INSIGHT
Environmental Engineering and Construction, Inc.
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7 September 2007

Mr. Barney Chan
Alameda County Environmental Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Expedited Site Assessment Work Plan Addendum**
Shore Acres Gas, 403 E 12th Street, Oakland, California
Fuel Case RO0002931 and Global ID #T0600174667

Dear Mr. Chan:

Insight Environmental, Engineering, and Construction, Inc. (Insight) is pleased to submit one copy of the work plan addendum for your review. This work plan addendum was prepared in response to the Alameda County Environmental Services letter dated 10 August 2007. The letter requested that Insight address four technical comments regarding our work plan dated 25 May 2007. Insight will address each technical comment separately.

Comment 1. Estimated Site Gradient-Based upon your consultant's record search, no wells were located within a ¼ mile radius of the site. Therefore, no current sites exist with monitoring wells to estimate groundwater depth or gradient. Insight states from GeoTracker, the inferred gradient is easterly, however, we believe that it is not likely in that direction. The gradient at a closed site at 45 E. 14th (International Boulevard) was reported as northwest and depth to water was from 8-13 feet below ground surface (bgs). If we look at the nearest water bodies from the site, Lake Merritt Channel, Lake Merritt and the Oakland Inner Harbor, it appears that the gradient should be northwest, west or southwest, but not easterly as inferred. In addition, although the initial Geofon borings did not encounter groundwater at a depth of 20 feet bgs, this appears to be deeper than would be expected.

Response 1. Insight concurs with this comment and the attached figure has been revised. Insight based the previous easterly flow direction on a GeoTracker site approximately ¼ mile to the east.

Comment 2. Proposed Soil and Groundwater Investigation-As noted, nine temporary ¾ inch wells with a 5 foot screen interval are proposed to be installed to a depth of 5 feet below first encountered water. After gradient is determined, four conventional wells are proposed, one of which will be designated as a "deep" well. It is unclear how the "deep" well will differ from the other three as it will be screened 5' below the established groundwater, seemingly similar to the

other wells. This "deep" well is an attempt to determine the vertical of contamination. We do not concur and request the following comments be incorporated into an amended work plan.

Response 2. Concur. Insight has deleted the "deep" well and revised the approach to a two-phase approach using direct push technology (DPT) to determine well locations.

Comment 2A. The borings should be placed and sampled to determine the lateral and vertical extent of contamination. Assuming a generally westerly gradient (possibly northwest or southwest), the borings should be placed in a transect down-gradient and perpendicular to the source(s). The potential sources at this site are the USTs and the pump islands. Attached please find a site plan with boring locations noted in this type of array.

Response 2A. Concur. The DPT borings have been relocated as shown on the attached figure based on the data provided by the County of Alameda.

Comment 2B. The use of ¾-inch wells for groundwater sampling and gradient determination appears excessive in an initial site characterization. Because gradient may be variable, it may be risky to determine gradient based using this type of method. Alternatively, we recommend sampling soil and groundwater from these borings and using a combination of contaminant contours and professional judgment to determine permanent well locations. We concur with sampling and screening soils every 5 feet, at changes in lithology, at locations of obvious contamination, at the capillary fringe and as deep as necessary to determine the vertical extent of contamination, including sampling saturated soils, until a clean sample is obtained. Please do no limit your soil samples to two per each borehole, rather base it upon the actual borehole conditions. In the event that multiple water bearing zones are encountered, you should attempt to sample each zone. Base upon your results, permanent well locations should be proposed in your report. If a mobile lab would allow this work to be done faster and therefore be cost effective, it should be considered as proposed.

Response 2B. Concur. Insight has removed the ¾-inch temporary wells and will not limit the soil sample collection to two per borehole but rather base the number of samples collected from each borehole upon the photoionization meter detections and lithologic conditions. Additionally, if multiple water bearing zones are encountered, Insight personnel will collect grab water samples from each zone and submit the samples to the laboratory for analysis. Insight will propose locations selected for permanent groundwater monitoring wells based on the soil and groundwater laboratory analytical results.

Insight initially proposed a mobile laboratory to be onsite to expedite the soil and groundwater results. After discussions with Mr. Chan, it was determined to use a fixed laboratory, which is less costly and will allow Insight personnel adequate time to evaluate the results prior to placement of the permanent groundwater monitoring wells.

Comment 3. Utilities As Preferential Pathways-Insight states that though they were unable to verify depths of utilities in the nearby streets it is reasonable to assume that utility trenches provide preferential pathways for contaminant migration. This conclusion is best made after this investigation is performed, since that type of statement may infer that further investigation along utilities will be required.

Comment 4. Maximum Laboratory Reporting Limits-These limits are presented in Table 1 of this work plan and deserve agency comment. The maximum laboratory reporting limit is a function of the laboratory instrumentation and the quality and concentration of the sample ie dirty samples or highly contaminated samples will have higher reporting limits. These limits should not be PRGs or any other health based cleanup level as indicated in this table.

Response 4. Concur. The table has been revised to show preliminary remediation goals for soil and groundwater.

If you have any questions or comments regarding this report, please do not hesitate to call either of us at (916) 923-3335.

Sincerely,
Insight, Inc.

Dennis M. Jones
Project Manager

Dave Marks, P.G.
Program Manager

REGISTERED GEOLOGIST
DAVID SCOTT
MARKS
exp 03/31/08
NO. 5472
STATE OF CALIFORNIA

Attachments:
Table 1 – Preliminary Clean-up Goals for Soil and Groundwater
Figure 4 – Proposed Borehole Locations

cc: Mr. Rashid Suhail Ghafoor (Owner), 301 Anchor Drive, Bay Point, CA 94565

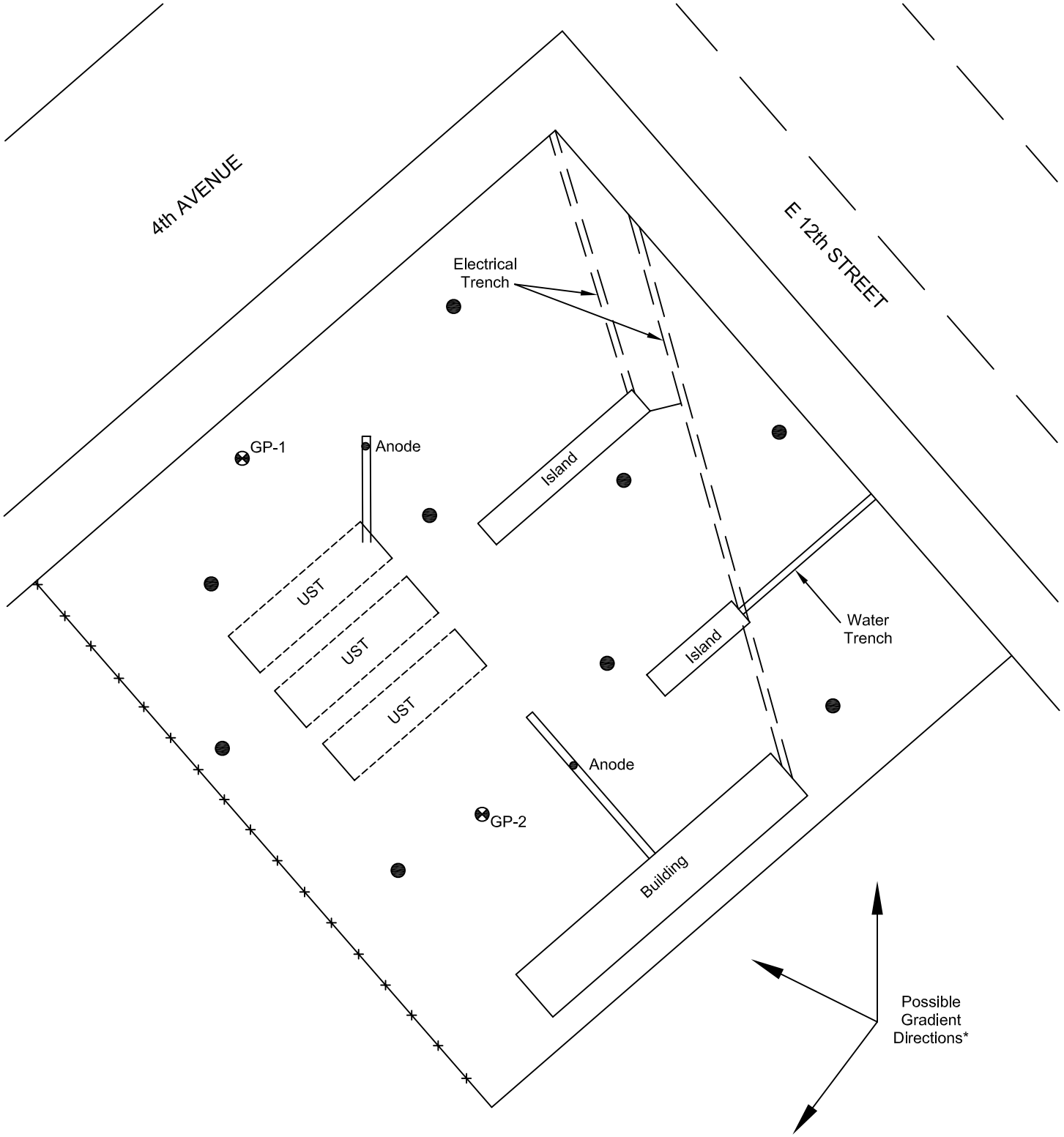
Table 1. Preliminary Clean-up Goals for Soil and Groundwater

Parameter	Soil [1] (mg/kg)	Groundwater [2] (µg/L)
TPH-g	NE	NE
TPH-d	NE	NE
Benzene	0.64	0.35
Toluene	520	720
Ethylbenzene	400	1,300
Xylenes	270	210
MTBE	32	11
DIPE	NE	NE
TAME	NE	NE
ETBE	NE	NE
TBA	NE	NE

[1] Soil reporting limits are based on EPA Region IX residential soil preliminary remediation goals (PRGs).

[2] Groundwater reporting limits are based on EPA Region IX tap water PRGs.

mg/kg – milligram per kilogram
µg/L – microgram per liter
NE - Not Established (no PRG available)
TPH-g – total petroleum hydrocarbons as gasoline
TPH-d - total petroleum hydrocarbons as diesel
MTBE - methyl tertiary butyl ether
DIPE - di-isopropyl ether
ETBE - ethyl tertiary butyl ether
TAME - tertiary-amyl methyl ether
TBA - tertiary butanol



LEGEND

- GP-2 Previous DPT Sampling Location
- Proposed DPT Location
- Pump Island
- Existing Underground Storage Tank
- Fence

* From Alameda County Environmental Health.

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APPROX. SCALE IN FEET

Figure 4

PROPOSED BOREHOLE LOCATIONS

Shore Acre Gas
403 E 12th Street
Oakland, California

GEOFON INCORPORATED

DRAWN: J. Hurst	DATE: 9/5/07	5-70004
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