



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

July 16, 2015

**NOTICE OF VIOLATION**

Mr. Walter Merkle  
MCG Investments LLC  
123 Estudillo Avenue  
San Leandro, CA 94577

Shirley J Davini & Dorothy D McGuire  
123 Estudillo Avenue  
San Leandro, CA 94577

Mr. Jon Braden  
McGrath Steel Company  
Address Unknown

Mr. David Davini  
Loretta A McGrath Family Trust  
Address Unknown

Subject: Notice to Violation; Fuel Leak Case No. RO0000063; (Global ID # T0600102099); McGrath Steel Company, 6655 Hollis Street, Emeryville, CA 94608

Dear Messrs. Merkle and Braden, and Mses. Davini and McGuire:

A review of the case file for the above-referenced site indicates that your case is not in compliance with Alameda County Environmental Health's (ACEH) September 15, 2014 directive letter that requested the generation of a Site Conceptual Model (SCM) and a Data Gap Work Plan, and requested a meeting in order to facilitate progress at the site under the State Water Resource Control Boards (SWRCBs) Low Threat Closure Policy (LTCP). Notification of meeting dates was requested to occur by October 3, 2014, and the submittal of the SCM and Data Gap Work Plan was requested to be submitted by December 5, 2014. Both the meeting request and the required report upload have not been received at ACEH or Geotracker.

The case review also indicates that your case is not in compliance with ACEH's Notice to Comply dated April 23, 2015, that again requested notification of potential meeting dates and the electronic submittal of a SCM and Work Plan to Geotracker and ACEH's FTP server by specified dates.

As you are aware, offsite property owners have recently submitted indoor and outdoor air vapor samples that indicate the probability of vapor intrusion from contaminants released at your site to the adjacent downgradient properties. The April 2015 Notice to Comply contained a copy of the November 2014 report documenting this condition at the two downgradient properties. An additional report has been submitted to ACEH documenting a second indoor and outdoor air sampling event in June 2015, that further indicates the probability of vapor intrusion from contaminants released at your site to the adjacent downgradient properties. A copy is attached.

As you are aware, the implementation of site characterization and/or cleanup at this site is crucial to be protective of human health and the environment and to move this case towards closure evaluation. Please note that as Responsible Parties, you are required by California Code of Regulations, Title 23, Division 3, Chapter 16, Article 11, §2720 through §2728 to characterize the site and implement corrective action.

ACEH has recently met with representatives of the offsite property owner, and has been appraised that the subject site is for sale, and that offsite access to the adjacent properties has been offered in order to begin the delineation of the downgradient groundwater plume, and other appropriate actions as needed. Please also know that the publicly available site history on Geotracker has been updated to document recent technical findings, including the risk of vapor intrusion to downgradient properties, and the risk of potentially explosive concentrations of methane beneath the subject site, and potentially the downgradient properties, from the degradation of petroleum hydrocarbons beneath the site.

In order to regain compliance, ACEH requests the notification of potential meeting dates, and the electronic submittal of a SCM and Work Plan to GeoTracker and ACEH's FTP server, by the dates specified below.

Failure to notify ACEH of meeting potential dates and to submit the SCM and Work Plan by the dates specified below may result in possible enforcement action by the District Attorney and/or ineligibility for reimbursement of corrective action costs incurred at the site from the Underground Storage Tank Clean-up Fund.

Please also be aware, that ACEH may recommend that civil penalties up to \$10,000 for each UST for each day of violation may be imposed. Please note that civil penalties for non-compliance are assessed from the original due date (October 3, 2014).

Based on the review of the case file and the referenced additional report, ACEH requests that you additionally send us the documents requested below.

### **TECHNICAL REPORT REQUEST**

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with Attachment 1 and the specified file naming convention below, according to the following schedule:

- **July 31, 2015** – Notification of Meeting Dates  
(Email notification requested)
- **September 4, 2015** – Data Gap Investigation Plan and Focused Site Conceptual Model  
File to be named: RO63\_WP\_SCM\_R\_YYYY-mm-dd
- **September 25, 2015** – Semi-Annual Groundwater Monitoring Report  
File to be named: RO63\_GWM\_R\_YYYY-mm-dd
- **60 Days After Work Plan Approval** – Soil and Groundwater Investigation Report  
File to be named: RO63\_SWI\_R\_YYYY-mm-dd

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

If you have any questions, please call me at (510) 567-6876 or send me an electronic mail message at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org).

Sincerely,

Mark E. Detterman, PG, CEG  
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations and Electronic Report Upload (ftp) Instructions

Attachment 2 - *Indoor Air Survey Sampling Event 2 Letter of Findings – 1475 and 1483 67<sup>th</sup> Street Emeryville, California*, Stellar Environmental Solutions, Inc, dated July 8, 2015

Messrs. Merkle and Braden, and Meses. Davini and McGuire  
RO0000063  
July 16, 2015, Page 3

cc: Leonard Niles, AllWest Environmental, Inc, 530 Howard Street, Suite 300, San Francisco, CA 94105; (sent via electronic mail to: [leonard@allwest1.com](mailto:leonard@allwest1.com))

Jon Wactor, Esq, Wactor and Wick LLP Environmental Attorneys, 180 Grand Avenue, Suite 950, Oakland, CA 94612; (sent via electronic mail to: [jon.wactor@ww-envlaw.com](mailto:jon.wactor@ww-envlaw.com))

Erin Corder-Schaefer, Corder Family Emeryville Properties, LLP, 2156 Corte Dorado Espuela, Alpine, CA 91901

James Arnold, Esq, The Arnold Law Practice, 3685 Mt. Diablo Blvd, Suite 331, Lafayette, CA 94549; (sent via electronic mail to: [jarnold@arnoldlp.com](mailto:jarnold@arnoldlp.com))

Richard Makdisi, Stellar Environmental Solutions, Inc, 2198 Sixth Street, Suite 201, Berkeley, CA 94710; (sent via electronic mail to: [rmakdisi@stellar-environmental.com](mailto:rmakdisi@stellar-environmental.com))

Dilan Roe, ACEH, (sent via electronic mail to: [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))

Mark Detterman (sent via electronic mail to [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org))

Electronic File, GeoTracker

## Attachment 1

### Responsible Party(ies) Legal Requirements / Obligations

#### REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

#### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal/](http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)).

#### PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>REVISION DATE:</b> May 15, 2014
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

## REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

## Submission Instructions

- 1) Obtain User Name and Password
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org)
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
  - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [deh.loptoxic@acgov.org](mailto:deh.loptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.



2198 SIXTH STREET, SUITE 201-BERKELEY, CA 94710  
TEL: (510)644-3123 · FAX: (510)644-3859  
GEOSCIENCE & ENGINEERING CONSULTING

July 8, 2015

Mr. Mark Detterman  
Hazardous Materials Specialist  
Alameda County Department of Environmental Health  
Local Oversight Program  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Ms. Erin M. Corder-Schaefer  
Corder Family Emeryville Properties, LP  
2156 Corte Dorado Espuela  
Alpine, CA 91901

Subject: Indoor Air Survey Sampling Event 2 Letter of Findings—1475 and 1483 67<sup>th</sup> Street,  
Emeryville, California.

Dear Mr. Detterman and Ms. Corder-Schaefer:

### **INTRODUCTION AND BACKGROUND**

This June 2015 indoor air monitoring event at the two Corder property buildings downgradient from known former McGrath Steel underground fuel storage tank (UFST) site is the second indoor air monitoring event conducted by Stellar Environmental Solutions, Inc. (Stellar Environmental), the first one being in October 2014. This survey has been commissioned by Corder Family Emeryville Properties, LLC. The indoor air monitoring was initially prompted by known McGrath Steel hydrocarbon plume site (Alameda County Fuel Leak Case #RO0000063; Global ID T0600102099) and specifically the June 2014 indoor air results reported by AllWest Environmental at the adjacent McGrath Steel office and warehouse complex located at 6655/ Hollis Street/1471 67<sup>th</sup> Street. The concern is the impact of the McGrath Steel hydrocarbon plume on the downgradient Corder properties.

Leakage from the McGrath Steel former underground fuel storage tanks (UST) system under the 67<sup>th</sup> Street sidewalk that was removed in 1996 became apparent in numerous subsequent investigations. The hydrocarbon leak resulted in fuel hydrocarbon contamination of soil and

groundwater beneath 67<sup>th</sup> Street and the plume is also indicated to be beneath at least part of the 1475 and 1483 67<sup>th</sup> Street, Corder property buildings, and to be impacting indoor air quality.

The AllWest indoor air survey is described in the July 21, 2014 AllWest document, "Indoor air Quality Monitoring Report, Former McGrath Steel, 6655 Hollis and 1471 67<sup>th</sup> Street, Emeryville, California (Alameda County Fuel Leak Case #RO0000063)". However, it should be noted that AllWest conducted a 24-hour indoor air test that is typically used for evaluating indoor air impacts to residential land use versus the 8-hour indoor air test called for in regulatory guidance to evaluate commercial land use spaces. The five AllWest indoor air samples were all located within the McGrath Steel property. Regulatory oversight of this case is being provided by Mr. Mark Detterman of Alameda County Environmental Health Services (ACEHS).

Benzene concentrations in four of the five AllWest indoor air samples exceeded the Regional Water Quality Control Board-San Francisco Bay Region (Water Board) indoor air commercial Environmental Screening Levels (ESLs) for benzene of 0.42  $\mu\text{g}/\text{m}^3$ . Benzene did not exceed its applicable ESL in the sample collected along the north wall of the warehouse building, adjacent to the former UST source area locations, or in the outdoor ambient air sample. According to the AllWest report, based on uniform concentrations in indoor and outdoor air samples, and on benzene concentrations being lowest in the sample location closest to the original UST source area, it was AllWest's opinion that benzene, carbon tetrachloride and several other detected VOCs were atmospheric contaminants which did not originate from the known UST source area.

Based on a review of the July 2014 AllWest indoor air quality report and of subsurface investigations conducted at the McGrath site to date by Weiss Associates (1998-2005) and AllWest (2013-2014), Stellar Environmental recommended indoor air sampling of the buildings adjacent to the 1471 67<sup>th</sup> Street McGrath warehouse as the logical next step to address the issue of whether the known hydrocarbon plume from the former McGrath Steel site is impacting the indoor air in adjacent buildings at 1475 and 1483 67<sup>th</sup> Street.

The indoor air samples IA-1 through IA-4 collected in November 2014 by Stellar Environmental all contained concentrations of benzene above the "commercial property" ESL of 0.42  $\mu\text{g}/\text{m}^3$ , ranging from 1.1  $\mu\text{g}/\text{m}^3$  to 9.5  $\mu\text{g}/\text{m}^3$ . This compares with the lower 0.54  $\mu\text{g}/\text{m}^3$  to 0.79  $\mu\text{g}/\text{m}^3$  benzene range reported by the July 2014 AllWest study. The November 2014 outdoor control sample OA-1 contained 1.3  $\mu\text{g}/\text{m}^3$  benzene. Three out of four of the indoor air samples exceeded the 100  $\mu\text{g}/\text{m}^3$  commercial ESL for TPH as gasoline with concentrations ranging from 61  $\mu\text{g}/\text{m}^3$  to 360  $\mu\text{g}/\text{m}^3$ . The outdoor sample contained 140  $\mu\text{g}/\text{m}^3$  TPHg. One sample exceeded the naphthalene ESL of 0.36  $\mu\text{g}/\text{m}^3$  at a concentration of 0.88  $\mu\text{g}/\text{m}^3$ , with the outdoor control sample

containing 0.17  $\mu\text{g}/\text{m}^3$  naphthalene. Detections of toluene, ethylbenzene and xylenes did not exceed their respective ESLs in any of the samples.

The indoor air sample with the highest concentrations of the constituents analyzed for was sample IA-4 located in the front office of 1483 67<sup>th</sup> Street. Sample IA-3 located in the office area of 1475 67<sup>th</sup> Street contained the lowest concentrations.

The 1475 67<sup>th</sup> Street building adjoins directly to the west of the McGrath warehouse and is a 15,000 square foot industrial building constructed in the 1940's. The building is occupied by Metalco, a metal anodizing business. 1483 67<sup>th</sup> Street adjoins directly to the west of the Metalco building and is a 13,000 square foot industrial structure occupied by Architectural Metal Works, which is a metal working shop for the building industry. Figure 1 presents the general site location. Figure 2 is a site map of the property and surrounding sites.

The specific goals of this second Stellar Environmental were to:

- Follow the California Department of Toxic Substance Control (DTSC) guidance for conducting indoor air sampling in commercial buildings;
- Collect four indoor air samples and one outdoor ambient air sample during normal office working hours (8:00 am to 4:00 pm);
- Analyze the indoor air quality samples for established contaminants in the subsurface using EPA Method TO-15 for Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, total xylenes and naphthalene for which there are existing indoor air regulatory ESLs and
- Compare the sampling results to 2013 RWQCB indoor air guidance ESLs for commercial property.

## **JUNE 2015 INDOOR AIR SAMPLING**

### **Air Sampling Location Rationale**

This indoor air investigation and associated report is informed from the initial Stellar Environmental November 2014 indoor air sampling event. The specific locations of the indoor air survey samples reproduced, to the extent practical, the same locations at three of the four indoor air sampling locations from where the samples were collected in November 2014. This approach is recommended to confirm seasonal variations in the indoor air contaminants of concern (COC). The sample point IA-4a location was selected to evaluate if there appears to be any significant difference in the indoor air concentrations further inside the building away from



the previous 2014 sample IA-4 that showed the highest hydrocarbon concentrations. Sample IA-4 was in a small office while IA-4a is located further inside the open warehouse space architecture of the building and serves as a better indicator of the extent of the vapor intrusion from the McGrath Steel facility hydrocarbon plume. Figure 3 depicts the sample locations.

### **Indoor Air Sampling Protocol**

Mr. Henry Pietropaoli, of Stellar Environmental completed the sampling setup at 8:00 am on Thursday June 18, 2015 and retrieved the sampling apparatus at 4:00 pm the same day, after checking the sampling canisters during the day to make sure they were operating properly. Photodocumentation of the sampling event is attached.

The indoor air sampling program generally followed the DTSC guidance entitled: the *Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (DTSC, August, 2011). The protocol used, included:

- Samples were collected for analysis using Environmental Protection Agency (EPA) method TO-15 [used for integrated (greater than a few minutes) sampling events], which includes the contaminants of concern: benzene, toluene, ethylbenzene, and total xylenes. In addition, TPHg and Naphthalene were included as analytes. These gasoline related compounds have a higher relative vapor pressure than diesel fuel, the other McGrath site contaminant, and are more likely to find their way into indoor air space from beneath the surface.
- The indoor and outdoor air samples were collected over an 8-hour period using 6-liter Summa® canister with a calibrated flow controller set at 11.5 milliliters per minute with the sample intake positioned approximately 3-5 feet above the building floor; and
- The samples were collected during the average period when the building would typically be occupied from 8:00 am until 4:00 pm.

The five air samples were maintained at ambient temperature, out of direct sunlight and transported by courier to McCampbell Analytical of Pittsburg, California, a laboratory certified by the State of California Environmental Laboratory Accreditation Program (ELAP) for the analytical method utilized in this investigation.

### **REGULATORY CONSIDERATIONS**

In December 2004, the Office of Environmental Health Hazard Assessment (OEHHA) on behalf of the California Environmental Protection Agency (CAL EPA) established their own risk

equivalent to the Water Boards Environmental Screening Levels (ESLs), which are called California Human Health Screening Levels (CHHSLs). The Water Board also established their Environmental Screening Levels (ESL's) which have superseded CHHSLs in that DTSC stopped updating them by 2013.

The Water Board ESLs were most recently updated in December 2013 and now include values for indoor air for gasoline range petroleum hydrocarbons (TPG-gasoline) and their benzene, toluene, ethylbenzene and xylenes (BTEX) components. The concentrations from this survey are compared to the Water Board 2013 Environmental Screening Levels (ESL) guidance as that has superseded the CHHSLs, which are no longer being updated. The CHHSL and ESLs historically had very similar values. In addition, the California Occupational Safety and Health Administration (CAL OSHA) has also established Permissible Exposure Limits (PELs) that reflect the maximum permitted 8-hour average concentration limit of an airborne contaminant associated with a given industry. The PELs are to be applied to occupational exposure (such as exposure to dry cleaner chemicals for workers at dry cleaners or petroleum exposure for workers at a petroleum service station) and are not applicable in this case. The CAL OSHA standards, while more conservative, are similar to the federal OSHA standards. Both the Cal OSHA standards and federal standards are law versus guidance and are significantly less conservative than the Cal EPA Water Board ESL's the indoor air sample sin this report are compared against.

It is important to note that neither CHHSLs nor ESLs, were conceived as a cleanup criteria nor stipulate regulatory agency action. Rather, the ESLs are Tier 1 conservative screening criteria used to evaluate sites for potential human health or environmental exposure concerns where releases of hazardous materials to soils or groundwater have occurred. And they serve as indicators source of contamination concerns that can carry environmental liability.

## **INDOOR AIR SAMPLING ANALYTICAL RESULTS AND DISCUSSION**

The indoor air samples IA-1a through IA-4a for the current study all contained concentrations of benzene above the "commercial property" ESL of  $0.42 \mu\text{g}/\text{m}^3$ , ranging from  $0.69 \mu\text{g}/\text{m}^3$  to  $1.7 \mu\text{g}/\text{m}^3$  in the Corder Family Emeryville property buildings downgradient of the McGrath petroleum UST site. This is a decrease from the November 2014 Stellar Environmental benzene results which ranged from  $1.1 \mu\text{g}/\text{m}^3$  to  $9.5 \mu\text{g}/\text{m}^3$  in those building although one of the locations changed. The downgradient indoor air samples showed higher concentrations compared with the  $0.54 \mu\text{g}/\text{m}^3$  to  $0.79 \mu\text{g}/\text{m}^3$  benzene range reported by the July 2014 AllWest study at the McGrath facility, suggesting the McGrath facility sourced petroleum plume is migrating beneath the downgradient Corder properties.

The outdoor control sample OA-1 contained 0.7  $\mu\text{g}/\text{m}^3$  benzene. All four of the indoor air samples exceeded the 100  $\mu\text{g}/\text{m}^3$  commercial ESL for TPH as gasoline with concentrations ranging from 190 $\mu\text{g}/\text{m}^3$  to 320  $\mu\text{g}/\text{m}^3$ . The outdoor sample contained 100  $\mu\text{g}/\text{m}^3$  TPHg. One sample (IA-4a) exceeded the naphthalene ESL of 0.36  $\mu\text{g}/\text{m}^3$  at a concentration of 0.52  $\mu\text{g}/\text{m}^3$ , with the outdoor control sample containing 0.21  $\mu\text{g}/\text{m}^3$  naphthalene. Detections of toluene, ethylbenzene and xylenes did not exceed their respective ESLs in any of the samples.

The indoor air sample with the highest concentrations of the constituents analyzed for was sample IA-4a located by the west wall of the shop of 1483 67<sup>th</sup> Street. The November 2104 results showed the highest results in this same building but in the front office. Sample IA-3 located in the office area of 1475 67<sup>th</sup> Street contained the lowest range of concentrations.

As part of the indoor air testing process, the outdoor control sample is collected to provide a meaningful comparison between indoor air and outdoor air concentrations. This comparison is considered in terms of the cumulative indoor air risk associated with the target volatile chemicals. Specific risk considerations would include the exposure scenario being evaluated (e.g., residential, industrial/commercial, school-based) and the risk associated with target volatile chemicals measured in outdoor air for the appropriate exposure scenario. When conducting a vapor intrusion/indoor air assessment, the outdoor ambient air data are used to interpret the measured indoor air concentrations, not to adjust the indoor air concentrations for risk assessment purposes. In the case of the current indoor air sampling results, outdoor air COC concentrations in sample OA-1a were lower than any of the indoor air sample concentrations. This comparison suggests that a vapor intrusion mechanism is involved in the contribution to the indoor air total COC concentrations detected inside the subject buildings.

Table 1 shows the concentrations of indoor air and ambient contaminants detected during the 8-hour sampling event of November 14, 2014 and for June 18, 2015. Table 1 also shows the ESLs indoor air standards for the detected contaminants. Photo-documentation and laboratory analytical results and chain-of-custody record are attached.

## **CONCLUSIONS AND RECOMMENDATIONS**

Based on the indoor air results, there is some risk of exposure from benzene, naphthalene and TPH-gasoline vapor intrusion to occupants of both buildings, based on their respective concentrations being above the regulatory ESLs with benzene as the primary risk driver. In general, once ESLs are exceeded, the need for a type of additional investigative and corrective actions are generally driven by the potential risk associated with the contamination, with input by the regulatory agency providing oversight, which in this case is the ACEHS.

Ms. Erin M. Corder-Shaefer  
Corder Family Emeryville Properties, LP  
July 8, 2015  
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The two indoor air sampling events, coupled with the Allwest monitoring events since 2013 shows the flow direction of the groundwater to be to the southwest, projecting beneath the 1475 and 1483 67<sup>th</sup> Street Corder buildings. The geometry and concentration of the hydrocarbons in groundwater beneath the Corder buildings needs to be evaluated to gain a better perspective of the environmental liability and risks associated with it not being mitigated and the most effective way to remediate the plume.

Indoor air risk can be mitigated by the increasing mechanical means such as increasing air exchange rates so that the air inside the sales offices areas of the buildings is flushed more frequently. The effectiveness of this can be gauged by future air monitoring under the recommended increased air exchange conditions. The only effective manner to reduce the longer term risk is through remediation of the hydrocarbon groundwater plume that is the source of the benzene and TPHg vapor intrusion.

Based on the findings of this and the previous investigations, Stellar Environmental recommends conducting another indoor air sampling event within 6 months, by December 2015. Also recommended is the installation of six to eight investigatory bores to soil (capillary fringe) and grab-groundwater data in the 1475 and 1483 67<sup>th</sup> Street spaces to delineate the plume better. As the lines of evidence all point to the upgradient McGrath Steel site as being responsible, the McGrath Steel Responsible Parties (RP) should ideally be directed to complete the work with active ACEHS oversight. We trust this review assists you in evaluating the salient environmental issues associated with the subject site. Please call the undersigned directly at (510) 644-3123 if you have any questions regarding this report of findings.

Sincerely,



Steve Bittman,  
Senior Geologist & Project Manager



Richard S. Makdisi, P.G.  
Principal Geochemist & President



**Table 1**  
**Indoor Air Sample Analytical Results –November 14, 2014 and June 18, 2015**  
**Eight Hour Test**  
**1475 and 1483 67<sup>th</sup> Street, Emeryville, California**

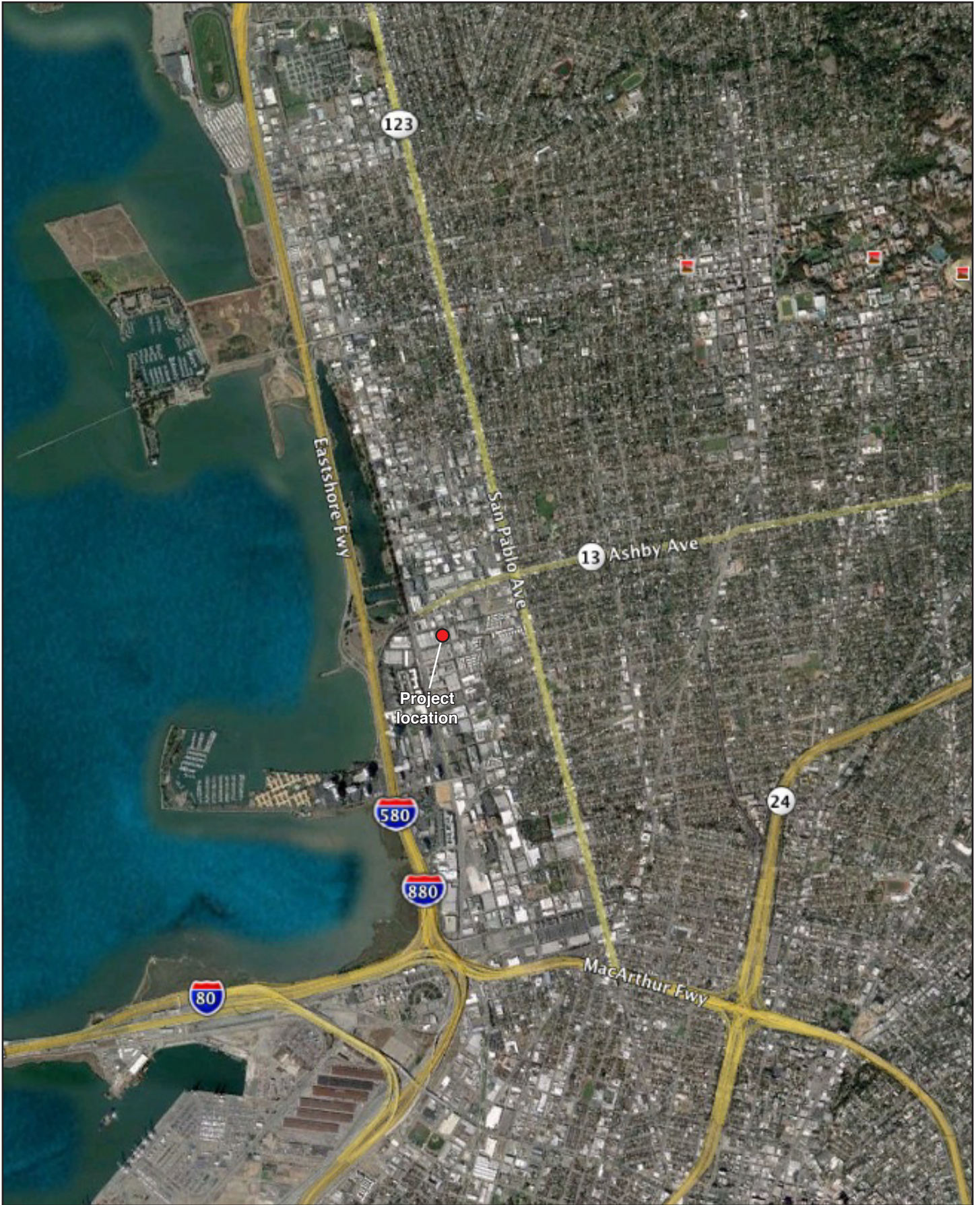
NOVEMBER 14, 2014 TO-15 INDOOR AIR SURVEY						
Analyte	Indoor Air Sample- NE Corner 1475 67 <sup>th</sup> Street Building	Indoor Air Sample- Central 1475 67 <sup>th</sup> Street Building	Indoor Air Sample- Office in NW Corner 1475 67 <sup>th</sup> Street Building	Indoor Air Sample- Office in 1483 67 <sup>th</sup> Street Building	Outdoor Air (Ambient) Sample- in Front of 1475 67 <sup>th</sup> Street Building	2013 Commercial ESL
	IA-1	IA-2	IA-3	IA-4	OA-1	
Benzene	3.0	1.2	1.1	9.5	1.3	0.42
Toluene	16	4.2	8.2	17	2.5	1,300
Ethyl Benzene	3.2	0.64	0.58	4.3	0.65	4.9
Total Xylenes	16	3.3	3.0	21	3.4	440
Total TPHg	240	150	61	360	140	100
Naphthalene	0.18	0.15	0.19	0.88	0.17	0.36
JUNE 18, 2015 TO-15 INDOOR AIR SURVEY						
Analyte	Indoor Air Sample- NE Corner 1475 67 <sup>th</sup> Street Building	Indoor Air Sample- Central 1475 67 <sup>th</sup> Street Building	Indoor Air Sample- Office in NW Corner 1475 67 <sup>th</sup> Street Building	Indoor Air Sample- Mid-point, west wall 1483 67 <sup>th</sup> Street Building	Outdoor Air (Ambient) Sample- in Front of 1475 67 <sup>th</sup> Street Building	2013 Commercial ESL
	IA-1A	IA-2A	IA-3A	IA-4A*	OA-1A	
Benzene	1.0	0.69	0.91	1.7	0.70	0.42
Toluene	6.0	3.2	3.2	17	1.9	1,300
Ethyl Benzene	0.86	0.56	0.51	2.3	0.60	4.9
Total Xylenes	4.2	2.7	2.3	12	2.8	440
Total TPHg	190	210	220	320	100	100
Naphthalene	0.27	0.21	0.28	0.52	0.21	0.36

Notes: All values in  $\mu\text{g}/\text{m}^3$  **Bold** type designatd exceeding guidance value. Cal/OSHA PEL = California Occupational Safety and Health Administration Permissible Exposure Limit ESL = Water Board Environmental Screening Level for commercial properties (December 2013). NA= There is no number available for this contaminant. All concentrations are reported in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Samples denoted with < are below the laboratory detection limit. All limits are the lowest possible detection limit possible by the laboratory. Samples were collected in the breathing zone between 3.5 and 5.feet above the top of the floor. \* after the smaple IA-4A denoted that this sample was not in the same location in June 2015 and November 2014.

## **FIGURES**

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**SITE LOCATION MAP**

1475 and 1483 67th St.  
Emeryville, CA

By: MJC

JUNE 2015

**Figure 1**







2014-56-03



**SITE PLAN AND SURROUNDING SITES**

1475 and 1483 67th St.  
Emeryville, CA

By: MJC

JUNE 2015

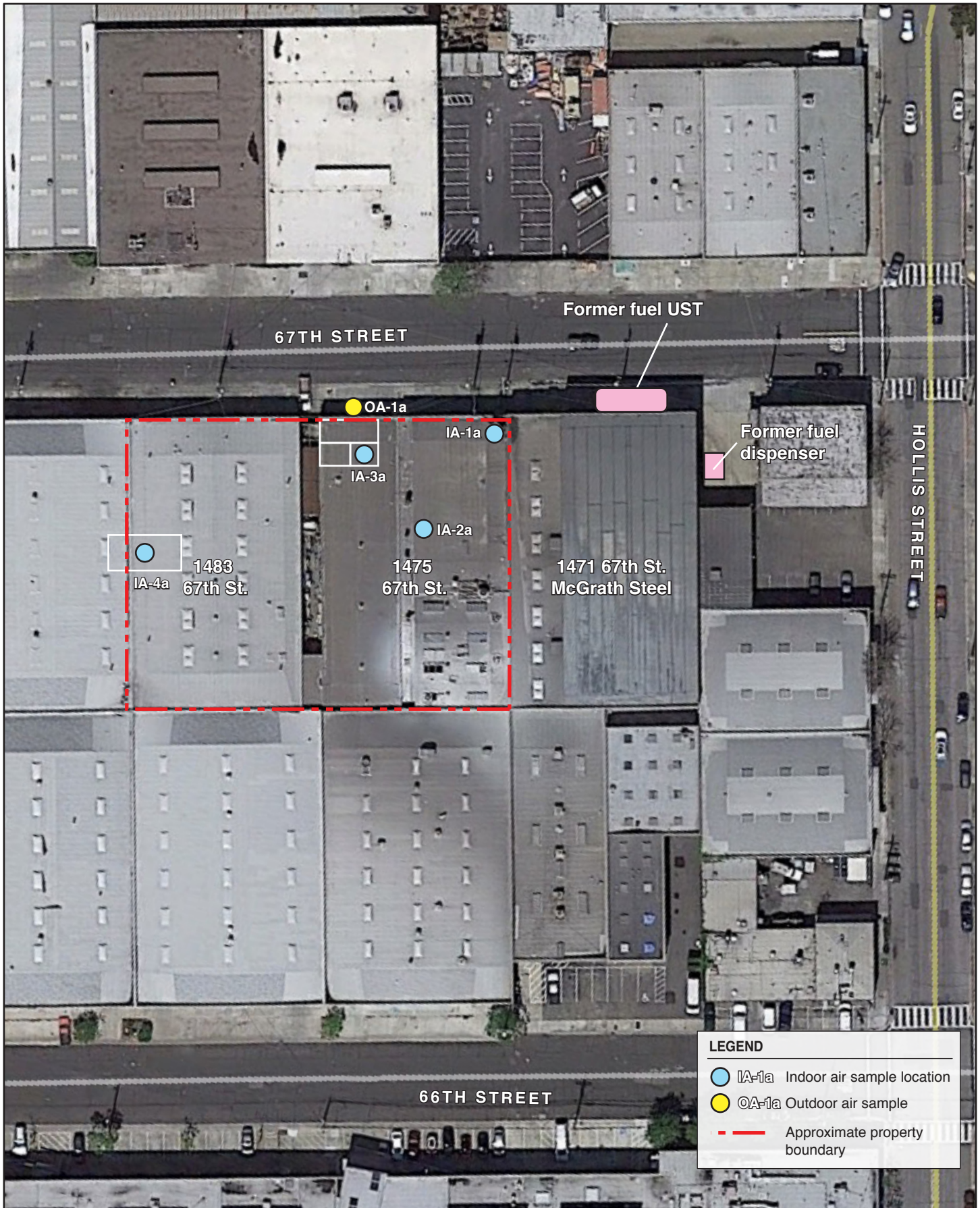
**Figure 2**

**LEGEND**

- - - - - Approximate property boundary







**SITE PLAN AND INDOOR AIR SAMPLE LOCATIONS**

1475 and 1483 67th St.  
Emeryville, CA

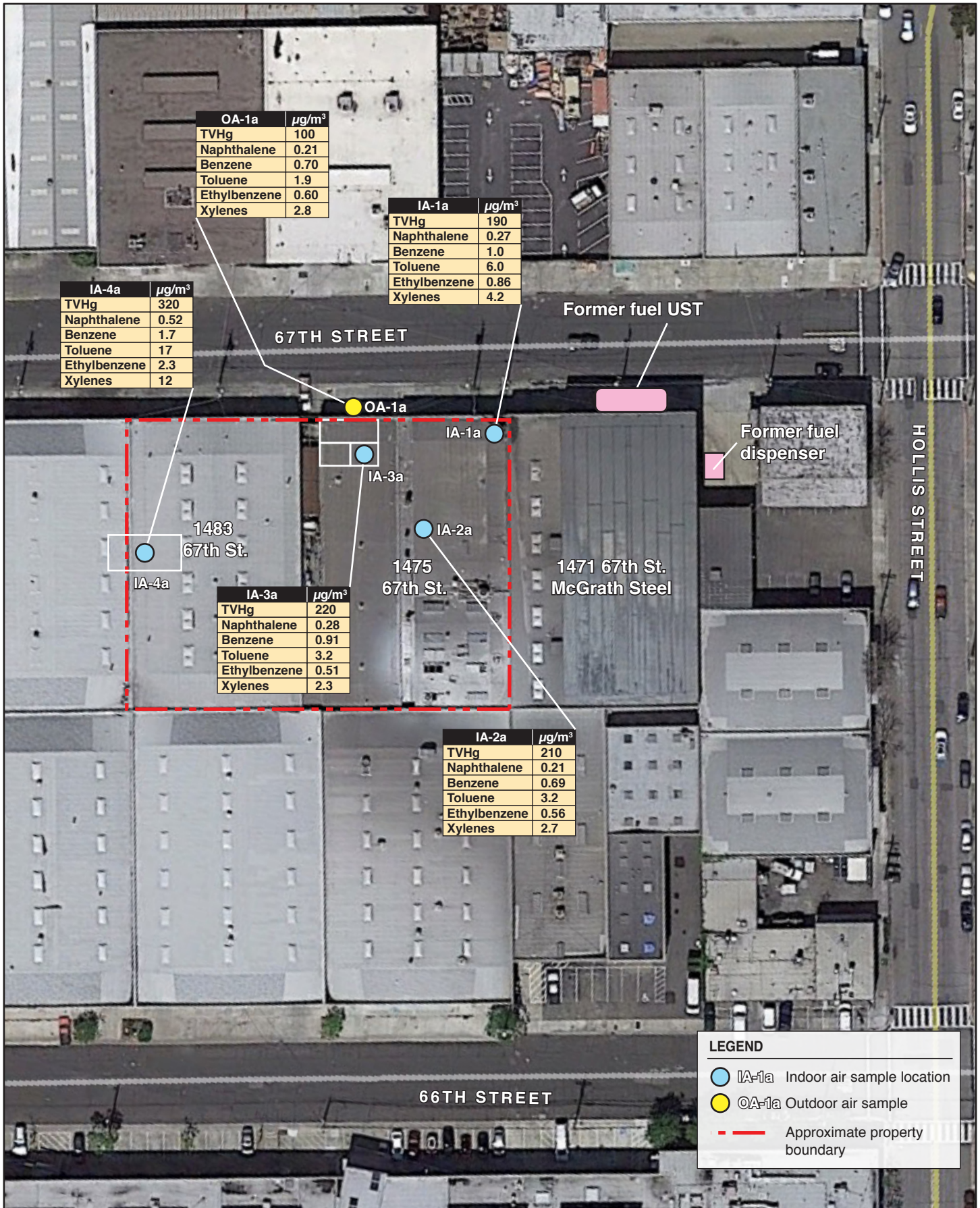
By: MJC

JUNE 2015

**Figure 3**







**LEGEND**

- IA-1a Indoor air sample location
- OA-1a Outdoor air sample
- Approximate property boundary

2014-56-06

# **PHOTODOCUMENTATION**

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Subject: Indoor air sampling location (IA-1a) in NE corner 1475 67<sup>th</sup> Street

Site: 1475/1483 67<sup>th</sup> Street, Emeryville, California

Date Taken: June 18, 2015

Project No.: SES 2014-56

Photographer: H. Pietropaoli

Photo No.: 01



Subject: Indoor ambient air sampling location (IA-2a) near 1475 67<sup>th</sup> Street building center

Site: 1475/1483 67<sup>th</sup> Street, Emeryville, California

Date Taken: June 18, 2015

Project No.: SES 2014-56

Photographer: H. Pietropaoli

Photo No.: 02



Subject: Indoor air sampling location (IA-3a) in 1475 67<sup>th</sup> Street sales office near 67<sup>th</sup> Street.

Site: 1475/1483 67<sup>th</sup> Street, Emeryville, California

Date Taken: June 18, 2015

Project No.: SES 2014-56

Photographer: H. Pietropaoli

Photo No.: 03



Subject: Indoor air sampling location (IA-4a) in 1483 67<sup>th</sup> Street by the west wall.

Site: 1475/1483 67<sup>th</sup> Street,, Emeryville, California

Date Taken: June 18, 2015

Project No.: SES 2014-56

Photographer: H. Pietropaoli

Photo No.: 04





Subject: Outdoor air sampling location (OA-1a) above front door at 1475 67<sup>th</sup> Street

Site: 1475/1483 67<sup>th</sup> Street, Emeryville, California

Date Taken: June 18, 2015

Project No.: SES 2014-56

Photographer: H. Pietropaoli

Photo No.: 05

*STELLAR ENVIRONMENTAL SOLUTIONS, INC.*

**LABORATORY ANALYTICAL RESULTS, CHAIN  
OF CUSTODYRECORD**

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# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1506896

**Report Created for:** Stellar Environmental Solutions  
2198 Sixth St. #201  
Berkeley, CA 94710

**Project Contact:** Henry Pietropaoli  
**Project P.O.:**  
**Project Name:** #2014-56; Corder

**Project Received:** 06/19/2015

Analytical Report reviewed & approved for release on 06/29/2015 by:

Angela Rydelius,  
Laboratory Manager

*The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.*







## Glossary of Terms & Qualifier Definitions

**Client:** Stellar Environmental Solutions  
**Project:** #2014-56; Corder  
**WorkOrder:** 1506896

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

### Quality Control Qualifiers

F2 LCS recovery for this compound is outside of acceptance limits.



## Analytical Report

**Client:** Stellar Environmental Solutions  
**Project:** #2014-56; Corder  
**Date Received:** 6/19/15 20:48  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506896  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### TPH gas in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OA-1a	1506896-001A	Indoor Air	06/18/2015 16:05	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
14.01	14.01	AK

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	100	36	1	06/24/2015 21:38
Surrogates	REC (%)	Limits		
1,2-DCA-d4	100	70-130		06/24/2015 21:38

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-4a	1506896-002A	Indoor Air	06/18/2015 16:07	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
14.36	14.36	AK

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	320	36	1	06/24/2015 22:39
Surrogates	REC (%)	Limits		
1,2-DCA-d4	101	70-130		06/24/2015 22:39

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-3a	1506896-003A	Indoor Air	06/18/2015 16:08	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.53	13.53	AK

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	220	36	1	06/24/2015 23:37
Surrogates	REC (%)	Limits		
1,2-DCA-d4	98	70-130		06/24/2015 23:37

(Cont.)



## Analytical Report

**Client:** Stellar Environmental Solutions  
**Project:** #2014-56; Corder  
**Date Received:** 6/19/15 20:48  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506896  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### TPH gas in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-2a	1506896-004A	Indoor Air	06/18/2015 16:10	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.78	12.78	AK

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	210	36	1	06/25/2015 00:39
Surrogates	REC (%)	Limits		
1,2-DCA-d4	96	70-130		06/25/2015 00:39

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-1a	1506896-005A	Indoor Air	06/18/2015 16:11	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.12	13.12	AK

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	190	36	1	06/25/2015 01:36
Surrogates	REC (%)	Limits		
1,2-DCA-d4	97	70-130		06/25/2015 01:36



## Analytical Report

**Client:** Stellar Environmental Solutions  
**Project:** #2014-56; Corder  
**Date Received:** 6/19/15 20:48  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506896  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
OA-1a	1506896-001A	Indoor Air	06/18/2015 16:05	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
14.01	14.01	AK

Analytes	Result	RL	DF	Date Analyzed
Benzene	0.70	0.032	1	06/24/2015 21:38
Ethylbenzene	0.60	0.44	1	06/24/2015 21:38
Methyl-t-butyl ether (MTBE)	ND	0.37	1	06/24/2015 21:38
Naphthalene	0.21	0.11	1	06/24/2015 21:38
Toluene	1.9	0.38	1	06/24/2015 21:38
Xylenes, Total	2.8	1.3	1	06/24/2015 21:38
Surrogates	REC (%)	Limits		
1,2-DCA-d4	97	70-130		06/24/2015 21:38
Toluene-d8	101	70-130		06/24/2015 21:38
4-BFB	106	70-130		06/24/2015 21:38

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-4a	1506896-002A	Indoor Air	06/18/2015 16:07	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
14.36	14.36	AK

Analytes	Result	RL	DF	Date Analyzed
Benzene	1.7	0.032	1	06/24/2015 22:39
Ethylbenzene	2.3	0.44	1	06/24/2015 22:39
Methyl-t-butyl ether (MTBE)	ND	0.37	1	06/24/2015 22:39
Naphthalene	0.52	0.11	1	06/24/2015 22:39
Toluene	17	0.38	1	06/24/2015 22:39
Xylenes, Total	12	1.3	1	06/24/2015 22:39
Surrogates	REC (%)	Limits		
1,2-DCA-d4	97	70-130		06/24/2015 22:39
Toluene-d8	99	70-130		06/24/2015 22:39
4-BFB	107	70-130		06/24/2015 22:39

(Cont.)



## Analytical Report

**Client:** Stellar Environmental Solutions  
**Project:** #2014-56; Corder  
**Date Received:** 6/19/15 20:48  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506896  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-3a	1506896-003A	Indoor Air	06/18/2015 16:08	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.53	13.53	AK

Analytes	Result	RL	DF	Date Analyzed
Benzene	0.91	0.032	1	06/24/2015 23:37
Ethylbenzene	0.51	0.44	1	06/24/2015 23:37
Methyl-t-butyl ether (MTBE)	ND	0.37	1	06/24/2015 23:37
Naphthalene	0.28	0.11	1	06/24/2015 23:37
Toluene	3.2	0.38	1	06/24/2015 23:37
Xylenes, Total	2.3	1.3	1	06/24/2015 23:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
1,2-DCA-d4	95	70-130		06/24/2015 23:37
Toluene-d8	100	70-130		06/24/2015 23:37
4-BFB	109	70-130		06/24/2015 23:37

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-2a	1506896-004A	Indoor Air	06/18/2015 16:10	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
12.78	12.78	AK

Analytes	Result	RL	DF	Date Analyzed
Benzene	0.69	0.032	1	06/25/2015 00:39
Ethylbenzene	0.56	0.44	1	06/25/2015 00:39
Methyl-t-butyl ether (MTBE)	ND	0.37	1	06/25/2015 00:39
Naphthalene	0.21	0.11	1	06/25/2015 00:39
Toluene	3.2	0.38	1	06/25/2015 00:39
Xylenes, Total	2.7	1.3	1	06/25/2015 00:39
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
1,2-DCA-d4	93	70-130		06/25/2015 00:39
Toluene-d8	101	70-130		06/25/2015 00:39
4-BFB	108	70-130		06/25/2015 00:39

(Cont.)



## Analytical Report

**Client:** Stellar Environmental Solutions  
**Project:** #2014-56; Corder  
**Date Received:** 6/19/15 20:48  
**Date Prepared:** 6/24/15-6/25/15

**WorkOrder:** 1506896  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IA-1a	1506896-005A	Indoor Air	06/18/2015 16:11	GC24	106870

Initial Pressure (psia)	Final Pressure (psia)	Analyst(s)
13.12	13.12	AK

Analytes	Result	RL	DF	Date Analyzed
Benzene	1.0	0.032	1	06/25/2015 01:36
Ethylbenzene	0.86	0.44	1	06/25/2015 01:36
Methyl-t-butyl ether (MTBE)	ND	0.37	1	06/25/2015 01:36
Naphthalene	0.27	0.11	1	06/25/2015 01:36
Toluene	6.0	0.38	1	06/25/2015 01:36
Xylenes, Total	4.2	1.3	1	06/25/2015 01:36

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	94	70-130	06/25/2015 01:36
Toluene-d8	101	70-130	06/25/2015 01:36
4-BFB	108	70-130	06/25/2015 01:36



## Quality Control Report

**Client:** Stellar Environmental Solutions  
**Date Prepared:** 6/26/15  
**Date Analyzed:** 6/24/15  
**Instrument:** GC24  
**Matrix:** Soilgas  
**Project:** #2014-56; Corder

**WorkOrder:** 1506896  
**BatchID:** 106870  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** nL/L  
**Sample ID:** MB/LCS-106870

### QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	22.9	0.50	25	-	92	60-140
Acrylonitrile	ND	25.1	0.50	25	-	100	60-140
tert-Amyl methyl ether (TAME)	ND	27.0	0.50	25	-	107	60-140
Benzene	ND	22.7	0.50	25	-	91	60-140
Benzyl chloride	ND	31.7	0.50	25	-	127	60-140
Bromodichloromethane	ND	24.6	0.50	25	-	98	60-140
Bromoform	ND	30.6	0.50	25	-	122	60-140
Bromomethane	ND	20.0	0.50	25	-	80	60-140
1,3-Butadiene	ND	24.2	0.50	25	-	97	60-140
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	27.3	10	25	-	109	60-140
Carbon Disulfide	ND	25.3	0.50	25	-	101	60-140
Carbon Tetrachloride	ND	25.4	0.50	25	-	102	60-140
Chlorobenzene	ND	27.0	0.50	25	-	108	60-140
Chloroethane	ND	18.1	0.50	25	-	72	60-140
Chloroform	ND	21.7	0.50	25	-	87	60-140
Chloromethane	ND	26.7	0.50	25	-	107	60-140
Cyclohexane	ND	20.6	5.0	25	-	82	60-140
Dibromochloromethane	ND	30.2	0.50	25	-	121	60-140
1,2-Dibromo-3-chloropropane	ND	29.8	0.012	25	-	119	60-140
1,2-Dibromoethane (EDB)	ND	26.4	0.50	25	-	105	60-140
1,2-Dichlorobenzene	ND	30.3	0.50	25	-	121	60-140
1,3-Dichlorobenzene	ND	30.6	0.50	25	-	122	60-140
1,4-Dichlorobenzene	ND	30.0	0.50	25	-	120	60-140
Dichlorodifluoromethane	ND	26.7	0.50	25	-	107	60-140
1,1-Dichloroethane	ND	26.0	0.50	25	-	104	60-140
1,2-Dichloroethane (1,2-DCA)	ND	22.8	0.50	25	-	91	60-140
1,1-Dichloroethene	ND	25.9	0.50	25	-	104	60-140
cis-1,2-Dichloroethene	ND	26.4	0.50	25	-	106	60-140
trans-1,2-Dichloroethene	ND	26.2	0.50	25	-	105	60-140
1,2-Dichloropropane	ND	22.3	0.50	25	-	89	60-140
cis-1,3-Dichloropropene	ND	27.6	0.50	25	-	110	60-140
trans-1,3-Dichloropropene	ND	26.1	0.50	25	-	104	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	25.8	0.50	25	-	103	60-140
Diisopropyl ether (DIPE)	ND	23.8	0.50	25	-	95	60-140
1,4-Dioxane	ND	25.0	0.50	25	-	100	60-140
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	25.5	0.50	25	-	102	60-140
Ethyl tert-butyl ether (ETBE)	ND	24.5	0.50	25	-	98	60-140

(Cont.)



# Quality Control Report

**Client:** Stellar Environmental Solutions  
**Date Prepared:** 6/26/15  
**Date Analyzed:** 6/24/15  
**Instrument:** GC24  
**Matrix:** Soilgas  
**Project:** #2014-56; Corder

**WorkOrder:** 1506896  
**BatchID:** 106870  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** nL/L  
**Sample ID:** MB/LCS-106870

## QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	27.2	0.50	25	-	109	60-140
4-Ethyltoluene	ND	29.6	0.50	25	-	119	60-140
Freon 113	ND	26.0	0.50	25	-	104	60-140
Heptane	ND	24.2	5.0	25	-	97	60-140
Hexachlorobutadiene	ND	35.7	0.50	25	-	143, F2	60-140
Hexane	ND	25.0	5.0	25	-	100	60-140
2-Hexanone	ND	26.9	0.50	25	-	108	60-140
4-Methyl-2-pentanone (MIBK)	ND	31.0	0.50	25	-	124	60-140
Methyl-t-butyl ether (MTBE)	ND	26.9	0.50	25	-	107	60-140
Methylene chloride	ND	24.4	0.50	25	-	98	60-140
Methyl methacrylate	ND	25.9	0.50	25	-	104	60-140
Naphthalene	ND	64.9	1.0	50	-	130	60-140
Propene	ND	-	50	-	-	-	-
Styrene	ND	27.9	0.50	25	-	112	60-140
1,1,1,2-Tetrachloroethane	ND	25.3	0.50	25	-	101	60-140
1,1,2,2-Tetrachloroethane	ND	25.7	0.50	25	-	103	60-140
Tetrachloroethene	ND	25.5	0.50	25	-	102	60-140
Tetrahydrofuran	ND	24.0	0.50	25	-	96	60-140
Toluene	ND	26.3	0.50	25	-	105	60-140
1,2,4-Trichlorobenzene	ND	36.0	0.50	25	-	144, F2	60-140
1,1,1-Trichloroethane	ND	31.0	0.50	25	-	124	60-140
1,1,2-Trichloroethane	ND	25.3	0.50	25	-	101	60-140
Trichloroethene	ND	23.3	0.50	25	-	93	60-140
Trichlorofluoromethane	ND	23.7	0.50	25	-	95	60-140
1,2,4-Trimethylbenzene	ND	29.5	0.50	25	-	118	60-140
1,3,5-Trimethylbenzene	ND	27.1	0.50	25	-	108	60-140
Vinyl Acetate	ND	27.2	0.50	25	-	109	60-140
Vinyl Chloride	ND	20.2	0.50	25	-	81	60-140
Xylenes, Total	ND	83.8	1.5	75	-	112	60-140

### Surrogate Recovery

1,2-DCA-d4	495	491		500	99	98	60-140
Toluene-d8	510	501		500	102	100	60-140
4-BFB	508	503		500	102	101	60-140



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1506896

ClientCode: SESB

WaterTrax    WriteOn    EDF    Excel    EQulS    Email    HardCopy    ThirdParty    J-flag

**Report to:**  
Henry Pietropaoli  
Stellar Environmental Solutions  
2198 Sixth St. #201  
Berkeley, CA 94710  
510-644-3123   FAX: 510-644-3859

Email: hpietropaoli@stellar-environmental.com; r  
cc/3rd Party:  
PO:  
ProjectNo: #2014-56; Corder

**Bill to:**  
Accounts Payable  
Stellar Enviornmental Solutions  
2198 Sixth St. #201  
Berkeley, CA 94710  
lwheeler@stellar-environmental.com

**Requested TAT: 5 days**

**Date Received: 06/19/2015**

**Date Printed: 06/19/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1506896-001	OA-1a	Indoor Air	6/18/2015 16:05	<input type="checkbox"/>	A	A											
1506896-002	IA-4a	Indoor Air	6/18/2015 16:07	<input type="checkbox"/>	A	A											
1506896-003	IA-3a	Indoor Air	6/18/2015 16:08	<input type="checkbox"/>	A	A											
1506896-004	IA-2a	Indoor Air	6/18/2015 16:10	<input type="checkbox"/>	A	A											
1506896-005	IA-1a	Indoor Air	6/18/2015 16:11	<input type="checkbox"/>	A	A											

**Test Legend:**

1	15_SCAN-SIM_Indoor(ug/m	2	3AS_SCAN-SIM_INDOOR(U	3		4		5	
6		7		8		9		10	
11		12							

The following SamplIDs: 001A, 002A, 003A, 004A, 005A contain testgroup.

**Prepared by: Jena Alfaro**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



## WORK ORDER SUMMARY

**Client Name:** STELLAR ENVIRONMENTAL SOLUTIONS

**QC Level:** LEVEL 2

**Work Order:** 1506896

**Project:** #2014-56; Corder

**Client Contact:** Henry Pietropaoli

**Date Received:** 6/19/2015

**Comments:**

**Contact's Email:** hpietropaoli@stellar-environmental.com;  
 rmakdisi@stellar-

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1506896-001A	OA-1a	Indoor Air	TO15 + TPHgas for Indoor Air	1	6L Summa	<input type="checkbox"/>	6/18/2015 16:05	5 days		<input type="checkbox"/>	
1506896-002A	IA-4a	Indoor Air	TO15 + TPHgas for Indoor Air	1	6L Summa	<input type="checkbox"/>	6/18/2015 16:07	5 days		<input type="checkbox"/>	
1506896-003A	IA-3a	Indoor Air	TO15 + TPHgas for Indoor Air	1	6L Summa	<input type="checkbox"/>	6/18/2015 16:08	5 days		<input type="checkbox"/>	
1506896-004A	IA-2a	Indoor Air	TO15 + TPHgas for Indoor Air	1	6L Summa	<input type="checkbox"/>	6/18/2015 16:10	5 days		<input type="checkbox"/>	
1506896-005A	IA-1a	Indoor Air	TO15 + TPHgas for Indoor Air	1	6L Summa	<input type="checkbox"/>	6/18/2015 16:11	5 days		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



# McC Campbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701  
www.mcccampbell.com / main@mcccampbell.com  
Telephone: (877) 252-9262 / Fax: (925) 252-9269

ISO 6894

## CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH  1 Day  2 Day  3 Day  5 DAY   
GeoTracker EDF  PDF  EDD  EQUIS  10 DAY   
UST Clean Up Fund Project  Claim #

Report To: Bill To: SAME  
Company: Stellar Environmental Solution  
2198 Sixth St Berkeley, CA  
E-Mail:  
Tele: (510) 644-3123 Fax: (  
Project #: 2014-56 Project Name: Corder  
Project Location: 1475 + 1483 67th St Emeryville CA  
Sampler Signature: *Hay Pietropoli*

### Analysis Requested

Helium Shroud SN#

Other:  
Notes: Please Specify units if different than defaults VOCs is ug/m3 and fixed gas is uL/L. Leak check default is IPA.

Field Sample ID (Location)	Collection		Canister SN#	12.5 m/min Sampler Kit SN# manifold
	Date	Time		
OA-1a	6/18/15	1605	4753	
IA-4a		1607	4741	
IA-3a		1608	L4772	
IA-2a		1610	3651	
IA-1a		1611	L4766	

VOCs by TO-15 (ug/m3)	8010 by TO-15 (ug/m3)	TPH(g) (ug/m3)	LEED (inc. 4PCH, Formaldehyde, CO, Total VOCs)	Fixed Gas: CO2, Methane, Ethane, Ethylene, Acetylene, CO (please circle or indicate in notes) uL/L	Fixed Gas: O2, N2 (please circle) uL/L	Fixed Gas: Propane uL/L	Helium Leak Check (%)	Leak Check (IPA, Norflorane, 1,1-difluoroethane) ug/m3	APH: Aliphatic and/or Aromatic (please circle) ug/m3	Other: TO15/Gas Range Organics
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Matrix		Cannister Pressure/ Vacuum	
Soilgas	Indoor Air	Initial	Final
X	X	-29	-2
X	X	-30	-1.5
X	X	-28	-1
X	X	-30	-5
X	X	-30	-4.5

Relinquished By: *Hay Pietropoli* Date: 6/18/15 Time: 1330 Received By: *[Signature]*  
 Relinquished By: *[Signature]* Date: 6/19/15 Time: 1605 Received By: *[Signature]*  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

Temp (°C) : \_\_\_\_\_ Work Order #: \_\_\_\_\_  
 Condition: \_\_\_\_\_  
 Custody Seals Intact?: Yes \_\_\_\_\_ No \_\_\_\_\_ None \_\_\_\_\_  
 Shipped Via: *COURIER*

*RLS to meet Commercial ESLs*

*Analyze all TPH gas, naphthalene, BTEX, MTBE by TO15/GRO*



### Sample Receipt Checklist

Client Name: **Stellar Environmental Solutions**

Date and Time Received: **6/19/2015 8:48:43 PM**

Project Name: **#2014-56; Corder**

LogIn Reviewed by: **Jena Alfaro**

WorkOrder No: **1506896** Matrix: Indoor Air

Carrier: Bernie Cummins (MAI Courier)

**Chain of Custody (COC) Information**

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

- All samples received within holding time? Yes  No
- Sample/Temp Blank temperature Temp: NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  NA
- Sample labels checked for correct preservation? Yes  No
- pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes  No  NA
- Samples Received on Ice? Yes  No

**UCMR3 Samples:**

- Total Chlorine tested and acceptable upon receipt for EPA 522? Yes  No  NA
- Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes  No  NA

\* NOTE: If the "No" box is checked, see comments below.

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 Comments: