenzene	ND	1.0	"	
1,4-Dichlorobenzene	ND	1.0	"	
Dichlorodifluoromethane	ND	0.50	"	
1,1-Dichloroethane	ND	1.0	"	
1,2-Dichloroethane	ND	0.50	"	
1,1-Dichloroethene	ND	1.0	"	
cis-1,2-Dichloroethene	ND	1.0	"	
trans-1,2-Dichloroethene	ND	1.0	"	
1,2-Dichloropropane	ND	1.0	"	
1,3-Dichloropropane	ND	1.0	"	
2,2-Dichloropropane	ND	1.0	"	
1,1-Dichloropropene	ND	1.0	"	
cis-1,3-Dichloropropene	ND	0.50	"	
trans-1,3-Dichloropropene	ND	0.50	"	
Hexachlorobutadiene	ND	1.0	"	
Isopropylbenzene	ND	1.0	"	

SunStar Laboratories, Inc.



RPD

%REC

Gribi Associates Project: Maz Glass

1090 Adam Street, Suite K Project Number: [none] Reported: Benicia CA, 94510 Project Manager: Jim Gribi 03/05/13 14:37

Reporting

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

Spike

Source

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3022738 - EPA 5030 GCMS	}									
Blank 3022738-BLK1				Prepared:	02/27/13	Analyzed	1: 02/28/13			
p-Isopropyltoluene	ND	1.0	ug/l							
Methylene chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Γrichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
C6-C12 (GRO)	ND	50	"							
Surrogate Toluene-d8						99.9	88.8-11			
Surrogate 4-Bromofluorobenzene	1.					1 3	83119			
Surrogate Dibromofluoromethane	.9					132	81.1-13			

SunStar Laboratories, Inc.



RPD

%REC

Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

Reporting

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

Spike

Source

Analyte	Result	Limit	Units	Level	Result	%REC	%KEC Limits	RPD	Limit	Notes
Batch 3022738 - EPA 5030 GCMS										
LCS 3022738-BS1				Prepared:	02/27/13	Analyze	d: 02/28/13			
Chlorobenzene	22.2	1.0	ug/l	25.0		88.9	75-125			
1,1-Dichloroethene	22.4	1.0	"	25.0		89.8	75-125			
Trichloroethene	22.2	1.0	"	25.0		88.8	75-125			
Benzene	24.2	0.50	"	25.0		96.7	75-125			
Toluene	23.4	0.50	"	25.0		93.6	75-125			
Surrogate Toluene-d8	48.8					9.	88.8-11			
Surrogate 4-Bromofluorobenzene	48.8					9.	83119			
Surrogate Dibromofluoromethane	.1					13	81.1-13			
LCS Dup 3022738-BSD1				Prepared:	02/27/13	Analyze	d: 02/28/13			
Chlorobenzene	25.7	1.0	ug/l	25.0		103	75-125	14.6	20	
1,1-Dichloroethene	24.2	1.0	"	25.0		96.7	75-125	7.38	20	
Trichloroethene	22.2	1.0	"	25.0		88.9	75-125	0.0450	20	
Benzene	27.2	0.50	"	25.0		109	75-125	11.6	20	
Toluene	24.7	0.50	"	25.0		99.0	75-125	5.57	20	
Surrogate Toluene-d8	48.8					9.	88.8-11			
Surrogate 4-Bromofluorobenzene						1 1	83119			
Surrogate Dibromofluoromethane	2.3					14	81.1-13			S-G0
Batch 3030109 - EPA 5030 GCMS										
Blank 3030109-BLK1				Prepared:	03/01/13	Analyze	d: 03/02/13			
Bromobenzene	ND	5.0	ug/kg	•		•				
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
	ND	5.0								
Chloromethane	ND	5.0	"							

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3030109 - EPA 5030 GCMS										

Blank 3030109-BLK1				Prepared: 03/01/13 Analyzed: 03/02/13
4-Chlorotoluene	ND	5.0	ug/kg	
Dibromochloromethane	ND	5.0	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	
Dibromomethane	ND	5.0	"	
1,2-Dichlorobenzene	ND	5.0	"	
1,3-Dichlorobenzene	ND	5.0	"	
1,4-Dichlorobenzene	ND	5.0	"	
Dichlorodifluoromethane	ND	5.0	"	
1,1-Dichloroethane	ND	5.0	"	
1,2-Dichloroethane	ND	5.0	"	
1,1-Dichloroethene	ND	5.0	"	
cis-1,2-Dichloroethene	ND	5.0	"	
trans-1,2-Dichloroethene	ND	5.0	"	
1,2-Dichloropropane	ND	5.0	"	
1,3-Dichloropropane	ND	5.0	"	
2,2-Dichloropropane	ND	5.0	"	
1,1-Dichloropropene	ND	5.0	"	
cis-1,3-Dichloropropene	ND	5.0	"	
trans-1,3-Dichloropropene	ND	5.0	"	
Hexachlorobutadiene	ND	5.0	"	
Isopropylbenzene	ND	5.0	"	
p-Isopropyltoluene	ND	5.0	"	
Methylene chloride	ND	5.0	"	
Naphthalene	ND	5.0	"	
n-Propylbenzene	ND	5.0	"	
Styrene	ND	5.0	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	
Tetrachloroethene	ND	5.0	"	
1,2,3-Trichlorobenzene	ND	5.0	"	
1,2,4-Trichlorobenzene	ND	5.0	"	
1,1,2-Trichloroethane	ND	5.0	"	
1,1,1-Trichloroethane	ND	5.0	"	
Trichloroethene	ND	5.0	"	
Trichlorofluoromethane	ND	5.0	"	

SunStar Laboratories, Inc.



RPD

%REC

Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

Reporting

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

Spike

Source

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3030109 - EPA 5030 GCMS	5									
Blank 3030109-BLK1				Prepared:	03/01/13	Analyzed	1: 03/02/13			
1,2,3-Trichloropropane	ND	5.0	ug/kg							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Tert-amyl methyl ether	ND	20	"							
Tert-butyl alcohol	ND	50	"							
Di-isopropyl ether	ND	20	"							
Ethyl tert-butyl ether	ND	20	"							
Methyl tert-butyl ether	ND	20	"							
C6-C12 (GRO)	ND	500	"							
Surrogate Toluene-d8	39.8			4 .		99.4	811			
Surrogate 4-Bromofluorobenzene	41.2			4 .		1 3	81.2-123			
Surrogate Dibromofluoromethane	4 .			4 .		11	913			
LCS 3030109-BS1				Prepared:	03/01/13	Analyzed	1: 03/02/13			
Chlorobenzene	96.0	5.0	ug/kg	100		96.0	75-125			
1,1-Dichloroethene	89.3	5.0	"	100		89.3	75-125			
Trichloroethene	91.4	5.0	"	100		91.4	75-125			
Benzene	99.8	5.0	"	100		99.8	75-125			
Toluene	89.7	5.0	"	100		89.7	75-125			
Surrogate Toluene-d8	3 .			4 .		94.2	811			
Surrogate 4-Bromofluorobenzene	41.			4 .		1 2	81.2-123			
Surrogate Dibromofluoromethane	4 .8			4 .		11	913			

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

	Reporting			Spike	Source		%REC			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3030109 - EPA 5030 GCMS										
Matrix Spike 3030109-MS1	Sou	rce: T13042	8-01	Prepared:	03/01/13	Analyze	d: 03/02/13			
Chlorobenzene	87.8	5.0	ug/kg	100	ND	87.8	75-125			
1,1-Dichloroethene	89.2	5.0	"	100	ND	89.2	75-125			
Trichloroethene	97.2	5.0	"	100	ND	97.2	75-125			
Benzene	101	5.0	"	100	ND	101	75-125			
Toluene	87.6	5.0	"	100	ND	87.6	75-125			
Surrogate Toluene-d8	3 .			4 .		91.	811			
Surrogate 4-Bromofluorobenzene	3 .4			4 .		91.	81.2-123			
Surrogate Dibromofluoromethane	44.4			4 .		111	913			
Matrix Spike Dup 3030109-MSD1	Sou	rce: T13042	8-01	Prepared:	03/01/13	Analyze	d: 03/02/13			
Chlorobenzene	103	5.0	ug/kg	100	ND	103	75-125	15.6	20	
1,1-Dichloroethene	88.0	5.0	"	100	ND	88.0	75-125	1.47	20	
Trichloroethene	94.0	5.0	"	100	ND	94.0	75-125	3.45	20	
Benzene	97.2	5.0	"	100	ND	97.2	75-125	3.89	20	
Toluene	83.8	5.0	"	100	ND	83.8	75-125	4.49	20	
Surrogate Toluene-d8	3 .			4 .		91.8	811			
Surrogate 4-Bromofluorobenzene	44.			4 .		11	81.2-123			
Surrogate Dibromofluoromethane	42.			4 .		1	913			

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/05/13 14:37

Notes and Definitions

S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Saniel & Chivy

3-24-w Phone: Sample disposal Instructions: Disposal @ \$2.00 each Project Manager: Address 949-297-5020 Relinquished by: (signature) Refinquished by: (sign Lake Forest, CA 92630 Relinquished by: (signature 801 E -15.0 50 クロワ Date Sampled 22 23 113 Date / Time Date / Time 133 Date / Time 57.80 57.80 57.80 5480 9.00 0815 1200 1018 Time Received by: (signature) Sample Type gived by: (s Return to client Container HICK VEAS HCL VOA HCC VCAS signature Type ≯ D ≯ Þ nature 8260 8260 + OXY Pickup 2/23/13 1018 Date / Time Date / Time 8260 BTEX, OXY only Date: Batch #: Collector: MRasman Project Name: 8270 8021 BTEX 8015M (gasoline) Turn around time: Chain of Custody seals Y/N/NA 8015M (diesel) Received good condition/cold T130428 8015M Ext./Carbon Chain Ma2 6010/7000 Title 22 Metals Seals intact? Y/N/NA Total # of containers Cryb) Client Project #: 22 Ø % 40 06 04 EDF# 02 Page: ç 30 Laboratory ID# 2,5 Comments/Preservative Notes Q B Total # of containers

25712 Commercentre Dr

SunStar Laboratories, Inc

Chain of Custody Record



SAMPLE RECEIVING REVIEW SHEET

BATCH# <u>T130428</u>	•		
Client Name: Gribi	roject: Maz	Glass	· · · · · · · · · · · · · · · · · · ·
Received by: Zan M. I	Date/Time Received:	2/23/13	3 (038
Delivered by: Client SunStar Courier GSO	☐ FedEx ☐ Ott	ner	
Total number of coolers received Temp cr	iteria = 6° C > 0° C (no <u>frozen</u> coi	ntainers)
Temperature: cooler #1 3.4 °C +/- the CF (- 0.2°C) = 3	2.2 °C corrected temper	erature	• •
cooler #2°C +/- the CF (- 0.2°C) = _	°C corrected temp	erature	·
cooler #3°C +/- the CF (- 0.2 °C) =	°C corrected temp	erature	
Samples outside temp. but received on ice, w/in 6 hours of fina	l sampling. 🔲 Ye	s	□N/A
Custody Seals Intact on Cooler/Sample	⊠Y€	s	□N/A
Sample Containers Intact	⊠Y€	s	
Sample labels match COC ID's	∑Y€	s No*	•
Total number of containers received match COC	⊠Y€	s	
Proper containers received for analyses requested on COC	∑ Ye	s □No*	
Proper preservative indicated on COC/containers for analyses	requested \(\sum Y \)	es	□N/A
Complete shipment received in good condition with correct terpreservatives and within method specified holding times.		s, labels, volu	mes
* Complete Non-Conformance Receiving Sheet if checked Co	oler/Sample Review - I	nitials and date	M2/23
Comments:			

brian

From: Bill Hannell [bill@sunstarlabs.com]

Sent: Friday, February 22, 2013 6:09 PM

To: bcharon@sunstarlabs.com

Cc: sunny@sunstarlabs.com

Subject: FW:

HI Brian and Sunny

These samples for Gribi are coming in tomorrow, see the email below, you need to change the sample id

Thanks

Bill

From: James Gribi [mailto:Jgribi@gribiassociates.com]

Sent: Friday, February 22, 2013 5:13 PM

To: Bill Hannell

Cc: dchavez@sunstarlabs.com

Subject:

Bill

I made a mistake on the labeling of the voas for the boring water samples. The sample labeled as "B-22-W", collected at 0840 on 2/22, should actually be labeled as "B-24-W". Can you please change the COC for me?

Thanks,

Jim

James E. Gribi, PG Senior Geologist/Principal Gribi Associates 1090 Adams Street, Suite K Benicia, CA 94510 Phone: (707) 748-7743

Fax: (707) 748-7763 Cell: (707)631-1505





06 March 2013

Jim Gribi Gribi Associates 1090 Adam Street, Suite K Benicia, CA 94510

RE: Maz Glass

Enclosed are the results of analyses for samples received by the laboratory on 02/27/13 10:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Daniel Chavez

Saniel & Chivy

Project Manager



Benicia CA, 94510

25712 Commercentre Drive Lake Forest, California 92630 949.297.5020 Phone 949.297.5027 Fax

Gribi Associates Project: Maz Glass
1090 Adam Street, Suite K Project Number: [none]

Project Number: [none] Reported:
Project Manager: Jim Gribi 03/06/13 13:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OW-2-7.5	T130449-01	Soil	02/22/13 11:05	02/27/13 10:10
OW-2-15.5	T130449-02	Soil	02/22/13 11:20	02/27/13 10:10
OW-3-7.5	T130449-03	Soil	02/22/13 13:40	02/27/13 10:10
OW-3-15.5	T130449-04	Soil	02/22/13 13:50	02/27/13 10:10

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass
1090 Adam Street, Suite K Project Number: [none] Reported:
Benicia CA, 94510 Project Manager: Jim Gribi 03/06/13 13:24

OW-2-7.5 T130449-01 Soil

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

C6-C12 GRO	7700	500	ug/kg	1	3022746	02/27/13	02/28/13	EPA 8015C	
Surrogate 4-Bromofluorobenzene		13	-1.	3					
Volatile Organic Compounds by E	CPA Method 8260	В							
Benzene	ND	5.0	ug/kg	1	3030537	03/03/13	03/04/13	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate Toluene-d8		99.	81	1					
Surrogate 4-Bromofluorobenzene		98.	81.2-1	23					
Surrogate Dibromofluoromethane		9.4	91	3					S

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

OW-2-15.5 T130449-02 Soil

		Reporting							
A	nalyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

C6-C12 GRO	2500	500	ug/kg	1	3022746	02/27/13	02/28/13	EPA 8015C
Surrogate 4-Bromofluorobenzene		122	-13					
Volatile Organic Compounds by E	PA Method 8260B							
Benzene	ND	5.0	ug/kg	1	3030537	03/03/13	03/04/13	EPA 8260B
Toluene	ND	5.0	"	"	"	"	"	"
Ethylbenzene	8.4	5.0	"	"	"	"	"	"
m,p-Xylene	ND	5.0	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"
Surrogate Toluene-d8		9 .1	811					
Surrogate 4-Bromofluorobenzene		1	81.2-12	3				
Surrogate Dibromofluoromethane		9.8	913					

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

OW-3-7.5 T130449-03 Soil

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

C6-C12 GRO	1100	500	ug/kg	1	3022746	02/27/13	02/28/13	EPA 8015C	
Surrogate 4-Bromofluorobenzene		128	-13						
Volatile Organic Compounds by EPA M	ethod 8260B								
Benzene	ND	5.0	ug/kg	1	3030537	03/03/13	03/04/13	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate Toluene-d8		98.1	811						
Surrogate 4-Bromofluorobenzene		1 1	81.2-12.	3					
Surrogate Dibromofluoromethane		9.	913						S-GC

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

OW-3-15.5 T130449-04 Soil

ı										
			Reporting							
	Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

T digensie i ett oledin il, di cent sol								
C6-C12 (GRO)	ND	500	ug/kg	1	3022746	02/27/13	02/28/13	EPA 8015C
Surrogate 4-Bromofluorobenzene		1	-13					
Volatile Organic Compounds by E	PA Method 8260B							
Benzene	ND	5.0	ug/kg	1	3030537	03/03/13	03/04/13	EPA 8260B
Toluene	ND	5.0	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"
m,p-Xylene	ND	5.0	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	II .
Surrogate Toluene-d8		1 2	811					
Surrogate 4-Bromofluorobenzene		1 4	81.2-12	3				

9.-13

9.9

SunStar Laboratories, Inc.

 $Surrogate\ Dibromofluoromethane$



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

Purgeable Petroleum Hydrocarbons by EPA 8015C - uality Control SunStar Laboratories, Inc.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3022746 - EPA 5030 GC										
Blank 3022746-BLK1				Prepared:	02/27/13					
C6-C12 (GRO)	ND	500	ug/kg							
Surrogate 4-Bromofluorobenzene	23			2		94.	-13			
LCS 3022746-BS1				Prepared: 02/27/13 Analyzed: 02/28/13						
C6-C12 (GRO)	12600	500	ug/kg	13800		91.3	75-125			
Surrogate 4-Bromofluorobenzene	322			2		129	-13			
Matrix Spike 3022746-MS1	Sou	rce: T13045	0-02	Prepared:						
C6-C12 (GRO)	12800	500	ug/kg	13800	1260	83.3	65-135			
Surrogate 4-Bromofluorobenzene	31			2		12	-13			
Matrix Spike Dup 3022746-MSD1	trix Spike Dup 3022746-MSD1 Source: T130450-02		Prepared:							
C6-C12 (GRO)	12800	500	ug/kg	13800	1260	83.6	65-135	0.265	20	
Surrogate 4-Bromofluorobenzene	323			2		129	-13			

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3030537	- General Pred	VOC-MS
---------------	----------------	--------

Blank 3030537-BLK1				Prepared: 03/03/13 Analyzed: 03/04/13
Bromobenzene	ND	5.0	ug/kg	
Bromochloromethane	ND	5.0	"	
Bromodichloromethane	ND	5.0	"	
Bromoform	ND	5.0	"	
Bromomethane	ND	5.0	"	
n-Butylbenzene	ND	5.0	"	
sec-Butylbenzene	ND	5.0	"	
tert-Butylbenzene	ND	5.0	"	
Carbon tetrachloride	ND	5.0	"	
Chlorobenzene	ND	5.0	"	
Chloroethane	ND	5.0	"	
Chloroform	ND	5.0	"	
Chloromethane	ND	5.0	"	
2-Chlorotoluene	ND	5.0	"	
4-Chlorotoluene	ND	5.0	"	
Dibromochloromethane	ND	5.0	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	
Dibromomethane	ND	5.0	"	
1,2-Dichlorobenzene	ND	5.0	"	
1,3-Dichlorobenzene	ND	5.0	"	
1,4-Dichlorobenzene	ND	5.0	"	
Dichlorodifluoromethane	ND	5.0	"	
1,1-Dichloroethane	ND	5.0	"	
1,2-Dichloroethane	ND	5.0	"	
1,1-Dichloroethene	ND	5.0	"	
cis-1,2-Dichloroethene	ND	5.0	"	
trans-1,2-Dichloroethene	ND	5.0	"	
1,2-Dichloropropane	ND	5.0	"	
1,3-Dichloropropane	ND	5.0	"	
2,2-Dichloropropane	ND	5.0	"	
1,1-Dichloropropene	ND	5.0	"	
cis-1,3-Dichloropropene	ND	5.0	"	
trans-1,3-Dichloropropene	ND	5.0	"	
Hexachlorobutadiene	ND	5.0	"	
Isopropylbenzene	ND	5.0	"	

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3030537	- General Prep	VOC-MS

Blank 3030537-BLK1				Prepared: 03/0	03/13 Analyze	ed: 03/04/13	
p-Isopropyltoluene	ND	5.0	ug/kg				
Methylene chloride	ND	5.0	"				
Naphthalene	ND	5.0	"				
n-Propylbenzene	ND	5.0	"				
Styrene	ND	5.0	"				
1,1,2,2-Tetrachloroethane	ND	5.0	"				
1,1,1,2-Tetrachloroethane	ND	5.0	"				
Tetrachloroethene	ND	5.0	"				
1,2,3-Trichlorobenzene	ND	5.0	"				
1,2,4-Trichlorobenzene	ND	5.0	"				
1,1,2-Trichloroethane	ND	5.0	"				
1,1,1-Trichloroethane	ND	5.0	"				
Trichloroethene	ND	5.0	"				
Trichlorofluoromethane	ND	5.0	"				
1,2,3-Trichloropropane	ND	5.0	"				
1,3,5-Trimethylbenzene	ND	5.0	"				
1,2,4-Trimethylbenzene	ND	5.0	"				
Vinyl chloride	ND	5.0	"				
Benzene	ND	5.0	"				
Toluene	ND	5.0	"				
Ethylbenzene	ND	5.0	"				
m,p-Xylene	ND	5.0	"				
o-Xylene	ND	5.0	"				
Tert-amyl methyl ether	ND	20	"				
Tert-butyl alcohol	ND	50	"				
Di-isopropyl ether	ND	20	"				
Ethyl tert-butyl ether	ND	20	"				
Methyl tert-butyl ether	ND	20	"				
Surrogate Toluene-d8	41.2			4 .	1 3	811	
Surrogate 4-Bromofluorobenzene	42.3			4 .	1	81.2-123	
Surrogate Dibromofluoromethane	3.8			4.	92.1	913	S-GC

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

Volatile Organic Compounds by EPA Method 8260B - uality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3030537 - General Prep VO	C-MS									
LCS 3030537-BS1				Prepared:	03/03/13	Analyzed	1: 03/04/13			
Chlorobenzene	90.4	5.0	ug/kg	100		90.4	75-125			
1,1-Dichloroethene	90.9	5.0	"	100		90.9	75-125			
Trichloroethene	95.2	5.0	"	100		95.2	75-125			
Benzene	95.8	5.0	"	100		95.8	75-125			
Toluene	93.5	5.0	"	100		93.5	75-125			
Surrogate Toluene-d8	39.			4 .		99.	811			
Surrogate 4-Bromofluorobenzene	38.9			4 .		9.2	81.2-123			
Surrogate Dibromofluoromethane	3.			4 .		92.4	913			S-GC
LCS Dup 3030537-BSD1				Prepared:	03/03/13	Analyzed	1: 03/04/13			
Chlorobenzene	90.2	5.0	ug/kg	100		90.2	75-125	0.221	20	
1,1-Dichloroethene	86.3	5.0	"	100		86.3	75-125	5.19	20	
Trichloroethene	91.6	5.0	"	100		91.6	75-125	3.85	20	
Benzene	97.0	5.0	"	100		97.0	75-125	1.24	20	
Toluene	92.4	5.0	"	100		92.4	75-125	1.13	20	
Surrogate Toluene-d8	4 .2			4 .		1 1	811			
Surrogate 4-Bromofluorobenzene	39.2			4 .		98.	81.2-123			
Surrogate Dibromofluoromethane	39.1			4 .		9.8	913			

SunStar Laboratories, Inc.



Gribi Associates Project: Maz Glass

1090 Adam Street, Suite KProject Number: [none]Reported:Benicia CA, 94510Project Manager: Jim Gribi03/06/13 13:24

Notes and Definitions

S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Saniel & Chivy



SAMPLE RECEIVING REVIEW SHEET

Project:	MAZ GL	<u> </u>	
Date/Time R	eceived:	2.27.13	1 10:10
FedEx	Other		
criteria = 6°C	> 0°C (no	<u>frozen</u> coi	ntainers)
5.6 °C corre	cted temperati	ure	
°C corre	cted temperate	ure	•
°C corre	ected temperati	ure	
nal sampling.	∑ Yes	□No*	□N/A
	Yes	□No*	□N/A
	Yes	□No*	
	∑Yes	□No*	•
	Yes	□No*	
	⊠Yes	□No*	
s requested	∐Yes	□No*	N/A N/A
		abels, volu	mes
Cooler/Sample F	keview - Initia	als and date	81 2.27.15
· · · · · · · · · · · · · · · · · · ·			
	Date/Time Re FedEx criteria = 6°C 5.6°C corre C corre C corre nal sampling.	Date/Time Received: FedEx Other Criteria = 6°C > 0°C (no 6.6 °C corrected temperate °C corrected temperate nal sampling. Yes Yes Yes Yes Yes requested Yes emperatures, containers, land Yes No*	Yes No* s requested Yes No* emperatures, containers, labels, volu