

**ensco
environmental
services, inc.**

PROJECT SAFETY PLAN

**Waste Management of
North America
Altamont Landfill Division
10840 Altamont Pass Road
Livermore, California**

**Project No. 4743F
December 1989**

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PROJECT SAFETY PLAN

**WASTE MANAGEMENT OF NORTH AMERICA
ALTAMONT LANDFILL DIVISION
10840 ALTAMONT PASS ROAD
LIVERMORE, CALIFORNIA**

This Project Safety Plan delineates the basic safety requirements for the removal, disposal, and site restoration phases of the tank closure at the Altamont Pass Landfill located in Livermore, California.

The provisions set forth in this plan will apply to the employees of Ensco Environmental Services, Inc. (EES) and their subcontractors working on this project. The subcontractors may elect to modify these provisions, but only to upgrade or increase the safety requirements, and only with EES's written concurrence.

This Project Safety Plan addresses the expected potential hazards that may be encountered for this project. Field activities are planned to begin on December 27, 1989 and continue for approximately 10 days. If changes in site or working conditions occur as the activities progress, EES will provide amendments to this plan.

1 Project Safety Authority

Personnel responsible for project safety are the Corporate Safety Officer, Office Safety Manager, and the Project Manager.

The Project Manager is responsible for providing and submitting this plan to the Project Supervisor and for advising the Project Supervisor on health and safety matters. He or she has the authority to audit compliance with the provisions of this plan, suspend or modify work practices, and administer disciplinary actions to individuals whose conduct does not meet the requirements of this safety plan.

The Project Manager is responsible for the dissemination of the information contained in this plan to the Project Supervisor assigned to the project, and to the responsible representative of each subcontractor firm working under EES on the project. The Project Manager will ensure that the following items are adequately addressed:

- Safety supplies and equipment inventory.
- Medical surveillance program/physical examinations.
- Training programs/hazard communication.
- Accident/incident reporting procedures.
- Decontamination/contamination reduction procedures.

The Project Supervisor will act as the Site Safety Officer. In his/her absence, the Job Foreman automatically assumes the role. As such, the Site Safety Officer is responsible for following procedures:

- Ensure that all personnel on-site adhere to the Project Safety Plan.
- Obtain acknowledgement from all on-site personnel on sign-off page of the Project Safety Plan.
- Investigate all incidents and accidents and report in writing to Project Manager, who will report to the Office Safety Manager.
- Ensure that proper personal decontamination points are available.

The Site Safety Officer has the authority to suspend work any time he or she determines that the provisions of the plan are inadequate to ensure worker safety. The Site Safety Officer will also inform the Project Manager of individuals whose conduct is not consistent with the requirements of the plan.

2 Medical Surveillance

EES personnel and subcontractors engaged in project operations will participate in the 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 requirements under CAC Title 8, Section 5216 which are available in the Fremont office library will be observed.

3 Safety/Orientation Training

Before beginning work, EES field personnel will attend a project-specific training program regarding safety issues and project work task review. The meeting will be conducted by the Project Manager and the Project Supervisor. In addition, the Material Safety Data Sheets (MSDS) will be reviewed, and hazards that may be encountered will be assessed.

4 Hazard Assessment

The possible major hazards to be encountered on the project are:

- Gasoline fuel and vapors.
- Diesel fuels and vapors.
- Loud equipment noises.
- Wet and slippery surfaces.
- Heavy equipment operations.
- Open excavations and cave-ins.
- Working with basic construction tools.
- Inerting process.
- Traffic hazards.
- Line breaking.

Inhalation and dermal contact will be the potential exposure pathways of concern. Protective clothing, including coveralls, boots, and gloves, will be mandatory for all field personnel. In addition, respiratory protective devices will be required for each person, or within easy reach, should irritating odors or irritation of respiratory tract become detectable.

5 Site-Specific Safety Requirements

Potential Hazard	Protective Measure
While removing USTs that may contain residual gasoline fuel and vapors.	Protective clothing and readily available respiratory protective devices with organic vapor cartridges. Level D protection.
While removing USTs that may contain residual diesel fuel and vapors.	Protective clothing and readily available respiratory protective devices with organic vapor cartridges. Level D protection.
Loud equipment noises	Proper hearing protection will be required.
Wet and slipper surfaces	No-slip soled boots for oil and grease are required.
Heavy equipment operations	All personnel will wear hard hats and stay clear of movable equipment parts.
Open excavations and cave-ins	Personnel will be required to stay at least 2 feet from edges of open excavations. Under no circumstances shall a person enter an excavation over 4 feet deep without following proper Occupational Safety and Health Administration (OSHA) requirements.
Working with basic construction tools	Common sense will be practiced. Special clothing required during operation of specific instruments will be worn.

Potential Hazard	Protective Measure
Inerting process	Personnel should not place themselves in the direct path of inerting gases. No ignition sources of any kind can be used.
Traffic hazards	Personnel will set up barricades and tape to ensure that traffic is safely rerouted around construction zone.
Line Breaking	See attached line breaking procedures.

6 General Project Safety Requirements

The project operations will be conducted under the following minimum safety requirements:

- Eating, drinking, and smoking will be restricted to a designated area.
- Gross decontamination and removal of all personal protective equipment will be performed before exiting the facility. 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 will not be permitted.
- The Project Supervisor will be responsible to take necessary steps to ensure that employees are protected from physical hazards, which could include:
 - Improper use of cables and chains.
 - 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 operations, equipment, or tools.
 - Entry into confined spaces (excavations greater than 4 feet).
 - Unqualified equipment operators.
- All personnel shall be required to wash their hands and faces before eating, drinking, or smoking.
 - Field operations personnel shall be cautioned to inform each other of non-visual effects of the hydrocarbon carbon vapors, 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.

7 Protective Equipment Requirements

Field personnel and visitors are required to wear the following clothing and equipment, as a minimum, while on the Altamont Pass Landfill site in Livermore, California:

- Hard hat.
- Safety glasses.
- Long-sleeved shirts.

Working field personnel are required to wear the following additional equipment:

- Boots (steel-toed).
- Gloves.
- Hearing protection.

8 Emergency Response Procedures

If an accident results in physical injury, first aid will be administered to the injured worker, who will then be transported to the Valley Memorial Hospital for emergency treatment. A physician's attention is required regardless of the severity of the injury.

In the event of fire, explosion, or property damage, Mr. Ronald Jackson will be notified immediately. If necessary, local fire or response agencies will be called.

9 Altamont Pass Landfill Emergency Procedures

- In-house emergency phone number, dial 232.
- In case of emergency at the Altamont facility, outside speakers will inform personnel. Emergency evacuation proceedings will be announced, and personnel will meet in front parking lot.

Emergency Telephone Numbers:

In house emergency number dial..... 232

Fire and Police9-911

Valley Memorial Hospital9-(415) 447-7000

1111 East Stanley Boulevard

Livermore, California (see attached map)

Directions to Hospital: Altamont Pass Road to 580 toward Livermore. Take
Portola exit follow signs to Stanley Boulevard.

Mr. Ronald Jackson.....(415) 449-6349

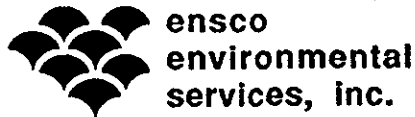
Operations Manager.....extension 232

Mr. Jim Jordan9-(415) 659-0404

EnSCO Environmental Services, Inc., Fremont, California

Fremont Safety Officer

Occupational Health and Safety Group9-(408) 253-6300



SAFETY PROCEDURE

TITLE: PRECAUTIONS IN BREAKING LINES NO.: III-G

I. PURPOSE:

To establish a procedure to safely break into process piping systems.

II. SCOPE:

This procedure applies to all Company operations.

III. PROCEDURE:

Breaking a line is, in essence, breaking into a closed system. Regardless of the checking done and the instruments used, it must be assumed that at the point where the line is to be broken there is product or gas that will escape.

A. Breaking lines which have ever contained a liquid or gas which is corrosive or toxic, or which presently contains hot materials, must be treated as a **SPECIAL HAZARD**. The following precautions must be taken in line breaking operations:

1. A "line breaking checklist" must be completed.
2. Competent supervision must be on the jobsite when a hazardous line is broken. Arrangements to provide this supervision on off-shifts and weekends must be made.
3. A water hose shall be provided at the point of line breaking. The water shall be running or the hose valved at the end.

TITLE: PRECAUTIONS IN BREAKING LINES

NO.: III-G

4. Where applicable, a Lockout procedure shall be employed to deactivate pumps, blowers, etc.
5. The line shall be drained completely, making certain that valves are left open to prevent the possibility of an air lock.
6. The portion of the line being worked on shall be isolated from those adjacent to it in the most effective way. Valves which are closed shall be chained and locked to prevent inadvertent opening.
7. Before the moment of breaking occurs, the area shall be set up for maximum protection to passersby and nearby workers. Shielding and roping off shall be effected. A funnel or suitable container to collect drainage will be used where applicable.
8. Protective equipment shall be worn when hot, corrosive to toxic materials are or may be present. THE MINIMUM EYE PROTECTION IS A FULL FACE SHIELD WORN OVER SAFETY GLASSES, OR GOGGLES OVER SAFETY GLASSES. In addition, the following safety equipment is required.
 - a) A hard hat
 - b) A full length raincoat (or jacket and pants) which fastens to the neck. Clothing shall be of suitable, chemically resistant materials.
 - c) Gauntlet type rubber gloves.
 - d) Rubber boots or overshoes high enough to be covered by the raincoat (or pants).
 - e) Where the possibility of inhalation exists, suitable respiratory protection shall be worn. The type of equipment used will be dictated by the material encountered and the severity of the exposure potential.
 - f) Where severe and continuing sprays or heavy gassing occurs or is anticipated, fully enclosed rubber suits with appropriate self-contained breathing apparatus will be worn.

TITLE: PRECAUTIONS IN BREAKING LINES

NO.: III-G

9. It is difficult to prescribe a general set of rules covering the precise and safest way to effect all line openings. However, the best standards applicable to the particular job shall be followed, including:
- a) Loosening the bolts of a flange which are farthest from the employee first.
 - b) Shielding whenever possible, including the partial use of flange covers. Stand aside to avoid any spray.
 - c) Washing out the lines and fittings with water, with the exception of water reactive chemicals, at least twice. (When in doubt, consult Management.) Contaminated water should be captured onsite for disposal. Dismantled lines and fittings should be free of contaminant before being removed from the jobsite. This applies if the parts are to be scrapped for salvage.
 - d) Flange spreaders shall be used for opening flange joints whenever possible and practical. When it is not possible to use flange spreaders, only standard wedges shall be used as an alternative. A chain or strong, flexible wire shall be secured to the wedge, the other end firmly secured to a fixed object to prevent the wedge from flying in the event it slips from the joint.
 - e) Whenever possible, old flange bolts shall be removed one at a time and replaced with new bolts which can be gradually loosened as the wedge is being inserted. This will prevent sudden opening of the joint, particularly when it is under stress. The use of drift pins, cold chisels, spud wrenches and similar tools as alternates is strictly forbidden.

TITLE: PRECAUTIONS IN BREAKING LINES

NO.: III-G

10. Line breaking checklists shall be used as follows:
 - a) When a checklist is used, it shall be filled out completely.
 - b) A checklist covers a single shift only, unless the entire job is completed by the personnel starting it.
 - c) The checklist must be signed by the supervisor or foreman.
 - d) When a job is completed, the checklist forms need to be submitted to the office.

IV. SPECIAL PRECAUTION - FLAMMABLE LIQUID OR GAS LINES

- A. Where it is necessary to burn flange bolts off, or to use welding equipment for other purposes, the following procedures are mandatory:
 1. Welding and burning procedures must be followed to the letter (III-F).
 2. The line must be broken at the nearest flange without the use of a burning torch.
 3. If the line cannot be broken without burning flange bolts, all flange bolts must be replaced one at a time without separating the flanged joint.
 4. The line, when separated, must remain open to the atmosphere. The remaining portion of the line not being worked on must be blanked.
 5. Explosive meter tests must be conducted by a qualified person. If an explosive mixture is detected, the line must be purged with an inert gas.

