58 Mellen St, Hopedale, MA 01747
Voice 508-634-6600 * Fax 508-634-3611
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Safety Manual

Table of Contents

FRONT LINE, INC.
Hazard Communication Plan

Contents: Sample Hazard Communication Plan

Introduction

OSHA requires employers to develop a written plan to communicate with employees about the hazards of particular chemicals used in the workplace. Perhaps the most significant part of this requirement is the reading of Material Data Safety Sheets (MSDS). This chapter includes a sample MSDS form and detailed instructions on how to read and understand an MSDS.
Outlines the requirements for ensuring evaluation of the hazards of all chemicals imported into, produced, or used in the workplace. It establishes means for communicating hazard information to all affected workers. This program allows for hazard identification and has requirements for safety data sheets (SDS). It outlines labeling requirements and details employee training requirements, including non-routine task training. The program also defines communication requirements for contractors and vendors.

This sample plan includes:

- container labeling procedures
- MSDS procedures (Material Safety Data Sheets)
- employee information and training guidelines
- sample forms to be used as part of the plan
- information on how to request, read, and understand a Material Safety Data Sheet (MSDS)

Employers Covered

Any employer using a hazardous material (any material that has or requires a Material Safety Data Sheet) is covered. This sample Hazard Communication Plan follows the OSHA requirements for a written plan found in 29 CFR 1910.1200.

Note: The sample MSDS at the end of this document is a PostScript™ file that may be difficult to read from a computer monitor, but should print accurately. The sample MSDS is a graphics file that may not be altered by the person using this disk.

HAZARD COMMUNICATION PLAN

Front Line, Inc.

Company Name

58 MELLEN ST

Street Address

HOPEDALE	MA	01747
City	State	ZIP Code

Prepared by:
Nancy Salter

print name of preparer

President	1-508-634-6600
Title	phone number

Signature	date

GENERAL REQUIREMENTS

(1) In order to comply with 29 CFR 1910.1200, the following written Hazard Communication Plan (HCP) is to be implemented for personnel of:

Front Line, Inc.
company name

(2) The originals will be kept on file by:

Nancy Salter President
name / title

58 MELLEN ST. HOPEDALE, MA. 01747
location

(3) This plan will be used by all personnel.

Nancy Salter President
name / title

will be responsible for ensuring that the plan is current and enforced.

(5) A copy of this plan must be available to employees on hiring, and a copy will be supplied to any employees on request.

(6) Nancy Salter President
Name/ title

will be contacted when a copy of the plan is needed.

(7) The plan will be updated when new chemicals or hazards are introduced into the working environment and will be reviewed annually.

PURCHASES

Nancy Salter President
name / title

will check all chemical purchase requests (PR) and verify that a statement requesting a Material Safety Data Sheet (MSDS) appears on each purchase request before it is processed.

CONTAINER LABELING

Nancy Salter President
name / title

will be responsible for monitoring all containers of hazardous chemicals entering the workplace. He or she will ensure that the chemical containers are properly labeled with:

- chemical name
- hazard warning
- name and address of manufacturer, importer, or responsible party
- Pictograms
- Precautionary Statements
- Signal Word

No chemical will be used until it has been checked by:

Nancy Salter President
name / title

If chemicals are to be transferred to a separate container,

Nancy Salter President
name / title

will ensure that the new container is properly labeled and that all secondary containers are labeled. Secondary labels can be an extra copy of the manufacturer's label or a generic label. All secondary labels must list Chemical Identity, Hazard Warning, Pictogram, Signal Word, Precautionary Statement and Manufacturer.

For help with labeling, contact:

Nancy Salter President
name / title

Nancy Salter President
name / title

will review the labeling system annually and update it as required.

Nancy Salter President
name / title

will ensure that pipes are labeled properly.

Nancy Salter President
name / title

will also inform employees of the hazards associated with the chemicals contained in pipes within the work area.

MATERIAL SAFETY DATA SHEETS (MSDS) – GENERAL PROCEDURES

Nancy Salter President
name / title

will be responsible for obtaining and maintaining the MSDS system for this company.

Nancy Salter President .
name / title

will review incoming data sheets for new and significant health and safety information.
Nancy Salter President
name / title

will ensure that the new information is given to the affected employees.

Copies of all MSDSs will be kept by:

Nancy Salter President
name / title

and reviewed annually for the accuracy and completeness of each MSDS.

The MSDS system includes the following requirements:

- A current master inventory list of all MSDSs will be maintained. The list will be indexed by number to the MSDS referenced on the inventory list.
- The chemical name or identity used on each MSDS will be the same as that used on the container label.
- The chemical and common name of all ingredients determined to present a hazard will appear on all MSDSs.

The information on an MSDS includes: *

- physical and chemical characteristics of the chemical, including vapor pressure, flash point, etc.
- fire, explosion, and reactivity hazards of the chemical, including boiling point, flash point, and auto-ignition temperature
- health hazards of the chemical mixture, including signs and symptoms of exposure, medical conditions recognized as aggravated by exposure, and primary routes of entry
- permissible exposure limit (PEL) or any other exposure limit used or recommended by the manufacturer, importer, or employer

* A request for an MSDS and a copy of the OSHA MSDS form are available at the end of the plan.

- whether the chemical is listed as a carcinogen by the National Toxicology Plan (NTP) or has been found to be a potential carcinogen by the American Conference of Governmental Industrial Hygienists (ACGIH) or OSHA

- control measures for the chemical, including fire, engineering, and personal protective equipment

- general precautions for safe handling and use, including protective measures during repair and maintenance of equipment involving the chemical

- procedures for cleanup of spills and leaks

- emergency first aid procedures

- date the MSDS was prepared or revised

- name, address, and telephone numbers of manufacturer, importer, or responsible party to call in an emergency

The MSDS originals will be kept on file by:

Nancy Salter President
name / title

The MSDS will also be part of the plan for use by employees.

Each Supervisor
title

will keep a current copy of the plan on file.

A new chemical will not be used until its MSDS has been obtained.

SUMMARY – READING AND UNDERSTANDING THE MSDS

The Material Safety Data Sheet (MSDS) is the primary document in hazard communication. OSHA standards require manufacturers and importers to provide an MSDS with each of the chemicals they ship. OSHA standards also require employers to have an MSDS for each hazardous chemical they use.

The importance of the MSDS can't be overstated. This form contains all known hazard and protection information on a hazardous chemical. The MSDS is a guide to safety.

OSHA has developed a sample Material Safety Data Sheet form that many companies are using. Although the agency doesn't insist that everyone use OSHA's form, OSHA does expect all MSDSs to include the same basic information.

A Material Safety Data Sheet should include information on these topics:

Section I Identity

This section tells you the name of the chemical as it appears on the container label. The only time identity information is not provided is if the chemical name is a trade secret. Even in that situation, the MSDS must provide full hazard protection data.

The identity section also lists the name, address, and telephone number of the company that makes the chemical. An employer may contact the manufacturer for additional information.

Section II Hazardous Ingredients/Identity Information

This section lists the hazardous parts of the chemical. The chemical is identified by its common and scientific names in this section. If it's a compound with more than one hazardous ingredient, the principal ingredients are listed here – usually by percentage.

This section also lists the exposure limits set by OSHA and other organizations. Both OSHA's Permissible Exposure Limit (PEL) and the Threshold Limit Value (TLV) set by the American Conference of Governmental Industrial Hygienists (ACGIH) are listed. These limits specify the maximum amount of exposure to the substance a worker can have based on an eight-hour workday. The OSHA limit is a legal one; ACGIH's limit is the stricter one and is a recommendation. Both limits are usually given in parts per million (PPM) or milligrams per cubic meter (mg/m^3).

Section II may also give a ceiling, or top exposure limit, which is the maximum allowable exposure at one time. Short-term (15-minute) exposure limits (STEL) may be provided. There may also be information on whether the substance is "Immediately Dangerous to Life and Health" (IDLH). If the chemical is IDLH, the respiratory protection supplied by the employer must take this rate into consideration.

Section III Physical/Chemical Characteristics

This section lists the chemical's normal state and helps define how the chemical will behave when it is released. For example, a chemical that is normally a liquid may evaporate quickly in a hot environment, thus increasing its risk as a fire hazard.

A chemical's physical characteristics could also affect its health hazards and the protection that an employee needs. A liquid may be dangerous if it splashes on skin, thus requiring that the employee wear protective clothing. But if the same chemical changes to a vapor, the chief risk may result from inhalation, requiring respiratory protection.

The chemical's normal appearance and odor are described in this section. Knowing the chemical's normal appearance, an employee can spot any changes or differences that could indicate trouble.

In addition to the normal state of the chemical, this section lists the circumstances, such as temperature, that could change that state.

- **Melting Point**

  The melting point is the temperature at which a solid changes to a liquid.

- **Boiling Point**

  The boiling point is the temperature at which a liquid changes to a gas.

- **Evaporation Rate**

  The evaporation rate is how long the chemical takes to evaporate. Butyl acetate has a relative evaporation rate of 1. A chemical with a higher number evaporates faster; one with a lower number evaporates slower.

- **Specific Gravity**

  The specific gravity is the density of the chemical compared to water, which has a relative value of 1. If the chemical's specific gravity is greater than 1, the chemical is heavier than water and will sink in water. If the chemical's specific gravity is less than 1, the chemical will float on water.

- **Vapor Density**

  The vapor density is the density of the chemical's vapor compared to air, which has the density of 1. If a chemical's vapor density is higher than 1, the vapor is heavier than air and will go to the floor. If the chemical's vapor density is lower than 1, the vapor will rise in the air.

- **Vapor Pressure**

  Vapor pressure measures how volatile a liquid is. Vapor pressure also measures how easily a liquid evaporates. The higher the number, the faster the liquid evaporates. This section of the MSDS also has a space that explains how much of the chemical will dissolve in water. The ability to dissolve is usually stated as a percent or as parts per million (PPM).

Section IV Fire and Explosion Hazard Data

This section states whether the chemical has a potential to catch fire or explode.

Flash point is the lowest temperature at which a chemical's vapors are concentrated enough to ignite. The lower the flash point number, the more dangerous the material.

Example:

Gasoline's flash point is -45°F. Diesel fuel #2 has a flash point of +125°F.

This section contains the upper (UFL) and lower (LFL) flammable limits. Between these limits the substance is likely to ignite.

This section also lists the upper (UEL) and lower (LEL) explosive limits. These provide the minimum and maximum concentration of the chemical's vapor in the air required for an explosion to occur. Finally, this section contains fire-fighting procedures and the extinguishing media.

Section V Reactivity Data

Some substances are unstable. They can react with other substances or in specific kinds of conditions. This section lists the chemicals or conditions to avoid. Any hazardous byproducts the chemical could generate are also listed, along with the hazards (such as toxic gases) that could be created if the chemical decomposes.

Section VI Health Hazard Data

This section describes how the chemical gets into the human body and what effects it has on the body. The following are the usual methods of exposure:

- inhalation or breathing
- ingestion or swallowing
- direct skin contact

This section also lists the health hazards the chemical poses:

- acute: effects that show up immediately after exposure
- chronic: effects that develop over time (usually serious)
- carcinogenic: It notes whether the conclusion that the chemical causes cancer is based on findings of the International Agency for Research on Cancer (IARC) or National Toxicology Program (NTP). The section also states whether OSHA regulates the chemical for its cancer hazard.

This section of the MSDS also lists the symptoms of exposure.

Section VII Precautions for Safe Handling and Use

This section provides the following types of information:

- how to handle the chemical under normal conditions
- how to handle a spill
- what to use to clean up a spill
- whether to evacuate immediately if there is a spill
- how to dispose of waste chemical

Section VIII Control Measures, Protective Clothing, and Equipment

This section describes the type of ventilation needed, for example:

- local exhaust
- mechanical exhaust
- other

It also describes respiratory protection needed (if any).

This section contains OSHA’s recommended protective devices and clothing.

SPECIAL PRECAUTIONS are also listed in this section.

CHECKLIST FOR COMPLETENESS OF MATERIAL SAFETY DATA SHEETS

Instructions: The Hazard Communication Standard requires that 13 items of information be included in a Material Safety Data Sheet (MSDS). The MSDS is provided to purchasers. There is no specified order for these items: they may be found anywhere on the MSDS. If the preparer of the MSDS did not find relevant information for any given item, he or she must mark the MSDS to indicate that no applicable information was found. This checklist will help you in determining the completeness of an MSDS. The checklist does not assess the accuracy of the information provided.

I Identity and Manufacturer Information

- ☐ The identity used on the label
  (may be the same as the chemical or common name)
- ☐ Name, address, and emergency phone number(s)
  of manufacturer
- ☐ Name of person who prepared the MSDS
- ☐ Date MSDS was prepared

II Hazardous Ingredients/Identity Information

- ☐ Hazardous ingredients
- ☐ Chemical names/common names
- ☐ OSHA PEL (permissible exposure limit)
- ☐ ACGIH TLV (threshold limit value)
- ☐ Other limits recommended

III Physical/Chemical Characteristics

- ☐ Boiling point
- ☐ Vapor pressure
- ☐ Vapor density
- ☐ Solubility in water
- ☐ Appearance and color
- ☐ Specific gravity
- ☐ Melting point
- ☐ Evaporation rate

IV Fire and Explosion Hazard Data

- ☐ Flash point
- ☐ Extinguishing media
- ☐ Special fire-fighting procedures
- ☐ Unusual fire and explosion hazards
- ☐ Flammable limits
- ☐ LEL (lower explosion limit)
- ☐ UEL (upper explosion limit)

V Reactivity Data

- ☐ Stability
  - ☐ Stable
  - ☐ Unstable
- ☐ Conditions to avoid

- [ ] Incompatibility
- [ ] Hazardous decomposition or byproducts
- [ ] Hazardous polymerization
  - [ ] May occur
  - [ ] Will not occur
- [ ] Conditions to avoid

VI Health Hazard Data

- [ ] Route(s) of entry
- [ ] Health hazards
- [ ] Signs and symptoms of exposure
- [ ] Medical conditions generally aggravated by exposure
- [ ] Emergency first aid procedures
- [ ] Carcinogenic?
- [ ] OSHA regulated?

VII Precautions for Safe Handling and Use

- [ ] Steps to take if released or spilled
- [ ] Waste disposal method
- [ ] Precautions for handling and storing
- [ ] Other precautions

VIII Control Measures

- ☐ Respiratory protection (specific type)
- ☐ Ventilation
  - ☐ Local exhaust
  - ☐ Special
  - ☐ Mechanical
  - ☐ Other
- ☐ Protective gloves
- ☐ Eye protection
- ☐ Other protective clothing or equipment
- ☐ Work/hygienic practices

Chemical: _____

Date checked: _____ Date on MSDS: _____

MSDS checked by: _____

EMPLOYEE INFORMATION AND TRAINING

Before a new employee starts work, the employee's supervisor or foreman will go over the employee's copy of the Hazard Communication Plan (HCP) and each MSDS applicable to the employee's job.

Before any new chemical is used, all employees will be informed of its use. Each affected employee will be instructed on safe use and trained on the hazards of the new chemical.

(Specify methods to be used, for example, handouts, videos, or tapes.)

_____

_____

_____

All employees will attend additional training, as appropriate, to review the HCP and MSDS.

Appropriate library reference material will also be discussed during the training sessions.

The minimum orientation and training for a new employee contains the following:

- an overview of the requirements contained in the Hazard Communication Standard, 29 CFR 1910.1200
- the chemicals present in the workplace operations and this office
- location and availability of the written HCP
- the physical and health effects of the hazardous materials listed on the inventory list of this plan
- methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area
- how to lessen or prevent exposure to these hazardous chemicals through use of control/work practices and personal protective equipment

- steps taken by:

Nancy Salter President
company name

to lessen or prevent exposure to the chemicals listed on the inventory list

- emergency procedures to follow if exposed to any chemicals
- location of MSDS file
- location of the hazardous chemical inventory list

Before a new chemical hazard is introduced into any section of the workplace, each employee will be given information and training as outlined above and/or as outlined on the attached Employee Training Guidelines by:

Nancy Salter President
name or title

This person is also responsible for ensuring that the MSDS on each new chemical is available before the chemical is used.

After attending the training class, each employee will sign a form to verify that he or she attended the training. Each employee will sign a form to verify that the written Hazard Communication Plan was or is made available for review and that he or she understands the HCP.

Before entering an establishment,

Nancy Salter President
name or title

will ascertain what hazards he or she may be exposed to and then take appropriate action to be protected. If an employee has any questions about what protection he or she will need, the employee will immediately contact:

Nancy Salter President .
name or title

EMPLOYEE TRAINING GUIDELINES

All employees and contractors must be made aware of the hazards they may encounter and the precautions they must take to protect themselves from these hazards.
Employees or contractors must be trained on initial assignment and whenever any new physical, chemical or health hazards are introduced, when non-routine tasks or procedures are required, or when employees are working with or near unlabeled piping systems that contain hazardous chemicals.

1. Prepare Objectives:

- Develop safety attitudes.
- Make employees aware of the hazardous chemicals.
- Motivate employees to protect themselves by preventing exposure to hazardous chemicals.
- Learn how to read and understand labels and MSDSs.

2. Design a Training Plan that Teaches the Following:

- which hazardous chemicals are found in the work area and where they are found
- what the chemicals look like and the odor of the chemicals
- the nature of the operation in which an employee might be exposed
- information to aid employees in recognizing conditions or situations that may result in the release of a hazardous chemical
- the purpose and description of detection or monitoring devices
- the purpose for, and application of, specific first aid procedures and practices
- availability of personal protective equipment
- type, use, and limitations of personal protective equipment
- location of personal protective equipment

- the overview on MSDSs
- review of the Hazard Communication Standard, located at 29 CFR 1910.1200

3. Implement the Following Techniques in the Training Plan:

- handout materials – examples of MSDSs and labels, employer's form for request of MSDS, and checklist of completeness for material safety data sheets.
- audiovisuals – examples of labels and MSDSs
- demonstration of protective equipment: what it is, how to use it, where protective equipment is located, etc.
- tests and quizzes
- attendance records

4. Assess Effectiveness:

- Were training objectives met?
- What part of the training plan needs to be revised?
- What part of the training plan was already known and unnecessary?
- What material was confusing?
- What material was missing?
- How often should training be repeated?
- What did the employees learn?
- What did the employees fail to learn?

5. Implement the Use of MSDSs:

- Were employees taught how to read and understand an MSDS?
- Did the Hazard Communication Plan include instructions from the overview on reading and understanding MSDSs, and the checklist for MSDSs?

INVENTORY LIST OF HAZARDOUS CHEMICALS

The following is a list of the hazardous chemicals used in this workplace. Further information can be obtained from the MSDS attached to this plan or from:

Nancy Salter President
name or title

The originals will be kept on file by:

Nancy Salter President
name or title

58 MELLEN ST HOPEDALE MA. 01747
location

HAZARDOUS CHEMICALS INVENTORY USED

Nancy Salter   President
name or title

MSDS Index #	Hazardous Chemical	Area Used in Workplace	CAS Number

NON-ROUTINE TASKS

Note: If no non-routine tasks are known to exist at the time of preparation of this plan, skip this section.

Before any non-routine task is performed, the employee will be advised of special precautions to follow. If the employee receives no instruction, the employee should contact:

Nancy Salter President
name or title

In addition, any other personnel who could be exposed will be informed of this potential exposure by:

Nancy Salter President
name or title

In the event such tasks are required,

Nancy Salter President
name or title

will provide the following information about the activity as it relates to the specific chemicals expected to be encountered:

- specific chemical names
- hazards of the chemicals
- what personal protective equipment is required
- what safety measures are to be taken
- emergency procedures
- measures that have been taken to lessen the hazards, including ventilation, respirators, and the presence of other employees

OUTSIDE CONTRACTORS

It will be the responsibility of:

Nancy Salter President
name or title

to provide other personnel or outside contractors with the following information:

- hazardous chemicals to which they may be exposed while in the workplace
- measures to lessen the possibility of exposure
- location of MSDS for all hazardous chemicals
- procedures to follow if they are exposed

Nancy Salter President
name or title

will also be responsible for contacting each contractor before work is started and finding out what chemicals the contractor is bringing into the workplace. If employees are to be exposed to these chemicals,

Nancy Salter President
name or title

will inform those employees who may be affected.

signature of employer

date

President
title

EMPLOYER'S FORM – REQUEST FOR MSDS

Instructions: Type this request on your company's stationery, supplying the information in brackets.

<date>

To: <name and address of chemical manufacturer, importer, or distributor>

Re: Request for MSDS

As you are aware, OSHA requires employers to provide training to their employees concerning the hazards of chemicals and/or other hazardous materials.

To properly train our employees, we need a Material Safety Data Sheet (MSDS) on one or more of your products. Please send MSDS for the following materials (chemicals):

<name of chemical>
<name of chemical>
<name of chemical>

Thank you for your prompt attention to help us maintain a proper level of safety for our employees.

If you have any questions, feel free to contact me at <phone number>.

Sincerely,

<signature>
<typed name>

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(As Used on Label and List)*	*Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

Section I

Manufacturer's Name	Emergency Telephone Number
Address *(Number, Street, City, State, and ZIP Code)*	Telephone Number for Information
	Date Prepared
	Signature of Preparer *(optional)*

Section II – Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*

Section III – Physical / Chemical Characteristics

Boiling Point		Specific Gravity (H_2O = 1)	
Vapor Pressure (mm Hg.)		Melting Point	
Vapor Density (AIR = 1)		Evaporation Rate (Butyl Acetate = 1)	
Solubility in Water			
Appearance and Odor			

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Extinguishing Media			
Special Fire Fighting Procedures			
Unusual Fire and Explosion Hazards			

Front Line, Inc.
Emergency Action Plan

Contents: Sample Emergency Action Plan

Introduction

OSHA requires employers to have an emergency action plan. The purpose of the plan is to eliminate or minimize hazards to employees in the event of a fire or other emergency. This sample plan is designed to generally follow the emergency action plan required for most businesses. However, the employer must modify the plan to meet any special circumstances.

This plan includes:

- location of the plan
- minimum plan requirements
- Evacuation plan
- Employee training
- designation of escape procedures and exit routes
- procedures for critical plant operations
- accounting for employees
- rescue and medical duties
- emergency reporting
- alarm systems and notification of emergencies
- types of evacuation in emergency circumstances
- employee training
- sources for employees to obtain further information about the plan

This Emergency Action Plan follows the OSHA requirement for a written plan found in 29 CFR 1910.38. Further information on alarm systems can be found in 29 CFR 1910.165 and 1910.38(a)(3)(ii). The employer must establish an employee alarm system that complies with 29 CFR 1910.165 in order to have a satisfactory emergency action plan.

Employers Covered

All employers must have a plan. Employers with 10 or more employees must have a written plan. Employers with fewer than 10 employees may have an oral plan.

EMERGENCY ACTION PLAN

Front Line, Inc.

company name

58 Mellen St.

street address

Hopedale | MA | 017457

city | state | ZIP code

Prepared by:

Nancy Salter

print name of preparer

President | 1-508-634-6600

title | phone number

signature | date

PURPOSE

This plan is for the safety and well-being of the employees of:

Front Line .
name of company

It identifies necessary management and employee actions during fires and other emergencies. Education and training are provided so that all employees know and understand the Emergency Action Plan.

LOCATION OF PLAN

The Emergency Action Plan can be found at the station or office of each Safety Supervisor. A copy is also maintained in the company office.
foreman, safety supervisor, etc.

Upon request, an OSHA representative may obtain a copy of the plan from:
Nancy Salter President .
company designee and title

MINIMUM PLAN REQUIREMENTS

The Emergency Action Plan must be in writing. The plan designates employer and employee actions to ensure safety during fire and other emergencies. The plan is kept at the workplace and is available for employee review.

The following must be in the plan:

- emergency escape procedures and escape route assignments
- procedures for employees who remain behind to perform critical plant operations

- procedures to account for all employees after emergency evacuation
- identification of employee rescue and medical duties
- preferred means of reporting fires and other emergencies (manual pull box alarms, public address systems, radios, telephones, etc.)
- types of evacuation to be used in emergency circumstances
- names and job titles of persons or departments who can be contacted for further information about the Emergency Action Plan

The employer must also post emergency telephone numbers near telephones and other conspicuous locations when telephones serve as the means of reporting emergencies.

Evacuation Routes and Assembly Areas

A map of evacuation routes will be displayed in key areas around the jobsite. Each map will show the way to an exit depending on where employees are located in the building. It is the responsibility of the foreman/ supervisors to inform employees of these evacuation routes.

Evacuation Procedures

Upon hearing the alarm or upon notification of an evacuation:

- Exit from buildings shall take place in an orderly and safe manner via the posted evacuation routes.
- Time permitting, ensure all windows and doors are closed upon exiting the building.
- If it is safe to do so, supervisors shall “sweep” their departments to ensure everyone has left the area.
- All employees, contractors, and visitors shall assemble at the closest designated Assembly Area (Rally Point).
- Anyone not at their usual work location, and contractors or visitors shall join the nearest group and proceed to exit and assemble at a designated Assembly Area.
- No one may leave the Assembly Area until the Emergency Coordinator has given the All-Clear signal.

- Department supervisors and/or Security personnel will conduct a head count and report any missing persons and their suspected locations if known to the Emergency Coordinator.

- Based on the situation, the Emergency Coordinator will decide whether to conduct search and rescue using internal personnel or wait for assistance from outside emergency responders.

ESCAPE PROCEDURES AND EXIT ROUTES

All exits will remain unlocked during working hours. All employees must exit the facility in a quiet and orderly manner.

The following departments/areas must leave through EXIT 1:

A. _____

B. _____

C. _____

The following departments/areas must leave through EXIT 2:

A. _____

B. _____

C. _____

The following departments/areas must leave through EXIT 3:

A. _____

B. _____

C. _____

NOTE: Include a diagram of facility exit routes in the space below:

CRITICAL PLANT OPERATIONS

OSHA requires employers to establish procedures for personnel who remain behind for critical plant operations. To minimize damage from the emergency, the following personnel are responsible for shutting down the listed critical operations:

	Personnel Names	**Critical Operation**
A.	_____	_____
B.	_____	_____
C.	_____	_____

As soon as shut down is completed, the employees who performed critical plant operations must take the nearest exit route in accordance with general emergency procedures.

ACCOUNTING FOR EMPLOYEES

After exiting the facility, all employees are to assemble for roll call at this location: _____ .

The following employees are responsible for ensuring that employees comply with this requirement:

A. Nancy Salter President
name and title

B. _____
name and title

NOTE: Include a diagram with the meeting place in the space below:

RESCUE AND MEDICAL DUTIES

The following personnel are certified and trained in both CPR and general first aid. These persons are to be contacted, as specified in the general emergency training:

A. Nancy Salter President 508-634-6600
name and title phone number

B. _____ _____
name and title phone number

C. _____ _____
name and title phone number

REPORTING EMERGENCIES

The following personnel have the duty of contacting public responders to come to the emergency scene. The personnel are listed in descending order of availability:

A. Nancy Salter President 508-634-6600
name and title phone number

B. _____ _____
name and title phone number

C. _____ _____
name and title phone number

ALARM SYSTEMS AND NOTIFICATION OF EMERGENCIES

(1) In a facility emergency, employees will be notified as follows:

_____
identify method of notification

(2) The employee alarm system provides warning for:

- necessary emergency action as called for in the Emergency Action Plan;
- reaction time for safe escape of employees from the workplace or the immediate work area; or
- both.

(3) The employee alarms must be:

- distinctive and recognizable as a signal to evacuate the work area or perform other required action
- perceptible above ambient noise or light levels by employees in the affected portions of the workplace

(4) If the employee alarm system is used for alerting fire brigade members, or for other purposes, a distinctive signal for each purpose must be used.

TYPES OF EVACUATION

OSHA requires this company to establish a system of types of evacuation to follow for different emergency circumstances. The following listing represents company policy for various emergency situations:

A. _____

B. _____

For example:

Partial evacuation – Code Yellow, 3 rings: RESPONDERS (trained extinguisher personnel and trained rescue and medical personnel)

Full Evacuation – Code Red, 4 rings: RESPONDERS (n/a)

NOTE: If there is more than one evacuation type, the alarm signal for each must be distinctive.

TRAINING

Before implementing the Emergency Action Plan, the employer must identify and train sufficient personnel to assist in the safe and orderly evacuation of employees. The following people have been specially trained to do so:

Employee Accountability Training:

A. Nancy Salter President
name and title

B. _____
name and title

Rescue and Medical Duty Training:

A. Nancy Salter President
name and title

B. _____
name and title

Emergency Reporting Training:

A. Nancy Salter President
name and title

B. _____
name and title

Extinguisher Training:

A. Nancy Salter President
name and title

B. _____
name and title

C. _____
name and title

On each employee's initial assignment, the employer will review those parts of the plan that the employee needs to know in an emergency. A record of this training will be kept in the company office

Employees shall be trained on those parts of the plan that they must know to protect themselves in the event of an emergency. Additionally, the written plan shall be made available for employees to review and plan for their evacuation.

Training shall take place:

- Upon initial employment
- Annually
- With a change in job assignment
- When the plan is revised.

Items to be reviewed during the training include, but are not limited to:

- Fire extinguisher locations, usage, and limitations.
- Threats, hazards, and protective actions.
- Means of reporting emergencies.
- Individual responsibilities.
- Escape routes and procedures.
- Emergency Action Plan availability.

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FURTHER INFORMATION

For further information or explanation about any duties under the Emergency Action Plan, contact:

A. Nancy Salter President
name and title

B. _____
name and title

C. _____
name and title

LADDER SAFETY

Ladders provide means to ascend to elevated work platforms. Ladders should not be used as a work platform to perform complicated or lengthy tasks. If the task requires two hands to perform or more than a few minutes, an elevated work platform should be used. If the task cannot be accomplished using an elevated work platform, then personal fall protection should be used.

Frontline personnel are to inspect all portable ladders before use, monthly when stored, and immediately after involvement in a collision or tipping over. All ladders must meet OSHA/ANSI specifications.

lnspect all portable ladders for:

- Dented, bent, decayed, broken, or missing steps, rungs, cleats, side rails, or other parts of the ladder.
- Sharp edges, burns, and splinters
- Loose joints between the steps and side rails
- Undue shakiness, wane, or signs of compression failures
- Loose or sheared rivets or bolts
- Worn or missing safety feet
- Frayed or badly worn rope
- Binding or undue play of moving parts
- If ladders are oily or greasy, clean them immediately. If ladders are damaged, deteriorated, or defective, remove them from service immediately and turn them over to the Warehouse Manager for repair or destruction and disposal.

Maintenance personnel must repair or destroy and dispose of ladders that are damaged, deteriorated, or defective. Do not improvise repairs. If the ladder cannot be repaired to original structural integrity, then it must be destroyed and discarded.

Do not use ladders as guys, braces, skids, platforms, scaffolds, runways, or for other than their intended design purposes.

Do not place ladders in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.

Do not place ladders on boxes, barrels, or other unstable bases. Do not splice ladders together to provide long sections.
The proper angle of a portable ladder is to place the base a distance from the wall equal to 1/4 the working length of the ladder.

Place the ladder base section with a secure footing to prevent slipping, or lash the top in place or otherwise hold the ladder in position. Safety feet are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used upon oily, metal, concrete, or slippery surfaces.

Ensure that the top of both rails are supported unless equipped with a single support attachment. Ensure the ladder extends at least three (3) feet above the point of support when gaining roof access. Ensure the metal reinforcement of portable rung ladders with reinforced rails is present. Ensure extension ladder sections overlap one (1) foot for every twelve (12) feet of ladder length, but not less than three (3) feet of overlap.

Do not use the top of a stepladder or the 2nd from top rung as a step. Do not climb on the bracing on the back legs of stepladders. Do not place more than one person on a ladder at a time.
Do not walk under ladders.

Face the ladder and have a 3- point contact when ascending or descending.

Ladder safety devices may be used on tower, water tank, and chimney ladders over twenty (20) feet in unbroken length in lieu of cage protection. No landing platform is required in these cases. All ladder safety devices such as those that incorporate body belts, friction brakes, and sliding attachments must meet the design requirements of the ladders which they serve.

Use only non-conductive (i.e., fiberglass or wood) ladders in areas where contact with electrical conductors is possible, including during transportation of the ladder.

Do not paint ladders, as this makes it impossible to see wear or damage to the rungs or side rails. Do not use a ladder beyond the manufacturer's rated weight capacity.

Specifications/Equipment

Ladders must meet stringent Standards and specifications. Do not attempt to manufacture or modify a ladder without first consulting the required OSHA specifications.

REFERENCES

U.S. Department of Labor. Occupational Safety and Health Administration.
Code of Federal Regulations, Title 29, Pad 1926. 1053, Ladders

Date: September, 2000 Approved by Safety Committee

Placement

- Ladders must be placed in a stable and secure position to prevent injury. Ladders must be placed on a dry, level surface at an angle sufficient to support loads. All areas around the top bottom of the ladder should be kept clear. Ladders in high-traffic areas should be secured to avoid movement by use of a barricade. If in use near doors a means of securing them through a lock or proper signage must be used. Each of the rails on leaning ladders, unless with a single support attachment, must be equally supported. Leaning ladders must also be placed so that the horizontal distance of the base is at a ratio of one foot to every four feet of vertical distance from the support. For wooden ladders made at the job site, this ratio should be one foot horizontally for every eight feet of height. In addition, ladders may not to be tied together unless designed to do so.

Slipping

- Steps and rungs must be clean, dry and free of slipping hazards. When climbing, users should always face the ladder and keep at least one hand on the rail. Do not move, adjust or extend the ladder when climbing. Wood ladders cannot be covered with any opaque covering except for identification and warning labels, which can be placed only on one side rail.

Loads

- Do not carry overly heavy objects when climbing. Both fold-out and leaning ladders must be placed at an angle where at least four times the maximum load can be supported; for extra-heavy-duty metal or plastic ladders, 3.3 times the maximum load.
-

Structure

- Rungs, cleats and steps must be spaced between 10 and 14 inches apart on the side rails; between 8 inches and 12 inches wide; skid-resistant; and parallel and evenly spaced.

  All ladder parts must be smoothed to prevent injuries or clothing snags. Step and folding ladders must have a locking device or metal spreader to keep the ladder in place.

Damaged or Defective

- Damaged ladders must be tagged "do not use" immediately. This includes ladders with split rails, damaged parts and missing or broken rungs or steps. The condition of repaired ladders must be as originally designed. Single-rail ladders may not be used.

Worker responsibility

- Workers will not stand on the top step of a ladder or step ladder.
- Workers will follow ladder manufacturers requirements for weight and height restrictions.
- Worker will maintain 3 point contact while working on ladder
- Ladder will be footed by another worker when deemed necessary.
- Worker will tie off when accessible to work area
- Avoid using a metal ladder when working near power lines or exposed energized electrical equipment.
- Do not place a ladder on boxes, barrels or other unstable bases to obtain height.
- Be sure that all locks on extension ladders are properly engaged.
- An extension or straight ladder used to access an elevated surface must extend 3 feet above the point of support and be secured against movement at top and bottom.

CONFINED SPACE

It is the policy of Frontline to protect the health and welfare of all employees whose work assignments may require entering or working in permit-required confined spaces. Only persons with appropriate aptitudes and physical competence shall be employed in confined space work. Training of selected persons to carry out confined space work shall include:

- Emergency entry and exit procedures
- Use of appropriate respiratory protective equipment
- First aid, including Cardio-Pulmonary Resuscitation (CPR)
- Lock Out and Isolation procedures
- The use of safety equipment
- Rescue drills
- Fire protection
- Communications
- Aspects essential for maintaining the safety of the breathing environment
- Recognition of any hazards specific to the operation/activity.

Purpose

This policy and procedures is for managing subcontractors and employee response and actions while working in confined spaces. Working in confined spaces can lead to injury or even death if adequate precautions are not taken. Only trained persons may enter or work in confined spaces.

Confined spaces can include storage tanks, process vessels, boilers, excavations, silos, storage bins, pits, and pipes, sewers, tunnels, vaults and shafts. Any place of work where the atmosphere is liable to be contaminated at any time by dust, fumes, mist, vapor, gas or other harmful substance, or is liable at any time to be oxygen deficient is defined as a permit required confined space. When any work area is not subject to good natural ventilation, people can be readily exposed to harmful vapors. They can then suffer lack of oxygen, and collapse as a result. People entering the same space to rescue colleagues may become the next victims.

Frontline management will ensure that all jobsite employees (our own and subcontractor employees) are protected from the potential hazards involved in entering confined spaces. We will make every effort to comply with the OSHA Construction Confined Space Standards and to exceed those requirements when necessary to ensure the safety of our workers. In the construction industry, confined spaces can develop and be eliminated during the various phases of construction. It is crucial that supervisors and lead persons recognize what is a confined space and when such a space becomes a permit required confined space.

We must also acknowledge confined spaces may exist that we are not ourselves entering, but our work could affect another employee's health or wellbeing. We must recognize that we should respect the entry that another contractor may have set up. This may include, for instance, maintaining control of the exhaust gasses from an internal-combustion engine that we may be operating in the area of a confined space.

When engaged in construction work we need to work with the owner and developers to (1) identify any existing confined spaces in which employees will be working, and (2) identify any confined spaces that will be formed during the project, and (3) determine whether any such spaces are permit-required confined spaces. When working in permit spaces, employees must be protected against the hazards in those spaces. When acting as a host employer, we will determine what confined spaces on the site may affect our employees or those of a subcontractor. If we know that a permit space is present at one of our worksites, we must inform all employees of the location and danger posed by each space, by meeting or conversation, and/or posting warning signs adjacent to the space. Where an employee has no need to enter a confined space, his employer must ensure that its workers stay out. Site workers recognize permit space warning signs and understand their significance.

Definitions

1. Acceptable entry conditions means the conditions that must exist in a permit space, before an employee may enter that space, to ensure that employees can safely enter into, and safely work within, the space.
2. Attendant means an individual stationed outside one or more permit spaces who assesses the status of authorized entrants and who must perform attendant duties. Those are:
    a. Is familiar with and understands the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
    b. Is aware of possible behavioral effects of hazard exposure in authorized entrants;
    c. Continuously maintains an accurate count of authorized entrants in the permit space and uses the following to identify authorized entrants in the permit space, identified by:
        i. name or by such other means (for example, through the use of rosters or tracking systems)

The attendant will use a reference on the entry permit as to the means used, such as a roster or tracking system, to keep track of the authorized entrants within the permit space.

a. Remains outside the permit space during entry operations until relieved by another attendant; Note. Once an attendant has been relieved by another attendant, the relieved attendant may enter a permit space to attempt a rescue when the employer's permit space program allows attendant entry for rescue and the attendant has been trained and equipped for rescue operations as required by paragraph §1926.1211(a).
b. The attendant communicates with authorized entrants as necessary to assess entrant status and to alert entrants of the need to evacuate the space:
    ii. whenever he/she is alerted to any warning sign or symptom of exposure to a dangerous situation; or
    iii. The entrant detects a prohibited condition
c. Assesses activities and conditions inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:
    iv. If there is a prohibited condition;

v. If the behavioral effects of hazard exposure are apparent in an authorized entrant;
vi. If there is a situation outside the space that could endanger the authorized entrants; or
vii. If the attendant cannot effectively and safely perform all the duties in this section;
viii. Summons rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards;
ix. Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:
    1. Warns the unauthorized persons that they must stay away from the permit space;
    2. Advises the unauthorized persons that they must exit immediately if they have entered the permit space; and
    3. Informs the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;
x. Performs non-entry rescues as specified by the employer's rescue procedure; and
xi. Performs no duties that might interfere with the attendant's primary duty to assess and protect the authorized entrants.

3. Authorized entrant means an employee who is authorized by the entry supervisor to enter a permit space.
4. Barrier means a physical obstruction that blocks or limits access.
5. Blanking or blinding means the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
6. Competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.
7. Confined space means a space that:
   (1) Is large enough and so configured that an employee can bodily enter it;
   (2) Has limited or restricted means for entry and exit; and

(3) Is not designed for continuous employee occupancy.

These spaces may include, but are not limited to, underground vaults, manholes, tanks, storage bins, vessels, boilers, pits (like for elevator, escalator pump, valve), crawl spaces, storm drains, and silos. There can be no impediments to safe exit from the space, should an evacuation be necessary.

8. Control means the action taken to reduce the level of any hazard inside a confined space using engineering methods (for example, by ventilation), and then using these methods to maintain the reduced hazard level. Control also refers to the engineering methods used for this purpose. Personal protective equipment is not a control.
9. Controlling Contractor is the employer that has overall responsibility for construction at the worksite.

Note. If the controlling contractor also owns or manages the property, then it is both a controlling employer and a host employer.

10. Double block and bleed means the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.
11. Early-warning system means the method used to alert authorized entrants and attendants that an engulfment hazard may be developing. Examples of early-warning systems include, but are not limited to:
    a. alarms activated by remote sensors; and
    b. lookouts with equipment for immediately communicating with the authorized entrants and attendants.
12. Emergency means any occurrence (including any failure of power, hazard control or monitoring equipment) or event, internal or external, to the permit space that could endanger entrants.
13. Engulfment means the surrounding and effective capture of a person by a liquid or finely divided (flow-able) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, crushing, or suffocation.
14. Entry means the action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.
15. Entry Employer means any employer who decides that an

employee it directs will enter a permit space.

   a. Note. An employer cannot avoid the duties of the standard merely by refusing to decide whether its employees will enter a permit space, and OSHA will consider the failure to so decide to be an implicit decision to allow employees to enter those spaces if they are working in the proximity of the space.

16. Entry permit (permit) means the written or printed document that is provided by the employer who designated the space a permit space to allow and control entry into a permit space and that contains the information specified in §1926.1206 of this standard.
17. Entry rescue occurs when a rescue service enters a permit space to rescue one or more employees.
18. Entry supervisor means the qualified person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this standard.
    a. Note. An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this standard for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.
19. Hazard means a physical hazard or hazardous atmosphere. See definitions below.
20. Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:
    a. Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
    b. Airborne combustible dust at a concentration that meets or exceeds its LFL; Note: This concentration may be approximated as a condition in which the combustible dust obscures vision at a distance of 5 feet (1.52 meters) or less.
    c. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
    d. Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart D—Occupational Health and Environmental Control, or in Subpart Z—Toxic and Hazardous Substances, of this part and which could result in employee exposure in excess of

its dose or permissible exposure limit;

i. Note. An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this definition.

e. Any other atmospheric condition that is immediately dangerous to life or health.

i. Note. For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with OSHA's Hazard Communication Standard, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

21. Host employer means the employer that owns or manages the property where the construction work is taking place.

a. Note. If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred all information about the space to that entity, the contracted management entity becomes the host employer for as long as that entity manages the property. Otherwise, OSHA will treat the owner of the property as the host employer. In no case will there be more than one host employer.

22. Hot work means operations capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating).

23. Immediately dangerous to life or health (IDLH) means any condition that would interfere with an individual's ability to escape unaided from a permit space and that poses a threat to life or that would cause irreversible adverse health effects. Note. Some materials—hydrogen fluoride gas and cadmium vapor, for example—may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" after recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

24. Inerting means displacing the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible. Note. This procedure produces an IDLH oxygen-deficient atmosphere.

25. Isolate or isolation means the process by which employees in a confined space are completely protected against the release of energy and material into the space, and contact with a physical hazard, by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lock-out or tag-out of all sources of energy; blocking or disconnecting all mechanical linkages; or placement of barriers to eliminate the potential for employee contact with a physical hazard.
26. Limited or restricted means for entry or exit means a condition that has a potential to impede an employee's movement into or out of a confined space. Such conditions include, but are not limited to, trip hazards, poor illumination, slippery floors, inclining surfaces and ladders.
27. Line breaking means the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.
28. Lockout means the placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
29. Lower flammable limit or lower explosive limit means the minimum concentration of a substance in air needed for an ignition source to cause a flame or explosion.
30. Monitor or monitoring means the process used to identify and evaluate the hazards after an authorized entrant enters the space. This is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.
31. Non-entry rescue occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space.
32. Non-permit confined space means a confined space that meets the definition of a confined space but does not meet the requirements for a permit-required confined space, as defined in this subpart.
33. Oxygen deficient atmosphere means an atmosphere containing less than 19.5 percent oxygen by volume. Oxygen enriched atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.
34. Permit-required confined space (permit space) means a confined space that has one or more of the following characteristics:
    a. Contains or has a potential to contain a hazardous

atmosphere;
   b. Contains a material that has the potential for engulfing an entrant;
   c. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
   d. Contains any other recognized serious safety or health hazard.
35. Permit-required confined space program (permit space program) means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.
36. Physical hazard means an existing or potential hazard that can cause death or serious physical damage. Examples include, but are not limited to: explosives, mechanical, electrical, hydraulic and pneumatic energy; radiation; temperature extremes; engulfment; noise; and inwardly converging surfaces. Physical hazard also includes chemicals that can cause death or serious physical damage through skin or eye contact (rather than through inhalation).
37. Prohibited condition means any condition in a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee.
38. Qualified person means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.
39. Representative permit space means a mock-up of a confined space that has entrance openings that are similar to, and is of similar size, configuration, and accessibility to, the permit space that authorized entrants enter.
40. Rescue means retrieving, and providing medical assistance to, one or more employees who are in a permit space.
41. Rescue service means the personnel designated to rescue employees from permit spaces.
42. Retrieval system means the equipment (including a retrieval line, chest or full body harness, wristlets or anklets, if appropriate, and a

lifting device or anchor) used for non-entry rescue of persons from permit spaces.

43. Serious physical damage means an impairment or illness in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment or illness may be permanent or temporary and includes, but is not limited to, loss of consciousness, disorientation, or other immediate and substantial reduction in mental efficiency. Injuries involving such impairment would usually require treatment by a physician or other licensed health-care professional.
44. Tag-out means:
    a. Placement of a tag-out device on a circuit or equipment that has been de-energized, in accordance with an established procedure, to indicate that the circuit or equipment being controlled may not be operated until the tag-out device is removed; and
    b. The employer ensures that:
        i. tag-out provides equivalent protection to lockout, or
        ii. that lockout is infeasible and the employer has relieved, disconnected, restrained and otherwise rendered safe stored (residual) energy.

45. Test or testing means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

Note. Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

46. Ventilate or ventilation means controlling a hazardous atmosphere using continuous forced-air mechanical systems that meet the requirements of §1926.57—Ventilation.

References

American National Standards Institute "Safety Requirements for Working in Tanks and other Confined Spaces".

NIOSH "Criteria for a Recommended Standard...Working in Confined Spaces."

U.S. Department of Labor, OSHA regulations 29 CFR 1926.1200, “Subpart AA Confined Spaces in Construction.”

U.S. Department of Labor, OSHA regulations, 29 CFR 1910.146, "Permit-Required Confined Spaces."

U.S. Department of Labor, OSHA regulations, 29 CFR 1926.26, "Illumination."

Identification and Evaluation of Confined Spaces

1. Before it begins work at a worksite, each employer must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.
2. If the workplace contains one or more permit spaces, the employer who identifies, or who receives notice of, a permit space must:
    a. Inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space;

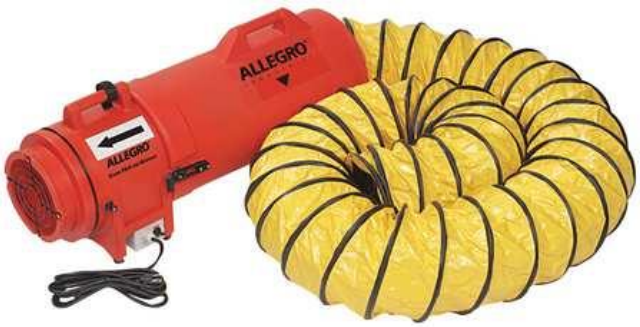
Note. A sign reading “DANGER – PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER” or using other similar language would satisfy the requirement for a sign.

    b. Inform, in a timely manner and in a manner other than posting, its employees’ authorized representatives and the controlling contractor of the existence and location of, and the danger posed by, each permit space.
3. Each employer who identifies, or receives notice of, a permit space and has not authorized employees it directs to work in that space must take effective measures to prevent those employees from entering that permit space, in addition to complying with all other applicable requirements of this standard.

Procedure

Work involving entry to a confined space must be planned. An assessment of likely hazards should be made prior to commencing the work. Precautions must be taken to avoid exposure to harmful substances or oxygen deficient atmospheres. Some thought should also be given to handling possible emergencies.

1. Every employer that has employees who will enter a permit space must have a written permit space program based upon the newest regulations and implemented at the construction site. The written program must be made available prior to and during entry operations for inspection by employees and their authorized representatives.
2. An employer may use the alternate procedures specified in the Permit-Required Confined Space Program sections of this program for entering a permit space only under their written program. Keep a copy of this program at the site when there is a confined space entry.
    a. Alternate Permit Space Procedures: An employer whose employees enter a permit space need not comply with permit-required space provisions in the following section, provided that all of the following conditions are met:
        i. The employer can demonstrate that all physical hazards in the space are eliminated or isolated through engineering controls so that the only hazard posed by the permit space is an actual or potential hazardous atmosphere;
        ii. The employer can demonstrate that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry, and that, in the event the ventilation system stops working, entrants can exit the space safely;
        iii. The employer develops monitoring and inspection data to document the above;



        iv. If an initial entry of the permit space is necessary to obtain the data required by to evaluate the hazards, the entry must be performed as a permit-required space program;
        v. The determinations and supporting data for the above must be documented by the employer and are made available to each employee who enters the permit space or to that employee's authorized representative and to an OSHA

Compliance Officer; and

vi. Entry into the permit space under the alternate permit space procedures terms above is performed in accordance with the requirements of the next section (Requirements).

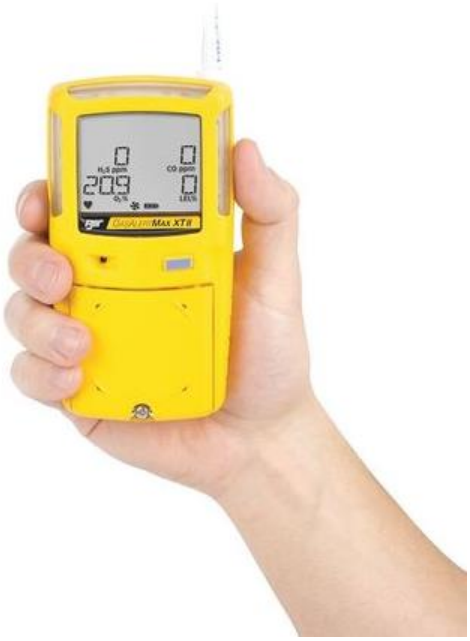
Note. See paragraph 4 in this section below, for reclassification of a permit space after all hazards within the space have been eliminated.

b. Requirements: The following requirements apply to entry into permit spaces that meet the conditions set forth in the Alternate Permit Space section, above:

i. Any conditions making it unsafe to remove an entrance cover must be eliminated before the cover is removed.

ii. When entrance covers are removed, the opening must be immediately guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.

iii. Before an employee enters the space, the internal atmosphere must be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Any employee who enters the space, or that employee's authorized representative, must be provided an opportunity to observe the pre-entry testing required by this paragraph.



iv. No hazardous atmosphere is permitted within the space whenever any employee is inside the space.

v. Continuous forced air ventilation must be used, as follows:

1. An employee must not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
2. The forced air ventilation must be so directed as to ventilate the immediate areas where an employee is or will be present within the space and must continue until all employees have left the space;
3. The air supply for the forced air ventilation must be

from a clean source and must not increase the hazards in the space.

vi. The atmosphere within the space must be continuously monitored unless the entry employer can demonstrate that equipment for continuous monitoring is not commercially available or periodic monitoring is sufficient. If continuous monitoring is used, the employer must ensure that the monitoring equipment has an alarm that will notify all entrants if a specified atmospheric threshold is achieved, or that an employee will check the monitor with sufficient frequency to ensure that entrants have adequate time to escape. If continuous monitoring is not used, periodic monitoring is required. All monitoring must ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee who enters the space, or that employee's authorized representative, must be provided with an opportunity to observe the testing required by this paragraph.

vii. If a hazard is detected during entry:
    1. Each employee must leave the space immediately;
    2. The space must be evaluated to determine how the hazard developed; and
    3. The employer must implement measures to protect employees from the hazard before any subsequent entry takes place.

viii. The employer must ensure a safe method of entering and exiting the space. If a hoisting system is used, it must be designed and manufactured for personnel hoisting; however, a job-made hoisting system is permissible if it is approved for personnel hoisting by a registered professional engineer, in writing, prior to use.

ix. The employer must verify that the space is safe for entry and that the pre-entry measures required by the above alternate entry method and procedures have been taken, through a written certification that contains the date, the location of the space, and the signature of the person providing the certification. The certification must be made before entry and must be made available to each employee entering the space or to that employee's authorized representative.

3. When there are changes in the use or configuration of a non-permit confined space that might increase the hazards to entrants, or some indication that the initial evaluation of the space may not have been

adequate, each entry employer must have a competent person reevaluate that space and, if necessary, reclassify it as a permit required confined space.

4. A space classified by an employer as a permit-required confined space may only be reclassified as a non-permit confined space when a competent person determines that all of the applicable requirements above have been met:
    a. If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated or isolated without entry into the space (unless the employer can demonstrate that doing so without entry is infeasible), the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated or isolated;
    b. The entry employer must eliminate or isolate the hazards without entering the space, unless it can demonstrate that this is infeasible. If it is necessary to enter the permit space to eliminate or isolate hazards, such entry must be performed to be compliant with the sections of this program that follow. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated or isolated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated or isolated;
        i. Note. Control of atmospheric hazards through forced air ventilation does not constitute elimination or isolation of the hazards. See the Alternate Permit Space and Procedures section above for permit space entry where the employer can demonstrate that forced air ventilation alone will control all hazards in the space.
    c. The entry employer must document the basis for determining that all hazards in a permit space have been eliminated or isolated, through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification must be made available to each employee entering the space or to that employee's authorized representative; and
    d. If hazards arise within a permit space that has been reclassified as a non-permit space, each employee in the space must exit the space. The entry employer must then reevaluate the space and reclassify it as a permit space as appropriate in accordance with all other applicable provisions of this standard.

Entry into Permit-Required Confined Spaces

Prior to entry into any permit-required confined space, each employer must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.
Issue a permit that specifies the location, purpose of the entry, type, and duration of the work to be done, and the date. The permit will also certify that all existing hazards have been evaluated and that necessary protective measures have been taken for the safety of entry employees. It will provide documentation of the atmospheric testing that has been done. It will assign entry and attendant duties to specific persons.

1. Permit Space Entry Communication and Coordination:
    a. On our jobsites, before permit space entry operations begin, if there are permit required confined spaces, the owner as host employer must provide us with the following information:
        i. The location of each known permit space;
        ii. The hazards or potential hazards in each space or the reason it is a permit space; and
        iii. Any precautions that the owner or any previous contractors or subs implemented for the protection of employees in the permit space.
    b. Before entry operations begin, Sagamore, as controlling contractor must:
        i. Obtain the owner's information about the permit space hazards and previous entry operations; and
        ii. Provide the following information to each entity entering a permit space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit space:
            1. The information received from the owner;
            2. Any additional information we have about the subjects listed in the above section (location of known permit spaces, hazards and precautions previously taken or identified); and
            3. The precautions that the host employer, controlling contractor, or other entry employers implemented for the protection of employees in the permit spaces.
    c. Before entry operations begin, each entry employer must:
        i. Obtain all of the controlling contractor's information

regarding permit space hazards and entry operations; and

ii. Inform the controlling contractor of the permit space program that the entry employer will follow, including any hazards likely to be confronted or created in each permit space.

d. The controlling contractor and entry employer(s) must coordinate entry operations when:
   i. More than one entity performs permit space entry at the same time; or
   ii. Permit space entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed.

e. After entry operations:
   i. The controlling contractor must debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space(s) during entry operations;
   ii. The entry employer must inform the controlling contractor in a timely manner of the permit space program followed and of any hazards confronted or created in the permit space(s) during entry operations; and
   iii. The controlling contractor must apprise the host employer of the information exchanged with the entry entities pursuant to this subparagraph.

Note. Unless a host employer or controlling contractor has or will have employees in a confined space, it is not required to enter any confined space to collect the information specified in paragraph (1. Permit Space Entry Communication and Coordination section above.

iv. If there is no controlling contractor present at the worksite, the requirements for, and role of, controlling contactors must be fulfilled by the host employer or other employer who arranges to have employees of another employer perform work that involves permit space entry.

Permit-Required Confined Space Program

1) Each entry employer must:
   a) Implement the measures necessary to prevent unauthorized entry;
   b) Identify and evaluate the hazards of permit spaces before employees enter them;
   c) Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following:
      i) Specifying acceptable entry conditions;
      ii) Providing each authorized entrant or that employee's authorized representative with the opportunity to observe any monitoring or testing of permit spaces;
      iii) Isolating the permit space and physical hazard(s) within the space;
      iv) Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;
         (1) Note. If an employer is unable to reduce the atmosphere to below 10 percent LFL, the employer may only enter if the employer:
            (a) inerts the space so as to render the entire atmosphere in the space noncombustible, and
            (b) the employees use PPE to address any other atmospheric hazards (such as oxygen deficiency), and
            (c) the employer eliminates or isolates all physical hazards in the space.
      v) Determining that, in the event the ventilation system stops working, the monitoring procedures will detect an increase in atmospheric hazard levels in sufficient time for the entrants to safely exit the permit space;
      vi) Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards;
      vii) Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry, and ensuring that employees are not allowed to enter into, or remain in, a permit space with a hazardous atmosphere unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee; and
      viii) Eliminating any conditions (for example, high pressure) that could make it unsafe to remove an entrance cover.
   d) Provide the following equipment in this section at no cost to each employee, maintain that equipment properly, and ensure that each

employee uses that equipment properly:

i) Testing and monitoring equipment needed to evaluate the space when used;
ii) Ventilating equipment needed to obtain acceptable entry conditions;
iii) Communications equipment for the authorized entrants and attendants as explained in the below section describing their duties, including any necessary electronic communication equipment for attendants assessing entrants' status in multiple spaces;
iv) Personal protective equipment insofar as feasible engineering and work-practice controls do not adequately protect employees;
    (1) Note. PPE requirements continue to apply and the applicable safety program sections still apply when using PPE in a permit space. For example, if employees use respirators, then the respirator program must be met.

Lighting equipment that meets the minimum illumination requirements in the following table, that is approved for the ignitable or combustible properties of the specific gas, vapor, dust, or fiber that will be present, and that is sufficient to enable employees to see well enough to work safely and to exit the space quickly in an emergency

DEFINITIONS

A **confined space** involves the following:

- adequate size and configuration for employee entry
- limited means of entry or outlet
- not designed for continuous employee occupancy

A **permit-space** is a confined space that needs a permit to be entered. A permit is required if the confined space includes, or potentially includes, the following:

- hazards related to atmospheric conditions, such as:
  - toxic conditions
  - flammable conditions
  - asphyxiating conditions
- engulfment
  - Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or a floor that tapers to a smaller cross section; or

- any other recognized serious hazard

INSPECTION AND EVALUATION

All work areas for this business will be inspected and evaluated to determine if they require a confined space entry permit. The inspection is the responsibility of:

Nancy Salter President

name or title

All hazards will be listed and evaluated. Conditions that prohibit entry to a confined space will be evaluated and listed on the entry permit.

PERMITS

All entry to a permit-space is restricted to those with permits. Permits must be available to all employees requiring entry to a confined space that requires a permit (permit-space). The permit should extend only for the duration of the task. All permits must be retained by the Administrator for a year to facilitate review of the Confined Space Plan.

Permits must include the following:

- identification of the space
- purpose of entry
- date and duration of permit
- list of authorized entrants
- names of current attendants and entry supervisor
- list of hazards in the permit-space
- list of measures to isolate the permit-space and eliminate or control hazards
- the acceptable entry conditions

- results of tests initialed by the persons performing tests
- rescue and emergency services and means to summon
- communication procedures for attendants and entrants
- required equipment (respirators, communication devices, alarm, etc.)
- any other necessary information
- any additional permits (such as for hot work under the Fire Safety Plan)

The Permit Plan must be reviewed at least annually.

CONFINED SPACE NOTICE

The Administrator will inform employees through signs or other equally effective means of all confined spaces requiring a permit to enter.

CONFINED SPACE PLAN LISTS

The Administrator will complete the following lists in order to implement the Confined Space Plan:

A. Known Confined Spaces

Location	Type of Confined Space

B. Personnel Authorized to Issue Entry Permits

Entry supervisors, designated as the competent person, must know hazards of confined spaces and must verify that all tests have been conducted and all procedures and equipment are in place before endorsing a permit. They must also verify that rescue services are available and that the means for summoning them are operable.

Entry supervisors may terminate entry and cancel permits. They must remove unauthorized individuals who enter a confined space. They also must determine that conditions are acceptable as specified in the permit.

Name	Job Title	Date of Certification

C. Personnel Authorized to Enter Confined Spaces

All personnel issued permits to enter confined spaces must know the hazards they may face, be trained to recognize signs or symptoms of exposure, and understand the consequences of exposure to hazards.

Entrants must know how to:

- use any needed equipment
- communicate with attendants
- alert attendants when a warning symptom or other hazardous condition exists
- exit as quickly as possible whenever ordered or alerted (by alarm, warning sign, or prohibited condition) to do so

Name	Job Title	Date of Certification

D. Attendants

Attendants must know the hazards of a confined space and be aware of potential exposures. Attendants must perform the following duties:

- check permits of authorized entrants
- prevent entry by those without a permit
- maintain a continuous count of those in a confined space
- monitor activity in the confined space
- remain outside the confined space until relieved

If necessary, an attendant will:

- order everyone to exit a confined space
- contact rescuers
- perform non-entry rescues

Attendants may not perform any duty that will interfere with the duties listed above.

Name	Job Title

E. Authorized Personnel Trained in the Use of Gas Monitor Devices

Name	Job Title	Date of Certification

F. Authorized On-Site Rescue Team Members

Rescuers should use employee retrieval systems whenever possible. On-site teams must be properly equipped. They must practice simulated rescues at least once every 12 months.

They must receive the same training as authorized entrants and additional training about:

- use of personal protective equipment
- use of rescue equipment
- first aid, including CPR

Name	Job Title	Date of Certification

G. Outside Rescue Services

_____
name or title

will be responsible for contracting with outside rescue services. The outside rescue services will be called in the event of any emergency involving confined space.

Outside rescue services must be made aware of hazards and have access to permit-spaces to develop rescue plans and practice rescues.

Employers must provide hospitals or treatment facilities with any MSDSs or other information about known hazards in a permit-space, if the information can aid in treatment of rescued employees.

H. Rescue Services

Name	Phone Number

I. Preventing Unauthorized Entry

List the methods used to inform employees to prevent unauthorized entry:

J. Informing Other Contractors

List the methods used to inform other contractors of permit-spaces, the permit-space plan, and what hazards contractors might encounter:

_____

_____

_____

_____

_____

_____

K. Confined Space Training

Training should provide employees with the understanding, skills, and knowledge to do their job safely. Training must include both initial and refresher courses. Refresher training is necessary when duties change, when hazards change, or whenever evaluation determines inadequacies in an employee's knowledge. Employer certification of training must include the employee's name, signature or initials of trainer, and date of training.

Date: _____

Instructor: _____

Subject: _____

Employee Name	Employee Signature

SEWER PRE-ENTRY CHECKLIST

A confined space either is entered through an opening other than a door (such as a manhole or side port) or requires the use of a ladder or rungs to reach the working level. This checklist must be filled out whenever the job site meets this criterion.

Yes	No	
☐	☐	1. Did your survey of the surrounding area show it to be free of hazards such as drifting vapors from tanks, piping, or sewers?
☐	☐	2. Does your knowledge of industrial or other discharges indicate this area is likely to remain free of dangerous air contaminants while occupied?
☐	☐	3. Are you certified in operation of the gas monitor being used?
☐	☐	4. Has a gas monitor functional test (Bump Test) been performed this shift on the gas monitor to be used?
☐	☐	5. Did you test the atmosphere of the confined space before entry?
☐	☐	6. Did the atmosphere check as acceptable (no alarm given)?
☐	☐	7. Will the atmosphere be continuously monitored while the space is occupied?

_____

name or title

will be contacted for personnel rescue by the local fire department in the event of an emergency. If in-site location, contact in-house rescue unit at:

_____

telephone number and location

Notice: If any of the above questions are answered "NO," DO NOT ENTER. CONTACT YOUR IMMEDIATE SUPERVISOR.

Job Location _____

Lead Man Signature _____

PRE-ENTRY CHECKLIST FOR CONFINED SPACES

Date: _____ Time: _____

Expires: _____ Issued: _____

Job Site: _____ Job Supervisor: _____

Equipment to Be Worked on: _____

Work to Be Performed: _____

1. Atmospheric Checks:

Time _____ Oxygen _____ %

Explosive _____ % L.F.L. Toxic _____ PPM

2. Source Isolation (NO ENTRY)	**N/A**	**YES**	**NO**
Pumps and Lines Blinded	☐	☐	☐
Disconnected or Blocked	☐	☐	☐

3. Ventilation Modification:	**N/A**	**YES**	**NO**
Mechanical	☐	☐	☐
Natural Ventilation Only	☐	☐	☐

4. Atmospheric Check After Isolation and Ventilation:

Time _____

Oxygen _____ % >19.5%

Explosive _____ % L.F.L. <10%

Toxic _____ PPM <10 PPM H_2S

If conditions are in compliance with the above requirements and there is no reason to believe conditions may change adversely, then complete questions 5 – 7 on the following page and post with this permit.

If conditions are not in compliance or if there is reason to believe that conditions may change adversely, stop here and proceed to the Entry Permit on page 13.

5.	**Entry, Standby, and back-up Persons:**		**YES**	**NO**
	Successfully completed required training?		☐	☐
	Is training current?		☐	☐
6.	**Equipment:**	**N/A**	**YES**	**NO**
	Direct reading gas monitor tested?	☐	☐	☐
	Safety harnesses and lifelines for entry and standby persons?	☐	☐	☐
	Hoisting equipment?	☐	☐	☐
	Powered communications?	☐	☐	☐
	SCBAs for entry and standby persons?	☐	☐	☐
	Protective clothing?	☐	☐	☐
	Electric equipment listed Class I, Division I, Group D, and non-sparking tools?	☐	☐	☐

7. Rescue Procedure:

_____

_____

_____

We have reviewed the work authorized by this permit and the information contained herein. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares in the "NO" column are checked. This permit is not valid unless all appropriate items are completed.

Permit and Checklist prepared by: _____

Approved by: _____

Reviewed by: _____

This permit must be kept at job site. Return job site copy to Safety Office following job completion. Copies to Safety Office and unit supervisor.

ENTRY PERMIT

Confined Space: _____

Hazardous Area: _____

Permit valid for three hours only. All copies of permit will remain at job site until job is completed.

Site Location and Description: _____

Purpose of Entry: _____

Supervisor(s) in Charge of Crews: _____

Phone Number: _____

Type of Crew: _____

Requirements Completed*	**Completed**	**Date**
Lock-Out/De-Energize/Try-Out	☐	_____
Line(s) Broken-Capped-Blanked	☐	_____
Purge-Flush and Vent	☐	_____
Full Body Harness w/ "D" ring	☐	_____
Emergency Escape Retrieval Equipment	☐	_____
Lifelines	☐	_____
Secure Area (Post and Flag)	☐	_____
Breathing Apparatus	☐	_____
Standby Safety Personnel	☐	_____
Fire Extinguishers	☐	_____
Lighting (Explosive Proof)	☐	_____
Protective Clothing	☐	_____
Respirator(s)	☐	_____
Air Purifying	☐	_____

* **Bold** denotes minimum requirements to be completed and reviewed before entry. For items that do not apply, enter N/A in the blank.

Continuous Monitoring (every 2 hours)

Test(s) to Be Taken	Entry Level	Monitoring Results						
Percent of Oxygen	19.5% to 23.5%							
Lower Flammable Limit	Under 10%							
Carbon Monoxide	+35 PPM							
Aromatic Hydrocarbon	+1 PPM *5 PPM							
Hydrogen Cyanide (skin)	(skin) *4 PPM							
Hydrogen Sulfide	+10 PPM *15 PPM							
Sulfur Dioxide	+2 PPM *5 PPM							
Ammonia	*35 PPM							

* Permissible

short-term Exposure Limit: Employee can work in the area up to 15 minutes.

Time-Weighted Average: Employee can work in area eight hours (longer with appropriate respiratory protection).

Remarks:

Gas Tester Name and Check #: _____

Instrument(s) Used: _____

Model and/or Type: _____

Serial and/or Unit #: _____

Safety standby person is required for all confined space work.

Safety Standby Person(s): _____

Check #: _____

Supervisor Authorizing Entry: _____

All above conditions satisfied: _____

Ambulance: _____ Gas Coordinator: _____

Fire: _____ Department: _____

Safety: _____ Phone: _____

CONFINED SPACE GLOSSARY
(to be used with Pre-Entry Checklists and Entry Permit)

Acceptable entry conditions The conditions that must exist in a permit-space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.

Attendant An individual stationed outside one or more permit-spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit-space plan.

Authorized entrant An employee who is authorized by the employer to enter into a permit-space.

Blanking or blinding The absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Confined space A space that:

1. is large enough and so configured that an employee can bodily enter and perform assigned work; and
2. has limited or restricted entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are
3. spaces that may have limited means of entry); and
3. is not designed for continuous employee occupancy.

Double block and bleed The closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Emergency Any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

Engulfment The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be breathed in and can cause death by filling or plugging the respiratory system; or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry The action by which a person passes through an opening into a permit-required space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry permit The written or printed document that is provided by the employer to allow and control entry into the permit-space and contains the information of the permit-required confined space plan.

Entry supervisor The person (such as the employer, foreman, or crew chief) responsible for determining if accept-able entry conditions are present at a permit-space where entry is planned; for authorizing entry and overseeing entry operations; and for terminating entry as required by this plan.

NOTE: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this plan for each role he or she fills. Also, the duties of the entry supervisor may be passed from one individual to another during the course of an entry operation.

Hazardous atmosphere An atmosphere that may expose employees to the risk of death, incapacitation, impairment of the ability to self-rescue (that is, escape unaided from a permit space), injury, or illness from one or more of the following causes:

1. flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL)
2. airborne combustible dust at a concentration that meets or exceeds its LFL

NOTE: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less.

3 atmospheric oxygen concentration below 19.5% or above 23.5%

4. atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in

5. Subpart A, Toxic and Hazardous Substances and in Subpart G, Occupational Health and Environmental Control,
6. and that could result in employee exposure in excess of its dose or permissible exposure limit

NOTE: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

5. any other atmospheric condition that is immediately dangerous to life or health

NOTE: For air contaminants for which OSHA has not determined a dose of permissible exposure limit, other sources of information, such as Material Safety Data Sheets that comply with the Hazard Communication Standard, 29 CFR 1910.1200, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot work permit The employer's written authorization to perform operations (for example, riveting, welding, cutting, burning,
and heating) capable of providing a source of ignition.

Immediately dangerous to life or health (IDLH) Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit-space.

NOTE: Some materials—hydrogen fluoride gas and cadmium vapor, for example—may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12 to 72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

Inverting The displacement of the atmosphere in a permit-space by a non-combustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible.

NOTE: This procedure produces an IDLH oxygen-deficient atmosphere.

Isolation The process by which a permit-space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lock-out or tag-out of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line breaking The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or a fluid at a volume, pressure, or temperature capable of causing injury.

Non-permit confined space A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen-deficient atmosphere An atmosphere containing less than 19.5% oxygen by volume.

Oxygen-enriched atmosphere An atmosphere containing more than 23.5% oxygen by volume.

Permit-required confined space (permit-space) A confined space that has one or more of the following characteristics:

1. contains or has a potential to contain a hazardous atmosphere
2. contains a material that has the potential for engulfing an entrant
3. has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls
4. or by a floor that slopes downward and tapers to a smaller cross-section
4. contains any other recognized serious safety or health hazard

Permit-required confined space plan (permit-space plan) The employer's overall plan for controlling and, where appropriate, for protecting employees from permit-space hazards or for regulating employee entry into permit-spaces.

Permit system The employer's written procedure for preparing and issuing permits for entry and for returning the permit-space to service following termination of entry.

Prohibited condition Any condition in a permit-space that is not allowed by the permit during the period when entry is authorized.

Rescue services The personnel designated to rescue employees from permit-spaces.

Retrieval system The equipment (including retrieval line, chest or full body harness, wristlets [if appropriate], and lifting device or anchor) used for non-entry rescue of persons from permit-spaces.

Testing The process by which the hazards that may confront entrants of a permit-space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit-space.

NOTE: Testing enables the employer both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately before and during entry.

Fall Protection Policies

PURPOSE:
The purpose of this procedure is to inform employees on the prevention of disastrous accidental falls from elevations.

SCOPE:
This applies to all Front Line employees.

DEFINITIONS:
Active Fall Protection – Fall protection that is made up of components and systems that require some manipulation by workers to make the protection effective.
Passive Fall Protection – Fall protection systems that consist of components and systems, such as nets, that do not require any action on the workers part.
Anchorage – An independent structure to which the fall arrest device or lanyard is attached.
Lanyard – Is a short flexible rope, strap, or webbing connecting the worker to the anchor
Harness – A device that encompasses the torso. It is attached to the other parts of the fall arrest system.
Lifeline – A cable rigged between two fixed anchorage points.
Fall Arrest / Shock Absorbers – A device that slows the workers fall or breaks the fall from a height of 6'or more.

REQUIREMENTS:
Guardrails, safety nets, or a "personal fall arrest system" shall be utilized whenever walking / or working on surfaces (horizontal or vertical) that have unprotected sides / and or edges thus allowing a person to sustain a fall from a height of 6' or more. When referring to a "personal fall arrest system" it shall mean a body harness, connectors, and an anchorage that may include lanyard decelerating devices or a suitable combination.

Guardrail systems consist of:

1. Top rail set at a height of forty-two inches plus or minus 3 inches.

2. Mid-rail should be set at a height of twenty-one inches.

3. Toe board should be set at bottom. (4”)

4. Guardrails must withstand a 200 hundred pound force outward & downward in any direction but up.

- When guardrails are necessary to safeguard a hole, all sides and/or edges must be fully protected.
- Safety nets are to be positioned as close as possible, but not more than thirty feet below the walking / working surface.

- Employers must determine whether walking / working surfaces are structurally capable of supporting workers safely.
- Workers on walking / working surfaces with unprotected sides or edges 6’ or higher above a lower level must be protected from falling by the use of guardrails, safety nets or personal fall arrest systems.
- Workers constructing or working near leading edges at 6 feet or higher must be protected from falls by guardrails, safety nets or personal fall arrest systems.
- Workers in hoist areas must be protected from falling more than 6’ by guardrails or personal arrest fall system.
- Workers must be protected from falling more than 6 feet through holes 2” or more (including skylights) by hole covers, guardrails or personal fall arrest systems.
- Workers on the face of form work or reinforcing steel must be protected from falling 6 feet or more by personal fall arrest systems, nets or positioning devices.
- Workers above dangerous equipment must be protected from falling into or onto the equipment by guardrails; personal fall arrest systems and equipment shall be guarded.
- Workers on the edge of excavations deeper than 6 feet must be protected from falling by guardrails, fences or barricades when excavations are not easily visible.

- Workers near wall openings 6 feet or higher above lower levels and less than 39 inches above the walking / working surface must be protected from falling by guardrails, nets, or personal fall arrest systems.
- Workers on walking / working surfaces 6 feet or higher above levels which are not otherwise addressed must be protected from falling by guardrails, nets or personal fall arrest systems.

- Where workers are exposed to falling objects, the employer must:
  Erect to boards, screens or guardrails to prevent objects from falling, erect a canopy structure and keep objects away from the edge of the higher level, or barricade the area to which objects could fall and keep objects away from the edge of the higher level.

ROOFS:

- Only workers who have been trained to be proficient in the alternative methods of fall protection used to minimize fall hazards shall be allowed onto the roof.
- Roof surfaces shall be inspected for slipping hazards. Such hazards shall be eliminated or effective measures shall be taken to have workers avoid them.
- Workers shall wear appropriate footwear to reduce slipping potential.
- When adverse weather, such as high winds, rain, snow, or sleet is creating a hazardous condition, roof operations shall be suspended until such time as the hazardous conditions no longer exist.
- Supplies and materials shall not be stored within 6 feet of the edge.
- The area below the eaves and rakes shall be kept clear of materials and other objects which could pose imperilment or other hazards or they shall be properly guarded.

DEFINITIONS:

Guardrails, safety nets and personal fall arrest systems – a means of fall protection from heights of 6 feet or more from a walking or working surface, where a leading edge is present.

A walking or working surface – defined as any surface where employees perform construction work.

Leading edge – any protected side or edge of a walking or working surface that may require work where a 6 foot fall may be incurred.

Ramp – a means of access or egress from which pedestrians or equipment may travel. Ramps used for pedestrian passage or construction activity must be erected and maintained where there is construction activity or where a fall hazard may be present. Any elevation above 19” or more will represent the need for such a ramp or stairs to be constructed.

Cover – a cover must be placed where there is a gap or void of more than 2”in the working surface or where there is a fall hazard to a lower level. i.e. where holes have been created for utilities, skylights, elevators, shafts etc.
Such openings shall be covered by installing some type of material that will prevent a fall or tripping/slipping hazard. This cover shall be prevented from accidental displacement wind, employees travel or equipment. These covers shall be identified by the words “cover or hole” to provide a warning for the hazard. This cover shall be constructed as not to prevent the accidental tripping while construction activities are taking place. These covers shall be constructed to support twice the weight of employees or equipment that may be imposed on them at any time. The actual details of the covers are to be defined in the Job Hazard Analysis.

APPLICATION:
A Job Hazard Analysis shall be adopted to address all identifiable hazards on the jobsite. These will identify the means or access and egress over any walking or working surface on the jobsite.

HOUSEKEEPING ON THE JOBSITE

Did you know there was an OSHA standard pertaining to Housekeeping on Construction Sites (29CFR Part 1926 25)? This three paragraph standard doesn't say a lot, but what it does say is important to worker safety and health. Construction sites can present many hazards to employees when they are performing construction-related activities. Keeping a construction site relatively clean of debris can further reduce hazards. The benefits of good housekeeping far exceeds the small additional effort required to establish good housekeeping practices at a construction site.

Front Line employees on construction sites are required to practice good housekeeping to further reduce hazards on these sites. When construction hazards exist that cannot be eliminated, then engineering practices, administrative controls, safe work practices, Personal Protective Equipment (PPE), and/or proper training will be implemented.

Scrap material and debris generated during construction usually consist of noncombustible scrap material and debris and combustible scrap materials and debris.

Noncombustible scrap material and debris that consist of form and scrap lumber with protruding nails, and all other debris, must be kept cleared from work areas, passageways, and stairs, and from around buildings or other structures. Combustible scrap materials and debris must be removed at regular intervals during the course of construction without increasing the hazard exposure to employees who remove such debris. Nails should be removed from used lumber before stacking.

All construction waste must first be collected into containers before disposal. These wastes include General Waste and Trash (nontoxic, non-hazardous) and Hazardous Wastes. Separate containers must be provided for the collection and separation of waste, trash and other refuse.

Additional separate containers must be provided with lids for hazardous wastes to prevent sparks or other ignition sources from coming into contact with hazardous wastes. Hazardous Wastes can include used oil, used oil filters, oily rags and flammable wastes as well as caustics, acids, harmful dusts, etc.

Construction Personal Protective Equipment (PPE)

Eye and Face Protection

Safety glasses or face shields are worn any time work operations can cause foreign objects to get in the eye. For example, during welding, cutting, grinding, nailing (or when working with concrete and/or harmful chemicals or when exposed to flying particles). Wear when exposed to any electrical hazards, including working on energized electrical systems.

Eye and face protectors – select based on anticipated hazards.

Foot Protection

Construction workers should wear work shoes or boots with slip-resistant and puncture-resistant soles. Safety-toed footwear is worn to prevent crushed toes when working around heavy equipment or falling objects.

Hand Protection

Gloves should fit snugly. Workers should wear the right gloves for the job (examples: heavy-duty rubber gloves for concrete work; welding gloves for welding; insulated gloves and sleeves when exposed to electrical hazards).

Head Protection

Wear hard hats where there is a potential for objects falling from above, bumps to the head from fixed objects, or of accidental head contact with electrical hazards.

Hard hats – routinely inspect them for dents, cracks or deterioration; replace after a heavy blow or electrical shock; maintain in good condition.

Hearing Protection

Use earplugs/earmuffs in high noise work areas where chainsaws or heavy equipment are used; clean or replace earplugs regularly.

Toolbox Talk Training

Tool box talks of 5 to 10 minutes must be held by superintendents and/or foreman each week. Employees never receive too much training, and therefore our company relies upon jobsite management to provide ongoing and continuous employee training. The subject to each training talk should be chosen to relate to the type of work that is being performed.

Safety toolbox talks are less formal and shorter than safety meetings and training sessions, and they are designed to reinforce safety training and information on a particular topic. Without constant reminders about safety, employees tend to forget, get sloppy, take risks, and have accidents. Front Line is committed to having the foreman or lead person on the jobsite hold a tool box talk once a week and having all employees in attendance, sign it. The office then collects all sheets on a weekly basis. If the Front Line office does not receive the signed toolbox talk from a particular jobsite, that foreman is held accountable.

How can we avoid safety talks that don't work? The Front Line management team chooses the topics that pertain to the work that we do. Therefore, our employees can relate and tend to be more interested.

There are some basic steps we follow to give an effective safety talk:

- Focus on one subject per talk. A safety talk that rambles or loses focus by discussing several different subjects will not hold our employees' attention.
- We choose subjects that involve as many people as possible, and confine the presentation and suggestions to that single topic. It is more effective to teach people how to handle a single problem at a time so they can eliminate that one hazard.
- Avoid such general statements as "Do better with your housekeeping." Our safety talks tell our employees exactly what to do. For instance, say "You need to make sure the aisles are clear of maintenance equipment," or "Clean up spills as soon as they happen."
- We discuss the same general topic on a regular basis—housekeeping, for example—we pin down the subject for each safety

talk to specifics, such as the danger of discarding sharp items in wastebaskets, or the unsafe use of electrical cords and extensions.
- We always include time for attendees to ask questions.

Why Are Toolbox Talks Important?

Toolbox talks are a great refresher, and keep your employees abreast of changes in regulations, safety procedures, equipment, personal protective equipment (PPE), and job assignments and responsibilities. Refresher training is required by law on some topics, in which case planned safety talks are a convenient way to go over required training.

JHA Policies and Procedures

JHA Policies

Front Line is committed to providing a safe work environment for all employees. Our policy in regards to JHA's is to identify, highlight and make everyone aware of the possible hazards on their specific jobsite daily. We provide our workers with a JHA to not only identify hazards but to use them as a tool to evaluate new hazards, update our current JHA, record daily actions and input from all onsite personnel.

JHA Procedures

1. List the specific activities that will be performed daily, also list general site hazards found on a daily basis.
2. List the hazards or potential hazards associated with each task or activity.
3. List the corrective controls that will be implemented so as to ensure the health and safety of all workers performing the tasks.

4. All JHA's are to be reviewed and signed off daily by all Front-Line personnel prior to commencing any work.
5. All JHA's will be reviewed and modified based on new equipment, processes and personel recommendations.
6. All JHA's will be maintained by Front Line for recordkeeping and training purposes.

JHA example

Job Hazard Analysis (JHA)

Activity/Work Task:	Overall Risk Assessment Code (RAC) (Use highest code)					
Project Location:	**Risk Assessment Code (RAC) Matrix**					
Contract Number:	**Severity**	**Probability**				
Date Prepared:		Frequent	Likely	Occasional	Seldom	Unlikely
Prepared by (Name/Title):	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
Reviewed by (Name/Title):	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
Notes: (Field Notes, Review Comments, etc.)	Step 1: Review each **"Hazard"** with identified safety **"Controls"** and determine RAC (See above)					
	"Probability" is the likelihood to cause an incident, near miss, or accident and identified as: Frequent, Likely, Occasional, Seldom or Unlikely.	**RAC Chart**				
	"Severity" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Critical, Marginal, or Negligible	E = Extremely High Risk				
	Step 2: Identify the RAC (Probability/Severity) as E, H, M, or L for each "Hazard" on AHA. Annotate the overall highest RAC at the top of AHA.	H = High Risk				
		M = Moderate Risk				
		L = Low Risk				

Job Steps	Hazards	Controls	RAC

Equipment to be Used	Training Requirements/Competent or Qualified Personnel name(s)	Inspection Requirements

Electrical Construction Safety

Most electric-related accidents and injuries occur as a result of water existing in and around the construction site where electrical equipment and lines are being used and worked on. One of the biggest things you can do to reduce electric shock and electrical injury is to work to prevent water from coming into contact with electrical equipment and lines.

Construction workers should also take the time to familiarize themselves with the construction site and all pieces of electrical equipment and spot any potential electric hazards in the site before they get to work, as well as to identify any electrical equipment that could become damaged through the use of various wet methods of removal.

A Ground Fault Circuit Interrupter, or GFCI, are outlets containing a “test” and “reset” buttons that prevent electric shock and electrocution by monitoring the flow of electricity, or current, through the circuit of the outlet. If the electric current changes in any way (for example, if a cord comes into contact with water), the GFCI immediately shuts off the flow of electricity. GFCIs should be used any time there is a source of electricity or electric outlet near a source of water, both on construction sites and in and around the home.

There are also a number of things you should avoid in order to increase electric-related safety around the construction site. First, don’t let water collect on the floor while you’re working with electric equipment and lines. Remove water before it can accumulate. Water and electricity do not mix! Next, avoid stringing along electrical wires and lines over floors. This is a safety hazard and must be avoided. Finally, be careful not to damage insulated covers and protectors.

Finally, in order to increase construction safety around electricity, construction workers and team members should always assume that any piece of electrical equipment or any lines (wiring, etc.) in and around the site are “live,” or energized, unless otherwise tested and publicly noted.

If any of your electrical equipment that you regularly use on construction sites comes with any safety manuals, be sure to read them through thoroughly before operating them. General electrical safety may also be explained in safety manuals.

Safe manual handling tips for construction workers (reduce soft tissue injuries)

The best way to reduce injuries is to encourage positive attitudes toward health and safety. This can be done by training workers, investigating accidents, and planning work to reduce risks. Below are some tips that help Front Line employees:

Clear pathway: Before you move things from one place to another, be sure you have a clear pathway. Always plan your lift.

Use proper equipment: Examine the materials handling tasks for risks, and determine what you will need to safely finish the task. For example, a cart or dolly may make it easier.

Check weight: Check the weight of the object you are moving to see if you need help. If you can't move it with one foot, you should get help.

Ask for help: You may need a second person. Learn to lift as a team. Take your time: Injuries can happen when tasks are rushed.

Keep back straight: If possible, keep your back straight and vertical to the ground. Keep your head up and looking straight. Lift with your knees: Bend your knees when lifting or pushing; don't stoop over an object. Use the strength of your legs. While this won't guarantee that you remain injury free, it helps reduce the risk.

Hold object close: Always bring the object as close to your body as possible to reduce the strain on your back. The closer you hold it, the less compressive force you put on your lower back. Tighten the stomach: Tighten your stomach muscles to help stabilize your back during a lift.

Use the right tools for the job. Use tools with secondary handles to help distribute the force over both hands and arms. Stack materials in appropriate work piles to reduce double and triple handling then looking for materials. Position work materials close to the work location to reduce walking and carrying. Use shoe or boot inserts to reduce stress on the back and legs from standing and walking all day.

Reducing injuries increases production.

HAND AND PORTABLE POWER TOOL SAFETY

PURPOSE

The purpose of this section is to promote the safe use of, and to reduce the likelihood of injuries involving the use of hand or power tools.

SCOPE
These requirements apply to all Front Line workers where the use of hand or power tools are in use or will be used.

RESPONSIBILITIES
Supervisor & Employee: Supervisor led training is required upon employment for employees who operate hand and portable power tools. An excellent means of conducting this training is to develop a JHA that covers the pertinent information on how to properly and safely use these types of tools and equipment. .

- **Select the Right Tool for the Job**
- **Keep Tools in Good Working Condition**
- **Use Tools the Right Way**
- **Place/Keep/Store Tools in a Safe & Secure Place**

The following procedures are excellent practices to follow in order to promote a safe working environment where hand and portable power tools are used:

- Establish regular tool inspection procedures and provide good repair facilities to ensure that tools will be maintained in safe condition.

- Establish a procedure for control of tools such as a check-out system at tool cribs.

- Provide proper storage facilities in the warehouse and on the jobsite.

- The employer is responsible for the safe condition of tools and equipment used by employees, but the employees have the responsibility for properly using and maintaining tools.

**Failure to observe safe work practices when using hand and portable power tools accounts for most hand and power tool accidents.

Each supervisor is to make a complete check of his/her operations to determine the need for special tools that will do the work more safely than ordinary tools. This can be completed by developing a Job Hazard Analysis which can be used to identify the hazards associated with the job and the appropriate tools that should be used.

Dull or damaged tools shall not be returned to stock.

Employees shall not continue use of damaged tools during a job if it is noticed during the job that the tool is damaged.

CARRYING TOOLS

The employee is to never carry tools, which in any way could interfere with using both hands freely on a ladder or while climbing on a structure. A strong bag, bucket, or similar container is to be used to hoist tools from the ground to the job. Tools are to be returned in the same manner. Employees should never bring tools down by hand, carry in pant/shirt pockets, or dropped tools to the ground.

Loose tools and tools laid inappropriately cause a substantial portion of hand tool injuries. Tools should not be left above where employees are moving or walking. This presents a falling object hazard.

Chisels, screwdrivers, and pointed tools shall never be carried in an employee's pocket. They are to be carried in a tool box/cart, a carrying belt (sharp/pointed end down) like those used by electricians and steel employees, a pocket tool pouch, or in the hand with points and cutting edges pointed away from the body.

Employees carrying tools on their shoulders should pay close attention to clearances when turning around. Tools should also be handled so that they will not strike other employees or pedestrians.

PERSONAL PROTECTIVE EQUIPMENT

Appropriate personal protective equipment should be worn to protect from hazards that may be encountered when using portable power tools and hand tools.
Employees that use hand and power tools and are exposed to the hazards of falling, flying, abrasive and splashing materials, or exposed to harmful dusts, fumes, vapors, or gases shall be provided with the specified personal protective equipment necessary to protect them from the hazard.

USE OF HAND TOOLS

Hand tools are non-powered, which includes adzes, mutts, wrenches, screw drivers, hammers, etc. The greatest hazard posed by hand tools results from misuse and improper maintenance.

Employee instruction / training programs shall provide detailed training in the proper use of hand tools for the specific area of operations of which they will be working in. Attention will be given to tool selection, tool use, and proper PPE that is required to be used when operating the specific tool.

METAL CUTTING HAND TOOLS

Tin Snips:

- Tin snips should be heavy enough to cut the material so easily that the employee needs only one hand on the snips and can use the other hand to hold the material.

- The material is to be well supported before the last cut is made so that cut edges do not press against the hand. Jaws of snips are to be kept tight and well lubricated.
- Employees are required to wear safety glasses when trimming corners or slivers of metal because small particles often fly with considerable force.
- Employees are also required to wear cut proof gloves when making cuts.

SCRAPERS & KNIVES

- Are to be used by only experienced employees.
- These tools are to be kept sharp and in good condition. The principal hazard in the use of knives is that hands may slip from the handle onto the blade or that the knife may strike the body or the free hand. A handle guard or finger ring (and swivel) on the hand eliminates these hazards and are required to be used.
- Employees who must carry knives with them on the job shall keep them in sheaths or holders.
- Never keep a sheathed knife on the front part of a belt, but should carry it over the right or left hip toward the back. This will prevent severing a leg artery or vein in case of a fall.
- Knives should be stored safely and must never be left lying on benches or in other places such as being hidden under a product, under scrap paper, or wiping rags, or among other tools in work boxes or drawers where they can cause hand injuries. Safe placing and storing of knives is one of the most important keys to knife safety.
- Supervisors must make certain that employees who handle knives have ample room in which to work so they are not in danger of being bumped by other employees.
- Knives are to be kept separate from other tools to protect the cutting edge of the knife as well as to protect the employee.
- Knives are not to be used as a substitute for a required tool..

SCREWDRIVERS

- The practice of using screwdrivers for punches, wedges, pinch bars, or pry bars shall not be allowed.
- Phillips head screwdrivers are safer than the square bit type, because they have fewer tendencies to slip. The tip must be kept clean and sharp, however to permit a good grip on the head of the screw.
- The part to be held upon must never be held in the hands; it shall be laid on a bench or a flat surface or held in a vise.

SHOCK TOOLS

- A hammer is to have a securely wedged handle suited to the type of head used.
- The handle shall be smooth, without cracks or splinters, free of oil, shaped to fit the hand, and of specified size and length. Employees shall be warned against using a steel hammer on hardened steel surfaces. Instead a soft head hammer or one with a plastic, wood, or rawhide head should be used. Safety goggles or safety glasses shall be
- worn to protect against flying chips, nails, or scale.

SPARK RESISTANT HAND TOOLS

- Around flammable substances, sparks produced by iron and steel hand tools can be a dangerous ignition source. Where the hazard exists, spark resistant tools made from brass, plastic, aluminum or wood would provide for safety.

POWER TOOL PRECAUTIONS

Power tools can be hazardous when improperly used. There are several types of power tools, based on the power source they use: electric, pneumatic, liquid fuel, hydraulic, and powder actuated.

The following general precautions should be observed by power tool users:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle. Keep cords and hoses away from heat.
- Cords are to free from frays or cuts. If the cord is damaged, the equipment shall be removed from service immediately.
- Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.
- All observers shall be kept at a safe distance away from the work area.
- Secure work with clamps or vise, freeing both hands to operate the tool.
- Avoid accidental starting. The employee should not hold a finger on the switch button while carrying a plugged in tool.
- Tools should be maintained with care. They should be kept sharp and clean for the best performance. Follow instructions in the users manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance.
- The proper apparel should be worn, Loose clothing, ties, or jewelry can become caught in moving parts.

All portable electric tools that are damaged shall be removed from use and tagged " DO NOT USE".

GUARDS

Hazardous moving parts of a power tool need to be safeguarded. For example, belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded if such parts are exposed to contact by employees. Guards, as necessary, should be provided to protect the operator and others from the following.

- Point of operation, in running nip points.
- Rotating parts, and flying chips and sparks.

Safety guards shall never be removed while a tool is being used.

SAFETY SWITCHES

The following tools are required to be equipped with a constant pressure switch or control that will shut off the power when the pressure is released if they do not have a positive accessory holding means:

- All hand-held powered circular saws having a blade diameter greater than 2 inches.
- Electric, hydraulic or pneumatic chain saws
- Percussion tools

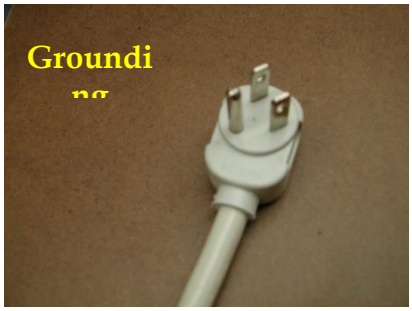
The following tools are required to be equipped with a constant pressure switch or control, and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on:

- All hand-held powered drills.
- Tappers.
- Fastener drivers.
- Horizontal, vertical, and angle grinders with wheels greater than 2 inches in diameter.
- Disc sanders with discs greater than 2 inches in diameter.
- Belt sanders, reciprocating saws, saber, scroll, and jig saws with blade shanks greater than a nominal one-fourth inch (1/4").
- Other similarly operating powered tools shall.

Other hand-held powered tools such as circular saws having a blade diameter greater than 2 inches, chain saws, and percussion tools without positive accessory holding means must be equipped with a constant pressure switch that will shut off the power when the pressure is released.

ELECTRIC TOOLS

Employees using electric tools must be aware of several dangers. The most serious of these dangers is the possibility of electrocution. Among the chief hazards of electric-powered tools are burns and slight shocks which can lead to serious injuries or even heart failure.



Under certain conditions, even a small amount of current can result in fibrillation of the heart and eventual death. A shock also can cause the user to fall off a ladder or other elevated work surface.

To protect the user from shock, tools must have a three-wire cord with a ground prong and be grounded, double insulated, or powered by a low voltage isolation transformer.

Three-wire cords: These cords contain two current-carrying conductors and a grounding conductor. One end of the grounding conductor connects to the tools metal housing. The other end is grounded through a prong on the plug. Anytime an adapter is used to accommodate a two-hole receptacle, the adapter wire must be attached to a known ground. The third prong should never be removed from the plug.

Double insulation: This is a more convenient method. The user and the tools are protected in two ways: by normal insulation on the wires inside, and by a housing that cannot conduct electricity to the operator in the event of a malfunction.

The following general practices should be followed when using electric tools:

Electric tools should be operated within their design limitations.

Gloves and safety footwear are recommended during use of electric tools.

- When not in use, tools should be stored in a dry place.
- Electric tools should not be used in damp or wet locations.
- Work areas should be well lighted.

- Frayed cords are required to be taken out of service and replaced.
- Electric cords shall be inspected periodically and kept in good condition. Heavy-duty plugs that clamp to the cord should be used to prevent strain on the current-carrying parts, if the cord is accidentally pulled.
- Although no guards are available for drill bits, some protection is afforded if drill bits are carefully chosen for the work to be done, such as being no longer than necessary to do the work.
- Where the operator must guide the drill by hand, the drill is required to be equipped with a sleeve that fits over the drill bit. Oversized bits shall not be ground down to fit small electric drills; instead, an adapter should be used that will fit the large bit and provide extra power through a speed reduction gear; however this again is an indication of improper drill size. When drills are used, the pieces of work are to be clamped or anchored to prevent whipping.
- Electric saws are usually well guarded by the manufacturer, but employees must be trained to use the guard as intended. The guard should be checked frequently to be sure that it operates freely and encloses the teeth completely when it is cutting.
- Circular saws shall not be jammed or crowded into the work. The saw is to be started and stopped outside the work.

AERIAL LIFT SAFETY

Safety Tips for Aerial Lifts

Aerial lifts are frequently used in the construction industry. According to the U.S. Bureau of Labor Statistics about 26 construction workers (8% are industrial painters) die each year from using aerial lifts. Approximately 70% involve boom-supported lifts, such as bucket trucks and cherry pickers; 25% of the other deaths involve scissor lifts.

Aerial Lift Deaths from Boom Lifts

Half of the falls from boom lifts involved being ejected from the bucket after being struck by vehicles, cranes, or crane loads, or by falling objects, or when a lift suddenly jerked. Two-thirds of the deaths from collapses/tip-overs of boom lifts occurred when the bucket cable or boom broke or the bucket fell; almost one-third were due to tip-overs. Over one-third of the electrocutions involved an overhead power line contacting the lift boom or bucket. In most of the caught in/between deaths, a worker was caught between the bucket edge and objects such as roof joists or beams while repositioning the bucket.

Aerial Lift Deaths from Scissor Lifts

Three-quarters of the tip-overs of scissor lifts resulted in fall deaths; in the remaining accidents, workers died from being struck by the falling scissor lift. About two-fifths of the tip-overs occurred when the scissor lift was extended over 15 feet, mostly while driving the lift. In one-fifth of the falls the worker was ejected from the scissor lift, mostly when an object struck the scissor lift. Other fall deaths occurred after removal of chains or guardrails, or while standing on or leaning over railings.

Operator Training Is Vital

Frequently operators lack the training to know they are creating safety hazards. An aerial lift is a potentially dangerous tool when the operator has not read the operator's manual. Contractors should provide required manuals to operators and maintenance mechanics. If they can not read or understand the language of manuals, ANSI safety standards allow others to explain the manuals. OSHA requires a qualified person to train all users on:

- Any electrical, fall, and falling-object hazards.
- Procedures for dealing with hazards.
- How to operate the lift correctly (including maximum intended load and load capacity). The user must show he/she knows how to use the lift.

- Manufacturer requirements.

If the hazards change, the type of aerial lift changes, or a worker is not operating a lift properly, workers must be retrained. Ask manufacturers and suppliers for specific instructions for the operation of special use aerial lift trucks. OSHA, NIOSH, the National Safety Council and their local affiliates, vocational-technical schools or other training institutions provide resources to learn this skill. (Find contact information below.)

In addition to the lack of training, many lift accidents are caused by misapplication of the machine, obstacles, and lack or use or incorrect use of outriggers.

Inspect Before Operating Lifts

Identifying and controlling hazards is very important for job site safety. OSHA regulations state that employers cannot force employees to use unsafe equipment. Generally a pre-start inspection is required for all types of aerial lifts at each job site. Check operating and emergency controls, safety devices (such as, outriggers and guardrails), personal fall-protection gear, wheels and tires, and other machine components specified by the manufacturer. Look for possible leaks (air, hydraulic fluid, and fuel-system) and loose or missing parts.

Contractors should immediately remove from service aerial platforms that do not operate properly or are in need of repair. A qualified mechanic must make all repairs using equivalent replacement parts. Substitution of parts is not wise; they have been known to cause accidents. De-energize and lockout/tagout aerial lifts before any maintenance or repairs. Each aerial lift must be inspected as the manufacturer requires – every 3 months or after 150 hours of use, whichever comes first.

Check the job site where the lift will be used. Look for a level surface that won’t shift. Check the slope of the ground or floor. A machine may not work properly on steep slopes that exceed slope limits set by the manufacturer. Look for hazards, such as, holes, drop-offs, bumps, and debris, and overhead power lines and other obstructions. Set outriggers, brakes, and wheel chocks – even if you’re working on a level slope.

Tips for Operating Aerial Lifts

- Always close lift platform chains or doors.
- Stand on the floor of the bucket or lift platform. Do not climb on or lean over guardrails, or ride on bumpers.
- Do not exceed manufacturer's load-capacity limits (including the weight of such things as bucket liners and tools).
- If working near traffic, put work-zone warnings, like cones and signs.
- Do not tie off to adjacent structure or equipment.
- Do not modify an aerial lift without written permission of the manufacturer.
- Be sure proper personal fall-protection is provided and used.
- On bucket trucks, OSHA requires a full-body harness and lanyard or a restraining device to prevent falls. To help keep workers inside guardrails, OSHA allows restraining devices with a 2 ft. lanyard.

To prevent electrocutions painters, blasters, and other workers must stay at least 10 feet away from overhead power lines. Insulated buckets protect from electrocution due to electric current passing through you and the boom to ground. The buckets do not protect if there's another path to ground – for example, if you touch another wire.

To prevent tip-overs

- Check the manufacturer’s instructions.
- Do not drive with the lift platform elevated (unless the manufacturer assures you that it is allowed).
- Do not exceed vertical or horizontal reach limits or the specified load-capacity of the lift.
- On an elevated scissor lift, avoid too much pushing or pulling.

More Safety Tips

- If hazards on a job site change, the type of aerial lift changes, or a worker is not operating a lift properly, workers must be retrained.
- Prevent unauthorized use by locking a machine, keeping its keys off the job site, or securing it in an inaccessible area when not working
- Keep the operator’s manual on the machine at the job site not in the office.
- Refer to the industry consensus standard, ANSI/SIA 92.6, for more information.

What You Should Know If You Rent

Many painting contractors rent aerial lifts instead of buying them. Therefore, you may not know which model you will be using, and may be unfamiliar with operator controls and other key features that differ on each model. Also, you may not know the maintenance history of the lift. The dealer or company renting out the lift should:

- Properly inspect and service the lift before rental.
- Provide operator and maintenance manuals.
- Make sure the operator controls are easy to reach and properly marked.

BLOODBORNE PATHOGENS

Bloodborne pathogens are microorganisms such as viruses or bacteria that are carried in blood and can cause disease in people. There are many different bloodborne pathogens including malaria, syphilis, and brucellosis, but *Hepatitis B (HBV)* and the *Human Immunodeficiency Virus (HIV)* are the two diseases specifically addressed by the OSHA Bloodborne Pathogen Standard.

While this module will focus primarily on HBV and HIV, **it is important to know which bloodborne pathogens (from humans or animals) you may be exposed to at work, especially in laboratories**. For example, personnel in the College of Veterinary Medicine might have the potential for exposure to rabies, and it would therefore be important to know specific information about rabies.

Hepatitis B (HBV)

In the United States, approximately 300,000 people are infected with HBV annually. Of these cases, a small percentage are fatal.

"Hepatitis" means "*inflammation of the liver,"* and, as its name implies, Hepatitis B is a virus that infects the liver. While there are several different types of Hepatitis, Hepatitis B is transmitted primarily through "blood to blood" contact. Hepatitis B initially causes inflammation of the liver, but it can lead to more serious conditions such as cirrhosis and liver cancer.

There is no "cure" or specific treatment for HBV, but many people who contract the disease will develop antibodies which help them get over the infection and protect them from getting it again. It is important to note, however, that there are different kinds of hepatitis, so infection with HBV will not stop someone from getting another type.

The Hepatitis B virus is very durable, and it can survive in dried blood for up to seven days. For this reason, this virus is the primary concern for employees such as housekeepers, custodians, laundry personnel and other employees who may come in contact with blood or potentially infectious materials in a non first-aid or medical care situation.

Symptoms:
The symptoms of HBV are very much like a mild "flu". Initially there is a sense of fatigue, possible stomach pain, loss of appetite, and even nausea. As the disease continues to develop, jaundice (a distinct yellowing of the skin and eyes), and a darkened urine will often occur. However, people who are infected with HBV will often show no symptoms for some time. After exposure it can take 1-9 months before symptoms become noticeable. Loss of appetite and stomach pain, for example,

commonly appear within 1-3 months, but can occur as soon as 2 weeks or as long as 6-9 months after infection.

Human Immunodeficiency Virus (HIV)

AIDS, or acquired immune deficiency syndrome, is caused by a virus called the human immunodeficiency virus, or HIV. Once a person has been infected with HIV, it may be many years before AIDS actually develops. HIV attacks the body's immune system, weakening it so that it cannot fight other deadly diseases. AIDS is a fatal disease, and while treatment for it is improving, there is no known cure.

Estimates on the number of people infected with HIV vary, but some estimates suggest that an average of 35,000 people are infected every year in the US (in 2000, 45,000 new infections were reported). It is believed that as of 2000, 920,000 persons were living with HIV/AIDS in the United States. These numbers could be higher, as many people who are infected with HIV may be completely unaware of it.

The HIV virus is very fragile and will not survive very long outside of the human body. It is primarily of concern to employees providing first aid or medical care in situations involving fresh blood or other potentially infectious materials. It is estimated that the chances of contracting HIV in a workplace environment are only 0.4%. However, because it is such a devastating disease, all precautions must be taken to avoid exposure.

AIDS infection essentially occurs in three broad stages. The **first stage** happens when a person is actually infected with HIV. After the initial infection, a person may show few or no signs of illness for many years. Eventually, in the **second stage**, an individual may begin to suffer swollen lymph glands or other lesser diseases which begin to take advantage of the body's weakened immune system. The second stage is believed to eventually lead to AIDS, the **third and final stage**, in all cases. In this stage, the body becomes completely unable to fight off life-threatening diseases and infections.

Symptoms:

Symptoms of HIV infection can vary, but often include weakness, fever, sore throat, nausea, headaches, diarrhea, a white coating on the tongue, weight loss, and swollen lymph glands.

If you believe you have been exposed to HBV or HIV, especially if you have experienced any of the signs or symptoms of these diseases, you should consult your physician or doctor as soon as possible

Modes of Transmission

Bloodborne pathogens such as HBV and HIV can be transmitted through contact with infected human blood and other potentially infectious body fluids such as:

- **Semen** (the viscid, whitish fluid from the male)
- **Vaginal secretions** (fluid from the female cervix).
- **Cerebrospinal fluid** (colorless liquid that surrounds the brain and spinal cord).
- **Synovial fluid** (fluid that lubricates and cushions the joint).
- **Pleural fluid** (fluid between the pleural membranes of the lung and the inner chest wall).
- **Peritoneal fluid** (fluid in the gastrointestinal organs).
- **Amniotic fluid** (fluid which surrounds the fetus).
- **Saliva** (in dental procedures).
- Any body fluid that is visibly contaminated with blood.

It is important to know the ways exposure and transmission are most likely to occur in your particular situation, be it providing first aid to a student in the classroom, handling blood samples in the laboratory, or cleaning up blood from a hallway.

HBV and HIV are most commonly transmitted through:

- Sexual Contact
- Sharing of hypodermic needles
- From mothers to their babies at/before birth
- Accidental puncture from contaminated needles, broken glass, or
- other sharps
- Contact between broken or damaged skin and infected body fluids
- Contact between mucous membranes and infected body fluids

Accidental puncture from contaminated needles and other sharps can result in transmission of bloodborne pathogens.

In most work or laboratory situations, transmission is most likely to occur because of accidental puncture from contaminated needles, broken glass, or other sharps; contact between broken or damaged skin and infected body fluids; or contact between mucous membranes and infected body fluids. For example, if someone infected with HBV cut their finger on a piece of glass, and then you cut yourself on the now infected piece of

glass, it is possible that you could contract the disease. Anytime there is **blood-to-blood contact** with infected blood or body fluids, there is a slight potential for transmission.

Unbroken skin forms an impervious barrier against bloodborne pathogens. However, **infected blood can enter your system through:**

- Open sores
- Cuts
- Abrasions
- Acne
- Any sort of damaged or broken skin such as sunburn or blisters

Bloodborne pathogens may also be transmitted through the **mucous membranes** of the eyes, nose & mouth.

For example, a splash of contaminated blood to your eye, nose, or mouth could result in transmission.

PPE, Work Practices & Engineering Controls

It is extremely important to use personal protective equipment and work practice controls to protect yourself from bloodborne pathogens.

"Universal Precautions**"** is the name used to describe a prevention strategy in which all blood and potentially infectious materials are treated as if they are, in fact, infectious, regardless of the perceived status of the source individual. In other words, whether or not you think the blood/body fluid is infected with bloodborne pathogens, *you treat it as if it is*. This approach is used in all situations where exposure to blood or potentially infectious materials is possible. This also means that certain engineering and work practice controls shall always be utilized in situations where exposure may occur.

Personal Protective Equipment

Probably the first thing to do in any situation where you may be exposed to bloodborne pathogens is to ensure you are wearing the appropriate personal protective equipment (PPE). For example, you may have noticed that emergency medical personnel, doctors, nurses, dentists, dental assistants, and other health care professionals always wear latex or protective gloves. This is a simple precaution they take in order to prevent blood or potentially infectious body fluids from coming in contact with their skin. To protect yourself, it is essential to have a barrier between you and the potentially infectious material.

Rules to follow:

- Always wear personal protective equipment in exposure situations.
- Remove PPE that is torn or punctured, or has lost its ability to
- function as a barrier to bloodborne pathogens.
- Replace PPE that is torn or punctured.
- Remove PPE before leaving the work area.

If you work in an area with routine exposure to blood or potentially infectious materials, the necessary PPE should be readily accessible. Contaminated gloves, clothing, PPE, or other materials should be placed in appropriately labeled bags or containers until it is disposed of, decontaminated, or laundered. It is important to find out where these bags or containers are located in your area before beginning your work. Gloves should be made of latex, nitrile, rubber, or other water impervious materials. If glove material is thin or flimsy, double gloving can provide an additional layer of protection. Also, if you know you have cuts or sores on your hands, you should cover these with a bandage or similar protection as an additional precaution before donning your gloves.

You should always inspect your gloves for tears or punctures before putting them on. If a glove is damaged, don't use it! When taking contaminated gloves off, do so carefully. Make sure you don't touch the outside of the gloves with any bare skin, and be sure to dispose of them in a proper container so that no one else will come in contact with them, either. Anytime there is a risk of splashing or vaporization of contaminated fluids, goggles and/or other eye protection should be used to protect your eyes.

Again, bloodborne pathogens can be transmitted through the thin membranes of the eyes so it is important to protect them. Splashing could occur while cleaning up a spill, during laboratory procedures, or while providing first aid or medical assistance.

Face shields may be worn in addition to goggles to provide additional face protection. A
face shield will protect against splashes to the nose and mouth.

Aprons may be worn to protect your clothing and to keep blood or other contaminated fluids from soaking through to your skin.

Normal clothing that becomes contaminated with blood should be removed as soon as possible because fluids can seep through the cloth to come into contact with skin. Contaminated laundry should be handled as

little as possible, and it should be placed in an appropriately labeled bag or container until it is decontaminated, disposed of, or laundered.

Remember to use universal precautions and treat all blood or potentially infectious body fluids as if they are contaminated. Avoid contact whenever possible, and whenever it's not, wear personal protective equipment. **If** you find yourself in a situation where you have to come in contact with blood or other body fluids and you don't have any standard personal protective equipment handy, you can improvise. Use a towel, plastic bag, or some other barrier to help avoid direct contact.

Hygiene Practices

Handwashing is one of the most important (and easiest) practices used to prevent transmission of bloodborne pathogens. Hands or other exposed skin should be thoroughly washed as soon as possible following an exposure incident. Use soft, antibacterial soap, if possible. Avoid harsh, abrasive soaps, as these may open fragile scabs or other sores.

Hands should also be washed immediately (or as soon as feasible) after removal of gloves or other personal protective equipment.

Because handwashing is so important, you should familiarize yourself with the location of the handwashing facilities nearest to you. Laboratory sinks, public restrooms, janitor closets, and so forth may be used for handwashing if they are normally supplied with soap. If you are working in an area without access to such facilities, you may use an antiseptic cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. If these alternative methods are used, hands should be washed with soap and running water as soon as possible.

- If you are working in an area where there is reasonable likelihood of exposure, you should never
- **Eat**
- **Drink**
- **Smoke**
- **Apply cosmetics or lip balm**
- **Handle contact lenses**

No food or drink should be kept in refrigerators, freezers, shelves, cabinets, or on counter tops where blood or potentially infectious materials are present. You should also try to minimize the amount of splashing, spraying, splattering, and generation of droplets when performing any procedures involving blood or potentially infectious materials, and you should NEVER pipette or suction these materials by mouth**.**

Decontamination and Sterilization

All surfaces, tools, equipment and other objects that come in contact with blood or potentially infectious materials must be decontaminated and sterilized as soon as possible. Equipment and tools must be cleaned and decontaminated before servicing or being put back to use**.**

Decontamination should be accomplished by using

A solution of 5.25% sodium hypochlorite (household bleach / Clorox) diluted between 1:10 and 1:100 with water. The standard recommendation is to use at least a quarter cup of bleach per one gallon of water.

Lysol or some other EPA-registered tuberculocidal disinfectant. Check the label of all disinfectants to make sure they meet this requirement.

If you are cleaning up a spill of blood, you can carefully cover the spill with paper towels or rags, then gently pour the 10% solution of bleach over the towels or rags, and leave it for *at least 10 minutes*. This will help ensure that any bloodborne pathogens are killed before you actually begin cleaning or wiping the material up. By covering the spill with paper towels or rags, you decrease the chances of causing a splash when you pour the bleach on it.

If you are decontaminating equipment or other objects (be it scalpels, microscope slides, broken glass, saw blades, tweezers, mechanical equipment upon which someone has been cut, first aid boxes, or whatever) you should leave the disinfectant in place for *at least 10 minutes* before continuing the cleaning process.

Of course, any materials you use to clean up a spill of blood or potentially infectious materials must be decontaminated immediately, as well. This would include mops, sponges, re-usable gloves, buckets, pails, etc.

Sharps

Far too frequently, housekeepers, custodians and others are punctured or cut by improperly disposed needles and broken glass. This, of course, exposes them to whatever infectious material may have been on the glass or needle. For this reason, it is especially important to handle and dispose of all sharps carefully in order to protect yourself as well as others.

Emergency Procedures

In an emergency situation involving blood or potentially infectious materials, you should always **use Universal Precautions** and try to

minimize your exposure by wearing gloves, splash goggles, pocket mouth-to-mouth resuscitation masks, and other barrier devices.

Hepatitis B Vaccinations

Employees who have routine exposure to bloodborne pathogens (such as doctors, nurses, first aid responders, etc) shall be offered the Hepatitis B vaccine series at no cost to themselves **unless**:

- They have previously received the vaccine series
- Antibody testing has revealed they are immune
- The vaccine is contraindicated for medical reasons

In these cases they need not be offered the series.

Although your employer must offer the vaccine to you, you do not have to accept that offer. You may opt to **decline** the vaccination series, in which case you will be asked to sign a declination form. Even if you decline the initial offer, you may choose to receive the series at anytime during your employment thereafter, for example, if you are exposed on the job at a later date.

As stated in the Emergency Procedures section, if you are exposed to blood or potentially infectious materials on the job, you may request a Hepatitis B vaccination at that time. If the vaccine is administered immediately after exposure it is extremely effective at preventing the disease.

The Hepatitis B vaccination is given in a series of three shots. The second shot is given one month after the first, and the third shot follows five months after the second. This series gradually builds up the body's immunity to the Hepatitis B virus.

The vaccine itself is made from yeast cultures; there is no danger of contracting the disease from getting the shots, and, once vaccinated, a person does not need to receive the series again. There are booster shots available, however, and in some instances these may be recommended (for example, if there is an outbreak of Hepatitis B at a particular location).

OSHA INSPECTIONS

Under the Occupational Safety and Health Act of 1970, OSHA is authorized to conduct workplace inspections and investigations to determine whether employees are complying with standards issued by the

agency for safe and healthful workplaces. OSHA also enforces Section 5(a)(1) of the Act, known as the "General Duty Clause," which requires that every working man and woman must be provided with a safe and healthful workplace. Workplace inspections and investigations are conducted by OSHA compliance safety and health officers who are safety and health professionals trained in the disciplines of safety of safety and industrial hygiene. States administering their own occupational safety and health program through plans approved under section 18(b) of the Act must adopt standards and enforce requirements which are at least as effective as federal requirements.

There are currently 26 states and territories with OSHA- approved safety and health plans: 23 covering the private and public(state and local government) sectors and 3 covering the public sector only. Plan states must adopt standards comparable to the federal standards within 6 month's of a federal standard's issue. Although most states adopt standards identical to the federal standards and have similar inspection procedures – including citations and penalties and employee rights and responsibilities- you should contact the state plan agency directly to determine if there are any different or additional state occupational safety and health requirements.

INVESTIGATIONS ARE ALWAYS CONDUCTED WITHOUT ADVANCE NOTICE.

There are, however, special circumstances under which OSHA may give notice to the employer, but such a notice will normally be less than 24 hours.

These circumstances include the following:

- Imminent danger situations that require correction as soon as possible;
- Accident investigations where the employer has notified the agency of a fatality or catastrophe;
- Inspections that must take place after regular business hours or that require special preparation;
- Cases where notice is required to ensure that the employer and employee representative or other personnel will be present;
- Cases where an inspection must be delayed for more than 5 working days where there is good cause; and situations in which the OSHA Area Director determines that advance notice would produce a more thorough or effective inspection. Employers who receive advance notice of an inspection must inform their

employees' representative or arrange for OSHA to do so. If any employer refuses to admit an OSHA compliance officer or if an employer attempts to interfere with the inspection, the Act permits appropriate legal action, such as obtaining a warrant to inspect.

What are OSHA'S inspection priorities?

Not all 111 million workplaces covered by the Act can be inspected immediately. The worst situations need attention first. OSHA, therefore, has established a system of inspection priorities.

Imminent Danger

Imminent danger situations receive top priority. An imminent danger is any condition where there is reasonable certainty that a danger exists that can be expected to cause death or serious physical harm immediately or before the danger can be eliminated through normal enforcement procedures. If a compliance officer finds an imminent danger situation, he or she will ask the employer to voluntarily abate the hazard and remove endangered employees from exposure. Should the employer fail to do this, OSHA, through the regional solicitor, may apply to the Federal District Court for an injunction prohibiting further work as long as unsafe conditions exist.

Catastrophes and fatal accidents

Second priority goes to the investigation of fatalities and accidents resulting in a death or hospitalization of three or more employees. The employer must report such catastrophes to OSHA within 8 hours. OSHA investigates to determine the cause of these accidents and whether existing OSHA standards were violated.

Complaints and referrals

Third priority goes to formal employee complaints of unsafe or unhealthful working conditions and to referrals from any source about a workplace hazard. The Act gives each employee the right to request an OSHA inspection when the employee believes that he or she is in imminent danger from a hazard or when he or she thinks that there is a violation of a n OSHA standard that threatens physical harm. OSHA will maintain confidentiality if requested, inform the employee of any action it takes regarding the complaints, and, if requested, hold an informal review of any decision not to inspect.

Programmed inspections

Next in priority are programmed inspections that are aimed at specific high-hazard industries, workplaces, occupations, or health substances,

or other industries identified in OSHA's current inspection procedures. OSHA selects industries for inspection on the basis of factors such as the injury incidence rat, previous citation history, employee exposure toxic substances, or random selection. OSHA may also develop special emphasis programs that are local, regional, or national in scope, depending on the distribution of the workplace involved. OSHA normally will conduct comprehensive safety inspections in manufacturing in those establishments with lost-day injury rates at or above the Bureau of Labor Statistics' (BLS) national rate for manufacturing currently in use by OSHA. States

With their own occupational safety and health programs may use somewhat different systems to identify industries for different inspections.

FRONT LINE, INC.
Harassment Policy

At Front Line, Inc. we are committed to maintaining a working environment free of
harassment on the basis of race, color, religion, age, national origin, gender or disability status. Racial, sexual, and other such epithets violate the company's policy on equal employment opportunity.

Sexual Harassment Defined

The following conduct constitutes sexual harassment:

Unwelcome sexual advances:

Requests for sexual favors:

Other verbal or physical conduct of a sexual nature, such as graphic remarks about an individual's body, sexually degrading words referring to an individual offensive comments, offensive jokes, sexual innuendo, or displays of sexually suggestive objects or pictures, when the employee's submission to the conduct is an express or implied condition of the employment:

the employee's submission to or rejection of the conduct is used as the basis for employment decisions affecting the employee: or

the conduct is intended to or does interfere substantially with the employee's work performance or create an intimidating, hostile, or offensive working environment.

What to do if you believe that you are the victim of harassment

If you believe that you have been the victim of sexual or other harassment in violation of company policy, you should notify your manager who will arrange for a discreet investigation of your complaint.

When an investigation indicates that harassment has occurred, a manager will take appropriate corrective action, such as placing the harassing employee on unpaid leave or termination of employment. Employees who file complaints of harassment or cooperate in an investigation may be assured that no retaliatory conduct will be tolerated.

We are confident such matters can be resolved internally; however, you may also contact the following external entities: Massachusetts Commission Against Discrimination, located at One Ashburton Place, 6th Floor, Boston, Ma. 02108, telephone (617) 727-3990 or Dwight Street, Springfield, Ma. 01103, telephone (413) 739-2145; and the Equal Employment Opportunity Commission (EEOC), located at One Congress Street, Room 1001, Boston, Ma. 02114, telephone (617) 565-3200. For additional information regarding state or federal sexual harassment laws or procedures for filing a complaint with these entities, refer to the Equal Employment Opportunity notices posted on your office Bulletin.

Nancy Salter
President

58 Mellen Street, Hopedale, MA 01747

Voice (508) 634-6600 FAX (508) 634 3611

April 23, 2009

A new Massachusetts State Law Mandates that all companies with 14 or more employees adopt and communicate a written policy against sexual harassment.

See attached policy

I have received and read the company's harassment policy.

Name:_____

Date:_____

SAFETY RELATED DISCIPLINE

REVISED

OCCUPATIONAL SAFETY AND HEALTH

PURPOSE

This practice identifies key aspects of the Occupational Safety and Health (OS&H) program, and establishes uniform application of disciplinary action for safety violations.

SCOPE

This practice includes the following major sections:

- General Requirements
- Project Safety
- Project Manager Responsibilities and Actions
- Safety Violation Classification
- Examples of Safety Violations

GENERAL REQUIREMENTS

Records generated during the performance of any activity will go into the employee's personnel files.

Front Line managers, foreman, and workers alike are held to the same safety and health standards to work safely, and to prevent injuries and property damage.

Any employee who knowingly violates safety and health practices and requirements is reprimanded or disciplined, and may be terminated for serious offenses.

PROJECT SAFETY (G.C.)

Project safety coordinates accident prevention as it applies to all areas of the project safety and health program. Project safety keeps a constant check on the methods used by Front Line foreman and laborers to prevent safety violations, corrects and instructs employees concerning safety practices and rules, and exercises stop work authority as necessary.

Project safety witnessing a non-serious act or safety violation, will notify the appropriate Front Line project manager responsible for carrying out corrective action. Project safety witnessing a serious or imminent unsafe act or safety violation will:

- Immediately stop the activity
- Initiate corrective action if appropriate
- Notify the appropriate project manager for carrying out corrective action

Project safety may advise or recommend the type of reprimand or discipline to be applied, but never administer the discipline. If appropriate discipline is not forthcoming, the chain of command is followed until appropriate corrective measures and discipline result.. If satisfactory results are not achieved after working through the project manger, project safety will contact Front Line's safety officer for resolution or further instructions in how to handle the situation.

PROJECT MANAGER RESPONSIBILITIES AND ACTIONS

The Front Line manager will know, abide by, and support established safety and health practices. If there is a question of how a practice should be applied, the manager contacts project safety for resolution.

The manager ensures the subordinates are made aware of this practice, and the consequences for not adhering to it, through training (such as tool box meetings, or special task training).

The manager enforces the safety and health practices consistently and predictably as well.

INVESTIGATION PHASE

An initial investigation is performed at the time of discovery (that is, when an employee is observed violating a safety and health practice). This is normally documented in field notes and provided to the project manager. Depending on the seriousness of the incident, one of 3 actions will be take. 1.) Through a conversation, the employee's actions will be corrected 2.) A written warning will be in order 3.)The employee will be removed from the site.

ENFORCEMENTS

The disciplinary process includes; 1st written warning, 2nd written warning, termination from the company. This 3 step process may be taken in any order, depending on the severity of the situation.

1st WRITTEN WARNING

A 1ST written warning record should be kept in the employees personnel file, this documentation shall have the verbal communications with the employee resulting from a safety and health violation or infraction of on-site rules. This documentation will include at least the following:

- Date
- What the violation or infraction was
- Whom it involved
- Where the violation or infraction occurred
- Signature of the employee and the manager

The employee is made aware of this action.

2ND WRITTEN WARNING

A 2nd written warning record of employee disciplinary action is completed and placed in the employee' personnel file.
The Manager filing the record of disciplinary action discusses the reprimand with the employee and Nancy Salter, Pres..

TERMINATION

An employee may be terminated after 2 written warnings or for serious safety and health violations and imminent danger situations, upon discovery of the violation/situation.
The Manager terminating the employee discusses the termination the employee and Nancy Salter, Pres..

MANAGEMENT TOOLS FOR ENFORCING SAFETY REQUIREMENTS

- Maintain records of individual employees safety training in their personnel file
- Clearly inform employees of conditions that constitute safety infractions. Distribute that info in the monthly safety newsletter
- Consistently implement and enforce the safety program
- Use the same tools and techniques to motivate good safety performance as you use to motivate any other performance.
- Create a safety performance for safe work practices.
- Document critical events, training, near misses, and risk-taking behaviors.

SAFETY INCIDENTS AND ACCIDENT REVIEW POLICY

Front Line (FL) is committed to the safety of its employees and realizes that employees are the most valuable asset. FL is committed to providing a safe work environment, and accident prevention is a matter of primary concern. However, FL recognizes that there may be occasions when safety incidents or accidents will occur. Accordingly, the following policy has been established to insure consistent review across the board of any such occurrences.

APPLICABILITY
This policy applies to all employees who operate vehicles or equipment in the performance of their job duties.

DEFINITIONS
Preventable Accident: A preventable accident is one in which the driver failed to do everything that reasonably could have been

done to avoid the accident. Example: When a driver commits an error and/or fails to react reasonably to the errors of others.

Non-Preventable Accident: When a driver commits no errors and reacts reasonably to the errors of others.

EMPLOYEE RESPONSIBILITIES AT A TRAFFIC INCIDENT

Vehicle and equipment operators have these responsibilities after involvement in an incident:

- Protect the scene by whatever means is available to prevent additional incidents and injuries.
- No written or other forms of statements shall be given by employees except to representatives of the department or law enforcement officers.
- Do not comment on who or what caused the incident; do not admit that you caused the incident.
- Do not promise that damages will be paid for by Front Line.
- Call the appropriate law enforcement agency.
- Render all possible aid to the injured, law enforcement officers, and other authorized persons at the incident scene.
- Permit any competent person to use your first aid kit, fire extinguisher, etc.
- If needed, call an ambulance
- If able, get the other drivers info, including name, address, phone #, license plate #, make, model, color of the other vehicle, the other persons insurance co. name and policy #, take photos if possible.
- Contact your Manager/supervisor and safety officer.

EMPLOYEE AND MANAGER RESPONSIBILITY

After receiving notice that an employee incident has occurred, the manager will complete an investigation of the incident. Together, the manager and the employee will fill out the accident documentation and report the incident. This will be compliant with the applicable State accident report.

MANAGER AND SAFETY OFFICER RESPONSIBILITIES
After receiving notice that an employee incident has occurred, the safety officer will review the documents. If there is conflicting evidence regarding the incident, the safety officer will conduct a follow-up investigation which may include interviewing the manager and the employee to confirm and correct the documentation. The reports will be forwarded to the appropriate office for claim processing.

Silica

Background:

Long term exposure to airborne crystalline silica, can cause a variety of disabling (sometimes fatal) diseases, e.g. silicosis, lung cancer, chronic obstructive pulmonary disease (COPD), and kidney disease.

When the silica dust is inhaled deep into the lungs, microscopic particles of the silica can cause scar tissue to form in the lungs, which restrict the lungs ability to properly extract oxygen from the air. This damage is permanent, and sometimes the symptoms of the disease may not appear for many years.

The disease initially causes fatigue and shortness of breath. If exposure continues, it can lead to chest pains, heart problems, and respiratory failure.

Responsibilities of Management:

Frontline has a duty to protect all its workers from silica exposure during cutting, coring, chipping, jack hammering and grinding of concrete and asphalt. Studies have shown that work tasks

involving these operations can generate airborne levels of silica, in excess of safe levels.

Silica Dust Control:

The new OSHA regulations requires that employers are to select silica dust controls based on the following hierarchy:

1. Engineering controls
2. Work Practices
3. Personal Protective Equipment (PPE)

- The use of respirators alone, as a primary control is not acceptable when other methods are available and more practical

- Respirators will be used in conjunction with other controls such as wet cutting, grinding, and drilling to reduce worker exposure to silica

- Wet cutting, grinding, and drilling or the use of local exhaust ventilation (LEV) are the preferred engineering control measures

- Dry cutting, grinding, and drilling will be avoided unless additional respiratory protection and other controls are used