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By Alameda County Environmental Health 9:12 am, Feb 15, 2017

Keith Nowell, P.G., C.HG
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway
Alameda, California 94502

Subject: **TRANSMITTAL LETTER & ACKNOLEDGEMENT STATEMENT**

Location: **Former Exxon Station, 3055 35th Avenue, Oakland**

ACEH LOP#: **RO-0000271; GeoTracker #: T0600100538;**

Dear Mr. Nowell:

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 SWRCB's GeoTracker website.

Sincerely,

Lynn Worthington

Lynn Worthington
Golden Empire Properties, Inc.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, CA 95076
(831) 722-3580 // www.weber-hayes.com

February 10, 2017

Keith Nowell, PG, CHG
Alameda County Department of Environmental Health
Local Oversight Program (LOP) for Hazardous Materials Releases
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Response to Technical Comments - Work Plan for Additional Site Investigation

Site: Former Exxon, 3055 35th Avenue, Oakland, CA, Fuel Leak Case RO0000271
GeoTracker Global ID T0600100538

Dear Mr. Nowell:

As requested by the Alameda County Department of Environmental Health (ACDEH) in their January 12, 2017 review of our *Work Plan for Additional Site Investigation* for the subject site, we have prepared this response to technical comments. Thank you for your prompt and thorough review of our *Work Plan* and for helping to move this project forward. All the modifications requested by the ACDEH will be incorporated into our field work plan. Details are presented below.

Response to Technical Comments

1. Benzene Contaminant Plume Map and Foundation Survey

We presented a benzene plume map as Figure 10 of the *Work Plan* using a 30 micrograms per liter (µg/L) isoconcentration contour that was drawn based on the most recent groundwater data. The purpose of the map was to identify properties that could be affected by vapor intrusion from the benzene plume. We stated that this is the current extent of benzene in groundwater. ACDEH noted that the benzene residential groundwater vapor intrusion human health risk level environmental screening level (ESL) is 30 µg/L for deep groundwater in the fine to coarse scenario. ACDEH also noted their opinion that the 30 µg/L contour does not denote the extent of the benzene contaminant plume. To clarify, we believe the 30 µg/L contour shown on figure 10 is the most accurate representation available at this time, that 30 µg/L is the vapor intrusion ESL for benzene in groundwater (which defines the vapor intrusion risk), and that the areal extent of benzene in groundwater is defined by the 1 µg/L contour. The work described in Section 5 (below) will help to define the current extent of benzene in groundwater.

2. Sensitive Receptor Survey

Per ACDEH's request, the location of the surface storm drain inlets in the site vicinity will be plotted on a Figure and the depth of both the storm drain piping and the outlet will be included in the discussion section of the report.

ACDEH notes the nearest surface water body, Peralta Creek, is within 1,000 feet and down gradient of the leading edge of the petroleum hydrocarbon contaminant plume. Field data will be plotted to determine where the downgradient edge of the petroleum hydrocarbon contaminant plume is and the distance from the leading edge of the contaminant plume to Peralta Creek along the direction of groundwater flow.

3. Direct Contact and Outdoor Air Exposure

As directed by ACDEH, we have added an additional soil boring in the middle of the site to adequately address Direct Contact and Outdoor Air Exposure (DCOAE) and revised Figure 20 to show the location of the additional soil bore. The revised figure is attached (Figure 20R). Figure 20R was provided to ACDEH staff by electronic mail on February 1, 2017. To date we have not received feedback regarding Figure 20R. Also as requested, we have assigned boring identification labels in Figure 20R for future reference. We believe the additional soil boring in the center of the site, DP–11, in conjunction with the other proposed borings, will provide sufficient data to adequately addresses the DCOAE criteria. We note that Figure 4 of the *Work Plan* summarizes shallow soil sample analytical results from previous borings at the site that can help with the DCOAE evaluation.

As requested, the contact information for the owner / occupant of 3014 Bartlett Street, Oakland, CA, where former boring B-16 and soil vapor sample probe SV-9 were located and access has been denied, were forwarded to the ACDEH and State Water Board staff by electronic mail on January 17, 2017.

With regard to bore B-15, as described in our February 1, 2017 electronic-mail to ACDEH staff, this location appeared inaccessible during our foundation survey due to the presence of a storage structure, but we believe we can access and collect samples close to this location as shown on revised Figure 20R, boring DP-17.

Per ACDEH request, soil bore logs for all borings will include photoionization detector (PID) readings, and when encountered, depth to first encountered water, depth to stabilized water and depth to water just prior to borehole grouting.

4. Soil Gas Survey

As directed by ACDEH and per our standard field methodology (Appendix D of the *Work Plan*), the soil vapor / soil gas investigation will be implemented in general accordance with the July 2015 *Advisory- Active Soil Gas Investigations* prepared by the California Environmental Protection Agency/ Department of Toxic Substances Control (Cal EPA I DTSC), and the Regional Water Quality Control Boards of the Los Angeles (LARWQCB) and San Francisco (SFRWQCB) regions (Advisory). We understand the Advisory includes site conditions addressing rainfall, irrigation, and standing water in addition to sample collection, analyses, and other protocols, all of which we will follow during the field implementation phase.

As directed by ACDEH, all of the soil gas samples will be analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, xylenes (BTEX), Methyl tert Butyl Ether (MTBE), naphthalene, and the fixed gases oxygen, methane and carbon dioxide. Also in accordance with ACDEH requirements, naphthalene soil gas analysis by EPA Method T0-17 will be conducted in accordance with the Advisory for one-third of the soil gas samples, in addition to the EPA Method T0-15 analysis, for comparison of the reported concentrations. Also as requested by ACDEH we will collect and analyze at least one duplicate soil gas sample.

In accordance with Appendix D of the *Work Plan*, Field Methodologies, isopropyl alcohol will be used as the leak detection compound (LDC) and a shroud will be used to encapsulate the sampling system. As we had planned, the LDC, isopropyl alcohol, will be included in the scope of analysis by EPA method T0–15.

As directed by ACDEH, soil gas samples will also be collected from Conestoga Rovers and Associates (CRA) offsite soil vapor points SV-11 through SV-14. We are in the process of obtaining access to the properties where soil gas sample probes SV 11 through 14 are located. If additional help is necessary in obtaining access to these probes we will inform ACDEH and State Water Board staff.

5. Groundwater Study and Plume Delineation

With the addition of boring DP – 17 we note that discrete groundwater samples will be collected at three offsite locations as depicted on Figure 20R.

As required by ACDEH, groundwater samples will be collected from all on-site monitoring wells (MWs) and remediation wells (RWs) during the groundwater monitoring event.

In addition, as required by ACDEH we will add Total Petroleum Hydrocarbons as diesel (TPH-d) to the scope of groundwater analysis. Also as requested by ACDEH the TPH-d analysis will be performed without silica

gel cleanup (SGC) for consistency with the San Francisco Bay Region, Regional Water Quality Control Board guidelines. Analysis of a select number of samples may be performed both with and without SGC for comparison of TPH-d concentration data. The information we have is in no diesel fuel was stored at the site. We believe TPH–d detected in groundwater samples is a result of aged gasoline and/or heavy-end gasoline hydrocarbon overlap into the TPH-d detection range. However we do not dispute the ACDEH request.

We will provide ACDEH with a copy of the laboratory analytical reports for the first phase of the plume delineation study for review and discussion prior to making a determination regarding the advancement of the Bartlett Street soil bores.

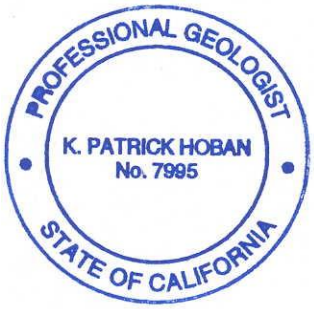
If you have any questions or comments regarding this *Work Plan Addendum*/response to comments please contact us at our offices at 831-722-3580, or by electronic mail at craig@weber-hayes.com.

Sincerely yours,

WEBER, HAYES AND ASSOCIATES

A California Corporation

By: _____
Craig B. Drizin, PE
Senior Engineer



And: _____
Patrick Hoban
Senior Geologist

Attachments: Figure 20R

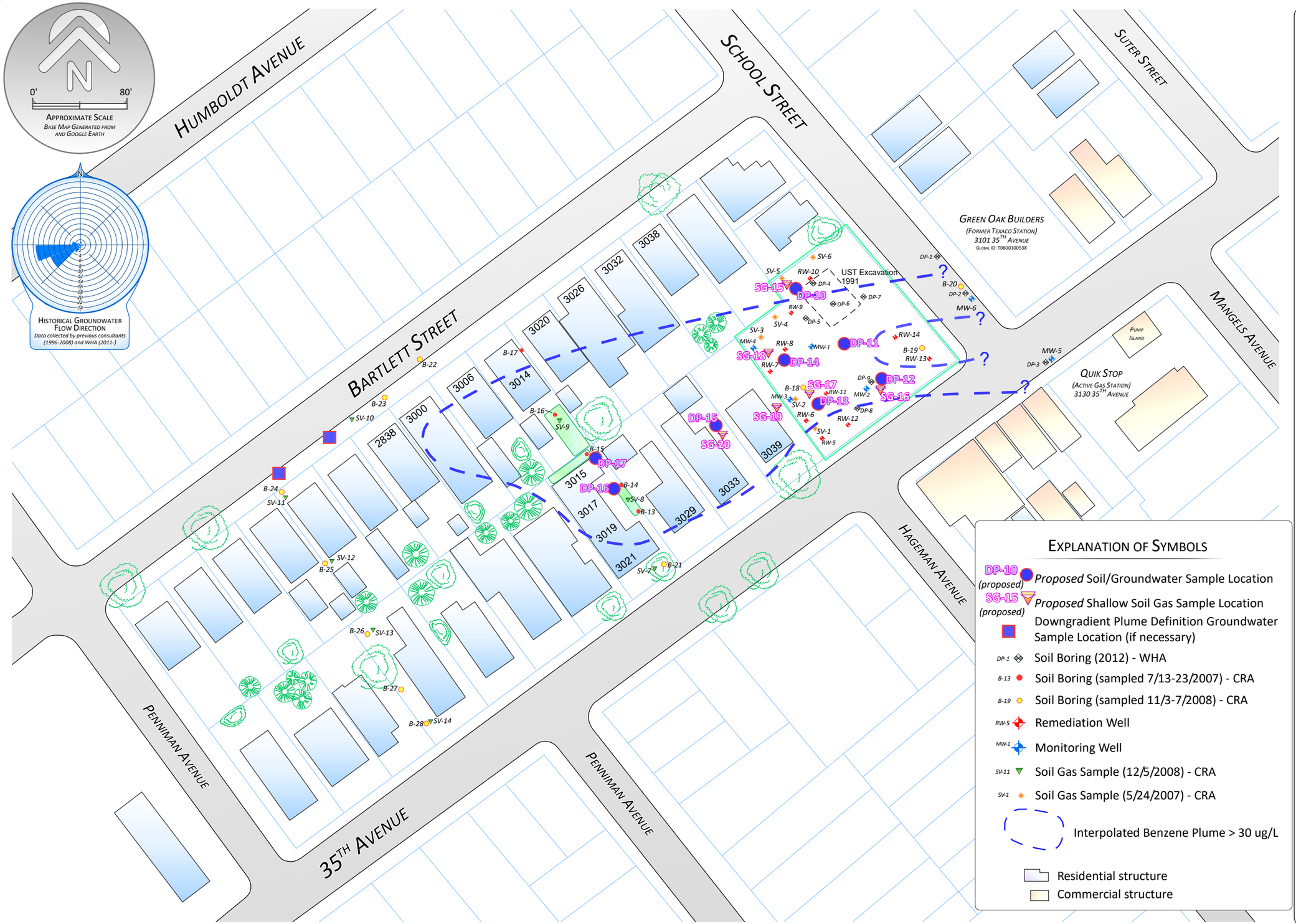
FIGURE 20R
Project 2X103.F

PROPOSED SAMPLE LOCATIONS

SITE: FORMER EXXON STATION
ADDRESS: 3055 35TH AVENUE, OAKLAND, CA

REVISIONS/NOTES: FEBRUARY 2017

DATE: DECEMBER 2016



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