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By Alameda County Environmental Health 5:23 pm, Nov 01, 2017

October 30, 2017

Mr. Khatri Paresh
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

**Subject: Transmittal – Work Plan, Additional Assessment,
401 Jackson Street, Oakland, California**

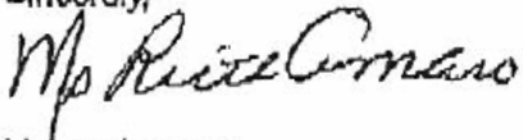
Dear Mr. Paresh:

Please find enclosed the *Work Plan, Additional Assessment* for the property located at 401 Jackson Street in Oakland, California. The proposed additional investigation activities were prepared to meet the request made during our recent meeting on September 21, 2017. Per the Alameda County Department of Environmental Health requirements, I am providing the following Acknowledgement Statement:

"I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website."

If you have any questions or need additional information, please do not hesitate to call Mr. Trent Weise with AEI Consultants at (408) 559-7600.

Sincerely,



Ms. Ruth Amaro

October 30, 2017

Mr. Khatri Paresh
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502
Submitted Via Electronic Mail to Paresh.Kharti@acgov.org

Subject: Work Plan, Additional Investigation
401 Jackson Street, Oakland, California
AEI Project No. 372927

Dear Mr. Paresh:

On behalf Amaro Poultry Co, Inc., AEI Consultants (AEI) has prepared this work plan presenting our proposed approach to further characterize the nature and extent of residual petroleum hydrocarbons in the subsurface at 401 Jackson Street in Oakland, California ("the Site"). Figure 1 presents the Site location and vicinity. Recent investigations at the Site have identified residual petroleum hydrocarbons presumably associated with a former gasoline underground storage tank (UST) at the Site, and the presence of elevated total petroleum hydrocarbons as motor oil (TPMmo) from an unknown source. The investigation data were provided to the Alameda County Department of Environmental Health (DEH) to perform a Preliminary Site Review, and the review was discussed in an in-person meeting at the DEH offices on September 21, 2017. In the meeting, it was discussed that additional characterization would be required by the DEH, including:

- Collecting soil vapor samples to characterize whether the residual petroleum hydrocarbons identified in soil and groundwater beneath the Site represented an unacceptable risk to indoor air;
- Further characterization of the nature and extent of TPHmo at the Site, and to identify whether a historical heating oil tank remained present at the Site; and
- Providing an addendum to the Phase I Environmental Site Assessment prepared for the Site specifically addressing potential for releases to the floor drains and the location of the refrigerant recirculation lines.

The proposed investigation activities are presented below.

BACKGROUND

The Site location and vicinity are shown on Figure 1. Figure 2 presents the Site Plan. The Site consists of a one story refrigerated warehouse and office space that previously housed Del Monte Meats, a meat distribution facility and storage warehouse. The Site is currently vacant. The Site is covered by concrete inside of the building with asphalt pavement and sidewalk surrounding the property. The general land use in the vicinity of the Site is mixed use commercial and residential.

The Site is relatively flat at an elevation of about 18 feet above mean sea level. The regional topographic gradient direction slopes toward the southeast and, therefore, the direction of

groundwater flow beneath the subject property is inferred to be to the southwest. The San Francisco Bay is located approximately 0.25 miles to the south.

The previous two subsurface investigations performed at the Site advanced a total of eight soil borings and collected and analyzed eight soil samples and six groundwater samples. AEI has the following observations based upon the previous work performed at the Site:

- The geophysical survey previously performed did not identify the presence of the former gasoline UST that was reportedly filled in-place.
- TPHg nor TPHd were not detected in the eight soil samples collected and analyzed.
- TPHmo was detected in three of the eight soil samples collected and analyzed, observed at a maximum concentration of 12 mg/kg.
- One of the five groundwater samples collected and analyzed, sample SB-4, yielded TPHg, benzene, and MTBE, observed at concentrations of 3,800, 21, and 16 µg/L, respectively. The groundwater sample collected from soil boring SB-8 yielded MTBE at a concentration of 1.8 µg/L. The groundwater samples collected from the remaining soil borings did not yield TPHg nor benzene at concentrations at or above their respective laboratory method detection limit. Therefore, if the observed concentrations of TPHg, benzene, and MTBE are attributed to the former gasoline UST, the lateral extent in groundwater has been adequately characterized and does not appear to represent a significant release from the former gasoline UST.
- Five of the six groundwater samples collected and analyzed yielded elevated concentrations of TPHd and TPHmo, observed at maximum concentrations of 3,400 and 45,000 µg/L, respectively, in the sample collected from soil boring SB-7. The detections of TPHd and TPHmo are not consistent with the noted former gasoline UST at the Site. The samples collected from the Site between the two investigations performed by AEI did not identify a source of the TPHd and TPHmo observed in groundwater nor did the Phase I ESA performed identify a suspected source.

SCOPE OF WORK

AEI proposes the following scope of work to further characterize residual petroleum hydrocarbons at the Site, including three sub-slab soil vapor probes (SV-1, SV-2, and SV-3) and four soil borings (SB-9 through SB-12). The proposed sample locations are shown on Figure 2. The soil vapor samples collected from the proposed sub-slab soil vapor probes will be used to assess whether there is an unacceptable risk to indoor air quality from the presence of petroleum hydrocarbons in soil and/or groundwater beneath the Site. The soil and groundwater samples collected from the proposed soil borings will be used to further characterize the nature and extent of residual TPHmo in soil and groundwater at the Site, and identify whether a source of the TPHmo is present at the Site. These activities are presented in detail below.

Preliminary Field Activities

The following activities will be performed to prepare for the proposed investigation:

- The existing Site-specific health and safety plan will be updated for this scope of work as needed, reviewed by on-site personnel, and kept on-site for the duration of the fieldwork.
- Drilling permits will be obtained from Alameda County Public Works Agency (ACPWA) for this investigation.

- The public underground utility locating service Underground Service Alert (USA) will be notified to identify public utilities in the work area at least 48 hours prior to drilling activities.
- A field utility scan will be conducted by an independent utility locating company to identify whether there are existing USTs at the Site and existing underground utilities that may interfere with the proposed soil boring locations.

Soil and Groundwater Sampling

AEI proposes to advance four soil borings at the Site, SB-9 through SB-12, at the locations shown on Figure 2. The proposed locations of the soil borings were selected to define the extent of TPHmo beneath the Site, primarily between previous soil borings SB-7 and SB-8. AEI will contract a State of California licensed drilling contractor (C-57) to advance the soil borings using a direct-push drilling rig (GeoProbe or similar) equipped with 2.25-inch diameter drilling rods. Soil will be continuously collected from each boring in approximately four-foot long, two-inch diameter acrylic liners. The soil core collected will be described using the Unified Soil Classification System (USCS). Soil samples will be cut from the liners at intervals of approximately two feet, or more frequently based on field observations and organic vapor measurements collected in the field.

A sub-sample of each sample collected for potential chemical testing will be placed into a zip-top bag and screened for the presence of organic vapors with a photo-ionization detector (PID). Samples will be selected for analysis based on PID readings, sensory observations of impact, and changes in soil types. Selected soil samples will be cut from the acrylic liners, sealed with Teflon™ tape and plastic end caps, labeled with a unique identifier, and placed in an ice-chilled cooler for transport to State of California-certified laboratory under chain-of-custody protocol.

Upon reaching first encountered groundwater, a 'grab' groundwater sample will be collected. Each groundwater sample will be collected by placing a new disposable temporary well screen within the open borehole and extracting groundwater using either a disposal bailer or new tubing and a peristaltic pump. The collected groundwater sample will be decanted into laboratory-supplied bottleware, sealed, labeled with a unique identifier, and placed in an ice-chilled cooler for transport to State of California-certified laboratory under chain-of-custody protocol.

Following sample collection and removal of tooling each soil borings will be destroyed by filling the open borehole with neat cement grout in accordance with the permit from the ACPWA. Investigation derived waste will be stored on-site in sealed, labeled, department of transportation (DOT) approved 55-gallon drums. Disposal will depend upon the receipt of the analytical results.

AEI proposes to collect and analyze a minimum of one soil and one groundwater sample from each soil boring, for the following:

- Total petroleum hydrocarbons gasoline (TPHg), as diesel (TPHd) and TPHmo using US EPA Testing Method 8015M.
- Volatile organic compounds (VOCs) using US EPA Testing Method 8260B.

Sub-Slab Soil Vapor Sampling

AEI proposes to collect three sub-slab soil vapor samples at the locations shown on Figure 2. Locations SV-1 and SV-2 were selected to be near the former gasoline UST to assess whether there is an unacceptable risk from the release from the gasoline UST. The third location, SV-3 was selected to assess whether there was an unacceptable risk from a potential unknown release

to the sanitary sewer lines at the Site. Each sub-slab soil vapor sample will be collected in general conformance with the *Advisory – Active Soil Gas Investigation, July 2015*, issued by the California Department of Toxic Substances Control (DTSC), and Los Angeles and San Francisco Regional Water Quality Control Boards as follows.

A rotary hammer drill will be used to drill through the concrete floor slab of the building, creating an approximately one-inch diameter hole. A temporary vapor probe consisting of 0.25-inch diameter Teflon™ tubing capped with a screen-lined point will be inserted into the newly created hole, terminating just beneath the concrete. The annular space surrounding the tubing will then be sealed with hydrated bentonite.

After waiting the Advisory-recommended equilibration time of a minimum of two-hours, soil vapor samples will be collected. Prior to collecting the samples, a shut-in test will be performed by placing a vacuum on the above-grade sampling train and vacuum canisters. The vacuum will be observed for approximately six minutes and verified to not change. A helium atmosphere within a shroud covering the sampling apparatus will be used as a leak-check compound. Prior to sampling, and following purging of the sampling lines, the purge valve will be closed and the initial vacuum of the laboratory-supplied, certified clean, one-liter vacuum canister will be recorded. Soil vapor samples will be collected through laboratory-supplied, certified clean, regulators at approximately 150-milliliters per minute. After approximately five minutes (depending on the down-hole vacuum), or -5 in Hg vacuum in the canister, each canister will be closed and removed from the sampling line and the final canister vacuum recorded. The vacuum canister sample will be sealed with a gas tight cap, appropriately labeled, and entered onto a chain of custody manifest for delivery to the laboratory.

Following the completion of sampling, the sample tubing will be removed and the hole in the building floor will be sealed with neat cement grout.

The collected sub-slab soil vapor samples will be transported under chain-of-custody protocol to State of California-certified laboratory analysis. Each soil gas sample will be analyzed for TPHg and volatile organic compounds (VOCs) using US EPA Testing Method TO-15.

Reporting


Upon the completion of the above-described field activities and receipt of the laboratory analytical data, AEI will prepare a report presenting the methods and results of the investigation. The report will summarize the investigation activities, tabular summaries of the data, and figures showing the sample locations. The soil, soil gas, and groundwater sample results will be compared to the California State Water Resources Control Board's *Low-Threat Underground Storage Tank Case Closure Policy* and/or the current Environmental Screening Levels (ESLs) provided by the California Regional Water Quality Control Board, San Francisco Bay Region as appropriate.

An addendum to the Phase I Environmental Site Assessment will be prepared for the Site specifically addressing potential for releases to the floor drains and the location of the refrigerant recirculation lines.

CLOSING

AEI appreciates working with the DEH to move this Site forward to closure. If there are any questions regarding our investigation, please do not hesitate to contact Mr. Trent Weise at (408) 559-7600 or at tweise@aeiconsultants.com.

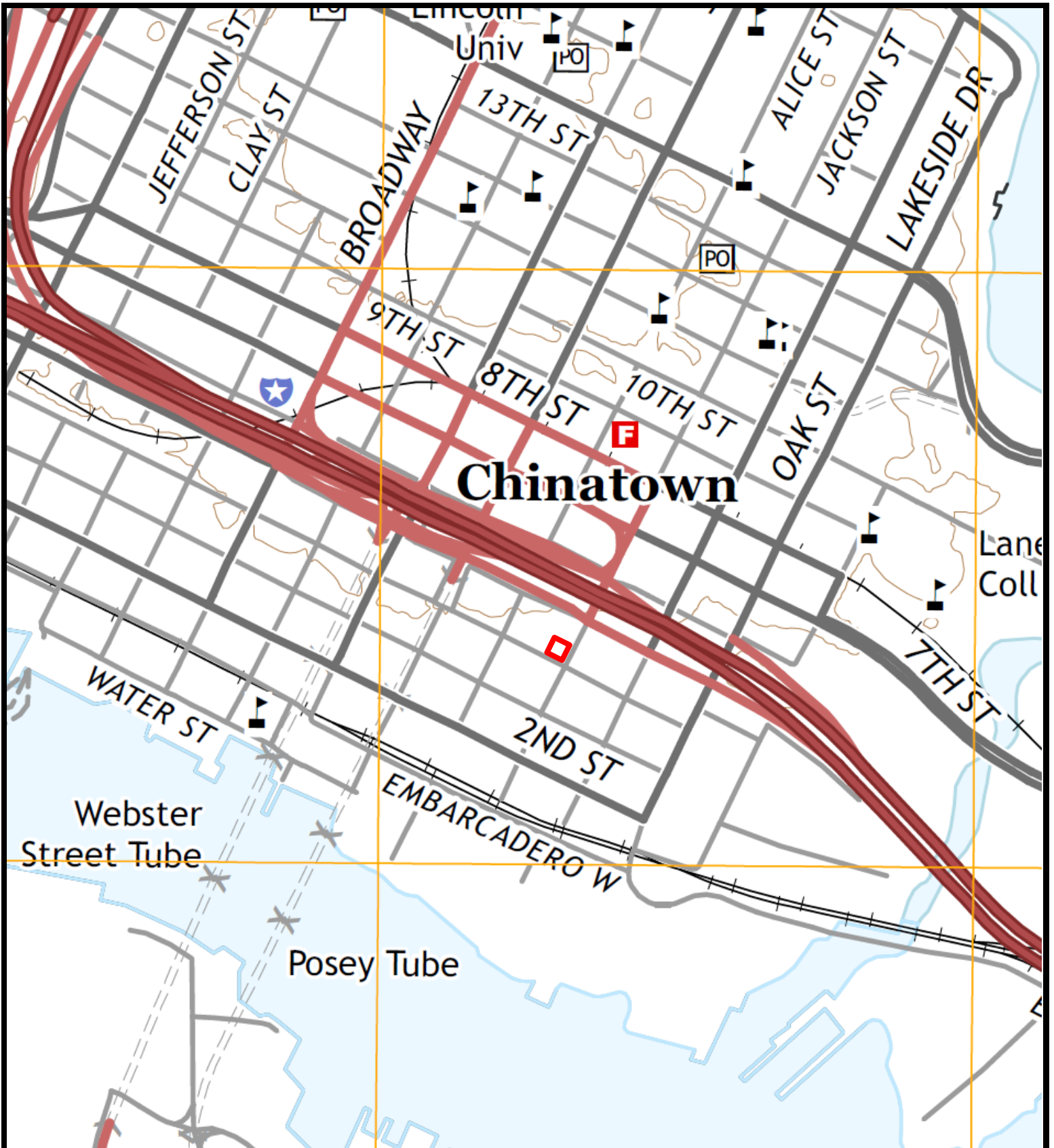
Sincerely,
AEI Consultants


Trent A. Weise, P.E.
Vice President



Enclosures

FIGURES



Legend: Approximate Property Boundary —

Source: USGS Topographic Map *Oakland West, California* (2015)

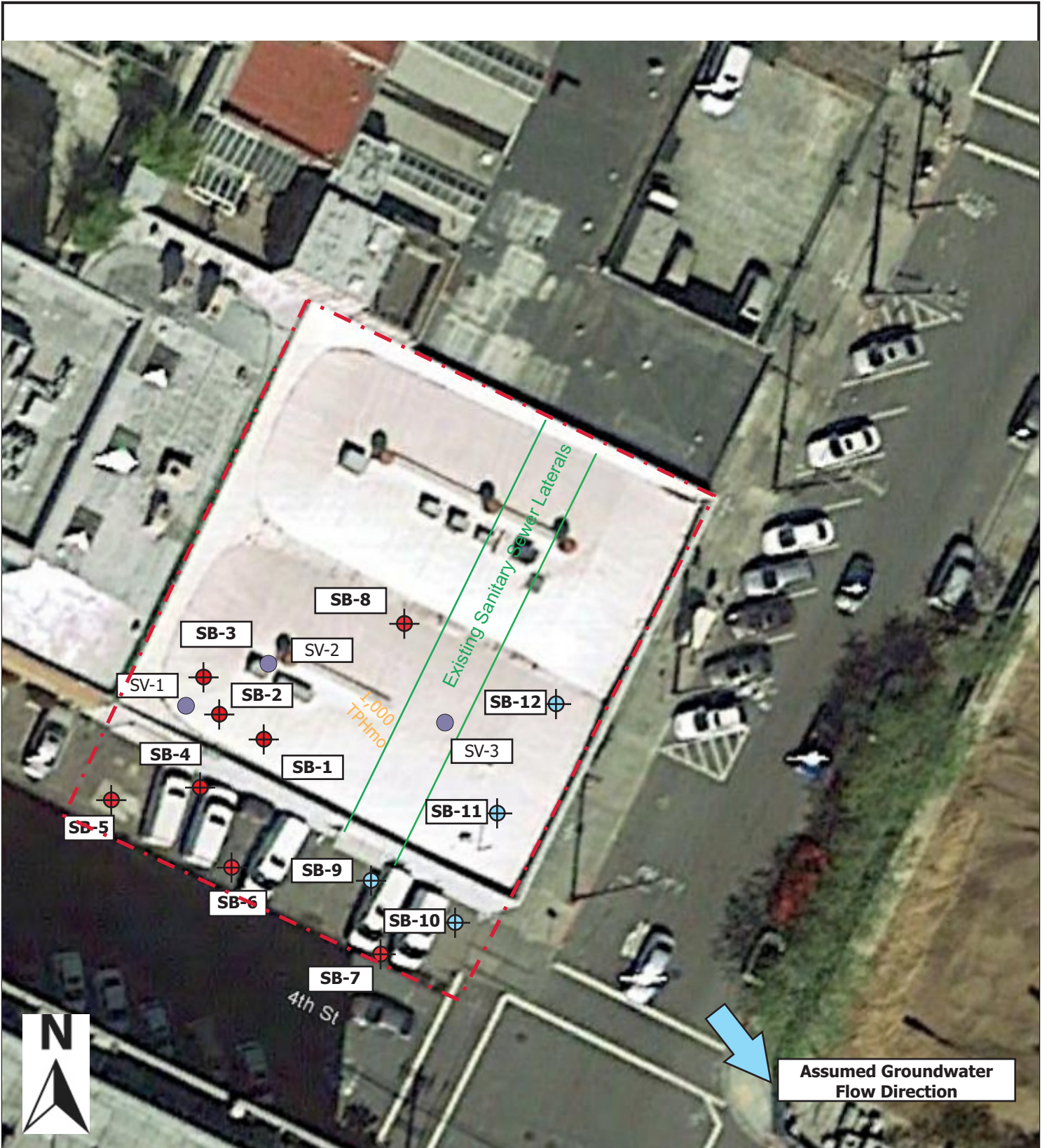


Figure 1: TOPOGRAPHIC MAP

401 Jackson Street, Oakland, California 94607

Project Number: 372927

AEI
Consultants



LEGEND

- - Approximate Property Boundary
 - Soil Boring Location
 - Proposed Soil Boring Location
 - Proposed Sub-Slab Soil Vapor Sample Location
- SCALE: 1" = 30'

AEI Consultants	
2500 Camino Diablo, Walnut Creek, California	
Proposed Additional Investigation	
401 Jackson Street, Oakland, California	FIGURE 2 Project No. 372927