April 22, 2014

Ms. Karel Detterman
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 9502-6577

Subject: Soil and Groundwater Investigation Workplan
RO3132, Site Cleanup Program Case
Franklin Home Heating, 1428-1432 Franklin St Oakland, CA

Dear Ms. Detterman:

This enclosed report has been prepared by LRM Consulting, Inc. on behalf of Brian Mitchell of Northstar Equities, Inc. 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. If you have any questions, please contact Mr. Mehrdad Javaherian of LRM at 415-706-8935.

Sincerely,

Brian Mitchell
Northstar Equities, Inc.

LRM
consulting inc.

April 21, 2014

Ms. Karel Dettermen, P.G.
Alameda County Health Care Services Agency (County)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Soil and Groundwater Investigation Workplan
Former Heating Oil Underground Storage Tanks
1428-1432 Franklin Street
Oakland, CA
(RO # 03132)

Dear Ms. Dettermen:

LRM Consulting, Inc. (LRM) is pleased to present this brief letter workplan for a focused soil and grab groundwater investigation targeting the residual levels of petroleum hydrocarbons reportedly detected beneath the two former heating oil underground storage tanks (USTs) removed in 2004 (see Figure 1). By way of background, two adjacent 300-gallon heating oil USTs were reportedly removed on January 15, 2013 from the 1430 Franklin Street property (AEI, 2011). Two soil samples were collected at the bottom of the tank pit excavation corresponding to a depth of 8 feet below ground surface (bgs). The two samples reportedly yielded maximum total petroleum hydrocarbon (TPH) as diesel (TPH-d) and gasoline (TPH-g) concentrations approximating 3,800 mg/kg and 1,700 mg/kg, respectively. Groundwater was reportedly observed at this depth, but not sampled, and a composited soil sample from the stockpiled soils associated with the excavation did not yield any hydrocarbon detections.

Given the use of the USTs for storage of heating oil (which is typically characterized with low toxicity and mobility), the likely age of the USTs (use of heating oils likely dates back more than 40 years), and given that the hydrocarbon detections in soils beneath the USTs occurred a decade ago, this investigation seeks to determine the current extent of any hydrocarbon impacts in soil and groundwater beneath the former USTs, and based on those results, set forth recommendations for site closure in concert with the State Water Resource Control Board's low threat UST case closure policy, and/or other relevant actions.

**Soil and Grab Groundwater Sampling Rationale and Procedures**

Figure 1 depicts the proposed location of four proposed soil boring locations, including three within the footprint of the former UST excavation pit, and one upgradient sample locations. The three boring locations proposed within the footprint of the UST excavation pit will be advanced to a maximum depth of no more than 15 feet bgs, unless groundwater is encountered at a shallower depth, in which case it will be sampled (i.e, first encountered groundwater will be sampled if encountered within the 15-foot investigation profile). In each of these boring locations, unsaturated soil samples will be collected at 5-foot intervals starting at 5 feet bgs, unless field observations of stained soils or odors, and/or elevated photoionization detector (PID) readings suggest the need for sampling at other depths. If groundwater is encountered at the proposed investigation depth, a grab groundwater sample will be collected at two of the three boring locations within the footprint of the former UST excavation pit (see Figure 1).

At the proposed upgradient boring location, the boring will be advanced to a maximum depth of 15 feet bgs. If groundwater is encountered within this vertical profile, a grab groundwater sample will be collected, reflecting upgradient groundwater quality flowing toward the former USTs. If groundwater is encountered beneath the site, this sample will help distinguish between potential hydrocarbon impacts associated with the two subject USTs and those which may exist upgradient of the former USTs. No soil samples will be collected at the upgradient boring location. All soil and grab groundwater samples will be submitted to McCampbell Analytical, a National Environmental Laboratory Accreditation (NELAC) certified laboratory, and analyzed for TPH-g (Environmental Protection Agency [EPA] Method 8260 B), TPH-D (EPA Method 8015), and for volatile organic compounds (including benzene, toluene, ethylbenzene, and naphthalene) using EPA Method 8260B.

The soil borings will be permitted by the Alameda County Department of Public Works and advanced by Vironex, Inc. of Concord, California, a State Licensed Driller. A direct-push Geoprobe drill rig will be used to advance the borings, which will be continuously cored and logged by LRM's professional geologist. Procedures for soil and grab groundwater sampling are included as Attachment A to this letter and are consistent with those previously approved by the County at other active sites on which LRM and its parent company, Endpoint Consulting, Inc., serve as the consultant of record.

**Schedule**

As previously indicated via email discussions, the schedule for this investigation is of critical concern to the responsible party, with significant funds held in an escrow account in support of environmental actions at this site. To this end, LRM will initiate permitting for this work during the forthcoming week and will seek to implement the investigation during the week of May 19th, 2014.

**Closing**

LRM greatly appreciates your assistance with this project, including any input you may have on this workplan prior to planned investigation on during the week of May 19th, 2014. If you have any questions, please contact Mehrdad Javaherian at 415-706-8935, or at mehrdad@endpoint-inc.com.

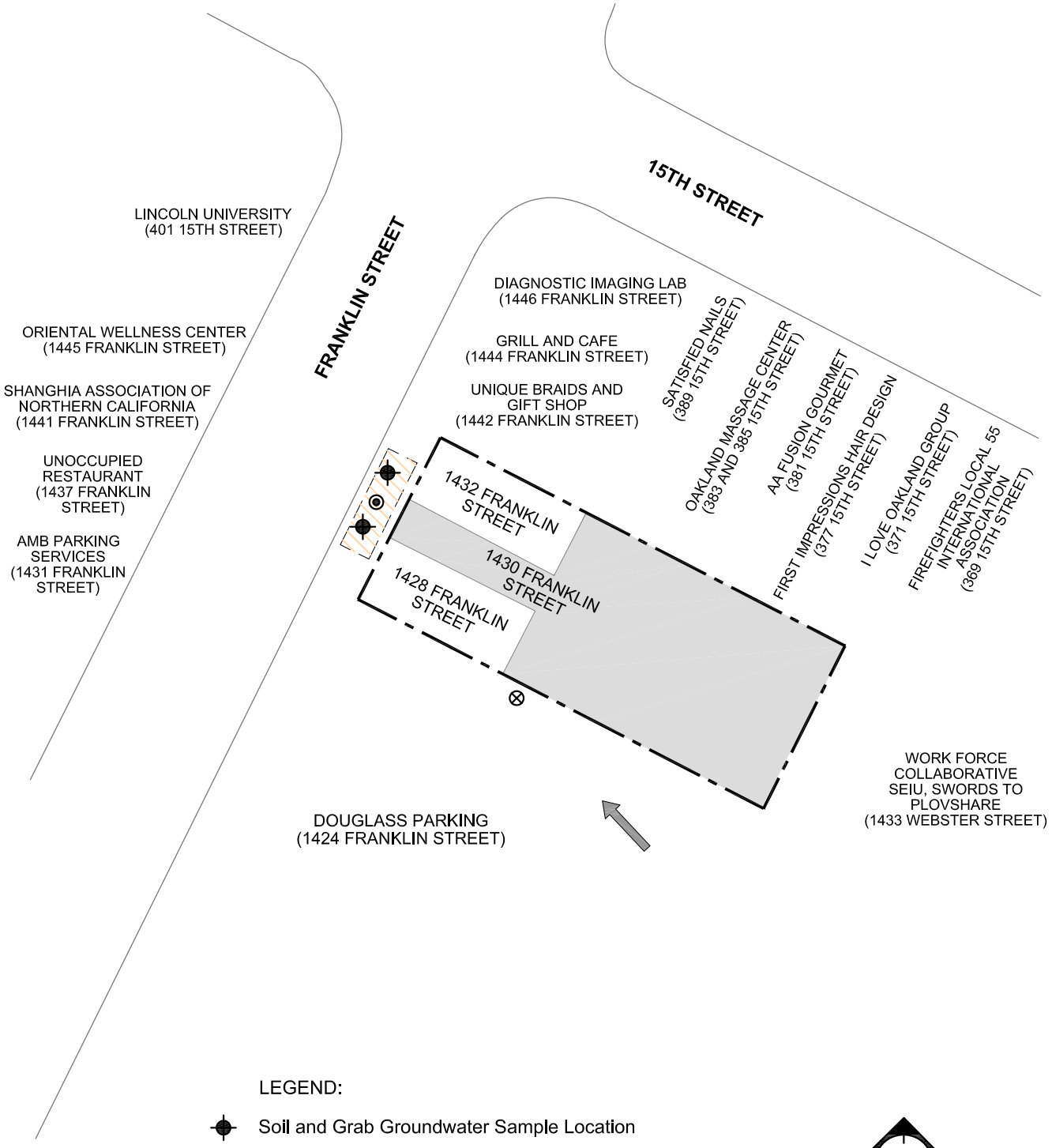
Sincerely,
**LRM Consulting, Inc.**

Mehrdad Javaherian, Ph.D., MPH, PE, LEED®GA
Principal


Attachments:

Figure 1 – Site Plan and Proposed Sample Locations

Attachment A –Soil and Grab Groundwater Sampling Procedures




Base Map: "Site Plan and Sample Location, Figure 2 by Enercon, undated.

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**SITE PLAN WITH SAMPLE LOCATIONS**
CALIFORNIA RURAL LEGAL ASSISTANCE, INC.
1428, 1430, & 1432 FRANLKIN STREET
OAKLAND, CALIFORNIA
APRIL 20, 2014

FIGURE:
**1**

LRM consulting inc.

# ATTACHMENT A

## SOIL AND GRAB GROUNWATR SAMPLING PROCEDURES

The following summarizes soil and grab groundwater sampling procedures to be implemented at the site, which will be implemented following permitting with the Alameda County Department of Public Works, notification of USA North Dig Alert, and an independent utility clearance.

### Soil Sampling and Sampling Handling Procedures

A vehicle-mounted, hydraulically-powered soil probing machine (Geoprobe) that utilizes static force and percussion to advance small diameter sampling tools into the subsurface will be used to collect soil samples. Upon reaching the desired depth, the bottom plug is released and driving action forces relatively undisturbed soil into the lined sampler barrel. Following the driving operation, the sampler is retrieved from the boring and the sample liner removed. A portion of the soil sample liner is selected and placed in an 8-ounce jar.

To avoid cross-contamination between samples and boreholes, the sampler is cleaned before each use. The sampling equipment is washed with an aqueous solution of Alconox, rinsed with potable water and then distilled water, and allowed to air dry. Push rods are steam cleaned or washed between borings to reduce potential cross-contamination. Each soil sample interval is monitored in the field for possible total volatiles by use of a portable hydrocarbon field analyzer. A portion of the sample interval adjacent to the retained sample is placed in a sealable air-tight plastic bag. After the bag has been sealed for a minimum of five minutes, the sample is measured and the meter readings recorded. The field analyzer is a battery-powered instrument which detects and indicates concentrations of total volatiles (gas or vapor) in the air in the parts per million range. Samples under test are drawn continuously by means of a built-in pump and analyzed. The instrument will respond to numerous hydrocarbons including petroleum products. Results of the analysis are reported in parts per million and are used only as a qualitative field measure of potential soil contamination. The photo ionization meter (PID) that will be used is a RAI systems MiniRAI Plus Professional PID with a 10.6eVlamp.

A portion of each recovered soil sample will be examined by a geologist. The geologist will observe the soil and record the soil characteristics visually observed. The soil description will be based on the Unified Soil Classification System. Individual descriptions of each soil sample will be recorded in boring logs.

All soil borings will be grouted under the inspection requirements of the drilling permit, and the ground surface will be restored to pre-existing conditions.

### Grab Groundwater Sampling Procedures

A vehicle-mounted, hydraulically-powered soil probing machine that utilizes static force and percussion to advance small diameter sampling tools in to the subsurface will be used to collect a water sample. Once the desired sampling interval is reached, the tool string will be lifted to expose the sampling screen or a temporary well screen installed. The water sample will then be collected as soon as possible.

A peristaltic pump will be used to purge the sample interval and a bailer or tubing with a check valve will be used to collect the water sample. Water samples will be filtered prior to analyses for metals. Water samples will be placed in appropriate containers with appropriate preservative. Sample containers will be filled to the top, capped, and sealed.

Equipment Decontamination Procedures

To avoid cross-contamination between samples and boreholes, the sampler is cleaned before each use. The sampling equipment is washed with an aqueous solution of Alconox, rinsed with potable water and then distilled water, and allowed to air dry. Push rods are also cleaned or washed between borings to reduce potential cross-contamination.

New clean tubing will be used to purge each sampling location and discarded when purging is complete. A new disposable bailer will be used to collect each sample. Proper protective gloves will be worn while collecting samples.

**Sample Preservation, Identification, and Custody Control**

Sample Preservation - All soil and grab groundwater samples will be sealed in air-tight plastic bags and placed in a refrigerated chest for preservation immediately after characterization and preparation.

Sample Identification - The field geologist will identify all samples taken in the field by using a pre-printed sample label attached to the sample container. The sample label will include the following information:

- project name and number;
- unique sample identification number;
- date and time of sample collection;
- initials of the sampler.

Chain-of-Custody Record and Shipment of Samples to the Laboratory - All samples will be documented using standard chain-of-custody procedure, packed in a refrigerated chest, and delivered to a state-certified laboratory for testing.