

FUGRO-McCLELLAND (WEST), INC.

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June 18, 1993
Reference: P9341-2040

Lebovitz & David
Two Century Plaza
2099 Century Park East, Suite 3100
Los Angeles, California 90067

Attention: Ms. Deborah A. David
Attorney at Law

**Proposal to Conduct Additional Environmental
Assessment and Soil Vapor Extraction Testing,
106-110 Hegenberger Road, Oakland, California**

Fugro-McClelland is pleased to submit this proposal outlining a scope of services and cost estimate to conduct additional environmental assessment, and to perform soil vapor extraction (SVE) testing at the subject site located at 106-110 Hegenberger Road, Oakland, California. We have reviewed the proposal for services document prepared by West Coast Environmental dated March 23, 1993, included with your request for proposal package. As requested, the scope of services contained herein is consistent with the Alameda County Environmental Health Department (EHD)-approved scope of services prepared by West Coast Environmental.

Background

Fugro-McClelland understands that the subject property was the site of a former gasoline station and car wash. It is our understanding that three underground storage tanks (USTs) used for the storage of hydrocarbon products and an underground clarifier/sump were utilized at the site. Reportedly, all three of the USTs and the clarifier/sump were removed by Bay Area Tank and Marine who also collected soil samples for chemical analysis from the excavations and trenches which resulted from the removal of the tanks and associated piping. Additionally, we understand Harding Lawson and Associates collected

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U.S. operating companies in California, Louisiana, Missouri, and Texas
International operating companies in Australia, Belgium, Brunei, Canada, Germany, Hong Kong, Indonesia, Japan,
Malaysia, The Netherlands, Saudi Arabia, Singapore, United Kingdom, and United Arab Emirates.

Lebovitz & David
June 18, 1993 (9341-2040)

an additional soil sample from the clarifier/sump excavation. In total, 36 soil samples were collected for chemical analysis from the excavations and trenches.

Fugro-McClelland understands that in April 1991 West Coast Environmental conducted additional assessment in the vicinity of the removed clarifier/sump. However, it is our understanding that additional assessment to determine the vertical and lateral extent of the soil contamination plume, and to determine whether or not ground water beneath the site has been impacted is required by EHD. This proposal is in response to these requirements.

Scope of Services

The proposed scope of services required for the project is described below. The tasks described are consistent with the scope of services contained in the West Coast Environmental March 23, 1993 document.

Task 1 - Regulatory Agency, Coordination, Technical Work Plan, Health and Safety Plan Preparation

Prior to conducting field work, Fugro-McClelland will prepare a Technical Work Plan and Health and Safety Plan, which must be submitted to and approved by EHD prior to implementation of field work. The work plan will describe the tasks involved to complete the project. The health and safety plan will provide for general worker and public safety.

Task 2 - Installation of Ground Water Monitoring Wells

Fugro-McClelland will install four ground water monitoring wells at the site at the locations identified by West Coast Environmental. Two of the monitoring wells will be installed in the vicinity of the former clarifier/sump, one monitoring well will be installed hydrogeologically upgradient of the rear fuel dispenser islands toward the northern property line, and one monitoring well will be installed in the vicinity of former UST No. 3.

The four ground water monitoring wells will be constructed of two-inch-diameter Schedule 40 PVC and will extend to a depth of approximately ten feet below first ground water or to the first impermeable unit encountered per State of California Regional Water Quality Control Board-San Francisco Bay region requirements. The screened interval of each monitoring well will extend from the base of the monitoring well to a depth of three to five feet. The monitoring wells will be constructed per California Code of Regulations, Title 23, Sections 2647 and 2648.

no, according to SW Regional Board Guidelines

Lebovitz & David
June 18, 1993 (9341-2040)

During the advancement of the drill holes required for the installation of the ground water monitoring wells, Fugro-McClelland will collect undisturbed soil samples for chemical analysis at five-foot intervals from grade to the total depth of each. The earth materials encountered will be geologically logged and screened for volatile organic compounds with a photoionization detector (PID) by a Fugro-McClelland geologist. One soil sample from each drill hole will be submitted to a State of California Environmental Protection Agency (CAL-EPA)-certified laboratory for the following analysis:

- 4 Total petroleum hydrocarbons-gasoline (TPH-g) and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA method 8020/8015, modified;
- 4 Total oil and grease by SM 5520 D+F;
- 3 Total lead by EPA method 7420; and
- 2 Soluble lead by EPA method California W.E.T./7420.

Additionally, the soil sample collected from the drill hole advancement closest to the former clarifier/sump will be analyzed for the following:

- TPH-diesel fuel (TPH-d) by EPA method 8015, modified;
- Halogenated hydrocarbon compounds by EPA method 8010;
- Semi-volatile hydrocarbon compounds by EPA method 8270; and
- Chromium, cadmium, lead, nickel, and zinc by EPA method 6010/7000 series.

Following the installation of the four ground water monitoring wells, Fugro-McClelland will develop and collect ground water samples for chemical analysis. The purged ground water will be containerized on-site in 55-gallon-capacity U.S. Department of Transportation (DOT) approved containers pending receipt of analytical results. One ground water sample from each ground water monitoring well and one trip blank will be submitted to a CAL-EPA-certified laboratory for analysis. The analysis will include the following:

- 5 TPH-g and BTEX by EPA method 8020/8015, modified;
- 5 Total oil and grease by SM 5520 C+F;

Lebovitz & David
June 18, 1993 (9341-2040)

- 5 Total lead by EPA method 7420;
- 4 Soluble lead by EPA method California W.E.T./7420;
- 1 TPH-d by EPA method 8020/8015, modified;
- 1 Semi-volatile hydrocarbon compounds by EPA method 8270;
- 1 Halogenated hydrocarbon compounds by EPA method 8010;
and
- 1 Chromium, cadmium, lead, nickel, and zinc by EPA method
6010/7000 series.

Task 3 - Assessment of Soil Contamination Plume

To determine the vertical and lateral extent of the suspected soil contamination plume, Fugro-McClelland will advance eight drill holes in the vicinity of the former USTs. The eight drill holes will be six-inch-diameter and will be advanced to depth of up to eight feet (to ground water). The drill holes will not be advanced below the ground water table. Fugro-McClelland will collect undisturbed soil samples at three-foot intervals from grade to total depth of each. The earth materials encountered will be geologically logged and screened for volatile organic compounds with a PID by a Fugro-McClelland geologist. One soil sample from each of the eight drill holes will be chemically analyzed. The analytical program will be as follows, per the West Coast Environmental document.

<u>LOCATION</u>	<u>ANALYSIS</u>
UST No. 3	1 TPH (fuel fingerprint) and BTEX by EPA method 8020/8015, modified and total oil and grease by SM 5520 D+F
Product line	2 TPH-g and BTEX by EPA method 8020/8015, modified
North pump island	2 TPH-g and BTEX by EPA method 8020/8015, modified
South pump island	2 TPH-g and BTEX by EPA method 8020/8015 modified

Lebovitz & David
June 18, 1993 (9341-2040)

UST No. 1 and UST No. 2

1

TPH-g and BTEX by EPA method
8020/8015, modified

All soil cuttings generated during the drill hole advancement program will be containerized on-site in 55-gallon-capacity DOT-approved drums pending receipt of analytical results.

Task 4 - Soil Vapor Extraction Well Installation

Fugro-McClelland will install three four-inch-diameter SVE wells in the vicinity of the previously identified soil contamination plume area to a depth of approximately eight feet at the locations specified by West Coast Environmental. The three SVE wells will be installed to conduct SVE testing at the site. The vapor extraction wells may be used to perform SVE remediation of the site if SVE is found to be feasible as a corrective action alternative. Fugro-McClelland will use a hollow-stem auger drilling rig to install the wells. The earth materials encountered will be geologically logged and soil cuttings monitored for volatile organic compounds with a PID by a Fugro-McClelland geologist.

Soil samples will be collected at three-foot intervals during the advancement of each SVE well from grade to total depth of each drill hole. Soil samples will not be collected for chemical analysis. However, three soil samples from the SVE well installation program will be analyzed for permeability and other soil properties by ASTM D2434 and ASTM D5084.

All soil cuttings generated during the SVE well installation will be containerized in DOT-approved drums.

Task 5 - Soil Vapor Extraction Testing

Fugro-McClelland will perform radius-of-influence testing at the site using the three newly installed SVE wells. Fugro-McClelland will temporarily (eight hours) connect a blower to one or two of the wells. The blower will vent directly to an activated carbon adsorption unit before venting to the atmosphere as part of SVE testing. As each well is tested, vacuum pressures will be periodically monitored in the two surrounding wells to determine the radius-of-influence of the soil venting system. Performance testing also includes measurement for air velocity and flow rate, relative humidity, temperature, and volatile organic compounds (VOCs). The pressure and flow will be monitored with a micromanometer and the temperature and relative humidity with a hand-held meter. The VOCs will be monitored at 30-minute intervals with a PID. The results of the testing will be used to model the radius-of-influence of this remedial technique and to determine if additional wells will be necessary.

Lebovitz & David
June 18, 1993 (9341-2040)

Additionally, during the performance of radius-of-influence testing, Fugro-McClelland will collect two soil vapor samples for chemical analysis. The results of the analysis will assist in the selection of the appropriate treatment technology (i.e., incineration of hydrocarbon vapors or hydrocarbon vapor capture using activated carbon adsorption). The samples will be analyzed for TPH-g and BTEX in a CAL-EPA-certified laboratory.

Task 6 - Report Preparation

Fugro-McClelland will prepare a technical report presenting our findings, conclusions, and recommendations as they pertain to the subject project. Included in this report will be remedial action system alternatives with estimated costs for soil contamination treatment.

Task 7 - Project Management

Project Management provides for the planning, organizing and control of the project resources to meet technical, schedule and budget commitments. This includes coordination of the project with regulators and subcontractors.

Cost Estimate

We propose to provide the services described in Tasks 1 through 7 on a time and expense basis in accordance with the enclosed current Fee Schedule. The estimated charges to complete the scope of services discussed herein are \$27,275. The estimated costs are detailed in the following cost breakdown.

Task 1 - Regulatory Agency, Coordination, Technical Work Plan, Health and Safety Plan Preparation

Supervising Professional	1 hour @ \$105	\$105
Senior Professional	2 hours @ \$95	\$190
Staff Professional	8 hours @ \$75	\$600
Illustrator	4 hours @ \$50	\$200
Word Processor	5 hours @ \$40	<u>\$200</u>
	Subtotal	\$1,295

Lebovitz & David
June 18, 1993 (9341-2040)

Task 2 - Installation of Ground Water Monitoring Wells

Senior Professional	1 hour @ \$95	\$95
Staff Professional	10 hours @ \$75	\$750
Technician	8 hours @ \$55	\$440
Drill Rig and Crew	10 hours @ \$130 + 15%	\$1,500
Steam Cleaner	1 day @ \$130 + 15%	\$150
Monitoring Well Supplies	Lump Sum	\$1,840
Photoionization Detector	1 day @ \$100	\$100
DOT Drums	14 @ \$40	\$560
Chemical Laboratory Analysis		
Soil	Lump Sum	\$1,790
Ground Water	Lump Sum	<u>\$1,980</u>
	Subtotal	\$9,205

Task 3 - Assessment of Soil Contamination Plume

Project Professional	1 hour @ \$85	\$85
Staff Professional	6 hours @ \$75	\$450
Drill Rig and Crew	6 hours @ \$130 + 15%	\$900
Steam Cleaner	1 day @ \$130 + 15%	\$150
Photoionization Detector	1 day @ \$100	\$100
DOT Drums	4 @ \$40	\$160
Chemical Laboratory Analysis	Lump Sum	<u>\$875</u>
	Subtotal	\$2,720

Task 4 - Soil Vapor Extraction Well Installation

Project Professional	2 hours @ \$85	\$170
Staff Professional	8 hours @ \$75	\$600
Drill Rig and Crew	8 hours @ \$130 + 15%	\$1,200
Steam Cleaner	1 day @ \$130 + 15%	\$150
SVE Well Supplies	Lump Sum	\$1,350
Photoionization Detector	1 day @ \$100	\$100
DOT Drums	3 drums @ \$40	\$120
Geotechnical Laboratory Analysis	Lump Sum	<u>\$975</u>
	Subtotal	\$4,665

Lebovitz & David
June 18, 1993 (9341-2040)

Task 5 - Soil Vapor Extraction Testing

Senior Professional	2 hours @ \$95	\$190
Staff Professional	8 hours @ \$75	\$600
Technician	8 hours @ \$60	\$480
Blower and Associated Supplies	Lump Sum	\$1,000
Photoionization Detector	1 day @ \$100	\$100
Carbon Adsorption Canister	Lump Sum - \$890 + 15%	<u>\$1,025</u>
	Subtotal	<u>\$3,395</u>

Task 6 - Report Preparation

Principal Professional	1 hour @ \$125	\$125
Senior Professional	6 hours @ \$95	\$570
Staff Professional	32 hours @ \$75	\$2,400
Illustrator	10 hours @ \$50	\$500
Word Processor	12 hours @ \$40	<u>\$480</u>
	Subtotal	<u>\$4,075</u>

Task 7 - Project Management

Senior Professional	2 hour @ \$95	\$190
Project Professional	4 hours @ \$85	\$340
Staff Professional	10 hours @ \$85	\$850
Illustrator	6 hours @ \$50	\$300
Word Processor	6 hours @ \$40	<u>\$240</u>
	Subtotal	<u>\$1,920</u>
	Total Estimated Cost	<u>\$27,275</u>

Schedule and Assumptions

Fugro-McClelland is prepared to begin work on this project upon receipt of written authorization to proceed. Preparation and submittal of the Technical Work Plan/Site Health and Safety Plan will require 1 week. Field work will require 3 weeks to complete (including permit acquisition), environmental and geotechnical analyses will require 2 weeks to complete, and report preparation will require 3 weeks to complete.

The estimated costs and schedule described above are based on the following assumptions:

Lebovitz & David
June 18, 1993 (9341-2040)

- The locations of subsurface and aboveground utilities will be made known to and located for Fugro-McClelland prior to the commencement of field work.
- The field work for the drilling program and radius-of-influence testing will require 3 to 4 days to complete. Inclement weather would delay field activities and would delay the project.
- Laboratory analysis will require 2 weeks to complete.
- Fugro-McClelland is not responsible for the disposal of the soil cuttings generated during the SVE well installation program.
- Fugro-McClelland is not responsible for damage to underground or aboveground utilities, pipes, tanks, structures, or the environment caused by drilling activities.
- Lebovitz & David should recognize that special risks occur when exploring the subsurface. Fugro-McClelland will strive to employ the necessary procedures under the current standard of practice to reduce the risk of working in the subsurface environment, but cannot eliminate those risks altogether.

Fugro-McClelland has successfully remediated numerous hazardous substances contaminated sites throughout California through the use of a number of remedial action techniques. In many cases, we have utilized soil vapor extraction to remediate soil contamination resulting from leaking USTs. Where appropriate, we have coupled our soil vapor extraction activities with ground water treatment systems including both pump and treat and in-situ air sparging techniques. We encourage you to contact the following references regarding our past performance on recent UST projects.

Reznick & Reznick, Attorneys at Law
Ms. Janice Reznick @ (818) 907-9898

City of Santa Barbara Public Works Engineering
Mr. Leif Reynolds @ (805) 564-5383

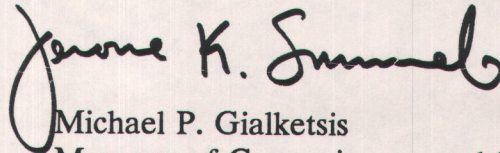
Color Spot, Inc.
Mr. Kevin Adams @ (510) 237-8066

Lebovitz & David
June 18, 1993 (9341-2040)

If this proposal is acceptable, please sign and return a copy of the General Terms and Conditions. We appreciate the opportunity to submit this proposal. Please contact me or Mr. Jerome K. Summerlin of our staff if you have any questions.

Sincerely,

FUGRO-McCLELLAND (WEST), INC.

 **for MPG**
Michael P. Gialketsis
Manager of Geoenvironmental Services

Attachments: Fee Schedule
 General Terms and Conditions