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4/Aug 99
- work plan implemented and approved. However, boring placement is based on previous conversations and shared faxes with Mr. Rucker in weeks past.
SDS

fax

to: **Scott Seery, Alameda County Environmental Health Services**

fax #: **(510) ~~[illegible]~~ 337-9335**

from: **Bruce Rucker**

date: **[illegible]**

subject: **Workplan for Subsurface Investigation, Redwood Regional Park, Oakland**

pages: **5 (including this cover sheet)**

NOTES:

Scott:

Attached is the workplan. Please call if you have any questions.

Bruce

Regards

Fax-Gehrett

★ **Stellar Environmental Solutions**

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Geoscience & Engineering Consulting

April 8, 1999

Mr. Scott Seery
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Workplan for Continued Site Investigation and Site Closure Assessment for Redwood Regional Park Service Yard Site - Oakland, California

Dear Mr. Seery:

On behalf of the East Bay Regional Park District (District), Stellar Environmental Solutions (SES) is pleased to submit this workplan for the underground fuel storage tank (UFST) site located at the Redwood Regional Park Service Yard Site, 7867 Redwood Road in Oakland, California. This workplan is submitted in response to your February 26, 1999 request (to Ken Burger of EBRPD).

This workplan follows the December 1998 SES Closure Assessment report that included recommendations for additional site investigation activities, including:

- Conducting an in-stream bioassessment (sampling conducted April 2, 1999);
- Conducting an additional groundwater and creek surface monitoring event (conducted April 6, 1999);
- Conducting an exploratory drilling and sampling program to address data gaps in plume definition and to evaluate current hydrochemical conditions (scheduled for April 14 and 15, 1999); and
- Evaluating historical hydrologic and hydrochemical data in the context of plume stability and potential long-term impacts, evaluating remedial options to address unacceptable impacts, including the viability of introducing oxygen releasing compounds existing and/or additional site groundwater wells to enhance natural degradation of fuel compounds.

At your direction, this workplan summarizes the standard operating procedures (SOPs) and proposed locations for the exploratory drilling activities.

SES TEAM QUALIFICATIONS

The drilling will be conducted by Fisch Environmental Services (who maintains a current C-57 license) under supervision of an SES California Registered Geologist. Laboratory analyses will be conducted by Curtis & Tompkins, Ltd. of Berkeley, California, who maintains California Department of Health Services ELAP certifications for all the analytical methods that will be utilized.

DRILLING LOCATIONS

We estimate that up to ten exploratory borings will be drilled in the area between the former UFSTs and the creek. The borings will be located on two approximately north to south trending transects approximately 50 feet apart. Borings will be located on approximately 20-foot centers along each transect. The attached figure shows the proposed boring locations. Actual locations may be revised in the field based on site access and subsurface conditions encountered during drilling.

PROPOSED SAMPLING AND ANALYTICAL PROGRAM

One soil sample will be collected from each boring for laboratory analysis of chemicals of concern (TPHg, TPHd, BTEX and MTBE) as well as indicators of natural attenuation. Soil samples will be collected from the inferred contaminated zone of the capillary fringe. One grab-groundwater sample will be collected from each boring from the upper water-bearing zone. Groundwater samples will be analyzed for the chemicals of concern as well as indicators of natural attenuation.

DRILLING SOPs

Prior to drilling, SES will update the site-specific health and safety plan (HASP) to address the drilling and sampling activities. The drilling subcontractor will conform to the tenets of the SES HASP at a minimum.

Borings will be drilled with the Geoprobe™ system which advances an approximately 2-inch diameter steel rod containing acetate sleeves for core recovery. Drilling and sampling equipment will be decontaminated between each bore by steam cleaning. Sleeves selected for laboratory analysis will be capped with non-reactive caps, labeled and transported under chain-of-custody to the laboratory. Grab-groundwater samples will be collected with vacuum pump tubing inserted through a temporary PVC well casing installed in the boring, and will be transferred to appropriate

preserved containers for transport to the laboratory. Sample handling, preservation and documentation will be in accordance with USEPA protocols.

Selected bores will be geologically logged by visual inspection of soil cores. Soil samples will be field-screened with a flame ionization detector (FID) for evidence of soil contamination to assist in the selection of samples for laboratory analysis and as a cost-effective technique for supplementing laboratory-analyzed samples to delineate soil contamination. Following sampling activities, the borings will be tremie-grouted to surface with a cement-bentonite grout slurry. All investigation-derived waste (unused soil samples and decontamination rinseate) will be temporarily containerized onsite for subsequent offsite disposal.

Please contact me directly at 510-644-3123 if you have any questions or require additional information regarding the proposed activities.

Sincerely,

Bruce M. Rucker.

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

REGISTERED GEOLOGIST
BRUCE M. RUCKER
No. 6814
Exp. 9/30/00
STATE OF CALIFORNIA

cc. Warren Gee, East Bay Regional Park District
Mike Rugg, Department of Fish and Game – Yountville, CA

Attachment: map of proposed boring locations