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★ **Stellar Environmental Solutions, Inc.**

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Geoscience & Engineering Consulting

August 20, 2003

Alameda County
AUG 25 2003
Environmental Health

Alameda County Health Care Services Agency
Environmental Health Services – Environmental Protection
Local Oversight Program
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: Workplan for Preliminary Site Assessment
Russ Elliott, Inc. Facility – 2526 Wood Street, Oakland, California
Fuel Leak Case No. 4073

To Whom It May Concern:

INTRODUCTION AND BACKGROUND

On behalf of the property (Elliott Trust), 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 workplan is being submitted concurrently with the SES "Underground Storage Tank Removal Closure Documentation and Assessment Report" (dated August 15, 2003) that described the removal of one 550-gallon diesel UFST (1995) and one 10,000-gallon gasoline UFST (2002) by other contractors.

Figure 1 shows the site location. Figure 2 shows the former UFST locations, excavation layouts, sampling locations, and analytical results. Tables 1 and 2 summarize historical analytical results. All tables and figures are attached at the end of this workplan.

Our report concluded that:

- ACEH was present during the UFST removals, follow-up overexcavation, and soil/groundwater sampling activities. No closure documentation report has been submitted to ACEH for the two UFST removals, although site activities are well documented in the ACEH case file. Analytical results are available for all site samples.

- All residual soil contamination was removed from the diesel UFST location, and no contamination was detected in a concurrent pit water sample.
- At the gasoline UFST location, MTBE was present at concentrations above regulatory agency screening levels in excavation sidewall and base soil samples. Neither gasoline nor BTEX were detected in any of the soil samples, and lead was present at concentrations representative of background conditions.
- Groundwater infiltrated the excavation and equilibrated at a depth of approximately 7 feet bgs. One "grab" groundwater sample was collected immediately following UFST removal. Contaminants detected above screening level criteria included gasoline, benzene, toluene, xylenes, and MTBE. Dissolved lead was not detected.
- The ACEH considers the 1995 diesel UFST an active fuel leak case (case No. 4073), with the RWQCB assigning a LUSTIS case number (No. 01-2294). There is no documentation of the 2002 gasoline UFST removal in the ACEH file; this is likely because, as the lead agency permitting/overseeing the UFST removal, the City of Oakland Fire Department has not notified or transferred the case to ACEH because no closure documentation has been submitted.

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 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, 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.

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 a groundwater monitoring well(s) is 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), although groundwater flow direction may vary locally based on lithology. A May 2002 quarterly groundwater monitoring report for a vicinity site (Pacific Supply Company, 1735 24th Street, located approximately two blocks away) available at ACDEH indicates that groundwater flow is to the northwest.

The initial eight primary set of boreholes will include:

- Two downgradient (north) of the UFSTs (along Wood Street);
- One through the center of each former excavation;
- One between the two UFSTs; and
- One on each of the upgradient (south) and crossgradient (east and west) sides of the UFSTs.

This positioning of boreholes on all sides of the former UFST excavations will ensure that local groundwater flow variations will be accommodated, and that any offsite-sourced contamination will be identified. Figure 2 shows the proposed borehole locations. Time

permitting, if initial findings indicate that the primary boreholes have not defined the extent of contamination, additional "step-out" boreholes may be advanced and sampled.

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 to first occurrence of groundwater (likely 7 and 15 feet below grade), and then will be advanced 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). 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, likely to be one from the unsaturated zone displaying evidence of maximum contamination or one from the capillary fringe, and one from the uppermost lower-permeability zone that underlies the uppermost water-bearing zone.

One "grab" groundwater sample will be collected from each borehole 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 the laboratory analyses. The analytical results will be performed at a standard turnaround (2 weeks). All soil and groundwater samples will be analyzed for the following:

- Total volatile hydrocarbons – gasoline range (TVHg), by modified EPA Method 8015;
- Total extractable hydrocarbons – diesel range (TEHd) by modified EPA Method 8015; and
- BTEX and MTBE, by EPA Method 8020.

8260 + oxys & Pb Scav

Task 4: Report Preparation

The methodology and findings of the investigation will be incorporated into a comprehensive 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;
- 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

We estimate that the drilling will be conducted within 2 weeks following ACEH approval of this workplan. Analytical laboratory results will be completed on normal turnaround (10 working days). The final report will be submitted within 2 weeks following receipt of analytical results, and will be submitted within the ACEH-specified deadline of 60 days following ACEH approval of the workplan.

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.

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. Please contact the undersigned directly if you have any questions.

Sincerely,

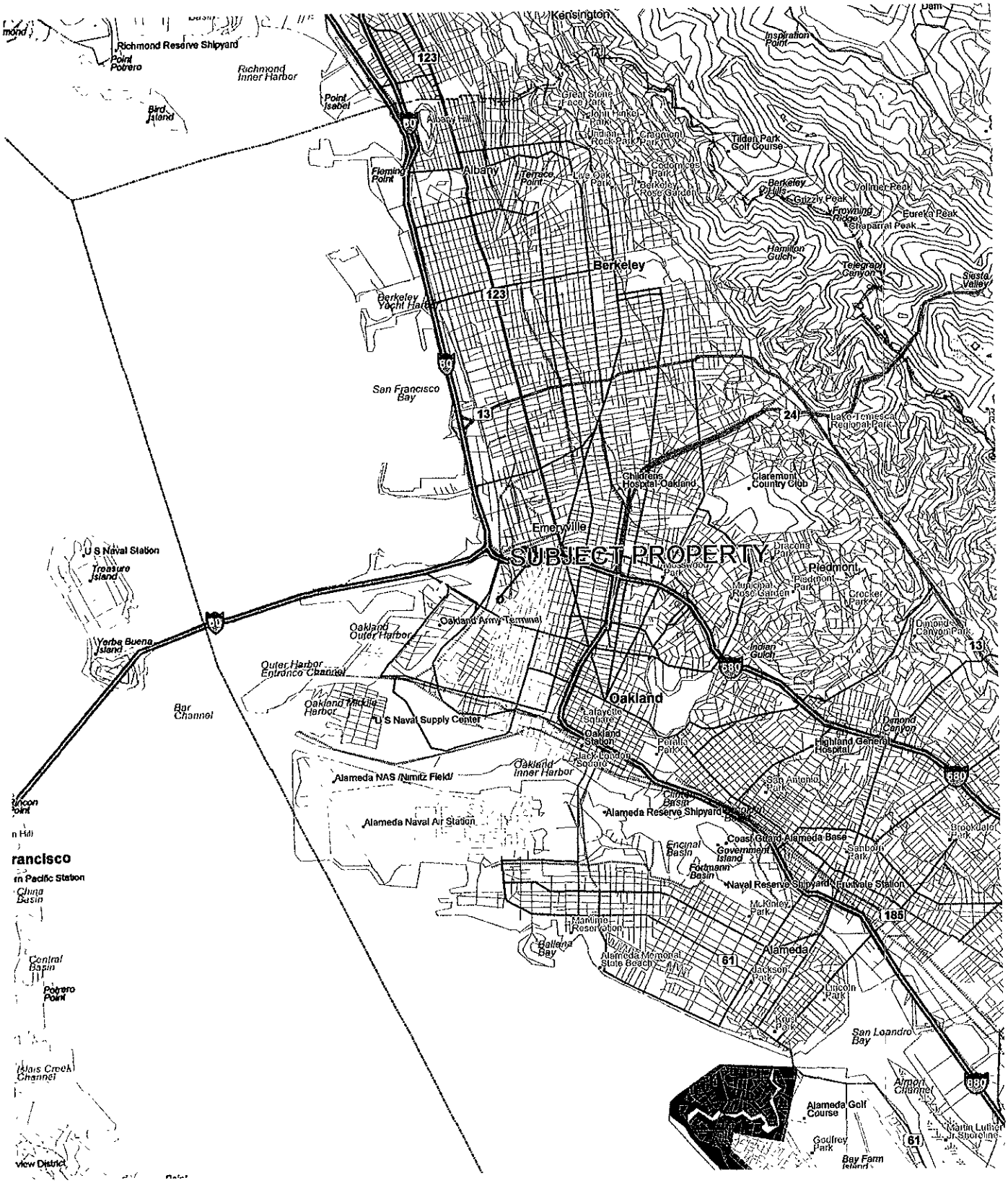
Bruce M. Rucker, R.G., R.E.A.
Project Manager

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

Attachments: Location Map and Site Plan with Proposed Borehole Locations
Tables 1 and 2 (Historical Analytical Results)

cc: Mr. Paul Valva – Valva Realty; Ms. Jeanette Elliott – Elliott Trust

FIGURES



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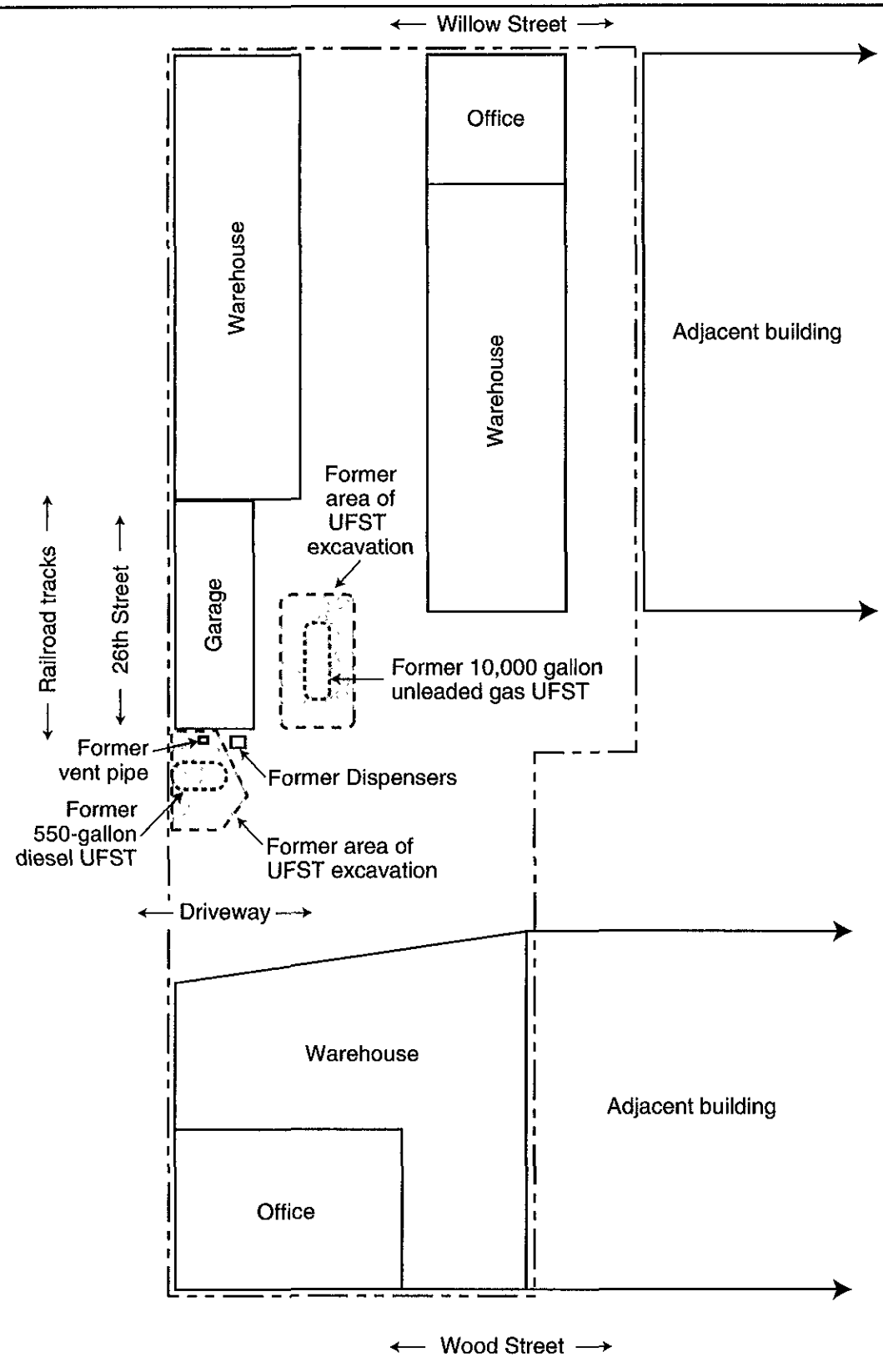
SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

2526 Wood Street Oakland, CA	By: MJC	JULY 2003
	Figure 1	

2003-36-01



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Scale in feet (approx.)

Note: See Figure 3 for detail of UFST area

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SITE PLAN—RUSS ELIOTT FACILITY, INC.

2526 Wood Street **Oakland, CA**	**By: MJC**	**AUGUST 2003**
	Figure 2	

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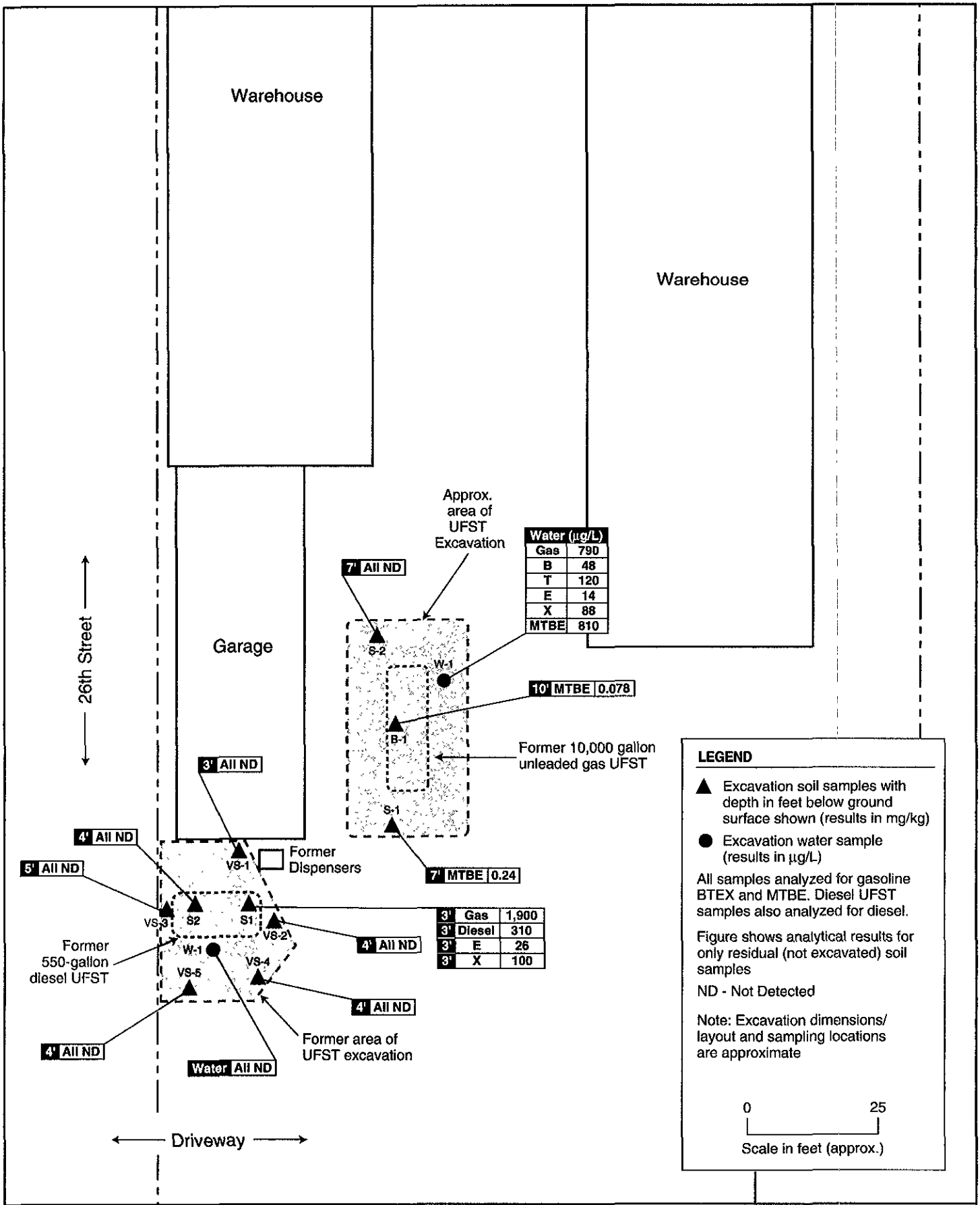
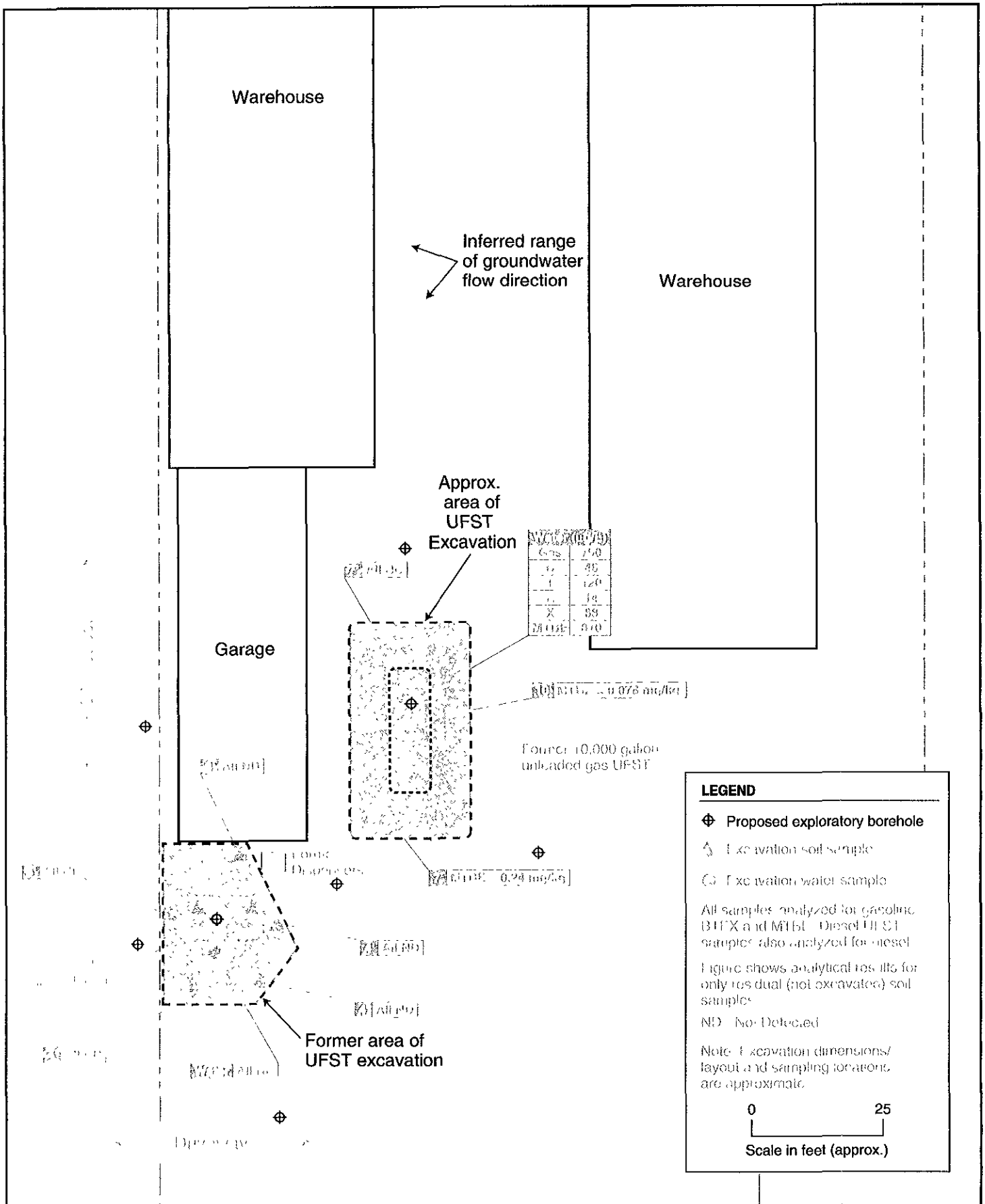
2003-41-02



DETAIL OF FORMER UFSTs SHOWING SAMPLING LOCATIONS AND ANALYTICAL RESULTS

2526 Wood Street Oakland, CA	By: MJC	AUGUST 2003	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 3		

2003-41-03



PROPOSED BOREHOLE LOCATIONS

2526 Wood Street Oakland, CA	By: MJC	AUGUST 2003
	Figure 4	

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2003-41-04

TABLES

Table 1
April 2002 Gasoline UFST Removal Sampling Analytical Results
2526 Wood Street, Oakland, California

Sample I.D.	Sample Depth (feet)	TPHg	TPHd	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE	Total Lead
Excavation Confirmation Soil Samples (concentrations in mg/kg)									
S-1 (west sidewall)	7'	*<1 0*	NA	*<0.005*	*<0.005*	*<0.005*	*<0.005*	**0.24**	**8.5**
S-2 (east sidewall)	7'	*<1.0*	NA	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*	*<3.0*
B-1 (UFST base)	10'	*<1.0*	NA	*<0.005*	*<0.005*	*<0.005*	*<0.005*	**0.078**	**3.1**
D-1 (below dispenser)	3.5'	*<1.0*	NA	*<0 005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*	**11**
Soil ESLs [a]		100	—	0.045	2.6	2.5	1.0	0.028	750
Stockpiled Soil Sample (concentrations in mg/kg)									
STK 1A-1D	—	<1.0	NA	*<0.005*	*<0.005*	*<0.005*	*<0.005*	**0.15**	**9.9**
Pit Water Sample (concentration in µg/L)									
W-1	7'	**790**	NA	**48**	**120**	**14**	**88**	**810**	*ND* [c]
Groundwater ESLs [b]		100	—	1.0	40	30	13	5.0	3.2

Notes.

[a] Applicable to subsurface soils (<10 feet deep) at sites where groundwater is a potential drinking water source.
[b] Applicable to sites where a potential drinking water source is threatened.
[c] Not Detected– method reporting limit not specified in lab report.

ESLs = RegionalWater Quality Control Board, San Francisco Bay Region "Environmental Screening Levels" for commercial/industrial sites.

TPHg = Total petroleum hydrocarbons- gasoline range.
TPHd = Total petroleum hydrocarbons- diesel range.

Table 2
1995-1996 Diesel UFST Removal Sampling Analytical Results
2526 Wood Street, Oakland, California

Sample I.D.	Sample Depth (feet)	TPHg	TPHd	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE	Total Lead
July 1995 Excavation Confirmation Soil Samples (concentrations in mg/kg)									
S-1 (south sidewall)	3	**1,900**	**310**	*2.6*	*<1.4*	**26**	**100**	NA	NA
S-2 (north sidewall)	4	*<0.5*	*<1*	*<0.005*	*<0.005*	*<0.005*	**0.0054**	NA	NA
June 1996 Excavation Confirmation Soil Samples (concentrations in mg/kg)									
VS-1	3	*<1*	*<1*	*<0.005*	*<0.005*	*<0.005*	*<0 005*	*<0.05*	NA
VS-2	4	*<1*	*<1*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*	NA
VS-3	5	*<1*	*<1*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*	NA
VS-4	4	*<1*	*<1*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*	NA
VS-5	4	*<1*	*<1*	*<0.005*	*<0.005*	*<0.005*	*<0 005*	*<0.05*	NA
Soil ESLs [a]		100	100	0.045	2.6	2.5	1.0	0.028	—
July 1995 Stockpiled Soil Sample (concentrations in mg/kg)									
SP1 (A-D) [b]	—	**960**	**340**	*<0.005*	*<0 005*	*<0.005*	*<0.015*	NA	NA
June 1996 Stockpiled Soil Sample (concentrations in mg/kg)									
STK (A-D)	—	**340**	*<25*	**0.80**	**1.2**	**0.71**	*<0.005*	*<0.05*	NA
October 1995 Pit Water Sample (concentration in µg/L)									
W-1	4.5	*<50*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0 5*	NA	NA
Groundwater ESLs [c]		100	100	1.0	40	30	13	5.0	—

Notes:

[a] Applicable to subsurface soils (<10 feet deep) at sites where groundwater is a potential drinking water source.
[b] 4-point composite sample.
[c] Applicable to sites where a potential drinking water source is threatened.

ESLs = Regional Water Quality Control Board, San Francisco Bay Region "Environmental Screening Levels" for commercial/industrial sites.

TPHg = Total petroleum hydrocarbons- gasoline range
TPHd = Total petroleum hydrocarbons- diesel range.

NA = Sample not analyzed for this constituent.

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201, BERKELEY, CA 94710
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TRANSMITTAL MEMORANDUM	
TO: ALAMEDA COUNTY HEALTH CARE SERVICES ENVIRONMENTAL HEALTH DEPT LOCAL OVERSIGHT PROGRAM 1131 HARBOR BAY PKWY, SUITE 250 ALAMEDA, CA 94502	DATE: AUGUST 21, 2003
ATTENTION: LOCAL OVERSIGHT PROGRAM	FILE: SES 2003-41
SUBJECT: RUSS ELLIOTT, INC. FACILITY 2526 WOOD STREET OAKLAND, CALIFORNIA	
WE ARE SENDING: ☒ HEREWITH	☐ UNDER SEPARATE COVER
☒ VIA MAIL	☐ VIA
THE FOLLOWING: WORKPLAN FOR PRELIMINARY SITE ASSESSMENT & UNDERGROUND FUEL STORAGE TANKS CLOSURE DOCUMENT AND ASSESSMENT REPORT (1 COPY OF EACH FOR YOUR REVIEW AND APPROVAL)	
☐ AS REQUESTED	☒ FOR YOUR APPROVAL
☐ FOR REVIEW	☐ FOR YOUR USE
☐ FOR SIGNATURE	☒ FOR YOUR FILES
COPY TO: OAKLAND FIRE DEPARTMENT– OFFICE OF EMERGENCY SERVICES 1605 MARTIN LUTHER KING WAY, 2ND FLOOR OAKLAND, CA 94612 ATTN: UNDERGROUND TANK REMOVAL (1 COPY OF UNDERGROUND FUEL STORAGE TANKS CLOSURE DOCUMENT AND ASSESSMENT REPORT)	BY: JOE DINAN