REMEDIATION TESTING AND DESIGN
ENVIRONMENTAL INVESTIGATION REMEDIATION SITE CLOSURE
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February 17, 1994

Mr. Bo K. Gin
Oakland Auto Parts & Tires
288 Eleventh Street
Oakland, California 94607

Subject: Proposal to Conduct Vacuum Extraction Feasibility Testing at Oakland Auto Parts at 7th and Harrison Streets in Oakland, California

Dear Mr. Gin:

Remediation, Testing and Design (RTD) is pleased to submit the following proposal to conduct vacuum extraction feasibility testing (VEFT) at the Oakland Auto Parts Site located at 706 Harrison Street in Oakland, California. This proposal is in response to a written request to provide a technical proposal and costs to perform vacuum extraction feasibility testing at the above referenced site from Dennis Bates Associates, Inc.

SCOPE OF WORK

RTD proposes the following activities: 1) Notify the Bay Area Air Quality Management District (BAAQMD) of the VEFT, 2) Perform vacuum extraction feasibility testing (VEFT), and 3) Prepare a VEFT summary report. The site work will require five full days of field work. Exact testing details for the site may be modified based on site conditions, but will generally follow the proposed field activities described below.

BAAQMD Notification

A minimum of one week prior to conducting the VEFT, RTD will send the BAAQMD a short notification letter describing the testing procedures, equipment to be used, type of vapor abatement, and monitoring procedures. An Authority to Construct or a Permit to Operate is not required for the VEFT as long as proven vapor abatement techniques are employed, and the testing program does not exceed five days. RTD will conform to both requirements.

Vacuum Extraction Feasibility Testing

RTD will conduct the VEFT using the existing vapor recovery/vacuum extraction wells at the site for extraction purposes and the monitoring wells used to monitor vacuum influence. The VEFT will be conducted to determine the effectiveness of using vacuum extraction for remediation of soil and groundwater, and the removal of insoluble hydrocarbons (if present).

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The VEFT will be conducted using RTDs vacuum extraction testing unit (VETU) consisting of: a Kohler 12-horsepower engine directly driving a Sutorbilt Model 3ML positive displacement blower capable of displacing 125 standard cubic feet per minute (scfm) and attainment of a vacuum load of 15 inches of mercury; a 55-gallon water accumulator to remove any vaporized water; and two granular activated carbon (GAC) canisters in series, each containing 200-pounds of vapor phase GAC. RTD will supply sufficient GAC filter capacity to conduct the testing and has included utilization of two 200-pound GAC canisters, including disposal, in this proposal.

Soil gasses extracted during the VEFT will be continuously field screened for total volatile hydrocarbons (TVH) using a Beckman Model 400 Total Hydrocarbon Analyzer equipped with a flame ionization detector (FID). RTD recommends further analysis of extracted soil gasses for oxygen and carbon dioxide. It is our understanding that DBA will supply a properly calibrated instrument capable of detecting oxygen and carbon dioxide at a range of 0 to 25 weight percent.

RTD anticipates extracting from each of the wells for a period of ten minutes each. The groundwater monitor wells (MW-1 and MW-2) will be tested briefly with and without a 1-inch diameter PVC drop pipe. Use of the drop pipe may enhance hydrocarbon extraction while reducing groundwater up welling. Vacuum extraction will be conducted for a minimum period of 12-hours (4-hours the first period, 8-hours the second period). The test will then be suspended for a 24-hour period. The second portion of the test will be for a minimum of 12-hours (8-hours the first period, 4-hours the second period). This will help in determining the rebound effect and to determine the overall effectiveness and sizing of the vapor extraction system.

Periodically during the testing, extracted soil gasses will be collected into 1-L Tedlar air bags. DBA will transport them under chain of custody documentation to a certified laboratory for analysis of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethyl benzene and total xylenes (BTEX). RTD will collect the samples and DBA will be responsible for supplying the airbags and the laboratory costs. RTD anticipates collecting a total of four air bag samples for laboratory analyses.

Any liquid wastes produced during the VEFT will be stored on-site in DBA supplied DOT rated 55-gallon drums. It is assumed that DBA will be responsible for the costs associated with the disposal of these wastes.

Report Preparation

Based on the results of the field work, a report will be prepared for the site which will summarize field activities and present the results of the vacuum extraction feasibility testing. In addition to data presentation, the report will also contain RTDs conclusions and recommendations.

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PROJECT COSTS

	COSTS
• Pre-field Activities and Permitting	$ 60.00
• Oakland Auto Parts Site VEFT	$ 4,930.00
• Carbon Canisters (Two @ 200# GAC each, including disposal)	$ 1,200.00
• Report Preparation	$ 600.00
PROJECT TOTAL	$ 6,790.00

Payment Terms and Conditions

Payment of $3,000 to RTD is required prior to conducting the VEFT to initiate the field work and cover job related expenses. Payment of the project total costs are net due in 30-days from submittal date of invoice.

These costs are valid for 60 days. If you have any questions or comments regarding this proposal, please call me or Mr. Howard Whitney at (408) 458-1612.

REMEDIATION TESTING AND DESIGN

Thomas E. Armstrong
President

This proposal is hereby accepted. By signing this proposal and initialing all pages, I authorize RTD to provide the aforementioned environmental services for the costs shown and accept the payment terms and conditions.

Bo K. Gin
Property Owner, 706 Harrison Street, Oakland, CA

cc: Dr. John Sammons, Dennis Bates Associates, Inc.

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