Site Specific Health and Safety Plan

Tank Removals
10700 McArthur Boulevard
Oakland, CA 94603

PACIFIC EXCAVATOR'S PROJECT

JUNE___, 1994

(Tenative)

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SITE SPECIFIC HEALTH & SAFETY PLAN

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10700 McArthur Boulevard, Oakland, California

I. ENTRY OBJECTIVES

Pacific Excavators plans to remove three 12,000 gallon underground gasoline storage tanks and one 8,000 gallon diesel fuel storage tank. Pacific Excavators will also collect soil and groundwater samples at the subject site. Pacific Excavators will be on site to direct the overall project and record field information. The investigation is planned for June _____, 1994.

(tenative)

II. ON-SITE ORGANIZATION AND COORDINATION

The following personnel are designated to carry out the job functions

Project Manager	Joe Madison, Pacific Excavators
Project Geologist	n/a
Health & Safety Manager	Joe Madison
Site Safety Officer	Joe Madison
(Sub)Contractor	n/a

Other personnel scheduled to be on site: None

All personnel arriving/departing the site must notify the Project Manager and, if applicable, the Site Superintendent or Foreman.

III. SITE BACKGROUND

Site Status: ____ Active XX Inactive ____ Unknown

Site Description:

The site is a gas station that is no longer in use. It is located at 10700 McArthur Blvd., Oakland ,CA. The site is currently operated by n/a with a street address of _____.

The areas of concern will be the three gasoline tanks and one diesel tank.

Waste Types: ____ Liquid XX Solid (Tanks) ____ Sludge ____ Gas ____ None

Waste Characteristics:

____ Corrosive	____ Flammable	____ Inert
____ Volatile	____ Reactive	XX Toxic
____ Radioactive	____ Irritant	____ Other

Waste Categories: Waste that may be encountered during the proposed work are tank sludge, and decontamination rinsate (rinse water from tank decontamination) containing petroleum hydrocarbons.

IV. HAZARDS

Hazards Rating: ● High __ Moderate __ Low ● __ Unknown

Hazards/Toxic Substances Likely To Be Encountered: Hazards likely to be encountered on site are limited to soil contaminated with petroleum hydrocarbons. Observe the necessary precautions while handling this material.

Reactivity, Stability, Flammability Of Substance(s) Exist On Site: Information indicate that soils at the site may contain petroleum hydrocarbons from surface spills. The most likely type of petroleum hydrocarbons is gasoline and diesel fuel. Soil and water contaminated with this type of material has a low potential to be flammable and irritable. Refer to Table 1, Definition of Hazard Evaluation Guidelines and MSDS sheets for additional information.

Are Affected: All of the work areas included in this tank removal program are likely to be impacted by petroleum hydrocarbons.

Weather Conditions Anticipated: Possible adverse weather conditions to be anticipated on site are warm to hot temperatures with moderate to no winds. The work areas are exposed and may be affected by adverse weather conditions.

V. PERSONAL PROTECTION

The level of personal protection designated here should be considered the minimal acceptable level. Project personnel may elect to upgrade the level of protection at their discretion.

Level of Protection Required: __A __B __C XXD (Minimum)

Level D protection includes hard hats, safety glasses, and steel toed boots.

Personal Protective Equipment: A minimum of Level D protection will be required on site for all personnel. Safety glasses, hearing protection, and neoprene gloves will be worn if conditions warrant them. The presence of volatile organic compounds will be monitored with an Organic Vapor Meter (OVM). Should the level of volatiles present in the breathing zone increase to 100 ppm, Level C protection will be required. Level C protection includes PVC boots, a tyvek suit, an air purifying respirator with combination cartridges (volatiles and particulates), and protective gloves in addition to the Level D protection.

Equipment: Health and Safety related equipment to be used on site includes: two 20 BC type Fire Extinguisher, on Organic Vapor Meter (OVM), and one First Aid Kit. The equipment will be provided by the CONTRACTOR.

VI. DECONTAMINATION PROCEDURES

All operations conducted at this site have the potential to contaminate monitoring equipment and personal protective equipment (PPE). To prevent the transfer of contamination to vehicles, administrative areas and personnel, the following procedures must be followed:

- Equipment Decontamination

Whenever possible, equipment should be decontaminated with a solution of Alconox or soap and thoroughly rinsed with water prior to leaving the site. This must be done outside a 10-foot radius of any work area.

- Personal Decontamination

Level D
Segregated equipment drop
Wash/rinse outer boot (as appropriate)
Wash/rinse chemical resistant outer glove, then

Level C
Segregated equipment drop
Wash/rinse outer boots
Wash/rinse chemical resistant outer gloves, then remove
Remove outer boots and place to dry (if reusable)
Remove chemical resistant suit (remove by rolling down the suit)
Remove respirator/hard hat/ face shield dispose of cartridges and wash respirator
Remove last pair of disposable gloves

Level B
Segregated equipment drop
Wash/rinse outer boots
Wash/rinse chemical resistant outer gloves, then remove
Cross hotline (into clean area) and change air tanks, then redress or
Cross hotline (into clean area)
Remove boots and gloves
Remove SCBA, if worn over chemical resistant suit
If SCBA is worn under the suit, remove the chemical resistant suit then the SCBA
Remove hard hat

VII. CHEMICAL OF CONCERN

Potential health effects from a chemical exposure are dependant on several exposure factors such as: toxicity of substances, duration of exposure, concentration during exposure and the overall health of the person exposed.

The hazardous chemicals encountered during this investigation are anticipated to be: medium to high boiling point petroleum hydrocarbons (diesel fuel). The following is a health analysis of the chemical.

- Petroleum Hydrocarbons (diesel)

Exposure to diesel is usually via skin contact or by ingestion. This chemical is not readily absorbed into the body through skin contact but is readily absorbed by ingestion. Exposure to diesel may result in skin rash, dizziness, flushing of the face, drowsiness, incoordination,

abnormal gait, tremor, confusion, respiratory depression, and cardiac arrhythmias. Long-term high level exposure to diesel may lead to liver and kidney damage.

VIII. MSDS INFORMATION

Material Safety Data Sheets (MSDS) on chemical substances encountered at the site shall be made available to all persons(including subcontractors) working at the site. For emergency situation not specifically addressed by this site safety plan refer to MSDS recommendations for action information.

IX. GENERAL PROJECT SAFETY REQUIREMENTS

Project activities will be conducted in accordance with the following minimum safety requirements:

Eating, drinking, and smoking will be restricted to designated areas.

Gross decontamination and removal of all personal protective equipment will be performed prior to leaving the site. Contaminated clothing will be removed and collected in a drum for disposal.

Shaking or blowing of potentially contaminated clothing or equipment to remove dust or other materials is not permitted.

The Site Safety Officer will be responsible for taking necessary steps to protect employees from physical hazards, including

Falling objects, such as tools or equipment.
Falls from elevations.
Tripping over hoses, pipes, tools, or equipment.
Slipping on wet or oily surfaces.
Insufficient or faulty protective equipment.
Insufficient or faulty equipment or tools.

All personnel will be required to wash their hands and faces before eating, drinking or smoking.

Field operations personnel will be cautioned to inform each other of the non-visual effects of the presence of toxics, such as,

Headaches
Dizziness
Nausea
Blurred vision
Cramps
Irritation of eyes, skin, or respiratory tract
Changes in complexion or skin discoloration
Changes in apparent motor coordination
Changes in personality or demeanor
Excessive salivation or changes in pupillary response
Changes in speech ability or pattern

Exposure To Cold Stress: Work schedules will be adjusted to provide sufficient rest periods in a heated area for warming up during operation conducted in cold weather. Also thermal protective clothing such as wind and/or moisture resistant outer wear is recommended to be worn. Dehydration, or the loss of body fluids, occurs in a cold environmental and may increase the susceptibility of the worker to cold injury due to a significant change in blood flow to the extremities. Warm sweet drinks and soups should be provided at the work sit to provide caloric intake and fluid volume. The intake of coffee should be limited (Adopted from TLV's and Biological Exposures Indices 11988-1989; ACGIH)

X. MEDICAL SURVEILLANCE

CONTRACTOR and subcontractors engaged in project activities must be participants in a medical surveillance program and must be cleared by the examining physician(s) to wear respiratory protection devices and protective clothing for working with hazardous materials. The applicable requirement under 29 CFR 1910.120 of the Federal Administrative Code will also be observed.

XI. SAFETY AND ORIENTATION MEETING

Field personnel from the **CONTRACTOR** and its subcontractors will attend a project-specific orientation meeting for safety issues and review the project tasks before beginning work. The meeting will be led by the **CONTRACTOR**'s site foreman. In addition, fit-testing of respiratory protective devices will be conducted as part of the safety orientation meeting when the use of a respirator may be required.

XII. WORK ZONES AND SECURITY MEASURES

The area where active excavation work is being performed will be designated as an Exclusion Zone. Only essential personnel will be allowed into an Exclusion Zone. When it is practical and local topography allows, approximately 20 to 75 feet of space surrounding the Exclusion Zone will be designated as a Contamination Reduction Zone.

XIII. TRAFFIC CONTROL

The **CONTRACTOR** is responsible for providing necessary traffic controls if required. Cones, wooden barricades, or a suitable alternative will be used to deny the public access to the Contamination Reduction Zone. If for any reason the safety of a member of the public (e.g., motorist or pedestrian) may be endangered, work will cease until the situation is remedied. Cones and warning signs will be used when necessary to redirect motorists or pedestrians.

XIV. PROJECT PERSONNEL

Pacific Excavators will oversee and act accordingly during all phases of the project. The following management structure will be instituted for

the purpose of successfully and safely completing this project.

Project Manager

The Project Manager will be responsible for implementing the project and obtaining any necessary personnel or resources for the completion of the project. Specific duties will include:

Coordinating the activities of **CONTRACTOR** and all subcontractors, to include informing them of the required personal protective equipment and insuring their signature acknowledging this Site Health and Safety Plan (Attachment A);

Selecting a Site Say Officer and field personnel for the work to be undertaken on site;

Ensuring that the tasks assigned are being completed as planned and on schedule;

Providing authority and resources to ensure that the Site Safety Officer is able to implement and manage safety procedures;

Preparing reports and recommendations about the project to agencies and effected Pacific Excavators personnel.

Ensuring that persons allowed to enter the site (e.e., EPA, contractors, state officials, visitors) made aware of the potential hazards associated with the substances known or suspected to be on site, and are knowledgeable as to the on-site copy of the specific site health & safety plan;

Ensuring that the Site Safety Officer is aware of all of the provisions of this site safety plan and is instructing all personnel on site about the safety practices and emergency procedures defined in the plan; and

Ensuring that the Site Safety Officer is making an effort to monitor site safety, and has designated a Field Team Leader to assist with the responsibility when necessary.

Health & Safety Manager

The Health & Safety Manager shall be responsible for the overall coordination and oversight of the site health and safety plan. Specific duties will include:

Approving the selection of the types of personal protective equipment (PPE) to be used on site of specific tasks;

Monitoring the compliance activities and the documentation processes undertaken by the Site Safety Officer;

Evaluating weather and chemical hazard information and making recommendations to the Project Manager about any modifications to work plans or personal protection levels in order to maintain safety;

Coordinate upgrading or downgrading PPE with Site Safety Officer, as necessary, due to changes in exposure levels, monitoring results, weather, other site conditions;

Approving all field personnel working on site, taking into consideration their level of safety training, their physical capacity, and their eligibility to wear the protective equipment necessary for their assigned tasks (i.e. Respirator Fit Testing Results); and

Overseeing the air monitoring procedures as they are carried out by site personnel for compliance with all company health and safety policies.

Site Safety Officer

The Site Safety Officer shall be responsible for the implementation of the site safety plan on site. Specific duties will include:

Monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task;

Routinely inspecting PPE and clothing to ensure that it is in good condition and is being stored and maintained properly;

Stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or public;

Monitoring personnel who enter and exit the site and all controlled access points;

Reporting any signs of fatigue, work-related stress, or chemical exposures to the Project Manager and/or Health & Safety Manger;

Dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public, and reporting the same to the Project Manager and/or Health & Safety Manager;

Reporting any accidents or violations of the safety plan to the Project Manager and/or Health & Safety Manger, and documenting the same for the project in the project records;

Knowing emergency procedures, evacuation routes and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments;

Ensuring that all project-related personnel have signed the personnel agreement and acknowledgment form contained in the Site Health & Safety Plan

Coordinate upgrading and downgrading PPE with the Health & Safety Manager, as necessary, due to changes in exposure levels, monitoring results, weather, and other site conditions; and

Perform air monitoring with approved instruments in accordance with equipment state in the Site Health & Safety Plan.

XV. AMENDMENTS

Any changes in the scope of work of this project and/or site conditions must be amended in writing on the Site Health and Safety Plan Amendment Sheet (Attachment B) and approved by the Health and Safety Manager.

XVI. EMERGENCY RESPONSE PROCEDURES

In the event of an accident resulting in physical injury, first aid will be administered and the injured worker will be transported to the nearest hospital or emergency medical clinic for emergency treatment. A physician's attention is required regardless of the severity of the injury.

In the event of a fire explosion, or property damage, Plant Managers will be notified. If necessary, local fire or response agencies will be called.

The CONTRACTOR shall drop a contingency plan which address procedures to be followed in the event of fire, personal accidents and explosions which may result in environmental contamination. The plan shall be reviewed and approved by Pacific Excavators before work commences.

EMERGENCY TELEPHONE NUMBERS

Fire and Police:	911
Ambulance:	911
Contractor:	
Underground Service Alert (USA):	800-422-4133
CHEMTREC:	800-424-9300

Note: Only call CHEMTREC in an emergency. CHEMTREC is an Acronym for Chemical Transportation Emergency Center, a public service of the Chemical Manufacture's association. CHEMTREC can usually provide hazard information warnings an guidance when given the identification number or the name of the product and the nature of the problem. CHEMTREC can also contact the appropriate experts.

MEDICAL:

Highland Hospital
1411 E. 31st Street
Oakland, California
(510)437-4800

XVII. LIMITATIONS AND AUTHORITY STATEMENT

Pacific Excavators does not guarantee the health or safety of an persons entering this site. Due to the potential hazards of this site and the activity occurring thereon, it is not possible to discover, evaluate, and provide protection for all possible hazards which may be encountered. Strict adherence of the HEALTH & SAFETY guidelines set forth herein will reduce but not eliminate, the potential for injury at this site. The HEALTH & SAFETY guidelines in this plan were prepared specifically for this

site and should not be used on any other site without prior research and evaluation by personnel trained in HEALTH & SAFETY practices. The Pacific Excavators Project Manager will be responsible for implementing this plan. The Pacific Excavators Project Manger and/or a designated Health & Safety Manager have the authority to audit site activities for compliance with them and may suspend, modify or halt contractor's work practices should they not meet the requirements specific to this plan.

TABLE 1
DEFINITION OF HAZARD EVALUATION GUIDELINES

	Guideline	Explanation
HAZARD: Airborne Contaminants		
	Threshold Limit Value Time-Weighted Average (TLV-TWA)	The time-weighted average concentration for abnormal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed without adverse effect.
	Permissible Exposure Limit (PEL)	Time-weighted average concentrations similar to (and in many cases derived from) the Threshold Limit Values>
	Immediately Dangerous to Life and Health	"IDLH" or "immediately dangerous to life or health" means any atmospheric condition that poses an immediate threat to life, or which is likely to result in acute or immediate severe health effects. This includes oxygen deficiency conditions.
HAZARD: Explosion		
	Guideline	Explanation
	Lower Explosive Limit (LEL)	The minimum concentration of vapor in air below which propagation of a flame will no occur in the presence of an ignition source.
	Upper Explosive Limit (UEL)	The maximum concentration of vapor in air above which propagation of a flame will not occur in the presence of an ignition source.
HAZARD: Fire		
	Guideline	Explanation
	Flash Point (flash p)	The lowest temperature at which the vapor of a combustible liquid can be made to ignite momentarily in air.