

RECEIVED

By Alameda County Environmental Health at 2:17 pm, Jun 27, 2014

June 30, 2014

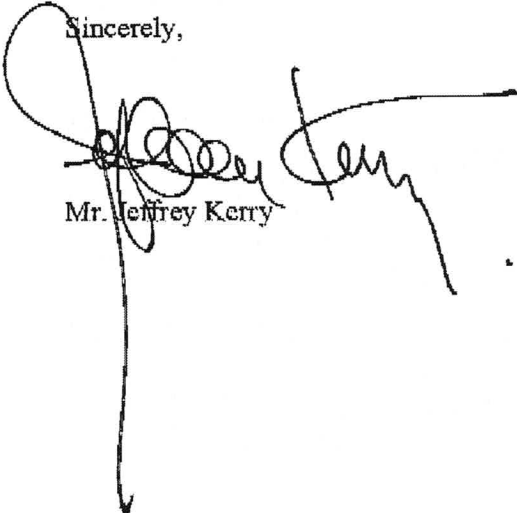
Mr. Mark Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

**Re: Kerry & Associates – Palace Garage
14336 Washington Avenue
San Leandro, California
ACEH Case No. RO0000208**

Dear Mr. Detterman,

I declare, under penalty of perjury, that the information and/or recommendations contained in the **Interim Remedial Action Plan** are true and correct to the best of my knowledge.

Sincerely,


Mr. Jeffrey Kerry



June 30, 2014

Mr. Mark Detterman
Alameda County Environmental Health
1311 Harbor Bay Parkway
Alameda, CA 94502

**RE: Interim Remedial Action Plan
Kerry & Associates – Palace Garage
14336 Washington Avenue
San Leandro, California
ACEH Case No. RO0000208
SFRWQCB LUFT Case No. 01-1133**

Dear Mr. Detterman:

On behalf of Kerry & Associates, Innovex Environmental Management, Inc. (INNOVEX) has prepared this *Interim Remedial Action Plan* (IRAP) for the Palace Garage site located at 14336 Washington Avenue, San Leandro, California (the Site, Figure 1).

A review of Site data by Alameda County Environmental Health (ACEH) staff has indicated the Site does not meet two closure criteria outlined in the 2011 Low-Threat Underground Storage Tank Closure Policy (LTCP). The deficiencies are: (1) General Criteria f (secondary source removal) and (2) Scenario 3a of Media Specific Petroleum Vapor Intrusion to Indoor Air. Based on the identified deficiencies, INNOVEX reviewed available Site soil and groundwater data and re-evaluated remedial options proposed in the Closure Solutions Inc. (Closure Solutions) *Revised Draft Corrective Action Plan* dated February 28, 2013. The data review and re-evaluation of remedial options indicated excavation of the Site versus previously proposed Dual Phase Extraction (DPE) would likely be more effective in reducing hydrocarbon impacts in a shorter time period and at a lower overall cost, thereby more rapidly satisfying the LTCP closure criteria in a more cost effective manner.

Results of the re-evaluation were discussed with ACEH, after which the agency issued a revised directive email dated June 11, 2014 (Attachment A) requesting submittal of an IRAP detailing a scope of work to perform secondary source area excavation. ACEH staff have indicated Interim Remedial Actions appear appropriate in order to mitigate the risk of vapor intrusion and expeditiously move the site towards closure. Therefore, it is anticipated that case closure will be granted following completion of the excavation activities and subsequent submittal of a report documenting excavation activities.

This report includes Site summary information, a discussion of the proposed remedial action scope of work, and reporting and GeoTracker documentation requirements.

1.0 SITE SETTING

The Site is an automotive body repair shop located on Washington Avenue in San Leandro, California (Figures 1 and 2). Land use in the vicinity of the property is primarily industrial/commercial. ACEH records show that one underground storage tank (UST) existed at the Site at the time of removal in 1991.

1.1 Site Geology and Hydrology

According to the United States Geological Survey (USGS) San Leandro 7.5 Minute Topographic Quadrangle Map (dated 1969, photo revised 1980), Site elevation is approximately 40 feet above mean sea level (msl) (Figure 1). The topography of the Site and surrounding properties are nearly flat with a slight overall slope to the west. Near surface geology is classified as Holocene age alluvial fan and fluvial deposits, with a general fining upwards of soil types.

Soils beneath the Site consist of clays, silty clays and clayey silts between near ground surface and approximately 16 feet bgs, poorly graded sands and gravels between approximately 16 and 21 feet bgs, and clays between approximately 21 and 25 feet bgs, the total depth explored. The saturated water bearing zone encountered beneath the Site is considered to be unconfined, with depth to groundwater measured in the existing well network ranging seasonally between 12 to 16 feet bgs. Groundwater flow direction has ranged from west to south-southwest with an average gradient of 0.003 foot per foot (ft/ft). A review of the last six years of groundwater monitoring data suggests fine-grained soils present beneath the Site with low hydraulic conductivity and effective porosity may be restricting the vertical movement of petroleum hydrocarbon constituents.

2.0 PROPOSED REMEDIAL ACTION

The proposed remedial action consists of excavating hydrocarbon-impacted soil to the extent practicable to a depth of approximately 16 feet below ground surface (bgs) within the 100 milligram per kilogram (mg/kg) soil contour shown on Figure 2. Excavated soil will then be hauled off-Site and disposed of at an appropriate disposal facility. The open excavation will then be backfilled with pre-approved clean crushed aggregate and resurfaced to match existing Site conditions.

Because of the size of the proposed excavation and the proximity to existing buildings, structural integrity of the buildings is a concern. Due to the limited available working space, it is not reasonable to conduct a complete excavation of the secondary source area in one phase. Therefore, excavation activities will be completed in two phases. In the first phase, excavation and backfilling will be completed in the southwestern portion of the proposed excavation area between the Site buildingsto maintain structural integrity. Once excavation backfilling is completed, the second phase of excavation will be completed to excavate the remaining portion of the secondary source area. Excavated soils from the first phase will be stockpiled and covered on site during field activities, then removed prior to initiating the next phase.

To safely perform excavating and backfilling activities, shoring will be required to protect against sidewall collapse. Sheet piling will be driven along the northwest and southeast sides of the proposed excavation prior to digging to protect the existing buildings.

INNOVEX prepared bid specifications, requested qualified environmental contractors bid on the proposed work, and performed site walks with the contractors to answer any questions or concerns they had. Qualified bids were reviewed to evaluate the most cost-effective means to both remove impacted soil and cause minimal disturbance to business activities conducted at the Site. Our scope of work to implement remedial action is presented below.

3.0 IMPLEMENTATION OF REMEDIAL ACTION

3.1 Pre-field Activities

Prior to implementing remedial action at the Site, INNOVEX will perform the following pre-field tasks.

3.1.1 Permitting

INNOVEX will contact the City of San Leandro Building Department and the City of San Leandro Fire Department to research excavation permit requirements for the project. Prior to beginning excavation activities, monitoring well MW-6 will be destroyed under permit from the Alameda County Public Works Agency (ACPWA). As required, all appropriate county and city agencies will be notified in advance of the excavation work schedule in order to conduct any required periodic site inspections during the course of the project.

3.1.2 Subsurface Utility Clearance

Underground Service Alert (USA) will be notified of the pending work a minimum of 48 hours prior to initiating field activities. The proposed excavation area will be marked in white paint as required so that the location of subsurface utilities beneath the Site can be identified. In addition, a private utility locating company will be contracted to, where possible, confirm the absence of underground utilities within the proposed excavation area.

3.1.3 Health and Safety Plan

A Health and Safety Plan (HASP) will be prepared for use by personnel implementing the IRAP. The HASP will address potential hazards associated with the proposed excavation scope of work, and a copy of the HASP will be available on-Site at all times. The subcontractor(s) performing field activities will be provided with a copy of the HASP prior to initiating work and daily safety tailgate meetings will be conducted to review the Site hazards and work scope.

3.2 Soil Excavation

Upon completion of remediation pre-field activities, INNOVEX will proceed with excavation of impacted soil, which will consist of the following tasks:

3.2.1 Noise Mitigation

In order to mitigate noise generated during excavation activities, the tenants/owners of adjoining properties will be notified in advance of the proposed work schedule so that they may take appropriate measures to reduce impacts to themselves. In addition, excavation equipment will be inspected to ensure the engine compartment is fitted with noise dampening materials and a muffler. All site workers will be required to wear hearing protection, and any tenants/owners who wish to use similar hearing protection will be provided with the equipment.

3.2.2 Surface Removal

Before excavation begins, removal of existing asphalt surfacing overlying the hydrocarbon secondary source area will be required. That portion of the existing asphalt overlying the secondary source area will be cut away from the surrounding asphalt pavement with a walk-behind concrete saw, broken into smaller blocks for ease of disposal, and removed. All removed asphalt will be hauled off Site as construction waste and transported to an approved recycling facility.

3.2.3 Shoring, Excavation, and Soil Disposal

As mentioned previously, excavation and backfilling of the secondary source area will be conducted in two phases to maintain structural integrity of adjacent Site buildings and to maximize the available working area. Excavation, soil stockpiling and backfill practices will be the same for both phases of work.

Because of the size and depth of the open excavation, shoring is required to protect against sidewall collapse on the northwest and southeast sides of the excavation near adjacent Site structures. After removing the asphalt surfacing and prior to commencing digging activities, sheet piling will be driven along the northwest and southeast sides of the excavation area approximately 3 feet from the existing Site structures. The sheets will be advanced to a depth of approximately 18 feet and locked together to ensure excavation stability. Once sheet piling is in place, an excavator will be used to remove impacted soil between the buildings to a depth of approximately 16 feet bgs as identified in Figure 2. As the soil is excavated, it will be stockpiled on Site on visqueen plastic and covered at the end of every day to mitigate exposure to impacted soil. In order to mitigate dust migration and exposure to on- and off-Site individuals, excavated soils as well as the excavation side walls may be periodically sprayed with water as needed to control dust. Upon completing the first phase of excavation and backfill activities between the buildings, excavated soils will be hauled off-Site for disposal prior to completing a similar scope of work on the remaining secondary source area.

Excavation activities may be adjusted in the field based on subsurface conditions and any deviations encountered in the field during the course of work. Approximately 500 cubic yards of impacted soil are proposed be removed and disposed of as Non-Hazardous waste. The extent of excavation will be limited to the proposed area presented in Figure 2 to avoid undermining areas of intact asphalt and ensure structural integrity of the existing Site buildings.

3.2.4 Excavation Backfilling and Compaction

Once all impacted soil is removed from each phase of the excavation, that portion will be backfilled in 1-foot-thick 'lifts' to approximately 3 feet below surface grade (bsg) with clean 0.75-inch crushed rock. Above the 0.75-inch crushed rock, the excavation will be backfilled to approximately 1 foot bsg with aggregate base rock. A fabric barrier will be placed between the crushed rock and aggregate base rock to form a barrier against downward migration of fine materials contained in the base rock. Both the crushed rock and base rock will be compacted during placement using a small sheepsfoot roller attached to the arm of the excavator to achieve a compaction rate of approximately 90 percent. Once both phases of the excavation are completed and backfilled to the same depth, the sheet piling will be removed and backfilling of the entire excavation will be finished to approximately 3 inches bsg. A small compaction roller will be used to achieve a compaction of approximately 90 percent before surface replacement activities take place.

INNOVEX is currently reviewing options for available aggregated backfill. In the event that recycled base rock is selected as the preferred backfill, INNOVEX will provide documentation of the cleanliness of the import fill as required by the ACEH in accordance with the *Guidance for Characterization of Concrete and Clean Material Certification for Recycling*, issued by the New Jersey Department of Environmental Protection dated January 12, 2010.

3.2.5 Surface Replacement

After completing backfilling and compaction activities, a new 3-inch-thick asphalt pavement will be placed over the excavated area and finished to match existing pre-excavation surface conditions.

4.0 CONFIRMATION SOIL SAMPLING

Due to previously identified constraints, sidewall and floor confirmation samples will not be collected once the excavation limits have been reached. Those sections of the excavation that border the existing site structures will be inaccessible for sampling due to the placement of sheet piling. The final depth of the excavation is anticipated to be approximately 16 feet bgs, which is expected to be at or near the top of the groundwater table. As such, once groundwater is encountered in the excavation, no additional digging or sampling below the water table will be performed. Based on a review of existing soil concentration data, INNOVEX believes sufficient data exists to delineate hydrocarbon impacts. This data was used to develop the work scope and define the excavation limits. While not all impacted soils will be removed, INNOVEX anticipates removing the vast majority of the hydrocarbon-impacted soil beneath the Site, thereby meeting the outstanding LTCP criteria. Concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg/GRO) reported in soil samples between 3 and 16 feet bgs along with the an estimated 100 mg/kg isoconcentration contour are presented on Figure 2. The isoconcentration contour represents the excavation limits.

5.0 WASTE CHARACTERIZATION AND DISPOSAL

Excavation derived waste (EDW) will be characterized in accordance with acceptance requirements at a pre-selected waste disposal facility prior to beginning field activities. Soil

analytical data obtained during the November 22, 2013, Data Gap Investigation will be used to pre-profile the EDW for disposal at the designated waste facility. As EDW is generated for each phase of the excavation, it will be stockpiled on Site on visqueen plastic and covered at the end of every day to mitigate exposure to impacted soil. Once backfilling is complete for the first phase of the excavation, the stockpiled soil will be loaded into trucks and hauled to the disposal facility by a California-licensed waste transporter for disposal prior to beginning the second phase of excavation. Upon completion of the second phase of excavation and prior to placing asphalt, the remaining stockpiled soil will be removed and disposed of in a similar manner. Approximately 500 cubic yards of impacted soil are estimated to be removed from the Site.

6.0 REPORTING AND GEOTRACKER

Upon completion of field activities, INNOVEX will finalize and submit a report documenting excavation activities. In accordance with GeoTracker requirements, INNOVEX will upload the final report and associated data related to this remedial action. It is anticipated that following completion of excavation activities and submission of the final report, the Site environmental case will be reviewed by the ACEH for closure.

7.0 LIMITATIONS

This IRAP is based on Site conditions, data, and other information available as of the date of the IRAP, and the conclusions and recommendations herein are applicable only to the time frame in which the IRAP was prepared. Background information used to prepare this report including, but not limited to, previous field measurements, analytical results, Site plans and other data have been furnished to INNOVEX by Kerry & Associates and as available on the GeoTracker website. INNOVEX has relied on this information as furnished, and is neither responsible for nor has confirmed the accuracy of this information.

If you have any questions regarding this submission, please feel free to contact Mr. Brian Busch at (925) 566-8403 (Brian.Busch@innovex.net) or Mr. Matthew Farris at (916) 760 7579 (Matt.Farris@innovex.net).

Sincerely,

INNOVEX ENVIRONMENTAL MANAGEMENT, INC.



Matthew Farris, PG
Senior Project Geologist



ATTACHMENTS:

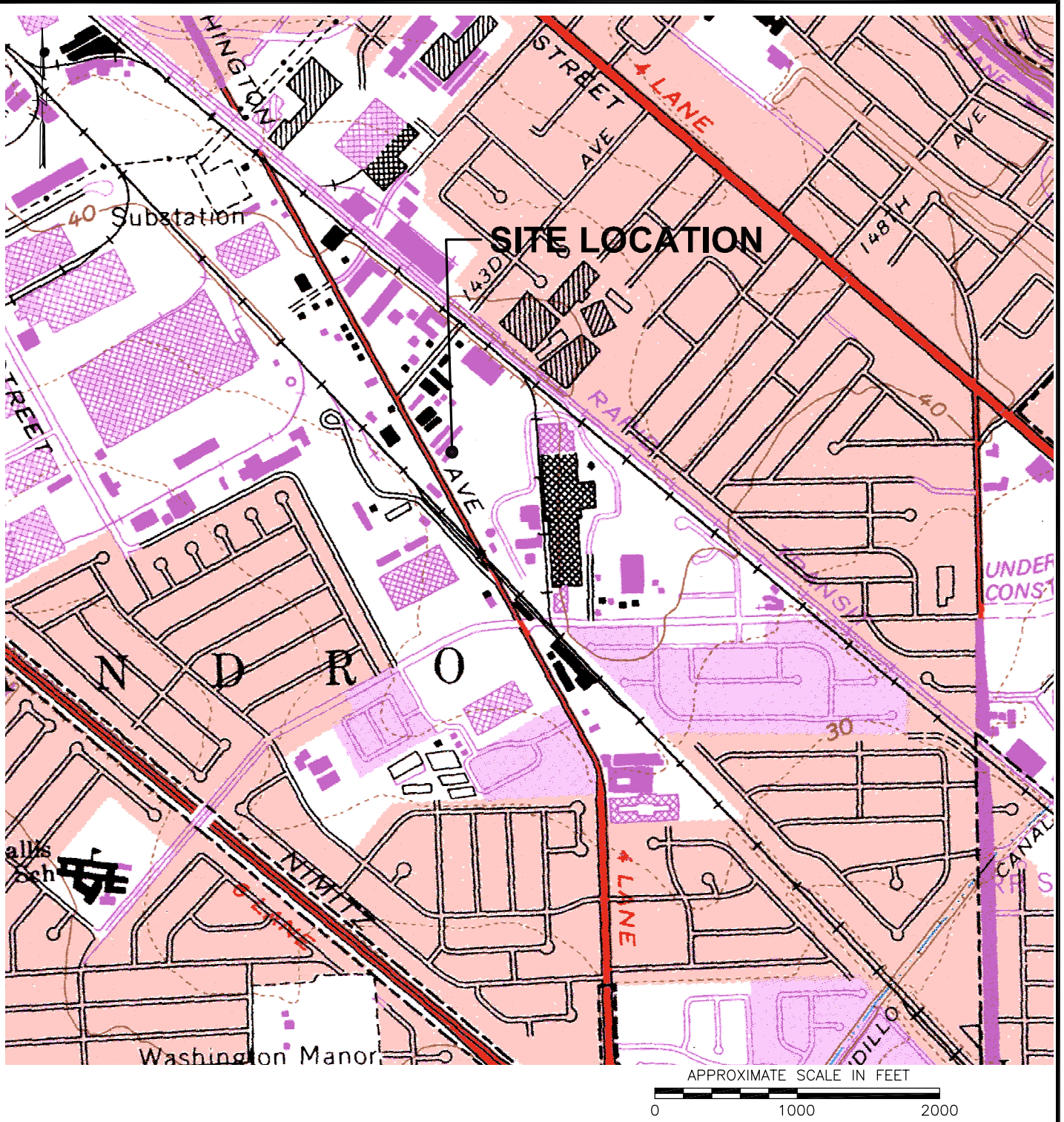
Figure 1 Site Vicinity Map

Figure 2 TPHg/GRO Concentrations in Soil from 3 to 16 Feet

Attachment A ACEH Correspondence

cc: Mr. Jeff Kerry, Kerry & Associates
Mr. Gerald Donnelley

FIGURES



20140404.1.1433951 \\The-server\pocher\Client Drawings\innovex\palace garage_1601\PALACE GARAGE VICINITY MAP.dwg

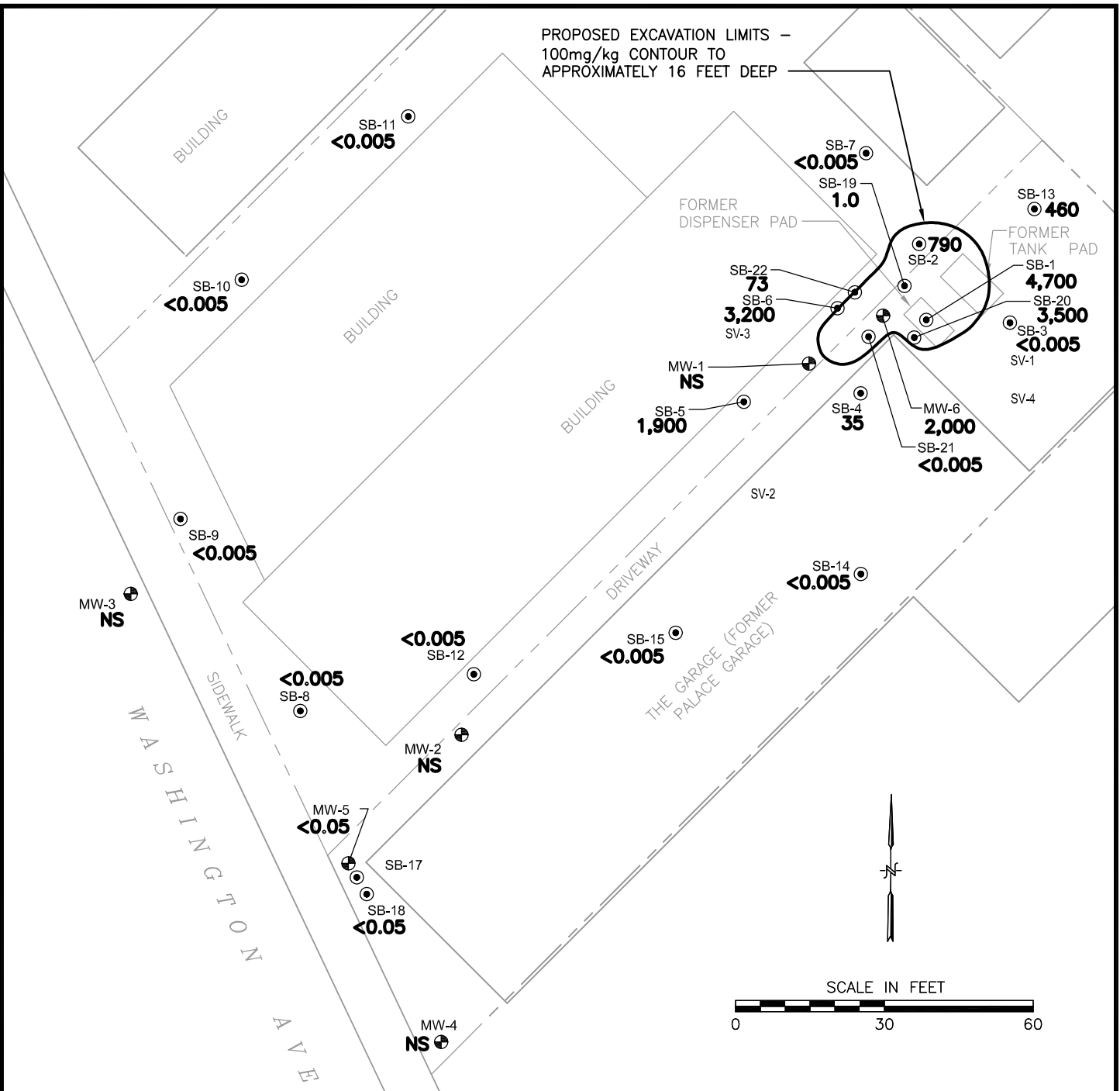
REFERENCE:
 USGS 7.5 MIN QUAD MAP TITLED: SAN LEANDRO, CALIFORNIA DATED: 1959 REV: 1980

FIGURE 1 SITE LOCATION MAP

PALACE GARAGE
 14336 WASHINGTON AVENUE
 SAN LEANDRO, CALIFORNIA


INNOVEX
 ENVIRONMENTAL MANAGEMENT, INC.
 3900 Lennane Drive • Suite 130
 Sacramento • California • 95834
 Phone: (800) 988-7880

20140617.11245417 C:\Users\Ron\Dropbox\Public\innovex\palace\3Q13 GRO IN SOIL 3 TO 16 FEET.dwg



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- SOIL BORING LOCATION
- PROPERTY LINE
- 73** TPHg/GRO CONCENTRATIONS IN SOIL (mg/kg)
- NS** NOT SAMPLED

NOTES:

1. BASEMAP SOURCE: MORROW SURVEYING, 2/05/03

FIGURE 2

TPHg/GRO CONCENTRATIONS IN SOIL FROM 3 TO 16 FEET BGS

PALACE GARAGE
14336 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



INNOVEX
ENVIRONMENTAL MANAGEMENT, INC.

4600 Northgate Boulevard • Suite 230
Sacramento • California • 95834
Phone: (800) 988-7880

ATTACHMENT A
ACEH Correspondence

Matt Farris

From: Detterman, Mark, Env. Health <Mark.Detterman@acgov.org>
Sent: Wednesday, June 11, 2014 4:53 PM
To: 'dj Kerry@AOL.com'
Cc: 'matthew farris'; Roe, Dilan, Env. Health
Subject: Request for Interim Remedial Action Plan; Palace Garage; 14336 Washington Ave, San Leandro (RO208)

Mr. Jeff Kerry
Kerry & Associates
151 Callan Avenue, Suite 300
San Leandro, CA 94577
(sent via electronic mail to:
dj Kerry1@AOL.com)

Mr. Jeffery Kerry
Jeffery & Dolores Kerry Trust & Jame Donnelley et. al.
19655 North Ripon Road
Ripon, CA 95366

Dear Mr. Kerry:

Alameda County Environmental Health (ACEH) staff has undertaken the review of the case file in order to update the Low-Threat Closure Policy (LTCP) and Path to Closure (PTC) checklists for the 2013 / 2014 fiscal year. In a January 21, 2014 directive letter, ACEH requested a Revised Corrective Action Plan due to the collection of additional data as discussed in that letter. Further review of the data indicates that in order to efficiently move the site forward by removing the last impediment to closure, and to quickly mitigate the risk of vapor intrusion indicated by the data, it is appropriate to modify the approach.

ACEH's review of site data indicates that the site does not meet two LTCP criteria. Existing data indicates that the site does not meet General Criteria f (dispenser secondary source removal), and also indicates that the site does not meet Media-Specific Petroleum Vapor Intrusion to Indoor Air criterion as follows. The site does not meet scenario 3a of the Media-Specific Petroleum Vapor Intrusion to Indoor Air criterion as the site does not consistently contain groundwater concentrations below 100 micrograms (ug/l) benzene, and may not have a 5 foot bioattenuation zone with Total Petroleum Hydrocarbon (TPH) under 100 milligrams per kilogram (mg/kg). The site also does not site meet scenario 3b of the Media-Specific Petroleum Vapor Intrusion to Indoor Air criterion, as the site does not contain a bioattenuation zone 10 feet in depth with residual soil contamination below 100 mg/kg TPH. Finally, site specific vapor data indicates that benzene, ethylbenzene, and naphthalene vapor concentrations greatly exceed LTCP required values by approximately 235%, 75%, and 27%, respectively, and oxygen is present at less than 4% (1.8 to 2.2%) at a depth of 5 feet. Additional details are contained in the January 21, 2014 directive letter.

Based on ACEH staff review of the case file, we request that you address the following technical comments and send us the reports described below.

TECHNICAL COMMENTS

- 1. Request for a Interim Remedial Action Plan** – The site does not meet two LTCP criteria as discussed above. It appears that a relatively shallow localized mass of residual soil contamination is present in the clay soil beneath the site. The residual soil mass does not appear to affect groundwater significantly within the context of the LTCP as the groundwater plume is defined to be relatively short (Groundwater Media-Specific Criteria 1.2). However, the shallow residual contaminant mass appears to represent a vapor intrusion risk to the site and adjacent offsite buildings, and this is the principal remaining impediment to case closure. Consequently Interim Remedial Actions appear appropriate in order to mitigate the risk of vapor intrusion and expeditiously move the site towards closure. Please submit an Interim Remedial Action Plan (IRAP) by the date listed below.

ACEH understands that the proposed IRAP will consist of a source area excavation. Please ensure the IRAP is complete and covers topics of potential concern for the proposed remedial actions, including mitigation of noise, dust, documentation of the cleanliness of import fill (if using recycled base rock see the *Guidance for Characterization of Concrete and Clean Material Certification for Recycling*, issued by the New Jersey Department of Environmental Protection), shoring, and offsite disposal of the excavated material.

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 following specified file naming convention and schedule:

- **August 15, 2014** – Interim Remedial Action Plan
File to be named: RO208_IRAP_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 you have any questions, please call me at (510) 567-6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

*Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6876
Fax: 510.337.9335
Email: mark.detterman@acgov.org*

PDF copies of case files can be downloaded at:

<http://www.acgov.org/aceh/lop/ust.htm>