



ENGINEERING-SCIENCE, INC.

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9 July 1993
Ref: NC367

East Bay Regional Parks District
Parklands Design Department
P.O. Box 5381
Oakland, CA 94605

Attention: Mr. Warren Gee

Subject: Proposal for Sampling of Contaminated Soil Stockpile, Redwood Regional
Park Site

Dear Mr. Gee:

INTRODUCTION

In accordance with your verbal request of 8 July 1993, Engineering-Science, Inc. (ES) is pleased to submit to East Bay Regional Parks District (EBRPD) this proposal to conduct sampling and analysis of the contaminated soil stockpile at the Redwood Regional Park underground storage tank (UST) site.

We understand that there is currently approximately 600 cubic yards of contaminated soil stockpiled at the site, which was generated during removal of a gasoline UST and subsequent excavation activities both conducted by another company contracted directly with EBRPD. Analytical results of excavation confirmation samples collected by ES indicate concentrations of up to 2,200 mg/Kg total petroleum hydrocarbons as gasoline (TPH-g) and 434 mg/Kg aromatic hydrocarbons (including benzene, toluene, total xylenes and ethylbenzene, or BTXE). We further understand that EBRPD is considering on-site, passive aeration of this soil as a remedial option.

In general, aeration of contaminated soil is regulated by the San Francisco Bay Area Air Quality Management District (BAAQMD) under Regulation 8 - Organic Compounds, Rule 40 - Aeration of Contaminated Soil and Removal of Underground Storage Tanks (adopted 16 July 1986). This regulation limits the emission of organic compounds from soil that has been contaminated by petroleum products, and specifies the procedures for sampling and analysis of contaminated soil stockpiles prior to aeration. The regulation also requires that all stockpiled, contaminated soil that is not currently aerating must be fully covered to minimize volatile emissions.

We understand that EBRPD will be responsible for all aspects of soil aeration, including notification to BAAQMD and submittal of any required reports or forms.

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SCOPE OF WORK

The scope of work for this proposal is presented in the following tasks: 1) Stockpile soil sampling; 2) Laboratory analyses; and 3) Data evaluation and reporting.

Task 1 - Stockpile Soil Sampling

In accordance with the BAAQMD Regulation 8 Rule 40 sampling protocol, ES will collect one four-point composite sample from approximately each 50 cubic yards of stockpiled soil. Soil samples will be collected at least three inches below the surface of the pile in brass sampling tubes. Each tube will be sealed with Teflon tape and non-reactive plastic caps, labeled, refrigerated and transported under chain-of-custody to the analytical laboratory. ES will document soil sampling protocols in a bound field logbook, including a sketch map of the stockpile and soil sampling locations. ES estimates that a total of 12 composite samples (total of 48 discrete samples) will be collected.

Task 2 - Laboratory Analyses

Soil samples will be analyzed by a laboratory that maintains current certification under the State of California Department of Toxic Substances Control (DTSC) Environmental Laboratory Accreditation Program (ELAP). The four discrete samples comprising each composite sample will be composited in the laboratory prior to analysis. Each of the estimated 12 composite samples will be analyzed for the following:

- TPH-g by DTSC Leaking Underground Fuel Tank (LUFT) Manual method
- BTXE by EPA Method 8020

Task 3 - Data Evaluation and Reporting

ES will evaluate the analytical results in the context of the BAAQMD Regulation 8 Rule 40 Allowable Rate of Uncontrolled Aeration. ES will submit to EBRPD a brief letter report summarizing the results of the aforementioned tasks. This report will include the following elements:

- Brief description of project background
- Stockpile soil sampling protocols
- Tabular summary of analytical results
- Sketch map of stockpile location and stockpile soil sample locations
- Certified analytical laboratory reports including chain-of-custody documentation
- Discussion of analytical results in the context of allowable soil volumes to be aerated
- Recommendations for sampling of aerated soil at the conclusion of the aeration process to confirm residual contamination

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ESTIMATED SCHEDULE AND COSTS


We estimate that one week will be required to schedule field personnel and collect the stockpile soil samples. Up to two weeks will be required for analytical laboratory turnaround. One week will be required to evaluate the data and prepare the letter report.

In accordance with the estimated cost by task (Table 1), we estimate the cost to complete the proposed scope of work to be \$3,300. ES proposes to provide these services to EBRPD on a time-and-expense basis; hence EBRPD will be invoiced only for those costs actually incurred. The current authorized project value (including ES change order #1) is \$21,600. ES submitted to EBRPD on 23 June 1993 a proposal and associated change order #2 (\$21,300) for an exploratory borehole investigation at the Redwood site. Should EBRPD authorize this investigation, the total authorized project value would increase from \$21,600 to \$42,900. The enclosed ES change order #3 for \$3,300 will increase the current authorized project value from \$21,600 to \$24,900. Should EBRPD accept both change orders 2 and 3, the total authorized project value would increase to \$46,200.

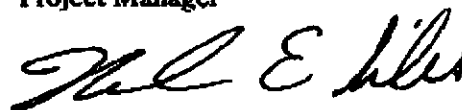
Should this proposal be acceptable, please sign the enclosed change order, keep a copy for your files and return the original to our office. Should you have questions or require additional information, please call.

Very truly yours,

ENGINEERING-SCIENCE, INC.



Bruce M. Rucker
Project Manager



Neal E. Siler, Manager
Hazardous Waste
Management Department

BMR/NES/amb/43-06.R0

Enclosure

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

LETTER OF TRANSMITTAL

ATTN: JULIET SHEN

To: DEPARTMENT OF ENVIRONMENTAL HEALTH Date: 7/12/93

80 SWAN WAY RM 350

OAKLAND CA 94621

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Subject: SAMPLING OF CONTAMINATED SOIL STOCKPILE,
REDWOOD REGIONAL PARK SITE

We are sending you herewith:

Prints, Tracings, Working drawings,
 Specifications, Correspondence, Photographs,

For the following action:

For your information, For your records, For your review,

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Parkland Design Department

BY: WARREN GEE

