RIVER BEND PROPERTIES

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ERIC O. FREEBERG President

May 1, 2008

RECEIVED

3:54 pm, Sep 02, 2008

Alameda County Environmental Health

Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

RE: Fuel Leak Case No. RO 161, American Auto Dismantlers 3744 Depot Road Hayward, CA ("Property")

Ladies and Gentlemen:

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report prepared by PIERS Environmental Services, Inc. is true and correct to the best of my knowledge.

I also declare that as the President, I am the responsible party for Riverbend Properties, Inc., a California corporation.

Very truly yours,

Eric O. Freeberg

5-1-08-C-RBP-Alameda County



1330 S. Bascom Ave., Suite F San Jose, CA 95128

August 28, 2008

Tel (408) 559-1248 Fax (408) 559-1224

Alameda County Environmental Health Services 1131 Harbor Way Parkway, Suite 250 Alameda, CA 94502-6577

Attention: Mr. Paresh Khatri

 RE: Work Plan for Additional Soil and Water Investigation American Auto Wreckers
3744 Depot Road Hayward, California Fuel Leak Case No. RO0000161, Geotracker Global ID T0600101922

Dear Mr. Khatri:

In response to your review letter dated July 10, 2008, PIERS has prepared this "Work Plan for Additional Soil and Water Investigation" for the above-referenced site. The purpose of this work is to further assess the extent of hydrocarbons in soil and groundwater in the vicinity of the former waste oil tank pit, and to advance the site towards eventual case closure. Previous work at the Property was summarized in a "Case Closure Summary Form" dated May 16, 2008. The closure request response was also in your July 10, 2008 letter from Alameda County Environmental Health (ACEH).

SITE DESCRIPTION AND BACKGROUND

The Property is located on the south side of Depot Road, between the intersections of Depot Road with Cabot Boulevard and Foley Street, in the City of Hayward, County of Alameda, and State of California. A Property Location Map and Vicinity Map are included with this report (Figures 1 and 2). The Property is identified as Assessors Parcel Number 5-1 of Assessors' Map 439, Page 70 (APN 439-70-5-1) and is approximately 2.5 acres in size. The parcel is a long, narrow rectangular site approximately 110 feet wide and 1,200 feet in length. The present tenant is American Auto Dismantler, an automobile salvage operation. The current use of the Property is comprised of similar industrial usage with scrap yards.

According to previous investigations by PIERS, a 500-gallon waste oil UST and a 1,000gallon gasoline UST were apparently excavated sometime in 1990 and 1991, the tanks were left on site for years, and finally disposed of in 1994 by a previous tenant, without a permit. The tank excavations were also left open for approximately two years before being backfilled, apparently with the aerated soils from the excavations. The Alameda County Health Services Agency (ACHSA) was informed of the tank removals in 1991 and required the owner to provide soil sample analytical results. Samples were later collected by an environmental consultant, TAT Environmental, in May 1992, but no report was ever issued, and the consultant is now out of business. The Property went into foreclosure, and was sold in 1996 to River Bend Properties.

Site Geology and Hydrogeology

The Property is situated in the Coast Range geomorphic province of California. The Coast Range geomorphic province is approximately 400 miles long by 50 miles wide, consisting of northwestern to southeastern-trending mountain ranges. The structure of these ranges is predominately controlled by folds and faults. The Property is located approximately one mile west of the Hayward Fault Zone, which is an active fault. The region to the north and east have had a series of Tertiary volcanic eruptions, including the Berkeley Volcanics, Sonoma Volcanics, and the Clear Lake Volcanics. According to Helley et al (1979), the Property and vicinity are underlain by fine-grained alluvium (map symbol Qhaf) from the Temescal Formation. The fine-grained alluvium is described as organic rich silt and clay, which grades towards the bay waters into marsh deposits.

The Property is located on the eastern margins of San Francisco Bay, approximately 3,800 feet east of the bay waters (U.S.G.S. 7.5' "San Leandro" Topographic Quadrangle) and approximately 1,000 feet east of a number of salt evaporators. Marsh lands lie between the salt evaporators and the bay waters. The Property lies at approximately ten feet above mean sea level (msl).

The Property is located within the Alameda East Bay Groundwater Basin. The June 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* (Beneficial Use Report) states that the current beneficial uses for shallow groundwater in the area are industrial process supply, industrial service supply, and municipal and domestic supply However, the City of Hayward receives its drinking water from the Hetch Hetchy, Calaveras, and San Antonio Reservoirs. The City of Hayward also has four emergency supply wells, screened between 350 and 550 feet below ground surface (bgs) in case of damage to the Hetch Hetchy aqueduct. Also, according to a Risk Assessment Report for 3152 Depot Road, Hayward, CA, prepared by Cambria, dated April 25, 2006, a Halogenated Volatile Organic Compound (HVOC) plume exists in the area, groundwater beneath their site may be brackish due to proximity to the Bay, and "only one industrial well, and several monitoring, abandoned, and remediation wells exist within 2,000-ft of the site [3152 Depot Road]."

Based on the previous subsurface investigations, including six soil borings to sixteen feet in the most recent phase, the subsurface soils consist predominantly of clayey silt (ML). On the most recent drilling event in February 2004, the first water was encountered in the soil borings below 12 feet, and later rose to approximately six feet, which correlated with the depth to water measured in wells MW-1 and MW-2. The total depth explored was sixteen feet below grade. The first water encountered was observed in four of the soil borings (EB-2 through EB-5) to correspond with a slightly sandier silt zone or a thin (two- to six-inch-thick) sandy silt zone. Over time, the hydraulic gradient at the site has been measured as 0.0017 feet per foot (ft/ft), 0.002 ft/ft, and 0.0009 ft/ft, all essentially flat gradients.

PROPOSED SCOPE OF WORK

The proposed scope of work includes the installation of two groundwater monitoring wells and the re-sampling of soils at EB4. One groundwater monitoring well, designated as MW5, is proposed to be installed in the vicinity of previous soil boring EB6. A second groundwater monitoring well, designated as MW6, is proposed to be installed at the presumed down-gradient perimeter of the Property boundary.

Total Petroleum Hydrocarbons (TPH) as diesel was previously encountered in groundwater at EB4 at 350,000 parts per billion (ppb) (PIERS, 2004). In addition, 2,000 parts per million (ppm) of Total Recoverable Petroleum Hydrocarbons (TRPH) was encountered in soil from EB4 at approximately 11.5 feet below grade. These analyses were performed without a silica gel cleanup. To verify these concentrations, and to determine what fraction of these concentrations are organic, PIERS proposes re-sampling soil at 11.5 feet and "grab" groundwater (proposed boring EB4A), and re-analyzing both with and without a silica gel cleanup. By performing the analyses both with and without the silica gel cleanup, the data generated may be used to re-evaluate the previous data for analyses performed without the silica gel cleanup. In addition, in order to determine what fraction are polar non-hydrocarbons, the soil sample will be analyzed for dissolved carbonate, bicarbonate, sodium chloride, bromide, iodide, sodium, calcium, magnesium, chlorine, sulfate and nitrate (Na, Ca, Mg, Cl, HCO₃, SO₄, CO₃, NO₃, I and Br).

The locations of the proposed wells and proposed soil boring are shown on Figure 2.

The following portions of the proposed scope of work are in response to comments in the ACEH letter dated July 10, 2008:

ACEH Technical Comment No. 2 – Water is of potential beneficial use unless Total Dissolved Solids (TDS) exceeds 3,000 ppm; conductivity exceeds 5,000 microseimens per cubic centimeter; and water yield is less than 200 gallons per day.

PIERS proposes to analyze the water samples from the monitoring wells for TDS, and to evaluate the conductivity measurements with respect to the beneficial use requirements. In addition, additional analyses will be conducted to evaluate water quality.

ACEH Technical Comment No. 3 – Need for Evaluation of Sensitive Ecological Receptors PIERS proposes to perform a survey of sensitive ecological receptors within a one-half mile radius of the Property in the assumed down-gradient direction, and include the findings in the report of the investigation.

<u>ACEH Technical Comment No.</u> 4 – Evaluation of Groundwater Contaminant Plume <u>Stability</u>

Groundwater monitoring well, MW2, is located proximal to the northwest of the former waste oil pit. A pre-pack well (one-inch casing), designated as MW5, will be installed on the southwest side of the tank pit, adjacent to the tank pit, and near previous soil boring EB6. An additional well, MW6, is proposed at the down-gradient Property boundary. Existing well MW-3 is a steel-cased well that extends to at least 30.5 feet below grade, with an unknown screen interval. Because of the very poor triangulation on the long narrow parcel between the three wells, and possibly because of the differing construction of well MW-3, the previous measurements of the direction of groundwater flow have been inconsistent. Placement of the additional well MW6 should aid in triangulation of the groundwater gradient, in addition to providing contaminant delineation.

The new and existing monitoring wells would be monitored and sampled for four quarters, per the requirements stated in the ACEH letter, dated July 10, 2008.

Soil samples for laboratory analyses will be obtained during installation at approximately 4.5 feet below grade, and just above the first water-bearing zone, which is anticipated at approximately 12 feet below grade.

Pre-drilling Activities

Prior to drilling, a health and safety plan will be prepared, and the site will be marked for Underground Service Alert (USA), and a USA notification will be completed. Also, permits for the installation of the monitoring wells will be obtained from Alameda County Public Works (ACPW), and well seal inspections will be scheduled.

Installation of Monitoring Wells

The proposed monitoring wells MW5 and MW6 will be completed at the site using a Geoprobe rig. The drill rig will be provided and operated by Vironex, Inc., of Pacheco, California, a state-licensed driller.

Soil and Groundwater Sampling at EB4A

Proposed soil boring EB4A and monitoring wells MW5 and MW6 will be continuously cored and the soils examined for contamination and lithology. At EB4A, as described above, a soil sample from approximately 11.5 feet below grade and a "grab" groundwater sample will be obtained using the same methodology as used in the original soil boring. At MW5 and MW6, soil samples from approximately 4.5 feet (capillary fringe) and approximately 11.5 feet below grade (just above first water-bearing zone) will be obtained for analyses.

Relatively undisturbed soil samples will be collected by hydraulically advancing a core barrel sampling tool lined with a plastic liner. The plastic liners holding the soil intervals will be cut with a hacksaw to isolate the samples selected for laboratory analyses. The plastic tubes will be sealed with Teflon-lined plastic caps, labeled, and placed in sealed plastic bags. The soil samples will be stored in a cooler, on ice, until delivery to a state-certified laboratory. Prior to each use, the drill rods and sample barrel will be cleaned by triple rinsing; using a non-phosphate detergent.

The groundwater sample from EB4A will be collected by using small diameter PVC tubing. The small diameter tubing placed down the hole within the drilling rods will be fitted with a special tip containing a chuck ball which will allow groundwater to be surged to the surface through the tubing and decanted into the sample containers. The water sample will decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which will be sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

Well Construction

The monitoring wells, designated as MW-5 and MW-6 on the attached Figure 2, will be completed to depths of approximately 14 feet below grade, unless differing site conditions are encountered. The uppermost five feet will be completed using 6-inch-diameter augers. The remainder of the boreholes will be cored using 3.25-inch-diameter drilling rods. Upon completion of the soil borings to approximately 14 feet, pre-pack wells with one-inch-diameter Schedule 40 PVC casing will be installed in the boreholes.

The well will be screened with 0.010-inch-diameter slotted screen casing from approximately 12 to 14 feet below grade. The annular space around the casing will be filled with #2/16 sand from approximately 11 to 14 feet below grade. The well design is based on the presence of sandy silt layers between 12 and 14 feet below grade that comprised the first encountered groundwater in previous soil borings EB5 and EB6.

A bentonite packer will be placed in the annular space interval from approximately 10 to 11 feet below grade. The upper ten feet will be filled with neat cement grout. Logs of the exploratory soil borings and details of the well constructions will be included in a technical report.

Soil and Water Disposal

The drill cuttings and any rinsate and/or purged water generated from the wells will be placed in a DOT-approved 55-gallon steel drum, which will be labeled and stored on-site pending proper disposal.

Laboratory Analyses

The soil and groundwater samples will be analyzed for TPH as gasoline and TPH as diesel and motor oil; and for benzene, toluene, ethylbenzene, and xylenes (BTEX) and Methyl-tertiary-butylether (MTBE) by EPA Method 8015-Modified and 8020; and for TRPH by EPA Method 418.1. A silica gel cleanup will be performed for the diesel/motor oil and TRPH analyses. The groundwater samples will also be analyzed for volatile organic compounds (VOC) including the fuel oxygenates and lead scavengers by EPA Method 8260, and for Total Dissolved Solids (TDS). The grab groundwater sample from EB4A will also be analyzed for TPH-diesel/motor oil without the silica gel cleanup, for comparison purposes.

To investigate water quality, the groundwater samples from wells MW2, MW5, and MW6 will also be analyzed for dissolved carbonate, bicarbonate, sodium chloride, bromide, and iodide.

Surveying, Development, Monitoring and Sampling

The tops of the well casings and the tops of the well covers will be surveyed by a state-licensed surveyor. The wells will be developed by removing a minimum of ten well casing volumes of water and by monitoring parameters of temperature, conductivity and pH for stabilization. The new wells will then be incorporated into the quarterly monitoring and sampling program.

Sensitive Ecological Receptor Study

PIERs will examine aerial photographs, topographic maps, and perform a field reconnaissance of the terrain within one-half mile down-gradient of the Property, to the southwest, in order to identify potential sensitive ecological receptors.

Reporting

The work will be summarized in a technical report. Recommendations may be made, as warranted. **PIERS requests the adjustment of due dates of the Quarterly Monitoring Reports to allow the quarterly monitoring to resume after the installation of the two proposed wells.**

Should you have any questions regarding this work plan, please do not hesitate to call me at (510) 593-5382.

Sincerely,

PIERS Environmental Services, Inc.



Joel G. Greger Senior Project Manager CEG # EG1633, REA # 07079

Attachments

Figures 1 and 2



Kay Pannell Chief Operations Officer/Senior Reviewer REP #5800, REA-II #20236

ATTACHMENTS

FIGURES



	<u>FIGURE 1</u> PROPERTY VICINITY MAP	
3744 Depot Road Hayward, CA 94545		27-Sep-06
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