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Alameda County
Environmental Health

**SITE INVESTIGATION WORKPLAN
FIRE STATION No. 1
4444 RAILROAD AVENUE
PLEASANTON, CALIFORNIA**

August 10, 2007

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A Site Investigation Workplan Prepared for:

Mr. James W. Gotcher
City of Pleasanton
Public Works / Development Services
200 Old Bernal Avenue
P.O. Box 520
Pleasanton, California 94566

**SITE INVESTIGATION WORKPLAN
FIRE STATION No. 1
4444 RAILROAD AVENUE
PLEASANTON, CALIFORNIA**

File No.: 84855

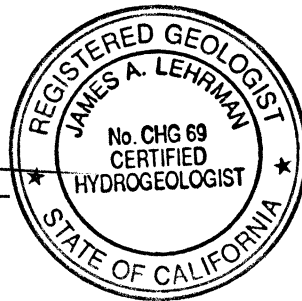
Prepared by:

Erik Bluvás for

Erik Bluvás
Environmental Engineer

James A. Lehrman

James A. Lehrman, PG, CHG
Environmental Group Manager



KLEINFELDER WEST, INC.
7133 Koll Center Parkway
Pleasanton, California 94566
(925) 484-1700

August 10, 2007

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 FIRE STATION No. 1
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- Appendix A Site Plan with Proposed Boring Locations
- Appendix B Site Health and Safety Plan

1 INTRODUCTION

Kleinfelder (Kleinfelder) has prepared this Workplan on behalf of City of Pleasanton (Owner) to investigate a fuel release at Fire Station No. 1 located at 4444 Railroad Avenue in Pleasanton, California (site). This Workplan is being submitted in accordance with the request of the Alameda County Environmental Health (ACEH), Environmental Health Division.

1.1 OBJECTIVES AND SCOPE OF WORK

The objective of the investigation is to assess the possible impact of a petroleum hydrocarbon release on soil and groundwater beneath the site. To meet this objective the following scope of work will be implemented.

- Advance one direct-push soil boring at the location of the former USTs;
- Collect soil samples and a groundwater grab sample from the borehole for laboratory analysis; and
- Prepare a report of the investigation.

2 BACKGROUND INFORMATION

On September 12, 1996, two underground storage tanks (USTs) were removed from Fire Station No. 1, otherwise known as the "Old Fire Station Facility". The USTs were each 500 gallons in capacity; one contained gasoline and the other contained diesel fuel. According to the Fire Department's *Hazardous Materials Record of Inspection* prepared on the day of the UST removal, the diesel tank had rust, corrosion and small holes on top. The gasoline tank had no obvious holes. No detectable concentrations of petroleum hydrocarbons were detected in confirmation soil samples collected from beneath the former diesel and gasoline USTs. However, analyses of the stockpile sample found concentrations of diesel fuel and xylenes in the original backfill material at concentrations of 150 mg/kg and 0.008 mg/kg, respectively, indicating that a minor release had occurred. A report dated September 20, 1996 by the UST removal contractor, W.A. Craig, includes additional detail.

On June 26, 2007, at the request of the City of Pleasanton, Kleinfelder supervised the drilling of a soil boring at the location of the former USTs. The objective of the drilling was to assess the impact of the fuel release on soil and groundwater beneath the site, with the intention of obtaining case closure. However, due to a greater than anticipated depth to groundwater and the depth limitation of the drilling rig, the boring was terminated at a depth of 28 feet below ground surface (bgs). No indications of soil contamination were observed in the boring, however groundwater was not encountered.

3 FIELD ACTIVITIES

This section describes the proposed field activities at the site. The following topics are discussed in this section:

- Field Preparation Activities
- Soil Sampling
- Groundwater Sampling
- Decontamination of Sampling Equipment
- Investigation-Derived Waste Management

The project activities will be conducted under the supervision of a California Professional Geologist (PG) or Professional Engineer (PE). Kleinfelder will contract with state-licensed drillers, analytical laboratories, surveyors and hazardous materials contractors and transporters, as needed.

3.1 FIELD PREPARATION ACTIVITIES

Kleinfelder will prepare and submit a drilling permit application to Zone 7 Water Agency. The application will include the proposed boring location, site map, and a description of activities. A site plan / sketch with the proposed boring location is included in Appendix A.

Kleinfelder will visit the site and mark the proposed boring location with white paint. Underground Service Alert will be notified at least two working days prior to the initiation of the drilling activities, as required by law. In addition, Kleinfelder will contract with a private utility locator to visit the site and check for utilities within a five-foot radius of the drilling locations.

3.2 SOIL SAMPLING

The soil samples collected during this investigation will be completed using a truck-mounted, direct-push drill rig to minimize generated waste. If necessary, asphalt or

concrete overlying borehole locations will be cored prior to drilling. The boreholes will be advanced to five feet below the first encounter of groundwater (anticipated at approximately 32 feet bgs) using direct-push drilling methods. Pre-inserted sample liners will be collected and the desired sample intervals will be selected for laboratory analysis. The soil will be screened with a PID and visually inspected to identify areas of impacted soil. Two soil samples will be collected: one at 10 feet below ground surface (ft bgs), and other at 30 feet bgs, unless another sample interval is identified as being impacted. The ends of each sample interval will be covered with Teflon[®] sheets and capped with plastic end caps. Samples will be placed in a cooler with ice for transport to the laboratory following chain-of-custody protocol. A Kleinfelder geologist or engineer will oversee the sampling activities and will prepare a log of the soils encountered in each boring.

3.3 GROUNDWATER SAMPLING

During this investigation one groundwater grab sample will be collected from the proposed boring. The groundwater sample will be collected at a depth of five feet below the first encounter of groundwater, anticipated at approximately 32 feet bgs. Once the boring is advanced to a depth of approximately 37 feet bgs, as described in Section 3.2, a small diameter polyvinyl chloride (PVC) pipe with a 10 foot screen section will be inserted to the bottom of the borehole. The groundwater sample will be collected using small diameter disposable bailer. Groundwater samples collected for analysis will be placed in appropriate containers, labeled, and placed into Ziploc[™] plastic bags. The samples will be placed in a cooler with ice for transport to the laboratory following chain-of-custody protocol.

3.4 ANALYTICAL TESTING

Soil and groundwater samples will be submitted for TPHg, TPHd, BTEX and fuel oxygenates analysis. Analyses will be performed using the following methods:

- TPHg and TPHd by EPA Test Method 8015M; and
- VOCs by EPA Test Method 8260;

3.5 BACKFILLING

Following the collection of groundwater samples, the PVC pipe will be withdrawn from the borehole. The boring will be sealed from the bottom to ground surface with neat cement grout (one 94-pound sack of Portland cement to approximately 5 gallons of water) and finished with cold asphalt or concrete patch to match the existing surface.

3.6 DECONTAMINATION OF SAMPLING EQUIPMENT

Prior to performing field activities, the sampling equipment will be pre-cleaned. All sampling equipment will be decontaminated prior to collecting each soil sample. The decontamination procedures will include: (1) removal of gross contamination by scraping, pulling or brushing (as necessary) followed by a tap water rinse; (2) Liquinox™ or equivalent equipment wash; (3) tap water rinse; and (4) deionized water rinse.

3.7 INVESTIGATION-DERIVED WASTE MANAGEMENT

Investigation-derived waste (IDW), such as decontamination rinsate fluids, soil cuttings and discarded groundwater will be separately drummed and temporarily held at the site in a ,labeled, U.S. Department of Transportation-approved, 55-gallon steel drum for later disposal pursuant to the City's direction.

4 QUALITY ASSURANCE/QUALITY CONTROL

This section describes the field and laboratory quality assurance/quality control (QA/QC) procedures that will be implemented during implementation of this workplan.

4.1 FIELD PROCEDURES

The following four formats will be used to document the implementation of field activities:

- Field data sheets;
- Photo-documentation record;
- Sample labels; and
- Chain-of-custody form.

4.1.1 *Field Data Sheets*

Field data sheets will be completed in the field to document field activities. The data sheets will include: daily field reports, air monitoring records, and geologic boring logs.

4.1.2 *Photo Documentation Record*

Photographs will be used to document the field activities. These photographs will be logged and placed into the report, as appropriate.

4.1.3 *Sample Labels*

Sample labels will be completed in waterproof ink at the time of sample collection and before the sample is placed into the cooler. The following information will be included on the sample label: sample number, date and time, sample location and client, analysis and laboratory, preservative, samplers' initials, and project number.

4.1.4 Chain-of-Custody

A chain-of-custody record will be completed as soil and groundwater samples are collected, so that samples do not have to be removed from the cooler prior to delivery to the laboratory. The record will be checked for completeness at the end of each day samples are collected and signed. It will then be hand-delivered with the samples to the laboratory. Information on the chain-of-custody record will include: sample data and time, sample ID and location, matrix, number of containers, required analyses, preservative, turnaround time, project manager's name, project number, project name and location, laboratory name, and sampler signatures.

4.2 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

All analytical testing will be performed by a Cal/EPA ELAP-accredited hazardous-waste fixed-base laboratory. The laboratory will be responsible for maintaining custody of the samples, and for maintaining all associated records documenting that custody. Upon receipt of the samples, the laboratory will check the original chain-of-custody documents and compare them with the labeled contents of each sample container for accuracy and traceability.

5 REPORT PREPARATION

Following completion of the site investigation and receipt of the soil and groundwater analytical results, a letter report will be prepared to document the activities, findings, and conclusions of the investigation and to provide recommendations. The report will be submitted to the City of Pleasanton and will include:

- Introduction, purpose, and objectives of the investigation;
- Site map showing borehole locations;
- Presentation of soil and groundwater analytical results (tables and plates) in the context of regulatory agency action levels and guidelines;
- Certified laboratory analytical reports and chain-of-custody records; and
- Conclusions and recommendations for future work, if appropriate.

The investigation and the report preparation will be conducted under the direct supervision of and will be signed by a California Professional Geologist (PG) or Professional Engineer (PE).

6 SCHEDULE

Kleinfelder will begin implementation of this workplan as soon as approval has been granted by City of Pleasanton and the ACEH. The field preparation activities will be completed first, including securing the required permits and approvals from Zone 7 Water Agency. Kleinfelder will then schedule the utility clearance and drilling subcontractors. The actual fieldwork is anticipated to take one day.

Analytical results will be available one week after submittal of the samples to the laboratory. Kleinfelder will prepare a draft of the letter report and submit the draft to the City approximately two weeks after receipt of the analytical results. After incorporating the City's comments, we will finalize the report for submittal to the ACEH.

7 QUALIFICATIONS

Kleinfelder maintains current licenses, certifications, and training required for hazardous waste operations in the State of California, including:

- State of California Contractors State License Board General Engineering Contractor (A) License; and
- Federal Occupation Safety and Health Administration (OSHA) 40-hour health and safety training for hazardous waste operations (29 CFR 1910.120) certifications for all site workers.

The drilling contractor selected by Kleinfelder will have the following certifications and training:

- Class C-57 Contractor's License for the State of California; and
- Federal Occupation Safety and Health Administration (OSHA) 40-hour health and safety training for hazardous waste operations (29 CFR 1910.120) certifications for all site workers.

The laboratory contractors selected by Kleinfelder will have the following certifications:

- Current Cal/EPA ELAP accreditation for all the analytical methods used.

8 HEALTH AND SAFETY

A Health and Safety Plan is included in Appendix B. The Health and Safety Plan was prepared in accordance with Federal OSHA and California Department of Safety and Health (DOSH) requirements outlined in 29 CFR Part 1910.120[jj]; Title 8, CCR, Section 5192.

The site-specific HASP provides general guidelines for decision points in site safety planning, and will establish personnel protection standards and mandatory safety practices and procedures. The HASP covers the following subjects:

- Emergency contacts to be used in the event of an accident or exposure;
- Description of site hazards, both physical and chemical;
- On-site monitoring and personnel protection;
- Project team organization and responsibilities;
- Site control measures; and
- Decontamination procedures.

The provisions of the HASP will be mandatory for all onsite personnel; all Kleinfelder subcontractors shall conform to this plan at a minimum.

9 LIMITATIONS

Kleinfelder prepared this report in accordance with generally accepted standards of care that exist in Northern California at this time. This report may be used only by the City of Pleasanton (Client) and only for the purposes stated, within a reasonable time from its issuance, but in no event later than one (1) year from the date of the report. All information gathered by Kleinfelder is considered confidential and will be released only upon written authorization of the Client or as required by law. Non-compliance with any of these requirements by the Client or anyone else, unless specifically agreed to in advance by Kleinfelder in writing, will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party and the Client agrees to defend, indemnify, and hold harmless Kleinfelder from any claim or liability associated with such unauthorized use or non-compliance.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present. Although risk can never be eliminated, more-detailed and extensive investigations yield more information, which may help understand and manage the level of risk. Since detailed investigation and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface investigations or field tests, may be performed to reduce uncertainties. Acceptance of this report will indicate that the Client has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may be discovered. Kleinfelder will assume no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner,

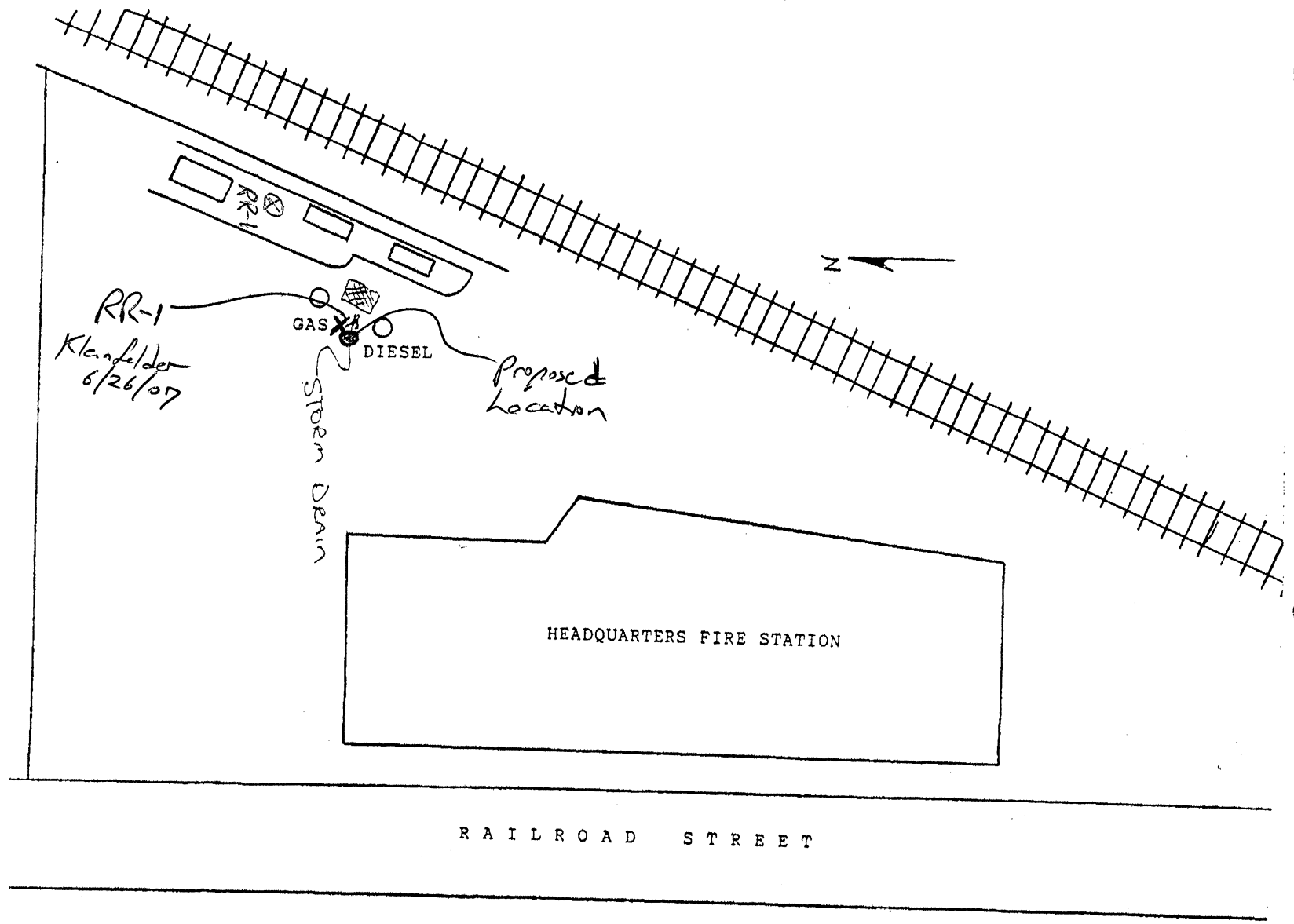
operator, generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. The Client will be solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. The Client will be responsible for all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

Regulations and professional standards applicable to Kleinfelder's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. As such, our services are intended to provide the Client with a source of professional advice, opinions and recommendations. Our professional opinions and recommendations will be based on our limited number of field observations and tests, collected and performed in accordance with the generally accepted engineering practice that exists at the time and may depend on, and be qualified by, information gathered previously by others and provided to Kleinfelder by the Client. Consequently, no warranty or guarantee, expressed or implied, is intended or made.

APPENDIX A

Site Plan with Proposed Boring Locations

PLEASE SHOW THE BUILDING AND PROPERTY LINES UP YOUR JOB. UNLESS YOUR PROPERTY IS NOT SHOWN AS THE SAME AS THE
PAGE, IF POSSIBLE



APPENDIX B

HEATH AND SAFETY PLAN

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Project No. 84855 **Date** August 10, 2007
Client City of Pleasanton **Address** 200 Old Bernal Avenue
Site Contact James Gotcher **Site Phone No.** 925-931-5684
Job Location 4444 Railroad Avenue Pleasanton, CA 94566
Work Objectives Collecting soil vapor, soil and/or groundwater samples.

Key Individuals: **Project Manager** Jim Lehrman
Site Health and Safety John Williams
Prepared by Mehagan Hopkins, Erik Bluvas **Reviewer/Approver** Jim Lehrman
Hospital/Clinic Pleasanton Urgent Care
Phone No. 925-462-9300
Address: 3128 Santa Rita Road, Pleasanton, CA
Paramedic 911 **Fire Dept.** 911 **Police Dept.** 911

Emergency/Contingency Plans: Stop work and evaluate situation and stabilize victim(s). Notify health and safety officer or site project manager. Apply first aid and/or seek medical aid as necessary. Move injured personnel only if injuries permit. If necessary call Ambulance and/or Medical Personnel to transport injured to hospital. Refer to attached maps for location of nearest medical facility site. Health and Safety Officer to notify Client and appropriate personnel of situation.

15 Minute Eyewash not required **Fire Extinguisher** required **First Aid Kit** required

Site Control Measures: Do not allow unauthorized personnel into the work area.

Personal Decontamination Procedures: Disposable gloves will be utilized for soil sampling procedures. Skin that comes in contact with soil will be washed immediately with soap and water. Goggles should be worn during sampling to protect eyes. Hands and face shall be thoroughly washed prior to eating, drinking, smoking, or other hand to mouth contact. Soil will be removed as thoroughly as possible from outerwear (especially boots and shoes) before getting in vehicles.

CHEMICAL HAZARDS

The primary chemicals of concern at the site are VOCs. Acute/chronic health effects associated with these and other chemicals are listed in the table below.

Chemical Name	Expected Concentration	Health Hazards
Fuel Hydrocarbons (i.e. gasoline); TPH-gasoline	Unknown	<u>Acute:</u> Headache, nausea, dizziness, skin/eye irritation, blurred vision, abdominal pains, vertigo, diarrhea, convulsions. <u>Chronic:</u> n/a
Total Petroleum Hydrocarbons (Diesel and other petroleum hydrocarbons); TPD-diesel	Unknown	<u>Acute:</u> skin, eye, and respiratory irritation; headache, dizziness. <u>Chronic:</u> n/a
Benzene	Unknown	<u>Acute:</u> Abdominal pain, headache, dizziness. <u>Chronic:</u> Carcinogen , anemia, leukemia,
Toluene	Unknown	<u>Acute:</u> Dermatitis (skin), respiratory irritant, headache, dizziness <u>Chronic:</u> n/a
Ethyl Benzene	Unknown	<u>Acute:</u> Skin/eye irritant, headache, dizziness <u>Chronic:</u> n/a
Xylenes	Unknown	<u>Acute:</u> Skin/eye irritant, headache, dizziness, drowsy <u>Chronic:</u> n/a

Notes: $\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter of air.

mg/kg = milligrams per kilogram, approximately equivalent to parts per million (ppm)

n/a = Not Applicable

Respiratory Protection

The principal routes of potential exposure are inhalation and ingestion during field activities. However, at this time, Level D personal protective equipment without respiratory protection is anticipated. Kleinfelder site activities are not expected to generate significant quantities of dust. If site conditions are different or change, the need for respiratory protection will be reevaluated.

PHYSICAL HAZARDS

Physical hazard during sampling consist of accidents that can occur during handling of sharp tools and injuries resulting form trips and falls. In general, these types of accidents will be minimized by the use of proper safety equipment (hard hat, safety glasses, steel-toed boots), good communication among all on-site personnel, and being alert to potential hazards. Safety hazards associated with this site requiring specific precautions are summarized below.

PHYSICAL HAZARDS

<input checked="" type="checkbox"/> Heat	<input checked="" type="checkbox"/> Slip, Trip, Fall	<input type="checkbox"/> Excavations/Trench
<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Electrical Hazards	<input checked="" type="checkbox"/> Moving Equipment
<input checked="" type="checkbox"/> Wet	<input checked="" type="checkbox"/> Underground Hazards	<input type="checkbox"/> Confined Space
<input checked="" type="checkbox"/> Noise	<input checked="" type="checkbox"/> Overhead Hazards	
<input type="checkbox"/> Other _____		

PERSONAL PROTECTIVE EQUIPMENT

R = Required A = As Needed

<input checked="" type="checkbox"/> Hard Hat	<input checked="" type="checkbox"/> Safety Eyegear: <u>glasses w/ side protection</u>
<input checked="" type="checkbox"/> Safety Boots	<input checked="" type="checkbox"/> Respirator (Type): Full-face <input type="checkbox"/> Half-face <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Orange Vest	<input checked="" type="checkbox"/> Filter Type: Organic vapor <input checked="" type="checkbox"/> Acid gas <input type="checkbox"/> HEPA <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Hearing Protection	<input checked="" type="checkbox"/> Gloves (Type): Neoprene <input type="checkbox"/> PVC <input checked="" type="checkbox"/> Nitrile
<input checked="" type="checkbox"/> Tyvek Coveralls	<input checked="" type="checkbox"/> Other <u>Mobile phone</u>
<input type="checkbox"/> 5 Minute Escape Respirator	

In general, if air monitoring readings in workers' breathing zone exceed 5 ppm for 60 seconds or longer, upgrade to Level C (respirator, etc.) or vacate the immediate area.

MONITORING EQUIPMENT

<input type="checkbox"/> Organic Vapor Analyzer (FID)	<input checked="" type="checkbox"/> PID with lamp of <u>10.6 eV</u>
<input type="checkbox"/> Oxygen Meter	<input type="checkbox"/> Detector Tube (specify) _____
<input type="checkbox"/> Combustible Gas Meter	<input type="checkbox"/> Passive Dosimeter
<input type="checkbox"/> H ₂ S Meter	<input type="checkbox"/> Air Sampling Pump
<input type="checkbox"/> W. B. G. T.	Filter Media _____

Directions to PLEASANTON, CA



Summary and Notes

START **A** 4444 Railroad Ave, PLEASANTON, CA

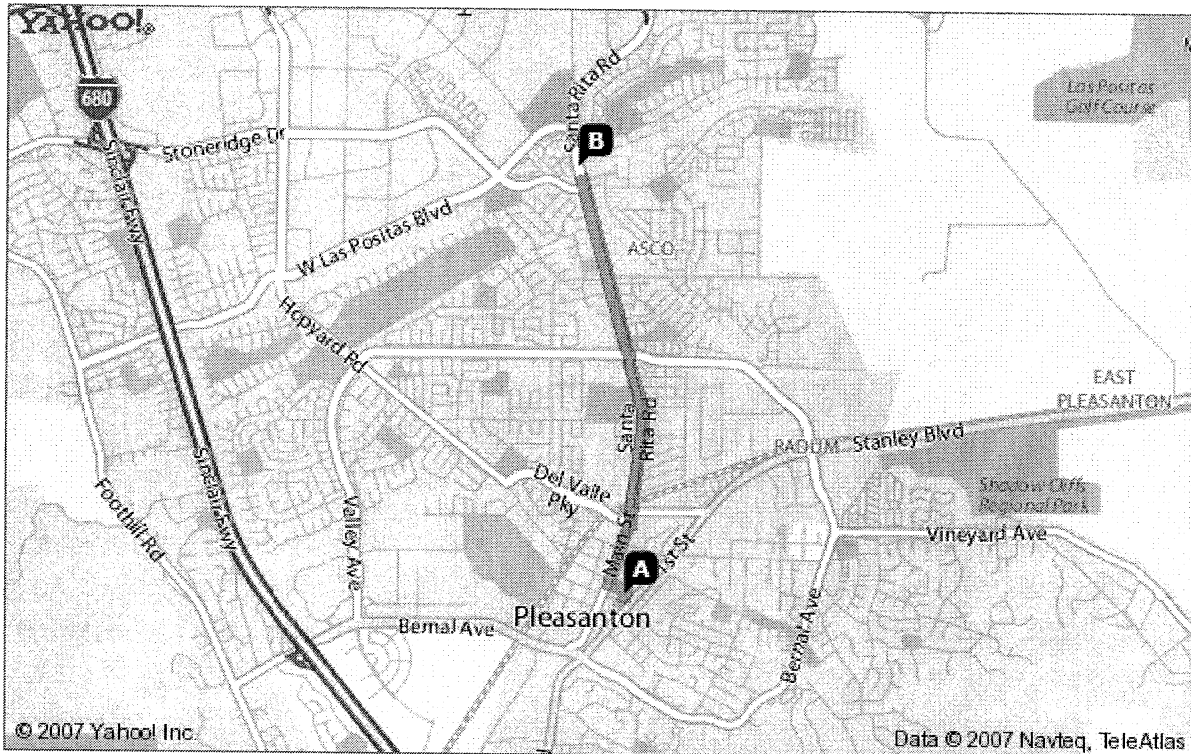
FINISH **B** 3128 Santa Rita Rd, PLEASANTON, CA

Total Distance: 2.1 miles, Total Time: 5 mins (approx.)

Add your notes here...

- | | Distance |
|--|-------------|
| A 4444 RAILROAD AVE, PLEASANTON, CA | |
| 1. Start at 4444 RAILROAD AVE, PLEASANTON going toward DIVISION ST | go < 0.1 mi |
| 2. Turn L on DIVISION ST | go < 0.1 mi |
| 3. Turn R on MAIN ST | go 0.4 mi |
| 4. Continue on SANTA RITA RD | go 0.7 mi |
| 5. Turn R on VALLEY AVE | go < 0.1 mi |
| 6. Turn L on SANTA RITA RD | go 0.9 mi |
| 7. Arrive at 3128 SANTA RITA RD, PLEASANTON | |
| B 3128 SANTA RITA RD, PLEASANTON, CA | |

Distance: 2.1 miles, Time: 5 mins



When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.