



LAW/CRANDALL

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Instructions/Comments:

Health and Safety Plan For 1603 Powell Street - Emeryville

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**LAW/CRANDALL, INC.
HEALTH AND SAFETY PLAN**

JOB NAME: DAY'S INN HOTEL
JOB NO.: 70424-6-0004
SITE LOCATION: 1603 POWELL STREET, EMERYVILLE, CALIFORNIA

1.0 ORGANIZATION AND COORDINATION

Date of Plan Preparation April 15, 1996

Scheduled dates of field activities April 17 through May 17, 1996

PERSONNEL

Health and Safety Officer	<u>Andrew T. Muha</u>	Date	<u>April 15, 1996</u>
Principal Scientist	<u>Mark I. Miller</u>	Date	<u>April 15, 1996</u>
Field Safety Coordinator	<u>Andrew T. Muha</u>	Date	<u>April 15, 1996</u>
Field Team Member(s)	<u>Andrew Muha</u>		

MEDICAL SURVEILLANCE

All Law/Crandall field personnel participate in the corporate medical program. They are determined by the physician to be medically fit to work at hazardous waste sites and also to wear respirator protection devices.

DESCRIPTION OF CLIENT SAFETY PROGRAM

Prior to performing the field assessment, Law/Crandall will inform the client of our planned field dates and will discuss:

- 1) The location(s) of fire fighting equipment, and
- 2) emergency response procedures.

EMERGENCY PHONE NUMBERS

Emergency phone numbers, and directions to phone or medical facility will be verified by the Field Safety Coordinator prior to beginning work. A site location map which shows the nearest hospital is attached to this plan.

CONTACTS

Hospital:	Alta Bates Hospital, (510) 540-0337
Fire:	City of Emeryville Fire Department, 911
Police:	City of Emeryville Police Department, 911
Safety Consultant:	Mr. Andrew T. Muha, (415) 834-2040
Project Manager:	Mr. Andrew T. Muha, (415) 834-2040
Client Contact:	Mr. Charles Goldman, (407) 396-6605
Laboratory:	American Environmental Network, (510) 930-9090
Subcontractor:	Bayland Drilling, (800) 564-9355

2.0 SITE DESCRIPTION

Site Location 1603 Powell Street

Emeryville, California

Known or Suspected Hazardous/Toxic Materials

Petroleum hydrocarbons such as diesel, gasoline, benzene, toluene, ethylbenzene, and xylene (BTEX). Due to the unknown nature of the contents of the above ground storage tanks, chlorinated hydrocarbons, polynuclear aromatic compounds and heavy metals may also be present at the site.

Hazard Assessment

Petroleum Products

Due to the former presence of above ground storage tanks on the property, there is the possibility of contamination by petroleum products. Chlorinated Hydrocarbons and Polynuclear Aromatic Compounds (PNAs), if present, are expected to pose minimal health threat due to low concentrations.

Flammable. Known or suspected hazardous/toxic materials pose minimal health risks due to low concentrations of petroleum hydrocarbons suspected on-site. Avoid creating ignition sources and generating airborne dust. An HNu photoionization detector (PID) or an organic

vapor analyzer (OVA) will be used to monitor soil borings for organic constituents of concern.

Petroleum hydrocarbons are complex mixtures of hydrocarbons, such as gasoline or other fuels. Exposure to petroleum hydrocarbons may occur through inhalation of vapors, absorption through skin, ingestion of contaminated soil or water, and direct contact. Toxicological information is available for the gasoline constituents benzene, toluene, ethylbenzene, xylene. In general, effects of acute exposure to high concentrations of petroleum hydrocarbons may result in skin, eye and respiratory irritation, giddiness, headache, nausea, dizziness, fatigue, anoxia, dermatitis, depression and narcosis.

Benzene is a colorless to light-yellow liquid with an aromatic odor. If inhaled, absorbed through the skin and/or eyes or ingested in sufficient quantities, benzene may cause symptoms of exposure including irritation of the eyes, nose and respiratory system, and may cause giddiness, headache, nausea, dizziness, fatigue, anorexia, dermatitis and depression, and may also affect the bone marrow. Benzene is classified as a carcinogen.

Ethylbenzene is a colorless liquid with an aromatic odor. Symptoms of exposure including irritation of the eyes and mucous membrane, headaches, dermatitis and narcosis and coma may occur if sufficient quantities are inhaled, ingested and/or come in contact with the skin or eyes.

Toluene is a colorless liquid with a sweet, pungent, benzene-like odor. Exposure symptoms including fatigue, confusion, euphoria, dizziness, headaches, dilated pupils, irritation of the eyes, nervousness, insomnia, tingling sensations and dermatitis may develop if sufficient quantities are inhaled, absorbed through the skin and/or eyes or ingested.

Xylene isomers are colorless liquids with an aromatic odor. Symptoms of exposure including dizziness, excitement, drowsiness, loss of coordination, irritation of the eyes and mucous membranes, corneal vascularization, anorexia, nausea, abdominal pain and dermatitis may develop if sufficient quantities are inhaled, ingested and/or absorbed through the skin or eyes.

HEAVY METALS

Cadmium is a silver-white, blue-tinged lustrous, odorless solid. Inhalation or ingestion of sufficient quantities of cadmium may cause pulmonary edema, dyspnea, coughing, tightness of the chest, substernal pain, headache, chills, muscle aches, nausea, vomiting, diarrhea, loss of smell, emphysema, proteinuria and mild anemia. Cadmium is classified as a carcinogen.

Chromium is a blue to steel-grey, lustrous, brittle hard solid. If inhaled in sufficient quantities, chromium may cause histiocytic fibrosis of the lungs.

Lead is a heavy ductile soft grey metal solid. If inhaled or ingested, or if it comes in contact with the skin and/or eyes in sufficient quantities it can cause weakness, lassitude, insomnia, facial pallor, irritation of the eyes, anorexia, low weight, malnutrition, constipation, abdominal pain, colic, anemia, gingival lead line, tremor, paralysis in the wrist and ankles, encephalopathy, nephropathy and hypotension.

Nickel is a lustrous silvery solid. Symptoms of over exposure may include headaches, nausea, vomiting, epigastric pain, substernal pain, cough, hyperpnea, cyanosis, weak, leukocytosis, pneumonitis, delirium and convulsions. Nickel is classified as a known carcinogen.

Zinc is a bluish white lustrous metal. If fumes are inhaled or contacts the skin and/or eyes in sufficient quantities, zinc may cause a sweet metallic taste, dryness of the throat, cough, chills, fever, tightness of the chest, dyspnea, rales, reduced pulmonary functions, headaches, blurred vision, muscle cramps, lower back pain, nausea, vomiting, fatigue, lassitude and malaise.

Hot Zone, Contamination Reduction Zone and Clean Zone

To be determined at the site by the Field Safety Coordinator.

3.0 WORK PROCEDURES

PLANNED FIELD ACTIVITIES

Law/Crandall personnel will collect soil and groundwater samples from six soil borings to be drilled at the subject site. The borings will be advanced using truck-mounted hollow stem auger equipment. The borings will subsequently be completed as monitoring wells. The samples will be submitted for chemical analysis and will be screened in the field with a photo-ionization detector (PID) and/or an OVA. Soil and groundwater samples will be analyzed for TPH as gasoline using Modified EPA Method 8015/5030, TPH as Diesel using Modified EPA Method 3550/8015, TPH as motor oil using EPA Method 8015/3550, poly aromatic hydrocarbons using EPA Method 8100, Chlorinated hydrocarbons using EPA Method 8010, benzene, ethylbenzene, toluene, and xylene isomers BETX using EPA Method 8020 and soluble lead, chromium, cadmium, nickel, zinc, and arsenic.

SITE AND/OR PERSONNEL MONITORING

An HNu PID or equivalent will be used to screen for petroleum products in the soil during the UST excavation. Skin will be monitored for contact dermatitis and allergic reactions, and eyes checked for irritation levels. Care needs to be taken that vapors do not build up behind goggles. Monitoring is to be conducted by individual field personnel or by field safety coordinator.

CLOTHING AND PROTECTIVE GEAR

REQUIRED at the work site: Tyvek suits, rubber boots and gloves, protective eyewear, hard hats and air purifying respirators with organic vapor cartridges and pesticide/dust filters. Tyvek suits are required if soil contact is unavoidable or if water samples are being collected. Respirators with organic vapor cartridges and pesticides/dust filters are to be **READILY AVAILABLE** on site, and shall be worn during emergencies. Employees who will wear respirators shall have completed the fit test for the specific type of respirator he/she is to wear.

The Health and Safety Officer should be contacted before changes are made in personal protective equipment usage.

Subcontractors and others not employed by Law/Crandall will not be furnished protective equipment unless prior arrangements have been made.

DECONTAMINATION PROCEDURES

Re-usable safety gear will be washed prior to re-use or removal from site.

Sampling tools and other equipment used during field work will be decontaminated as prescribed in the Work Plan, or as directed by the Field Safety Coordinator.

Drilling equipment will be steam cleaned between holes and sampling equipment will be washed in a soap and water solution.

DISPOSAL PROCEDURES

Contaminated items will be decontaminated or disposed of as directed by client officials, or bagged or containerized and left on site if possible.

Soil collected during the excavation shall be stockpiled until a proper disposal method is identified.

40 HOUR AND 8 HOUR SUPERVISOR TRAINING COURSES

All Law/Crandall employees participating in this field assessment site have completed the initial and/or annual refresher Federal OSHA training.

4.0 EMERGENCY PROCEDURES

Exposures/Decontamination

Skin - Remove contaminated clothing immediately, wash skin with soap and water.

Inhalation - Remove to fresh air. Personnel shall not enter confined spaces with known or suspected contamination.

Eye Contact - Flush with eye wash or water for at least 15 minutes. Get medical help if indicated.

Ingestion - DO NOT INDUCE VOMITING. If victim is conscious, provide drinking water or milk. Get medical help if indicated.

Injuries - Administer basic first aid if appropriate, note time and conditions. Medical emergencies take precedence over decontamination. Only Red Cross certified first aid or other qualified emergency personnel are allowed to perform the rescue. Transport to nearest medical emergency facility (Alta Bates Medical Center-Emergency Room). Notify Health and Safety Officer.

Fire/Explosion - Use hand extinguishers if appropriate and safety permits. Clients may require fire truck for large scale work. Sufficient number of fire extinguishers should be available for the size of potential fire. Contact Project Manager and client officials. Evacuate if necessary to upwind location or to pre-designated area. Notify local fire department.

DO NOT ATTEMPT TO FIGHT A LARGE FIRE.

Accidental Spill/Release - Clean up, isolate or contain spill. Evacuate area if necessary. Contact Project Manager or Branch Manager.

5.0 WORK PRECAUTIONS

1. Prior to going on site, the Field Safety Coordinator will review available data and information pertaining to site conditions, potential contaminants and work to be accomplished.
2. Prior to beginning any work on the site, the Field Safety Coordinator shall brief all field personnel on the contents of this plan.
3. No eating, drinking, smoking, chewing gum or tobacco is permitted at the work site.
4. Wear prescribed safety equipment as directed in this Plan.
5. Remove and decontaminate or discard any clothing that becomes contaminated.
6. Do not go anywhere on site other than where directed by the Field Safety Coordinator.
7. Wash exposed skin with soap and water before leaving site.
8. Potable water shall be provided in sufficient quantity to provide emergency washing.
9. Use safe and legal procedures for collecting, storing and shipping samples.
10. Entering the excavated pit is prohibited during and after excavation.
11. Monitor workers for symptoms of heat stress (e.g., elevated pulse; respiration; and body temperature). If workers exhibit these signs of heat stress, move them to shade and cool them off with cool water. Provide copious amounts of water or electrolytes to drink, and monitor pulse and respiration until they return to normal. If worker exhibits symptoms of heat stroke (e.g., red, hot and dry skin; lack of or reduced perspiration; nausea; dizziness and strong rapid pulse), obtain medical assistance immediately.

If temperature and humidity increase, increase the frequency of rest periods and lower the rate of work. As a general rule, if ambient temperatures exceed 85 degrees Fahrenheit, a 20 to 30 minute rest period should be taken after every 30 -45 minutes of work. Rest periods should be extended and work periods reduced if workers wear increased levels of PPE (e.g., air purifying respirator and impermeable clothing) in hot weather.

PERSONNEL AUTHORIZED TO ENTER SITE

Site Location: 1603 Powell Street
Emeryville, California

The following personnel may be potentially exposed to hazardous materials. By initialing and dating this form, the listed individual acknowledges that she/he has read and understands, and will comply with the requirements of this Health and Safety Plan.

Name	Date	Initials
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Other personnel who may handle hazardous materials:

FIELD SAFETY COORDINATOR'S SUMMARY

Site Location: 1603 Powell Street
Emeryville, California

To be completed after each phase of work.

a. There were no violations of this Health and Safety Plan and no obvious contamination of any personnel.

b. The following incidents, violations, exposures, or contamination occurred. (Tell who, when, contaminants, circumstances, first aid or medical assistance needed.)

Field Safety Coordinator _____ Date _____

Comments _____

*** * * RETURN TO HEALTH AND SAFETY OFFICER * * ***

INCIDENT REPORT

ALL hazards or incidents resulting in **POTENTIAL** exposure to hazardous materials must be reported as soon as possible to:

1. Health and Safety Officer, or
2. Project Manager, or
3. Chief Engineer, or
4. Branch Manager

Complete for all jobs:

Job Name _____ No. _____

Dates in Field _____

Next Phase of Work Scheduled _____

Description of all exposure incidents _____

RETURN COPY OF THIS PAGE TO HEALTH AND SAFETY OFFICER

