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Alameda County
FEB 23 2004
Environmental Health

TRANSMITTAL MEMORANDUM

TO: ALAMEDA COUNTY HEALTH CARE AGENCY DATE: FEBRUARY 19, 2004
ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
LOCAL OVERSIGHT PROGRAM
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502-6577

ATTENTION: MR. BARNEY CHAN

FILE: SES 2003-36

SUBJECT:

1451 32ND STREET, OAKLAND, CA
ACEH CASE NO. R00002592

WE ARE SENDING:

HEREWITH

UNDER SEPARATE COVER

VIA MAIL

VIA

THE FOLLOWING: "WORKPLAN FOR PRELIMINARY SITE ASSESSMENT" (DATED 2/19/04)

INVOICE #2003-36-01 (ATLAS HEATING ONLY)

AS REQUESTED

FOR YOUR APPROVAL

FOR REVIEW

FOR YOUR USE

FOR SIGNATURE

FOR YOUR FILES

COPIES TO: ROBERT TUCK – PROPERTY OWNER

BY: Bruce Rucker

BMR

Ro 2592

February 19, 2004

Alameda County

Mr. Barney Chan – Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services – Environmental Protection
Local Oversight Program
1131 Harbor Bay Parkway
Alameda, California 94502-6577

FEB 23 2004

Environmental Health

Subject: Workplan for Preliminary Site Assessment
Atlas Heating & Air Conditioning Company Facility
1451 - 32nd Street, Oakland, California
Fuel Leak Case No. RO0002592

Dear Mr. Chan:

INTRODUCTION AND BACKGROUND

On behalf of the property owner and responsible party (Robert & Elizabeth Tuck), Stellar Environmental Solutions, Inc. (SES) is submitting to the Alameda County Environmental Health Department (ACEH) this workplan for a Preliminary Site Assessment (PSA) at the referenced site. This proposed work follows the SES "Gasoline Underground Fuel Storage Tank Removal Report" (dated July 24, 2003) that described the removal of two 2,000-gallon gasoline UFSTs and associated corrective actions conducted between December 2000 and April 2001 (work conducted by other contractors).

Figure 1 shows the site location. Figure 2 shows the former UFST locations, excavation layouts, sampling locations, and analytical results. Table 1 summarizes historical analytical results. All tables and figures are attached at the end of this workplan. The following summarizes historical site investigation and corrective action activities.

- The UFSTs were removed in December 2000 under regulatory permitting and oversight. Corrective actions included removing for offsite disposal 80 tons of contaminated backfill material and 4,800 gallons of excavation water. The final common excavation measured approximately 18 feet long by 13 feet wide by 11 feet deep. Over-excavation confirmation soil samples (collected just above groundwater depth in the pit) contained detectable gasoline, toluene, ethylbenzene and xylenes;

only gasoline and xylenes were above regulatory agency screening-level criteria, and in only one sidewall. An excavation “grab” water sample contained gas, BTEX and MTBE above regulatory agency screening-level criteria. Neither lead scavengers nor fuel oxygenates were analyzed for.

- The ACEH is the lead regulatory agency, and has assigned the case to its Local Oversight Program (case no. RO0002592).
- The responsible party is in the process of applying to the California Petroleum Underground Storage Tank Cleanup Fund for potential reimbursement of corrective action costs.
- The responsible party is planning to redevelop the property within approximately one year, which would include constructing a building over the area of the former UFSTs.
- At the request of the responsible party (to minimize the schedule for implementing the proposed work), the Alameda County Health Care case officer (Mr. Barney Chan) indicated that this workplan could be submitted to Alameda County Health Care without a letter requesting such. The Alameda County Health Care written approval of this workplan would therefore be considered the regulatory agency directive for the proposed work.

TECHNICAL OBJECTIVES AND PROPOSED SCOPE OF WORK

The objective of the proposed work is to conduct sufficient site characterization to satisfy ACEH and RWQCB closure criteria (assuming the findings warrant it). The PSA is designed to evaluate the lateral and vertical extent of residual soil and groundwater contamination, in the immediate vicinity of the former UFSTs. Favorable conditions under which closure might be warranted would include: minor source area soil contamination; locally-limited groundwater contamination; and/or low potential for residual contamination to migrate. Should the findings not support these criteria, additional site characterization beyond the PSA stage would be warranted (likely well installation and periodic sampling), and would be addressed in the proposed PSA documentation report.

The proposed scope of work includes the following four tasks: 1) Pre-Field Work Planning; 2) Exploratory Borehole Installation and Sampling; 3) Laboratory Analyses; and 4) Report Preparation.

Task 1: Pre-Field Work Planning

SES will create a site-specific Health and Safety Plan that will include the proposed drilling activities. We will apply for the requisite borehole drilling permit from Alameda County Public Works Agency, and we will notify Underground Service Alert of proposed drilling for its notification to utilities to mark any potential underground utilities. Work will not be conducted until ACEH approves this workplan.

A preferential pathway/receptor survey (including potential onsite underground utilities) will likely be required by Alameda County Health Care prior to site closure. In February 2004 SES coordinated an underground utility survey of the site itself, to aid in locating proposed boreholes (no utilities were found in the immediate area of the drilling), and we have begun the research to identify any deep utilities in the vicinity of the site. The methods and findings of that survey will be discussed fully in the proposed PSA report. If/when requested by Alameda County Health Care, SES will complete the remaining element of the preferential pathway/receptor survey – identifying vicinity water wells.

Task 2: Exploratory Borehole Installation and Sampling

We propose a phased approach to the investigation. The first phase will consist of exploratory borehole drilling and soil/groundwater sampling. The primary objectives of this investigation include:

- Determine current groundwater impacts in the immediate vicinity of the former UFST;
- Provide additional analytical data on residual soil contamination in the source areas (former UFSTs); and
- Determine the depth to groundwater and lithologic conditions in the immediate vicinity of the UFST, especially with regard to potential preferential migrational pathways and the vertical base of the upper water-bearing zone..

These data will be used to evaluate if further action—i.e., installation and sampling of groundwater monitoring wells are warranted.

The direction of shallow groundwater flow at the site has not been determined. The regional groundwater flow direction in the area is likely to the west (following topography, toward San Francisco Bay). It is our experience that local groundwater flow direction can vary locally in this area between southwest and northwest, based on lithology. We therefore propose

sufficient boreholes to identify the potential plume movement in the approximately 180 degree zone from northwest to southwest, with more extensive coverage due west of the former UFSTs. ✓ *the*

We propose an initial set of six boreholes to include:

- One through the center of the former UFST common excavation (BH-01);
- One on each of the west (BH-02), north (BH-03) and south (BH-04) sides of the former UFST excavation, within 10 feet of the excavation boundaries;
- One approximately 20 feet northwest of the western edge of the former UFST excavation (BH-05); and
- One approximately 20 feet southwest of the western edge of the former UFST excavation (BH-06).

Time permitting, we will advance an additional two boreholes (BH-07 and BH-08), approximately 50 feet and 150 feet to the west (inferred downgradient) of the former excavation.

Figure 2 shows the proposed borehole locations. The boreholes will be advanced with a Geoprobe™ (direct-push) or equivalent rig that advances approximately 2-inch-diameter sampling rods into undisturbed soil. Boreholes will be advanced/sampled to first occurrence of groundwater (likely at or above 10 feet below grade), whereupon a grab-groundwater sample will be collected. The boreholes will then be deepened through the water-bearing zone, to a depth of 3 feet below the top of the lower-permeability zone underlying the water-bearing zone (to allow for determination of vertical extent of contamination). - as far as possible

We estimate that boreholes will be no deeper than 20 to 25 feet. Continuous core soil samples will be collected to allow for visual inspection of lithology (for geologic logging) and for field screening with a photoionization detector (PID) to assist in selection of soil samples. Two soil samples will be collected from each borehole for laboratory analysis (estimated 12 to 16 soil samples total). In each borehole, one sample will be collected from the unsaturated zone at the depth that displays maximum contamination, or if absent, from the depth just above first occurrence of groundwater. The second sample from each borehole will be collected from the lower-permeability zone that very likely underlies the upper water-bearing zone.

One “grab” groundwater sample will be collected from each borehole (estimated between 6 and 8 samples) using new Tygon™ tubing connected to a vacuum pump. The sampling will be completed using a licensed (C-57) drilling contractor, to provide the sampling services under SES’s direction. Samples will be securely sealed in appropriate containers, placed in an ice chest with ice at approximately 4 C., and transported to the analytical laboratory under chain-of-custody record the same day they are collected.

Waste soil from the borehole installations will be temporarily containerized onsite in labeled, 5-gallon plastic pails with sealing tops. This soil will be appropriately profiled and disposed of when it has been determined that no further waste soil will be generated, or will be combined with any future generated waste soil from subsequent investigation phases.

Task 3: Laboratory Analyses

A California-certified (ELAP) analytical laboratory will complete all laboratory analyses. All soil and groundwater samples will be analyzed for the known (and potential) site contaminants of concern, including:

- Total volatile hydrocarbons – gasoline range (TVH-g) by EPA Method 8015M
- MTBE and BTEX by EPA Method 8260
- Two lead scavengers (EDB and EDC) and fuel oxygenates (TAME, ETBE, DIPE, TBA and ethanol) by EPA Method 8260.

Task 4: Report Preparation

The methodology and findings of the investigation will be incorporated into a comprehensive PSA documentation report that will contain the following elements:

- Investigation scope and objectives;
- Summary of previous UFST removal activities and findings;
- Sampling and analytical protocols used;
- Hydrochemical data from the sample analyses;
- Site map delineating borehole locations;
- Site lithologic conditions including borehole geologic logs;

- Discussion of the fate and transport mechanisms of the constituents of concern in the groundwater, and their potential migrational pathways (including any known underground utilities);
- Conclusions and, where appropriate, recommendations; and
- Technical appendices.

The project will be overseen, and the report will signed, by a California Registered Geologist.

ESTIMATED SCHEDULE

Due to proposed site re-development activities, the responsible party is committed to conducting this and any follow-on activities as quickly as practical, and therefore respectfully requests that Alameda County Health Care review this workplan as quickly as possible.

We estimate that the drilling will be conducted within 2 weeks following Alameda County Health Care's approval of this workplan. Analytical laboratory results will be completed on normal turnaround (10 working days). The final report will be submitted within approximately 2 weeks following our receipt of analytical results.

TEAM QUALIFICATIONS

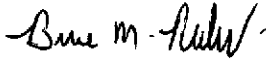
Stellar Environmental Solutions, Inc. has completed dozens of similar projects, including several under the jurisdiction of ACEH. Our team will consist of the following:

- Stellar Environmental Solutions, Inc. (owner's consultant responsible for overall project coordination, geologic evaluation, sampling, data evaluation, and report certification by a California Registered Geologist);
- Borehole installation driller with a current C-57 license; and
- Analytical laboratory with a current California ELAP certification.

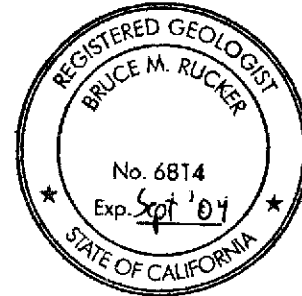
Mr. Barney Chan – Hazardous Materials Specialist
Alameda County Health Care Services Agency
February 19, 2004
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We trust that this submittal meets your agency's needs. We request that ACEH provide to SES and the property owner written approval of this workplan, as soon as possible. Please contact the undersigned directly if you have any questions.

Sincerely,



Bruce M. Rucker, R.G., R.E.A.
Project Manager



Richard S. Makdisi, R.G., R.E.A.
Principal

Attachments: Location Map and Site Plan with Proposed Borehole Locations
Table 1 (Historical Analytical Results)

cc: Mr. Paul Robert Tuck (property owner and responsible party)



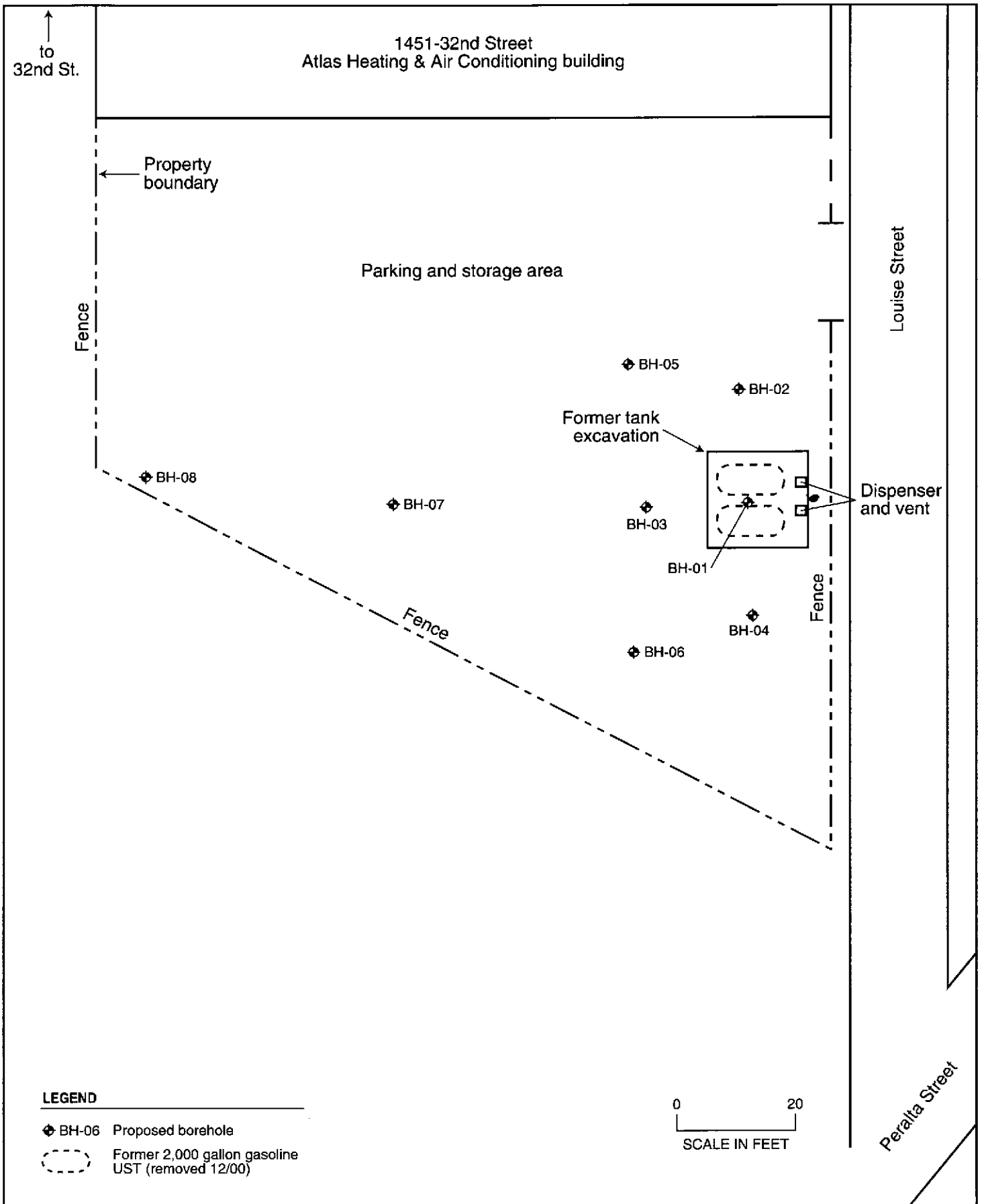
SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

1451 32nd Street
Oakland, CA

By: MJC

JUNE 2003

Figure 1



SITE PLAN SHOWING FORMER TANK EXCAVATION AND PROPOSED BOREHOLES

1451-32nd Street
Oakland, CA

By: MJC

FEBRUARY 2004

Figure 2

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-36-07

Table 1
Underground Fuel Storage Tank Analytical Results
1451 - 32nd Street, Oakland, California
(Samples collected February 2, 2001)

Sample ID	Sample Depth (feet)	TVH-gas	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE	Total Lead
<i>Stockpiled Soil Samples (concentrations in mg/kg)</i>								
West 1-4 Composite (a)	7'	6.5	< 0.005	0.03	< 0.005	0.021	< 0.05	6.6
East 1-4 Composite (a)	7'	< 1.0	< 0.005	< 0.005	< 0.005	0.026	< 0.05	14
<i>Excavation Confirmation Soil Samples (concentrations in mg/kg)</i>								
S1	Not appl.	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	24
S2	Not appl.	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	6.9
S3	Not appl.	250	< 0.005	0.12	0.87	9.7	< 0.1	12
S4	Not appl.	35	< 0.005	0.017	0.012	0.53	< 0.05	10
S1-S4 (b)	Analyzed only for soluble lead. Detected at 0.28 mg/L.							
Soil ESLs (c.)		100	0.045	2.6	2.5	1.0	0.028	750
Soil ESLs (d)		400	0.18	8.4	24	1.0	1.0	750
<i>Pit Water Sample (concentration in µg/L)</i>								
W-1	9'	400	6.3	1.3	< 0.5	10	11,000	0.010
Groundwater ESLs (e)		100	1.0	40	30	13	5.0	3.2
Groundwater ESLs (f)		500	46	130	290	13	1,800	3.2

Notes:

- (a) Sample is a 4-point composite of approximately 40 cubic yards.
(b) Sample is a 4-point composite from four locations along the excavation sidewall.
(c.) For surface soil (< 10 feet deep) at commercial/industrial sites where groundwater is a current or potential drinking water source.
(d) For surface soil (< 10 feet deep) at commercial/industrial sites where groundwater is not a current or potential drinking water source.
(e) For commercial/industrial sites where a drinking water resource is threatened.
(f) For commercial/industrial sites where a drinking water resource is not threatened.
NA = Not Analyzed for this constituent.
ESLs = Regional Water Quality Control Board, San Francisco Bay Region "Environmental Screening Levels (2003)."
TVH-gas = Total volatile hydrocarbons – gasoline range.