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March 24, 2016

Mr. Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Ste. 250
Alameda, CA 94502-6577
keith.nowell@acgov.org

Subject: **Soil, Groundwater, and Soil Gas Workplan**
3101 35th Avenue, Oakland, CA
Fuel Leak Case No. RO0003164; Global ID T10000006539

Dear Mr. Nowell,

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached *Soil, Groundwater, and Soil Gas Workplan* are true and correct to the best of my knowledge.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mona Hsieh', with a long horizontal flourish extending to the right.

Ms. Mona Hsieh
Responsible Party Representative



***Soil, Groundwater, and Soil Gas
Workplan***

**3101 35th Avenue
Oakland, California**

March 24, 2016

Prepared for:

Green Oak Builders
Attn: Ms. Mona Hsieh & Mr. Patrick Kong
888 Brannan Street, #101
Oakland, CA 94103

Prepared by:

Almar Environmental
407 Almar Avenue
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1.0 INTRODUCTION

Almar Environmental (Almar) appreciates the opportunity to work on the 3101 35th Avenue project in Oakland, California (Figures 1 through 3). Almar has been retained by Green Oak Builders to prepare and implement this *Soil, Groundwater, and Soil Gas Workplan* for the subject site. As requested by the Alameda County Health Care Services Agency (ACHCSA) in their March 15, 2016 Directive Letter (Appendix A), the purpose of this workplan is to present a series of tasks to further assess the extent of subsurface contamination at the site and adequately characterize the site as it pertains to the requirements contained within the State Water Resources Control Board's (SWRCB's) Low Threat Closure Policy (LTCP). In general, the proposed scope of work consists of collecting soil and grab groundwater samples from three additional borings, advancing one soil only boring in the area of the former "Texaco" tank pit, and installing and sampling one confirmation soil gas sample point near historical soil gas sample point SG-3. Almar, herein, presents the details of the proposed scope of work.

2.0 SITE INFORMATION

The project site is located at 3101 35th Avenue in the city of Oakland, California (Figure 1). The site consists of a roughly rectangular property associated with Alameda County Assessor's parcel number 28-951-12-1. The site is located on the northern corner of the intersection of 35th Avenue and School Street. An Aerial Photograph of the Site Area is included as Figure 2 and a detailed Site Map Showing Historical Sampling Locations is included as Figure 3.

2.1 Physical Setting

Based on the U.S. Geological Survey Oakland East, California Quadrangle 7.5 Minute Series Topo Map, the subject property is approximately 160 feet (ft) above mean sea level (msl). The topographic slope of the subject property and surrounding areas is generally to the west, towards the San Francisco Bay (Figure 1).

According to the *Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California*, the site lies upon Pleistocene alluvial fan and fluvial deposits (Qpaf) (Graymer, 1996). Site specific soils, encountered during previous investigations were identified as predominately Clayey Gravel to Gravelly Clay (CL) of varying consistency and plasticity from the ground surface until the total depths explored (approximately 30 feet bgs) (Almar, 2015).

The nearest surface water to the site is the seasonal Peralta Creek, located approximately 800 feet north and north west of the subject site. The larger San Francisco Bay is located approximately 2.5 miles west of the site (Figure 1). Based upon topography of the area, regional groundwater flow is expected to be to the west/southwest (towards the San Francisco Bay).

2.2 Site History

The subject site appears to have operated as a gasoline service station from at least 1929 until the early 1980s. In the later years the service station was owned and operated by Texaco. Texaco sold the property in 1982. It appears that USTs associated with the former Texaco station were previously located near the southern corner of the property (Figure 3) and were removed sometime prior to 1982. From the mid 1980s until the late 1990s the site was an auto parts sales and auto glass repair facility. The building and associated canopy appear to have remained unoccupied from at least 1995 until the buildings were demolished in 2014. The property is currently a vacant lot surrounded by a chain link fence.

2.3 Summary of Previous Environmental Investigations

Phase I Environmental Site Assessment (ESA) – January, 2005

On January 31, 2005 as part of a property transfer, a Phase I ESA was prepared for the subject site by Martin & Associates of Oakland, California (Martin). Part of the conclusions of that report found:

“No evidence of (current) storage tanks or pipelines was identified. Former USTs were reportedly removed when gasoline service station activities were discontinued in the early 1980s. No further action or investigation is recommended regarding storage tanks or pipelines at the project.”

Based upon these findings and recommendations, the current property owner proceeded with purchasing the property.

Phase I Environmental Site Assessment (ESA) – October, 2014

On October 3, 2014 a second Phase I ESA, as part of a loan process, was prepared for the subject site by Piers Environmental Services, Inc. of Mill Valley, California (Piers). Part of the conclusions of that report found:

*This assessment has revealed evidence of a **Recognized Environmental Condition (REC)** from the prior use of the Property. The Property operated as a gasoline service station from at least 1929 to 1982, apparently with several generations of tank locations.*

*The gasoline service station closed before environmental regulations existed that required the tanks to be removed and inspected by the regulatory agencies. PIERS was unable to obtain any information concerning tank removals. **Therefore, PIERS recommends performing a geophysical survey in the known tank locations to determine if the tanks have been removed.***

A groundwater monitoring well, MW-6, from an adjacent down-gradient LUST case at 3055 35th Avenue has detected 1,800 parts per billion (ppb) of Total Petroleum Hydrocarbons (TPH) as gasoline and 230 ppb of benzene, significantly above the Water Quality Objective of 1,000 ppb and one ppb, respectively.

*PIERS contacted Mr. Keith Nowell of the ACEH regarding the 3055 35th Avenue LUST case and the consultant’s claim that, based on well MW-6 in front of the Property, contamination from the Property was migrating to the 3055 35th site. **Therefore, PIERS recommends conducting a limited soil and groundwater site investigation to determine if the gasoline and benzene concentrations detected in well MW-6 are due to an on-site source of contamination from the Property.***

A Phase II investigation of soil and groundwater conditions and additional effort to determine if there are any tanks remaining at the Property should be completed.

UST Removal Activities – January, 2015

Based upon the findings of the Piers Phase I ESA, an underground survey of the property was conducted and three (3) 350 gallon USTs were identified on the property. Two of the tanks contained gasoline and were located along the western property boundary, along School Street. The third tank was a waste oil tank located near the center of the property. The tank locations are shown on Figure 3. The tanks were subsequently removed under permit by Environmental Restoration Services of Menlo Park, California (ERS). Confirmation soil samples were collected by ERS from below each of the former tanks and the two

associated former pump island locations. Elevated concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg) were detected in soil samples collected from below the former western most pump island (Table 1A and Figure 4). A detailed summary of the tank removal and initial sampling activities is documented in ERS's *Underground Tank Technical Closure Report*.

Interim Remedial Action by Overexcavation – April, 2015

Based upon the findings of the elevated hydrocarbon concentrations documented during the tank removal activities, ERS prepared and implemented an *Interim Remedial Action Workplan* for the subject site. Interim remedial activities consisted of overexcavated hydrocarbon impacted soils in the area of the former dispenser location. In total, approximately 25 cubic yards of non-hazardous petroleum impacted soils were excavated and transported to Newby Island Landfill under non-hazardous manifests. Interim remedial activities are documented in ERS's *Report of Interim Remedial Action*.

Data Gap Investigation Workplan and Site Conceptual Model – June, 2015

On June 25th, 2015 Almar prepared a *Data Gap Investigation Workplan and Site Conceptual Model* for the site. This Workplan identified several data gaps which remained unaddressed prior to the being eligible for closure under the State's LTCP. The Workplan, in addition to presenting an initial site conceptual model for the site, set forth a series of tasks to close those data gaps. The ACHCSA reviewed the Workplan and issued a directive letter approving the proposed scope of work. As such, the Workplan was implemented in November 2015 (see below).

Soil, Water, and Soil Gas Investigation – November, 2015

On December 4, 2015 Almar prepared a *Soil, Water, and Soil Gas Investigation & Updated LTCP Data Gap Analysis* for the site. This report documented the installation and sampling of three temporary borings for soil and groundwater as well as the installation and sampling of three soil gas sample points. Based upon the results of the investigation, the ACHCSA requested additional an investigation be conducted to further assess the extent of subsurface contamination at the site and adequately characterize the site as it pertains to the requirements contained within the LTCP. As such, Almar has prepared this Workplan to satisfy these requirements.

3.0 PROPOSED SOIL AND WATER INVESTIGATION SCOPE OF WORK

This portion of the investigation will, in general, consist of the collection of soil and "grab" groundwater samples from three boring locations at the site. These borings locations were previously proposed but not completed during the November 2015 investigation due to time. The proposed borings will be identified as DP-6 through DP-8. Additionally, one soils only boring (DP-9) through the former Texaco tank pit will be advanced. The proposed boring locations are shown on Figure 4. A detailed description of the proposed tasks to install the borings is presented as follows.

3.1 Task 1: Regulatory Liaison, Permitting, and Project Management

Almar will represent the client with regulatory agencies and onsite businesses or residences in meetings and/or communications. A representative of Almar will also coordinate, oversee, and/or conduct all activities detailed in this Workplan. Almar will obtain the appropriate subsurface drilling permit from the ACHCSA. As required by law, Almar will mark the subject property and notify Underground Service Alert (USA) to clear the proposed boring locations of underground utilities prior to drilling activities. A Health

and Safety Plan (HASP) will be prepared, maintained onsite, and will comply with 29 CFR 1910.120 and Cal OSHA regulations.

3.2 Task 2: Drilling and Soil Sampling

Soil borings will be drilled by a C57 licensed driller under the direction of a licensed State of California Professional Geologist. As required by law, the top five (5) feet of each boring will be dug by hand to ensure that underground utilities are not encountered. Following hand clearing, a truck-mounted Geoprobe™ direct-push sampling rig capable of continuous core soil sampling will be used to drill each of the proposed borings (DP-1 through DP-5). The Geoprobe™ will direct-push (hammer) a 2-inch diameter steel Macrocore barrel until groundwater is first encountered (estimated 25 - 30 ft bgs). The core barrels will be lined with clear plastic disposable tubing to facilitate continuous soil coring and soil logging for description. Soils will be logged using the United Soil Classification System (USCS). Soil samples will be collected at five (5) foot intervals, where contamination is observed in the field, and at the soil-groundwater interface. A minimum of two (2) soil samples from each boring will be retained for laboratory analysis. All soil samples will be collected by cutting the desired section of disposable plastic tubing, sealing the ends of the tube with Teflon™ tape, and capped. The caps will be sealed with silicone tape, labeled, sealed in individual plastic bags, and placed in a pre-chilled ice chest with ice to remain at 4° Celsius (°C) until they arrive at the lab.

Soil cuttings generated during drilling operations will be contained 55-gallon drums and remain on site. Water used in the decontamination and cleaning of drilling equipment will also be stored on site in 55-gallon drums.

3.3 Task 3: Groundwater Sampling

Once groundwater is encountered in each of the borings, and a sufficient amount is present for sampling, the Macrocore sampler will be removed from the boring, and a temporary flush threaded, ¾-inch schedule 40 polyvinyl chloride (PVC) casing will be placed within the boring. The bottom cap will be flush threaded, and based on previously observed conditions, the screened casing will be 0.010-inch slots. Based upon previous investigations, the groundwater recharge rate at the site is known to be slow. The casing may need to be left in the boring for up to 24 hours for enough water to be present for sampling. Groundwater samples will then be collected from the temporary casing using a disposable polyethylene bailer or a peristaltic pump.

Each groundwater sample will be collected in laboratory supplied EPA Testing Method approved containers, labeled, sealed in individual plastic bags, and placed in a pre-chilled ice chest with ice to remain at 4 degrees Celsius (°C) until they arrive at the lab. Samples will be properly decanted into 40 ml VOAs using bailer attachments to minimize agitation of the sample. Samples collected in VOAs will be checked for headspace. VOA vials will be ordered with hydrochloric acid preservative and amber liters without preservatives. Typically, three VOAs and one amber liter will be collected for each groundwater sample.

3.4 Task 4: Laboratory Analysis – Soil and Groundwater Samples

Once all soil and groundwater samples are collected and appropriately packed, they will be transported, observing formal chain-of-custody (COC) procedures to a State of California-certified testing laboratory. All soil and groundwater samples will be collected and analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Test Method 8015 and because of historical detections of tetrachloroethene

(PCE) the full suite of VOCs by EPA Test Method 8260b. Additionally, the soil samples from boring DP-9 will also be analyzed for TPHd by EPA Test Method 8015B/Fuel Finger Print.

3.5 Task 5: Backfilling of Borings

Once all soil and groundwater samples are collected, each temporary boring will be backfilled with neat cement grout. The backfilling procedures will be witnessed by a representative of the ACHSA as dictated by the permit.

4.0 PROPOSED SOIL GAS INVESTIGATION SCOPE OF WORK

During the previous investigation in November, 2015, PCE was detected in soil gas sample point SG-3, which was located within the former Texaco tank pit (Figure 3). To confirm these results, and at the request of the ACHCSA, Almar proposes to collect one soil gas sample from within the former tank pit. The details of the proposed soil gas investigation are presented in the following sections.

4.1 Task 6: Boring and Construction of Soil Gas Sampling Points

Almar will advance one boring (SG-4) in general accordance with the Department of Toxic Substance Control's (DTSC's) guidelines for Active Soil Gas Investigations. The boring will be advanced with either a direct-push geoprobe rig to approximately 5.5 ft bgs at the locations shown on Figure 4. Almar will then place ¼-inch diameter Teflon tubing attached to a polyethylene vapor implant to 5.0 ft bgs; install a sand pack of #2/12 or #2/16 sand adjacent to the soil-gas implant within the borings from 5.5 to 4.5 feet bgs; place approximately 12-inches of dry granular bentonite above the sand pack, followed by a hydrated bentonite seal to the ground surface. The seal should minimize ambient air from the atmosphere from intruding into the area of the polyethylene probe.

4.2 Task 7: Purging and Sampling of Soil Gas Sampling Points

In general accordance with the DTSC's guidelines for Active Soil Gas Investigations, WTI will sample each of the newly installed soil gas sampling points a minimum of 2 hours after installation. Prior to sampling, Almar will purge the Teflon tubing and the voids within the sand-pack and granular bentonite portions of each soil-gas sampling point of three volumes of air using a 60 ml syringe or a SUMA[®] canister (purge canister) and will collect soil gas samples at a flow rate less than 200 milliliters per minute in either one or six liter laboratory-supplied evacuated sample-collection SUMA[®] canisters. Sampling will be aborted if soil gas flow rates are less than 10 ml/minute, or vacuum exceeds 10-in of mercury. Each soil-gas sampling point will be sampled in a Helium enriched atmosphere. The Helium will provide a quantifiable method (inert tracer) to ensure that representative soil gas samples are collected from each well.

4.3 Task 8: Laboratory Analysis - Soil Gas Sampling Points

The soil gas sample collected from the soil gas sampling point will be analyzed at California State-certified laboratory. Each sample will be analyzed for TPHg and VOCs by EPA Test TO-15, percent oxygen, and helium. The samples will be transported to the contract laboratory under chain-of-custody-record, within a dark ambient temperature container (Suma[®] canister). An electronic deliverable report (EDF) will be requested in addition a PDF copy of the certified laboratory report of the results for the soil gas sample testing work order.

4.4 Task 9: Reporting

A written report documenting both the soil, water, and soil gas sampling work performed will be provided by Almar approximately two (2) weeks following completion of the field work and receipt of the laboratory results. The report will include field sheets, boring logs, laboratory data, etc. The report will contain the appropriate conclusions and recommendations based upon the conditions encountered in the field and the laboratory analytical results. The report will be signed and stamped by a registered professional.

5.0 TIMELINE

The following is an estimated timeline to complete the tasks outlined in Sections 3.0 and 4.0:

Task 1 – Will be completed within two (2) weeks of regulatory approval of this Workplan.

Tasks 2, 3, and 6 – Will take place within two (2) weeks of receipt of the required permit from the ACHCSA (Task 1). Almar expects these tasks to be completed in 2 business days.

Task 4 – Will occur two weeks following completion of Tasks 2 and 3.

Task 5 – Will be completed the same day as Tasks 2 and 3.

Task 7 – Will be completed a minimum of 2 hours after task 6.

Task 8 – Will be completed within one week of completion of task 8.

Task 9 – Will be completed no more than two (2) weeks following receipt of all laboratory analytical data.

6.0 CERTIFICATION AND DISTRIBUTION

To the best of our knowledge, all statements made in this workplan are true and correct. This workplan is based on data provided by the client and others, site conditions observed, samples collected and analytical data. No warranty whatsoever is made that this workplan addresses all contamination found on the site.

Respectfully submitted,



Forrest N. Cook
Owner/Principal Scientist
Almar Environmental
California Professional Geologist #8201 (exp 9/16)

cc:

Mr. Keith Nowell
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keith.nowell@acgov.org

7.0 REFERENCES

Environmental Restoration Services. January 27, 2015. *Underground Tank Technical Closure Report*. 3101 35th Avenue, Oakland, California.

Environmental Restoration Services. May 6, 2015. *Report of Interim Remedial Action*. 3101 35th Avenue, Oakland, California.

Graymer, R.W. 1996. *Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California*. U.S. Geological Survey, Menlo Park, CA.

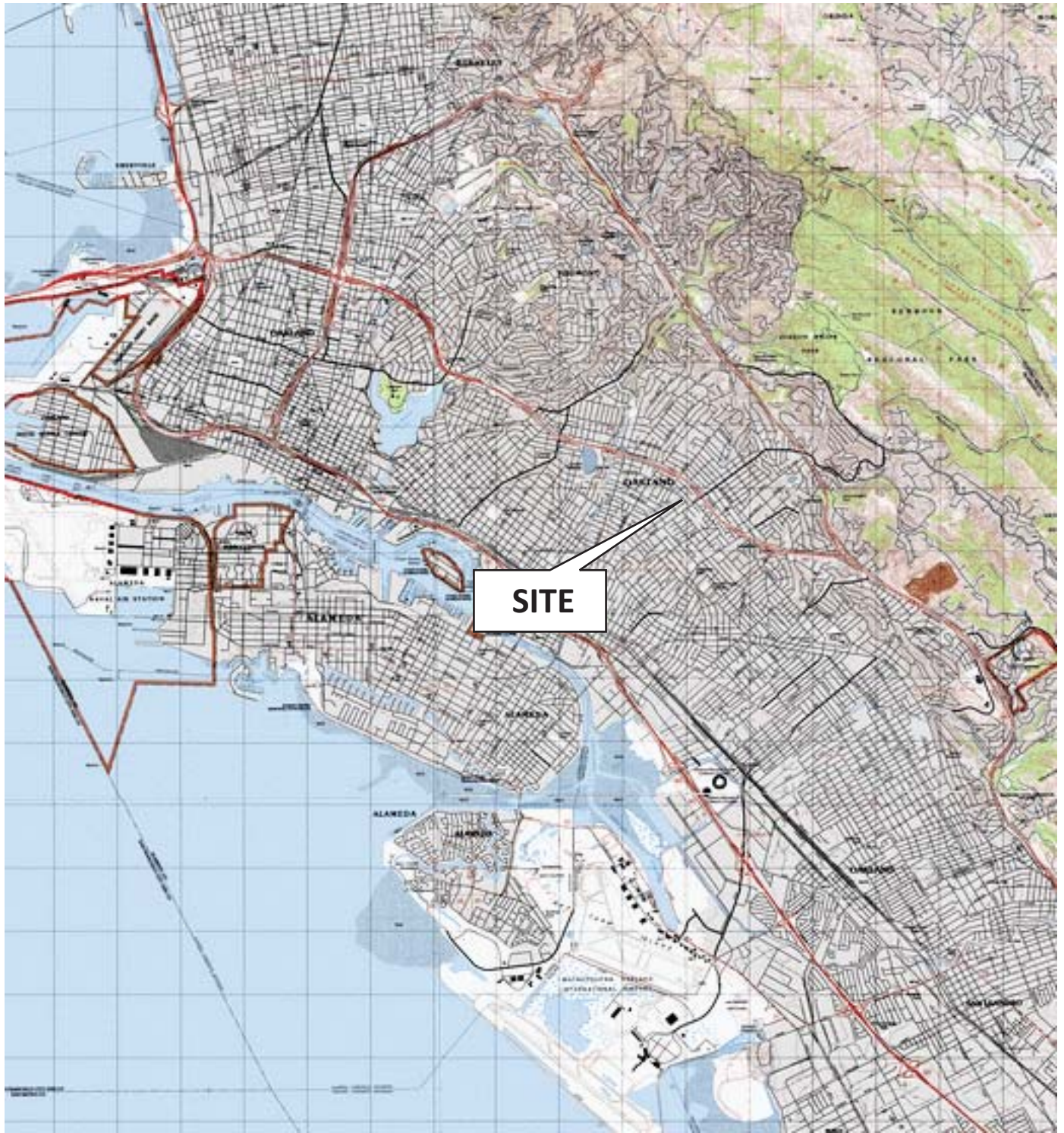
Martin & Associates. January 31, 2005. *Phase I Environmental Site Assessment for 3101 35th Avenue, Oakland, California*.

Piers Environmental Services, Inc. October 2014. *Phase I Environmental Site Assessment for 3101 35th Avenue, Oakland, California*.

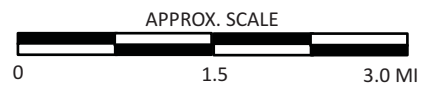
United States Department of the Interior Geologic Survey (USGS). 1954, Revised 1994. Oakland East, California 7.5-Minute Quadrangle.

Weber Hayes & Associates. May 14, 2013. *Quarterly Groundwater Monitoring Report*. Former Exxon Station, 3055 35th Avenue, Oakland, California.

FIGURES



SOURCE: USGS 1:24,000 SCALE SERIES OAKLAND EAST, CA QUAD



3101 35th AVENUE
OAKLAND, CALIFORNIA

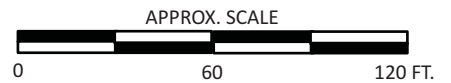
SITE VICINITY TOPO MAP

FIGURE

1



SOURCE: Google Earth, 2015

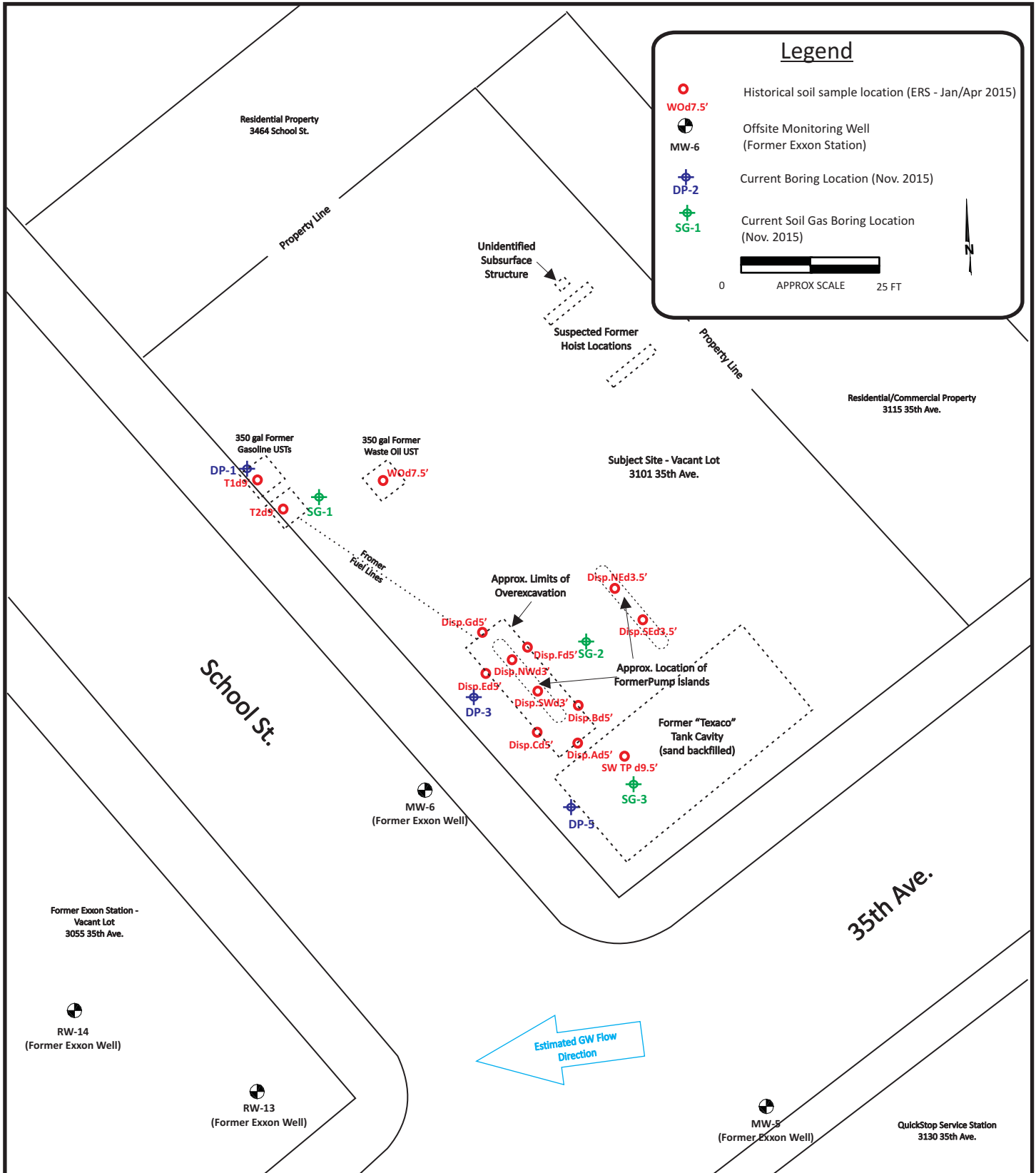


3101 35th AVENUE
OAKLAND, CALIFORNIA

AERIAL PHOTOGRAPH
OF SITE AREA

FIGURE

2

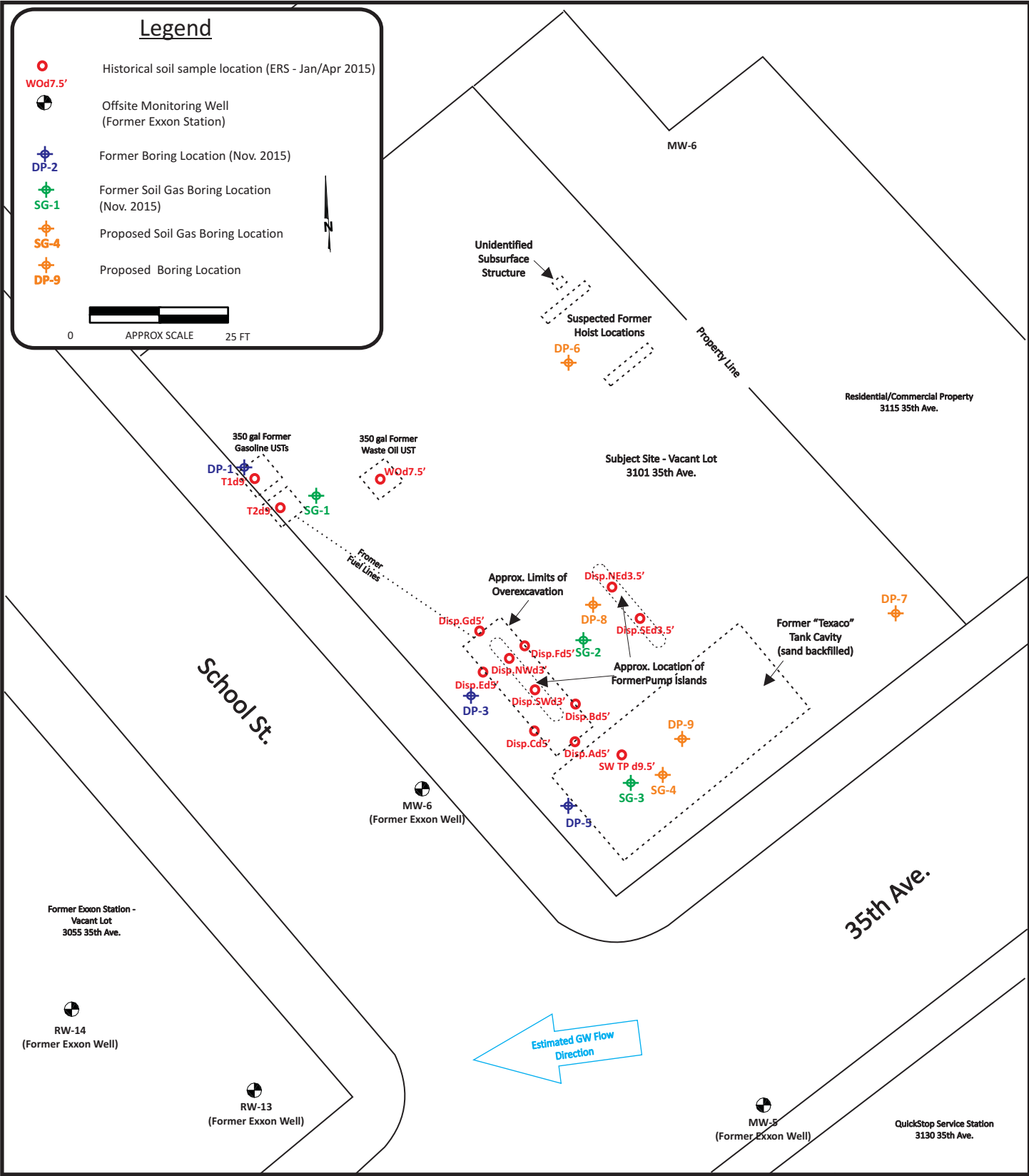


3101 35th AVENUE
OAKLAND, CALIFORNIA

DETAILED SITE MAP SHOWING
HISTORICAL BORING LOCATIONS

FIGURE

3



3101 35th AVENUE
OAKLAND, CALIFORNIA

FIGURE

DETAILED SITE MAP SHOWING
PROPOSED BORING LOCATIONS

4

TABLES

TABLE 1B
SUMMARY OF HISTORICAL PAHs SOIL ANALYTICAL DATA
3101 35th Avenue
Oakland, California

Sample ID	WO d 7.5'	WO SP	LTCP	LTCP	Residential
Sample Depth	7.5 ft bgs	Stockpile	Residential	Residential	Residential
Sample Date	01/27/15	01/27/15	0 to 5 ft bgs	5 to 10 ft bgs	ESL
Units	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Acenaphthene	ND<0.010	ND<0.010	0.063	NA	16
Acenaphthylene	ND<0.010	ND<0.010	0.063	NA	13
Anthracene	ND<0.010	ND<0.010	0.063	NA	28
Benzo[a]anthracene	ND<0.010	ND<0.010	0.063	NA	0.38
Benzo[b]fluoranthene	ND<0.010	ND<0.010	0.063	NA	0.38
Benzo[k]fluoranthene	ND<0.010	ND<0.010	0.063	NA	0.38
Benzo[a]pyrene	ND<0.010	ND<0.010	0.063	NA	0.38
Benzo[g,h,i]perylene	ND<0.010	ND<0.010	0.063	NA	27
Chrysene	ND<0.010	ND<0.010	0.063	NA	3.8
Dibenzo[a,h]anthracene	ND<0.010	ND<0.010	0.063	NA	0.11
Fluoranthene	ND<0.010	ND<0.010	0.063	NA	40
Fluorene	ND<0.010	ND<0.010	0.063	NA	8.9
Indeno[1,2,3-cd]pyrene	ND<0.010	ND<0.010	0.063	NA	0.38
1-Methylnaphthalene	ND<0.010	0.66	0.063	NA	NA
2-Methylnaphthalene	ND<0.010	1.2	0.063	NA	NA
Napthalene	ND<0.010	0.71	9.7	9.7	1.2
Phenanthrene	ND<0.010	ND<0.010	0.063	NA	11
Pyrene	ND<0.010	ND<0.010	0.063	NA	85

Notes:

--- = Parameter not analyzed
 <0.5 / ND = Not present at or above reporting detection limit
 mg/Kg = micrograms per kilogram = parts per million = ppm
 ESLs = RWQCB Environmental Screening Levels shallow soil
 (Table A: Potential source of drinking water)
Bolded Value =detected concentration
Shaded Value = concentration exceeds either ESL or LTCP value

TABLE 1C SUMMARY OF HISTORICAL METALS SOIL ANALYTICAL DATA 3101 35th Avenue Oakland, California							
Sample ID	Sample Depth (ft.)	Sample Date	Cadmium	Chromium	Lead	Nickel	Zinc
			(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
WO d 7.5'	7.5	01/27/15	ND<0.25	46	6.9	100	120
T1 d 9'	9.0	01/27/15	---	---	6.5	---	---
T2 d 9'	9.0	01/27/15	---	---	9.7	---	---
Disp. SW d 3'	3.0	01/27/15	---	---	25	---	---
Disp. NW d 3'	3.0	01/27/15	---	---	35	---	---
Disp. SE d 3.5'	3.5	01/27/15	---	---	13	---	---
Disp. NE d 3'	3.0	01/27/15	---	---	8.3	---	---
SW TP d 9.5'	9.5	01/27/15	---	---	18	---	---
Dispenser SP	stopckpile	01/27/15	---	---	170	---	---
Main TP SP	Stockpile	01/27/15	---	---	43	---	---
WO SP	Stockpile	01/27/15	0.32	52	65	80	160
ESL Residential			12	1,000	80	150	600
LTCP Residential (0' to 5')			---	---	---	---	---
LTCP Residential (5' to 10')			---	---	---	---	---
Notes: 1/27/15 samples collected by ERS --- = Parameter not analyzed <0.5 / ND = Not present at or above reporting detection limit mg/Kg = micrograms per kilogram = parts per million = ppm ESLs = RWQCB Environmental Screening Levels shallow soil (Table A: Potential source of drinking water) LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil that will have no significant risk of adversely affecting human health							

TABLE 2 SUMMARY OF CURRENT SOIL ANALYTICAL DATA 3101 35th Avenue Oakland, California										
Sample ID	Sample	Sample Date	TPHg (mg/Kg)	B (mg/Kg)	T (mg/Kg)	E (mg/Kg)	X (mg/Kg)	MtBE (mg/Kg)	Naphth. (mg/Kg)	TBA (mg/Kg)
	Depth (ft.)									
DP-1d5.0	5	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-1d10.0	10.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-1d15.0	15.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d10.0	10.0	11/02/15	12	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d20.0	20.0	11/02/15	0.73	0.0023	0.013	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d30.0	30.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d10.0	10.0	11/02/15	6.1	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d15.0	15.0	11/02/15	0.30	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d20.0	20.0	11/02/15	18	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d30.0	30.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
SG-1d5.0	5.0	11/02/15	0.065	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
SG-2d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
SG-3d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
ESL Residential			100	0.044	2.9	3.3	2.3	0.023	1.2	varies
LTCP Residential (0' to 5')			---	1.9	---	21.0	---	---	9.7	varies
LTCP Residential (5' to 10')			---	2.8	---	32.0	---	---	9.7	varies
Notes:										
--- = Parameter not analyzed										
<0.5 / ND = Not present at or above reporting detection limit										
mg/Kg = micrograms per kilogram = parts per million = ppm										
ESLs = RWQCB Environmental Screening Levels shallow soil (Table A: Potential source of drinking water)										
LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil that will have no significant risk of adversely affecting human health										
TPHg = Total Petroleum Hydrocarbons as gasoline										
B = Benzene										
T = Toluene										
E = Ethylbenzene										
X = Total Xylenes										
MtBE = Methyl-t-butyl ether										
TBA = t-Butyl alcohol										
Naphth. = Naphthalene										

TABLE 3 SUMMARY OF CURRENT GROUNDWATER ANALYTICAL DATA 3101 35th Avenue Oakland, California									
Sample ID	Sample Date	TPHg	B	T	E	X	MtBE	Naphth.	TBA
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
DP-1	11/03/15	ND<50	ND<0.50	0.11	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<10
DP-3	11/03/15	1,000	19	1.1	34	5.1	ND<0.50	7.2	ND<10
DP-5	11/03/15	3,700	2.2	1.5	1.4	5.5	ND<0.50	2.6	ND<10
ESL Residential		100	1.0	40.0	30.0	20.0	5.0	6.2	12
Notes: Samples DP-1 thru DP-3 collected as "grab" groundwater samples --- = Parameter not analyzed <0.5 / ND = Not present at or above reporting detection limit ug/L = micrograms per Liter = parts per billion = ppb ESLs = RWQCB Environmental Screening Levels shallow soil (Table A: Potential source of drinking water) LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil that will have no significant risk of adversely affecting human health TPHg = Total Petroleum Hydrocarbons as gasoline TPHd = Total Petroleum Hydrocarbons as diesel B = Benzene Naphth. = Naphthalene T = Toluene MtBE = Methyl-t-butyl ether E = Ethylbenzene X = Total Xylenes Bolded Value =detected concentration Shaded Value = concentration exceeds either ESL or LTCP value									

TABLE 4
SUMMARY OF CURRENT SOIL GAS ANALYTICAL DATA
3101 35th Ave.
Oakland, California

SAMPLE ID	Sample Depth (ft.)	Sample Date	Oxygen (O ₂)	Helium	TPHg (C6-C12)	Tetrahydrofuran	Carbon Disulfide	n-Hexane	Chloroform	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Isopropanol	PCE	Naphthalene	Other VOCs
			Mol%	Mol%	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
SG-1	5.0	11/09/15	2.6	ND<0.47	460	80	47	ND<2.3	16	10	28	ND<2.3	ND<2.3	ND<2.3	ND<2.3	ND<2.3	<MDL
SG-2	5.0	11/09/15	4.1	ND<0.45	96,000	190	140	70	ND<14	61	91	ND<14	74	ND<14	ND<14	ND<14	<MDL ¹
SG-3	5.0	11/09/15	15	ND<0.19	210	22	12	ND<0.97	ND<0.97	3.3	7.8	ND<0.97	ND<0.97	ND<0.97	160	ND<3.9	<MDL
Residential ESL			NA	NA	150,000	NA	NA	NA	2,300	42	160,000	490	52,000	NA	210	36	Varies
Residential CHHSL			NA	NA	NA	NA	NA	NA	NA	85	320,000	1,100	NA	NA	470	93	Varies
LTCP w/Bioattenuation			NA	NA	NA	NA	NA	NA	NA	85,000	NA	1,000,000	NA	NA	NA	93,000	Varies
LTCP w/o Bioattenuation			NA	NA	NA	NA	NA	NA	NA	85	NA	1,100	NA	NA	NA	93	Varies

Notes:

--- = Parameter not Sampled

NA = Not analyzed or Not established

<0.5 / ND = Not present at or above reporting detection limit

ug/m3 = micrograms per cubic meter = ppmv

ESLs = RWQCB established environmental screening levels, May 2013

CHHSL = California Human Health Screening Level - January 2005

LTCP = Low Threat Closure Policy (Appendix 4 - Scenerio 4)

<MDL¹ = 1,2,4-Trimethylbenzene at 73 ug/m3

Bold = detected concentration

Shaded Value = concentration exceeds either ESL or LTCP value

APPENDIX A

Directive Letters

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
REBECCA GEBHART, Acting Director



ENVIRONMENTAL HEALTH SERVICES

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

March 15, 2016

Mr. Patrick Kong &
Ms. Mona Hsieh
Green Oak Builders
888 Brannan Street, #101
San Francisco, CA 94103
(Sent via E-mail to patrickykong@gmail.com)
(Sent via E-mail to mona.hsieh@yahoo.com)

Subject: Request for Work Plan, Fuel Leak Case No. RO0003164 and GeoTracker Global ID T10000006539, Green Oak Builders, 3101 35th Avenue, Oakland, CA 94619

Dear Mr. Kong and Ms. Hsieh:

Thank you for attending the meeting today regarding the subject fuel leak case. Prior to the meeting, Alameda County Environmental Health (ACEH) reviewed the case file, including the documents provided as an attachment to an electronic mail dated January 31, 2016. The documents, *Updated Maps with Development Overlay* and *Cross Sections*, were requested by ACEH during the meeting for the subject case held on January 8, 2016.

Discussion topics at the meeting included the completeness of the site characterization as it applies with the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP).

As discussed, further work is required to assess the extent of contamination within and beneath the former underground storage tank (UST) pit along 35th Avenue. Also, areas of the site have not been adequately characterized. These areas were addressed in the work plan ACEH approved on October 2, 2015. Only a portion of the approved work plan was implemented. Please ensure that the case is characterized in light of the requirements contained in the LTCP. At present the case fails General Criteria f and Media-Specific Criteria for Groundwater. The decision was made at the meeting not to immediately address the contaminant plume length until receipt of additional site information.

Based on the review of the case file and our meeting, ACEH requests that you address the following technical comments and send us the documents requested below.

TECHNICAL COMMENTS

1. **Work Plan** – Please prepare a work plan to address the technical comments above. Please incorporate the elements of the previous ACEH-approved work plan that have not been implemented as well as advancing a soil bore near the center of the tank pit that is located along 35th Avenue. ACEH requests the collection of pit backfill soil samples and at least one native soil sample recovered from beneath the base of the UST pit.

Additionally, ACEH requests the collection of a soil gas sample from the vicinity of the previous SG-3 location in order to determine if the tetrachloroethene (PCE) detected at SG-3 is a

spurious concentration or if the distribution of PCE requires further delineation. As requested in the ACEH Staff Letter dated August 19, 2015, please recover a soil sample for analysis at the base of the soil gas bore.

2. **Analysis Scope** – ACEH requests the scope of analysis for the soil samples collected from- and beneath the UST pit, as well as the soil-gas bore soil sample, include total petroleum hydrocarbons (TPH) as gasoline (TPHg), TPH as diesel (TPHd), and a full-scan for volatile organic compounds (VOCs), which will include benzene, toluene, ethylbenzene, and xylenes (collectively BTEX), methyl tertiary butyl ether (MTBE), naphthalene, and PCE.
3. **Bore Logs** – ACEH noted the bore logs submitted with the December 4, 2015 investigation report did not include photoionization detector (PID) readings. If the readings are available, please incorporate them into the GEO_BORE upload requested below. Please include PID readings on all future soil bore logs.
4. **GeoTracker Compliance** – A review of the SWRCB GeoTracker website indicates the soil bore logs (GEO_BORES) have not been uploaded to GeoTracker. Because this is a state requirement, ACEH requests submittal of the GEO_BORES.
5. **Site Development Plans** – At the meeting held on January 8, 2016, ACEH requested a copy of the site development plans in electronic format. Though it appears the electronic copy of the plans were provided to ACEH, the case file review did not reveal the plans. Therefore, ACEH requests resubmittal of the site development plans to the County's ftp website.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Keith Nowell) in accordance with the following specified file naming convention and schedule:

- **March 25, 2016** – Electronic Submittal of Information – GEO_BORE submittal to GeoTracker.
- **March 25, 2016** – Electronic Submittal of Information – Site Development Plans to the ACEH ftp website (file to be named: RO0003164_DEV_PLAN_yyyy-mm-dd).
- **March 28, 2016** – Work Plan for a Soil, Groundwater, and Soil-Gas Investigation (file to be named: RO0003164_WP_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.

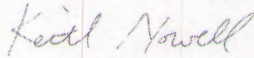
Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>.

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence

Green Oak Builders
RO0003164
March 15, 2016, Page 3

or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org

Sincerely,



Digitally signed by Keith Nowell
DN: cn=Keith Nowell, o, ou,
email=keith.nowell@acgov.org,
c=US
Date: 2016.03.15 15:37:21 -0700'

Keith Nowell, PG, CHG
Hazardous Materials Specialist

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

cc: Forrest Cook, Almar Environmental, 407 Almar Avenue, Santa Cruz, CA 95060
(Sent via E-mail to cook.forrest@gmail.com)

Dilan Roe, ACEH (Sent via E-mail to: dilan.roe@acgov.org)
Keith Nowell, ACEH (Sent via E-mail to keith.nowell@acgov.org)
GeoTracker/ File

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.

APPENDIX B

Client Transmittal Letter

March 24, 2016

Mr. Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Ste. 250
Alameda, CA 94502-6577
keith.nowell@acgov.org

Subject: **Soil, Groundwater, and Soil Gas Workplan**
3101 35th Avenue, Oakland, CA
Fuel Leak Case No. RO0003164; Global ID T10000006539

Dear Mr. Nowell,

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached *Soil, Groundwater, and Soil Gas Workplan* are true and correct to the best of my knowledge.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mona Hsieh', with a long, sweeping horizontal stroke extending to the right.

Ms. Mona Hsieh
Responsible Party Representative