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Alameda County
Environmental Health

Project No.
6863.000.000

October 27, 2008
Revised August 10, 2009

Mr. Doug Durein
Ken Betts, Incorporated
770 Wesley Way
Oakland, CA 94610-2312

Subject: Chevron Service Station No. 9-2142
4150 Redwood Road
Oakland, California

**PROPOSED WORK PLAN TO EVALUATE SUBSURFACE
CONDITIONS**

- References:
1. Alameda County Environmental Health Services, GeoTracker Status for the Leaking Underground Storage Tank, Fuel Leak Case RO0000502, Chevron Service Station #9-2142, 4150 Redwood Road, Oakland, CA 95619; July 3, 2008.
 2. Touchstone Developments, Product Piping Removal Soil Sampling Report, Chevron Services Station No. 9-2142, 4150 Redwood Road, Oakland, California; May 28, 1997.

Dear Mr. Durein:

We are pleased to provide this work plan to evaluate the subsurface soil and groundwater conditions at the Chevron Service Station at 4150 Redwood Road in Oakland, California. The purpose of the plan is to respond to the request from Alameda County for additional soil and groundwater information at the subject property, in order to remove the property from their list of leaking underground storage tank sites.

At the time of the dispenser and piping removal operations at the service station in 1997, a sheen was reportedly observed on groundwater encountered in the excavation under the gasoline dispensers (Reference 2). Approximately 40 cubic yards of soil was removed from the site at the time of the dispenser clean up operations. Groundwater was encountered at a depth of about 7 to 7.5 feet below the ground surface at the time the dispensers, piping and excavated soil was removed from the site.

There is no record of additional follow up studies at the site after 1997 to determine if the site soil and groundwater was further impacted by the release. Consequently, Alameda County does not have sufficient information needed to determine if the property can be removed from their database as a contaminated property. Alameda County Health Care Services (ACHCS) has requested a work plan showing how the site soil and groundwater will be investigated to assess the site conditions related to the past leak.

We propose to evaluate the site conditions by advancing GeoProbes to collect soil and groundwater samples for laboratory testing to verify if there are any subsurface impacts from the past release. After a site visit and review of aerial photographs, we prepared a site plan, Figure 1 showing the approximate locations for the planned GeoProbes.

The field work would include the use of direct push technology (*Geoprobos*). An F-550 Geoprobe rig will be used to advance the exploratory probes to depths ranging from 15 to 20 feet below the ground surface. The purpose is to determine if the groundwater at the site has possibly been impacted by the past release of petroleum hydrocarbons. GeoProbes will be placed upslope of the current pump island and within the approximate location of the former underground tank, with a third location down gradient of the tank location. The testing of the upslope area should provide your office with background information regarding the groundwater entering the site. The test results of the downslope samples could show if the groundwater has been impacted by the service station use.

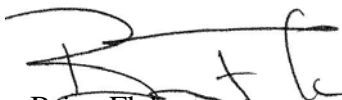
Continuous soil samples will be collected and cut from the cores of PVC tubes generated by the *Geoprobe*. At this time, we estimate one soil and one groundwater sample will be recovered from each probe location for submittal to the testing laboratory. The samples would be capped with Teflon sheeting and plastic caps, labeled, and placed in an ice-chilled cooler. Selected soil samples will then be submitted to a California-certified laboratory under chain of custody protocol and documentation. The samples would be analyzed for gasoline, BTEX and MTBE since these constituents are the same as reported in the referenced Touchstone report.

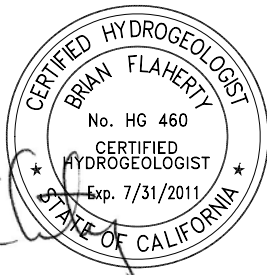
After review of the laboratory test results, we will prepare a report documenting our findings for submittal to the ACHCS. A request for site closure by the regulatory agencies will be made, provided the findings show no significant impacts to the site soil or groundwater.

We look forward to working with your office on this project. If you have any questions regarding our proposed work scope, please contact us.

Very truly yours,

ENGEO Incorporated


Brian Flaherty
bf/sm/cjn




Shawn Munger



Attachment: Figure 1 – Site Plan

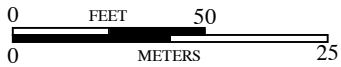
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EXPLANATION



APPROXIMATE LOCATION OF PROPOSED GEO PROBE



BASE MAP SOURCE: USGS TERRASERVER



PROPOSED GEOPROBE LOCATION PLAN
REDWOOD CHEVRON
OAKLAND, CALIFORNIA

PROJECT NO.: 6863.000.000

DATE: AUGUST 2009

DRAWN BY: SRP

CHECKED BY: BF

FIGURE NO.

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