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HEALTH CARE SERVICES
AGENCY
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January 14, 2013

Mr. Reed Rinehart
Rino Pacific
2401 North State Street
Ukiah, CA 95482

Tony Muir and Lilllie Earls
P.O. Box 328
Wilsonville, OR 97070-328

Subject: Review of Revised Feasibility Study Report for Fuel Leak Case No. RO0000234 and GeoTracker Global ID T0600102136, Rino Pacific/Oakland Truck Stop, 1107 5th Street, Oakland, CA 94607

Dear Mr. Rinehart:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the most recent document entitled, "*Revised Remediation Feasibility Study Report*," dated May 7, 2012 (Revised FS). The Revised FS, which was prepared on behalf of Rino Pacific LLC by Advanced GeoEnvironmental, Inc., responds to ACEH technical comments in correspondence dated November 29, 2011 and proposes a pilot study for in-situ chemical oxidation (ISCO). ACEH's technical correspondence dated November 29, 2011 had requested preparation of a Revised FS. However, the format of the document is that of a response to comments with only minor modification from the previous October 10. 2011 FS Report to include an injection well.

ACEH does not concur with the proposed ISCO pilot study. Given the ongoing intent to implement an ISCO pilot study at a site where an ISCO does not appear to have a high potential to succeed, we have reviewed the case file and the Revised FS in detail. As a result of this detailed review, we have several technical comments. Moreover, there appears to be some questions regarding the conceptual site model (CSM) and an understanding of fundamental site conditions. Until these basic issues are resolved, implementation of an ISCO pilot study is not appropriate. We request that you address the technical comments below and prepare a Conceptual Site Model **no later than April 17, 2013.**

TECHNICAL COMMENTS

1. **Cross Sections.** The Revised FS concludes that the depiction of adsorbed petroleum hydrocarbons on Cross Section A-A" appears to be, "idealized and exaggeratory, based on the source of petroleum from the USTs." Regardless of whether cross sections are conceptual or detailed, they should accurately reflect the distribution of petroleum hydrocarbons and the data they are based upon. Please be sure that any cross sections presented in future documents are accurate. The statement regarding the USTs and the source of petroleum from the USTs is unclear. It should be noted that the USTs do not appear to be the only source of fuel releases. Elevated concentrations of petroleum

hydrocarbons are present in soil and groundwater in the areas of the USTs and both pump islands. Therefore, there are likely multiple sources, some of which may be relatively shallow. The proposed remediation must be based upon an accurate CSM that accurately considers the sources and lateral and vertical extent of contamination. Therefore, we request that you prepare an updated CSM that summarizes site data and conditions, incorporates the items described in the technical comments below, and accurately describes the sources, pathways, extent of contamination, and receptors for the site.

2. **Remaining Petroleum Hydrocarbon Mass.** In response to ACEH's comment that a significant mass of petroleum hydrocarbons is present from ground surface to depths of more than 20 feet bgs, the Revised FS indicates that "a significant portion of the shallow petroleum hydrocarbon mass was removed by excavations." The Revised FS goes on to conclude that based on the mass removed by excavation, ISCO could be cost effective. No estimates of the residual or removed mass are presented and no cost estimates are provided. Since an understanding of the distribution of the remaining petroleum hydrocarbon mass is essential to selecting an appropriate remedial technology, we have reviewed the site conditions in detail using recent and historic reports and do not find evidence to support the claim that the majority of the petroleum hydrocarbon mass has been removed by excavation. The extent of excavation in the UST area is unclear. Please submit any additional reports not in ACEH files that document the 1999 UST removal and confirmation sampling results. No report documenting the 1999 removal of soil from the UST area or confirmation sampling results exists in the ACEH case files. We note that up to 7,600 milligrams per kilogram of TPHd was detected in soil samples from soil boring P-1, which is approximately 65 feet east of the tank excavation. Up to 28,000 mg/kg of TPHd was detected in soil samples from boring EB-5, which was advanced in the area north of the eastern dispenser islands. A soil sample from boring B-4, which was advanced in July 2002 near the northeastern corner of the site, contained 53,000 micrograms per kilogram of MTBE. These data indicate that elevated concentrations of TPHd and fuel oxygenates are present well outside the areas of previous excavations. Confirmation soil samples collected during the 2007 excavation area for the truck scales indicate that elevated concentrations of petroleum hydrocarbons were left in place in the sidewalls and beneath the floor of the excavation. A significant mass likely remains in place between the truck scale and the former UST and pump island areas.

   In order to accurately define the extent of residual petroleum hydrocarbons, we request that you include the following in the conceptual sites model requested in technical comment 1:
   - Table(s) of all soil data
   - Maps showing all soil data results
   - Updated cross sections that accurately depict TPH concentrations
   - Estimate of contaminant mass.

3. **Unexplained Spikes in Groundwater Concentrations.** Sporadic and abrupt increases in groundwater concentrations are apparent in time concentration graphs for selected groundwater monitoring wells at the site. Examples include the concentration of TPHd in groundwater from well MW-5, which increased from <50 micrograms per liter (µg/L) on February 28, 2007 to 240,000 µg/L on May 29, 2007. Several concentration spikes in TPHg and TPHd are also obvious in the time concentration graphs for well MW-8, which is located northwest of the pump islands. The most recent spike in concentrations was noted in groundwater samples collected on November 23, 2011 from wells MW-5 and MW-8.

Concentrations also increased in several wells during the groundwater monitoring event on May 23, 2012. These spikes in groundwater concentrations are unexplained at present. In the CSM requested below, please review these concentration spikes and identify any site activities that may be related. The potential for these concentration spikes to represent ongoing releases from the UST system must be thoroughly evaluated in the CSM requested in technical comment 1.

4. **Extent of Dissolved Phase Plume.** Figure 3 of the Revised FS likely underestimates the lateral extent of dissolved TPHg. TPHg was detected at elevated concentrations in grab groundwater samples collected in 2006 from boring P-5 and P-7, both of which are outside the dissolved plume shown on Figure 3. In the CSM requested in technical comment 1, please consider all relevant data in defining the extent of contamination.

5. **TBA Results.** Please review the analytical data for TBA from groundwater monitoring events in wells MW-4 through MW-8. There appears to be a high degree of variability between sampling events for the same well. In many cases, TBA results vary from less than reporting limits to elevated concentrations between sampling events. As an example, the concentration of TBA in groundwater from well MW-4 was less than 10 µg/L on November 12, 2009 but was 120,000 µg/L on November 23, 2010. After reviewing the analytical results, sampling methods, and relevant data, please include an evaluation of the TBA results in the CSM requested in technical comment 1.

6. **Well MW-8.** The FS indicates that wells MW-7 and MW-8 are not screened in a peat layer. However, no descriptions are presented on the boring log for MW-8 below a depth of 10 feet. A review of boring logs from nearby boring P-4 and P-5 indicates that peat is likely present within the screen interval for well MW-8.

7. **Proposed Injection Well.** The Revised FS includes a proposal to install an injection well 15 feet north of monitoring well MW-6. Although this is an improvement to the previous proposal, the proposed location may intersect the peat layer, which was encountered at a depth of 11 feet bgs in boring P-2. It is also possible that the proposed new well may be within the former area of excavation and therefore, may be connected to the current tank pit. No maps or diagrams are present in the case file to indicate the extent of the former tank excavation. Any further proposals to install an injection well at the proposed location will need to address these issues and need to provide an evaluation as to whether ISCO could potentially damage the USTs and piping.

8. **Replacement Well MW-13R.** In the CSM requested below, please provide the boring log and well completion diagram for replacement well MW-13R.

9. **Low Threat Closure Policy.** The preparation of an updated CSM that accurately describes site conditions will aid in reviewing the site using the State Water Resource Low Threat Closure Policy which became effective on August 17, 2012.

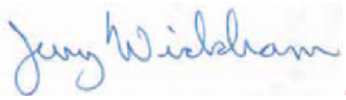
TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Jerry Wickham), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **April 17, 2013** – Conceptual Site Model
  File to be named: CSM_R_yyyy-mm-dd RO234

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Case files can be reviewed online at the following website: http://www.acgov.org/aceh/index.htm. As your email address does not appear on the cover page of this notification ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Sincerely,



Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o=Alameda County Environmental Health, ou, email=jerry.wickham@acgov.org, c=US
Date: 2013.01.15 18:05:51 -08'00'

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 2032 (*Sent via E-mail to: lgriffin@oaklandnet.com*)

Brian Millman, GeoEnvironmental, Inc., 837 Shaw Road, Stockton, CA 95215 (*Sent via E-mail to: bmillman@advgeoenv.com*)

Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Jerry Wickham, ACEH (*Sent via E-mail to: jerry.wickham@acgov.org*)

GeoTracker, e-File

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. Please visit the SWRCB website for more information on these requirements. (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)

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, 7835, 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, late 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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	**REVISION DATE:** July 25, 2012
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (petroleum UST and SCP) require submission of all reports in electronic form to the county's FTP site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single Portable Document Format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to .loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to .loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.