



Chemist Enterprises
333-B Camino Verde
Boulder Creek, California 95006
ph (408) 338-0198

SITE SAFETY PLAN

PROJECT NAME: Gallo Salame

LOCATION: 2411 Baumann Avenue, San Lorenzo, California

DATE: 12/21 or 12/22, 1994

TASK: Soil and Groundwater Investigation

SITE SAFETY OFFICER (SSO): Tom Price

SECONDARY SITE SAFETY OFFICER: Bob Baker

NEAREST HOSPITAL: Fairmont Hospital
Phone: (510) 667-7800
Address: 15400 Foothill Boulevard
San Leandro

DIRECTIONS TO HOSPITAL: East on Baumann Ave. one block, North on Worthley Dr. one block, East on Grant Ave. 1.5 mile, Northeast on Hesperian Blvd. 1.5 mile, east on 150th Ave. 0.5 mile, South on Foothill Blvd. one block, Hospital is on the left.

NEAREST FIRE DEPARTMENT: San Leandro Fire Department
Phone: (510) 577-3319
Address: 835 E. 14th Street
San Leandro

HAZARDOUS MATERIALS SPILL/CLEAN-UP CONTRACTOR
CHEMTREC: 1-(800) 424-9300

US ALERT SERVICE NUMBER: 1-(800) 642-2444

NEAREST PG&E OFFICE:
Phone: 1-(800) 743-5000
Address: 1919 Webster Street
Oakland, California

NEAREST TELEPHONE LOCATION: On site in the Office at the front desk.

LOCATION OF SITE "CLEAN AREA" as Per SSO

LOCATION OF PERSONNEL DECON:STATION: as per SSO

A Pre-project Meeting allows all personnel on-site to familiarize themselves with the potential hazards associated with the job.

The following pages contain guidelines for on-site procedures to minimize risks to personnel at the job site, as well as information regarding basic first aid in the event of injury, among other points.

We, the undersigned, have read the Site Safety Plan and understand the potential hazards on-site. We will follow the guidelines set forth in order to decrease the likelihood of personal or public injury.

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SITE SAFETY PLAN
CE

I. SAFETY AND HEALTH PLAN OVERVIEW

- A. In order to promote safety and health awareness, the position of Site Safety Officer (SSO) is rotated among owners and employees for each project site.
- B. It is the responsibility of the designated SSO to implement the Site Safety Plan (SSP) and to hold a pre-project safety meeting.

II. FACILITY BACKGROUND

- A. Site History
 - 1. Two underground storage tanks were removed in 1987. These included one 10,000 gallon gasoline tank and one 10,000 gallon diesel tank. The tanks were not observed to have holes in them at the time they were removed however, low levels of gasoline and diesel were found to be in the groundwater. The last reported concentration of gasoline in the groundwater was at below detection or

less than 50 parts per billion (ppb). The last reported concentration of diesel in groundwater was 160 ppb.

- B. Chemical Constituents of Concern
 - 1. Petroleum Hydrocarbons as Gasoline
 - 2. Benzene
- C. Scope of Work
 - 1. Conduct soil borings to groundwater.
 - 2. Conduct field testing.
 - 3. Collect grab groundwater samples.
 - 4. Site demobilization.

III. SITE CHARACTERIZATION / JOB HAZARD ANALYSIS

- A. Physical Hazards
 - 1. Operation of heavy equipment
 - a. Overhead hazards
 - b. General traffic hazards
 - c. Power actuated soil auger rig
 - 2. Electrical Shock
 - a. Faulty electric wiring on equipment
 - b. Faulty electric service to equipment
 - 3. Light Traffic Areas

a Traffic barricade work areas with safety cones.

4. Exposure to Hazardous Chemicals
(additional information listed in Appendix A)

a Soils, groundwater and/or soil gas vapors may contain an assortment of volatile petroleum hydrocarbons and possibly other toxic components. Chemicals are moderately toxic and highly flammable causing explosive concentrations in air over a range of 0.8% to 6% by volume.

5. Chemical Listing

a. Benzene

(1) Routes of entry

- (a) Inhalation
- (b) Ingestion
- (c) Dermal contact
- (d) Absorption

(2) Acute Symptoms

- (a) Fatigue
- (b) Eye, nose and skin irritation
- (c) Giddiness
- (d) Headache
- (f) Staggered walk
- (g) Anorexia
- (h) Dermatitis
- (i) Bone marrow depression
- (j) Abdominal pain

b. Toluene

(1) Routes of entry

- (a) Inhalation
- (b) Ingestion
- (c) Dermal contact
- (d) Absorption

(2) Acute symptoms

- (a) Fatigue
- (b) Weakness
- (c) Confusion
- (d) Euphoria
- (e) Dizziness
- (f) Headache
- (g) Dilated pupils
- (h) Muscle fatigue
- (i) Lacrimation
- (j) Insomnia
- (k) Parasthesia
- (l) Dermatitis
- (m) Photophobia

c. Ethylbenzene

(1) Routes of entry

- (a) Inhalation
- (b) Ingestion
- (c) Dermal contact

(2) Acute symptoms

- (a) Eye and skin irritations
- (b) Headache
- (c) Coma
- (d) Narcosis

d. Xylenes (ortho/meta/para isomers)

(1) Routes of entry

- (a) Inhalation
- (b) Ingestion
- (c) Dermal contact
- (d) Absorption

(2) Acute Symptoms

- (a) Eyes, nose, throat and skin irritation
- (b) Drowsiness
- (c) Dizziness
- (d) Excitement
- (e) Incoherence
- (f) Staggered walk
- (g) Nausea
- (h) Vomiting
- (i) Abdominal pain
- (j) Dermatitis
- (k) Anorexia
- (l) Corneal vacuolization

IV. TRAINING

- A. Potential Hazards - All personnel working at the site are made aware of all potential on-site hazards prior to the beginning of field work.
- B. Safe Work Practices - All personnel at the site are advised of safe work practices and hazard avoidance.
- C. SSP - All personnel, subcontractors of CE and all visitors to the site, are to read the SSP and sign an acknowledgment indicating that they understand its contents.
- D. OSHA - ALL CE Personnel have completed a minimum of 40-hour OSHA training and are updated annually with an 8-hour refresher course.

V. PERSONAL PROTECTIVE EQUIPMENT

- A. Level "D"
 - 1. Chemically resistant steel toed boots
 - 2. Hard hat
 - 3. Safety glasses - Eye protection must be worn whenever the potential for flying debris and or chemical splash is present.
 - 4. Hearing protection
 - 5. Leather gloves
 - 6. Denim or equivalent long pants
 - 7. Button up shirt
- B. Level "C"
 - 1. All the above, plus the following;
 - 2. Respirator - Half face respirator equipped with organic vapor cartridges. To be used when air monitoring reveals that action levels have been exceeded for any or all chemicals of concern.
 - 3. Tyvek suit
 - 4. Neoprene or Nitrile gloves

VI. MEDICAL SURVEILLANCE

- A. Health surveillance will be on an individual and on a "buddy system" basis.
- B. All personnel are advised to pay "close" attention to the symptoms of chemical exposure outlined and listed above.

VII. EXPOSURE MONITORING PLAN

- A. Direct reading instruments
(Equipment use depends on site specific conditions).
 - 1. All vapors or gases are initially field screened/monitored using an organic vapor analyzer (OVA) or a flame ionization detector (FID).

VIII. SITE CONTROL

- A. Work Zones - Areas designated during pre-field meeting.
1. Exclusion Zone
 - a. Where work is performed, with all proper safety equipment, and, where safe work practices are employed.
 - b. Public is excluded.
 - c. Area is barricaded with fences, barricades, cones and caution tape.
 - d. Cones placed to guide public away from work area.
 2. Contamination Reduction Zone
 - a. Located outside the exclusion zone.
 - b. Place where personnel and/or equipment are decontaminated in the event of contact with hazardous chemicals, from either the soils, water and/or air (vapors).
 3. Support Zone
 - a. Clean zone or Support zone is located outside Contamination Reduction zone.
 - b. Contains all job related support services.
- B. Location of Nearest Communication Equipment
1. On-site map shows nearest communication equipment. See Page 1 for address.
 2. All persons in the various zones will have remote communication equipment if necessary.
- C. Location of Nearest Medical Assistance
1. On-site map shows nearest hospital and fire department. See Page 1 for address and telephone numbers.
- D. On-site Communication
1. All personnel on-site will be made aware of common hand signals.
- E. Engineering Controls
1. Underground locator services (U. S. Alert) will be notified prior to commencing field work on-site to avoid hitting underground services (electric, phone, gas, etc.) on public property.
 3. Site Map
 - a. Indicates work locations.

IX. DECONTAMINATION

A. Material Handling

1. All hydraulic coring equipment will be steamcleaned prior to use.
2. Contaminated equipment will be taken off-site only after decontamination.
3. Disposal of wash and rinse water, and soil cuttings will be in compliance with all applicable regulations.

B. Personal Hygiene

1. No smoking, eating, or drinking will take place in the exclusion zone or in the contamination reduction zone.
2. A designated break area may be established off-site. However, any such facility must be established a minimum of at least 100 feet upwind of any vapor source and shall be tested for flammable gases and vapor at the start of work and prior to scheduled break periods each day.
3. Personnel must wash all exposed skin areas with soap and water in the decontamination area before departing the site or going on break.

X. STANDARD OPERATING PROCEDURES

- A. Pre-project safety meeting prior to working.
- B. Sampling equipment calibrated before use.
- C. Respirator fit test (if required).
- D. Site work initiated.
- E. Decontamination protocol followed.

XI. CONTINGENCY PLAN/EMERGENCY PROCEDURES

A. Personal Exposure (First Aid)

1. In the event that exposure symptoms are manifested, the victim will be taken up-wind and off-site. Seek qualified medical attention immediately.
2. Wash skin with soap and water immediately.
3. Inhalation - Move to fresh air and administer immediate artificial respiration if required.
4. Ingestion - Do not induce vomiting. If conscious give water or milk to drink. Seek qualified medical attention immediately.
5. Eyes - Flush with water for at least 20 minutes while holding eyes open. Seek qualified medical attention immediately.

B. Personal Injury

1. Provide basic first aid procedures as required; note time and circumstances of injuries. Follow these emergency action procedures:
 - a. Survey the scene.
 - (1) Is it safe to assist victim(s).
 - b. Conduct a Primary Survey
 - (1) Check for unresponsiveness and Airway, Breathing, and Circulation.
 - c. Phone 911 for ambulance if necessary.
 - d. Conduct a Secondary Survey.
 - (1) Interview victim
 - (2) Check vital signs
 - (3) Head to toe exam
 - e. Transport to nearest medical facility as appropriate. Notify SSO. See on-site map for the nearest hospital emergency room.

C. Fire and Explosion Potential

1. Evacuate the area immediately and conduct a head count of all personnel. Notify fire department. Do not attempt to fight the fire. A fire extinguisher will be present on-site for immediate response by an OSHA certified person.

XII. LIST OF APPROPRIATE REFERENCE LITERATURE

- A. Title 29 CFR 1910 - OSHA General Industry Standard
- B. Title 29 CFR 1926 - OSHA Construction Standard
- C. Title 49 CFR 171-173 - DOT Regulations

APPENDIX A.

A. Potential Hazards

1. Exposure to Hazardous Chemicals
 - a. Hazardous / Toxic Materials
 - (1) Results of previous subsurface investigations indicate the presence of volatile hydrocarbons in the shallow soils.
 - b. Hazard Assessment
 - (1) Moderately toxic chemicals through inhalation, ingestion, absorption and skin contact, but possess good warming properties.
 - (2) Highly flammable and explosive when vapor concentrations range from 0.8 to 6% by volume.

2. Chemical Listing

a. Benzene

(1) Permissible exposure limit (PEL) = 10 ppm with a ceiling of 50 ppm for 10 minutes. (NIOSH)

(2) Action Level = 0.05 ppm

(3) Immediately Dangerous to life or Health (IDLH) at 3,000 parts per million

(a) Carcinogenic

(4) Physical Properties

(a) Vapor Pressure = 75 mm mercury

(b) Lower explosion limit (LEL) = 1.3%

(c) Upper explosion limit (UEL) = 7.9%

(d) Class 1B flammable liquid

(5) Target Organs

(a) Central Nervous System (CNA)

(b) Skin

(c) Blood

(d) Eyes

(e) Respiratory system

(f) Bone marrow

b. Toluene

(1) Permissible exposure limit (PEL) = 200 ppm with a maximum exposure of 500 ppm for 10 minute peak.

(2) Action Level = 50 ppm

(3) Immediately Dangerous to Life or Health (IDLH) at 2,000 parts per million

(4) Physical Properties

- (a) Vapor pressure = 22 mm mercury
- (b) Lower explosion limit (LEL) = 1.2%
- (c) Upper explosion limit (UEL) = 7.1%
- (d) Class 1B flammable liquid

(5) Target Organs

- (a) Central Nervous System (CNA)
- (b) Skin
- (c) Liver
- (D) Kidneys

c. Ethylbenzene

(1) Permissible exposure limit (PEL) = 100 ppm

(2) Action Level = 50 ppm

(3) Immediately Dangerous to Life or Health (IDLH) at 2,000 parts per million

(4) Physical Properties

- (a) Vapor pressure = 10 mm mercury
- (b) Lower explosion limit (LEL) = 1.0%
- (c) Upper explosion limit (UEL) = 6.7%
- (d) Class 1B flammable liquid

(5) Target Organs

- (a) Central Nervous System (CNA)
- (b) Skin
- (c) Upper respiratory system
- (d) Eyes

d. Xylenes (ortho/meta/para isomers)

(1) Permissible exposure limit (PEL) = 100 ppm with maximum exposure of 200 ppm for 10 minutes.

(2) Action Level = 50 ppm

(3) Immediately Dangerous to Life or Health (IDLH) at 1,000 parts per million

(4) Physical Properties

- (a) Vapor pressure = 7/9/9 mm mercury
- (b) Lower explosion limit (LEL) = 1/1.0/1.1%
- (c) Upper explosion limit (UEL) = 7/7/7%
- (d) Class 1B flammable liquid - o xylene
- (e) Class 1C flammable liquid - m,p xylenes

(5) Target Organs

- (a) Central nervous system
- (b) Eyes
- (c) Liver
- (d) Kidneys
- (e) Skin
- (f) Blood
- (g) Gastro-intestinal tract

URGENT
FAX

RUSH TO: Amy Leech/ACDEH

FAX: 1 (510) 337-9335

FROM: Chemist Enterprises

PAGES (INCLUDING THIS COVER): 13

Amy, We received your letter concerning Gallo Salame. As you requested, we will submit samples for (lead analyses.) Also, the lithology will be logged visually by method ASTM D2488. We are tentatively scheduling for December 21 or 22. We will confirm the schedule early next week. Please feel free to call at your convenience if you have any questions. We

Thursday, December 15, 1994

→ Total Lead

→ Unified Soil Classification System

→ ASTM guidelines?

(please send me a copy