



AmTrust North America

Technology Insurance • Rochdale Insurance

Sample Loss Control Program



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November 15, 2006

Re: Accident Prevention Program

The following is important tool that can be used to **assist** you in the development of a company specific Accident Prevention Program. ***The material collected in this manual was collected and assembled from a wide variety of safety resources. This manual is not all-inclusive and should be used as a guide only. The standards contained in the manual are overviews and not in complete form. For more detail you should refer to the applicable OSHA, Manufacturer, or Industry Standards. For this manual to be effective, it should be modified by your company to address the site-specific safety concerns, task, and projects of the company.***

You can also access OSHA on the Internet at www.OSHA.gov. This site contains all regulations, standards, interpretations, as well as numerous other areas that your company can utilize. You can also go to our web site www.NARM.biz for additional information.

If you have any questions or would like to discuss any areas in more detail please feel free to contact me at anytime.

Sincerely,

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Vice President Loss Control
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(Your Company)

PURPOSE OF MANUAL

The purpose of this manual is to assist **(Your Company)** in the development of a company specific Accident Prevention Plan.

The material in this manual was collected and assembled from a wide variety of safety resources. The recommendations, standards and/or safe work practices are not necessarily all inclusive. This manual should be used as a guide only. The standards contained herein are overviews and not in their complete form. For more detailed information or clarification **(Your Company)** should refer to the applicable **OSHA**, Manufacturer or Industry Standards and recommendations.

For this manual to be effective, it should be modified by **(Your Company)** to address the site specific safety concerns, tasks and projects of the company.

NOTICE

This manual is designed for all workers providing services for **(Your Company)**.

The term **(Your Company)** refers to the company in control of the working conditions of the **"employee"**.

The term **"Supervisor"** includes any person directing the actions of the **"employee"** while providing services for **(Your Company)**.

(Your Company)

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ACCIDENT PREVENTION PLAN

Safety and Health Policy Statement

The safety and health policy of **(Your Company)** is based on the firm conviction that accidents which cause personal injury or loss of assets can be prevented. No area of company business is of greater importance than the safety and health of the men and women at this company.

(Your Company) will strive to provide and maintain a safe and healthy working environment and establish rules, procedures and training pursuant to this goal.

(Your Company) encourages individual responsibility and supports a climate of safety awareness and enforcement of the safety program consistently and fairly. It is the responsibility of each employee to comply with safety rules and to work in such a manner as to prevent injuries to themselves and others.

The goal of **(Your Company)** is to perform the highest quality service as efficiently as possible while maintaining the safety and health of employees to the highest possible standard.

(The President)

Management/Employee Leadership

The success of **(Your Company)** safety program is dependent on managers and employees accepting their assigned safety responsibilities. The acceptance of these responsibilities will be the first step in the development of a proactive safety culture. **(Your Company)** will hold company personnel accountable to the following safety responsibilities.

(The President)

(The President) has the responsibility to outline basic safety policy and assign specific safety responsibility throughout the Organization. He will give full support to these policies and procedures and hold employees accountable for completion of outlines activities.

(The President) responsibilities:

1. Establish and support a comprehensive Accident Prevention Plan.
2. With other members of his staff, issue a Safety Policy Statement.
3. With input of employees, establish company goals and objectives.
4. Regularly audit completion and effectiveness of assigned responsibilities.
5. Ensure the following safety program components are in place and implemented per the guidelines of this manual.
 - * Management Commitment and Assignment of Responsibility
 - * Analysis
 - * Recordkeeping
 - * Education & Training
 - * Audit/inspection
 - * Incident Investigation
 - * Periodic Review & Revision
6. Insure safety standards and operating procedures are understood and implemented.
7. Follow safety rules (set example).

Accident Prevention Plan

8. Solicit employee input on **Supervisors** and Accident Prevention Plan effectiveness.
9. Continually reinforce the philosophy that safety is each and every employees responsibility.
10. Support and reinforce rules and procedures with **Supervisors**, employees, visitors, vendors and contractors.

Supervisor

The **Supervisor** is the critical point of contact between the company and individual employee. The **Supervisor** should reinforce the philosophy that compliance and participation in **(Your Company)'s** safety program is an employee responsibility. He must continually support and as deficiencies are noted train employees on the various rules, procedures, safe work practices and federal, state and local regulations.

The **Supervisors** will fulfil the following:

1. Assist in the development of policies and procedures.
2. Lead by example.
3. Solicit employee input with regard to all Accident Prevention Plan activities.
4. Consistently reinforce rules and procedures with employees, visitors, vendors and contractors.
5. Understand and implement assigned responsibility as outlined in each section of this manual.
 - * Management Commitment and Assignment of Responsibility
 - * Analysis
 - * Recordkeeping
 - * Education & Training
 - * Audit/inspection
 - * Incident Investigation
 - * Periodic Review & Revision
6. Facilitate employee participation and completion of Accident Prevention Plan activities.
7. Co-ordinate work activities to comply with Job Safety Analysis.

Accident Prevention Plan

8. Make available needed personal protective equipment and explain the why, when and where of its use.

Employees

Employees have a safety responsibility to themselves, their families, fellow workers, community and **(Your Company)**. While accepting this responsibility in the performance of their duties, they shall be expected to observe safety rules and regulations, as well as the instructions relating to safe performance. Employees will be expected to actively participate and take responsibility for the activities outlined in this manual. A safe and sound operation is reached only when employees are conscious of and keenly alert to their safety responsibilities.

Employees shall fulfil the following:

1. Know, understand and comply with the safety policy, rules, procedures and safe work practices.
2. Assist in the development and review of rules and procedures.
3. Attend, participate and periodically lead monthly Safety Meetings.
4. Maintain good housekeeping in their area.
5. Participate in Safety Inspections and Audits.
6. Assist in the development of Job Safety Analysis.
7. Attend and participate in required safety training activities.
8. Stop, correct and report unsafe conditions.
9. Identify safety problems and offer ideas for corrective action.
10. Know the chemicals used in their area and comply with the related Material Safety Data Sheets.
11. Report all accidents, injuries and near-miss incidents to their immediate **Supervisors**. Know how to recognize a near-miss and participate in accident investigation.
12. Properly use and maintain required personal protective equipment.
13. Observe and correct unsafe acts of visitors, contractors, vendors and fellow employees.
14. **The responsibility for safety on the job**

Analysis Component

I. Analysis Component

(The President) and the **Supervisors** are responsible for evaluating accident/incident reports, whether they be first aid, **OSHA** recordable, lost time or a near-miss. These reports should be analyzed for hazard exposures and unsafe behavioral trends that may exist.

Monthly, **(The President)** and the **Supervisors** should review the data generated from the safety inspections. At this time, substandard conditions and unsafe work practices will be reviewed to verify corrective action has been implemented. Safe Work Practices will be continually reviewed and revised to meet the ever changing needs in the work place.

Continuous review and evaluation is conducted by **(The President)** and the **Supervisors** of the Safety Prevention Plan and related operational activities. Employee input will be solicited for necessary changes. An analysis report, written annually, is filed in the Accident Prevention Plan Manual.

Accident Prevention Plan

Recordkeeping

The **(Bookkeeper/Secretary)** is responsible for maintaining documentation of training, accident reports, **OSHA** logs, hazard reports, incident reports and other information incidental to the implementation of this Accident Prevention Plan. **(The President)** is responsible to oversee recordkeeping requirements.

Blank forms for safety related training, incidents reports and any other activity that requires documentation is available from the **(Bookkeeper/Secretary)**.

I. Injury Records

An injury log is maintained in the main office. Injuries should be recorded on an **OSHA** 200 form or equivalent within 24 hours of being reported. The summary portion of the **OSHA** 200 form will be posted from February 1 to March 1 each year in a place where employees notices are normally placed.

A SUPERVISOR'S REPORT OF INJURY, A CLAIMANT STATEMENT and A WITNESS STATEMENT (if any) will be filed for each recordable injury. These reports will be completed before the end of the work day by the **Supervisors** and will be supplied to **(Your Company)** no later than the next workday. **(The President)** will be responsible for the distribution of these reports.

Supervisors and employees are responsible to report, investigate and implement corrective action. The reports should be distributed by **(The President)** to other crews at **(Your Company)** job sites.

(The President) will review incident reports for completeness and to verify corrective action has been implemented.

Injury records will be retained for a period of 5 calendar years.

II. Inspection Reports

Inspection reports should be filed in the **Supervisors** safety manual as they occur. The documentation should include:

1. Date of inspection.
2. Name of inspector(s).
3. Discrepancies found.
4. Person(s) responsible for corrections.

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5. Estimated date of correction.

These reports should be maintained for a minimum of 12 months or until discrepancies have been corrected, whichever is longer. **(The President)** is responsible to see the **Supervisor** completes the specified number of inspections.

III. Safety Meetings

Documentation will include:

1. Date of safety meeting.
2. Name of trainer/presenter.
3. Outline of subject(s) covered.
4. Signed attendance roster.

A Safety Meeting Form will be completed for each Safety Meeting held and filed in the corresponding section of the Safety Manual.

IV. Training

Documentation will include:

1. Date of training.
2. Name of trainer/presenter.
3. Outline of subject(s) covered.
4. Signed attendance roster.

Training required by **OSHA** will be conducted on a timely basis and records will be maintained in accordance with **OSHA** guidelines.

Specialized training such as confined space or respiratory protection will be provided and documented before employees will be permitted to perform tasks involving these exposures.

A copy of completed Job Safety Analysis will be filed in the corresponding section of the Safety Manual.

Task Safety Observation forms should be filed on a weekly basis in the Safety Manual.

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The Safety Contact forms should be filed on a monthly basis in the Safety Manual.

New employee orientation: **(The President)** or (designee) is responsible for the completion and documentation of new employee orientation.

Training shall be documented and filed for a period of 24 months as required by law or directives.

V. Incident Investigation Reports

Accidents and near-miss incidents at this company resulting in injury or illness to a person, or property damage of any magnitude, or the potential of either will be investigated and documented.

Incident investigation reports should be completed, with attached corrective actions, and filed and retained for a period of 24 months or as required by law.

Safety Education & Training

I. Formal Training

It is the policy of **(Your Company)** that employees receive training in the various **OSHA** standards, regulations and safe work practices that apply to their assigned tasks. The **Supervisor** has the primary responsibility to complete this training.

(The President) should periodically audit training effectiveness and verify the proper documentation has been completed.

Employee training should be reviewed and updated a minimum of once per year unless incidents or observations indicate immediate attention is needed.

(For more details, refer to section titles "Training").

II. New Employee Orientation

(The President) will support and facilitate the development of the new employee orientation program. It is the responsibility of the **Supervisor** to provide the appropriate training and hazard information to the new employee. If a task(s) is considered hazardous this training should be completed before the employee is allowed to start work. This orientation should include as a minimum, basic safety requirements, regulations, guidelines and a general orientation of the work place.

(For more details, refer to the section titled "New Employee Orientation").

III. Safety Meetings

Monthly, the **Supervisors** should schedule and facilitate a crew safety meeting. This meeting should be conducted by the employees. The **Supervisor's** role is to help organize the subject matter and assist employees with the presentation material.

Employees are expected to attend the scheduled safety meetings, participate, identify problem areas and offer suggestions for corrective action.

(The President) should periodically attend scheduled safety meetings to get feedback and audit meeting effectiveness.

Tailgate safety meetings should be conducted before each work day. The **Supervisor** or assigned employee will be responsible to conduct these meetings. Periodically, **(The President)** should attend these meetings to audit contents and effectiveness.

Accident Prevention Plan

(For more details, refer to the section titled "Safety Meetings").

IV. Safety Contacts

The Safety Contact is one of the most positive, proactive safety tools available when performed properly. Its main purpose is to increase the employee's safety awareness while performing different jobs and tasks. This is accomplished through a brief weekly discussion by the **Supervisor**, with each employee, referencing a particular safety topic. An example of this would be a simple reminder that safety glasses need to be worn when operating a circular saw.

(For more detail, refer to section titled "Training")

Inspections & Audits

I. Inspections

(Your Company) is dedicated to providing a safe workplace, free of recognized hazards. Safety inspections are a key component of the Accident Prevention Plan. The identification of hazards is primarily dependent on the hazard awareness and responsible participation of employees. Employees are expected to inspect the equipment and job site for any unsafe or substandard conditions. When an unsafe condition is identified, the employee is expected to repair, tag, and/or report the item to their **Supervisor**.

Monthly, or as required by law, the **Supervisor** and one or more employees should conduct a formal job site inspection. These inspections will be documented and returned to **(The President)** upon completion. Identified hazards will be tagged, barricaded or corrected in a timely manner.

(The President) should periodically review this list to verify corrective action has been completed. He will periodically participate in scheduled job site inspections.

(For more details, refer to section titled "Inspections & Audits")

II. Audits

(The President) will continuously audit the inspection and other elements of the Accident Prevention Plan. Such as: recordkeeping, new employee orientation, training requirements, job safety analysis, safety meetings, incident reporting and investigation and the Hazard Communication Program.

As part of the audit process, **(The President)** will attend and participate in various Accident Prevention Plan activities.

Incident Reporting, Investigation & Analysis

It is the policy of **(Your Company)** that incidents be promptly reported. The depth of the review or investigation will be determined by the severity or potential severity and probability of reoccurrence. this incident investigation program will provide an opportunity for **(Your Company)** to evaluate and correct deficiencies found within the Accident Prevention Plan.

The FIRST REPORT OF INJURY report should be completed by the **Supervisor** ,no later than the end of the day in which the incident occurred. This report should be forwarded to **(The President)** or designee for review and distribution.

Investigations should be conducted as soon as possible but no later than 24 hours after the incident has occurred.

Employees and **Supervisors** will be responsible for correction of deficiencies identified during the incident investigations. **(The President)** will verify corrective action has been implemented.

Periodically **(The President)** with his staff will review and analyze incident trends and develop a plan of corrective action.

(For more details, refer to section titled "Incident Reporting & Investigation")

Accident Prevention Plan

Periodic Review & Revision

(The President) and the **Supervisors** will conduct an overall review and evaluation of the entire Accident Prevention Plan. The reviews will be completed on an annual basis. The areas to be reviewed are as follows:

1. All existing safety program documentation.
 - * Incident investigation reports.
 - * Inspection results.
 - * Inspection records.
 - * Training records and related documents.
 - * Task Safety Observations.
 - * Safety Contact reports.
 - * Job Safety Analysis.
 - * Safety meeting minutes.
 - * Injury and near-miss reports and corrective actions.
 - * Program review reports.
 - * Safety checklist and permits.
 - * Specific training topics and needs.
2. New operations and/or new hazard exposure.
 - * New equipment and work sites.
 - * New employees.
 - * Environmental conditions.
 - * New related standards or training.
3. Accident Prevention Plan (proper implementation and effectiveness).
4. Any other related safety and health matters.

Accident Prevention Plan

A formal report will be posted to inform employees about any changes or revisions which have been made to the Accident Prevention Plan.

TRAINING

I. Purpose

The main purpose of employee training is to verify the employees knowledge and skill on the various jobs and tasks they are expected to perform. These activities promote awareness, a vital component to the elimination of accidents and injury. The training process will outline and clarify the basic skill requirements to perform the job in the safest possible manner.

II. Responsibilities

It is primarily the **Supervisor's** responsibility to facilitate and assist the employees with the outlined training requirements. This training may be hands on, verbal or written material provided to the employee.

It is the responsibility of the employee to inform the **Supervisor** of skill or task deficiencies.

The **Supervisor** should periodically follow up employee training with the use of the Task Safety Observation Form, to verify understanding and reinforce the importance of compliance.

(The President)'s role is to outline the company's training needs. **(The President)** should assist the **Supervisor** in acquiring the needed training materials and information. **(The President)** will periodically evaluate the effectiveness of the training program. Annually, management will evaluate the program for any additional training that may be required.

(For new employees, refer to section titled "New Employee Orientation")

III. Training Guidelines

- * General Requirements.
- * Housekeeping & Sanitation.
- * Services & First Aid.
- * Protective Equipment.
- * Fire Suppression & Prevention.
- * Signs & Placards.
- * Power & Hand Tools (if used).

Training

- * Electrical Standards.
- * Equipment Guarding.
- * Stairways & Ladders (if used).
- * Hazard Communication.
- * Accident Reporting Procedures.
- * Back Injury Prevention.
- * Drug abuse Policy.
- * Lockout/Tagout.
- * Driver Safety.
- * All Job Related Safe Work Practices.

This list by no means is all inclusive of every type of training that may be required on each job.

At first glance, compliance with the **OSHA** standards and training requirements appear to be overwhelming. But most of the required training and standards are simply common sense with the exception of certain types of specialized training (confined space, respiratory protection, etc.). A simple checklist of do's and don'ts and procedure guides included in equipment manuals will provide most of the needed information. The best resource of all is the knowledge and experience of the employees and **Supervisors**.

Included in this section is an outline of the most common standards used in this industry.

IV. Documentation

- A. Documentation is needed whether the training is completed during a safety meeting or while on the job.
- B. If training is completed during a safety meeting briefly outline the subject matter and have all persons in attendance sign meeting form.

Training

- C. If training occurs while on the job, fill out the appropriate form with a description of the subject matter and signature of the employee(s).
- D. Training should be documented. This documentation will follow the guidelines as set forth in the recordkeeping portion of this manual.

V. Safety Contacts

- A. Purpose.

The safety contact is a planned safety tip conducted mainly by the **Supervisor** with the employees he/she supervises. The safety contact is a brief, direct, person to person communication between the **Supervisor** and employee. As most of us know injuries typically occur not due to lack of knowledge but lack of awareness. The safety contact is designed to do just that, increase employee awareness while performing their various jobs and tasks. The contact topics can be selected from a number of sources:

- * Accident Experience.
- * Observed Behaviors.
- * Task Safety Observations.
- * Near-Miss Incidents.
- * Inspections.
- * New Jobs or Equipment.
- * Seasonal Changes.
- * Safety Meeting Discussions.
- * Job Safety Analysis.
- * Reinforce Training Topics.
- * Particularly Hazardous Jobs.
- * Unsafe Conditions or Work Practices Identified with Other Crews.

Training

B. Responsibilities.

1. **Supervisor**

Weekly, each **Supervisor** should conduct a minimum of one safety contact, individually, with each employee he supervises.

2. **(The President)**

Monthly, **(The President)** should review the Safety Contacts for content and completeness.

C. Guidelines

1. One on one.
2. Positive reinforcements.
3. Brief and to the point.
4. Relevant to a specific job, task or condition.
5. Minimum of one per employee per week.
6. More frequent with new employees or employees with frequent accident history.
7. Pick a time and place free from interruptions and distractions.
8. Record safety contact topics.

The safety contact, when done properly, is one of the most positive, proactive activities we have to impact the safety attitude and culture within the company. It simply shows concern, creates awareness with recognized hazards, develops a better line of communication and reinforces safe work practices and training.

Good communication has many other benefits to the company besides heightened safety awareness. Improved morale, increased efficiency, improved quality, lower absenteeism and better care of company equipment and customers. All these things add up to lower operating costs, which allows the company to be more competitive and offer a greater opportunity for expansion and longevity.

Remember: The relationship or attitude between employees and management will have more impact on the success or failure of the safety program and possibly the company than all other factors combined.

Training

Insert file d:\dat\forms\form0047.xls here.

COMPANY _____

Initial Observation _ Follow-Up Observation _

TASK SAFETY OBSERVATION

TASK REVIEW

Description of Task: _____

List job steps and precautions: _____

List required Personal Protective Equipment: _____

OBSERVATIONS

- Physical Safety Controls Not in Place or Unsafe Conditions Observed:
- | | |
|--|--|
| <input type="checkbox"/> Inadequate guards or barriers. | <input type="checkbox"/> Inadequate or improper personal protective equipment. |
| <input type="checkbox"/> Defective tools, equipment, or materials. | <input type="checkbox"/> Exposure to ,rough/sharp objects, |
| <input type="checkbox"/> Exposure to moving or rotating parts. | <input type="checkbox"/> Noise exposure. |
| <input type="checkbox"/> Congestion in aisles or walkways. | <input type="checkbox"/> Chemical exposure. |
| <input type="checkbox"/> Exposure to hot surfaces. | <input type="checkbox"/> Inadequate lighting. |

Please describe checked items: _____

Training

Safe Behavior Observed:

- | | |
|---|--|
| <input type="checkbox"/> PPE-proper wearing. | <input type="checkbox"/> Using proper, tools, equipment. |
| <input type="checkbox"/> Proper transport techniques. | <input type="checkbox"/> Proper body posturing. |
| <input type="checkbox"/> Following established procedure. | <input type="checkbox"/> Good housekeeping. |
- Other _____
-

Unsafe Behavior Observed:

- | | |
|---|--|
| <input type="checkbox"/> Improper lifting techniques. | <input type="checkbox"/> Poor housekeeping. |
| <input type="checkbox"/> Using defective equipment. | <input type="checkbox"/> Improper position for task. |
| <input type="checkbox"/> Working at improper speed. | <input type="checkbox"/> Improper disposal of waste. |
| <input type="checkbox"/> Service equipment in operation. | <input type="checkbox"/> Improper hand placement. |
| <input type="checkbox"/> Not using PPE. | <input type="checkbox"/> Removing safety devices. |
| <input type="checkbox"/> Not following established procedure. | |

Please Describe Checked Items: _____

Other _____

Training Roster

Name	Date

Task Auditor _____ **Date** _____

NEW EMPLOYEE ORIENTATION

I. Policy

It is the policy of this company that new employees receive orientation and instruction on the general safety hazard awareness program. In addition, employees will receive any specialized training required to safely and properly perform his/her job duties. It is the employees responsibility not to perform any job with which they are not familiar. **(Your Company)** will expect employees to inform supervision of their job knowledge deficiencies. No one knows those deficiencies better than the employee.

II. Responsibility

A. (The President)

(The President) will help develop and give assistance to the new employee orientation program. He will be responsible to periodically audit the effectiveness and completeness of this program.

B. Supervisor

The **Supervisor** will be the person primarily responsible for the completion of the new employee's orientation. After the initial orientation, the **Supervisor** should continually solicit employee feed back on specific training needs and deficiencies. The **Supervisor** should also fulfil the following:

1. Keep a record of employee attendance and training.
2. Personally be familiar with the content of the required training.
3. Reinforce the concepts and practices of the training in day to day operations.
4. Perform Task Safety Observations on new employees at least once per week for a month or longer if needed.

C. Employee

It is the responsibility of the employee to make the **Supervisor** aware of the jobs and tasks in which they are unfamiliar or not comfortable to perform. No one knows the employees skill level better than the employee.

New Employee Orientation

III. Documentation

With today's legal environment, training should be documented whenever possible and should include the following:

- * Name of trainer.
- * Subject.
- * Brief outline of material.
- * Employees name and signature.
- * Date.

IV. Purpose and Guidelines

When new employees come to work they immediately begin to form impressions about the company, job, supervision and fellow employees. This impression will be formed by the things said and sometimes by the things not said. It is important that during this initial period the employee clearly understand the safety policies of the company and his/her role and expected participation.

Like anyone in unfamiliar surroundings, new employees are not likely to fully grasp all of the job requirements and hazards they face. For many, they lack experience and confidence and may be hesitant to ask for help. For others, it's simply the fact of being in unfamiliar surroundings. Much of the success of the safety effort will be dependent on the employee communicating "what they know and don't know". It is imperative the employee understand that it is "OK" to say they do not understand a particular job or task. The alternative is to experience poor job performance or worse yet, personal injury.

New employees will try to make a good impression. Many will take risks and be hesitant to admit job knowledge deficiencies. Remember, over 50% of work place injuries occur to employees who have been employed less than 12 months. It's not surprising then that 70% of work place fatalities involve new employees in the same 12 month period.

Many people often ask, "Where do I start?" The answer is really pretty simple.

1. No mater how fast you talk, you can not cover very rule in one day and you should not try.
2. Ask the employee a series of questions to determine their job knowledge and experience. Remember, you have to ask. New employees may be hesitant to admit job knowledge deficiencies.
3. Employees should be trained in a General Hazards Safety Orientation.

New Employee Orientation

4. After being assigned to a crew, the **Supervisor** should begin to train the employee in job specific standards and work practices.

The new employee General Hazards Safety Orientation is designed to provide basic safety knowledge. It will also be a time to reinforce or review information he/she may know or in some cases not know. Safety awareness and building a foundation for the proper safety attitude is the primary function of this General Hazards Orientation. Remember, the new employee's attitude will be greatly impacted (positively or negatively) by this initial orientation.

General Hazards Safety Orientation

Listed below is an example of a general training orientation outline.

General Introduction To The Company

- * Attitude.
- * Employee safety responsibility: It is the employees responsibility not to perform any job that they are not competent, familiar or comfortable performing.

Emergency Reporting Procedures

- * How to report an accident/injury:

Accidents, injuries & near-miss incidents must be reported the **Supervisor**. THE SUPERVISOR'S REPORT OF INJURY and supplemental investigation reports to be completed by end of work day.

Report to (Your Company) by next morning.

- * Emergency numbers and location of nearest medical facility.
- * First aid kit in every truck or job trailer.
- * Evacuation.

Safety Signs & Tags

- * No smoking.
- * Danger or caution.
- * Speed limit signs.
- * Defective equipment tags.
- * Lockout / Tagout.
- * High voltage.

Personnel Protective Equipment

- * Hard hats.

New Employee Orientation

- * Steel toed shoes.
- * Safety glasses, goggles & face shield.
- * Hearing protection.
- * Respiratory protection.
- * Proper dress.
 - Hair length.
 - Jewelry.
 - Clothes.

General Lifting Requirements

- * Back injuries are the most common disabling injuries, but with proper training and the use of common sense most of these injuries can be prevented.
- * Preparing to lift:
 - Check the load. If it looks too heavy, ask for help.
 - If the object has rough or sharp edges, wear suitable gloves.
- * Making the lift:
 - Lift with your legs.
 - Keep the load as close to your body as possible. Don't twist or turn, move your feet instead.
 - When lowering the load, reverse the process.
- * Use mechanical aids when possible. Reduce the amount of physical lifting.

Hand & Power Tools

- * Inspection before each use.
- * Selection of the right tool.
- * Maintenance & Storage.

New Employee Orientation

- * Using tool for its intended purpose.
- * Stop and unplug equipment to make adjustments.

Guards

- * Importance of guards.
- * Procedure to follow.
- * All guards in place before operating equipment.

Electrical Equipment

- * Grounding.
- * Inspection.
- * Danger signals.
- * Electrical tool & extension cords.

Fire Safety & Prevention

- * Fire extinguishers (each piece of heavy equipment, truck & job site).
- * Housekeeping.
- * Storage of flammable liquids.
- * Smoking.

Heavy Equipment (Dozers, Back-hoes, Maintainers, etc.).

- * Only experienced & trained operators.
- * Riders not allowed.
- * Safe speed on poor roads or slopes.
- * Seat belts.

New Employee Orientation

- * Backing up:
 - Check for personnel & clearance.
 - Operators should walk around equipment.
 - Be aware of other employees and blind spots.
 - Back up alarms, mirrors & spotters.
- * Inspect equipment daily (informal), weekly (formal).
- * Make sure all safety devices are working.
- * Inspect wire ropes: replace frayed, broken or ,kinked wire rope.
- * Never fuel running equipment.
- * Never get on or off moving equipment.
- * Don't jump, use 3 point contact with the machine when getting on or off. (Two feet, one hand or two hands, one foot).
- * Keep deck and equipment clean.

Company Vehicles (Driving safety)

- * The driver is responsible for a visual vehicle inspection before use.
- * Do not operate if the vehicle has defective tires, brakes or steering, etc.
- * Observe speed limits at all times.
- * Seat belts are to be worn by all occupants.
- * Keep truck beds and cabs clean.
- * Report all mechanical problems immediately.
- * Equip all materials that overhang the vehicle with red flags.
- * Make sure all tools and equipment are secured.

New Employee Orientation

- * Absolutely no alcoholic beverages or drug use will be tolerated while operating or riding in any company vehicle at any time. This includes after work. (No operating any company vehicle after you have had alcoholic beverages or drug use will be tolerated either).

Ladders

- * Inspection before use.
- * Right ladder for job (weight, load, height).
- * Never use a defective ladder. Immediately tag and take out of service.
- * Always use both hands when climbing ladder. Hoist needed tools up by rope or in pouch.
- * Avoid reaching too far to the side.
- * Do not stand on the top three rungs.

Rigging Safety, Loads & Hand Signals (chains, boomers & slings)

- * Inspect chains for wear and stress.
- * Never use fatigued chains, boomers or slings.
- * Never lift load by point of the hook.
- * Follow manufacturer's safe load limits.
- * Give adequate clearance to overhead power lines or obstructions.
- * Never leave the load suspended.
- * No employee shall work or walk under suspended load.
- * Never stand under back-hoe or loader buckets.
- * Only trained individuals in the proper use of hand signals will be allowed to direct load.
- * Beware of frayed wires and pinch points.
- * Anticipate swing and roll of object to be lifted.
- * Use tag line or hook to guide load.
- * Never place yourself between material, equipment or other objects and the load.

New Employee Orientation

Lockout / Tagout

- * Before an employee repairs or maintains any piece of equipment, electrical, hydraulic or pneumatic, it must first be Locked Out and Tagged.
- * Lockout / Tagout means zero energy
- * Locking is the only sure way to prevent accidental start-up or unplanned release of stored energy.
- * If you are unsure, **Stop and Ask**.
- * Your **Supervisor** will direct and train you in the specifics of the Lockout / Tagout program.

Confined Space

- * No untrained employee will be allowed to enter a confined space.
- * Never trust your senses. They cannot detect odorless gases or lack of oxygen.
- * Some examples of a confined space are: Storage tanks, process vessels, sewers, pump rooms, open top tanks, trenches or pits over four feet deep.
- * It may also be a confined space if it meets the following:
 - If there is a lack of or little natural ventilation.
 - If the area has limited or difficult means for entry or exit.
 - If the area is not designated for continuous human habitation.
- * Some of the dangers of confined space include:
 - Lack of oxygen.
 - Presence of toxic vapors or gases.
 - Possibility of flammable or explosive atmospheres.
 - Danger of equipment activation.

Hazard Communication

- * Right-to-know refers to your "right to know" what hazardous chemicals and materials you may be exposed to on the job site.

New Employee Orientation

- * Every hazardous substance that has been identified has a Material Safety Data Sheet (**MSDS**) which tells you what the substance is, what dangers you may encounter and how to properly protect yourself from the substance.
- * Some items that would not ordinarily be hazardous become hazardous when heated or mixed with other chemicals.
- * Employees will be trained in the hazards of each chemical or substance to which they may be exposed.
- * It is the employee's responsibility not to handle any chemical or substance of which they are not familiar.

General Orientation Training Certificate

As the undersigned, I am certifying that I have received a General Orientation of the anticipated basic operation I will be exposed to while working for (Your Company) at the location stated below.

Date: _____

Employee Name: _____

Employee Signature: _____

Supervisor Name: _____

Supervisor Signature: _____

Location: _____

INSPECTIONS & AUDITS

I. Policy

(Your Company) is dedicated to providing a safe workplace, free of recognized hazards. Safety inspections and audits are a key component of this Accident Prevention Plan. The identification of hazards is primarily dependent on the hazard awareness and responsible participation of employees. Employees are expected to inspect the equipment and the job site for any unsafe or substandard conditions. They will also be expected to repair, tag and/or report deficiencies to the **Supervisor**.

To accomplish this objective, the company had developed a planned structured process for the maintenance of safe work conditions.

II. Purpose

The purpose of formal and informal inspections is to compare present conditions to specified standards and to train employees to recognize substandard conditions as they are encountered during the day to day operation. Ideally, unsafe conditions will be identified and corrected as they occur. The formal inspections should be a double check to verify nothing has been over looked. Much of the success will be dependent on the employees knowledge, experience and level of participation. The following is an outlined explanation of the inspection and audit process:

III. Types of Safety Inspections

A. Informal

Informal inspections are the type every employee, regardless of job, should continually make.

1. Employee

- a. Employees should use their knowledge and experience of work practices and equipment to identify deficiencies.
- b. At the start of each job, a visual inspection of tools, process equipment, vehicles and the general work area should be performed.
- c. Informal inspections are a regular part of every employee's job and individual responsibility.

Inspection & Audits

2. Supervisor

- a. The **Supervisors** should be constantly alert to unsafe acts and conditions.
- b. The **Supervisors** should continually check equipment, machinery, tools, vehicles and general conditions as a routine procedure.

B. Formal inspection

1. Employee

- a. Weekly, or as close to weekly as possible, employees that operate equipment or drive company vehicles should conduct a documented formal inspection.
- b. Customized safety check sheets should be used as a guide and filed in the safety manual. Items found to be substandard should be repaired, tagged ,and/or taken out of service. Deficiencies should be recorded by the **Supervisor** in the safety work order log.

- c. Monthly, one or more employees will be responsible to conduct a walk around inspection. this inspection should include:

- * Job site housekeeping.
- * Vehicles (trucks, ,dozers, ,back-hoes, etc.).
- * Equipment (ladders, scaffold, pumps, electrical cords, shop tools, etc.).

2. Supervisor

- a. Weekly, the **Supervisors** should participate in a minimum of one employee vehicle and equipment inspection. The purpose is to verify effectiveness and to demonstrate the importance of these types of inspections.
- b. Monthly, the **Supervisors** should participate in the employees formal inspections. The **Supervisor** should assist the employees with information on the applicable standards and regulations. Although it is primarily the employees responsibility, the **Supervisor** should co-ordinate the time and follow up corrective action. This is also the time for the **Supervisor** to verify the employees knowledge and understanding of the various standards and requirements.

Inspection & Audits

C. Reporting Unsafe/Substandard Conditions.

Upon recognition of a substandard condition, immediate action should be taken to eliminate the hazard. The reporting of unsafe conditions is largely dependent on the responsible participation of each employee. Every unsafe condition not reported, creates the potential of personal injury to other employees or personnel. If immediate correction of the unsafe condition is not possible, other action should be initiated in the following order:

1. Immediate corrective action.

If possible the substandard condition should be immediately corrected by the person making the observation.

2. Interim action.

If a hazard cannot be eliminated, the person or persons recognizing the hazard should take interim action ,(i.e. tagging, barricading, etc.).

3. Reporting.

After interim action is taken, the hazard should be reported to the job **Supervisor** for correction.

D. Benefits.

1. Provides continuity with the various crews.

2. Provides training in applicable standards.

3. Increases hazard recognition and awareness.

4. Allows employees input and participation in the Accident Prevention Plan.

5. Opportunity for management to demonstrate commitment.

6. Reviews the effectiveness of the informal and routine surveillance inspections process.

IV. Safety Inspection Checklist

A. Guidelines.

1. Checklists should be customized to identify various pieces of equipment and job site requirements.

Inspection & Audits

2. The checklists should be filled out carefully and completely.
3. The original inspection form should be returned to **(The President)** and filed in the safety manual.
4. The results of the inspection should be reviewed during the monthly safety meetings.
5. Periodically, the checklist should be reviewed for accuracy and effectiveness.
6. A combination of **(The President), Supervisor** and employees should be involved in the checklist review.

V. Safety Work Order Log

To ensure substandard conditions are corrected and to facilitate tracking, each area should maintain a safety work order log.

(The President) should be responsible for the upkeep of the log and verify the timely correction of identified deficiencies and substandard conditions. The safety work order log should include the following:

- * Description of the hazardous condition.
- * Priority.
- * Date.
- * Interim action taken.
- * Schedules completion.
- * Person responsible for corrective action.

This log should be posted and reviewed at the scheduled safety meetings. Status of deficiencies completed and/or outstanding should be communicated to employees.

NOTE: To the employee, the substandard condition they report carries the highest priority.

COMMUNICATE

Inspection & Audits

VI. Audits

(The President) will continuously audit the inspection process and other elements of the Accident Prevention Plan such as; recordkeeping, new employee orientation, training requirements, job safety analysis, safety meetings, incident reporting and investigation and the Hazard Communication Program.

As part of the audit process, **(The President)** will attend and participate in various Accident Prevention Plan activities.

GENERAL SAFETY CHECKLIST

Date: _____

Company Name: _____

Job Address: _____

Supervisor: _____

Safety Field Rep.: _____

Paper Work

Are the following required posters conspicuously posted and communicated to the employees?

Code	No	Yes	
A001	-	-	EEOC
A002	-	-	Job Safety and Health (OSHA poster).
A003	-	-	Minimum Wage Law.
A004	-	-	Emergency Phone Numbers.
A005	-	-	OSHA 200 log posted in February.
A006	-	-	
A007	-	-	
A008	-	-	
A009	-	-	
A010	-	-	

Is the following required documentation readily accessible and communicated with employees?

B001	-	-	Copies of OSHA construction and applicable general industry standards
B002	-	-	OSHA 200 log.
B003	-	-	Copy of Assured Grounding Conductor Program if in use).
B004	-	-	Maintenance records for equipment (cranes, material hoists, etc.
B005	-	-	Proof of safety and equipment training.
B006	-	-	Written respiratory protection program (if respirators are in use).
B007	-	-	Material Safety Data Sheets (MSDS).
B008	-	-	Safety Meeting scheduled and posted.
B009	-	-	Written Hazardous Communication Program.
B010	-	-	Employee medical records when required for hazardous chemical and noise exposure

Inspection & Audits

GENERAL SAFETY CHECKLIST

House keeping Sanitation & Environment

Code	No	Yes	
C001	-	-	General nearness of work area.
C002	-	-	Regular disposal of debris and waste.
C003	-	-	Passageways and walkways clear.
C004	-	-	Adequate lighting.
C005	-	-	Projecting nails removed.
C006	-	-	Oil and grease removed from floor.
C007	-	-	Waste containers provided and used.
C008	-	-	Sanitary facilities adequate.
C009	-	-	Sanitary facilities clean and disinfected.
C010	-	-	Adequate supply of drinking water.
C011	-	-	Drinking water potable.
C012	-	-	Trash can for disposable drinking cup.
C013	-	-	Drinking cups or sterilized drinking fountain.
	-	-	

First Aid

D001	-	-	Hand and eye wash facilities when exposure hazard is present.
D002	-	-	First aid supplies well stocked and accessible.
D003	-	-	First aid kit signed by Doctor.
D004	-	-	Certified first aid person on duty when required.
D005	-	-	First aid supplies including responder protective equipment.
D006	-	-	First aid instructions on the job.
D007	-	-	Telephone number and location of nearest medical facility.
	-	-	

Personal Protective Equipment

E001	-	-	Eye protection.
E002	-	-	Hard hats.
E003	-	-	Safety shoes.
E004	-	-	Hearing protection
E005	-	-	Respiratory protection.
E006	-	-	Life preservers when working near water.
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	-	-	

Inspection & Audits

GENERAL SAFETY CHECKLIST

Fire Prevention

Code	No	Yes	
F001	-	-	Emergency fire procedures for employees.
F002	-	-	Fire extinguishers identified, accessible, and inspected.
F003	-	-	Hydrants clear with access for fire department.
F004	-	-	Good housekeeping.
F005	-	-	" NO SMOKING " signs posted and no smoking enforced where needed.
	-	-	

Flammable Gases and Liquids

G001	-	-	All containers clearly identified.
G002	-	-	Gasoline in safety cans
G003	-	-	Proper storage practices observed.
G004	-	-	Proper storage temperatures and protection.
G005	-	-	Proper type and number of extinguishers positioned and mounted.
	-	-	

Barricades and Signs

H001	-	-	Floor openings planked and barricade.
H002	-	-	Roadways and sidewalks posted.
H003	-	-	Proper signs posted.
H004	-	-	Flag-men have proper clothing and signalling.
H005	-	-	Adequate lighting provided.
H006	-	-	
	-	-	

Hand Tools

I001	-	-	Defective or broken tools tagged. " Do Not Use ".
I002	-	-	Proper tool being used for each job.
I003	-	-	Neat storage.
I004	-	-	Inspection and maintenance being. one.
I005	-	-	Damaged tools repaired or replaced promptly.
	-	-	
	-	-	

Inspection & Audits

GENERAL SAFETY CHECKLIST

Handling and Storage of Materials

Code	No	Yes	
J001	-	-	Neat storage areas, clear passageways.
J002	-	-	Material neatly stacked
J003	-	-	Approved canopy guards and rollover protection
J004	-	-	Rated lifting capacity posted on lifting equipment.
J005	-	-	Stacks on firm footing, not too high.
J006	-	-	Appropriate number of workers for each task.
J007	-	-	Workers lifting loads correctly.
J008	-	-	Protection against falling into hoppers and bins.
J009	-	-	Dust protection observed.
J0010	-	-	Fire extinguishers and other fire protection provided.
J0011	-	-	Traffic routing and control.
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Power Tools

K001	-	-	Tools tagged " Do Not Use " if defective.
K002	-	-	Tools and cords in good condition.
K003	-	-	Proper guarding.
K004	-	-	Proper switch for tool being used.
K005	-	-	Proper instruction in use.
K006	-	-	All mechanical safeguards in use.
K007	-	-	Tools neatly stored when not in use.
K008	-	-	Safeties on air lines to prevent accidental disconnection.
K009	-	-	Proper tool being used for the job..
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Equipment Maintenance

L001	-	-	Planned maintenance and inspection program.
L002	-	-	Adequate equipment records.
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Inspection & Audits

GENERAL SAFETY CHECKLIST

Welding and Cutting

Code	No	Yes	
M001	-	-	Welding cylinder carts.
M002	-	-	Qualified operators.
M003	-	-	Screens and shields.
M004	-	-	Goggles, gloves, clothing.
M005	-	-	Equipment in good operating condition.
M006	-	-	Proper igniters being used.
M007	-	-	Electrical equipment grounded.
M008	-	-	Power cables protected and in good repair.
M009	-	-	Rod holders in good condition.
M010	-	-	Adequate fire extinguishers within reach.
M011	-	-	Welding or cutting area free of fire hazards.
M012	-	-	Flammable/combustible material protected.
M013	-	-	Gas cylinders chained upright and separated.
M014	-	-	Protection to prevent slag from falling on workers.
M015	-	-	Gas lines protected and in good condition.
	-	-	

Electrical Installations

N001	-	-	Adequate ground in main electrical system.
N002	-	-	Adequate wiring, well insulated.
N003	-	-	GFCI or other assured equipment grounding provided.
N004	-	-	Circuits labelled in breaker panel.
N005	-	-	Lockout / Tagout program in place.
N006	-	-	Lockout / Tagout program being followed.
N007	-	-	Receptacle right for proper voltage.
N008	-	-	Connections and junction boxes covered properly.
N009	-	-	Proper cords being used.
N010	-	-	Cords in good condition.
N011	-	-	Qualified employees doing electrical work.
N012	-	-	Temporary light guards being used.
N0131	-	-	Electrical dangers posted.
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Inspection & Audits

GENERAL SAFETY CHECKLIST

Scaffolding -- Fixed

Code	No	Yes	
P001	-	-	Erection under competent person.
P002	-	-	Structural members adequate for use.
P003	-	-	Connections adequate.
P004	-	-	Secured to structure.
P005	-	-	Ladders provided for access and egress.
P006	-	-	Ladders and working areas free of debris, snow, ice, grease, tripping hazards.
P007	-	-	Proper footing provided.
P008	-	-	Passers-by protected from falling objects.
P009	-	-	Overhead protection provide when overhead hazards exist.
P010	-	-	Supports plumb, adequate cross-bracing provided.
P011	-	-	Guard-rails and toe boards in place
P012	-	-	Ropes and cables in good condition.
P013	-	-	Properly inspected.
	-	-	

Ladders

Q001	-	-	Ladders inspected and in good condition.
Q002	-	-	Ladders not spliced.
Q003	-	-	Double cleated ladders when serving more than 25 workers or two way traffic.
Q004	-	-	Properly secured -- tied off.
Q005	-	-	Side rails on ladders extend three feet above top landing.
Q006	-	-	Job built ladders built of sound material.
Q007	-	-	Rungs not over 12 inches on center.
Q008	-	-	Length not over 24 feet.
Q009	-	-	Shoes on single and extension ladders.
Q010	-	-	Insulated ladders used around electrical hazards.
Q011	-	-	Stepladders fully opened and locked when in use.
Q012	-	-	Proper maintenance and storage.
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GENERAL SAFETY CHECKLIST

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Code	No	Yes
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GENERAL SAFETY CHECKLIST

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EXCAVATION CHECKLIST

Date: _____

Company Name: _____

Job Address: _____

Supervisor: _____

Safety Field Rep.: _____

Excavation and shoring

Call utilities regarding lines in proposed excavation area.

Code	No	Yes	
R001	-	-	Hard hats.
R002	-	-	Safety glasses.
R003	-	-	Safety shoes.
R004	-	-	Frequent inspection by competent person.
R005	-	-	Shoring of adjacent structures.
R006	-	-	Shoring and sheeting or sloping as needed for soil and depth.
R007	-	-	Public sidewalks and roads supported and protected.
R008	-	-	Proper barricades, warning and rails at edges of excavation.
R009	-	-	Material not too close to the edge of excavation.
R010	-	-	Ramps and planks have cleats.
R011	-	-	Lighting at night.
R012	-	-	Subsurface water controlled.
R013	-	-	Adequate drainage of water
R014	-	-	Equipment safe distance from excavation edge.
R015	-	-	Equipment ramps adequate, slope not too steep.
R016	-	-	Ladder or stairs provided.
R017	-	-	Traffic control around excavation, workers wearing proper reflective clothing.
R018	-	-	Dust protection.
R019	-	-	Audible back-up warning on heavy equipment.
R020	-	-	Employees working safe distance from equipment.
R021	-	-	Air quality tested if over four feet.
R022	-	-	Rescue equipment when needed.
R023	-	-	Temporary holes filled in a timely manner

CONFINED SPACE CHECKLIST

Date: _____

Company Name: _____

Job Address: _____

Supervisor: _____

Safety Field Rep.: _____

Shafts

Code	No	Yes	
V001	-	-	Has confined space entry permit been completed and posted?
V002	-	-	Ladders, stairs adequate and safe.
V003	-	-	Top of shaft barricade, toe boards provided.
V004	-	-	Adequate lighting.
V005	-	-	Adequate ventilation.
V006	-	-	Inspection and maintenance of elevators and hoists.
V007	-	-	Signals being used, communication.
V008	-	-	Shoring and bracing.
	-	-	

Tunnels

W001	-	-	Has confined space entry permit been completed and posted?
W002	-	-	Adequate ventilation.
W003	-	-	Adequate lighting.
W004	-	-	Good housekeeping.
W005	-	-	Tunnel supports.
W006	-	-	Electrical lines.
W007	-	-	Operation of hauling equipment.
W008	-	-	Proper personal protection (PPE).
W009	-	-	Dust protection
W010	-	-	Air quality sampled & verified.
W011	-	-	Proper transportation of personnel.
W012	-	-	Drilling safely observed.

SAFETY MEETINGS

I. Policy

It is the policy of this company that employees attend and participate in the scheduled safety meetings. The employees will be expected to conduct these meetings. If the employees are not leading a discussion, they are still expected to actively participate.

II. Purpose

The purpose of the safety meeting is to stimulate, promote and communicate safety and health issues and to co-ordinate past, present and future safety and health efforts.

These meetings should be used to promote safety consciousness, hazard awareness and a forum for most of the needed training. It provides an opportunity to discuss identified problems and as a group develop corrective action.

Components of a quality safety meeting are as follows:

- * Well planned.
- * Management participation.
- * Ample time allotment.
- * Employee participation.
- * Relevant information.
- * Suitable time and place.

Quality safety meetings have many more benefits than improving the safety and health of employees.

- * Better communication between **Supervisors** and employees.
- * Demonstrates management's sincerity to employee issues and concerns.
- * Demonstrates safety is an employee responsibility.
- * Employee issues are more easily resolved.

The following is a description of the safety meeting structure and meeting guidelines for **(Your Company)**.

Safety Meetings

III. Job Site Safety Meetings

A. Tailgate Safety Meetings (Daily)

The **Supervisor** or designated employee will facilitate a short meeting before the start of each work day. This meeting should be used to supplement the formal safety meeting. This meeting allows for task demonstration and hands-on instruction on topics relevant to that days work assignments.

B. **Supervisor/Employee** Formal Safety Meeting (Monthly)

Monthly, each **Supervisor** should facilitate a formal safety meeting with the employees assigned to his crew. This meeting should be conducted by the employees. The **Supervisor** should delegate responsibility and provide information, when needed, on the employees assigned subject matter. This meeting should follow the safety meeting guidelines listed below.

C. **President/Supervisor** Safety Meeting

Monthly, the **Supervisors** should attend and participate in a safety meeting. The information generated from the **Supervisor/Employee** meetings should be reviewed at this time. This is also the time to evaluate incident trends, training, inspections and Job Safety Analysis.

Monthly, (**The President**), if at all possible, will attend a **Supervisor/Employee** safety meeting. The purpose is to audit the content and value of the meeting and demonstrate the importance management places on the safety and health of the employees. It also gives management the opportunity to answer questions and solicit recommendations for improvements.

IV. Safety Meeting Guidelines

- A. Establish a basic meeting agenda with specific dates and times of planned meetings.
- B. Review injuries and near-miss incidents to insure employees are aware and in agreement as to the proper corrective action.
- C. Review the previous months inspections of the area of job site and discuss corrective action for items found to be substandard.
- D. Communicate the status and reason for outstanding safety items, particularly if over 45 days old.
- E. Solicit employee input in the development of future goals and objectives. Continually review status of current goals and objectives.

Safety Meetings

- F. Review a minimum of one work related standard.
- G. Review of complete one **JSA**.
- H. Review a minimum of one **MSDS**.
- I. Review employee suggestions, questions and recommendations from previous month's safety meetings.
- J. Communicate information discussed in other company safety meetings. .
- K. Discuss Task Safety Observations, both past and future.
- L. Discuss Safety Contact topics from previous month and get suggestions for new topics for the upcoming month.

V. Conducting a Successful Meeting

- A. Prepare in advance.
- B. Pick a suitable time and place.
- C. Establish ground rules.
- D. Establish agenda.
- E. Conduct meeting, not show.
- F. Review only information relevant to the group. G. Use participation drills and activities.
- H. Encourage employee involvement (assign employees a portion of the meeting).
- I. Address employee concerns.
- J. Invite guest speakers.
- K. Use current video's, examples overheads, etc..

Safety Meetings

Safety Meeting

Presenter: _____ Date: _____

Job Safety Analysis (Attach copy of JSA) and or Topic

Incident Review (Attach Copy Of Incident Investigation Form)

Questions and Suggestions

Material Safety Data Sheets (**MSDS**) Reviewed (Attach copy of **MSDS**)

Inspections Reviewed (Attach Copies of Inspections Reviewed)

As one of the undersigned, I am acknowledging that I have been trained in and fully understand the topics discussed in this safety meeting.

Print Name	Signature

INCIDENT REPORTING, INVESTIGATION & ANALYSIS

I. Policy

It is the policy of **(Your Company)** that injuries, no matter how minor, be reported IMMEDIATELY to the On Site **Supervisor** or the most immediately available company **Supervisor**. In addition, equipment damage or near-miss incidents should be reported as soon as possible. The depth of the investigation at **(Your Company)** will be determined not only by the seriousness of the injury but by the potential seriousness and probability of reoccurrence.

(Your Company) subscribes to the philosophy that accidents are preventable.

II. Incident Reporting Responsibilities & Process

A. Employee

1. Report injuries or potential injuries immediately to the **Supervisor** or available **Supervisor**.
2. Report near-miss or equipment damage incidents as soon as possible to the **Supervisor** or available **Supervisor**.
3. Complete the employee portion of incident reporting form.

B. Supervisor

1. The **Supervisor** will be responsible to report injury accidents to **(The President)** as soon as possible but no later than the end of the work day.
2. Complete and return THE SUPERVISOR'S REPORT OF INJURY within 24 hours.
3. Distribute THE SUPERVISOR'S REPORT OF INJURY to **(The President)** for review and distribution.

C. (Bookkeeper/Secretary)

1. File all injury and non injury reports.
2. Update the **OSHA** 200 log as necessary **(Your Company)** will update the 200 log).

The general purpose is to identify and correct deficiencies to prevent reoccurrence. Simply stated, if an incident is not reported it can not be corrected.

Incident Reporting, Investigation & Analysis

Although personal injury incidents are usually reported, /near/miss incidents are typically not. Listed below are few of the reasons employees fail to report:

- * Fear of discipline.
- * Concern about /record/reputation.
- * Avoidance of paperwork.
- * Poor understanding of importance .
- * Lack of concern by **Supervisor**.

To improve reporting, **Supervisor** and employees should discuss the purpose, benefits and requirements of reporting injury and non injury incidents.

III. After an Injury is Reported

A. Call for Help

B. Immediately report injury to the **Supervisor** or designated person.

C. Make the area safe (ensure rescuers and bystanders can not become additional victims).

D. Provide appropriate medical assistance. Do not move the injured person.

E. Secure the area, save any material and evidence that might be important to the incident investigation.

IV. Incident Investigation

After an incident has occurred, the investigation should start as soon as possible. Incident investigation process is as follows:

A. Responsibilities

The **Supervisor** of the injured employee should organize and lead the investigation. A team should be formed consisting of employees, **Supervisor** and in some cases, (**The President**). This investigation should be completed within 24 to 48 hours after the incident has been reported. The investigation process is as follows:

Incident Reporting, Investigation & Analysis

B. Investigation Process

1. Start the completion of THE SUPERVISOR'S REPORT REPORT OF INJURY and supplemental investigation form. **(The President)** will be responsible to send a copy to **(YOUR COMPANY)** and distribute a copy to other work crews for review.
2. Interview injured employee as soon as possible.
3. Interview witnesses as soon as possible.
4. Take pictures of accident site from various angles (where appropriate).
5. Determine immediate causes.
6. Determine contributing causes.
7. Identify which areas of the Accident Prevention Plan failed (Inspections, JSA, Training, attitude, etc.).
8. Develop corrective action.
9. Distribute completed accident investigation information.
10. Assign responsibility for corrective action.
11. Follow up.

C. Interview Process

Interviewing accident/injury victims and witnesses can be a difficult job if not handled properly. Interview employees as soon as possible, while the incident is fresh in their minds. After a period of time, it is possible to rationalize what might have or could have happened.

Many employees believe incidents investigations are a fault finding action rather than a fact finding process. The individual being interviewed often is fearful and reluctant relate all the facts about the incident. This is due mainly to the narrow focus of most incident investigations that concentrate more on the unsafe acts of employees and rarely on the management practices which allow and sometimes reward similar employee behavior. The following guidelines are recommended:

Incident Reporting, Investigation & Analysis

1. Discuss the purpose of the investigation and interview (fact not fault finding) before an incident occurs, possibly during the safety meeting. You are letting the employees know, this is your Standard Operating Procedure. By doing this, the employees will expect it and should respond more readily.
2. Don't ask any leading questions, such as "Did you lift more than you could safely handle?"
3. Have the individual relate his/her version of the incident with minimal interruptions, preferably alone, so his/her interpretation will not influence anyone else's. If the individual being interviewed is the one who was injured, ask what was being done, where and how it was being done and what happened.
4. Ask questions to clarify or fill in any gaps.
5. The interviewer should then repeat the facts to clarify them with the witnesses and employees involved to avoid any misunderstandings.
6. Ask the person being interviewed what they think can be done to prevent reoccurrence.
7. Note the employees health, clothing and job knowledge at the time of the incident.
8. Record all facts and opinions no matter how irrelevant they may appear.
9. Document all observable facts at the scene. Some examples are the environment (slippery floors, lights, dust); the equipment and tools (guarding, maintenance, defects); materials involved (size, shape and weight); and safety equipment and devices including PPE.

D. Investigation Follow Up

The investigation is not complete until the **Supervisors** and employees verify other employees are not using the same methods which caused the incident being investigated. The investigation report should be reviewed at safety meetings to communicate findings and corrective action. **(The President)** should verify corrective action had been completed.

Incident investigation is not incident prevention. Prevention of similar incidents is dependent on the proper corrective actions developed and follow-up to insure implementation.

Incident Reporting, Investigation & Analysis

How the follow up is handled will send a strong message, positive or negative, about the company's safety attitude.

V. General

Why is the proper reporting and investigation of incidents so important to the success of the safety program? That question can be best answered by analyzing the correlation between major, minor, near-miss incidents and errors.

Incident Ratio

Recordable or lost time injury	1
Minor injury - First aid required	10
Property damage - work disruption	30
Near-miss - no injury incident	300
Errors (unsafe acts or conditions)	15000

The above ratio is an average for the possibility of chance or risk. When an unsafe act or condition occurs, generally nothing happens. But, as is shown, it is only a matter of time before property damage or personal injury occur. This indicates the correction of errors, sometimes viewed as little things, is critical to accident prevention.

With this said, it becomes apparent why safety is primarily an employee problem and responsibility. Who knows better than the employee their job skills. Who knows better than the employee whether the rules and procedures are followed. Who knows better than the employee unsafe conditions that may exist. The answer is very apparent -- NOBODY. More importantly, if an injury occurs who will suffer the consequences? THE EMPLOYEE.

Another key, is the development and implementation of the actions necessary to prevent reoccurrence. To develop these actions, contributing as well as immediate causes need to be identified.

The following example will demonstrate the difference between immediate and contributing causes. It will show how an accidents is usually an indicator that employees and **Supervisors** either do not understand or have accepted their individual responsibilities.

Incident Reporting, Investigation & Analysis

Scenario:

An employee falls off an extension ladder. The initial investigation indicates:

- * Unsafe act: Employee climbed a defective ladder.
- * Unsafe condition: Defective ladder (broken rung, no safety feet)
- * Corrective action: Instruct the employee in proper use of a ladder. Get rid of the defective ladder.

Now, the investigation of the same accident using multiple causation (contributing causes). A series of questions need to be asked:

- * Why was the defective ladder not identified during the inspection process? . Have other employees reported a defective ladder?
- * Has the proper use of ladders been discussed formally or informally? . Are there other defective ladders in use?
- * Do employees and **Supervisors** consistently follow and enforce other rules, procedures and/or safe practices?
- * Are employees taking responsibility for safety and does management reinforce that philosophy?

The answer to these and other questions will provide us means to develop corrective action that eliminates recurrence of the real problems. In this example, corrective action may be:

- * Improved inspection procedures.
- * Better definition of employee responsibilities.
- * Better response to identified unsafe equipment.
- * More frequent audits by **Supervisor** and managers.
- * Reinforce safety is primarily an employee responsibility and condition of employment.
- * Develop or review the ladder standard or safe work practice.

Usually, unsafe acts or conditions are not isolated instances. Typically, similar deficiencies can be found in other areas of the safety program and Organization as well. Statistically, 85% of injury accidents are preceded by one or more near-miss incidents. This simply indicates that the vast majority of accidents and injuries can be identified and eliminated if employees and management work together and accept their individual safety responsibility.

Incident Reporting, Investigation & Analysis

Company
Employee's Name
Date of Occurrence

**Incident Investigation and
Near Miss Analysis**

What happened? (Describe in detail, task performed, tools, equipment and materials involved)

Describe any **unsafe acts** and **conditions** that may have contributed to the incident.

Was the task performed part of the employees regular job? (If no explain.)

Personal Protective Equipment (PPE)

Describe the PPE required for the task being investigated.

Was this PPE available to the employee? (If no explain.)

Was the employee wearing all PPE required? (If no explain.)

Incident Reporting, Investigation & Analysis

Rules, Procedures and Safe Work Practices

Is there a written/verbal procedure, rule or safe work practice for the involved task?

Did the employee follow recommended method or procedure? (If no explain.)

If no, were there any extenuating circumstances that caused the employee to deviate from the recommended method?

Are the rules, procedures, safe work practices and PPE requirements understood and enforced consistently? (If no explain.)

Training

Has the employee been trained in the rules and safe work methods pertaining to the involved task? (If no /explain.

If yes how and approximately how long since last trained?

Are other employees using the same work /habits/methods involved in this incident? yes explain.)

NOTE: Remember incident investigation if done properly will, give you an opportunity to correct

HAZARD COMMUNICATION PROGRAM

I. Purpose

In an effort to protect workers from dangers due to hazardous chemical exposure, **OSHA** established the Hazard Communication Standard. The standard establishes guidelines for employers to produce a written program that addresses the following:

- Chemical Inventory.
- Container Labelling.
- Material Safety Data Sheets.
- Employee Training.
- Personal Protective Equipment.
- Emergency Response.
- Hazards Of Non-Routine Tasks.
- Informing Other Employers.
- Posting.

The program will be updated as needed and shall be reviewed annually. It is the intent of **(Your Company)** to conform to this standard. Although **(The President)** will have the ultimate responsibility, it is primarily the responsibility of the **Supervisor** and employees to follow the guidelines. The following information will outline the tasks and responsibilities for this program.

II. Policy

A copy of this program is to be made available to employees after hiring and a copy supplied to any employee upon request. The **Supervisor** will be contacted when a copy of the program is needed.

The program should be updated whenever new chemicals or hazards are introduced into the work environment and reviewed annually.

III. Chemical inventory

It is important a chemical inventory list be kept on file pointing out the hazardous chemicals used in the workplace. A chemical inventory list will be kept in each Safety Manual in the beginning of the section titled Material Safety Data Sheets.

Responsibilities:

* The **Supervisors** will have a copy of the chemical inventory list in his Safety manual and should make it available to employees upon request.

Hazard Communication Program

- * The **Supervisors** will make every effort to include on the chemical inventory list,
- * It is the responsibility of employees to alert the **Supervisors** when a new chemical is introduced and they have not received "**Right to Know**" training.

IV. Purchasing

Hazardous chemicals brought into the workplace need to be accompanied by a **MSDS** if one is not already on file. It is the responsibility of the person purchasing the material to see the proper **MSDS** is delivered with the hazardous material.

Suppliers are required to supply Material Safety Data Sheets upon request. When purchasing hazardous chemicals or other hazardous materials, a statement should accompany the order requesting the Material Safety Data Sheets for those material.

Responsibilities:

- * The **Supervisor** should be responsible for making sure hazardous materials are accompanied by the appropriate **MSDS** if that information is not already on file.
- * As a safeguard, any employee receiving hazardous material should ask for the **MSDS** before taking possession if that material.

V. Container Labelling

To avoid accidental exposure to hazardous chemicals being placed in unmarked or miss-marked containers, (**Your Company**) will make every effort to ensure containers are properly marked. An exception to this rule would be small quantities for immediate use. In most cases, the label applied to the container will contain all the required information in cases of exposure.

Unmarked containers should not be left unattended. Hazardous chemicals should be returned to their properly labelled containers for storage.

Responsibilities:

- * The **Supervisor** should be alerted by employees when a container is improperly labelled. Upon notification, the **Supervisor** should see the containers are then properly re-labelled.
- * The employee shall transfer unused chemicals in unlabeled containers to properly labelled containers or notify their **Supervisor** as soon as possible after use.

Hazard Communication Program

- * In most cases, **(Your Company)** will rely on the manufacturer's label. If the label is unreadable or not present, the employee should inform the **Supervisor** so an adequate label can be installed.
- * If a **Supervisor** or employee suspects a material in a container is not what the label says it is, the **Supervisor** should be notified as soon as possible to correct the discrepancy.

VI. Material Safety Data Sheets

The Hazard Communication standard requires all manufacturers, distributors and suppliers to supply copies of Material Safety Data Sheets (**MSDS**) to customers. This is information on how to safely handle specific chemicals.

Responsibilities:

- * The **Supervisor** should have at their disposal, a copy of this safety manual which should include **MSDS** for the hazardous chemicals used on the job site. It is the
- * Employees working with a hazardous chemical may request a copy of the Material Safety Data Sheet (**MSDS**). Requests for **MSDS** should be made to the **Supervisor**.
- * In case of a chemical exposure emergency, the first to be notified should be

VII. Employee Training

Employees will be trained and be expected to work safely with hazardous chemicals. The training should include the following:

- A.** The elements and responsibilities outlines in **(Your Company)'s** Hazard Communication Program.
- B.** The location of the Hazard Communication Program along with the chemical inventory list and the Material Safety Data Sheets.
- D.** The purpose of and how to read and understand a Material Safety Data Sheet.
- E.** Physical and health hazards associated with hazardous chemicals listed on the chemical inventory list.

Hazard Communication Program

- F. Protective measures to be taken.
- G. Safe work practices, emergency responded and use of personal protective equipment.
- H. Methods that may be used o detect a release of a hazardous chemical in the workplace. This information will be made on an individual basis after analyzing the information given on the **MSDS**.
- I. Steps taken by **(Your Company)** to lessen or prevent exposure listed on the chemical inventory list.

Responsibilities:

- * The **Supervisor** should train new employees before they are introduced to hazardous chemicals. In some cases, it is not practical to train all employees on every **MSDS** before exposure to the hazardous substance. In these cases, every effort should be made by the **Supervisor** to start the training with the most hazardous and frequently used chemicals.
- * If employees have not been trained in or are unsure of the hazards associated with a particular hazardous chemical, they should stop and read the label. If they are still unsure or can't find the proper information on the label, they should notify their **Supervisor** before using.

VIII. Personal Protective Equipment

MSDS information will include the types of personal protective equipment needed when working with hazardous chemicals. **(Your Company)** will provide employees with the proper personal protective equipment.

Responsibilities:

- * It is the responsibility if the **Supervisor** to provide the appropriate personal protective equipment.
- * Employees are required to wear all personal protective equipment required when handling hazardous chemicals and materials.
- * If an employee is given a hazardous chemical too work with, without the appropriate personal protective equipment, they should notify the **Supervisor**. It will then be up to the **Supervisor** to provide the employee with the proper equipment.

Hazard Communication Program

IX. Emergency Response

Immediately notify the appropriate personnel in the event of a hazardous chemical spill or overexposure. The information needed for emergency response can be found on the container label or the **MSDS** for that material.

Responsibilities:

- * In the event of a hazardous chemical spill or overexposure, the person directly involved should seek help. In case of an injury, emergency medical personnel should be notified if medical attention is required.
- * Employees must notify the **Supervisor** as soon as possible after an exposure incident.

X. Hazards of Non-Routine Tasks

Supervisors should inform employees of any special tasks, other than their everyday tasks, that could involve possible exposure to hazardous chemicals. Review of safe work practices and use of required PPE should be conducted prior to the start of such tasks. Where necessary, areas should be posted to indicate the nature of the hazard involved.

XI. Informing Other Employers

When more than one contractor is on a job site, the **OSHA** standard requires that contractor's HazCom Program and **MSDS** information be made available to each other. This will enable each company to inform their employees of other's known chemical hazards.

Responsibilities:

- * The **Supervisor** on the job will be responsible to inform outside contractors or a designated person of chemical exposures they may encounter while working in their work area.
- * The **Supervisor** must provide employees with **MSDS** information on hazardous chemicals used by outside contractors that may cause exposure. If this information is not provided to the **Supervisor**, it will be up to the **Supervisor** to obtain the information by some other means or discontinue the use of the material until the proper information is available.
- * In the event an employee is exposed to a hazardous chemical or substance by an outside contractor or employee, the exposed employee must notify their **Supervisor** immediately to receive the proper information.

Hazard Communication Program

- * If an employee is using a hazardous chemical or substance and exposing another employee, they should make sure that employee is aware of the hazards.

XII. Posting

The **OSHA** standard requires each company to post information about the Hazard Communication Standard on the job site. A copy of the poster is included at the end of this section.

Responsibilities:

- * The **Supervisor** must post information for employees describing the location of **(Your Company)'s** Hazard Communication Program.

Hazard Communication Program

**(Your Company) Has a Written Hazard
Communication Program**

IN COMPLIANCE WITH **OSHA** 1926.59 & 1910.1200

In accordance with the standard, the following items are available to you upon request:

- Copy of the company Written Hazard Communication Program.
- Copy of the **OSHA** Hazard Communication Standard.
- Copy of the company's List of Hazardous Chemicals for your work place.
- Copies of Material Safety Data Sheets for any covered chemical to which you are exposed.

**TO OBTAIN ANY OR ALL OF THIS
INFORMATION, CONTACT**

Your Supervisor

Hazard Communication Program

OUTSIDE /EMPLOYER/OTHER PERSONNEL HAZCOM NOTIFICATION

I, _____ have been provided the following information by

(Your Company):

- a. Names of hazardous chemicals to which I may be exposed to while in the work place.
- b. Measures to lessen the possibility of exposure.
- c. Location of **MSDS** for all hazardous chemicals.
- d. Procedures to follow if I am exposed.

Signed: _____
(Signature of outside employer or other personnel)

Date: _____

Printed Name: _____

Company Name: _____

Title: _____

Signature of Provider: _____

Printed Name of Provider: _____

Hazard Communication Program

The Material Safety Data Sheet Collection for hazardous chemicals on this job site is located at

The Hazard Communication Program for this job site is located at

The Hazardous Chemical List for this job site is located at

Questions regarding chemicals, chemical handling or health and safety should be directed to

MATERIAL SAFETY DATA SHEET CHEMICAL INVENTORY LIST

The following is a list of the hazardous chemicals used in this work place. Further information can be used from the **MSDS** attached with this program, from the **Supervisor**. The originals will be kept on file by the **(Bookkeeper/Secretary)** at:

MSDS m	HAZARDOUS MATERIAL
1.	Glossary of Terms and Abbreviations
2.	Reading a Material Safety Data Sheet
3.	Acetone
4.	Acetylene
5.	Argon
6.	Bleach ((Sodium hypochlorite aqueous solution)
7.	Diesel Fuel Oil No. 2-D
8.	Ethylene
9.	Gasoline (lead free)
10.	Nitrogen
11.	Oxygen
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	
21.	
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26.	
27.	
28.	
29.	
30.	

Material Safety Date Sheets

Insert the Genium CD Rom

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Print and insert into form0046.wpd, in the order listed below, between pages 74 and 76:

Glossary of Terms and Abbreviations
Reading a Material Safety Data Sheet
Acetone
Acetylene
Argon
Bleach ((Sodium hypochlorite aqueous solution)
Diesel Fuel Oil No. 2-D
Ethylene
Gasoline (lead free)
Nitrogen
Oxygen

Policies and Procedures For

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Tools

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

First Aid

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Fire Protection & Prevention

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Housekeeping

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Ladder Use

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

**Policies and Procedures
For
Lifting & Back Injury
Protection**

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Power & Hand Tools

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Machine Guarding

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

**Policies and Procedures
For
Personal Protective
Equipment (PPE)**

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Forklift Truck Operation

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Policies and Procedures For

Signs & Placards

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

**Policies and Procedures
For
Electrocution & Shock
Hazard Protection**

List below the policies and procedures (do's and /don'ts) for the operation listed above:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Required Documentation & Posters

STANDARDS & PROCEDURES

Required Documentation & Posters Standards & Procedures

This section concerns itself with documentation and posting requirements. There are a number of required documents that should either on the job site and/or maintained in a central location.

Section Contents

- I. Required Posters
- II. Required Documentation

For further information on these requirements, refer to **OSHA** Construction Standards 1926.50, 1926.51, 1926.59 and **OSHA** General Industry Standards 1910.141, 1910.151, 1910.1200.

Required Documentation & Posters

I. Required Posters

The following posters are required by **OSHA** to be displayed in a "conspicuous location" and to be communicated to the employees. Where there are state required postings, verify they are also in place.

- A. 5-in-1 Labor Law Poster, which contains the following:
 - 1. Equal Employment Opportunity Commission poster.
 - 2. Job Safety and Health poster.
 - 3. Minimum Wage Laws poster.
 - 4. Employee Polygraph Protection Act poster.
 - 5. Family and Medical Leave Act poster.

II. Required Documentation

The following documentation should be readily accessible and communicated to employees.

- A. Copies of **OSHA** /Construction and General Industry Standards.
- B. Log and Summary of Occupational Injuries and Illnesses **OSHA** 200 (Posted in February)
- C. Copy of Assured Equipment Grounding Conductor Program if being used.
- D. Maintenance records for equipment (cranes, material hoist, etc.).
- E. Proof of safety and equipment training.
- F. Employee medical records when required for hazardous chemical and noise exposure.
- G. Written Hazard Communication Program.
- H. Appropriate **MSDS**.

Housekeeping, Sanitation & First Aid Standards & Procedures

Good housekeeping is one of the most important elements of an effective safety program. An employee's productivity can suffer due to the distractions of lost tools, lost materials, materials and equipment being destroyed or thrown away, or even having to be overcautious while walking through cluttered areas. Usually the workmanship of employees is reflected by the order and cleanliness of the job site.

Sanitation is also very important. Serious illnesses can be spread if the work-site sanitation is inadequate.

Section Contents	OSHA Standards
I. Housekeeping	(1910. 141)
II. Sanitation	(1910. 141)
III. Medical & First Aid	(1926.50 & 1910.151)

For further guidance on housekeeping and sanitation, refer to **OSHA** Construction Standards 1926.25 and 1926.51 and General Industry Standards 1910.141.

Housekeeping, Sanitation & First Aid

I. Housekeeping (OSHA Standard. 1926.225 & 1910.141)

Good housekeeping improves efficiency, attitude and helps prevent accidental injuries.

- A. During the course of work, lumber with protruding nails and other debris must be kept clear from the work area, stairs and doorways.
- B. Oil and grease should be wiped from walkways or work areas immediately.
- C. Combustible scrap and debris should be removed from the work area on regular intervals, at least at the end of the day.
- D. Containers with covers must be provided for the collection and separation of:
 - 1. Trash
 - 2. Waste
 - 3. Oily and used rags
 - 4. Flammable wastes
 - 5. Hazardous wastes (caustics, acids, harmful dusts, etc.)
- E. When finished with tools, return them to their proper tripping.
- F. Avoid running hoses, power cords, welding leads, ropes and other tripping hazards across traffic areas.
- G. Clean up as work progresses, this reduces fire and accident potential.

II. Sanitation (OSHA Standard. 1926.51 & 1910.141)

- A. The employees should have adequate water supply.
- B. Drinking water should be visibly labelled as such.
- C. Drinking water should be stored in a sanitary container.
- D. Disposable cups should be made available at water supply.
- E. Non-potable water should be labelled as such.

Housekeeping, Sanitation & First Aid

- F. There should be at least 1 toilet facility for every 20 workers.
- G. Lavatories must be made available.

Housekeeping, Sanitation & First Aid

1. All lavatories must have hot and cold running water or tepid water for washing of hands, face and arms.
2. Hand soap or similar cleansing agents should be made available.
3. Some type of individual hand towels must be provided.

NOTE: **OSHA** has cited some construction companies for not having washing facilities on the job site even though it is not required in the construction standards.

III. Medical & First Aid (OSHA Standard. 1926.50 & 1910.151)

- A. In the absence of a hospital, medical clinic or physician, that is reasonably accessible in terms of time and distance to the worksheet, a person with a valid certificate in first aid training shall be available at the work-site to render first aid.
- B. First Aid Kits should:
 1. Be easily accessible in each work area.
 2. Have adequate supplies for the hazards encountered.
 3. Be periodically inspected and replenished as needed.
 4. Be approved by a physician and the card inside should be signed by the physician.
- C. A hand and/or eye wash device or solution must be on location where an exposure to hazardous chemicals is present.

Power and Hand Tools Standards & Procedures

Most industry requires its workers to use a large array of power and hand tools. The many hand tool injuries that occur each year are caused by either poor training in the use of the tool or tampering with the tools required safety guarding and devices. Regardless of the amount of training or safe guards, it is ultimately the employees common sense and awareness that will prevent injury.

	Section Contents	OSHA Standards
I.	General Requirements	(1926.300)
II.	Hand Tools	(1926.301)
III.	Power Hand Tools	(1926.301)
IV.	Abrasive Wheels and Tools	(1926.303)
V.	Woodworking Tools	(1926.304)
VI.	Jacks	(1926.305)

For further help in the guidelines for Hand and Power Tools refer to **OSHA** Construction Standards 1926.300 through 1926.305.

Power & Hand Tools

I. General Requirements (OSHA 1926.300)

- A. Hand and power tools whether furnished by the company or employee shall be maintained in a safe condition 1926.300(a).
 - 1. Employees should be thoroughly trained on their specific tools.
 - 2. Tools should be inspected and maintained on a regular basis.
 - 3. Tools should be neatly stored when not in use.
 - 4. Broken or defective tools should be tagged "out of service" or destroyed.
 - 5. Always use the proper tool for the job.
 - 6. Always turn power tools off & unplug before servicing any power tool.
- B. Guards designed to be used with power operated tools should be in place and
- C. No moving parts of equipment can be exposed to employees as to create a hazard, i.e. guarding for belts, shafts, gears, pulleys, sprockets, spindles, drums, flywheels, and chains.
- D. Employees using hand and power tools should wear protective devices as pointed out in the section titled Personal Protective Equipment.

II. Hand Tools (OSHA 1926.301)

- A. Impact tools such as chisels shall be free of mushroomed heads.
- B. Tools with wooden handles must be kept free from splinters, cracks and be tight in the tool.
- C. Do not carry sharp or pointed tools in pockets.
- D. When using a screwdriver, never hold the work in your hand.
- E. Do not use screwdrivers for chisels or pry bars.
- F. Keep screwdrivers filed to prevent slipping.
- G. Be sure and use the proper type hammer for the proper type work. The metal on a machinist hammer is softer than a carpenter hammer allowing you to use it to strike other metal objects without chipping.

Power & Hand Tools

- H. When using wrenches, always pull the wrench toward you. If it is necessary to push the wrench, use the open palm or protect your hand in case slippage occurs. When using an adjustable wrench, always exert pressure toward the movable jaw.
- J. Stand to one side when using wrenches above your head.
- K. Do not use files without a handle or use one as a pry bar.
- L. When using a pry bar, always balance yourself to prevent a fall in the event of a slippage.

III. Power Operated Hand Tools (OSHA 1926.301)

- A. Electric hand tools shall be double insulated or be provided with a three prong grounding plug. Tools should not be hoisted by the tool cord.
- B. Adjustments to power tools should never be made while tool is connected to a power source.
- C. The following rules should be followed when working with air powered tools:
 - 1. Make sure safeties are installed and in working condition on air powered nailers and staplers.
 - 2. On airless paint guns safeties and tip guards should be used when painting or handling gun.
- D. The following rules should be followed when working with powder actuated tools.
 - 1. Employees without training will not be allowed to operate powder actuated tools.
 - 2. All defective tools shall be removed from service immediately.
 - 3. Caution should be used when driving pins into very hard, brittle, or easily penetrated materials.
 - 4. Do not use these tools in explosive or flammable atmosphere.
 - 5. All guarding should be used.
 - 6. Goggles or face shields shall be worn.
 - 7. Tools and charges should be stored in a manner which will protect them from unauthorized use.

Power & Hand Tools

- E. There are numerous types of switches required on hand power tools, refer to the chart below for help in determining the proper switch.

Type of Switch		
Positive “on-off”	Momentary “on-off” with locking control	Constant press type that will shut off when pressure is released
* Sanders	* Drills	* All other hand held
* Grinders with 2 inch	* Tappers	* Circular saws
* Routers	* Fastener drivers	* Chain saws
* Planners	* Grinders with 2” or	* Percussion tools
* Laminate trimmers	* Disc sander	
* Nibblers	* Belt sander	
* Shears	* Reciprocating saws	
* Scroll saw	* Saber saws and other similar operating	
* Jig saw with blade		

IV. Abrasive Wheels and Tools (OSHA .1926.303)

- A. Guards and safeties provided by the manufacturer shall be in place when grinding.
- B. Work rests on stationary grinders should be maintained 1/8 inch from grinding
- C. Grinding wheels should be visually checked for cracks and deformities and ring tested before being installed.

V. Woodworking Tools (OSHA 1926.304)

- A. Fixed woodworking tools shall be installed with a switch that can be either tagged or locked in the off position.

Power & Hand Tools

- B. Manufacturer installed safety devices shall be in place at all times.

VI. Jacks (OSHA 1926.305)

- A. Rated capacities shall be marked on all jacks and should be used within those limitations.
- B. Care should be used when blocking /jacks so as to provide for a firm foundation contact point so slippage will not occur.

Electrical Standards & Procedures

It takes very little current to KILL, that is why electrocution is one of the leading killers in the workplace and at home today. With good contact 115 volts is more than adequate to **KILL**. Because of the ease in which one can be electrocuted it is important that employees be thoroughly trained in the use and handling of electricity and electrical tools, equipment and extension cords. It is the responsibility of the employee not to operate or work with any power source of which they are not familiar.

There are numerous guidelines that pertain to electrical systems installation and design. Since these things are normally done by licensed electricians and engineers this manual will not address those areas. This section will only deal with a general overview and then discuss some of the requirements for the most common forms of employee contact with electricity.

	Section Contents	OSHA Standards
I.	General Requirements	(1926.403)
II.	Temporary Electrical Wiring (Extension Cords)	(1926.405)
III.	Equipment Grounding	(1926.404)
IV.	Ground Fault Protection	(1926.404)
V.	Temporary Lighting	(1926.405)
VI.	Assured Equipment Grounding Program	(1926.404)

For further guidance on electrical refer to **OSHA** Construction Standards 1926.400 through 1926.451 and **OSHA** General Industry Standards 1910.301 through 1910.399.

Electrical

I. General (OSHA Standard 1926.400)

NEVER OPERATE ANY ELECTRICAL DEVICE WHILE STANDING IN A DAMP OR WET AREA. THIS CAN KILL YOU.

- A. No electrical work will be performed by employees unless they have been adequately qualified.
- B. Electrical distribution systems shall be installed according to applicable codes unless specific rules provide otherwise on special equipment.
- C. No work shall be performed on equipment while it is energized.
- D. Be sure circuits are labelled in the breaker panel to allow employees that work on circuits quick disconnection without disrupting the power on other parts of the job.
- E. Connections and junction boxes shall have the appropriate covers in place.
- F. Correct receptacles shall be used for /voltage/ampereage supplied.
- G. Hazardous areas shall be marked.
- H. Lamps for general illumination shall be protected from accidental contact or breakage. Any fixtures below 7 feet must have some type of guarding on bulbs.
- I. All wires should be treated as live wires.
- J. Report any tripped circuit breakers to your **Supervisor** immediately. Tripped circuit breakers can indicate an overload or short.
- K. If you find sparking or smoking electrical equipment, turn off the power and report the condition to your **Supervisor** immediately.
- L. Examine extension cords before use for cuts, frayed wires, bad connectors, etc.,.
- M. Do not drag cords over sharp edges or leave them exposed to damage from traffic.

II. Temporary Electrical Wiring (including extension cords) (OSHA Standard 1926.405)

- A. Extension cords shall be the three wire type with one terminal being a ground.
- B. Only cords with the following ratings may be used on the job site: SJ, SJO, SJTO, SJT, S, SO, STO, or ST. These ratings are embossed into the jacket of the cord.

Electrical

- C Any repairs to cords should be soldered and insulation restored so the cord retains the outer sheath properties and usage characteristics.
- D Cords passing through doorways must be protected from pinching or cutting.

III. Equipment Grounding (OSHA Standard 1926.404) (f)

- A. Make sure the electrical system being used provides an adequate ground before the system is put into service. This can be done by an electrician or use of an inexpensive plug type circuit tester.
- B. Receptacles shall be the 3 hole grounded type.
- C. Equipment used should have either a 3 prong grounded plug or a double insulated body with a 2 prong non-reversible polarity plug.

IV. Ground Fault Protection (OSHA Standard 1926.404) (b)

- A. Employees on the job site should be protected by either Ground Fault Circuit Interrupters (GFCI) or an Assured Equipment Grounding Conductor Program.
- B. GFCI devices are able to detect an imbalance in current between the hot and neutral side. If the device detects an imbalance of 5 mA or more it interrupts the circuit protecting the employee from shock hazard.
- C. GFCI's are required to be used on all 120 volt, single phase, 15 and 20 amp. receptacles not part of the permanent wiring of the building. This means when extension cords are used, you are no longer using the permanent building wiring.
- D. Instructions and a sample copy for an Assured Equipment Grounding Conductor Program is included at the end of this section.

V. Temporary /Lighting (OSHA Standard 1926.405) (2)

- A. Temporary lights should be equipped with guards to protect contact with bulbs. If the construction of the fixture is such that the bulb is deeply recessed, the guard is not required.
- B. Temporary lights should be equipped with heavy duty cords and connections should be secured and protected in such a manner as not to allow accidental contact with wiring.
- C. Cords for lighting should be run in such a manner as not to impose a tripping hazard to walking traffic. Care should be taken so cords cannot be run over and cut.

VI. Assured Equipment Grounding Program (OSHA Standard 1926.400)

- A. **Scope:** This procedure describes the requirements set forth by **OSHA** regarding the installation and maintenance of equipment conductors for temporary wiring on construction sites.

Electrical

- B. Policy: Employees should not use equipment that has not met these requirements.
- C. Requirements
 - 1. Equipment grounding conductors shall be installed as follows:
 - a. All 120 volt, single phase, 15 and 20 amp. receptacles shall be the grounding type and connected to the grounding conductor of the circuit supplying the receptacles in accordance with **National Electrical Code (NEC)**.
 - b. Extension cords shall be the 3 prong grounding type and connected to the grounding contacts of the connectors on each end of the cord.
 - c. The exposed /non current carrying metal parts of tools and equipment likely to become energized, shall be grounded in accordance with applicable requirements of **NEC**.
 - 2. Employees should be instructed to visually inspect receptacles, extension cords, except those fixed and not exposed to damage, and equipment connected by cord and plug before each day's use for external damage. The employee should look for things such as deformed or missing pins, damaged insulation, and evidence of internal damage. The damaged items should be taken out of service, tested and repaired.
 - 3. Extension cords and plug connected equipment should be tested as follows:
 - a. Grounding conductors should be tested for continuity and be electrically continuous.
 - b. Receptacle and attachment plugs should be tested for correct attachment to the grounding conductor.
 - 4. The required tests should be performed as follows:
 - a. Before first use.
 - b. Before equipment returns to service following repairs.
 - c. Before equipment is used following an incident which it is suspected damage may have been done internally.

Electrical

- d. At intervals not to exceed 3 months, except cord sets and receptacles fixed and not exposed to damage should be tested at intervals not exceeding 6 months.
5. The recording method shall be performed as follows:
- a. Test verification shall be by means of numeric or color coded marking tape on the receptacle, cord set and equipment to identify it has passed the test and to indicate the date (month or quarter) in accordance with the attached Coding Scheme.
 - b. If some system other than this attached color or numeric code is used, such as tags or logs, it should be specified here in lieu of previous sentence.
 - c. This written description and the test record required in (a) shall be available at the job site for inspection and copying by the Assistant Secretary, **OSHA** compliance officer and any affected employee.

Coding Schemes for Assured Equipment Grounding Conductor Test Record			
Month or Quarter	Color Coding Scheme		Numeric Coding Scheme
	Quarterly	Monthly	Monthly
January	White	White	1
February		White & Yellow	2
March		White & Blue	3
April	Green	Green	4
May		Green & Yellow	5
June		Green & Blue	6
July	Red	Red	7
August		Red & Yellow	8
September		Red & Blue	9
October	Orange	Orange	10
November		Orange & Yellow	11
December		Orange & Blue	12
Repair or Incident	Brown	Brown	0

Machine Guarding

Fixed Machine Operation & Guarding Standards & Procedures

Attached to the end of this section is a roster signed by the employees that have trained in machine operation and guarding and the manufacturers suggested operating procedures for the machinery used at this company.

There are too many specific standards to list in this section. Listed in this section is a brief overview of guarding and operation of fixed equipment. Refer to the following **OSHA** standards and the attached manufacturers recommendations for specific machines used.

Attached to the JSA section is an inventory list and proper operation and guarding procedures for the machinery used.

	Section Contents	OSHA Standards
I.	General Requirements	(1910.212 through 1910.222)
II.	List of Equipment Requiring Guarding	

Stairways and Ladders Standards & Procedures

Improper use of stairways and ladders can lead to serious injury and/or death. It is important proper planning goes into the use of stairways and ladders before commencement of the job to minimize these risks. One important way to do this is to assign a competent person to oversee the use of ladders and stairways.

Section Contents	OSHA Standards
I. General	(1926.1051)
II. Stairways	(1926.1052)
III. Portable Ladders	(1926.1053)
IV. Step Ladders	(1926.1053)
V. Job Built Ladders	(1926.1053)
VI. Training	(1926.1060)

For further guidance on stairways and ladders, refer to **OSHA** Construction Standards 1926.1050 through 1926.1060 and 1910.23(d) 1910.24 through 1910.27.

Stairways & Ladders

I. General (OSHA Standard 1926.1051)

- A. A stairway, ladder, ramp, or runway shall be provided when there is a change in elevation of 19 inches or more.
- B. Spiral stairs are not be permitted except for special limited usage and secondary access situations where it is not practical to provide a conventional stairway.
- C. A ladder shall be double cleared when it will serve more than 25 employees or have 2 way traffic.
- D. At least one point of access should be kept clear between building levels.
- E. Ladders may not be spliced.
- F. Ladders used around an electrical hazard shall be insulated.
- G. Make sure the ladder you are using is strong enough to support you and all your tools.
- H. Whenever climbing stairs or ladders always be sure shoes are free of oil, grease, mud, snow, ice, etc.,.
- I. Remember the belt buckle rule when working from a ladder, KEEP YOUR BELT BUCKLE INSIDE THE SIDE RAILS.
- J. Ladders should be inspected for damage or fatigue before each use. If a ladder is found to be defective, it should be removed from service and tagged defective. Don't risk your life on a defective ladder.

II. Stairways (OSHA Standard 1926.1052)

- A. Every 12 feet of stairway rise should have a landing that measures 30 inches in the direction of travel and 22 inches in width.
- B. Stair angles should be between 30 and 50 degrees.
- C. Variations in riser height and tread width cannot be greater than 1/4 inch.
- D. Where a landing exists that has a door or gate which opens onto it, the resulting width cannot be less than 20 inches.
- E. Except during stairway construction, foot traffic is prohibited unless open voids in treads are filled with wood or some other solid material to the top and full width of the pans.

Stairways & Ladders

- F. Stairways with a rise of 30 inches or more or having 4 or more risers should have at least 1 handrail and stair rails along any unprotected sides.
- G. Winding and spiral stairs must have a handrail located in such a way as to prevent employees from walking on the portion of treads less than 6 inches.
- H. Stair rails should be at least 36 inches but not more than 37 inches from the top front edge of the treads to the top of the handrail. Mid rails shall be provided located midway between the top edge of the stairway system and the top front edge of the tread.
- J. On stairways less than 44 inches in width, only one handrail is required.
- K. On stairways more than 44 but less than 88 inches, 2 handrails are required.
- L. Stairways more than 88 inches shall have one handrail on each side and one railing in the middle of the stairs.
- M. Intermediate vertical members should be less than 19 inches apart.
- N. The surface of the handrail shall be prepared as to protect employees /from cuts and splinters.
- O. Ends of stair rails should not project past posts so as to cause a hazard.
- P. Handrails which are not a permanent part of the building should have a minimum clearance of 3 inches between the handrail and wall.
- Q. Unprotected sides of landings should be protected with a guard-rail system with a top rail 42 inches high, and a mid rail and toe board if work is to be conducted on the landing.

III. Portable Ladders (OSHA Standard 1926.1053)

- A. Keep both hands free when climbing or descending ladders. (DON'T CARRY ANYTHING WHILE GOING UP OR DOWN LADDERS. Use a tool pouch or hoist them up.
- B. Employees should face ladders while climbing or descending.
- C. Portable ladders should extend 3 feet above the upper landing surface and be tied off.
- D. Portable ladders should be pitched 1 foot out for every 4 feet of ladder height.

Stairways & Ladders

- E. Ladders should not be used on slippery surfaces unless provided with slip resistant feet or firmly secured.
- F. The maximum length for single metal extension ladders is 30 feet, two section ladders cannot exceed 48 feet, and /multi section ladders 60 feet.
- G. When the possibility exists for accidental movement, the ladder should be secured and/or barricaded.
- H. Portable ladders exposed to electrical hazards shall be constructed of non conductive materials.
- I. Do not move or shift ladders that are occupied.
- J. Do not place a ladder in front of a door unless the door has been locked or properly guarded.
- K. A competent person should be assigned to inspect portable ladders on a periodic basis for proper usage and condition.

IV. Stepladders (OSHA Standard 1926.1053)

- A. Never stand or work off of the top or top step of any step ladder.
- B. Employees working off a stepladder exposed to electrical hazards must use a ladder constructed of non conductive materials.
- C. Step ladders should have a locking device between the front and back legs to prevent spreading.
- D. Stepladders should be fully open when in use.
- E. A competent person should be assigned to inspect stepladders on a periodic basis, for proper usage and condition.
- F. The bracing on the back of stepladders should not be used for climbing unless constructed for that purpose.
- G. Stepladder should not be used as a straight ladder, as the legs may slip and the steps are not at the correct angle.

V. Job Built Ladders (OSHA Standard 1926.1053)

- A. Wood parts should be seasoned, smoothly machined, and dressed on all sides. Fasteners should be driven all the way in and countersunk not more than 1/8N inch.

Stairways & Ladders

- B. material used for cleat boards should be as free from knots as possible.
- C. Single and double cleat job built ladders cannot exceed 24 feet in length.
- D. The width of single cleat ladders should be between 16 and 20 inches. The ladder width of double cleat ladders should be 18 to 22 inches for either side.
- E. On double cleat ladders, cleats should extend the full width of the ladder and be evenly spaced between 8 and 12 inches from the tops of the cleats.

VI. Training (OSHA Standard 1926.1060)

- A. Employees should be trained in the use of ladders and stairways. The employees should be able to recognize hazards related to ladders and stairways and know how to minimize these hazards.
 - 1. Employees should be trained in the nature of fall hazards.
 - 2. They should know the correct procedures for erecting, maintaining, and disassembling the fall protection to be used.
 - 3. Employee should know the proper construction, use, placement, and care in handling stairways and ladders.
 - 4. Employees should know where to find the load carrying capacities of ladders and the importance of working within those limits.

Back Injury Prevention

The following program has been adopted as a guideline for back safety. This program will be used as a general outline for training of employees. New and current employees should be trained in the following guidelines as a minimum requirement. In addition, periodically, employees should receive follow-up training to insure compliance and understanding.

A. Lifting

1. Size Up The Load

Always assess the object before lifting it. Make sure the load is stable and balanced. Carefully and slowly put force against the object to determine its weight.

IF IT IS TOO HEAVY, GET HELP IF YOU CAN'T GET HELP, WAIT.

2. Plan The Job

Plan a route free of tripping and slipping hazards. Ensure the planned route allows for easy travel. Know where the object will be unloaded and plan for rest stops if necessary. Think through the lift; lift the load in your mind. Face the object you are about to lift and if possible, face toward the direction you want to go. Don't obstruct your view by stacking objects too high. This is one of the quickest routes to an injury. Use devices to help with the load whenever possible, dolly, winch, pulley, forklift, etc. Break a large load into smaller loads whenever possible.

3. Base of Support

Make sure your footing is firm. Keep at least shoulder width apart. A staggered stance, with one foot slightly behind the other, often aids in providing a firm base of support.

4. Bend Your Knees

Bend at your knees, not at your waist. Bend down as far as necessary using your legs and not your back.

5. Get a Good Grip

Grip the load firmly, using your whole hand, not just your fingers.

6. Keep the Load Close

Back Injury Prevention

Keep the load close to your body. The closer it is to your spine, the less force it puts on your back. Maintain the natural inward curve of your lower back. Keep your back upright. Whether you are lifting or putting down a load, do not add the weight of your body to the load.

Grasp the object with your palms, not just your fingers. Don't reach over a surface to pick up an object. If you can not get closer to the object, slide it toward you. Keep loads out of the danger zone by keeping the load between your shoulders and knuckles. Working in the danger zone multiplies the chance of injury.

10 pounds at /arms length is like lifting 100 pounds.

7. Lift With Your Legs

Lift with your legs allowing your body's powerful leg muscles to do the work. Flex your knees and hips, not your back. Tighten stomach muscles to give added support to the spine, thus helping offset the force of the load.

AVOID BENDING AT THE WAIST

8. Lift Smoothly

Move the load in a smooth motion. Do not use jerky movements. Jerky movements not only increase the chance of a strain or sprain but may also throw you off balance.

9. Pivot, Don't Twist

Don't twist your body when moving objects that have already been lifted. Pivot your feet and turn your entire body in the direction of movement.

B. Travel

1. Carrying the Load

Walk using short steps with feet far enough apart to maintain good balance.

C. Lowering the Load

1. Lower Slowly

Lower the load slowly, by flexing the knees and hips. Don't bend at the waist. After releasing the load straighten up using your legs. Remember, you can injure yourself just as badly by putting the load down incorrectly as you can by lifting it.

Back Injury Prevention

D. Moving Objects

I. Pushing

When possible, push instead of pull an object. Lean into the object and let your body weight and thigh muscles do the work. Pushing puts less strain on the back.

**THINK BEFORE YOU LIFT. ONLY YOU KNOW YOUR
PHYSICAL CAPABILITIES**

Industrial Powered Trucks (Forklifts)

Industrial Powered Trucks (Forklifts)

This section points out some of the most common minimum safety standards as set forth by **OSHA**.

	Section Contents	OSHA Standards
I.	General Requirements	(1910.178)
II.	Designated Locations	(1910.178(c))
III.	Safety Guards	(1910.178(e))
IV.	Changing and Charging Storage Batteries	(1910.178(g))
V.	Trucks and Railroad Cars	(1910.178(k))
VII.	Operation	(1910.178(m))
VIII.	Loading	(1910.178(o))
IX.	Maintenance	(1910.178(q))

For further guidance on industrial powered trucks, refer to **OSHA** General Industry Standards (1910.178).

Industrial Powered Trucks (Forklifts)

I. General Requirements (OSHA Standard 1910.178)

- A. The standards in this section pertain to the following equipment:
 - I. Fork trucks, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines.
- B. All approved trucks must bear a label or some type of identifying mark indicating approval by the testing lab.
- C. All modifications must be approved by the manufacturer.

II. Designated Locations (OSHA Standard 1910.178(c))

- A. Only power operated industrial trucks with the **EX** designation can be allowed to be used in atmospheres containing hazardous concentrations of metal dust, including aluminum, magnesium or other metals of similarly hazardous characteristics, and carbon black, coal, or coke dust.
- B. In atmospheres containing dust of magnesium, aluminum or aluminum bronze; fuses, switches, motor controllers, and circuit breakers of trucks shall be a specially approved type.
- C. Only specially designated industrial trucks shall be used in atmospheres containing certain highly volatile substances. Refer to **OSHA** standard 1910.178(c)(2)(b)(iii)(iv) for the designations of the appropriate trucks for descriptions of the substances involved.
- D. Only power operated industrial trucks with the designation of EX shall be used in atmospheres in which combustible dust is or may be in suspension continuously, intermittently, or periodically, in quantities sufficient to produce explosive or ignitable mixtures.

III. Safety Guards (OSHA Standard 1910.178(e)).

- A. High Lift Rider trucks must be fitted with an overhead guard that meets ANSI specifications.
- B. If the type of load presents a hazard, the user shall equip the fork truck with a vertical load backrest extension that meets ANSI specs.

IV. Changing and Charging Storage Batteries (OSHA Standard 1910.178(g))

- A. Battery charging areas must be identified as such.

Industrial Powered Trucks (Forklifts)

- B. The charging area must have facilities for flushing and neutralizing spilled electrolyte, fire protection, protection from damage by fork trucks to battery charging equipment, and ventilation of gasses from charging batteries.
- C. A conveyor, overhead hoist or similar equipment must be used for handling batteries.
- D. A carboy filter or siphon must be used for handling electrolyte.
- E. Trucks shall be properly positioned with the brake set before charging batteries.
- F. While charging, be sure vent caps are working properly and compartment must be open to compensate for excess heat.
- G. Smoking must be prohibited in charging area.
- H. All precautions must be taken to prevent open flames, sparks, or electric arcs in charging area.
- I. Metallic objects must be kept from the top of batteries to prevent arcing.

V. Trucks and Railroad Cars (OSHA Standard 1910.178(h))

- A. When boarding highway truck trailers, the rear wheels must be chocked.
- B. When loading railroad cars, wheel stops or some other form of positive protection must be used to prevent railroad cars from moving.
- C. When truck trailers are not connected to a tractor, some type of jack device must be used to prevent tipping of the trailer while loading.

VI. Training (OSHA Standard 1910.178(l))

- A. A training program must be set up to train new operators on powered industrial trucks. All operators must be trained and certified by a competent trainer before being allowed to operate a powered industrial truck.

VII. Operation (OSHA Standard 1910.178(m))

- A. No person shall be allowed to stand or pass under the elevated portion of the truck, whether loaded or unloaded.
- B. Riders are not allowed on trucks.
- C. Arms and legs must be kept inside running line of truck.

Industrial Powered Trucks (Forklifts)

- D. When a truck is left unattended, forks must be fully lowered with controls neutralized, power shut off, and brakes set. If it is left parked on an incline the wheels must be blocked.
 - 1. A truck is considered unattended when it is either out of the operators view or when it is further than 25 feet from operator.
 - 2. If the driver is within 25 feet of the truck and it is within view, the load must be fully lowered, the controls neutralized, and the brakes set.
- E. Trucks shall not be used for opening freight car doors.
- F. Overhead guards should be used to protect against falling objects. It should be pointed out to operators that these guards are not designed to withstand full capacity loads.
- G. A load backrest extension must be used when necessary to prevent the load from falling rearward.
- H. Forklifts must not be used for lifting employees unless it is equipped with a personnel platform and controls for the personnel on the platform to shut off power to the lift truck.
- I. Truck operators must observe speed limits and keep at least a 3 length distance from the truck in front of them.
- J. Drivers must slow down and sound the horn at intersections and pedestrian crossways that have obstructed view.
- K. If the load being carried obstructs the view of the driver, the driver must travel with the load trailing.
- L. Railroad tracks must be crossed diagonally.
- M. When ascending or descending grades in excess of 10 percent, loaded trucks must be driven with the load trailing.
- N. On all grades the load and load engaging means shall be tilted back and raised only as high as necessary to clear the driving surface.
- O. Caution must be used when driving on wet or slippery floors.
- P. Dock-boards or bridge-plates must be properly secured before driving over.
- Q. Speed must be reduced when making turns with turns being manoeuvred in a smooth sweeping motion.

Industrial Powered Trucks (Forklifts)

VIII. Loading (OSHA Standard 1910.178(0))

- A. Only loads within the rated capacity of the truck can be handled.

IX. Maintenance (OSHA Standard 1910.178(q))

- A. Any power operated industrial truck must be removed from service.
- B. Repairs which involve fire hazards must be done in a designated area that is designed for such work.
- C. Any work done on the electrical system must first involve disconnection of the battery.
- D. Trucks cannot be altered in a way that would change the relative position of parts from that of the manufacturer's.
- E. A safety inspection shall be done at least daily, or at the beginning of each shift in the event it is used around the clock.
- F. Water mufflers must retain a water level of at least 75 percent. No truck can be operated if emitting hazardous sparks or flames from the exhaust.

LOCKOUT / TAGOUT PROGRAM

I. Purpose

This procedure established requirements for **Lockout** or **Tagout** of energy isolating devices. It should be used to ensure the machine or piece of equipment is isolated from all potentially hazardous energy. The locked out or tagged out procedure shall be accomplished before employees perform any service or maintenance activities where the unexpected ,energization, start-up or release or stored energy could cause injury.

At the end of this section are the Hazardous Energy Control Procedure Forms. There is one form for each piece of equipment or machinery that is covered by this **Lockout/Tagout** procedure.

II. Responsibility

- A. Appropriate employees shall be instructed in the safety significance of the **Lockout/ Tagout** procedure, as well as how to use this procedure by the **Supervisor**.
- B. Only authorized employees may **Lockout/Tagout** machines or equipment. Authorized employees are identified on each Hazardous Energy Control Procedure form.
- C. Affected employees and any other employees whose work operations are, or may be in the area, will be instructed in the purpose and use of the **Lockout/Tagout** procedure by the **Supervisor**.
- D. Affected employees or their job titles are identified on each Hazardous Energy Control Affected Employees Form. They will be notified by the authorized employees whenever a **Lockout /Tagout** will occur, as well as when the equipment is to be placed back in service.
- E. It is the responsibility of management to approve all Hazardous Energy Control Procedures. Approval can be given by the **Supervisor**.

III. Preparation for Lockout/Tagout

- A. Obtain the proper hazardous Energy Control Procedure for the equipment or machine to be locked out or tagged out.
- B. Identify affected employees by name that they may be involved in the impending **Lockout/Tagout**.

Lockout/Tagout Program

IV. Lockout/Tagout System Procedure

- A. Notify affected employees that a **Lockout/Tagout** is going to be used and the reason for it. The authorized employee shall know the type and magnitude of energy the machine or equipment utilizes and shall understand the hazards there of.
- B. Shutdown the equipment by normal stopping procedures. Operate the equipment to be sure it is off.
- C. Stored energy must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, ,etc.
- D. **Lockout/Tagout** the electrical disconnect with individual lock or tags.
- E. After ensuring that other personnel will not be exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.

CAUTION: Return operating controls to OFF position after the test.

The equipment is now Locked/Tagged out.

Note: Combination locks are prohibited for **Lockout** of machines or equipment. **Do not** attempt to operate machine or equipment when it is **Locked** or **Tagged Out**.

V. Restoring Equipment to Normal Production Operation

- A. After servicing and/or maintenance is complete and equipment is read for normal production operations, check the area to ensure no one is exposed.
- B. Ensure tools have been removed from the equipment and guards have been reinstalled.
- C. Remove **Lockout/Tagout** devices and reconnect the disconnect to restore energy to the machine.

VI. Training

- A. **Lockout/Tagout** training will be performed for this listed equipment and/or machines by the **Supervisor**.
- B. Authorized employees will be trained prior to their initial involvement in the **Lockout/ Tagout** procedures.

Lockout/Tagout Program

- C. Affected employees will be trained prior to work assignment.
- D. Employees will be retained whenever there is a change in job assignment, equipment or process that would create a new hazard.
- E. Training documentation will be maintained by the **Supervisor**. The documentation should include the employees name and the date trained. A copy should be kept in the Safety and Health Manual.

VII. Group Lockout/Tagout Procedures

- A. One authorized employee will co-ordinate the **Lockout/Tagout** procedure for group **Lockout/Tagouts**.
- B. No employee will be allowed to remove another employee's lock or tag without proper authorization.
- C. Employees will remove their own lock or tag when their part of the operation is completed.

Lockout/Tagout Program

(Your Company) Lockout/Tagout Inventory List

Listed below is an inventory of the machines and equipment requiring the use of Lockout/Tagout procedures.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

Lockout/Tagout Program

(Your Company) Hazardous Energy Control Procedure Form

Listed below is a step by step procedure for **Lockout/Tagout** for the following piece of equipment:

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	

List the names of the employees authorized to **Lockout /Tagout** this piece of equipment

_____	_____
_____	_____
_____	_____
_____	_____

HEARING CONSERVATION PROGRAM

I. Purpose

This program establishes procedures and guidelines for the hearing safety of employees and the use of hearing protection equipment while performing certain functions at **(Your Company)**. It should be used to ensure the safety of employees while performing any of their normal duties when working for **(Your Company)**.

II. Designation of Program Administrator and Responsibilities

The Hearing Conservation Program will be administered by **(The President)**. His responsibility as Program Administrator will be to make decisions and implement changes in the Hearing Conservation Program as needed. In addition, **(The President)** will also be charged with the following responsibilities:

- A. Establishment of a periodic inspection program for monitoring the conditions that may require the use of hearing protection equipment.
- B. Supervision of hearing protection equipment selection procedure.
- C. Establishment of training programs pertaining to the use, care and inspection of hearing protection equipment and the importance of hearing protection and the **OSHA** standards that apply.
- D. Establish a program for the cleaning and inspection of hearing protection equipment.
- E. Establishment and issuance of accounting procedures for employees assigned to wear hearing protection equipment.
- F. Implementing a program for notifying employees that are exposed to noise at or above an 8 hour time weighted average of 85 decibels or higher.
- G. Establishing a program for Audiometric testing for all employees with exposure levels above the established limits.
- H. Establish a recordkeeping system for exposure limits and testing results and allow affected employees access to those records.

Hearing Conservation Program

III. Policy Statements

A. Evaluation of the Hazard

An evaluation of each operation will be made by the **Supervisor** before employees are allowed to commence work. This evaluation will be done to determine what noise exposure hazards, if any, the employee may be exposed to. The evaluation will involve the use of an analog sound level meter. When it is determined the employee noise level exposure levels equal or exceeds 85 decibels in an 8 hour time weighted average, the Hearing Conservation Program shall be utilized.

B. Implementation of Engineering and/or Administrator Controls

Upon completion of the hazard evaluation, the **Supervisor** shall review the results and determine the feasibility of engineering and/or administrative control techniques. These controls shall be administered before commencing work.

C. Selection of Hearing Protection Equipment

If it is determined at this point the administrative and/or engineering controls aren't feasible, the **Supervisor** shall determine the appropriate personal protective measures to be implemented. It shall be the responsibility of the President to purchase and distribute the appropriate hearing protection equipment for each job.

D. Training Exposed Employees

The **Supervisor** will be responsible for training on an annual basis, in at least the following:

1. The importance of the Hearing Conservation Program.
2. The **OSHA** Standard 1910.95 and 1926.52 as it applies to them.
3. The effects of noise on hearing.
4. The purpose of hearing protectors, including the advantages and disadvantages.
5. Attenuation of various types of hearing protection equipment.
6. Selection, fitting, use and care of hearing protection equipment.
7. The purpose of audiometric testing and an explanation of the test procedures.

Hearing Conservation Program

E. Training of Other Employees

All other employees not directly exposed to these noise levels but may have occasional contact with the hazard area, will be trained in the following on at least an annual basis:

1. The importance of the Hearing Conservation Program.
2. The effects of noise on hearing.
3. The purpose of hearing protectors.
4. Attenuation of various types of hearing protection equipment.
5. Selection, fitting, use and care of hearing protection equipment.

F. Care and Inspection

1. Insert type ear plugs shall be used by only the person to which they were issued.
2. The disposable type ear plugs shall not be used for more than one week.
3. All other insert type plugs will be cleaned at least weekly with a solution of mild soap and warm water or follow specific manufacturers recommendations.
4. Muff type hearing protection equipment will be cleaned at least weekly or before being used by another employee.
5. All hearing protection equipment will be inspected before each use for any defects that may alter it's effectiveness.

G. Compliance Accounting

An inspection program will be implemented by **(The President)** and carried out by the **Supervisor**. The inspections will be carried out on a random basis and without warning. The inspector will check to see that all employees required to wear hearing protective equipment are wearing the appropriate equipment. The inspection forms will be filed and kept in the main office for a period of 1 year.

H. Notification of Excessive Noise Exposure

Hearing Conservation Program

Before commencing work, all effected employees shall be notified by the **Supervisor** of the anticipated or measured noise levels involved in the job and instructed in the appropriate hearing protective equipment to be worn.

I. Audiometric Testing

The following guidelines are to be followed for ,audiometric testing at **(Your Company)** for employees with noise exposure levels equal to or greater than 8 hour time weighted average of 85 decibels:

1. The program shall be free to employees.
2. Audiometric tests will be performed by a person certified in the administration of audiometric testing or someone who has satisfactorily demonstrated competence in administering audiometric examinations.
3. Baselines audiograms will be given within 6 months of the time of first exposure.
4. Audiograms will be given to all effected employees.
5. Annual audiograms results will be compared with baseline tests to determine if standard threshold shift has occurred.
6. If it is determined a standard threshold shift has occurred, the employee maybe re-tested within 30 days.
7. For requirements on follow up testing procedures, refer to the **OSHA** Standard 1910.95(g)(8) through (10).
8. Audiometric testing requirements can be found in the ,**OSHA** Standard 1910.95(h).

J. Recordkeeping

1. **(Your Company)** will maintain records of initial exposure measurements and new exposure limits conducted whenever any of the following takes place:
 - a. There is a change in processes, equipment or controls that increase noise exposure to the extent that additional employees are exposed at or above the action level.
 - b. When the effectiveness of the hearing protection equipment is not sufficient to reduce employee exposure.

Hearing Conservation Program

2. Records of exposure level measurements will be kept for a period of 2 years.
3. All audiometric test results will be retained for the duration of the affected employee's employment.
4. All records will be provided upon written request to employees, employee designated representatives and **OSHA**.
5. If for some reason, **(Your Company)** were to cease doing business, all records required by this program will be transferred to **NELCO**.

Hearing Conservation Program

(Your Company) Audiometric Testing Form

Employee Name:

Job Classification:

Date of Audiogram:

Examiner's Name:

Date of Last Calibration of Audiometer:

Date of Employee's Most Recent Noise Exposure Assessment:

Background Sound Pressure Levels in the Audiometric Test Room:

Hearing Conservation Program

(Your Company) Noise Exposure Form

Date:

Job Address:

Inspector:

Job or Task:

Noise Level After Protection:

Recommended Measures of Protection:

CONFINED SPACE

The following information is reprinted from information taken directly from the **U.S. Department of Labor Occupational Safety and Health Administration publication titled Permit-Required Confined Spaces (Permit Spaces) number OSHA 3138-1993.**

I. Introduction

Many workplaces contain spaces considered to be "confined" because their configuration hinders the activities of any employees who must enter into, work in and exit from them. In many instances, employees who work in confined spaces also face increased risk of exposure to serious physical injury from hazards such as entrapment, engulfment and hazardous atmospheric conditions. Confinement itself may pose entrapment hazards and work in confined spaces may keep employees closer to hazards, such as asphyxiating atmosphere, than they would be otherwise. For example, confinement, limited access and restricted airflow can result in hazardous conditions that would not arise in an open workplace.

The term "permit-required confined space" ,(i.e. permit space) refers to those spaces that meet the definition of a "confined space" and pose health or safety hazards, thereby requiring a permit for entry.

A confined space has limited or restricted means of entry or exit, is large enough for a employee to enter and perform assigned work and is not assigned for continuous occupancy by the employee. These spaces may include, but are not limited to, underground vaults, tanks, storage bins, pits and ,diked areas, vessels and silos.

A permit-required confined space is one that meets the definition of a confined space and has one or more of these characteristics: (1) Contains or has the potential to contain a hazardous atmosphere, (2) Contains a material that has the potential to for engulfing an entrant, (3) Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly covering walls or by a floor that slopes downward and tapers to a smaller cross section, and/or (4) Contains any other recognized serious safety or health hazards.

II. Who is Covered

OSHA standard for confined spaces, Titles 29 Code Federal Regulations Part 1910.146, effective April 15, 1993, contains the requirements for practices and procedures to protect employees in general industry from hazards of entry into permit-requires confined spaces (i.e. permit spaces).

Confined Space

OSHA estimates about 224,000 establishments have permit spaces: 7.2 million production workers are employed at these establishments, and about 2.1 million workers enter permit spaces annually.

OSHA anticipates that compliance with these regulations will avoid 53 worker deaths and injuries, 4,900 lost-workday cases and 5,700 non-lost time accidents annually.

III. Requirements of the Standard

A. General

In general, **(Your Company)** must evaluate the workplace to determine if spaces are permit-required confined spaces (see flow chart). If there are permit spaces in the workplace, the **(Your Company)** must inform exposed employees of the existence, location and danger posed by the spaces. This can be accomplished by posting danger signs or by another equally effective means. The following language will satisfy the requirements for such a sign:

DANGER

PERMIT REQUIRED -- CONFINED SPACE

AUTHORIZED ENTRANTS ONLY

If employees are not to enter and work in permit spaces, **(Your Company)** must take effective measures to prevent their employees from entering the permit spaces (see 1910.146, section c(1), c(6) and c(8) for requirements).

Under certain conditions, the **(Your Company)** may use alternate procedures for worker entry into a permit space (see sections ,c(5)(i) and ,c(5)(ii) for requirements). For example, if **(Your Company)** can demonstrate with monitoring and inspection data that the only hazard is an actual or potential hazardous atmosphere, which can be made safe for entry by the use of continuous forced air ventilation alone, they may be exempted for such requirements, such as permits and attendants.

Even in such circumstances, however, the internal atmosphere of the space must be tested first for oxygen content, second for flammable gases and vapors and third for potential toxic air contaminants before any employee enters.

Confined Space

B. Written Program

(Your Company) who implements a written program to allow employees entry must develop and program for permit-required confined spaces. the **OSHA** standard requires the **(Your Company)** to:

1. Identify and evaluate permit space hazards before allowing employee entry.
2. Test conditions in the permit space before entry operations and monitor the space during entry.
3. Perform, in the following sequence, the appropriate testing for atmospheric hazards: combustible gases or vapors and toxic gases and vapors.
4. Implement necessary measures to prevent unauthorized entry.
5. Establish and implement the means, procedures and practices, such as providing barriers, verifying acceptable entry conditions, purging, making inert, flushing or ventilating the permit space to eliminate or control hazards necessary for safe permit-space entry operations.
6. Identify employee job duties.
7. Provide, maintain and require, at no cost to the employee, the use of personal protective equipment and any other equipment necessary for safe entry ,(e.g., testing, monitoring, ventilating, communications and lighting equipment, barriers, shields and ladders).
8. Ensure that at least one attendant is stationed outside the permit space for the duration of entry operations.
9. Co-ordinate entry operations when employees of more than one **(Your Company)** are to working in the permit space.
10. implement emergency procedures for summoning rescue and emergency services.
11. Establish, in writing, and implement a system for the preparation, issuance, use and cancellation of entry permits.
12. Review established entry operations and annually revise the permit-space entry program.

Confined Space

13. When an attendant is required to monitor multiple spaces, implement the procedures to be followed during an emergency in one or more of the permit spaces being monitored.

If hazardous conditions are detected during entry, employees must immediately leave the space and the **(Your Company)** must evaluate the space to determine the cause of the hazardous atmosphere.

When entry to permit spaces is prohibited, **(Your Company)** must take effective measures to prevent unauthorized entry. Non-permit confined spaces must be re-evaluated when there are changes in their use or configuration and, where appropriate, must be reclassified.

If testing and inspection data prove that a permit-required confined space no longer possess hazards, that space may be reclassified as a non-permit confined space. If entry is required to eliminate hazards and to obtain data, **(Your Company)** must follow procedures as set forth under sections (d) through (k) of the standard. A certificate documenting the data must be made available to employees entering the space. The certificate must include the data, location of the space and the signature of the person making the certification.

Contractors also must be informed of permit-spaces and permit-space entry requirements, any identified hazards, **(Your Company)'s** experience with the space ,(i.e. the knowledge of hazardous conditions) and precautions or procedures to be followed when in or near permit spaces.

When employees of more than one Company are conducting entry operations, **(Your Company)** must co-ordinate entry operations to ensure that affected employees are appropriately protected from permit space hazards. Contractors also must be given any other pertinent information regarding hazards and operations in permit spaces and be debriefed at the conclusion of entry operations.

C. Permit System

A permit, signed by the entry **Supervisor** and verifying and that ,pre-entry preparation have been completed and that the space is safe to enter, must be posted at the entrances or otherwise made available to entrants before they enter a permit space.

The duration of entry permits must not exceed the time required to complete an assignment.

Confined Space

Also, the entry **Supervisor** must terminate entry and cancel permits when an assignment has been completed or when new conditions exist. New conditions must be noted on the cancelled permit and used in revising the permit space program. The standard also requires **(Your Company)** to keep all cancelled entry permits for at least 1 year.

D. Entry Permits

Entry permits must contain the following information:

1. Test results.
2. Tester's initials or signature.
3. Name and signature of **Supervisor** who authorizes entry.
4. Name of permit space to be entered, authorized entrants, eligible attendants and individuals authorized to be entry **Supervisors**.
5. Purpose of entry and know space hazards.
6. Measures, to be taken, to isolate permit spaces and to eliminate or control space hazards ,(i.e. locking out or tagging equipment and procedures for purging, making inert, ventilating and flushing permit spaces).
7. Date and authorizes duration of entry.
8. Acceptable entry conditions.
9. Communication procedures and equipment to maintain contact during entry.
10. Additional permits that have been issued to authorize work in the permit space.
11. Special equipment and procedures, including personal protective equipment and alarm systems
12. Any information needed to ensure employee safety.

Confined Space

F. Authorized Entrant's Duties

1. Know space hazards, including information on the mode of exposure ,(e.g. inhalation or dermal absorption), signs or symptoms and consequences of exposure.
2. Use appropriate personal protective equipment properly ,(e.g. face and eye protection and other forms of barrier protection, such as gloves, aprons and coverall).
3. Exit from permit space as soon as possible when ordered by an authorized person, when the entrant recognizes the warning signs or symptoms of exposures exists, when a prohibited condition exist or when entrant's status as well as to alert the entrant to evacuate.
4. Alert the attendant when a prohibited condition exists or when warning signs or symptoms of exposure exist.

G. Attendant's Duties

1. Remain outside permit space during entry operations unless relieved by another authorized attendant.
2. Perform non-entry rescues when specified by **(Your Company)**'s rescue procedure.
3. Know existing and potential hazards, including information on the mode of exposure, signs or symptoms, consequences of the exposure and their physiological effects.
4. Maintain communication with and keep an accurate account of those workers entering the permit-required space.
5. Order evacuation of the permit space when a prohibited condition exists, when worker shows signs of physiological effects of hazard exposure, when an emergency outside the confined space exists and when the attendant cannot effectively and safely perform required duties.
6. Summon rescue and other services during an emergency.
7. Ensure that unauthorized persons stay away from permit spaces or exit immediately if they have entered the permit space.
8. Inform authorized entrants and entry **Supervisor** of entry by unauthorized persons.
9. Perform no other duties that interfere with the attendant's primary duties.

Confined Space

H. Entry **Supervisor's** Duties

1. Know space hazards including information on the mode of exposure, signs or symptoms and consequences of exposure.
2. Verify emergency plans and specified entry conditions, such as permits, tests, procedures and equipment, before allowing entry.
3. Terminate entry and cancel permits when entry operations are completed or if a new condition exists.
4. Take appropriate measures to remove unauthorized entrants.
5. Ensure that entry operations remain consistent with the entry permit and that acceptable entry conditions are maintained.

I. **Emergencies**

The standard requires the **(Your Company)** to ensure that rescue service personnel are provided with and trained in the proper use of ,personal protective and rescue equipment, including respirators. They must be trained to perform assigned rescue duties and have had authorized entrants training. The standard also requires that all rescuers be trained in first aid and CPR and, at a minimum , one rescue team member be currently certified in first aid and CPR.

(Your Company) also must ensure that practice rescue exercises are performed yearly and that rescue services are provided access to permit spaces so that

Where appropriate, authorized entrants who enter a permit space must wear a chest or full body harness with a retrieval line attached to the center of their backs near shoulder level or above their heads. Wristlets must be used if **(Your Company)** can demonstrate that the use of a chest or full body harness is not feasible or creates a greater hazard. **(Your Company)** must ensure that the other end of the retrieval line is attached to a mechanical device or to a fixed point outside the permit space.

The mechanical device must be available to retrieve personnel from vertical type permit spaces more than 5 feet deep.

Confined Space

In addition, if an injured entrant is exposed to a substance for which a Material Safety Data Sheet (**MSDS**) or other similar written information is required to be kept at the work-site. That **MSDS** or other written information device must be made available to the medical facility treating the exposed entrant.

IV. Other Sources of OSHA Assistance

OSHA sources of assistance that are available to (**Your Company**) include consultation services, state plan activities, voluntary protection programs and training and education programs.

A. Consultation Services

Consultation assistance is available if (**Your Company**) wants help in establishing and maintaining a safe and healthful workplace. Largely funded by **OSHA**, the service is provided at no cost to the (**Your Company**). Primarily developed for smaller Companies with more hazardous operations, the consultation service is delivered by state government agencies or universities employing professional safety and health consultants. Comprehensive assistance includes an appraisal of all mechanical, physical work practice and environmental hazards of the workplace and all aspects of (**Your Company**)'s present job safety and health program. No penalties are proposed or citations issued for hazards identified by the consultants.

B. State Plans

OSHA allows each individual state to administer their own occupational safety and health program through approved section 18(b) of the Occupational Safety and Health Act, (**OSHA**) of 1970. Currently there are 25 state plan states. Florida, Texas and Oklahoma not among those states.

C. Voluntary Protection Programs

Voluntary protection programs ,(VPP's) on site consultation services , when coupled with an effective enforcement program, expand worker protection to help meet the goals of the **OSHA** Act. The three VPP's are: Star, Merit and Demonstration. They are designed to recognize outstanding achievement by companies that have successfully incorporated comprehensive safety and health programs into their total management system. They motivate others to achieve excellent safety and health results in the same outstanding way and they establish a co-operative relationship among (**Your Company**), employees and **OSHA**.

Confined Space

For additional information on VPP's and how to apply, contact the nearest **OSHA** office.

D. **OSHA** Training Institute

The **OSHA** Training Institute, in Des ,Plaines, ILL, provides the basis and advanced training and education in safety and health for federal and state compliance officers, state consultants, other federal agency and private sector Companies, employees and their representative.

OSHA also provides funds to non-profit organisations, through grants, to conduct workplace training and education in subjects where **OSHA** believes there is a lack of workplace training.

For more information on training courses and grants, contact the **OSHA** Training Institute, Office of Training and Education, 1555 Times Drive, Des ,Plaines, IL, 60018, (312) 353-2500.

HAZARDOUS WORK PERMIT (HWP)

SITE NUMBER:



WORK DESCRIPTION:		WORK LOCATION:		
		ESTIMATED START DATE:		
		REQUESTED BY:		
		REQUESTING DATE:		
HAZARDOUS CONDITIONS		SITE SURVEY		
		TYPE:		
		NUMBER:		
		DATE:		
		BY:		
REQUIRED PROTECTIVE CLOTHING AND EQUIPMENT				
HEAD/EYES	FEET	HANDS	BODY	RESPIRATORY
SAFETY GLASSES <input type="checkbox"/> GOGGLES <input type="checkbox"/> FACE SHIELD <input type="checkbox"/> HARD HAT <input type="checkbox"/>	RUBBER BOOTS <input type="checkbox"/> PLASTIC BOOTS <input type="checkbox"/> HIP WADERS <input type="checkbox"/> STEEL-TOE SHOES <input type="checkbox"/> DISPOSABLE SHOE COVERS <input type="checkbox"/>	COTTON GLOVES <input type="checkbox"/> PLAYTEX GLOVES <input type="checkbox"/> RUBBER GLOVES <input type="checkbox"/> NEOPRENE GLOVES <input type="checkbox"/> SURGICAL GLOVES <input type="checkbox"/> POLYVINYL ALCOHOL GLOVES <input type="checkbox"/> LEATHER GLOVES <input type="checkbox"/>	COVERALLS/COTTON <input type="checkbox"/> COVERALLS/TYVEX (REGULAR) <input type="checkbox"/> COVERALLS/TYPE SPECIAL STATE TYPE <input type="checkbox"/> TYPE RUBBER SUIT <input type="checkbox"/> ACID SUIT <input type="checkbox"/> RAIN SUIT <input type="checkbox"/> MOON SUIT <input type="checkbox"/>	HALF-FACE (NEGATIVE PRESSURE)° <input type="checkbox"/> FULL-FACE (NEGATIVE PRESSURE)° <input type="checkbox"/> POWERED AIR PURIFYING° <input type="checkbox"/> °SPECIFY CARTRIDGE/ CANISTER TYPE BELOW SUPPLIED AIR HOOD <input type="checkbox"/> SANDBLAST HOOD <input type="checkbox"/> SELF CONTAINED (SCBA) <input type="checkbox"/>
SPECIAL INSTRUCTIONS			MISCELLANEOUS	
WATCHMAN <input type="checkbox"/> ELECTRICAL LOCKOUT <input type="checkbox"/> PRE-ENTRY MONITORING <input type="checkbox"/> ADDITIONAL COMMENTS:			"BUDDY SYSTEM" IN EFFECT <input type="checkbox"/> JOB COVERAGE BY SAFETY PROFESSIONAL <input type="checkbox"/> SPECIAL TRAINING REQUIRED <input type="checkbox"/> TAPE GLOVES AND BOOTS TO COVERALLS <input type="checkbox"/> LIFE <input type="checkbox"/> SAFETY BELT <input type="checkbox"/> SAFETY HARNESS <input type="checkbox"/>	
			DOSIMETRY INDV. GROUP	
			TLD BADGE <input type="checkbox"/> EXTREMITY BADGE <input type="checkbox"/> SRD 0-200 mR <input type="checkbox"/> SRD (HIGH) <input type="checkbox"/> DIGITAL ALARMING DOSIMETER <input type="checkbox"/>	
			I.H. MONITORING INDV. GROUP	
			EXPIRATION DATE	
APPROVALS		TERMINATION		
DSSHR		DSSR		
SITE SUPERINTENDENT		SITE SUPERINTENDENT		
		REASON		

Machine Operation

MACHINE OPERATION

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- IV. Procedure**
- V. Training**

RESPIRATORY PROTECTION PROGRAM

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Respiratory Protection Program

Who Does This Apply To?

Use the checklist provided below to determine if your company is covered by **OSHA's** Respiratory Protection standard at §1910.134. If your company is covered by this standard, you need a respiratory protection program consisting of written standard operating procedures.

Your workplace has any of the following hazards that cannot be controlled through

- Lack of oxygen
- Presence of harmful dust
- Fogs
- Smokes
- Mists
- Fumes
- Gases
- Vapors
- Sprays

and

Your company has one or more employee who works with a respirator at any time;

Your company currently has no written respiratory program lying out standard

If you checked off all three of the above statements, then you are subject to the requirements of the Respiratory Protection Standard and must have a written respiratory program. In addition, you are subject to the written hazard assessment provision under the General Requirements part of Personal Protective Equipment (PPE) Subpart of **OSHA** regulations, in §1910.132. See the Personal Protective Equipment (PPE) section in this manual for further information on that requirement.

If you checked only the first two statements, but your company already has developed a written respiratory protection program, then you should use this section to:

1. Review the adequacy of your current written program's contents, and
2. Determine the compliance of your respiratory protection program overall.

If you checked off only the first of the above statements, but you never have employees work in those hazardous atmospheres and/or you only hire subcontract workers to work in such atmospheres, then you do not need a written Respirator Program for your workplace.

Respiratory Protection Program

What Is It?

Some of the most common workplace hazards to the lungs are the lack of oxygen and the presence of harmful dust, fogs, smokes, mists, fumes, gases, vapors, or sprays including substances that may cause cancer, lung impairment, other diseases, or death. Respirators are necessary to prevent the entry of harmful substances into the lungs during breathing. Some respirators also provide a separate supply of breathable air so work can be performed where there is inadequate oxygen, or where greater protection is needed.

The prevention of atmospheric contamination at the work-site generally should be accomplished as far as feasible by engineering control measures, such as enclosing or confining the contaminant-producing operation, exhausting the contaminant, or substituting with less toxic materials. However, when effective engineering controls are not enough to contain the hazard completely, while those controls are being installed, or during clean up operations, appropriate respirators must be used.

Where respirators are necessary for health protection, specific procedures are necessary to overcome any potential deficiencies and to insure the effectiveness of the equipment. **OSHA's** Respiratory Protection Program at §1910.134 regulates the selection and use of respirators in the workplace, because the use of respirators is complex, and different hazards require different respirators. If your company is covered by this standard, you need a respiratory protection program consisting of written standard operating procedures to govern the selection and use of respirators in your workplace.

The written respiratory protection program should contain all information needed to maintain an effective respirator program to meet the user's individual requirements. It should be written so as to be useful to:

- Those directly involved in the respirator program,
- The program administrator,
- Those fitting the respirators and training the workers,
- Respirator maintenance workers, and
- The supervisors responsible for overseeing respirator use on the job.

It is not necessary that the respirator program operating procedures be written for the wearer, although in a very small program it may be desirable to direct their content to the wearer. Only analysis of the individual program will show to what extent information for the wearer should be included.

Any respirator program should stress thorough training of all participants, chiefly the users who need to wear the respirators. Employees must be aware that the equipment does not eliminate the hazard. If the equipment fails, overexposure will occur. To reduce the possibility of failure, equipment must fit properly and be maintained in a clean and serviceable condition.

Respiratory Protection Program

Elements of a Respirator Program

An effective respirator program should include at least the following written standard operating procedures as elements to govern the selection and use of respirators in your workplace:

- **Purpose** A statement of the program's purpose.
- **Respirator selection** Respirators must be selected for the hazards to which the workers Health under the provisions of 30 CFR part 11.
- **Training and use** Detailed instructions for training workers in the proper use of the respirator(s), including respirator fitting, respirator limitations, and all other necessary elements for which they will need the knowledge to perform duties associated with it.
- **Detailed maintenance procedures for inspection, cleaning, disaffection, and storage.** use such as self contained devices shall be thoroughly inspected at least once a month and after each use. Respirators shall be cleaned and disinfected. Those used by more than one worker shall be thoroughly cleaned and disinfected after each use. They shall be stored in a convenient, clean, and sanitary location.
- **Work area surveillance** Appropriate surveillance of work area conditions and degree of
- **Program evaluation** Procedures for evaluating the respirator program's effectiveness via regular inspection and evaluation.
- **Physical fitness determination for users** Guidelines for medical surveillance of workers, examinations to review the overall effectiveness of the respirator program on the basis of physiological factors. The respirator user's medical status should be reviewed periodically (for instance, annually).
- **Air quality standards** Technically, you need not put this as a separate section of the written program, but the air quality standards are an important requirement which you may wish to have in writing. Information is provided here on them.

The exact format of written standard operating procedures may vary widely. The large company that has many workers wearing respirators and, perhaps, several respiratory hazards to consider, may formulate separate procedures for selection and use of respirators for each hazard. Respiratory Protection Program

For a small company, which have only a few workers to protect from only one or very few hazards, a much simplified document may serve; but it must cover the same subjects. In general, the complexity of the procedures increases as respirator use increases.

Respiratory Protection Program

The procedures also become more extensive as the toxicity of the respiratory hazard(s) increases, demanding better and more reliable protection. It is better to be overly detailed in developing written operating procedures than not detailed enough.

Further information is given here on the complex issues of all the program elements except the Purpose and Program Evaluation sections, which are relatively straightforward.

Respirator Selection

Choosing the right equipment is complex and involves several steps: determining what the hazard is and its extent, choosing equipment that is certified for the function, and assuring that the device is performing the intended function. The proper selection of respirators must be made according to the guidance of American National Standards Institute (ANSI) publication, "Practices for Respiratory Protection," ANSI Z88.2-1969 (A later edition of this standard, Z88.2-1980, has been issued by ANSI.)

Chemical and physical properties of the contaminant, as well as the toxicity and concentration of the hazardous material and the amount of oxygen present, must be considered in selecting the proper respirators. The nature and extent of the hazard, work rate, area to be covered, mobility, work requirements and conditions, as well as the limitations and characteristics of the available respirators also are selection factors.

There are two basic classes of respirators: air purifying and atmosphere supplying. Air-purifying respirators use filters or sorbents to remove harmful substances from the air. They range from simple disposable masks to sophisticated powered air-purifying respirators. Air-purifying respirators do not supply oxygen and may not be used in oxygen-deficient atmospheres or in ones that are immediately dangerous to life or health (IDLH). Atmosphere-supplying respirators are designed to provide breathable air from a clean air source other than the surrounding contaminated work atmosphere. They range from supplied-air respirators and self contained breathing apparatus (SCBAs) to complete air-supplied units.

The time needed to perform a given task, including the time necessary to enter and leave a contaminated area, is one factor that determines the type of respiratory protection needed. For example, an SCBA, gas mask, or air-purifying chemical-cartridge respirator provides respiratory protection for relatively short periods; whereas a type of atmosphere-supplying respirator that supplies breathable air from an air compressor through an air line can provide protection for extended periods of time. Particulate filter air-purifying respirators can provide protection for long periods without the need of filter replacement only if the total concentration of atmospheric particulate is low. Where there are higher concentrations of contaminants an atmosphere-supplying respirator such as the positive pressure supplied-air respirator (SAR) offers the advantage of better protection and longer duration.

The use of SAR's also avoids the need to be concerned about the sensory warning properties of the airborne toxic materials, a factor that must be considered when using air-purifying respirators. These respirators also cause less discomfort than air-purifying respirators because the wearer need not overcome filter resistance when inhaling.

Air-purifying respirators present minimal interference with the wearer's movement, whereas atmosphere-supplying respirators may restrict movement and present potential hazards. For example, SAR's with their trailing hoses, can limit the area the wearer can cover and may present a potential hazard where the trailing hose can meet machinery.

Respiratory Protection Program

Similarly, a SCBA -- (a respirator that includes a back-mounted, compressed-air cylinder), presents both a size and weight penalty. This may restrict climbing and movement in tight places, and carrying the added weight of the air cylinder presents an additional burden.

Another factor to consider when using respirators is the air-supply rates. The wearer's work rate determines the volume of air breathed per minute. The volume of air supplied to meet the breathing requirement is of great significance when using atmosphere-supplying respirators such as self contained and air-line respirators that use cylinders because this volume determines their operating life. The useful service life of these respirators under even moderate working conditions may be significantly less than under conditions of rest.

The peak airflow rate is also important in the use of a constant-flow SAR. The air-supply rate should always be greater than the maximum amount of air being inhaled to maintain the respiratory enclosure under positive pressure.

Higher breathing resistance of air-purifying respirators under conditions of heavy work may result in distressed breathing. A person working in an area of high temperature or humidity is under stress. Additional stress resulting from the use of a respirator should be minimized by using one having a minimal weight and minimal breathing resistance when these can be fitted properly to the wearer.

Some type of warning on the remaining service life is available for all SCBAs and for some chemical canister respirators. This may be a pressure gauge or timer with an audible alarm for SCBAs or a color end-of service-life indicator on the cartridge or canister. The user should understand the operation and limitations of each type of warning device. Most other gas masks and chemical-cartridge respirators have no indicator for remaining service life. It is important, therefore, that new canisters and cartridges be used at the beginning of each work shift.

Respiratory Protection Program

(This table presents a simplified version of characteristics and factors used for respirator selection. It does not specify the contaminant concentrations or particle size.)

Hazard	Respirator
1. Oxygen Deficiency	
Immediately dangerous to life or health*	Any positive-pressure SCBA. Combination positive-
Not immediately dangerous to life or health	Any positive-pressure SCBA .or supplied-air respirator.
2. Gas and vapor contaminants	
Immediately dangerous to life or health*	Positive-pressure SCBA. Combination positive
Not immediately dangerous to life or health	Any positive-pressure SAR. Gas mask. Chemical
3. Particulate contaminants	
	Any positive-pressure SAR including abrasive blasting with a specific particulate filter.
4. Gaseous and particulate contaminants	
Immediately dangerous to life or health*	Positive-pressure SCBA. Combination positive-pressure
Not immediately dangerous to life or health	Any positive-pressure supplied-air respirator. Gas
5. Escape from contaminated atmosphere	Any positive-pressure SCBA. Gas mask. that ma
6. Fire fighting	Any positive-pressure SCBA
*Note: "Immediately dangerous to life or health" is any condition that poses either an immediate threat to	

Respiratory Protection Program

Training and Use

Both supervisors and workers must be taught the proper selection, use, and maintenance of respirators. All employees required to use respiratory protective equipment must be instructed in the proper use of the equipment and its limitations.

Written procedures shall be prepared covering safe use of respirators in dangerous atmospheres that might be encountered in normal operations or in emergencies.

Respiratory Protection Program

Personnel shall be familiar with these procedures and the available respirators. Those employees who will be required to use respiratory protective equipment in atmospheres immediately dangerous to life or health should be trained in rescue procedures and have special requirements for attendants. Communications (visual, voice, or signal line) shall be maintained between all individuals present.

The training, conducted by a competent person, must include instructions of fitting and on how to check the face-piece-to-face seal. The employee must be given an opportunity to handle the respirator, wear it in normal air for a period of time to become familiar with it and to practice adjusting it, and then wear it in a test atmosphere.

Training should include an explanation of the following:

- Nature of the respiratory hazard and what may happen if the respirator is not used properly,
- Engineering and administrative controls being used and the need for the respirator as added protection,
- Reason(s) for selection of a particular type of respirator,
- Limitations of the selected respirator,
- Methods of donning the respirator and checking its fit and operation,
- Proper wear of the respirator,
- Respirator maintenance and storage, and
- Proper method for handling emergency situations.

Users should know that improper respirator use or maintenance may cause overexposure. They should know that continued use of poorly fitted and maintained respirators can also cause chronic disease or death from overexposure to air contaminants.

Fit Testing

Full face-pieces, half masks, quarter masks and even the different brands of the same type of respirator marketed, have different fit characteristics. No one respirator will fit everyone. Employers will find it advantageous to purchase several brands of each type in various sizes to assure proper fit for all workers who must wear one.

Corrective glasses worn by employees also present a problem when fitting respirators. Special mountings are available to hold corrective lenses inside full face-pieces. If corrective lenses are needed, the face-piece and lenses must be fitted by a qualified individual to provide good vision, comfort, and proper sealing.

The user must receive fitting instructions including demonstrations and practice in how to wear the respirator, how to adjust it, and how to determine if it fits properly.

Respiratory Protection Program

Although respirators are designed for maximum efficiency, they cannot provide protection without a tight seal between the face-piece and wearer. Consequently, beards and other facial hair can substantially reduce the effectiveness of a respirator.

The absence of dentures can seriously affect the fit of a face-piece. To assure proper respiratory protection, a face-piece must be checked each time the respirator is worn. This can be accomplished by performing either a positive-pressure or negative-pressure check. Detailed instructions for performing these tests can be found in the ANSI standard on respirator use.

The effectiveness of the fit of the face-piece can be tested two ways - qualitatively and quantitatively.

Qualitative fit testing involves the introduction of a harmless odorous or irritating substance into the breathing zone around the respirator being worn. If no odor or irritation is detected, a proper fit is indicated.

Quantitative fit testing offers the most accurate, detailed information on respirator fit. It involves the introduction of a harmless aerosol to the wearer while he or she is in a test chamber. While the wearer performs exercises that could induce face-piece leakage, the air inside and outside the face-piece is then measured for the presence of the harmless aerosol to determine any leakage into the respirator.

Respirator Use Under Special Conditions

The following are special problems which may be encountered in the wearing and use of respiratory protective equipment.

- Facial Hair
- Contact Lenses
- Communications
- In Low and High Temperatures
- Eye Glasses
- Facial Deformities
- In Dangerous Atmospheres
- Physiological Response of Respirator Use

Inspection, Cleaning, Maintenance and Storage

All respirators must be inspected for wear and deterioration of their components before and after each use. Special attention should be given to rubber or plastic parts which can deteriorate. The face-piece, especially the face seal surface, headband, valves, connecting tube, fittings, and canister must be in good condition. A respirator inspection must include a check of the tightness of the connections.

SCBAs must be inspected at least monthly. Air and oxygen cylinders must be fully charged according to the manufacturer's instructions. Regulator and warning devices must be checked to assure their proper function.

Chemical cartridges and gas mask canisters should be replaced as necessary to provide complete protection. The manufacturer's recommendations should be followed. Mechanical filters must be replaced as necessary to avoid high resistance to breathing.

Repairs must be made only by experienced persons using parts specifically designed for the respirator. The manufacturer's instructions should be consulted for any repair, and no attempt should be made to repair or replace components or make adjustments or repairs beyond the manufacturer's recommendations.

Respiratory Protection Program

A respirator that has been used must be cleaned and disinfected before it is reissued. Emergency-use rescue equipment must be cleaned and disinfected immediately after each use. Records must be kept of inspection dates and findings.

Respirators must be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. Protection against any mechanical damage should also be provided. Respirators should be stored so that face-pieces and exhalation valves will rest in a normal position to prevent the rubber or plastic from reforming into an abnormal shape.

Respirators may be washed in a detergent solution and then sanitized by immersion in a sanitizing solution. Cleaner-sanitizers that effectively clean the respirator and contain a bactericidal agent are commercially available. The bactericidal agent frequently used is a quaternary ammonium compound. Strong cleaning and sanitizing agents and many solvents can damage rubber or elastomeric respirator parts. Such materials must be used with caution or after consultation with the respirator manufacturer.

Work Area Surveillance

Surveillance must be maintained of the conditions in the work area and of the degree of worker exposure or stress (combinations of work rate, environmental conditions, and physiological burdens of wearing a respirator). Changes in operating procedures, temperature, air movement, humidity, and work practices may influence the concentration of a substance in the work area atmosphere. These factors necessitate periodic monitoring of the air contaminant concentration. Testing should continue to assure that the contaminant exposure has not risen above the maximum protective capability of the respirators being used.

Employees using SCBAs or SARs with auxiliary SCBAs in confined spaces, where the environment is or may be immediately dangerous to life or health, must wear safety harnesses and lifelines. A second person equipped with complete protective gear must be standing by ready to help if the first worker gets into trouble. Communications (visual, voice, or signal line) must be maintained with all persons present. Precautions must be taken so that in the event of an accident one person will be unaffected and have the proper rescue equipment to be able to assist the others in an emergency situation.

Physical Fitness Determination for Users

The regulation states that no one should be assigned a task requiring use of respirators unless found physically able to do the work while wearing the respirator. In addition, some regulatory standards for specific substances and occupations may also contain requirements for medical examinations. Both types of standards declare that a physician should determine what health and physical conditions are pertinent, and that respirator wearers' medical status should be reviewed periodically.

Pre-placement medical examinations should screen out those who are physically or psychologically unfit to wear respirators. As another part of this examination, medical tests pertinent to the respiratory hazards that workers may encounter should be made to get baseline data against which to assess physiological changes in respirator wearers. In addition, the workers' previous medical and employment history should also be considered.

The types of information which should be obtained from the worker include:

Respiratory Protection Program

History of respiratory disease: Identifies workers with a history of asthma, emphysema, or chronic lung disease. These people may be at risk when wearing a respirator.

Work history: Identifies workers who have been exposed to asbestos, silica, cotton dust, beryllium, etc., within the past ten years, or workers who have worked in occupations or industries where such exposure was probable. If past exposures are identified, medical tests can be obtained for comparison. Some of the specific items of information which might be obtained include:

- Previous occupations;
- Problems associated with breathing during normal work activities; and
- Past problems with respirator use.

Any other medical information: Which might offer evidence of the worker's ability or inability to wear and use respirators, such as:

- Psychological problems or symptoms including claustrophobia;
- Any known physical deformities or abnormalities, including those which may interfere
- Past and current usage of medication; and
- Tolerance to increased heart rate, which can be produced by heat stress.

Periodic routine medical examinations should be made to determine whether respirator wearers have been exposed to harmful levels of respiratory hazards. Examination frequency should be tailored to particular situations and in accordance with specific substance standards. Tests to determine whether harmful amounts of hazardous substances have been taken into the body should be used.

These may include urine, blood, or feces analysis and other techniques to determine the intake and excretion of toxic substances. The findings of these tests, when correlated with other exposure data, such as air sampling data for wearers of such equipment, can serve as an indication of program effectiveness. Positive evidence of exposure should be followed up with appropriate surveillance of work area conditions to determine if there is any relationship to inadequate respiratory protection or a need for additional engineering controls.

Air Quality Standards

Compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration must be of high purity. Oxygen must meet the requirements of the United States Pharmacopoeia for medical or breathable oxygen. Breathable air must meet at least the requirement for Grade D breathable air described in Compressed Gas Association (CGA) Commodity Specification G-7.1-1966. (A later edition of this specification, G-7.1-1973, has been issued by CGA.) Compressed oxygen must not be used in open circuit SCBAs or SARs that have previously used compressed air. Oxygen must never be used with air-line respirators.

Breathable air may be supplied to respirators from cylinders or air compressors. For testing cylinders, see Shipping Container Specifications of the Department of Transportation (49 CFR Part 178).

Respiratory Protection Program

Containers of breathable gas must be clearly marked. Further details on the sources of compressed air and its safe use will be found in the Compressed Gas Association's pamphlet G-7-1968.

The compressor for supplying air must be equipped with the necessary safety devices and alarms. Compressors must be constructed and situated to avoid any entry of contaminated air into the system and must be equipped with suitable in-line, air-purifying sorbent beds and filters installed to assure air quality. The system must also have a receiver of sufficient capacity to enable the wearer to escape from a contaminated atmosphere in the event of compressor failure and alarms to indicate compressor failure and overheating. If an oil-lubricated compressor is used, it must have a high-temperature, or carbon monoxide alarm, or both. If only the high-temperature alarm is used, the air from the compressor must be tested frequently for carbon monoxide.

Air-line couplings must be incompatible with outlets for other gas systems to prevent accidental servicing of air-line respirators with non-respirable gases or oxygen.

Respiratory Protection Program

Area Involvement in the Process

The plant or company department of industrial hygiene, health physics, safety engineering or fire prevention should administer the respirator program in liaison with the plant medical department, if there is one. In small plants that have no such departments, the respirator program should be administered by an upper-level superintendent, foreman, or qualified person responsible to the principle manager. Overall responsibility should rest with one person. The administrator must have sufficient knowledge of the subject to supervise the program properly.

Before you or the designated person begins to write the program, you need to gather and lay out information regarding: employees who use respirators, types of respirators in use at your company, departments in which respirators are used, and work operations for which respirators are used. Ask for help from department heads or area supervisors in determining this information.

The final written respirator program should contain all information needed to maintain an effective respirator program to meet the user's individual requirements. It should be written so as to be useful to those directly involved in the respirator program, the program administrator, those fitting the respirators and training the workers, respirator maintenance workers, and the supervisors responsible for overseeing respirator use on the job. It is not necessary that the operating procedures be written for the wearer, although in a very small program it may be desirable to direct their content to the wearer. Only analysis of the individual program will show to what extent information for the wearer should be included.

The exact format of written standard operating procedures may vary widely. The large user who has many workers wearing respirators and, perhaps, several respiratory hazards to consider, may formulate separate procedures for selection and use of respirators for each hazard. For a small user, who has only a few workers to protect from only one or very few hazards, a much simplified document may serve; but it must cover the same subjects. In general, the complexity of the procedures increases as respirator use increases. The procedures also become more extensive as the toxicity of the respiratory hazard(s) increases, demanding better and more reliable protection. It is better to be overly detailed in developing written operating procedures than not detailed enough.

When the respirator program is ready, train affected employees on its existence and purpose, as well as on proper selection, use, and care as necessary. Even if they have previously received training, train them whenever new conditions or procedures arise that provides new information regarding respirators in your workplace.

Respiratory Protection Program

Checklist to Complete a Respirator Program

Use the following checklist as you are developing your written respirator program.

Before you start writing or revising your written program:

- Read and understand this section.
- Which employees in what jobs and areas are covered.
- Determine if feasible engineering controls or work practices can eliminate the need for respirators and your need for a program.

When writing the program:

- Overall responsibility for the program should rest with one person.
- Make sure the program contains at least the following elements:

Purpose

Respirator selection

Training and use

Inspection, cleaning, maintenance and storage

Work area surveillance

Program evaluation

Physical fitness determination for users

Air quality standards

Respiratory Protection Program

Sample Respirator Program

The following is a sample respirator program adapted from the NIOSH *Guide to Industrial Respiratory Protection* and the Office Of Superfund Region V Respirator Protection Program.

Company Name:

Contact Person:

(Your Company) Respirator Program

Purpose

This respirator program lays out standard operating procedures to ensure the protection of all employees from respiratory hazards, through proper selection and use of respirators. Respirators are to be used only where engineering control of respirator hazards is not feasible, while engineering controls are being installed, or in emergencies. This program is in accordance with the requirements of **OSHA** 29 CFR 1910.134. The company contact person is (name). He/she is solely responsible for all facets of this program and has full authority to make necessary decisions to ensure success of this program. This authority includes hiring personnel and purchasing equipment necessary to implement and operate the program. The contact person will develop written detailed instructions covering each of the basic elements in this program, and is the sole person authorized to amend these instructions.

Respirator Selection

Respirators will be selected on the basis of hazards to which the worker is exposed. All selections will be made by the contact person. Only MSHA/NIOSH certified respirators will be selected and used. Where practicable, the respirators will be assigned to individual workers for their exclusive use.

The contact person will develop detailed written standard operating procedures governing the selection and use of respirators using the NIOSH Respirator Decision Logic as a guideline. Outside consultation, manufacturer's assistance, and other recognized authorities will be consulted if there is any doubt regarding proper selection and use. These detailed procedures will be included as appendices to this respirator program. Only the Contact person may amend these procedures.

See Appendix 1 for detailed selection and use criteria.

Training and Use

The user will be instructed and trained in the proper use of respirators and their limitations. Both supervisors and workers will be so instructed by the Contact person. Training should provide the employee an opportunity to handle the respirator, have it fitted properly, test its face-piece-to-face seal, wear it in normal air for a long familiarity period, and finally to wear it in a test atmosphere. Every respirator wearer will receive fitting instructions, including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly.

Respirators should not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the face-piece, or temple pieces on glasses. No employees of **(Your Company)**, who are required to wear respirators, may wear beards. Also the absence of one or both dentures can seriously affect the fit of a face-piece.

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The worker's diligence in observing these factors will be evaluated by periodic checks. To assure proper protection, the face-piece fit will be checked by the wearer each time the wearer puts on the respirator. This will be done by following the manufacturer's face-piece-fitting instructions.

See Appendix 1 for detailed selection and use criteria and see Appendix B for detailed use and care criteria for air purifying respirators. **(Your Company)** has such detailed instructions and specifications for all types of respirators used at the facility.

Inspection, Cleaning, Maintenance, and Storage

Respirators will be regularly cleaned and disinfected. Those issued for the exclusive use of one worker will be cleaned after each day's use, or more often if necessary. Those used by more than one worker will be thoroughly cleaned and disinfected after each use. The Contact person will establish a respirator cleaning and maintenance facility and develop detailed written cleaning instructions.

The central respirator cleaning and maintenance facility will store respirators in a clean and sanitary location.

Respirators used routinely will be inspected during cleaning. Worn or deteriorated parts will be replaced. Respirators for emergency use such as self contained devices will be thoroughly inspected at least once a month and after each use. Inspection for SCBA breathing gas pressure will be performed weekly'

See Appendix 2 for detailed use and care criteria for air purifying respirators. See Appendix 3 for inspection criteria for self contained breathing apparatus (SCBA). **(Your Company)** has such detailed instructions and specifications for all types of respirators used at the facility.

Work Area Surveillance

Appropriate surveillance of work area conditions and degree of employee exposure or stress will be maintained. During safety audits and at other opportunities the Contact person will make inspections of areas where respirators are used to ensure compliance with the respiratory protection programs.

Program Evaluation

There will be a regular inspection and evaluation to determine the continued effectiveness of the program. The Contact person will make frequent inspections of all areas where respirators are used to ensure compliance with the respiratory protection programs.

Physical Fitness Determination for Users

Persons will not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The designated physician will determine what health and physical conditions are pertinent. The respirator user's medical status will be reviewed annually.

Air Quality Standards

Air quality standards as required by the regulation will be maintained.

Respiratory Protection Program

Appendix 1 - SELECTION AND USE

1. The selection of a specific respirator must be made by individuals knowledgeable about the limitations of the selection process if adequate worker protection is to be achieved.

A. Criteria for Selecting Respirators

To use this decision logic, the user must first assemble the necessary toxicological, safety, and other relevant

- General use conditions, including determination of contaminant(s);
- Physical, chemical, and toxicological properties of the contaminant(s); - Odor threshold if applicable;
- NIOSH recommended exposure limit, (REL), ACGIH threshold limit values, (TLVs), OSHA permissible exposure limit (PEL) or other applicable exposure limit (Exposure limits are data;);
- Immediately dangerous to life or health (IDLH) concentration;
- Eye irritation potential; and
- Any service life information available (for cartridges and canisters).

When conflicting or inadequate data are found, experts should be consulted before decisions are made that could affect the proper use of the selection procedure. In addition, the adequacy of the respirator selected is dependent on the validity of the exposure limit used.

The information obtained on general use conditions for respirators should include a description of the actual job task, including the duration and frequency, location and physical demands. Some general use conditions may preclude the use of specific types of respirators in certain circumstances because the individual must be medically and psychologically suitable to wear a given respirator for a given task, particularly if the respirator is a self-contained breathing apparatus (SCBA).

Information obtained on the service life of the cartridge/canister under conditions of intended use should be evaluated regardless of the odor warning properties of the chemicals. These evaluations should be based on all gases and vapors present at the temperature and relative humidity extremes (high and low) in the workplace. Cartridge replacement schedules will be based on the type of operation and will generally be at the end of each shift of work or more often as indicated by odor break through, or high breathing resistance. Cartridge replacement may be at more frequent intervals.

B. Restrictions and Requirements for All Respirator Usage

The following requirements and restrictions must be considered to ensure that the respirator selected

Respiratory Protection Program

- Respirator users must receive annual training in basic maintenance, inspection, cleaning, and evaluation of the respirator; use of the respirator in accordance with the manufacturer's instructions; fit testing; and environmental monitoring. Minimum

respiratory protection
CFR 1910.134,
Respiratory protection
Hazards and in other

requirements can be found in the **OSHA** Safety and Health Standards, 29
and in the expanded standards sections for specific contaminants.
information is also found in the NIOSH Pocket Guide to Chemical
publications.

- Qualitative or quantitative fit tests should be provided as appropriate to ensure that adequate respiratory protection. When quantitative fit testing (QNFT) is used, the fit factor screening level should be chosen with caution and with the recognition of the uncertainty of its effectiveness since no studies have demonstrated what fit factor values provide adequate accept/reject criteria for quantitative fit screening.

- Negative pressure respirators should not be used when facial scars or deformities
- No respirator (including positive pressure respirators) should be used when facial hair
- The respirators should be properly maintained, correctly used, and conscientiously worn.
- The usage limitations of air-purifying elements, particularly gas and vapor cartridges,
- In order to select air purifying respirators the following criteria must be met in almost

Compound must be identified and quantified.

Compound must have adequate warning properties.

There must be at least 19.5% oxygen present.

- The respirators must be approved by the Mine Safety and Health Administration and
- Full face respirators are the only respirators approved for Office of Superfund
- Workers must leave the contaminated area immediately upon suspicion of
- In order to select air purifying respirators the following criteria must be met in almost

Compound must be identified and quantified.

Compound must have adequate warning properties.

Respiratory Protection Program

There must be at least 19.5% oxygen present.

- The respirators must be approved by the Mine Safety and Health Administration and the
- Full face respirators are the only respirators approved for Office of Superfund personnel.
- Workers must leave the contaminated area immediately upon suspicion of respirator
- Workers are not exposed to single unvarying concentrations of hazardous substances. for each respirator wearer. Respirator selection will be made based on the compound with the most toxic and/or carcinogenic property or potential.
- Respirator wearers should be aware of the variability in human response to the warning

- Published assigned protection factors (APFs) of various respirators are based for the most part on laboratory studies. However, a few APFs have been validated by data obtained from studies of workplace protection factors (WPFs). For the present, the APFs should be

C. Respirator Decision Logic Sequence

After all criteria have been identified and evaluated and after the requirements and protection:

1. Is the respirator intended for use during firefighting?
 - a. If yes, only a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure demand or other positive pressure mode is
 - b. If no, proceed to Step 2.
2. Is the respirator intended for use in an oxygen-deficient atmosphere, i.e., less than 19.5% oxygen at sea level?
 - a. If yes, a self-contained breathing apparatus (SCBA) with a full face-piece demand or other positive pressure mode in combination with an auxiliary is interrupted.

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- b. If no, proceed to Step 3.
3. Is the respirator intended for use during emergency situations?
 - a. If yes, two types of respirators are recommended: a SCBA with a full face-piece operated in pressure demand or other positive pressure mode or a demand or other positive pressure mode. The Auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted.
 - b. If no, proceed to Step 4
4. Is the contaminant regulated by the Department of Labor as an occupational
 - a. If yes, the respirator selected, either supplied air, or air purifying, will depend on the properties of the contaminant: confirmed, or suspected human carcinogen, assigned numeric exposure limit, no exposure limit and the concentration of the contaminant at the work location. selections for carcinogenic contaminants should be referred to the (Respirator Superfund complete assignment, Contact person.)
 - b. If no, proceed to Step 5.
5. Is the exposure concentration of the contaminant, as determined by acceptable

(Whenever a worker is given a respirator to use on a voluntary basis when ambient levels are below applicable limits, **OSHA** requires the implementation of a complete respiratory protection program, which includes medical evaluation,

training, fit testing,
29 CFR 1910.134.)

periodic environmental monitoring, and all other requirements in

- escape
irreversible
dangerous
- a. If yes, a respirator would not be required except for an escape situation. (required at any concentration above background.)
 - b. If no, proceed to Step 6.
6. Are conditions such that a worker who is required to wear a respirator can from the work area and not suffer loss of life or immediate or delayed health effects if the respirator fails, i.e., are the conditions not immediately to life or health (IDLH)?
- a. If yes, conditions are not considered to be IDLH. Proceed to Step 7.

Respiratory Protection Program

- an
- b. If no, conditions are considered to be IDLH. Two types of respirators are in pressure demand or other positive pressure mode in combination with auxiliary SCBA operated in pressure demand or other positive pressure
- the
7. Is the contaminant an eye irritant, or can the contaminant cause eye damage at exposure concentration?
- a. If yes, a respirator equipped with a full face-piece, is required. Full face
- 11.
8. If the physical state of the contaminant is a particulate (solid or liquid) during Step 10, if it is a combination of gas or vapor and particulate, proceed to Step
9. A filter medium that will provide protection against exposure to the particulate in the REL/TLV/PEL. In some instances other filters may be approved for nuisance dusts only.
- Maximum use concentration of the respirators used as protection against toxic respirator selection requirements based on their concentrations.
10. Gas/Vapor Respirators
- Are the warning properties for the gas/vapor contaminant adequate at or below NIOSH REL/ TLV/PEL or their applicable exposure limit?
- a. If yes, proceed to Step 11.
 - b. If no, an air-purifying respirator equipped with an effective end-of-service-indicator (ESLI), a supplied-air respirator, or a self-contained breathing
- is
11. A combination air-purifying chemical cartridge/canister and HEPA filter respirator required that has a sorbent suitable for the chemical properties of the anticipated

Note: Because of the mix of un-quantified compounds generally found at hazardous

Because the standard criteria for selecting air-purifying respirators (identifying, selected under these conditions. (See level of protection based on dial reading response in EPA's Standard Operating Safety Guides.)

Appendix 2

AIR PURIFYING RESPIRATORS - INSTRUCTIONS FOR USE AND CARE BY PROPERLY TRAINED AND QUALIFIED PERSONNEL.

WARNING

1. This device does NOT supply oxygen.
2. Use only in adequately ventilated areas containing at least 19.5 percent oxygen.
3. Do not use when concentrations of contaminants are unknown or immediately dangerous to life or health.
4. Leave area immediately if:
 - A. Breathing becomes difficult.
 - B. Dizziness or other distress occurs.
 - C. You taste or smell contaminant.
5. Use strictly in accordance with instructions, labels and limitations pertaining to this device.
6. This device may not provide a satisfactory face seal with certain physical characteristics (such as beards or gross sideburns) as outlined in ANSI Z88.2 1980, resulting in leakage in connection with the face-piece.
7. Never alter or modify this device.

PREPARATIONS FOR USE: INSPECTION

There are five inspection points, listed below, that should be checked before donning the respirator. Under no circumstances should a respirator that fails inspection be used. The respirator should be repaired or replaced.

1. Headbands: Check to see that the headbands still have their elasticity. Inspect for cracks or
2. Face-piece: Check face-piece for dirt, cracks, tears or holes. Inspect the shape of the face
3. Inhalation and exhalation valve: Check for cracks, tears, distortion, dirt or build-up of material tween valve and valve seat.
4. Cartridge holders: Check to make sure gaskets are in place and check for cracks and

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5. Cartridges: Make sure cartridges and filters are clean. Never try to clean filter or cartridge by and/or filters washing it or using compressed air. Inspect cartridges for dents, scratches or

INSTALLING
CARTRIDGES: Thread cartridges into receptacles carefully. Hand tighten to prevent damage to threads and to insure a good seal against the gaskets.

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DONNING THE RESPIRATOR

Pull out headband straps, especially the "FRONT" or forehead strap, so that their ends are at the buckles, then grip face-piece between thumb and fingers. Insert chin well into the lower part of face-piece and pull headbands back over head. To obtain a firm and comfortable fit against the face at all points, adjust headbands as follows:

- A. See that straps lie flat against head.
- B. Tighten lower or "Neck" straps.
- C. Tighten the "Side" straps. (Do not touch forehead or "Front" strap.).
- D. Place both hands on headband pad and push it towards the neck.
- E. Repeat operations (B) and (C).
- F. Tighten forehead or "FRONT" strap a few notches if necessary.

TEST FOR TIGHTNESS - THE RESPIRATOR MUST BE SUBJECTED TO THE FOLLOWING TIGHTNESS TEST BEFORE EACH USE.

Test respirator for leakage using a positive pressure method. Lightly place palm over exhalation valve cover. Gently exhale. A slight positive pressure should build up inside the respirator. If any leakage is detected around the facial seal, readjust head harness straps and repeat test until there is no leakage. If other facial seal leakage is detected, the condition must be investigated and corrected before another test is made. A negative pressure test may also be performed on certain types of respirators. Lightly place palms over cartridges of filter holders. Gently inhale and face-piece should collapse against the face.

The respirator must pass the tightness tests before the respirator is used. The respirator will not furnish protection unless all inhaled air is drawn through suitable cartridges or filters.

REPLACING CARTRIDGES AND FILTERS

The following conditions are indications that the cartridges or filters have served their useful life and should be replaced.

CARTRIDGES: Odor or taste of gases or vapors; eye, nose, or throat irritation.

FILTERS: Excessive breathing resistance upon inhalation.

To replace cartridges proceed as follows:

- A. Remove the expended cartridges and discard.
- B. Remove the replacement cartridges from storage bags and insert into the threaded receptacles making
- C. Carefully hand tighten the cartridges to prevent damage to threads and to insure a good seal against

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CLEANING AND SANITIZING

The face-piece (with the cartridges removed) should be cleaned and sanitized after, every use with MSA Cleaner-Sanitizer, Part No. 34337 or other suitable cleaner/sanitizer.

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1. Make a solution with the contents of one package added to water, following the instructions on the cleaner-sanitizer carton.
2. Immerse soiled equipment in the solution and scrub gently with soft brush until clean. Take care to clean the exhalation valve in the face-piece and other parts that exhaled air contacts.
3. Rinse in plain warm water (about 120°F) and then air dry.

CAUTION: Cleaning and Sanitizing at the recommended 120°F, temperature will avoid possible overheating and distortion of parts of the respirator assembly, which would necessitate replacement.

MAINTENANCE

This respirator must be kept in good condition to function properly. When any part shows evidence of excessive wear or failure, it should be replaced immediately with the proper part. Extra parts should be readily available. This respirator, when not in use, should be stored in a clean dry location. Do not distort rubber face-piece during storage.

CAUTION: Follow the preceding instructions carefully. They were prepared for your protection. Do not enter into any atmosphere with this respirator unless you KNOW that:

- A. Cartridges are the proper type for the contaminant or contaminants present.
- B. Amount of oxygen is sufficient to support life (that is, at least 19.5 percent oxygen by volume at sea level). If oxygen concentrations sufficient to support life is questionable, use Self-Contained Breathing Apparatus.
- C. Respirator does not leak (see test for tightness).
- D. Cartridges do not need replacing. Discard used or exhausted cartridges.

LIMITATIONS

Following is a partial list of gaseous materials for which chemical cartridge respirators should not be used for respiratory protection regardless of concentration or time of exposure; this far-from-complete list is offered only as a guide to proper evaluations of the many contaminants found in industry. Contact your safety equipment supplier for further information on other specific materials.

Acrolein	Hydrogen sulfide	Nitro-glycerine
Aniline	Methanol	Ozone
Arsine	Methyl bromide	Phosgene
Bromine	Methyl chloride	Phosphine
Carbon monoxide	Methylene chloride	Phosphorous tri-chloride
Dimethylaniline	Nickel carbonyl	Stibine
Dimethyl sulfate	Nitro compounds	Sulfur chloride
Hydrogen cyanide	Nitrobenzene	Toluene diisocyanate
Hydrogen fluoride	Nitrogen oxides	Vinyl chloride
Hydrogen selenide	Nitromethane	

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Appendix 3

SELF CONTAINED BREATHING APPARATUS - SCBA

This apparatus will be used only by trained and qualified personnel. Inspections will take place monthly.

CHECKLIST FOR INSPECTION OF PRESSURE DEMAND - SCBAs:

PRIOR TO BEGINNING INSPECTION: Regulator must be connected to air cylinder via high pressure hose. Check for the presence and condition of small "O" ring in high pressure hose connector.

1. Check to assure that high pressure hose connector is tight on cylinder fitting.
2. Bypass valve closed.
3. Mainline valve closed.
4. No cover or obstruction on regulator outlet.

I. BACK & HARNESS ASSEMBLY

A. STRAPS

1. Visually inspect for complete set.
2. Visually inspect for frayed or damaged straps that may break during use.

B. BUCKLES

1. Visually inspect for mating ends.
2. Check locking function.

C. BACK PLATE & CYLINDER LOCK

1. Visually inspect back plate for cracks and for missing rivets or screws.
2. Visually inspect cylinder hold down strap and physically check strap tightener lock to assure that it is fully engaged.

and

II. CYLINDER & CYLINDER VALVE ASSEMBLY

A. CYLINDER

1. Physically check cylinder to assure that it is tightly fastened to back plate.
2. Check Hydrostatic Test Date to assure it is current. (Hydrostatic test dates are

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3. Visually inspect cylinder for large dents or gouges.

B. HEAD & VALVE ASSEMBLY

1. Visually inspect cylinder valve. (NIOSH no longer requires locks on cylinder valves. Some old cylinder valves may still have latches.)
2. Visually inspect cylinder gauge for condition of face, needle, and lens.
3. Open *cylinder valve* and listen or feel for leakage around packing. (If leakage is

III. REGULATOR & HIGH PRESSURE HOSE

A. HIGH PRESSURE HOSE & CONNECTOR

1. Listen or feel for leakage in hose or at hose to cylinder connector. (Bubble in outer hose covering may be caused by seepage of air through hose when stored under pressure. This does not necessarily mean a faulty hose.)

B. REGULATOR & LOW PRESSURE HOSE

1. Cover outlet of regulator with palm of hand. *Open mainline valve* and read gauge. (Must read at least 1800 PSI and not more than rated cylinder pressure.)
2. Close *cylinder valve* and slowly move hand from regulator outlet to allow slow flow of air. Gauge should begin to show immediate loss of pressure as air flows. Low pressure alarm should sound between 650 and 550 PSI. Remove hand completely from outlet and close *mainline valve*.
3. Place mouth onto or over regulator outlet and blow. A positive pressure should be created and maintained for 5-10 seconds without any loss of air. Next suck a slight negative on regulator and hold for 5-10 seconds. Vacuum should remain constant. This tests the integrity of the diaphragm. Any loss of pressure or vacuum during this test indicates a leak in the apparatus.
4. *Open cylinder valve*.
5. Place hand over regulator outlet and open *mainline valve*. Remove hand from outlet and replace in rapid movement. Repeat twice. Air should escape when hand is
6. Ascertain that no obstruction is in or over the regulator outlet. *Open and close*

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IV FACE-PIECE & CORRUGATED BREATHING TUBE

A. FACE-PIECE

1. Visually inspect head harness for damaged serrations and deteriorated rubber.
2. Visually inspect lens for proper seal in rubber face-piece, retaining clamp properly in place, and cracks or large scratches.
3. Visually inspect exhalation valve for visible deterioration or (build-up of) foreign

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B. BREATHING TUBE & CONNECTOR

1. Stretch breathing tube and visually inspect for deterioration and holes.
2. Visually inspect connector to assure good condition of threads and for presence and proper condition of "O" ring rubber gasket seal.

Note: Final test of face-piece would involve a negative pressure test for overall seal and check of exhalation valve. If doing monthly inspection, mask may now be placed against face and following tests performed. If preparing for use, don backpack, then don face-piece and use following procedure.

C. NEGATIVE-PRESSURE TEST ON FACE-PIECE

1. With face-piece held tightly to face or face-piece properly donned, stretch breathing tube to open corrugations and place thumb or hand over end of connector. Inhale. Negative pressure should be created inside mask, causing it to pull tightly to face. If negative pressure leaks down, the face-piece assembly is not adequate and should not be worn.

V. STORAGE OF UNITS

1. Cylinder refilled as necessary and unit cleaned and inspected.
2. Cylinder valve closed.
3. High pressure hose connector tight on cylinder.
4. Pressure bled off of high pressure hose and regulator.
5. Bypass valve closed.
6. Mainline valve closed.
7. All straps completely loosened and laid straight.

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8. Face-piece properly stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals.

NOTE: Any discrepancy found should be cause to set unit aside until repair can be done by certified

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Employee Handout Sheets

Respirator Program

These sheets can be copied and handed out to employees to train them on the written Respirator Program.

Some of the most common workplace hazards to the lungs are the lack of oxygen and the presence of harmful dust, fogs, smokes, mists, fumes, gases, vapors, or sprays including substances that may cause cancer, lung impairment, other diseases, or death. Respirators are necessary and in use at **(Your Company)** to prevent the entry of harmful substances into the lungs during breathing. Some respirators also provide a separate supply of breathable air so work can be performed where there is inadequate oxygen, or where greater protection is needed.

The prevention of atmospheric contamination at the work site is accomplished as far as possible by engineering control measures, such as enclosing or confining the contaminant-producing operation, exhausting the contaminant, or substituting with less toxic materials. However, when effective engineering controls are not enough to contain the hazard completely, while those controls are being installed, or during clean up operations, appropriate respirators must be used.

Where respirators are necessary for health protection, specific procedures are necessary to overcome any potential deficiencies and to assure the effectiveness of the equipment. **OSHA's** Respirator Program at §1910.134 regulates the selection and use of respirators in the workplace, because the use of respirators is complex, and different hazards require different respirators.

Our company is covered by this standard, and the respirator program you received with this handout details how we select, use, and care for respirators at **(Your Company)**. In addition, as a respirator user, you receive training on respirator selection, care, and use procedures relevant to the work you perform with respirators.

This respirator program covers the following elements:

- Purpose
- Respirator selection
- Training and use
- Inspection, cleaning, maintenance and storage
- Work area surveillance
- Program evaluation
- Physical fitness determination for users
- Air quality standards

The respirator program is evaluated periodically and updated to reflect changes in respirators usage at the **(Your Company)**. You will be trained upon any relevant changes as well.

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Always wear your respirator as required, according to the rules laid out in this program, for your safety and protection.

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Employee Sign-Off Sheet Respirator Program

I acknowledge I have been given a copy of the Respirator Program, I have read and understood it, and I accept the program as a working document which I will support and follow in my daily work at **(Your Company)**.

Employee Signature: _____

Date: ____ / ____ / ____

Supervisor's Signature: _____

Company Name: _____

Safety & Security Manager's Signature: _____

(Use the form above and/or below to document employee +training/information)

I acknowledge I have been trained on and been informed how to get access to a copy of the Respirator Program. I have understood this training. I will support and follow this program in my daily work at **(Your Company)**.

Employee Signature _____

Date ____ / ____ / ____

Supervisor's Signature _____

Company Name _____

Safety & Security Manager's Signature _____

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Regulation: 1910.134(b)

Respirator Program

(b) *Requirements for a minimal acceptable program.*

- (1) Written standard operating procedures governing the selection and use of respirators shall be established.
- (2) Respirators shall be selected on the basis of hazards to which the worker is exposed.
- (3) The user shall be instructed and trained in the proper use of respirators and their limitations.
- (4) [Reserved]
- (5) Respirators shall be regularly cleaned and disinfected. Those used by more than one worker shall be thoroughly cleaned and disinfected after each use.
- (6) Respirators shall be stored in a convenient, clean, and sanitary location.
- (7) Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced. Respirators for emergency use such as self contained devices shall be thoroughly inspected at least once a month and of tar each use.
- (8) Appropriate surveillance of work area conditions and degree of employee exposure or stress shall be maintained.
- (9) There shall be regular inspection and evaluation to determine the continued effectiveness of the program.
- (10) Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The local physician shall determine what health and physical conditions are pertinent. The respirator user's medical status should be reviewed periodically (for instance, annually).
- (11) Respirators shall be selected from among those jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health under the provisions of 30 CFR part 11.