

**SITE-SPECIFIC HEALTH AND SAFETY PLAN**

Prepared for:

**PORT OF OAKLAND  
530 Water Street  
Oakland, California, 94607**

Prepared by:

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APPENDIX A

## **1.0 INTRODUCTION**

This site-specific health and safety plan has been developed by Riedel Environmental Services, Inc. (RES) for underground tank removal from the site located at 330 8th Ave., Oakland, California. This document sets forth the minimum acceptable requirements and procedures for site occupational health and safety of RES personnel. Changes to the plan may be necessary as actual project tasks commence.

## **2.0 ASSIGNMENT OF RESPONSIBILITIES**

### **2.1 Project Manager**

The Project Manager (PM) will have overall responsibility for the implementation of the site health and safety plan. This will include communicating site requirements to all personnel regarding appropriate changes to the health and safety plan (HASP). The Project Manager (PM), will act as PM and as Site Health and Safety Officer (SHSO). Mr. Poeltl may be contacted at the following telephone numbers: RES office (510) 222-7810, mobile (510) 220-4487 or pager # (510) 970-0745.

### **2.2 Health and Safety Manager**

The Health and Safety Manager will have the responsibility for preparing and revising of the HASP, coordinating technical health and safety support for the project, and advising the PM on all matters related to health and safety. The Health and Safety Manager for this project will be Sherri Williams. No changes will be made without approval of the PM and the Health and Safety Manager. Ms. Williams may be contacted at the following telephone numbers: RES office (510) 222-7810, or pager# (510) 970-0164.

### **2.3 Site Health and Safety Officer**

The Site Health and Safety Officer (SHSO) will be the PM whose responsibility will to ensure that work crews comply with all the site health and safety requirements.

### **2.4 Subcontractors**

On-site subcontractors and their personnel are responsible for understanding and complying

with all site requirements. Subcontractors are required to follow the guidelines in the HASP.

## **2.5 On-Site Personnel and Visitors**

All on-site personnel and visitors are required to comply with the provisions of this HASP and all applicable Federal, State and local regulations. Each person is responsible for their own health and safety, for completing tasks in a safe manner and for reporting any unsafe acts or conditions to the PM of the Riedel representative. Personnel will monitor themselves and their fellow employees for signs and symptoms of heat stress and chemical exposure.

## **3.0 SITE DESCRIPTION**

The project is inside a trucking facility located in Oakland, California. The work site is located on the north side of #2 warehouse.

## **4.0 SCOPE OF WORK**

Riedel Environmental Services, Inc. (RES) has been contracted for the tank removal of one 1,000 gallon steel underground fuel storage tank, which contained diesel. Also contracted to transport and disposal of the tank.

## **5.0 ASSESSMENT OF HAZARDS**

### **5.1 Job Hazard Assessment**

The Hazard Assessment identifies potential safety, health, and environmental hazards and provides for the protection of personnel, the community and the environment. Because of the complexity and constant change associated with remediation projects, supervisors must continually inspect the work site to identify hazards which may harm site personnel, the community, or the environment. The PM and the SHSO must be aware of these changing conditions and discuss them with the Health and Safety Manager. The Health and Safety Manger will write addenda to modify the job safety analysis and associated hazard controls, as necessary.

## **5.2 Health Hazards**

It is not anticipated that the chemical hazard will be encountered within the hazardous levels at the Oakland site. Exposure to the chemicals listed is expected to be far below the permissible exposure limit (PEL). Work practices and methods will be instituted to prevent exposure to workers. Where elevated concentration levels are determined, respiratory protection will be the primary method of control to protect the employees from inhalation of hydrocarbon vapors. The chemical of concern has limited toxicity, requiring minimal controls at the concentrations expected during work activities. A brief summary of the chemical of concern is given below.

### **Diesel**

**PEL:** Not listed gasoline is 300 ppm

**ROUTE of ENTRY:** Inhalation, skin absorption

**Health Effects:** May be poisonous if inhaled or absorbed through the skin. Inhalation of vapors may cause dizziness, headaches, nausea. Contact may irritate or burn skin and eyes.

## **5.3 Job Hazard by Task**

The field activities fall into several phases, however for purposes of this risk analysis the project will be divided into the following phases: Site Mobilization and Set-up; Activities associated with the tank removal and Site Demobilization. The anticipated hazards for each phase will be discussed and analyzed.

### **5.3.1 Task 1: Site Mobilization and Set-up**

The personnel and equipment necessary to perform this project will be mobilized from the RES office located in Richmond, California. No chemical exposures are anticipated during this phase of the project. The principle hazards associated with mobilization and set-up are ergonomic hazards associated with loading and unloading of equipment. At this time heavy equipment arriving at the site will be inspected and prepared.

### **5.3.2 Task 2: Asphalt Removal**

This task involves breaking the asphalt with a jackhammer or hydraulic hammer depending on the asphalt thickness and removing the asphalt with a loader into a dump truck.

#### **Physical Hazards**

Employees are exposed to several hazards while breaking and removing the asphalt. The first hazard is cuts, puncture or abrasions resulting from the breaking of the asphalt as the jack hammer or hydraulic hammer penetrates the surface of the asphalt. The jack hammer or hydraulic hammer can hurl pieces of material at high rates of speed that can cause serious injury to unprotected area of the body.

Serious injury or death can result if an employee makes contact with the jack hammer or hydraulic hammer. Only properly trained and supervised employees are permitted to operate the jack hammer and hydraulic hammer.

Noise is a definite hazard during this operation. Jack hammer and the hydraulic hammer will generate noise exceeding 85 dBA and therefore requiring the use of hearing protection as well. If the ear is subjected to high levels of noise for a sufficient period of time, some loss of hearing may occur.

Dust resulting from the breaking operation is a hazard to the employee operating the equipment and to those employees in the vicinity of the operation. Dust, when deposited in the lungs, may produce either tissue damage, tissue reaction, disease, or physical obstruction.

#### **Chemical Hazards**

The most likely hazard is airborne of dust from the breaking procedure. The dust components do pose a health hazard and PPE (listed in section 11.0) will be used to protect employees from exposure.

### **5.3.3 Task 3: Tank Removal and Use of Excavation and Earth Moving Equipment**

#### **Physical Hazards**

The primary hazards involved in the removal of underground storage tanks are related to the excavation of soils and the operation of heavy equipment. The use of excavation and earth moving equipment such as a backhoe, front-end loader, excavator, crane and dump trucks present several possible slip, pinch, or impact hazards. The presence of overhead utilities such as power lines requires careful positioning of the excavating equipment in order to maintain at least 20 feet of distance between the lines and the closest part of the equipment. The presence of underground utilities such as gas lines, power lines, water lines and sewer pipes must be determined prior to beginning of the excavation.

Truck and forklift traffic is a constant hazard during all tasks of this operation. Employees need to be aware of the heavy equipment operating in the area during removal process.

Noise is a definite hazard during this operation. The heavy equipment operations will expose project personnel to noise levels in excess of 85 dBA.

Dust resulting from this operation may be a hazard to the employee operating the heavy equipment and to those employees in the vicinity of the operation. Dust when deposited in the lungs, may produce other tissue damage, tissue reaction, disease, or physical obstruction.

Heat stress is possible during this phase of the phase and employees are cautioned to heed possible warnings of this condition.

There exists a chance for fall hazard and employees must pay careful attention to what they are doing or they risk a fall into the excavation.



## **Chemical Hazards**

Contaminated soil may pose additional hazards such as air contamination, flammable or explosive atmosphere.

### **5.3.4 Task: 4 Rinsing & Inerting Procedure**

The tank must be rinsed and inerted prior to removing the tank from the ground. The tank must be monitored for oxygen content throughout the procedure to ensure inert conditions are maintained.

- \* Once oxygen content drops below 10% the LEL readings are unreliable.
- \* Carbon dioxide is damaging to the CGI oxygen sensor; do not leave the probe in tank between measurements.
- \* Monitor strictly for oxygen
- \* Once the desired oxygen concentrations is reached, all opening should be sealed.
- \* NO HOT WORK or ignition sources are allowed within 25 feet of any tank during removal (excluding heavy equipment used for lifting)

### **5.3.5 Task 5: Demobilization**

During the demobilization phase all materials, equipment and personnel will be removed from the site. The principle hazards associated with demobilization are ergonomic hazards associated with loading of equipment and materials. No chemical hazards are anticipated during this project phase

## **6.0 PHYSICAL HAZARDS**

The operation of or working near heavy equipment will present the risk of physical injury at this site. Only qualified operators will be allowed to work the heavy equipment. RES will use the safe work guidelines included in the OSHA General Industry Standard (29 CFR 1910) and Construction Industry Standards (29 CFR 1926).

### **6.1 General**

The following general practices will be observed at the project site:

**A. Tools**

Manipulation of hand held tools will be done with caution to avoid catching fingers or dropping on feet. Hands tools will be used with cation and only for the tasks for which they are designed.

**B. Pumps, Compressors, Generators**

If pumps are fueled electronically, they will be properly grounded and class approved for the site. Ground fault interrupter devices. The machines will be properly guarded to prevent contact with possible injurious parts.

**C. Flammable Materials**

When working with flammable materials, adequate ventilation and control of all ignition sources will be maintained. This may include:

- o Explosion-proof equipment (intrinsically safe). An explosion proof apparatus is enclosed in a case that is capable of withstanding an explosion of a specified gas or vapor which may occur within it and of preventing the ignition of a specified gas or vapor surrounding the enclosure by sparks, flashes, or explosion of the gas or vapor within, and which operates at such an external temperature that a surrounding flammable atmosphere will not be ignited thereby.

Class-approved electrical equipment

Grounding and bonding of static electricity sources

No smoking or open lights

**D. Heavy Equipment**

Potential hazardous conditions and the appropriate responses concerning heavy equipment include but are not limited to:

### **Power Lines**

When operating heavy equipment, such as cranes, near power lines, care will be taken to ensure that the crane boom or rigging always maintains a distance of at least 10 feet from the power lines.

### **Underground Utilities**

Utilities will be located and disconnected, shut off, or blanked prior to any excavation work.

### **Swing Radius**

All swing equipment, such as cranes or backhoe, will have the swing radius guarded to prevent employees from being struck by the rotating machinery.

### **Electrical Equipment**

All electrical equipment will be properly grounded and class approved for the location. Ground fault interrupter devices or a daily monitored grounding program will be used.

#### **E. Power Tools**

Employees using power tools will be trained in the proper use of the tool and the safety hazards associated with it. Electric tools should not be used in a damp or wet environment. When changing accessories, adjusting or cleaning a tool, the tool should be unplugged. Tools not in use should be kept unplugged as well.

#### **F. Housekeeping and Material Storage**

All material shall be stored in a manner that will ensure that the material is safe from unexpected movement, falling, rolling, blowing or any other uncontrolled motion.

**Tools and equipment shall not be thrown about where they might cause a tripping or falling hazards. At the end of the work shift tools will be collected and stored or disposed of as appropriate.**

## **6.2 Project Specific Practices**

- 1. Eating, drinking chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material are prohibited in any area designated as contaminated.**
- 2. Hands and face must be thoroughly washed upon leaving the work area and before eating, drinking, and any other activities.**
- 3. Personal required to wear respiratory protective equipment must be free of any excessive facial hair that would interfere with a good face-piece seal, as determined by a qualitative fit test. Contact lenses cannot be worn with any respirators. Use of contact lenses is forbidden in exclusion and contamination reduction zones.**
- 4. Contact with contaminated or suspected contaminated surfaces should be avoided. Whenever possible, walking through puddles, mud, and other discolored surfaces should be avoided. Kneeling on the ground and leaning, sitting, or placing equipment on drums, container, vehicles, or on the ground should also be avoided.**
- 5. Acholic beverages and/or illicit drugs are not allowed on any site. Persons exhibiting evidence of alcohol or drug consumption will be driven by another employee to a clinic to have a drug test performed.**

### **6.2.1 Excavation Safety**

All excavations shall be performed from a stable ground position. Daily inspections of the excavation shall be made by a competent person. The inspector shall determine the likelihood of a cave in, need for remedial action such as sloping or shoring shall be taken if the walls appear to be unstable.

All spoil shall be located at least two feet from the edge of the excavation to prevent it from falling back into the excavation. The excavation shall be guarded on all sides by barricades or caution tape at least two feet from the edge.

All project personnel shall participate in the Tool Box Safety Meeting and be instructed on the following requirements:

- \* Before excavating the existence and location of underground pipe, electrical equipment and gas lines will be determined. This will be done, if possible, by contacting the appropriate utility company and/or client representative to mark the location of the lines.
- \* No ignition sources are permitted if the ambient airborne concentration of flammable vapors exceeds 10% of the Lower Explosive Limit (LEL) during the excavation. A combustible gas indicator will be used to make this determination.
- \* Operations must be suspended and the area vented if the airborne flammable concentration reaches 10% of the LEL in the area of an ignition source (i.e., internal combustion engine, exhaust pipe).
- \* Combustible gas monitoring of the general work will be performed on a regular basis at the discretion the competent person.
- \* If excavating equipment is located in the vicinity of overhead power lines, a distance of 15 feet must be maintained between the lines and any point on the equipment.

If the lines have appreciable sag, or if windy conditions exist, this distance shall be 20 feet.

### **6.3 Heat Illness Prevention**

#### **6.3.1 Working in Hot Environment - Heat Stress**

Heat related illnesses are some of the potential hazards faced by work crews. The protective equipment required for handling hazardous substances defeats the body's natural cooling mechanisms. If not properly monitored, body heat can be escalated to dangerous levels. The three primary heat related illnesses of concern are: heat cramps, heat exhaustion, and heat stroke. While the first two conditions may be painful or uncomfortable, the third illness, heat stroke, is immediately life threatening.

#### **6.3.2 Heat Stress Symptoms**

Heat Cramps: Abdominal muscle tightness/cramping.

Treatment: Move employee from contaminated work area, remove as many clothing items as possible, give electrolyte replenishing drink.

Heat Exhaustion: Excessive perspiration; flushed skin tone; cool clammy or moist skin; possible red rash; dizziness or nausea.

Treatment: Move to cool area outside the contaminated areas; supply electrolyte replenishing fluids; restrict activity.

Heat Stroke: Dry hot skin, pale skin tone, no perspiration, possible coma, strong rapid pulse.

Treatment: Move patient to non-contaminated area; reduce body temperatures by wetting clothes or covering with wet sheets. Get medical attention immediately.

#### **6.3.3 Heat Stress Prevention**

Employees should take increased rest periods, drink appropriate beverages; Gatorade or

other electrolyte replenishes, water or fruit juice. NO SODAS. Further, employees should follow the work rest regimen established by the American Conference of Governmental Industrial Hygienists (ACGIH).

#### **6.3.4 Heat Stress Monitoring**

Heat stress monitoring, measuring vitals, blood pressure and body temperature will be initiated at 70°F ambient temperature as determined by a Wet Bulb Globe Thermometer. The ambient temperature will be used to determine the appropriate Work-Rest Regimen as listed in the current Threshold Limit Values...and Biological Exposure Indices, American Conference Governmental Industrial Hygienists. Table 1 'Examples of Permissible Heat Exposure Threshold Limit Values'.

#### **6.4 Hearing Conservation**

Heavy equipment can be expected to generate potentially hazardous noise levels during various work phases; tank removal, excavation, etc. Hearing protection devices will be provided for workers.

### **7.0 WORK ZONES**

Site conditions and planned activities do not call for the imposition of rigid access control zones. At each of the work sites the PM, shall implement a work zone system that will be sufficient to limit employee exposure and to prevent the dispersion of hazardous components. This will consist of clarifying:

- \* Where/when protective clothing must be worn
- \* Where protective clothing will be donned
- \* Where protective clothing will be removed
- \* What must be done with contaminated protective clothing

However, if on-site conditions change such that the work area becomes heavily contaminated, the area around that the site may be more rigidly defined. The site will be divided into three areas, clearly marked/labeled with appropriate warnings. Additionally, the site perimeter will be visibly designated and secured against unauthorized entry.

### **7.1 Exclusion Zone**

The exclusion zone is the area with the greatest degree of potential exposure and safety hazards. This area therefore, requires the highest level of protective clothing. Gross decontamination (decon) of equipment occurs in this zone. No eating, drinking, or tobacco products are allowed in this area. Unauthorized personnel are restricted from entry.

### **7.2 Contamination Reduction Zone**

The contamination reduction zone (CRZ) is established at the entry and exit to the exclusion zone. Decontamination activities take place in the CRZ.

### **7.3 Support Zone**

The support zone will border the exclusion zone. All unauthorized personnel will be required to remain in this zone during drilling and other-excavation activities. No contaminated materials or equipment are allowed in this area. Communications, first aid, and employee break areas are established here. Eating, drinking, and tobacco products are allowed in this area only.

## **8.0 Site Control**

Site control requires established specific measures to prevent unauthorized entry onto the site and to protect all personnel entering the site from recognized safety and health hazards. The following measures are mandatory:

### **8.1 Authorization to Enter**

The PM may grant authorization to enter the site. Access to contaminated work areas is regulated and limited to authorized personnel. , Only those who have completed the required training and medical requirements will be allowed to enter. Representatives from regulatory agencies will be permitted to enter the site at any time during business hours or at other reasonable times by appointment to conduct official business. Representatives of the news media and other visitors must receive authorization from the PM.



## **8.2 Hazardous Briefing**

The PM shall brief this HASP to all personnel entering the site to inform them of potential hazards and procedures specific to this site. All personnel shall acknowledge this briefing by signing the HASP.

## **8.3 Entry Requirements**

All personnel entering the exclusion zone will use the proper PPE. All personnel entering the exclusion zone will enter and exit through the decontamination zone and observe the mandatory decontamination procedures.

## **9.0 Training**

All RES on-site personnel shall complete at least 40 hours of Hazardous Waste Operation training, as required under 29 CFR 1910.120. Those personnel who complete this training more than 12 months prior to the start of the project, shall have completed an 8 hour refresher course within the past 12 months. The manager shall have completed an additional 8 hours of relevant health and safety training. Riedel shall ensure that there is at least one first/CPR trained person on site at all times. All training records will be kept in Travel Packets.

## **10.0 Medical Surveillance**

All RES personnel shall, within the past 12 months have completed a comprehensive medical examination, that meets the requirements of the OSHA regulation 29 CFR 1910.120. The annual medical examination questionnaire

- \* Medical and occupational history questionnaire
- \* Physical examination
- \* Complete blood count, with differential
- \* Liver enzyme profile
- \* Chest x-ray, once every three years
- \* Pulmonary function test
- \* Audiogram

- \* **Electrocardiogram for persons older 45 years of age, or if indicated during physical examination**
- \* **Illegal drug screening**
- \* **Visual acuity**
- \* **Follow-up exam at the discretion of the examining physician or the corporate medical director**

All employee medical records for Riedel employee are maintained in Richmond, for subcontractor's office. Each employee also has the right to inspect and copy their medical records. The examining physician provides the employee with a Fit for Duty Form confirming the workers fitness for work, and ability to wear a respirator. A copy of this Fit for Duty Form for all workers will be kept in their Travel Packets.

## **11.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

PPE is assigned per task as follows:

### **11.1 Task 1: Site mobilization and demobilization :**

- Hard hat
- Safety glasses with side shields
- Work gloves
- Steel-toed work boots
- Riedel coveralls or work uniforms

### **11.2 Task 2: Asphalt Removal**

- Hard Hat
- Safety glasses with side shields
- Face Shield
- PVC steel-toed boots when in direct contact with contaminated waste material otherwise steel-toed work boots
- Disposable ear plugs
- Nitrile gloves when in direct contact with contaminated waste material otherwise work gloves

### **11.3 Task 3: Inerting Procedure**

- Same as task 1

### **11.4 Task 4: Tank Removal and Use of Excavation and Earthmoving Equipment**

- Hard hat
- Safety glasses with side shields
- Steel-toed boots
- Tyvek coveralls
- Nitrile gloves when in direct contact with contaminated waste material

otherwise leather  
Disposal ear plugs

**11.5 Task 5: Demobilization**  
Same as task 1

**12.0 Respiratory Protection**

All RES personnel required to use respirators will select and use the respirators based upon guidelines established by OSHA and NIOSH. All RES employees are individually fit tested and issued their own respirators with the following provisions.

- o MSA Ultra-twin respirators equipped with the cartridge type dictated by monitoring results.
- o All individuals required to wear respirators will have received a documented pre-issue qualitative fit test for the specific type of respirator in use. This fit test will be given by the regional safety officer.
- o Each employee will be responsible for conducting a positive/negative fit check each time the respirator is donned.
- o All respirators shall be NIOSH/OSHA approved. No interchange of respirators shall be permitted.
- o Each individual shall be responsible for cleaning his/her own respirator at least once daily and is permitted to leave the work area to wash his/her face and respirator as needed.
- o Cartridges or filters shall be changed whenever an increase in breathing resistance or odor is detected, or if they become wet. All cartridge changes will be made in uncontaminated areas.
- o Respirators must be stored in a clean area which is not likely to be contaminated by

the work in progress. Respirators should not be hung from their headbands for prolonged periods of time since this may degrade the respirator head straps and decrease respirator fit and effectiveness.

### **13.0 DECONTAMINATION PROCEDURES**

#### **13.1 General**

RES uses decontamination procedures in EPA's Standard Operating Guide. The Site Health and Safety Officer will monitor decon procedures to ensure compliance as per OSHA 1910.120(k)(s).

#### **13.2 Personnel Decontamination**

For this project the personnel decontamination procedures will consist of the following:(changes to the decon procedure can take place at the discretion of the PM)

- \* Upon entering the CRZ, rinse the mud or the gross contamination etc., from boots.
- \* Remove protective garments. All disposable clothing should be placed in plastic bags and labeled as contaminated waste
- \* Reusable protective equipment must be cleaned at the job site
- \* Wash hands and faces
- \* Proceed to the clean area

#### **13.3 Emergency Decontamination**

Facilities and materials for decontamination shall be provided in the immediate work environment for employees to:

- o Immediately wash the affected area which comes into contact with any contaminated materials.

- o Immediately flush the eyes with copious amounts of water (15 minute continuous flush) if the eyes come into contact with any contaminated materials.
- o The following first aid equipment will be located on the site in a location known to all workers prior to task commencement: first aid kit and emergency eye wash.

### **13.4 Equipment Decon**

#### **Tools**

Any potentially contaminated wooden handled tools will be disposed of at the end of the project. All metal hand tools will be decontaminated by using water/TSP.

#### **Heavy Equipment**

Any mechanical equipment used on the site and suspected of being contaminated will be decontaminated by having any parts (wheels, tires, forks, etc.) completely wiped and scraped down to remove any traces of dirt or other contamination. A steam cleaner may be used for this purpose.

### **14.0 GENERAL WORK PRACTICES**

**The Buddy System** - Will be used whenever levels A, B, or C are employed on the site or when heavy equipment is being operated.

**Safety Meetings** - Will be held daily, when the scope of work changes or if an accident occurs. Documentation should include topics discussed and signatures of those attending.

**Site Specific Safety Plan** - Must be signed by all RES site workers prior to the start of the job and posted in an accessible place on site.

**Accidents and Injuries** - Must be reported to the PM immediately. The PM will then report the accident/injury to the Corporate Health and Safety Manager promptly at 1-800-334-0004 or the following pager numbers:

Mike Amen 1-800-SKY-PAGE-295-7435

Lois Mumma 1-800-SKY-PAGE-295-7436

Accident Investigation - Will be conducted by the Health and Safety Manager.

Authorized Personnel Only - Will be allowed on work sites.

MSDS - All employees will be well versed in the location of MSDS for any chemicals used or encountered on the site. Employees must know proper location, precautions, and usage of chemicals. Project Manager has the responsibility to ensure that all workers on-site are familiar with this information.

OSHA Inspections - Any OSHA inspections, visits or citations must be reported to the Health and Safety Manager and the PM immediately, on the same day.

Food or Appropriate Beverages - Are allowed in the Support Zone only.

Tobacco Products - Are allowed only in the Support Zone.

## 15.0 SITE MONITORING

### 15.1 Air Monitoring

The monitoring equipment to be used will be a combustible gas/oxygen meter.

The combustible gas/oxygen meter will be used where the presence of flammable atmospheres and oxygen content are of concern at the site. The operation will be discontinued if the combustible gas levels exceed 10% of the LEL or if oxygen levels drop below 20%. Combustible gas/oxygen levels will be monitored regularly during inerting operation.

Additional sampling may be used at the discretion of the project H&S Manger.

## **16.0 EMERGENCY CONTINGENCY PLAN**

In the unlikely event of a release of hazardous material into the environment, or a fire or explosion which may present a threat to human health or the environment, the PM must assess the hazard presented by the incident, and notify all facility personnel.

If there has been a release of contaminated materials into the environment outside of the area, the PM must immediately notify:

- o Office of Emergency Services  
(800) 852-7550
  
- o This office will notify any other agencies necessary.

The PM shall stop all normal facility operations and take all necessary measures to mitigate the hazard presented by any release of contaminated material, fire or explosion.

Any employee who has been injured or has become ill, should be transported to the hospital for treatment.

Personnel will be transported to the hospital via a company vehicle, ambulance or helicopter depending on the severity of the injury.

In any emergency, an employee is to be sent to the entrance of the property to guide Emergency Services to the scene.

A master list of chemicals on the site will be kept on the site. This list should be given to emergency personnel in the event of any chemically related incidents.

### **16.1 First Aid Procedures**

In responding to any medical emergency, it is important that the responding personnel consider their individual safety first. Do not enter any area where a chemical contaminant might be present without appropriate levels of protection.

### **First Aid Procedures For Skin Contact.**

- \* Rinse affected areas with copious amounts of water. This means a portable decon station capable of delivering a 15 minute continuous flush or a charged water hose with spray adjustment.
- \* Remove all contaminated clothing.
- \* Move person to decontamination station. If able, decontaminate as per procedure.
- \* Transport person to hospital for observation if skin contact is producing any significant physical effects.

### **First Aid Procedures For Inhalation Incidents.**

- \* Move person from contamination area to fresh air.
- \* Keep person still and lying down.
- \* Any person receiving any significant inhalation causing unconsciousness or other significant physiological responses is to be sent to the hospital immediately.

### **First Aid Procedures For Eye Contact.**

- \* Eye injuries must be treated immediately as permanent blindness can result if left untreated.
- \* Treat toxic or corrosive chemical injuries by rinsing the affected eye with water for a minimum of 15 minutes.
- \* Transport the injured employee to the predesignated medical facility.



### **First Aid Procedures For Ingestion.**

- \* Ingestion of toxic materials, while unlikely, can result in serious injury or death.
- \* In case of suspected ingestion of a toxic material, do not cause the person to vomit.
- \* Call an ambulance (911) and transport person to hospital.

### **16.2 Fire and Explosion Response Plan**

Immediately warn personnel in the near vicinity.

Fire Department authorities must be called immediately in the event of fire. Station an employee outside the property to direct the fire department to the scene.

Never approach chemical fires without full supplied air respiratory protection.

Attempt to extinguish a blaze ONLY if no compressed gas or chemical containers are involved.

Instruct Fire Department personnel as to the materials/chemicals involved upon their arrival.

### **16.3 Inclement Weather**

The PM or designated person will suspend on-site excavation activities whenever excessive rainfall may cause contaminated soils to be washed off-site or onto clean areas on site.

Due to the shock hazard, site operations will be suspended in the event of a thunderstorm. Site crews will take whatever means are required to prevent erosions and surface transport of contaminated soils. Control measures will include placement of geo-fabric, construction of berms, and other techniques that are commonly used in normal excavating practice.

## **17.0 EVACUATION PLAN**

Total evacuation of the area may be required if the incident is of such magnitude that it cannot be controlled by on-scene personnel. Evacuation shall occur in the following sequence:

Personnel shall leave the area via the most direct route, if it is safe to do so. Equipment operators shall position their equipment as far from the immediate danger as possible.

Personnel leaving the site shall proceed immediately to the area designated for a head count. Personnel will then dispose of protective clothing.

**TO BE POSTED IN CENTRAL LOCATION**

**EMERGENCY NUMBERS**

**Fire Department 911**

**Police/Sheriff Department 911**

**Nearest Hospital/Emergency Room:**

**Name: Highland Hospital**

**Address: 1411 East 31st street, Oakland**

**Phone #: Emergency room (ER) 510-437-4557**

**Contracting Co. Rep./#:**

**Riedel Contact/#: Kevin Poeltl**

**Chemtrec (if applicable).(800) 424-9300**

## **18.0 HAZARDOUS COMMUNICATION PROGRAM**

### **18.1 Overview**

The Occupational Safety and Health Administration (OSHA) issued the Hazardous Communication standard (29 CFR 1910.1200) in November 1983. The purpose of the standard was to give any and all employees who are exposed to chemicals in the work place, the "right to know" about exposures so that they can take measures to protect themselves.

### **18.2 Material Safety Data Sheets (MSDS)**

Since November 25, 1985, all manufacturers, importers, and distributors of hazardous chemicals have been required to supply purchasers of their products with MSDSs. And, as of May 25, 1986, employers have been required to make available to their employees these data sheets for any chemical used in their work place. Please find the pertinent MSDS for this job at the end of the Hazardous Communication section.

### **18.3 Informing Contractors**

It is the responsibility of the PM to provide on-site personnel with information about hazardous chemicals to which they may be exposed on a job site and suggested safety precautions.

### **18.4 List of Hazardous Chemicals**

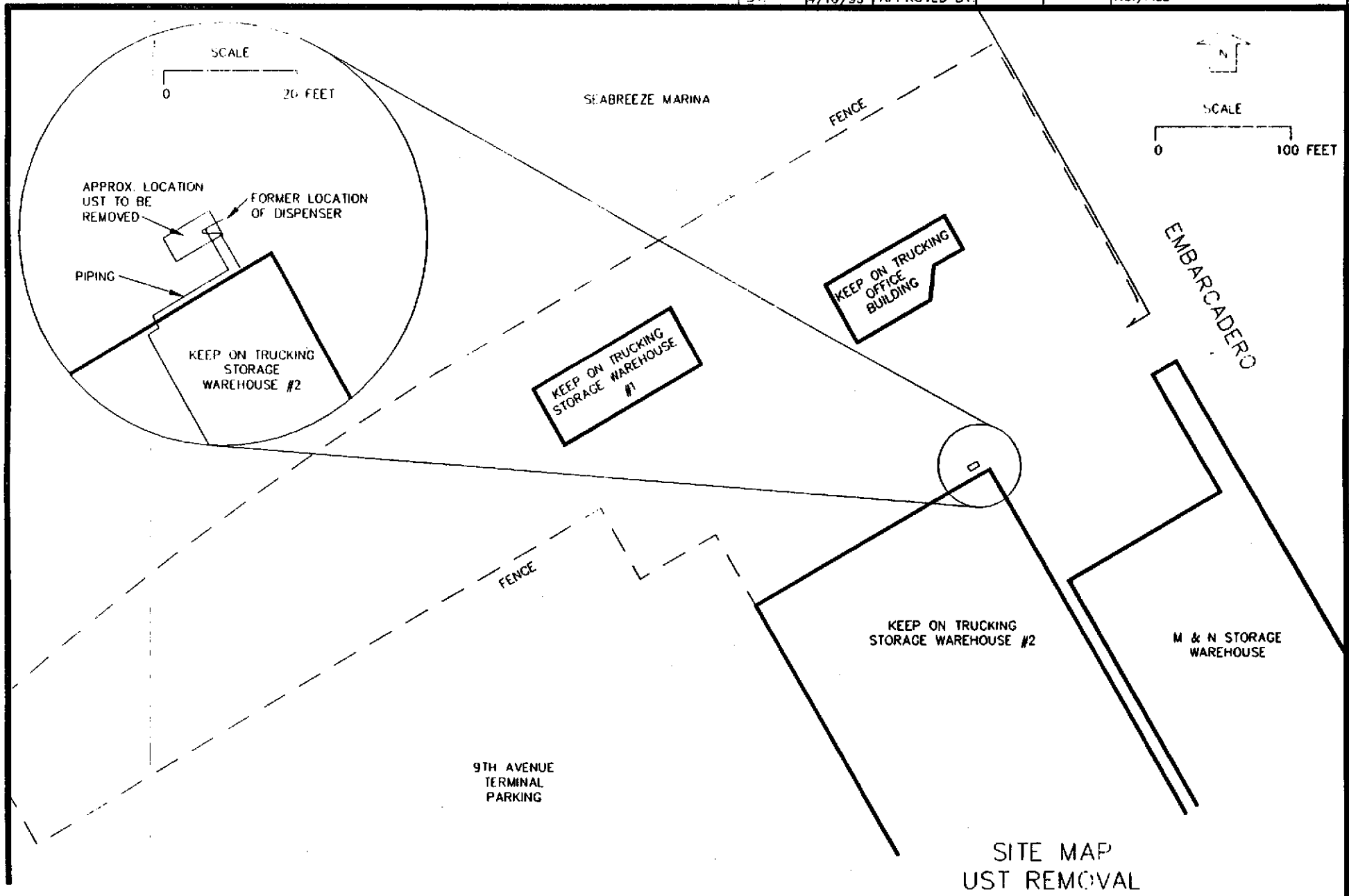
The following is a list of all known hazardous chemicals used by our employees. Further information on each chemical may be obtained by reviewing the appropriate MSDS.

<b>Hazardous Chemical</b>	<b>Location</b>
Gasoline	
Diesel	

**19.0 SIGNATURE PAGE**

The below signed personnel have read this plan, understand its contents, and agree to follow the guidelines set forth:

<b>EMPLOYEE NAME (PRINT)</b>	<b>SIGNATURE</b>	<b>DATE</b>
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**RIEDEL ENVIRONMENTAL SERVICES, INC**  
RICHMOND, CALIFORNIA

**SITE MAP  
UST REMOVAL  
EMBARCADERO, OAKLAND, CA  
RES PROJECT 4371**

**FIGURE  
1**