



**CONESTOGA-ROVERS  
& ASSOCIATES**

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11:24 am, Jun 09, 2008

Alameda County  
Environmental Health

5900 Hollis Street, Suite A, Emeryville, California 94608  
Telephone: 510-420-0700 Facsimile: 510-420-9170  
www.CRAworld.com

June 5, 2008

Ms. Barbara Jakub  
Alameda County Health Care Services Agency, Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502  
510/639-1287

Re: **Work Plan Addendum – Additional Characterization and Soil Vapor Sampling**  
Former Exxon Service Station  
3055 35<sup>th</sup> Avenue, Oakland, California  
Fuel Leak Case No. RO0000271  
CRA Project No. 130105

Dear Ms. Jakub:

Conestoga-Rovers & Associates (CRA) presents this *Work Plan Addendum – Additional Characterization and Soil Vapor Sampling* (Work Plan Addendum) on behalf of Golden Empire Properties (GEP). This Work Plan Addendum is in response to the Alameda County Environmental Health Services' (ACEH) May 22, 2008 letter after review of CRA's April 11, 2008 *Work Plan – Additional Characterization and Soil Vapor Sampling* (Work Plan).

### **Modified Scope of Work**

**Onsite and Upgradient Borings:** ACEH has requested that the vertical extent of hydrocarbons and oxygenates in soil, as well as groundwater, is investigated. Therefore, CRA proposes using a GeoProbe<sup>®</sup> rig to continuously core and collect soil samples, instead of a CPT rig as originally proposed in the Work Plan. Soil samples will be collected where staining, odor or PID readings occur or a minimum of every five feet. Onsite and upgradient borings will be advanced to a depth of 45 feet below ground surface (ft bgs) as originally proposed. Hydropunch will be used to collect grab groundwater samples from each of the three borings at approximate depths of 20 ft, 30 ft, and 45 ft.

**Offsite and Downgradient Borings:** If no staining, odor or PID readings occur in offsite, downgradient borings, CRA will attempt to collect soil samples at the capillary fringe, first encountered groundwater, and the bottom of each borehole.

**Chemical Analyses:** In addition to the chemicals of concern proposed in the Work Plan, CRA will analyze soil vapor samples for MTBE and Toluene by EPA Method TO-3, and Oxygen, Carbon Dioxide, and Helium (as tracer gases) by ASTM Method 1946.

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**CONESTOGA-ROVERS  
& ASSOCIATES**

Work Plan Addendum, Additional Characterization and Soil Vapor Sampling  
Golden Empire Properties, Oakland, California  
June 6, 2008

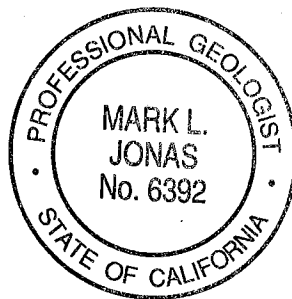
Prior to extractable (TPHd) analysis of grab groundwater samples, the laboratory shall follow the *Zemo Protocol for Gravity Separation of Groundwater Samples to Isolate the Water Phase* (Zemo Gravity Separation Protocol). A copy of the Zemo Gravity Separation Protocol is attached.

## CLOSING

If you have any questions regarding the contents of this document, please call Mark Jonas at (510) 420-3307.

Sincerely,  
**Conestoga-Rovers & Associates**

Mark Jonas, P.G.  
Senior Project Geologist



Christina McClelland  
Staff Geologist

Attachment: May 22, 2008 ACEH Letter  
*Zemo Protocol for Gravity Separation of Groundwater Samples to Isolate the Water Phase*

cc: Golden Empire Properties, Inc. 5942 MacArthur Blvd., Suite B, Oakland, CA 94605  
Mr. Jeffrey Lawson, SVLG, 25 Metro Drive, Suite 600, San Jose, CA 95110  
Ms. Dawn Zemo, Z&A, 986 Wander Way, Incline Village, NV 89451

Work Plan Addendum 6-5-2008 - GEP 130105.doc

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

May 22, 2008

Lynn Worthington  
Golden Empire Properties Inc.  
5942 Macarthur Blvd. Suite B,  
Oakland, CA 94605

Subject: Fuel Leak Case No. RO0000271 and Geotracker Global ID T0600100538, Exxon, 3055  
35<sup>th</sup> Avenue, Oakland, CA

Dear Mr. Worthington:

Alameda County Environmental Health (ACEH) staff has reviewed the April 11, 2008 *Work Plan Additional Characterization and Soil Vapor Sampling* prepared by Conestoga-Rovers & Associates, Inc. (CRA). The work plan included additional downgradient and upgradient borings as well as a map showing the properties and existing buildings.

ACEH generally concurs with the proposed scope of work and requests that you address the following technical comments, perform the proposed scope of work, and send us the technical reports requested in our April 7, 2008 letter. The proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during field implementation. Submittal of a revised work plan is not required.

**TECHNICAL COMMENTS**

1. **Upgradient and On-site Borings.** The proposed depths for the upgradient borings exceed the depths of the proposed on-site borings. ACEH recommends that you investigate the vertical extent of hydrocarbons and oxygenates in soil and groundwater on-site to at least the same depth and with the same sample depths as proposed for the upgradient wells. ACEH requires that you assess the maximum vertical extent of contamination in groundwater by continuing to sample groundwater until a clean sample is obtained. ACEH also requests that you continuously core the borings to gather detailed lithologic data and then prepare detailed cross-sections for the site including these logs. Include plots of the contaminant plumes on your maps, cross-sections, and diagrams
2. **Downgradient Soil Borings.** You proposed collecting soil samples only where PID readings or signs of staining or odor exist. As per Steven Plunkett's May 16, 2006 letter he also states that if no staining, odor, or elevated PID readings are observed, soil samples are to be collected from each boring at the capillary fringe, where groundwater is first encountered or at a minimum of five-foot intervals until the total depth of the

boring is reached. Please note that ACEH recommends that at least one but preferably two soil samples be collected from the base of the boring that are below the detection limit for all analytes for vertical definition. We do not want to have you remobilize to perform this at a later time since it will incur additional charges.

3. **Units on maps.** Please specify contaminant concentration units on maps for data presented for soil, groundwater and soil vapor.
4. **Soil Vapor Sampling.** ACEH requested that you analyze for the tracer gas that is used during sampling. Please add your tracer gas, MTBE (as proposed and accepted) and toluene to the analyses for this round of soil vapor sampling.

### **TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Barbara Jakub), according to the schedule presented below:

1. **June 12, 2008** – Landowner Notification Document.
2. **July 11, 2008** – Complete field work.
3. **August 15, 2008** – Soil and Water Investigation Report, including soil vapor results.

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

### **ELECTRONIC SUBMITTAL OF REPORTS**

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in

Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/electronic\\_submittal/report\\_rqmts.shtml](http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml)).

#### **PERJURY STATEMENT**

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

#### **PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS**

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

#### **UNDERGROUND STORAGE TANK CLEANUP FUND**

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### **AGENCY OVERSIGHT**

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Lynn Worthington  
RO0000271  
May 22, 2008  
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If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at [barbara.jakub@acgov.org](mailto:barbara.jakub@acgov.org).

Sincerely,

A handwritten signature in cursive script that reads "Barbara J. Jakub".

Barbara J. Jakub, PG  
Hazardous Materials Specialist

Enclosures: ACEH Electronic Report Upload (ftp) Instructions

cc: Mark Jonas, via electronic mail

Donna Drogos, ACEH, via electronic mail  
Barbara Jakub, ACEH  
File

## Zemo & Associates LLC

986 Wander Way  
Incline Village, NV 89451  
Tel/Fax: 775-831-6179  
dazemo@zemoassociates.com

### **Protocol for Gravity Separation of Groundwater Samples to Isolate the Water Phase**

Groundwater samples may contain non-dissolved petroleum resulting from entrained sheen and/or entrained petroleum-affected soil particles. The objective of this procedure is to separate the oil phase and the particulate matter solid phase from the water phase prior to extraction and analysis of the sample. In this way, the analysis will better represent the true dissolved-phase of the sample. The success of this procedure depends on many factors, including adequate time for separation, and complete exclusion of the oil and particulate matter phases from the collected water phase.

*For groundwater samples to be analyzed for semi-volatiles (e.g., extractable TPH, PAHs):*

1. Pour the raw groundwater sample into a glass separatory funnel of adequate volume.
2. Allow the sample to separate and equilibrate for a minimum of 48 hours. Keep the sample refrigerated during the separation period.
3. After the separation period, the analyst will observe the sample to confirm that the water phase is visually clear. If the water is not visually clear, additional separation time may be required.
4. Open the bottom stopcock of the funnel and allow all of the particulate matter that collected at the bottom to run completely through; discard.
5. Collect an adequate sample volume of the water phase from the bottom of the funnel without including any of the oil phase and place into appropriate containers.
6. Add surrogates to water phase sample and extract as per requested method.

*For groundwater samples to be analyzed for volatiles (e.g., purgeable TPH, BTEX, etc.):*

1. Store the 40-ml VOA vials upside-down in the refrigerator for a minimum of 48 hours.
2. After the separation period, the vials must remain in the upside-down position while the septum is punctured by the hypodermic needle and the water phase is subsampled. The analyst should keep the needle tip within the water phase and must avoid both the solid and oil phases with the needle tip during subsampling.