ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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

April 23, 2015

NOTICE TO COMPLY

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 Comply; 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.

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.

In order to regain compliance, please notify ACEH of potential meeting dates, and / or electronically submit 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 an issuance of a Notice of Violation and 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 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 report ACEH requests that you additionally address the following technical comments and send us the documents requested below.

TECHNICAL COMMENTS

1. **Collection of Offsite Indoor Air Samples by Others -** As you are likely aware (copy attached) additional indoor and outdoor air vapor data has been collected by another consultant for the property owners at the immediate downgradient properties located at 1475 and 1483 67th Street, Emeryville, (*Indoor Air Survey Letter of Findings – 1475 and 1483 67th Street Emeryville, California*, Stellar Environmental Solutions, Inc, dated November 26, 2014). The analytical data appears to indicate a

higher risk of vapor intrusion to indoor air at those properties than data collected at the subject site, as documented in the AllWest Environmental report entitled *Indoor Air Quality Monitoring Report,* and dated July 18, 2014. While indoor air concentrations of benzene, naphthalene, and carbon tetrachloride at the subject site, reported to be unoccupied, exceeded the San Francisco Bay Regional Water Quality Control Board (RWQCB) commercial indoor air Environmental Screening Levels (ESLs; generally considered to be safe), the associated outdoor air samples collected at the subject site were not significantly different. Conversely, indoor air vapor samples for petroleum hydrocarbons at the adjacent sites appear to be higher than onsite indoor air vapor concentrations. Please evaluate the additional data, incorporate the data and any additional scope of work that is appropriate, into the requested SCM and the Data Gap Work Plan by the date listed below.

Please note that at this time the offsite vapor sampling report is considered to be incomplete by ACEH, as the report that was provided was included as an Exhibit to a cover letter. A copy of the complete communication can be found on the ACEH website. Additionally, by this communication, ACEH requests that a complete copy of the report be electronically forwarded.

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:

- **April 24, 2015 –** Semi-Annual Groundwater Monitoring Report
  File to be named: RO63_GWM_R_yyyy-mm-dd
- **May 8, 2015** – Notification of Meeting Dates
  (Email notification requested)
- **June 30, 2015** – Data Gap Investigation Plan and Focused Site Conceptual Model
  File to be named: RO63_WP_SCM_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
- **October 23, 2015 –** Semi-Annual Groundwater Monitoring Report
  File to be named: RO63_GWM_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.

Sincerely,

Digitally signed by Mark E. Detterman
DN: cn=Mark E. Detterman, o, ou, email, c=US
Date: 2015.04.23 14:28:15 -07'00'

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 Letter of Findings – 1475 and 1483 67th Street Emeryville, California*, Stellar Environmental Solutions, Inc, dated November 26, 2014

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

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

James Arnold, The Arnold Law Practice, One Sansome Street, Suite 3500, San Francisco, CA 94104; (sent via electronic mail to: jaronold@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)

Dilan Roe, ACEH, (sent via electronic mail to: dilan.roe@acgov.org)
Mark Detterman (sent via electronic mail to 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/).

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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** 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
   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 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.

ATTACHMENT 2

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

November 26, 2014

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

Subject: Indoor Air Survey Letter of Findings—1475 and 1483 67th Street, Emeryville, California.

Dear Ms. Corder-Schaefer:

This letter report summarizes the findings associated with the indoor air survey for your above mentioned properties.

INTRODUCTION AND BACKGROUND

On June 25 and 26, 2014, AllWest Environmental conducted an indoor air survey of the former McGrath Steel office and warehouse complex located at 6655/ Hollis Street/1471 67th Street in Emeryville, California as part of an overall environmental assessment of that site as it relates to former underground fuel storage tanks (USTs) under the 67th Street sidewalk that were removed in 1996. Leakage from that UST system resulted in fuel hydrocarbon contamination of soil and groundwater beneath 67th Street and possibly the buildings on the south side of 67th Street. 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 67th Street, Emeryville, California (Alameda County Fuel Leak Case #RO0000063)*". However, it should be noted that the AllWest report completed a 24-hour indoor air test that is typically used for evaluating indoor air impacts to residential building versus the 8-hour indoor air test called for in regulatory guidance to evaluate commercial spaces. The locations of the five 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 indoor air samples exceeded the Regional Water Quality Control Board-San Francisco Bay Region (Water Board) indoor air commercial

Exhibit A

Environmental Screening Levels (ESLs) for benzene of 0.42 µg/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, because of uniform concentrations in indoor and outdoor air samples, and although benzene concentrations was 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 and did not originate from the UST source area.

Based on a review of the 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 67th 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 67th Street.

The 1475 67th Street building adjoins the McGrath warehouse to the east, 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 67th Street adjoins 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 Stellar Environmental study 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.

INDOOR AIR SAMPLING

Air Sampling Location Rationale

Based on the soil and groundwater sampling results from the previous Weiss Associates and AllWest subsurface work at the McGrath site and extending to the west down 67th Street, four indoor air sampling locations were chosen; three locations (IA-1, IA-2 and IA-3) were located inside the 1475 67th Street building occupied by Metalco, with one location (IA-4) located in the 1483 67th Street building occupied by Architectural Metal Works. These four locations were chosen based on depictions of benzene concentrations in groundwater and on the calculated groundwater gradient that indicates a southwest flow direction (AllWest, 2013) towards the 1475/1483 67th Street buildings. One "control" or ambient air sample (OA-1) was placed outside the 1475 67th Street building in a secure location on an overhang over the front door. Figure 3 depicts the sample locations.

Indoor Air Sampling Protocol

Mr. Steve Bittman, of Stellar Environmental completed the sampling setup at 8:00 am on November 14, 2014 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 with 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 Laboratory 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 equivalents of the CHHSL, the Environmental Screening Levels (ESL's) were most recently updated in December 2013. The concentrations from this survey are compared to the Water Board 2013 Environmental Screening Levels (ESL) guidance as that has superseded the DTSC California Human Health Screening Levels (CHHSLs), which are no longer being updated. The CHHSL and ESLs have 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 or DTSC used CHHSL values.

Water Board ESLs and Cal EPA CHHSLs

The Water Board ESL's were revised in December 2013 and now include an ESL for indoor air for gasoline grade petroleum hydrocarbons (TPG-gasoline) and their benzene, toluene, ethylbenzene and xylenes (BTEX) components.

It is important to note that neither CHHSLs nor ESLs, were conceived as a cleanup criteria nor should they be used to determine when impacts should be reported to a regulatory agency. 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.

INDOOR AIR SAMPLING ANALYTICAL RESULTS AND DISCUSSION

The indoor air samples IA-1 through IA-4 all contained concentrations of benzene above the "commercial property" ESL of 0.42 μg/m^3, ranging from 1.1 μg/m^3 to 9.5 μg/m^3. This compares with the lower 0.54-0.79 μg/m^3 benzene range reported by the AllWest study. The outdoor control sample OA-1 contained 1.3 μg/m^3 benzene. Three out of four of the indoor air samples exceeded the 100 μg/m^3 commercial ESL for TPH as gasoline with concentrations ranging from 61μg/m^3 to 360 μg/m^3. The outdoor sample contained 140 μg/m^3 TPHg. One sample exceeded the naphthalene ESL of 0.36 μg/m^3 at a concentration of 0.88 μg/m^3, with the outdoor control sample containing 0.17 μg/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 67th Street. Sample IA-3 located in the office area of 1475 67th Street contained the lowest concentrations.

It is accepted practice to subtract the outdoor control sample concentrations from the indoor concentrations, resulting in a "corrected" value. Subtracting the outdoor benzene result from the four indoor sample benzene concentrations, in effect "cancels out" the results for IA-2 and IA-3, leaving samples IA-1 and IA-4 with corrected concentrations of 1.7 μg/m^3 and 8.2 μg/m^3 which still exceeds the benzene commercial ESL of 0.42 μg/m^3. When this correction is applied to TPHg, the result is that one sample, (IA-4) exceeds the 100 μg/m^3 commercial ESL for TPHg with a value of 220 μg/m^3. IA-4 also contained a corrected concentration of naphthalene at 0.71 μg/m^3 which exceeds the 0.36 μg/m^3 ESL.

Using the DTSC risk calculation sheet for benzene (modified to account for ambient air), the total risk is calculated to be 1.2E-5 (DTSC does not have risk factor for TPH-gasoline or naphthalene). Therefore, based on the DTSC guidance, the recommendation is that indoor air sampling event frequency should be semi-annually (every six months) until the next sampling event establishes a 10E-8 or less in which case the monitoring can be reduced to every two years.

Table 1 shows the concentrations of indoor air contaminants detected during the 8-hour sampling event of November 14, 2014. Table 1 also shows the ESLs indoor air standards for the detected contaminants. The DTSC vapor intrusion risk calculation model, 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 the office areas in both buildings, based on their respective concentrations being above the regulatory ESLs. Benzene is the 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.

Indoor air risk can be mitigated by the 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 air monitoring under the recommended increased air exchange conditions. Longer term risk can be reduced by 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, as recommended by DTSC guidance, within 6 months, by May 2015. Also recommended is the installation of six investigation bores to collect grab groundwater data in the 1475 and 1483 67th Street spaces to delineate the plume better. This letter of findings also recommended to be submitted to ACEHS.

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,
Project Manager

Richard S. Makdisi, R.G., R.E.A.
Principal Geochemist & President

Table 1
Indoor Air Sample Analytical Results –November 14, 2014
Eight Hour Test
1475 and 1483 67th Street, Emeryville, California

Analyte	Indoor Air Sample- NE Corner 1475 67th Street Building IA-1	Indoor Air Sample- Central 1475 67th Street Building IA-2	Indoor Air Sample- Office in NW Corner 1475 67th Street Building IA-3	Indoor Air Sample- Office in 1483 67th Street Building IA-4	Outdoor Air (Ambient) Sample- in Front of 1475 67th Street Building OA-1	Commercial ESL
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

Notes:

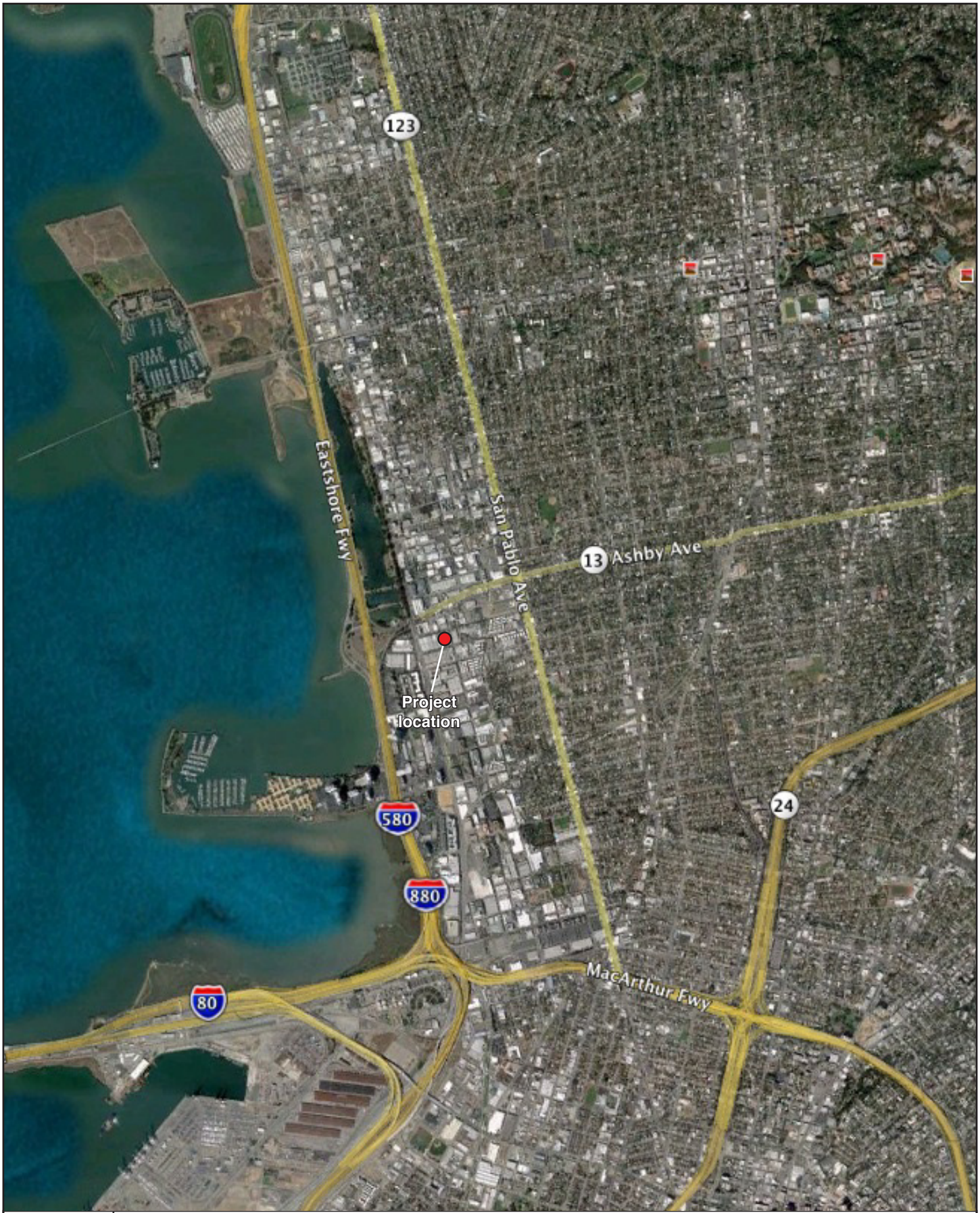
All values in µg/m^3

Bold type designatd exceeding guidance value
Cal/OSHA PEL = California Occupational Safety and Health Administration Permissible Exposure Limits.

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 (µg/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.

FIGURES



N

SITE LOCATION MAP

1475 and 1483 67th St. Emeryville, CA	By: MJC	NOVEMBER 2014
	Figure 1	

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

2014-56-01

N

SITE PLAN AND SURROUNDING SITES

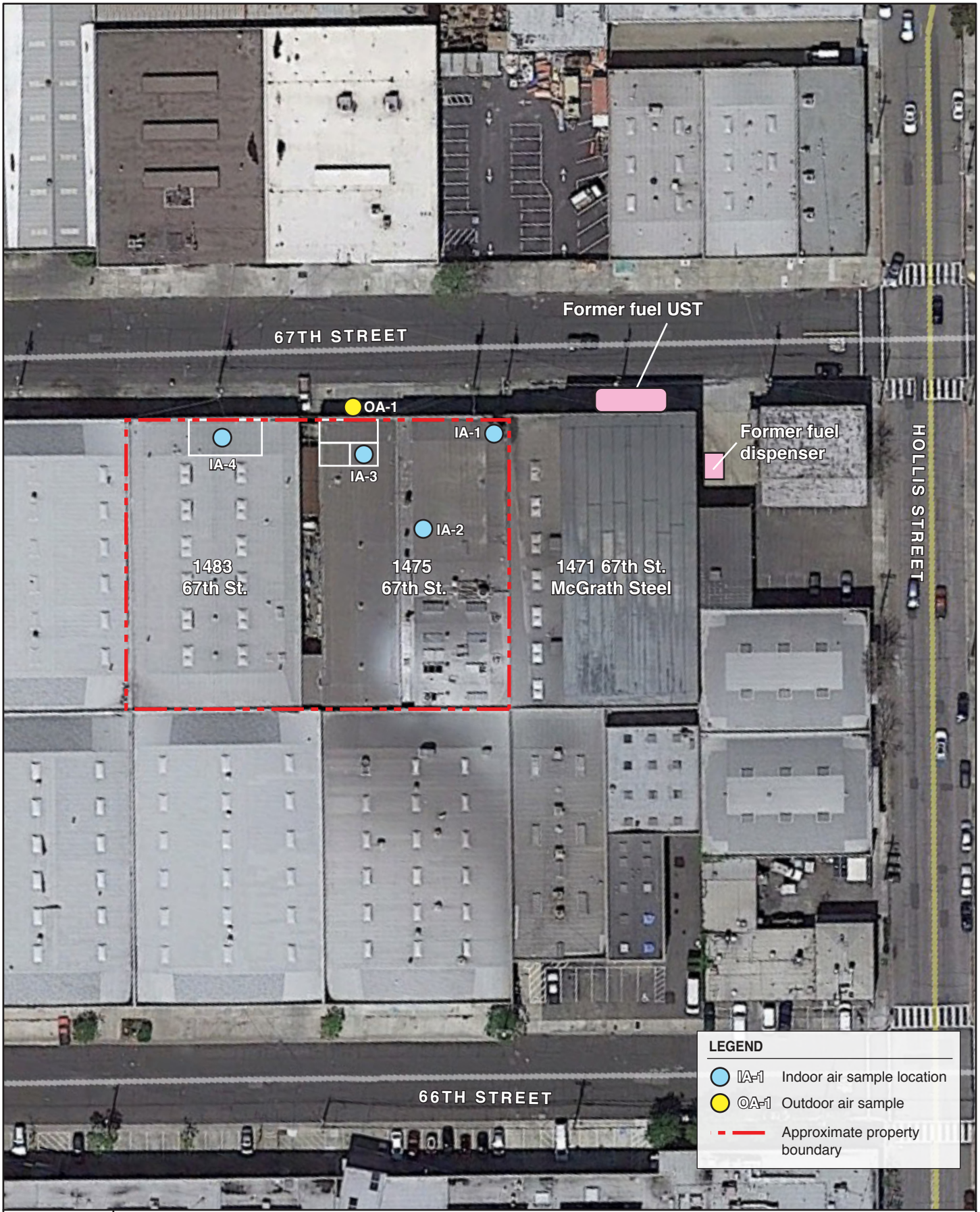
1475 and 1483 67th St.
Emeryville, CA

By: MJC | NOVEMBER 2014

Figure 2

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

2014-56-03



N

SITE PLAN AND INDOOR AIR SAMPLE LOCATIONS

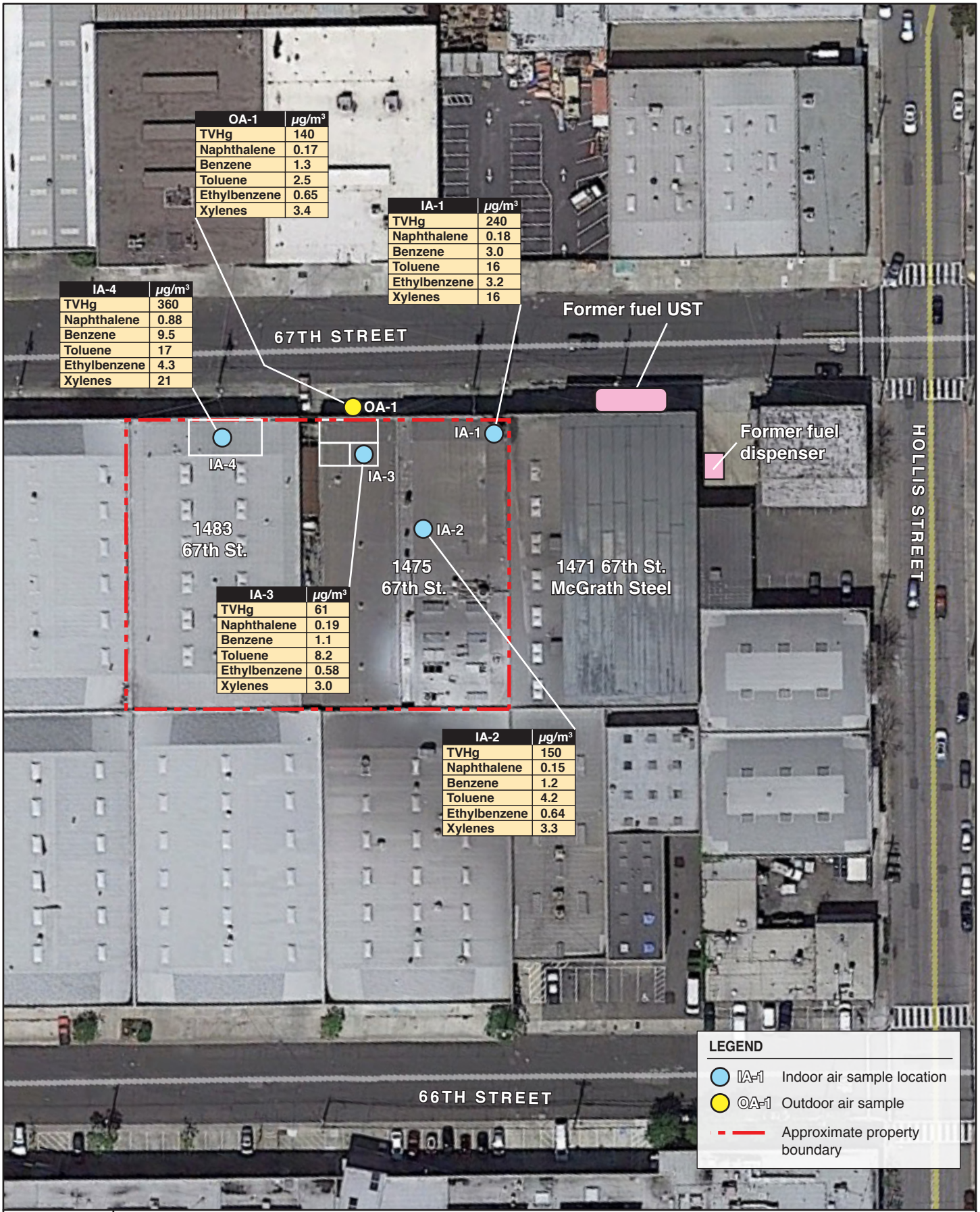
1475 and 1483 67th St.
Emeryville, CA

By: MJC | NOVEMBER 2014

Figure 3

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

2014-56-02



INDOOR AIR SAMPLE ANALYTICAL RESULTS

1475 and 1483 67th St.
Emeryville, CA

By: MJC | NOVEMBER 2014

Figure 4

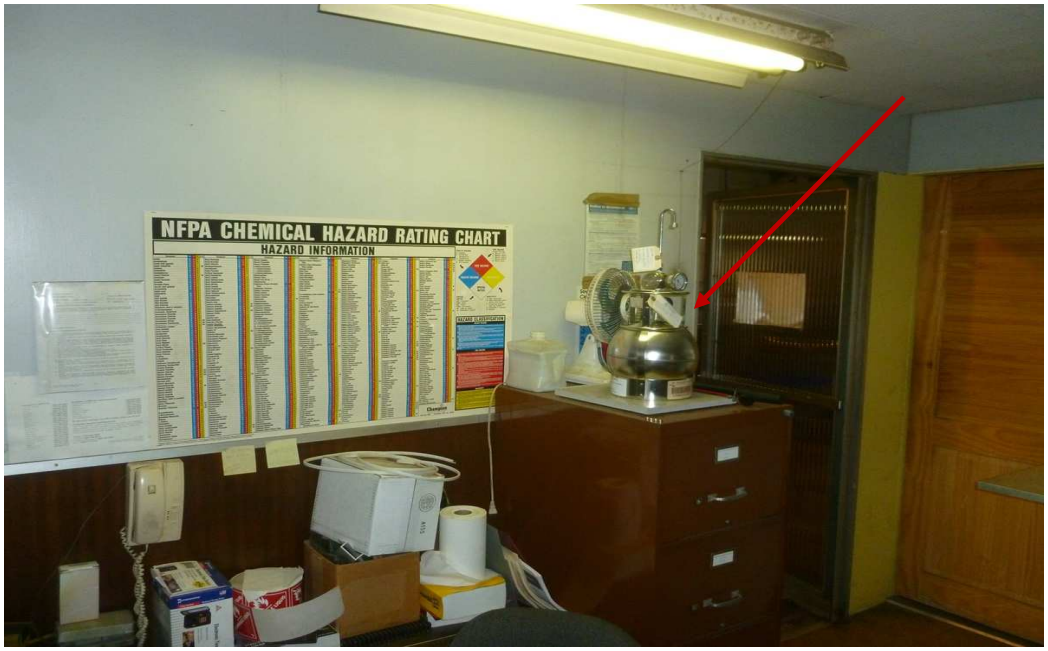
STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

2014-56-04

PHOTODOCUMENTATION

Subject: Indoor air sampling location (IA-1) in NE corner 1475 67th Street	
Site: 1475/1483 67th Street, Emeryville, California	
Date Taken: November 14, 2014	Project No.: SES 2014-56
Photographer: S. Bittman	Photo No.: 01

Subject: Indoor ambient air sampling location (IA-2) near 1475 67th Street building center	
Site: 1475/1483 67th Street, Emeryville, California	
Date Taken: November 14, 2014	Project No.: SES 2014-56
Photographer: S. Bittman	Photo No.: 02



Subject: Indoor air sampling location (IA-3) in sales office near 67th Street.	
Site: 1475/1483 67th Street, Emeryville, California	
Date Taken: November 14, 2014	Project No.: SES 2014-56
Photographer: S. Bittman	Photo No.: 03

Subject: Indoor air sampling location (IA-4) in 1483 67th Street sales office by 67th Street.	
Site: 1475/1483 67th Street,, Emeryville, California	
Date Taken: November 14, 2014	Project No.: SES 2014-56
Photographer: S. Bittman	Photo No.: 04

Subject: Outdoor air sampling location (OA-1) above front door at 1475 67th Street	
Site: 1475/1483 67th Street, Emeryville, California	
Date Taken: November 14, 2014	Project No.: SES 2014-56
Photographer: S. Bittman	Photo No.: 05

STELLAR ENVIRONMENTAL SOLUTIONS, INC.

LABORATORY ANALYTICAL RESULTS, CHAIN OF CUSTODY, AND DTSC RISK MODEL

Work Sheet: Risk Equation for Indoor Air Inhalation Exposure

Excess Cancer Risk

The equation below is used to calculate the theoretical excess cancer risk from inhalation exposure to volatile chemicals *(Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air; DTSC, Dec 15, 2004)*

6400 Christie Avenue, Emeryville, California

as written in "Interim Final Guidance..."

$$\text{Risk, 6400 Christie} = \frac{\text{(Exposure Conc.)}}{\text{(365 d/yr)}} \frac{\text{(Duration of Exposure)}}{\text{(70 yr.avg. life time)}} \text{[Unit Risk (per DTSC)]} = \frac{\text{(Conc.)}}{\text{(Atc)}} \frac{\text{(EFa)}}{\text{(365 d/yr)}} \text{(UoF)}$$

Where

ATc — *Averaging time for carcinogens = 70 yr*

EFa — *Exposure frequency = (hour/day) * (day/ year) * (Exposure duration in years)*

UoF — *Unit risk factor = increase in risk per ug/m3 chemical inhaled for 24 hr/day 365 day/yr*

DATA INPUT: ***Enter measured air concentrations in the Conc. cells (ug/m3).***

Chemical			Exposure				Unit Risk Factors		Risk
CAS No.	Chem		Conc. in air (ug/m3)	Work hour/day (Avg.)	Work day/year (Avg.)	Years at site (Avg.)	Unit Risk (DTSC Table)	ATc (year)	
71432	Benzene		8.2	8	250	15	2.9E-05	70	1.2E-05
TOTAL RISK*									**1.2E-05**

* The total risk is equal to sum of the individual risks of the individual chemicals.

Based on 8-hour indoor air sample collected November 14, 2014 by Stellar Environmental

Resulting Actions

The TOTAL RISK* will be used to evaluate future actions.

Total Risk *	Immediate Action	Future Action
10E-05 or above	Inform Tenant	Mitigate Soil Vapor with SVE
below 10E-05 to 10E-06	Sampling, 2 times per yr	Track results
below 10E-06 to 10E-07	Sampling in 1 year	Track results
below 10E-07 to 10E-8	Sampling in 1 year	if 2 consecutive results are in this range, sampling frequency to be every 2 years
below 10E-08	no action required	no future sampling

* The Risk calculated using this spread sheet is a conservative value since the average employee is unlikely to work for 15 years with the indoor air being at the level it currently is.