



## ENVIRONMENTAL BIO-SYSTEMS, INC.

Innovative Solutions for a Better Environment

June 11, 1990

CALIFORNIA REGIONAL WATER

JUL 17 1990

QUALITY CONTROL BOARD

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Zaccor Corporation  
791 Hamilton Avenue  
Menlo Park, California 94025

Attention: Mr. Gary Zaccor

The following documentation concerns the initial tank removal sampling and assessment performed by Environmental Bio-Systems, Inc. for Zaccor Corporation, on May 25, 1990 at:

WEST COAST WIRE ROPE COMPANY  
597 85TH AVENUE  
OAKLAND, CALIFORNIA

On this date, one steel walled 8,000 gallon underground diesel fuel tank was removed from the property. Subsequent sampling of surrounding soil within the tank pit excavation was performed in the presence of Inspector Cynthia Chapman of the Alameda County Department of Environmental Health.

### FIELD OBSERVATIONS

Upon removal it was note that the tank had a mostly intact tar wrap. A detailed visual inspection of the tank did not reveal the presence of any pitting, significant rusting, or holes. Hydrocarbon odor was noted in the backfill material near the northern end of the tank pit (refer to the attached diagram). Odorous soil, approximately 50 cubic yards in volume, was segregated from what appeared to be clean soil during excavation and placed in a stockpile designated as stockpile B. The assumed clean material, approximately 50 cubic yards, was placed in a stockpile designated as stockpile A. Odorous water was also present in the pit at an approximate depth of 7.5 feet below grade. The water was suctioned out of the pit in an attempt to obtain a representative recharge sample.

### SAMPLING

At the direction of Inspector Chapman, two soil samples were collected from the native soil lying approximately 12 to 18 inches below the backfill/native soil interface at either end of the tank pit (refer to the attached diagram illustrating sample locations). One sample was also collected from each of the stockpiles (A and B) generated during tank removal operations.

Sample #S1 was collected from the northern end of the tank pit at a depth of 7.0 feet below grade. Sample #S2 was collected from the southern end of the tank pit also at a depth of 7.0 feet below grade. Sample #SC3A-D was collected from stockpile B and sample #SC4A-D was collected from stockpile A.

At the discretion of Inspector Chapman, a sample was of the water from the pit was not collected due to insufficient recharge

### SAMPLE ANALYSES

All four soil samples were analyzed for total petroleum hydrocarbons (TPH) calculated as diesel, benzene, toluene, xylenes, and ethylbenzene (BTX&E). Samples #SC3A-D and #SC4A-D were also analyzed for total lead.

### SAMPLING METHODOLOGY

Soil was removed from the pit in a backhoe bucket. After removing the first 3 to 4 inches of soil just above the teeth of the bucket, presumably slough, samples were contained by driving clean brass tubes (1.92" x 6") into the exposed layer of soil. Soil was packed into the tubes to eliminate the possibility of headspace. Thus prepared, the ends of the tubes were wrapped with aluminum foil and sealed with plastic caps. After removing excess foil, tape was applied to the seams between cap and tube in an effort to reduce the evaporative loss of volatile constituents.

Composite soil samples were collected from each stockpile in accordance with Bay Area Air Quality Management District guidelines, and were contained and sealed as described above.

The samples were then placed on ice in a cooler and transported under chain of custody documentation to Mobile Chem Labs, Inc., a certified hazardous materials testing laboratory (HMTL #289).

Analytical methods used by Mobile Chem Labs, Inc. were consistent with procedures presented in EPA document SW-846.

### RESULTS

The certified analytical report documenting the findings of analyses has been attached to this report.

Sample #S1 contained TPH calculated as diesel at a concentration of 290 parts per million (ppm), benzene at 0.1 ppm, xylenes at 0.2 ppm, and ethylbenzene at 0.1 ppm.

Sample #S2 did not contain detectable concentrations of TPH calculated as diesel or BTX&E above the respective detection limits for each of these constituents.

Composite sample #SC4A-D contained TPH calculated as diesel at a concentration of 54 ppm. BTX&E was not detected above the respective detection limits for each of these constituents. Total lead was detected at a concentration of 4.7 ppm.

### RECOMMENDATIONS

The State Water Resources Control Board document, Leaking Underground Fuel Tank Field Manual (LUFT), supported by the San Francisco Regional Water Quality Control Board (SFRWQCB), defines acceptable limits and appropriate actions in dealing with tank removal and associated contamination.

The presence of fuel hydrocarbons in excess of 100 ppm in sample #S.1 necessitates further investigation. Initial activities should include the excavation of soils containing concentrations of TPH calculated as diesel in excess of 100 ppm. Excavation should be performed until certified laboratory analysis confirms that acceptable levels (<100 ppm) have been attained. In accordance with the LUFT manual, such investigatory actions should include the installation of at least one groundwater monitoring well within ten feet of the former diesel tank pit for the collection of groundwater quality data. Also in accordance with LUFT guidelines, a determination of the direction of groundwater gradient must be accomplished. To satisfy this requirement two additional groundwater reference points would be necessary. Consequently, two additional wells would need to be installed. It is acceptable to use a previously installed well on an adjacent property (if any exist) that has been properly screened as reference point, in lieu of requiring the installation of two additional wells.

Analytical results for sample #S3A-D (composite sample from stockpile B) indicate that this material contains concentrations of hydrocarbons which exceed acceptable limits for disposal at a class III landfill. Because of the presence of such concentrations, appropriate actions include disposal of this material at a class I hazardous materials landfill or disposal at an accepting class II landfill, or on site treatment using biological methods in accordance with regulatory specifications, until residual levels of hydrocarbons have been diminished to acceptable levels for class III landfill disposal. Total lead concentrations are below toxic levels as stated in Title 22 of the California Administrative Code (section 66699).

Composite sample #SC4A-D contained concentrations of hydrocarbons which are within acceptable limits for class III landfill disposal. Total lead concentrations are below toxic levels as stated in Title 22 of the California Administrative Code (section 66699), therefore, this material can be hauled to an accepting class III landfill for final disposition.

6/11/90

ZACCOR CORP. @  
WEST COAST WIRE ROPE COMPANY  
OAKLAND, CA

4

**REPORTAGE**

Copies of the sampling report, the chain of custody, and the certified analytical report should be submitted to both the SFRWQCB and the Alameda County Department of Environmental Health.

The following addresses have been listed for your convenience:

Water Quality Control Board  
San Francisco Bay Region  
1800 Harrison Street  
Room 700  
Oakland, CA 94612  
ATTN: Fuel Leaks Division

Alameda County Department of Environmental Health  
Hazardous Materials Unit  
80 Swan Way, Room 200  
Oakland, CA 94621  
ATTN: Cynthia Chapman

If you have any questions, or if I may be of service please contact me at (415) 429-9988.

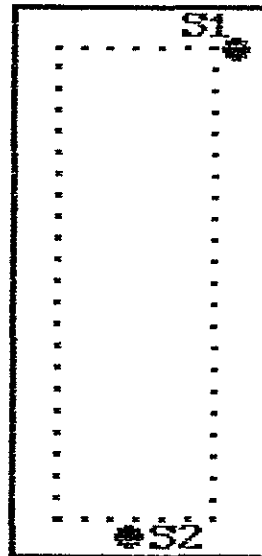
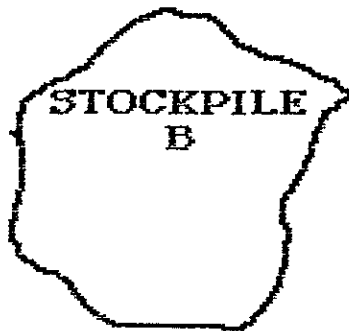
Sincerely,  
ENVIRONMENTAL BIO-SYSTEMS, INC.



Timothy M. Babcock  
Environmental Scientist

TMB/bdm

**ZACCOR CORP.®**  
**WEST COAST WIRE ROPE CO.**  
**597 85th AVE.**  
**OAKLAND, CA.**  
**5/25/90**



BLDG.  
604

85th AVE.

