

DH

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
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Alameda County
JUN 10 2004
510.644.3123

TRANSMITTAL MEMORANDUM

To: ALAMEDA COUNTY HEALTH CARE AGENCY DATE: JUNE 10, 2004
ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
LOCAL OVERSIGHT PROGRAM
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502-6577

ATTENTION: MR. BARNEY CHAN FILE: 2003-36

SUBJECT:
1451 32ND STREET, OAKLAND, CA
ACEH CASE NO. RO0002592 94607

WE ARE SENDING: HEREWITH UNDER SEPARATE COVER
 VIA MAIL VIA

THE FOLLOWING: "WORKPLAN FOR ADDITIONAL SITE CHARACTERIZATION
ACTIVITIES" (DATED 6/10/04)

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)

June 10, 2004

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

Alameda County
JUN 15 2004
RECEIVED

Subject: Workplan for Additional Site Characterization Activities
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 additional site characterization activities at the referenced site. This workplan is substantively based on your concern regarding site characterization needs as communicated in your June 4, 2004 e-mail to SES.

The following summarizes historical site investigation and corrective action activities.

- The site UFSTs were removed in December 2000 under regulatory permitting and oversight. This work was discussed in our July 24, 2003 UFST Closure Report.
- A PSA was conducted in March 2004, in accordance with our February 19, 2004 PSA workplan, and was summarized in our April 13, 2004 PSA documentation report. That report recommended installing and monitoring four groundwater monitoring wells to monitor groundwater contamination. You responded to the workplan in a June 4, 2004 e-mail to SES, requesting that additional site characterization activities be conducted before proceeding to the groundwater monitoring well installations.

TECHNICAL OBJECTIVES AND PROPOSED SCOPE OF WORK

The objectives of the proposed work are to better define the extent of groundwater plume geometry, particularly the offsite component. In addition you requested that the lithology be better defined at depth, to better understand the hydrogeology, prior to the installation of any groundwater monitoring wells. Concurrent with the SES technical report summarizing these proposed activities, SES will submit a technical workplan for the groundwater monitoring well installation and monitoring program. As detailed below, the scope of work and technical protocols for the additional borehole drilling/sampling will be essentially the same as for the initial PSA, with specific technical items requested by Alameda County Health.

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

We will apply for the requisite borehole drilling permit from Alameda County Public Works Agency and a City of Oakland excavation permit (required for drilling in City Streets). Before any drilling SES 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 Alameda County Health approves this workplan and the required permits are obtained.

Task 2: Exploratory Borehole Installation and Sampling

As discussed above, this work will follow an initial PSA conducted at the site, and is designed to satisfy the specific Alameda County Health technical comments to our PSA report. The primary objectives of this investigation include:

- Drill and sample additional exploratory boreholes to the east of the former UFST source area (the area of apparent greatest groundwater contamination) to evaluate the extent and magnitude of groundwater contamination in that area; and
- Drill one exploratory borehole in the former UFST source area, adjacent to a previous borehole, to provide additional information on site lithology and hydrology.

These data will be used to better locate and design the groundwater monitoring wells.

As shown on the attached figure, we propose a set of six boreholes to include:

- One borehole (BH-10) immediately to the northwest of the former UFST common excavation, equidistant between previous boreholes BH-03 and BH-06
- One borehole (BH-11) approximately 20 feet to the north of previous borehole BH-01, in Louise Street
- One borehole (BH-12) approximately 20 feet to the south of previous borehole BH-01, in Louise Street
- One borehole (BH-13) approximately 85 feet to the southeast of previous borehole BH-01, on the east side of Louise Street
- One borehole (BH-14) approximately 75 feet to the east-southeast of previous borehole BH-01, on the east side of Louise Street
- One borehole (BH-13) approximately 85 to the east-northeast of previous borehole BH-01, on the east side of Louise Street

General Drilling and Sampling Protocols

The drilling and sampling will be completed using a licensed (C-57) drilling contractor, to provide the sampling services under SES's direction. The boreholes will be advanced with a Geoprobe™ (direct-push) or equivalent rig that advances approximately 2-inch-diameter sampling rods into undisturbed soil. 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.

All soil and groundwater 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 a labeled, 55-gallon steel drum (combined with the previous PSA drilling waste soil). This soil will continue to be stored onsite until it has been determined that no further waste soil will be generated (likely after the groundwater monitoring well installation phase), then will be appropriately profiled for offsite disposal.

BH-10 Drilling Specifics

Borehole logs from the previous PSA documented a saturated sand/gravel unit at a depth of approximately 20 to 21 feet in all nine boreholes. In seven of those boreholes, there was an underlying clay unit, inferred to be an aquitard likely limiting downward contaminant migration). Maximum depth of any given bore was 24 feet bgs. The base of the sand/gravel unit (and the top of the underlying clay unit) was not encountered in two of the nine boreholes (BH-03 and BH-06 to the west and north of the former UFSTs, respectively).

SES proposes to advance borehole BH-10 between previous BH-03 and BH-06, to determine the thickness of the saturated sand/gravel unit, and to confirm the presence of the inferred underlying clay unit at a greater depth than the previous maximum of 24 feet bgs. We will advance the borehole three feet into the clay unit (or to a total depth of 35 feet if the clay unit is not encountered). SES will collect one soil sample from the clay unit for laboratory analysis to determine if there is contamination below the overlying water-bearing zone.

Other Boreholes

Boreholes BH-11 through BH-15 will be advanced/sampled to first occurrence of groundwater (likely to be approximately 20 feet below grade), whereupon a grab-groundwater sample will be collected. Each borehole 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).

SES estimates that three soil samples will be collected from each of these boreholes for laboratory analysis. In each borehole, one sample will be collected from the unsaturated zone at the depth that displays maximum contamination, or if contamination is not evident, from the depth just above first occurrence of groundwater. The second sample from each borehole will be collected from the saturated zone, and the third sample will be collected from the underlying clay unit (if encountered).

One “grab” groundwater sample will be collected from each of BH-11 through BH-15 using new Tygon™ tubing connected to a vacuum pump, or with a disposable bailer.

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, and TBA) 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 PSA findings;
- Sampling and analytical protocols used;
- Tabular summary of historical and proposed investigation sample results;
- Site map delineating historical and proposed 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 be signed, by a California Registered Geologist.

ESTIMATED SCHEDULE

We estimate that the drilling will be conducted within 3 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.

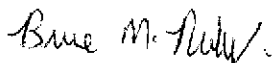
TEAM QUALIFICATIONS

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

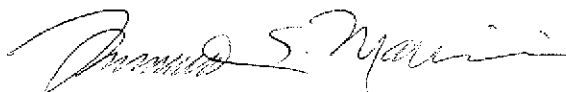
- Stellar Environmental Solutions, Inc. (owner's consultant responsible for overall project coordination, geologic evaluation, sampling, data evaluation, and report certification by a California Registered Geologist);
- Gregg Drilling and Testing, Inc. (SES' subcontracted borehole driller; C-57 license no. 485165; and
- Curtis & Tompkins, Ltd. (SES' subcontracted analytical laboratory; California ELAP certification no. 1486).

We trust that this submittal meets your agency's needs. We request that Alameda County Health 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



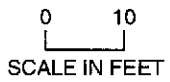
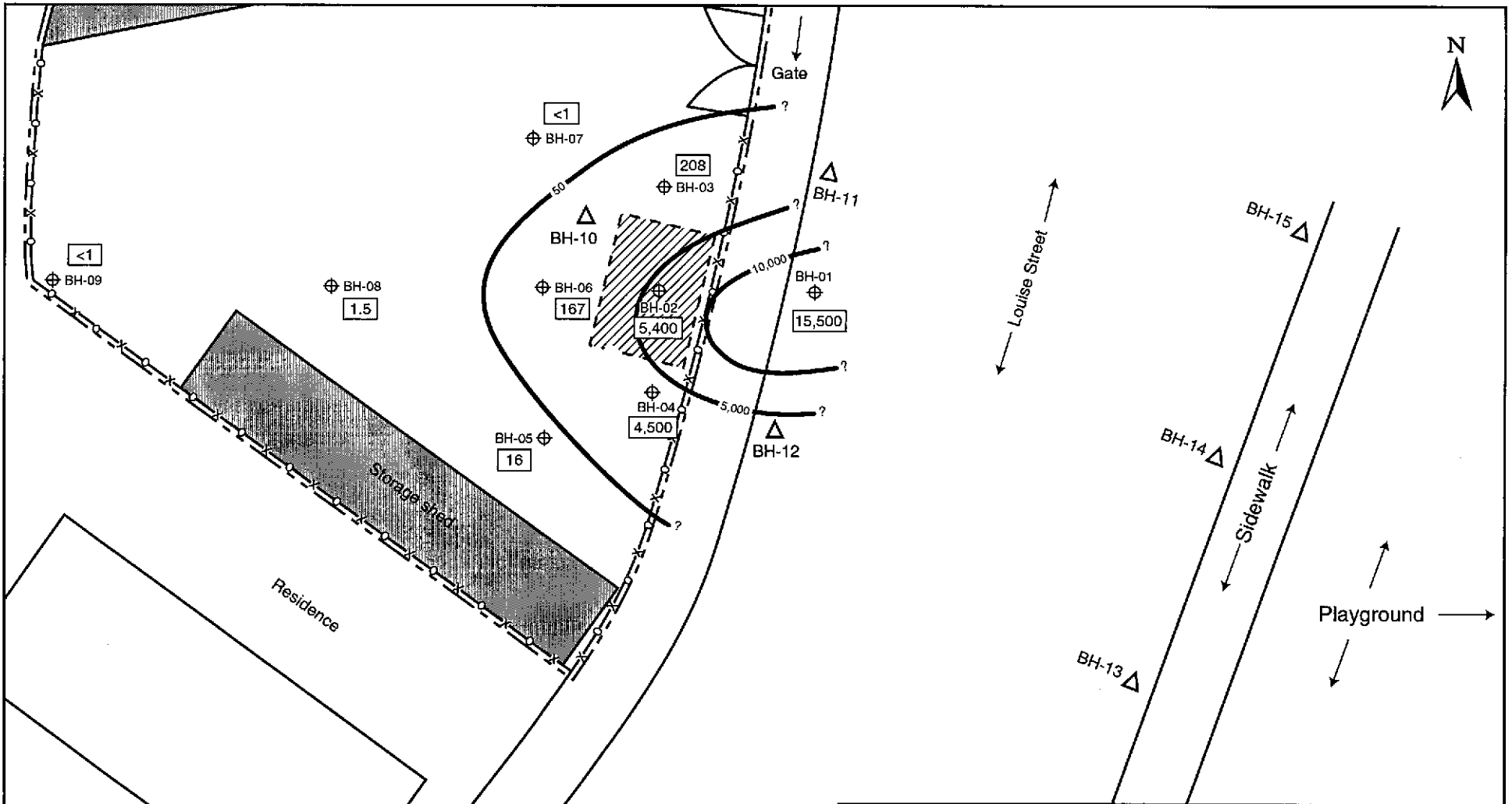
Richard S. Makdisi, R.G., R.E.A.
Principal

Attachment: Site Plan with Proposed Borehole Locations

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

Stellar Environmental Solutions, Inc.

FIGURE



LEGEND			
	Former UFST (2) excavation		BH-10 Proposed boreholes
	Building		BH-06 March 2004 borehole
	Approximate property boundary		Groundwater MTBE concentration in $\mu\text{g/L}$
	Chainlink/sheet metal fence		MTBE isoconcentration contour in $\mu\text{g/L}$

2003-36-32

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

PROPOSED BOREHOLE LOCATIONS
1451-32nd Street, Oakland, CA

by: MJC

JUNE 2004