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| **Safety Handbook** |

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| **<COMPANY NAME>****SAFETY PROGRAM** |

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SAFETY PROGRAM GUIDE

MANAGEMENT'S POLICY ON SAFETY

<COMPANY NAME> considers individual safety and health of each employee of this company to be of primary importance. Our objective is a safety and health program that will reduce the number of injuries and illnesses to zero.

In order to achieve this objective we recognize that the responsibilities for safety and health are shared:

1. As your employer we accept the responsibility for leadership of the safety and health program for its effectiveness and for providing the safeguards required to ensure safe conditions.
2. Our supervisors are responsible for developing the proper attitudes toward safety and health in themselves and in those they supervise, and for ensuring that all operations are performed with the highest regard for the safety and health of all personnel involved, including themselves.
3. As employees, you are responsible for wholehearted, genuine cooperation with all aspects of the safety and health program including compliance with all rules and regulations, and for continuously practicing safety while performing your duties.

The <COMPANY NAME>Safety committee will continue to enhance the safety program through written procedures and continued training safety skills necessary for a safe working environment.

To be successful such a program must include the proper attitudes toward injury and illness prevention on the part of both supervisors and employees. It also requires cooperation in all safety and health matters, not only between supervisor and employee but also between each employee and their fellow workers. Only through such a cooperative effort can a safety record in the best interest of all be established and maintained.

The success of our Accident Prevention Program depends on the sincere, constant, and cooperative effort of all employees and their active participation and support. If you see a hazard, report it immediately; the life you save may be your own.

# GENERAL REQUIREMENTS

Every project shall comply with all safety regulations required by any state and federal agency under which such project may be accountable.

1. The [Director of Operations] is hereby assigned the responsibility of coordinating their job program with the overall Company Safety Program. They must maintain safe practices and conditions throughout the job and coordinate their efforts with those of the coordinator. The company expects each manager to recognize their responsibility for the prevention of accidents. This refers not only to injury producing accidents, but to all other areas as well.
2. All personnel of the Company, its subcontractors, employees, vendors and visitors will comply with the hard hat rule on each and every job with no exceptions. Each subcontractor will be responsible for its crew being equipped with all protective and safety devices necessary to perform work in a safe manner.
3. Monthly safety meetings will be held for each coordinator and crew to keep workers safety conscious and provide an opportunity to offer comments and suggestions.
4. When an accident or near‑accident occurs a meeting with the crew shall be held as soon as possible to discuss causes of the accident and how to prevent a recurrence.
5. A complete investigation of every accident producing damage or injury shall be conducted and a report filed immediately.
6. Each coordinator must observe and control each operation with safety in mind. Whenever an unsafe act by any member of the crew is noticed, correct the individual immediately. Point out to the person what he/she was doing unsafe and demonstrate the correct method of operation. Help develop safe working habits.
7. Coordinator shall make it understood that any injury, regardless of how minor it may be, must be reported promptly.

When followed conscientiously, the above rules will make all Company employees more safety conscious and aid materially in eliminating accidents on the job.

This Company has always recognized that our success comes through the efforts of our employees and that we have a definite responsibility for their safety and well being. It is and will be the policy of this Company to take all practical steps to maintain and support a Safety Program which provides safe working conditions for all employees and safeguards that lives and properties of the general public.

* We believe that safety and accident prevention and efficient production go hand in hand.
* We believe a good safety record is clear evidence of good management.
* We believe that top management through the Safety Director has major responsibility for establishing definite safety policies, procedures, and safe working conditions.

###### HOWEVER

* We believe that safety is a function of operations, which cannot be transferred to a Safety Director or staff organizations.
* We believe each Employee, Coordinator, Manager, and Operating Head is directly responsible for safety in operations.

The Occupational Safety and Health Act of 1970 requires employers to provide a hazard‑free work place and comply with the occupational safety and health standards, rules, and regulations issued under the Act. This same federal law (OSHA) requires an employer to reprimand and even discharge employees who violate OSHA and company safety rules and regulations.

The objective of our company is to work in cooperation with all employees and provide a safe and hazard‑free work place. Only through such a cooperative effort can this safety objective be attained.

# GENERAL SAFETY RULES

1. THINK ‑ then act safely.
2. Get full instructions on work to be done before starting job.
3. Anticipate possible dangers and plan work to avoid them.
4. The use of necessary safety equipment where required is mandatory. Do not use any equipment unless authorized to do so. Anyone deliberately misusing company tools, equipment or safety material will be dismissed.
5. REPORT ALL ACCIDENTS and injuries immediately.
6. Comply with the hard hat rule.
7. Employees must work fully clothed.
8. Employees must wear protective equipment for all operations as directed.
9. Lift correctly, use your legs, not your back.
10. Obey all safety signs and replace any safety sign, barricade, guard or other safety device whenever you need to move it to work or to move about.
11. Compressed air or gas must not be used to dust off hands, face or clothing. Use of compressed air or gas for these purposes can be fatal.
12. Do not climb or walk on scaffolds or walkways unless all guard rails, floor boards and toe boards have been completed, all openings in floor must be barricaded.
13. Employees must be tied off at all times when working from an unguarded surface at heights more than twenty-five feet (25') above the floor or ground level.
14. Do not remove or tamper with guards or protective devices on any equipment. They are for your protection.
15. Always shut down an engine when refueling.
16. Any cuts, open wounds, or abrasions shall be covered with an appropriate bandage.
17. Walk around your machine and check all controls before beginning operations.
18. Watch out for moving vehicles.
19. Keep speed and operating methods in line with job conditions.
20. Never approach a machine from the blind side. Be sure the operator is aware of your presence before approaching.
21. Never use gasoline or carbon tetrachloride to wash parts.
22. Intentional misuse of company vehicles will not be allowed. It is forbidden to ride on the running boards of trucks or equipment or to jump from trucks or other moving equipment.
23. It is forbidden to ride on the load, hook or headache ball of any crane, derricks or other lifting or hoisting apparatus.
24. Never work under a suspended load.
25. Keep trench banks clear of objects that might fall back in to it.
26. The use of torches for comfort heating is not permitted under any circumstances.
27. Smoking is permitted only in designated smoking areas.
28. Observe and promote good housekeeping. A clean job is a safe job, and it shows that we are professionals who care about our work and fellow employees.
29. Never engage in "horse‑play".
30. Employee firearms will not be allowed on any job.
31. No intoxicating beverages are to be taken or used in or around the job.
32. No fighting or gambling will be allowed.
33. "Drugs", pep pills, tranquilizers, and the like are not to be taken on the job unless written permission is given by a qualified physician. It is the Employee's responsibility to advise their supervisor of any medication, which is being taken.

# GENERAL MANAGER

RESPONSIBILITIES

1. Be responsible for the safety of the employee under their supervision as well as the quality and quantity of work produced by them.
2. Select and train competent safety minded branch operations managers and coordinators.
3. Plan the work in such a manner as to eliminate hazards.
4. Investigate hazardous work with branch operations manager and coordinator and after discussion outline a method to do the work in the safest manner.
5. See that immediate medical attention is given to anyone who is injured.
6. Report immediately all serious accidents to the company controller.
7. Investigate and make full written reports on all accidents with‑in 24 hours.
8. By working through the coordinator encourage employees to report all accidents, no matter how minor they seem at the time.
9. See that all equipment is in safe working condition and necessary repairs are made before equipment is put back into operation.

PROJECT MANAGER AND

COORDINATOR RESPONSIBILITIES

1. Be responsible for the safety of the workers under their supervision as well as the quality and quantity of work produced by them.
2. Believe in safety and transmit this belief to their workers.
3. Be accountable for all accidents and employee actions unless investigation shows they were due to conditions beyond their control.
4. Be responsible for the training and instruction of new employees and other employees transferred to their supervision.
5. Instruct all employees on the reporting of accidents and prompt seeking of First Aid and/or Medical attention.
6. Fully understand and comply with the company Safety Rules. They shall insure that the employees under their supervision understand the Safety Rules.
7. Be responsible for the proper use of equipment and safety devices by employees under their supervision.
8. Be responsible for the regular inspection of all tools and equipment, including the personal tools of workers under their supervision.
9. Make certain that no work is assigned to an individual unqualified or unable to do the work safely.
10. Be responsible for work and equipment being in a safe condition at the end of the day so that no hazard exists to the general public.
11. Acquaint themselves with principles of First Aid and resuscitation.
12. Obtain location of all underground utilities prior to breaking ground on any project.
13. Upon project commencement, indoctrinate each employee as to the scope of the safety program. Each employee will be charged with the responsibility of acting within its framework and individuals flagrantly violating safety rules will be dismissed.

AN EMPLOYEE

RESPONSIBILITIES

1. Conduct themselves at work so as to insure:

* Safety for themselves;
* Safety for their fellow workers;
* Protection of the public; and
* Protection for company property and for public and private property.

1. Get plenty of nightly rest and observe a balanced diet; get periodic medical check‑ups.
2. Remember their health and life are very important to both them and the company. Follow all safety rules and regulations and make sure the employees around them are safety‑minded also.
3. Wear clothing suitable for weather and work. Torn or loose clothing, cuffs, neckwear are hazardous.
4. Take pride in themselves and their job. Help keep all areas clean, organized and as safe as possible.
5. Report to their coordinator or supervisor all unsafe acts or conditions seen on the job.
6. When called upon to do work under conditions they believe unsafe, call these conditions to the attention of their coordinator and then thoroughly understand the coordinator's instruction as to the best possible way to do the job.
7. Acquaint themselves with the principles of First Aid and resuscitation.
8. Attend all Safety meetings and take an active part in the Safety Program.
9. Know and understand the Company Safety rules which apply to the work they are performing.
10. Properly use all safety devices and equipment (including the hard hats as required).
11. Remember that they are a representative of the company and that their words and actions should create only a favorable opinion of the Company.

SUBCONTRACTOR SAFETY ENFORCEMENT

Before subcontractors commence work, they should be informed in as much depth as possible of our Safety Policy along with working features of their specific work as it is integrated into our General Contractor Work. This should be handled much the same as a new‑hire employee with written instructions, verbal explanations and showing the physical area and hazards as much as practicable.

We want subcontractors to work safe alongside us ‑ in the same way that we expect and enforce our employee to operate. The coordinator must monitor this action and voice concerns to the subcontractor if they fail to act safely.

# SAFETY EDUCATION

### ORIENTATION FOR NEW WORKERS

New employees will be given a talk about safety along these lines:

1. First of all...this company is serious about safety and you're going to have to take safety seriously yourself. If you endanger other workers...the public...or yourself by working unsafe ...you won't be around very long on this job. We require that you work with consideration of others, that you work safely and that you obey the safety laws.
2. We require that you not only continue to learn to do your job better, but that you continue to learn more about working safety that's a part of your job. We will help you whenever we can... and in different ways...but your own safety education is your responsibility as well as ours.
3. If you have any problems that could lead to accidents on the job ...let us know about them. If you get dizzy in high places ...have trouble with your breathing...have a bad back...have fainting spells...take strong medicines that could cause you to be less than completely alert...or other such things; let us know so we won't put you in situations where you could hurt yourself or others. Work with us and we'll work with you.
4. No alcohol or drugs are allowed on the job. Don't come to work hungover, on tranquilizers or on stimulants. If you take medicines that warn against driving...possible sleepiness problems ...or anything else that may affect you or your co‑workers...let your supervisor know what's happening. We're concerned about your safety and the safety of others but we also appreciate that we all need strong medicines at one time or another. Just remember to tell us.
5. If you're really sick...stay home, but notify us.
6. Read this small booklet on general safety before you start, and again...follow all the safety rules and policies of this company and of the OSHA law.
7. Let us point out to you that once we have adequately told you and shown you what is safe and what is not...you assume personal liabilities for your own unsafe behavior and you can be held personally liable for accidents caused by your disregard of safe working practices.
8. If you are unsure of how to do something...find out before you proceed.
9. Let us show you where emergency numbers are and where the telephone is located...so that in case of an accident or fire you can get help. Remember to let us know first whenever possible. Always report all accidents even if they are minor.
10. Let us show you where the fire fighting equipment is kept.
11. Never lift a load, which you consider too heavy. USE TEAM LIFTING!!!
12. DO NOT TAKE CHANCES.

COMPANY VEHICLE POLICY

All company vehicles are the property of the company. In order to continue to improve efficient operation and minimize operating costs, the following policies must be established and acknowledged.

1. Employees should be properly license to operate vehicles assigned to them. Any one operating a company vehicle must demonstrate competency in that particular vehicle.
2. Vehicles should be operated carefully, courteously, and in conformance with legal regulations. Expense for infractions of laws is the employee's responsibility. Employee driving records will be verified periodically. The Company maintains the option of suspending the driving privilege.
3. The use of a company vehicle at any time while under the influence of alcohol and/or drugs is absolutely prohibited and subjects an employee to dismissal. The employee will reimburse any damages caused while under the influence of alcohol or drugs.
4. Use of the vehicle is limited to the assigned operator or other <COMPANY NAME>. employees authorized by the assigned operator. Operation by any one other than a <COMPANY NAME>. employee is strictly prohibited.
5. Vehicles should be kept clean and in proper operating condition. It is the driver's responsibility to see that routine or other maintenance is performed at proper intervals.
6. No vehicle is to be modified in any way without prior approval by your supervisor.
7. Only job related stickers and decals are allowed on vehicles. Safety belts have been installed for your protection and must be worn at all times. Accidents must be reported at once. Your supervisor should be telephoned as soon as possible and be advised of the circumstances. Arrangements must be made to obtain copies of the police reports.
8. Employees, who are allowed to drive a company vehicle to and from work, are authorized to use the vehicle after regular working hours for company business only. There should be no use of these vehicles for personal reasons.
9. All repairs and maintenance costs are the responsibility of <COMPANY NAME>.

Use the following rule for the authorization of maintenance cost:

* An employee is authorized to spend up to<$xxxx> on maintenance cost.
* Coordinator is authorized to spend up to <$xxxx> on maintenance cost.
* Management must authorize maintenance cost exceeding <$xxxx>.

1. <COMPANY NAME> will not be responsible for personal items stolen or damaged in vehicles.

Technicians, who have been assigned a company vehicle on out‑of‑town jobs, are authorized to use company vehicles subject to the following limitations.

1. Direct travel from employee domicile to the job site and return.
2. Travel to and from local stores, restaurants, etc., for necessary incidentals.
3. The vehicle shall not be used to provide transportation in conjunction with recreation or entertainment, nor shall it be driven extended distances for any reason without prior permission from the employee's immediate supervisor.

Any other personal use of a company vehicle is unauthorized, and in the event of an accident, it must be clearly understood that the company will provide no legal defense or insurance coverage for the vehicle operator.

# MOTOR VEHICLES

GENERAL: The term "motor vehicle" as used in this section and hereinafter referred to as a vehicle shall mean any vehicle propelled by a self contained power unit or any vehicle designed to be towed by a vehicle having a self‑contained power unit, except a vehicle designed for use on railways or other trackage or equipment designed for exclusive use off the highway.

Every person regularly or occasionally operating a motor vehicle shall have in their possession at all times while operating such a vehicle, a valid drivers license.

No vehicle shall be placed in service until a mechanic has inspected it and found to be in safe operating condition. The operator shall inspect the vehicle at the beginning of their shift to ensure proper operation of all safety appliances and required supply of emergency equipment.

All vehicles shall be inspected on a scheduled maintenance program. Vehicles found to be in unsafe operating condition shall be removed from service, repaired or replaced and re-inspected before being placed back into service.

All vehicles or combinations of vehicles, if operated between sunset and sunrise, shall be equipped with the following lights: two headlights, one on each side; at least one red tail light and one red or amber stop light; clearance lights; and directional signal lights on both front and back.

All vehicles except trailers or semi-trailers having a gross weight of 5,000 pounds or less shall be equipped with service brakes and hand‑operated parking brakes. Service and parking brakes shall be adequate to control the movements of, stop and hold the vehicle under all conditions of service.

Every vehicle shall be equipped with a speedometer, fuel gauge, and an adequate audible warning device in proper operating condition.

Every vehicle shall have a windshield and an operative windshield wiper.

Every vehicle shall be equipped with an operative defrosting and defogging device.

All vehicles shall be equipped with at least one rear view mirror.

Cabs, cab shields, and other protection shall be provided on all vehicles to protect the driver from the elements and falling and shifting materials.

Glass in windshields, windows and doors shall be safety glass.

Cracked or broken glass shall be replaced.

All towing devices used on any combinations of vehicles shall be structurally adequate for the weight drawn and securely and properly mounted.

Every trailer shall be coupled with safety chains to the towing vehicle. Such chains shall be adequate to prevent accidental separation from vehicle and trailer.

The exhaust fumes of vehicles shall be controlled in such a manner that they will present no hazards to the operator, attendants or other occupants.

MOTOR VEHICLE ACCIDENTS

DRIVER SAFETY AND REPORTING REQUIREMENTS

If you are involved in a Motor Vehicle Accident:

1. Stop immediately ‑ If the vehicle is exposed to oncoming traffic, move it to a safe location.
2. Warn other drivers of the exposed vehicles.
3. Notify the nearest law enforcement agency immediately if anyone is injured, killed, or if property damage will exceed $250.00. If the accident occurs on private property, some police departments will not respond to a call.
4. Express no opinion as to who was at fault.
5. Give no information except as required by the authorities.
6. Sign no statement for anyone except as required by the authorities or approved by the company controller.
7. Fix in your mind location of any vehicles, obstructions or individuals involved in the accident, both prior to its occurrence and afterward so you will be able to accurately recall the accident at a later time.
8. Obtain the following information from the other driver:

* Driver's name, address, telephone number, occupation and driver's license number.
* Owner's name, address and telephone number.
* Insurance Company and policy number.
* Vehicle description ‑ year, make, type and license plate number.
* Parts of other vehicle damaged.
* If the other driver was injured, ‑ Hospital taken to and extent of injuries .

1. Obtain the name, address and telephone number of any witnesses.
2. Request police report or obtain the name, badge number, and department of the investigating law enforcement officer.
3. Your interest will be best served if you are courteous and engage in no controversy at the scene of the accident but leave the entire handling of the claim to the company controller.

# VEHICLE OPERATING RULES

No vehicle shall be driven at a speed greater than is reasonable and proper, with due regard to weather, traffic, intersections, width and character of the roadway, type of motor vehicle and any other existing condition. The operator shall at all time have the vehicle under such control as to be able to bring it to a complete stop within the assured clear distance ahead.

Headlight beams shall be dimmed when approaching other vehicles at night.

No vehicles shall be driven on a downgrade with gears in neutral or clutch disengaged.

Every vehicle, upon approaching a railroad crossing or drawbridge shall be driven at such speed as to permit stopping before reaching the nearest track or the edge of the draw and shall proceed only if the course is clear.

No vehicle shall be left unattended until after the motor has been turned off, and the key removed (unless local regulations prohibit).

If stopped on a hill or grade, the front wheels shall be turned or hooked into the curb.

JOB SITE SECURITY

1. All toolboxes, trailers and temporary sheds shall be securely locked when leaving a job site at quitting time.
2. If you have been operating equipment that cannot be placed in a locked compartment, de‑energize it and secure it safely until the next day's work assignment.
3. Wherever possible ladders, scaffolds or any other attractive nuisances shall be left in a condition of security to minimize the probability of unauthorized use by persons, other than employees and possible accident resulting.
4. All heaters, both fuel and electric, shall not be left on through the night.
5. All equipment required for burning and welding shall be shut down, all regulators removed and securely locked.
6. If required install audible alarm systems in areas to deter intrusion by unauthorized persons.
7. In a case where tools or equipment are stolen or vandalized, the police shall be called and a written report made. All company employees will at all times cooperate with local authorities.
8. Immediately after a trailer is set up on a job site the local police shall be notified and asked to patrol the area on a regular basis. Also local police phone number shall be posted within sight of the job telephone.

# ACIDS, GASES, VAPORS, FUMES, DUSTS, MISTS AND SOLVENTS

Exposure of employees to inhalation, ingestion, skin absorption or contact with any material or substance at a concentration above those specified in the "Threshold Limit Values of Airborne Contaminants for 1970" of the American Conference of Governmental Industrial Hygienists shall be avoided.

1. Whenever harmful airborne contaminants exist or are produced in the course of construction work in quantities that expose employees to inhalation, ingestion, skin absorption or contact, such hazards shall be controlled by:

* General ventilation;
* Local exhaust ventilation;
* Goggles and face protection; and
* Wearing applicable protective clothing.

1. When handling caustics or battery acids, goggles shall be worn as splashing can cause serious eye injuries.
2. If all containers are not properly identified as to the type of acid, gas or solvent contained therein, the contents shall not be used or the container handled.
3. All flammable liquids and gases shall be stored in approved containers having positive identification of the contents.
4. All areas that are to be used for the storage of flammable liquids or gases shall be conspicuously designated as such and "No Smoking" signs posted and vigorously enforced.
5. Suitable fire extinguisher, types ABC Dry Chemical or type B shall be located within the area and adjacent to it.
6. Access to flammable liquids and gases storage areas shall be restricted to personnel trained in the hazards present and the precautions necessary for proper safety.
7. All personnel engaged in the handling of flammable liquids must be made aware of the importance of insisting that no sources of ignition be brought within the designated area.
8. Handling flammable liquids: Drums shall meet the requirements of ICC Specification No. 5 for shipping containers and gasoline safety cans shall be of the type approved and listed in the Underwriters laboratories, Inc. "List of Inspected Fire Protection Equipment and Materials" of "Equipment for Industrial Fire Protection" as published by the Associated Factory Mutual Fire Insurance Companies. Dispensing from drums shall be only by means of an approved mechanical pump location away from open flames.
9. Finishing materials such as paints, varnishes, lacquers, epoxy resins and catalysts, enamels, solvents, thinners and other flammable finishes shall be stored and mixed outside the building, isolated from painting operations. The material will be stored in a well ventilated place where there is no possibility of excess heat, sparks, flames or direct rays of the sun. No smoking will be permitted in storage or mixing rooms. All containers when not in use shall be kept closed. Only a maximum of one day's supply of finishing material shall be kept at a place of painting.
10. No more than 25 gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet. No more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one storage cabinet. No more than three storage cabinets may be located in a single storage area.
11. Storage in containers outside buildings shall not exceed 1,000 gallons in any one area. The storage area shall be graded to divert possible spills away from buildings or other exposures or shall be surrounded by a curb or dike. Storage areas shall be located at least 20' from any building and shall be free from weeds, debris and other combustible materials.
12. When engineering and administrative controls cannot keep the exposure of employees to air contaminants within the limits prescribed, equipment and technical measures used for this purpose will be approved by competent industrial hygienist or other technically qualified person.

# CLOSED VESSEL AND CONFINED SPACES SAFETY PROCEDURE

I. PURPOSE

The purpose of this procedure is to establish guidelines for the proper and safe entry and work within closed vessels and confined space.

II. SCOPE

This procedure applies to all employees required to enter closed vessels or confined spaces for work or inspection.

III. RESPONSIBILITY

1. It shall be the responsibility of the Director of Operations to insure the implementation of this procedure.
2. It shall be the responsibility of the Coordinator to supervise and insure compliance with this procedure.
3. It shall be the responsibility of all employees involved in inspection or work in closed vessels or confined spaces to be familiar and comply with this procedure.

IV. REFERENCES

A) OSHA 1926.56 Illumination

B) OSHA 1926.57 Ventilation

C) OSHA 1926.103 Respiratory Protection

D) OSHA 1926.150 Fire Protection

E) OSHA 1926.300 Tools, Hand and Power

V. DEFINITIONS

A) Closed Vessels: Any closed equipment where the inside may be closed off from the normal atmosphere such as storage tanks and pressure vessels.

B) Confined Space: Any area or space where there is not sufficient ventilation to keep sufficient oxygen content in the atmosphere while work is in progress.

VI. PROCEDURE

The entry into and work in a closed vessel or confined space could be very hazardous unless proper safety precautions are taken. The following safety precautions shall be taken to insure a safe and healthful environment for entry and work in closed vessels or confined spaces.

1. Prior to entry into or work being accomplished in any closed vessel or confined space the Safety Department shall be notified by the submission of a CONFINED SPACE ENTRY PERMIT request form. A representative from this department shall inspect the area to be worked in, take samples of the atmosphere and make recommendations for proper ventilation where necessary. When a satisfactory inspection has been made the Safety Department representative will sign the authorization. Copies of this form shall be posted near the entry of the vessel or confined space to be worked in, in the safety department file and by the discipline requesting entry.
2. An attendant shall be assigned to remain outside of any closed vessel or confined space to be worked in. They shall have available and be trained in the use of an oxygen analyzer, a self-contained breathing apparatus and a fire extinguisher suitable for the type of work to be done.
3. A listing shall be made of all tools and equipment to be used in the closed vessel or confined space. All tools and equipment must be accounted for when the work is completed.
4. No person shall enter a closed vessel or confined space without a safety harness or belt with a lifeline attached. The person assigned outside the vessel or space shall attend this lifeline.
5. No smoking shall be permitted within a closed vessel or confined space.
6. No gasoline or other internal combustion engine shall be used in closed vessels or confined spaces.
7. While work is in progress adequate lighting shall be provided. All attached fixtures shall be the low voltage (12V or 24V) nonmetallic explosion proof type. The 120V completely sealed, plastic cased, explosion proof fluorescent extension light may be used during field inspection.
8. After all personnel, tools, equipment and lighting are accounted for vessels may be closed.

VII. ENVIRONMENTAL TESTING

Where flammable or toxic contaminants may be present in a confined area, or where deficiencies of oxygen are suspected, appropriate tests shall assure that explosive or toxic limits are not exceeded or that the oxygen concentration is not below 19.5% before persons enter the area.

During inert gas welding, portable and/or fixed oxygen analyzers with visual/audible alarms shall be used in areas where oxygen deficiencies may occur.

Any area suspected of being unsafe for entry because of oxygen deficiency or because of exceeding toxic or flammable limits shall be promptly reported to the coordinator. Appropriate warning signs shall be posted. The area shall be ventilated or exhausted and then checked again before anyone is permitted entry.

Ventilation and exhaust will be maintained in all confined or enclosed areas to prevent concentrations of toxic or hazardous gases and dusts beyond prescribed limits.

In areas where adequate ventilation and exhaust cannot be provided, personnel will be required to wear appropriate respiratory protection.

Suspect areas designated by the Safety Department shall be continuously monitored for oxygen deficiencies with visual/audible alarms.

The Safety Department shall coordinate the maintenance and distribution of all sampling equipment.

Examples of confined or enclosed spaces:

* Caissons, storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, and open spaces more than four feet in depth, such as pits, tubs, vaults, and vessels.

**CONFINE SPACE ENTRY PERMIT**

Date

Location of work

Description of work

Employees assigned to work

Is forced ventilation required?

Does the job require explosion proof lighting or cords?

Does the stand-by attendee know the procedures for notifying help?

Does the space need to be cleaned?

Does all employees understand entry and emergency procedures?

Does the employee entering the confined space have the following proper personnel protective equipment?

Fire Extinguisher Gas Detector Gloves Goggles

Hard Hat Hearing Protection Protective Clothing Respirator

Safety Line Safety Harness Radio

Has the site been surveyed for the following hazardous conditions?

Corrosive Materials Hot Equipment Flammable Materials Toxic Materials

Open Drains Spilled Liquids Pressure Systems

ATMOSPHERIC GAS TESTS :

Test Performed Time / Reading **DO NOT ENTER IF**

Oxygen / Less than 19.5% or more than 22.0%

Flammability / Greater than 10 %

Carbon Monoxide / Greater than 35 PPM

Hydrogen Sulfide / Greater than 10 PPM

Test Performed By

Signature of Supervisor

Signature of Employees Entering Confined Space

# AIR‑USAGE AND HANDLING

# 

1. When using air‑operated hand tools, the utmost caution must be taken in their application.
2. Shut off air pressure before making any adjustments to air‑operated hand tools.
3. Be sure that air‑operated hand tools are held with a firm grip when air pressure is turned on.
4. If compressed air is used for cleaning purposes, it shall be reduced to less than 30 p.s.i. and then only with the proper personal protective equipment.
5. No employee shall be permitted to enter a compressed air environment until they see a physician who reports that they are physically qualified to engage in such work have examined them.
6. Air, if improperly used, can cause serious injuries. Do not point the air nozzle in the direction of other employees.
7. Do not use compressed air to clean clothing or blow dust or dirt out of the air.
8. Pneumatic power tools shall be secured to the hose in a positive manner to prevent accidental disconnection.
9. Safety clips or retainers shall be securely installed and maintained on pneumatic impact tools to prevent them from being accidentally expelled.
10. The manufacturer's safe operating pressure for all fittings shall not be exceeded.

EXCAVATIONS, TRENCHING AND SHORING

1. Prior to opening an excavation, effort shall be made to determine whether underground installations such as sewer, water, fuel, and electric lines will be encountered and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined by careful probing or hand digging and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation.
2. Local, state and Federal ordinances shall be complied with in all general excavation requirements.
3. Barriers and barricades shall be placed on both sides of the excavation to deter the passage of persons or vehicles.
4. Excavated or other material shall not be stored nearer than 4' from the edge of any excavation and shall be so stored and retained as to prevent its falling or sliding back into the excavation.
5. Sides of trenches in hard or compact soil, including embankments shall be shored or otherwise supported when the trench is more than 4' in depth and 8' or more in length. In lieu of shoring, the sides of the trench above the 4' level may be sloped to preclude collapse, but shall not be steeper than a 1' rise to each 1/2' horizontal.
6. Materials used for sheeting or sheet piling, bracing, shoring and underpinning shall be in good serviceable condition and timbers used shall be sound and free from large or loose knots and shall be designed and installed so as to be effective to the bottom of the excavation.
7. In locations where oxygen deficiency condition is possible, use a mechanical blower to provide necessary amount of fresh air.
8. Where employees are required to be in trenches 4' deep or more, ladders extending from the floor of the trench excavation to 3' or more above the top of the trench, shall be provided and located to provide means of exit without more than 25' of lateral travel.
9. The supervisor shall make daily inspections of excavations on the job site. If any evidence of possible cave‑ins or slides is apparent, do not permit employees to work in the trench.
10. Before leaving the work area at quitting time, the supervisor in charge shall see that machinery and tools are properly stored at the trench site and not left in the "on" position.

# FLOOR OPENINGS, OPEN SIDES, HATCHWAYS, RAILINGS AND TOE BOARDS

1. Floor openings shall be guarded by a standard railing and toe‑boards or cover. In general, the railing shall be provided on all exposed sides, except at entrances to stairways. Temporary floor openings shall have standard railings.
2. Every open‑sided floor or platform, 6' or more above adjacent floor or ground level, shall be guarded by a standard railing or the equivalent, on all open sides except where there is entrance to a ramp, stairway, or fixed ladder.
3. Runways 4' or more high shall have standard railings on all open sides, except runways more than 18" wide used exclusively for special purposes may have the railing on one side omitted where operating conditions necessitate.
4. A standard railing shall consist of top rail, intermediate rail and posts, and have a vertical height of approximately 42" from upper surface of top rail to the floor, platform, etc.
5. The top rail of a railing shall be smooth‑surfaced, with strength to withstand at least 200 pounds. The intermediate rail shall be approximately halfway between the top rail and floor.
6. A stair railing shall be of construction similar to a standard railing, but the vertical height shall be not more than 34" nor less than 30" from upper surface of top tail to surface of tread in line with face of riser at forward edge of thread.
7. Railings protecting floor openings, platforms, scaffolds, etc., shall be equipped with toe boards wherever persons can pass beneath the open side, there is moving machinery, or there is equipment from which falling material can cause a hazard.
8. A standard toe board shall be at least 4" in height, and may be of any substantial material either solid or open, with openings not to exceed 1" in greatest dimension.

HAND TOOLS

1. Each supervisor shall be responsible for the safe condition of tools used by the employee, including tools that may be furnished by the employee.
2. Keep tools sharp and in good condition at all times. Dull tools contribute to accidents.
3. If tools cannot be repaired properly, do not make any temporary or make‑shift repairs. Notify your supervisor so tool gets repaired correctly.
4. When tools are not being used, store them in their proper places.
5. Keep hand tools off top of ladders.
6. Keep points of screwdrivers sharp and square.
7. All chisels shall be checked for mushroom heads.
8. Exercise extreme care in using hand tools to prevent their contact with live circuits or equipment.
9. Lubricate moving and adjustable parts to prevent wear and misalignment.
10. Wrenches, including adjustable, pipe, and end socket wrenches, shall not be used when jaws are sprung to the point that slipping occurs.
11. Use hammers with flat striking surfaces.
12. The weight, size, and type of tool should be selected to fit the job. Do not substitute pliers for hammers and screwdrivers for chisels. The right size and type of tools makes your job easier and safer.
13. Impact tools shall be kept free of mushroomed heads. The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tools.
14. Do not leave tools on walkways, aisles, stairways or elevated places.
15. Do not throw tools to fellow workers. Hand them down person by person or by rope.
16. All employees will be subject to personal tool inspection at any time by the Company Safety Representative.
17. All hand tools will be inspected prior to work.

# HOUSEKEEPING

1. During the course of construction, alteration or repairs, scrap material and all other debris shall be kept cleared from work areas, passageways and around buildings and other structures.
2. Combustible scrap and debris shall be removed at regular intervals during the course of construction. Safe means shall be provided to facilitate such removal.
3. Provide garbage containers with covers in areas designated as lunchrooms.
4. The proper time to clean up work areas is as soon as possible after the debris or scrap has been created.
5. Spills of oil, grease or other liquid should be removed immediately or sprinkled with sand to prevent slips and falls.
6. Protruding nails should either be removed or bent over.
7. All materials should be maintained in neat stockpiles for ease of access.
8. Covers shall be provided on containers used for flammable or harmful substances.
9. Fresh air shall be supplied in sufficient quantities to maintain the health and safety of workers.
10. Solid fuel salamanders are prohibited in buildings and on scaffolds.
11. The employers shall provide adequate washing facilities for employees engaged in the application of harmful substances or in operations where harmful contaminants are used.
12. Washing facilities shall be in close proximity to the work site and shall be equipped to remove all harmful substances.
13. An adequate supply of potable water shall be provided in all places of employment.
14. Potable drinking water containers shall be capable of being tightly closed and equipped with a tap.
15. The common drinking cup is prohibited.
16. Unused disposable cups shall be kept in a sanitary container and a receptacle shall be provided for used cups.

INDUSTRIAL HYGIENE

A) INTRODUCTION

* Employees shall be protected from environmental hazards during the course of their employment. Hazardous exposures that cause short‑term adverse effects to health must be controlled.
* The job site safety representative shall develop a program that deals with the identification, evaluation, and control of environmental health hazards. Environmental health hazards may include conditions that cause, legal illness, or any conditions in the work environment that might impair the health of employees to the extent that they lose efficiency or lose time from work.

B) NOISE

* Employees shall be protected from noise levels that might impair hearing. Permissible noise levels shall not exceed those listed in 29 CFR 1926.52, Table D‑2. Exposure to impact on impulse noise shall not exceed 140 dB peak sound pressure level. Impact or impulse exposures of 140 dB shall be limited to 100 dB per eight hours a day. For each decrease at 10 dB in the peak sound pressure level, the number of impact or impulse exposures can be increased by a factor of ten. When employees are exposed to sound levels exceeding acceptable levels, feasible administrative or engineering controls shall be utilized to reduce the exposures. If these controls fail to reduce sound levels to acceptable levels, personal protective equipment shall be issued and used.

C) AIRBORNE CONTAMINANTS

* Employees shall not be exposed to inhalations, skin absorption, ingestion, or contact with any material or substance at or above the concentration allowed in the table of Threshold Limit Vales in 29 CFR 1926.55. Suitable administrative or engineering controls shall be implemented to control airborne contaminants at acceptable levels. This can be done with proper ventilation systems installed in accordance with the recommended practices in Industrial Ventilation.

D) TOXIC MATERIALS

* If we excavate toxic substances on a job all work must cease. It is our preference that the Owner of the job execute the subcontract directly with the abatement contractor. The handling of any toxic material merely by change order should be resisted.

E) SOLVENTS

* The use of solvents is a dual hazard because they are both toxic and flammable. Controls shall be established that reduce the level of exposure to an acceptable level of exposure while preventing a build‑up of flammable mixtures. In selecting a solvent, care should be taken to choose the solvents that are least toxic, flammable and volatile.

F) NON‑IONIZING RADIATION

* Non‑ionizing radiation concerns the control of exposures to lasers, microwaves, and ultraviolet light.
* These effects of non‑ionizing radiation are usually burns to the eye, which is susceptible to this type of radiation.
* Control measures include shielding from harmful rays or arcs and adequate light filters to protect the eyes.
* Consult 26 CRF 1926.54.

LADDERS

1. When portable ladders are used for access to an upper landing surface, the ladder side rails shall extend at least 3 feet above the upper landing surface. If an extension is not possible because of the ladder's length, the ladder shall be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grab rail, shall be provided to assist employees in mounting and dismounting the ladder. In no case shall the extension be such that ladder deflection under a load would, by itself, cause the ladder to slip off its support.
2. Ladders shall be maintained free of oil, grease, and other slipping hazards.
3. Ladders shall not be loaded beyond the maximum intended load for which they were built nor beyond their manufacturer's rated capacity.
4. Ladders shall be used only for the purpose for which they were designed.
5. Non-self-supporting ladders shall be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (the distance along the ladder between the foot and the top support).
6. Wood job made ladders with spliced side rails shall be used at an angle such that the horizontal distance is one-eighth the working length of the ladder.
7. Fixed ladders shall be used at a pitch no greater than 90 degrees from the horizontal, as measured to the backside of the ladder.
8. Ladders shall be used only on stable and level surfaces unless secured to prevent accidental displacement.
9. Ladders shall not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement. Slip-resistant feet shall not be used as a substitute for care in placing, lashing, or holding a ladder that is used upon slippery surfaces including, but not limited to, flat metal or concrete surfaces that are constructed so they cannot be prevented from becoming slippery.
10. Ladders placed in any location where they can be displaced by workplace activities or traffic, such as in passageways, doorways, or driveways shall be secured to prevent accidental displacement, or a barricade shall be used to keep the activities or traffic away from the ladder.
11. The area around the top and bottom of ladders shall be kept clear.
12. The top of a non-self-supporting ladder shall be placed with the two rails supported equally unless it is equipped with a single support attachment.
13. Ladders shall not be moved, shifted, or extended while occupied.
14. Ladders shall have nonconductive side rails if they are used where the employee or the ladder could contact exposed energized electrical equipment.
15. The top or top step of a stepladder shall not be used as a step. When ascending/descending a ladder, the user shall face the ladder and each employee shall use at least on hand to grasp the ladder when progressing up/down the ladder.
16. Cross-bracing on the rear section of stepladders shall not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.
17. Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.
18. Portable ladders with structural defects, such as, but not limited to broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components, shall either be immediately marked in a manner that readily identifies them as defective, or be tagged with "DO NOT USE" or similar language, and shall be withdrawn from service until repaired.
19. Fixed ladders with structural defects, such as, but not limited to broken or missing rungs, cleats, or steps, broken or split rails, or corroded components, shall be withdrawn from service until repaired. The requirement to withdraw a defective ladder from service is satisfied if the ladder is either (1) immediately tagged with "DO NOT USE" or similar language; (2) marked in a manner that readily identifies it as defective; (3) or blocked (such as with a plywood attachment that spans several rungs).
20. Ladder repairs shall restore the ladder to a condition meeting its original design criteria, before the ladder is returned to use. Single-rail ladders shall not be used.
21. An employee shall not carry any object or load that could cause the employee to lose balance and fall.

MATERIAL HANDLING & STORAGE

1. Material Handling
2. Do not attempt to lift or move any material or equipment if there is any doubt in your mind about your ability to do so.
3. Size up the weight of the material or equipment first and discuss the best method of handling with your supervisor. This safe procedure will save many strains, sprains, and hernias.
4. If you feel that you can lift a certain piece of equipment, proceed as follows:
5. Make sure your footing is secure. Get a good balance‑this means feet fairly wide apart (8"‑12").
6. Place feet close to the base of the object of the object to be lifted. This is important because it prevents the back muscles from taking the entire load.
7. Bend the knees outward and straddle the load somewhat, keeping the back as straight as possible.
8. Now start pushing up with your legs, using your strongest set of muscles. Keep the load close to your body as you come up, taking full advantage of the mechanical leverage your body now possesses.
9. Lift the object to the carrying position. If necessary to change your direction when in the upright position, be careful not to twist the body. Turn your body with change of foot position.
10. If you deposit the load on a bench or table, place it on the edge to make the table take part of the load and then push it forward with the arms, or, if necessary, with part of the body in a forward motion. In putting the load down to the floor surface from a waist‑high carrying position, bend the knees and with a straight back and load close to the body, lower the load with the arm and leg muscles.
11. If manual labor is the only method available for handling material eliminate vertical lifting and carrying by substituting simple methods whereby loads can be pulled, pushed or rolled.
12. Take advantage of any mechanical lifting equipment available.
13. Rigging equipment for material handling shall be inspected prior to use each day to ensure that it is safe. Defective rigging equipment shall be tagged, "Out of Service" and removed from the job site.
14. Rigging equipment shall not be loaded in excess of its recommended safe working load as per manufacturer's information for the specific equipment being used.
15. Except for eye splices in the ends of wires and for endless rope slings, each wire rope used in hoisting or lowering, or in pulling loads shall consist of one continuous piece with‑out knot or splice.
16. When used for eye splices, the "U‑bolt" shall be applied so that the "U" section is in contact with the dead end of the rope.
17. Do not ride loads.
18. Use a "tag‑line" on loads for better control.
19. Keep hands and fingers away from ropes, blocks, and sheaves.
20. Do not walk or work under suspended loads.
21. Prior to unloading steel, poles, cross arms and similar material, the load shall be thoroughly examined to ascertain if the load has shifted, binders, or stakes have been broken or the load is otherwise hazardous to employees.
22. During hauling operations, all loads shall be secured to prevent displacement and a red flag shall be attached to the trailing end of the longest piece of equipment.
23. Precautions shall be exercised to prevent blocking of roadways or endangering other traffic.
24. When equipment is being hauled during the hours of darkness, illuminated warning devices shall be attached to the trailing end of the longest piece of equipment.
25. The hoist rope shall not be wrapped around the load.
26. All material handling equipment used on construction such as scrapers, loaders, bulldozers, off‑highway trucks, graders, agricultural and industrial tractors and similar equipment shall be provided with seat belts and shall meet the requirements of the Society of Automotive Engineers, S386‑1969. Seat Belts for Construction Equipment. Seat belts for agricultural and industrial tractors shall meet the seat belt requirements of Society of Automotive Engineers J333a‑1970, Operator Protection for Agricultural and Light Industrial Tractors.

B) Storage

1. All materials stored in tiers shall be stacked, racked, blocked, interlocked or otherwise secured to prevent sliding, falling or collapse.
2. Clearance shall be maintained around lights and heating units to prevent ignition of combustible materials.
3. Aisles and passageways shall be kept clear to provide for the free and safe movement of material handling equipment or employees. Such areas shall be kept in good repair.
4. Material stored inside buildings under construction shall not be placed within 6' of any hoistway or inside floor openings, nor with 10' of an exterior wall that does not extend above the top of the material stored.
5. Stack large quantities of pipe in a neat manner and block to prevent spreading.
6. When storing materials or equipment with sharp or pointed edges, be careful that they are protected so employees will not walk into them.
7. When storing heavy material or equipment, keep in mind the weight of items and locate in proper area to prevent collapse of floor or platform.
8. When materials are stored or used as a passageway, any open‑sided floor, platform or runway 4' or more above adjacent floor or ground level shall be guarded by a standard railing and toe board on all open sides.
9. Railing shall be 42" in vertical height from floor to the upper surface of top rail.
10. Posts, top and intermediate railing shall be at least 1 1/2" minimal diameter (OD) with posts spaced not more than 8' on centers.
11. The intermediate railing shall be halfway between the top surface of top railing and the floor.
12. The anchoring of posts and framing of members of railings for all types of such construction that the completed structure shall be capable of withstanding a load of at least 200 pounds applied in any direction at any point of the top rail.
13. The toe board shall be 4" nominal in vertical height from its top edge to the level of the floor.
14. Paint, rags or other inflammable or flammable materials shall be kept in approved lockers and containers.
15. "No Smoking" signs in large letters on contrasting color background shall be conspicuously posted at all spraying areas and paint storage rooms.
16. No materials or equipment shall be stored under energized bus, energized lines, or near energized equipment. Due to some conditions, it may not be possible to store materials elsewhere while performing installations in congested urban areas. It is intended that storage of materials under or near energized buses, lines or equipment, the clearances noted in Table No. 1 of section 8. (c) (6) (a)\*, shall be complied with and extreme caution shall be exercised when handling material under or near energized buses, lines or equipment.
17. Storage of materials shall not obstruct exits.
18. Materials shall be stored with due regard to their fire characteristics.
19. Weeds and grass in outside storage areas shall be kept under control.

\* See ANSI STANDARD.

# POWER TOOLS

1. Maintenance of equipment should be systematic. All worn or damaged equipment shall be replaced or repaired immediately. All tools shall be cleaned, tested, and inspected regularly.
2. Safety devices such as guards shall be left in place and not removed.
3. Employees using hand or power tools and exposed to the hazard of falling, flying abrasive and splashing objects shall be provided with the particular personal protective equipment necessary to protect them from the hazard.
4. Only authorized employees who have been trained or had previous experience in the field shall be permitted to operate power tools.
5. All electric power operated tools shall either be of the approved double‑insulated or grounded type.
6. When making adjustments or oiling any power tools, turn off the power first.
7. When using electric drill, always use a prick punch to provide starting operation for the drill bit.
8. Wear proper clothing to prevent sleeves and other loose garments from being wound around the drill.
9. All portable grinders shall be equipped with hood guards.
10. Wheels used on portable grinders shall be inspected regularly. A cracked wheel may fly to pieces and should be replaced immediately.
11. Use a wheel with the proper RPM rating in all portable grinders.
12. All grinders shall have abrasive wheels protected by guards and work rests.
13. The safety guard shall cover the spindle end, nut and flange projections. The safety guard shall be mounted so as to maintain proper alignment with the wheel.
14. Work rests shall be used to support the material that is being altered at all times. They shall be of rigid construction and so designed to be adjustable to compensate for wheel wear. Work rests shall be kept adjusted closely to the wheel with a maximum opening of 1/8" to prevent the work from being jammed between the wheel and the rest, which may cause wheel breakage. The work rest shall be securely clamped after each adjustment.
15. The use of electric cords for hoisting or lowering tools shall not be permitted.
16. Pneumatic power tools shall be secured to the hose or whip by positive means to prevent the tools from becoming accidentally disconnected. Safety clips or retainers shall be securely installed and maintained on pneumatic (percussion) tools to prevent attachments from being accidentally expelled.
17. The manufacturer's safe operating pressure for hoses, pipes, valves, filters and other fittings shall not be exceeded.
18. The use of hoses for hoisting or lowering tools shall not be permitted.
19. All hoses exceeding 1/2" inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
20. The operating trigger on portable hand‑operated utilization equipment shall be so located as to minimize the possibility of its accidental operation and shall be arranged to close the air inlet valve automatically when the pressure of the operator's hand is removed.

O) The fluid is used in hydraulic powered tools shall be fire‑ resistant fluid and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed.

1. The manufacturer's safe operating pressures for hoses, pipes, valves, filters and other fittings shall not be exceeded.
2. All fuel‑powered tools shall be stopped while refueled or serviced.
3. All portions of band saw blades shall be enclosed or guarded, except for the working portion of the blade between the bottom of the guide rolls and the table.
4. Circular table saws shall have a spreader aligned with the blade, spaced no more than 1/2" behind the largest blade mounted in the saw. This provision does not apply when grooving, dadoing or rabbiting.
5. Circular table used for ripping shall have nonkickback fingers and dogs.
6. The use of portable power tools has increased in recent years. The majority of power tool accidents are caused by lack of knowledge as to their operation and poor handling. If you do not know how to operate any power tool, ask your coordinator for the proper instructions. Always use the proper tool for the job, if the tool is not available the coordinator will re‑schedule work until the proper tool is on the job.
7. No one shall be subject to prolong periods of use with any power tool. Take turns of short rest periods. Boredom can cause serious injury.
8. A ground fault interrupter, (GFI) shall be used whenever a power tool is used in conjunction with an electrical cord.
9. All portable, power drive, circular saws shall be equipped with guards above and below the base plate or shoe. The lower guard shall cover the saw to the depth of the teeth, except for that minimum which is required to allow proper retraction and contact with the work, and shall automatically return to the covering position when the blade is removed from the work.

PROTECTIVE EQUIPMENT

A) General Requirements

1. Protective equipment, including personal protective equipment for eyes, face, head and extremities, protective clothing, respiratory devices and protective shields and barriers shall be provided, used and maintained in a sanitary and reliable manner. Wherever it is necessary by reason of hazards of processes of environment, chemical hazards or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.
2. Considerable amount of time and expense has gone into research for the improvement of personal protective equipment for use in the construction industry in recent years. Such equipment is only effective when it is used in the daily application of work assignments, and it shall be the responsibility of all levels of supervision for the enforcement of personal protective equipment to be used and worn by all employees at all times.
3. Where employees provide their own protective equipment, the employer shall be responsible to assure its adequacy, including maintenance and sanitation of such equipment.
4. All personal protective equipment shall be of safe design and construction to meet the requirements of the particular job assignments to be performed.
5. Employees operating machines, climbing ladders, handling material wear clothes that reasonably snug, particularly around the neck, wrists and ankles, and there should be no loose cuffs, flaps or strings.

B) Head Protection

1. Employees working in areas where there is a danger of head injury from impact or from falling or flying objects or from electrical shocks and burns shall be protected by protective helmets.
2. Helmets for the protection of employees against impact and penetration of falling and flying objects shall meet the specifications contained in American National Standards Institute S8.1‑1969 Safety Requirements for Industrial Head Protection.
3. Helmets for the head protection of employees exposed to high voltage electrical shock and burns shall meet the specifications contained in American National Standards Institute Z89.2‑1971.
4. A protective helmet with a brim extending completely around the periphery of the helmet will offer much more protection to the face and the back of the neck.
5. Whenever installations are to be performed in confined spaces where a brim would be a hindrance, a cap‑type helmet may be more appropriate.
6. In some installations where impact protection is not required by protection against bumping the head is required, the so‑called bump hats could be used to an advantage.

C) Head Protection

1. Protection against the effects of noise exposure shall be provided when the sound levels that exceed those shown in the table below when measured on the A‑scale of a standard sound level meter at slow response.

DURATION PER or SOUND LEVEL

DAY HOURS DBA SLOW RESPONSE

8 90

6 92

4 95

3 97

2 100

1 ½ 102

1 105

½ 110

¼ or less 115

1. Exposure to impulsive or impact noise shall not exceed 140 dB peak sound pressure level.
2. Ear protective devices inserted in the ear shall be fitted or determined individually by competent persons.
3. Plain cotton is not an acceptable protective device.

D) Eye and Face Protection

1. Employees shall be provided with eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical or radiation agents.
2. Eye and face protection equipment shall meet the requirements specified in the American National Standards Institute Z87.1‑1968, Practice for Occupational and Educational Eye and Face Protection.
3. All employees shall use a suitable protector for the work to be performed. No unprotected employee shall knowingly be subjected to a hazardous environmental condition.
4. All eye and face protection shall be disinfected, kept clean and in good repair.
5. Persons whose vision requires the use of corrective lenses in spectacles shall wear goggles that can be worn over corrective spectacles without disturbing the adjustment of the spectacles.
6. In performing some job assignments with harsh chemicals, to protect against splashes, a plastic face shield that is shaped to cover the entire face shall be worn together with splash‑proof goggles.
7. To protect against severe exposure, cupped goggles shall be worn as they are so designed and constructed to absorb maximum impact without damage to the employee eyes.

E) Hand Protection

1. Employees should wear work gloves in good condition, which are suited to the type of work involved.
2. Gloves should be worn when handling material with sharp or rough edges.
3. When working with materials that are extremely hot, asbestos gloves should be worn.
4. Employees using pipe-threading machine should wear suitable gloves to prevent cuts to fingers when cleaning off the threads.

F) Protection of Feet

1. It is strongly recommended that all employees that engaged in work involving heavy pipe and equipment wear safety shoes to prevent serious injury.
2. In addition to safety shoes canvas or leather leggings, leather jackets should be worn by welders who work with molten metal.
3. Employees should be encouraged to keep their shoes in good repair. Shoes with worn heels or thin or worn soles should not be permitted.
4. Employees are not allowed to wear shoes that have been slit or have holes cut in them.
5. For additional protection to the in‑step and toes, an instep protector is available which spreads any impact over a wide area and thus will minimize any injury.
6. To afford the most protection to the feet and shins from the heaviest impacts, foot guards made of heavy gauge, flanged and corrugated sheet metal are available.

G) Protection Against Radiant Energy in Welding

1. The following table shall be used as a guide to the selection of the proper shade numbers of filter lenses or plates to be used by all employees who are welding.

WELDING OPERATION SHADE NUMBER

Shielded metal‑arc welding 1/16, 3/32,

1/8, 5/32‑inch diameter electrodes 10

Gas‑shielded arc welding (nonferrous) 1/16,

3/32, 1/8, 5/32‑inch diameter electrodes 11

Gas‑shielded arc welding (ferrous) 1/16,

3/32, 1/8, 5/32‑inch diameter electrodes 12

Shielded metal arc welding 3/16, 7/32,

1/4‑inch diameter electrodes 12

5/16, 3/8‑inch diameter electrodes 14

Atomic Hydrogen Welding 10 ‑ 14

Carbon arc welding 14

Soldering 2

Torch Brazing 3 or 4

Light cutting up to 1 inch 3 or 4

Medium cutting 1 inch to 6 inches 4 or 5

Heavy cutting over 6 inches 5 or 6

Gas welding, light, up to 1/8 inch 4 or 5

Gas welding, medium, 1/8 to 1/2‑inch 5 or 6

Gas welding, heavy over 1/2 inch 6 or 8

H) Respiratory Protection

1. When work assignments must be performed in areas with air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays or vapors, respirators shall be provided and used by the employee for the protection of their health.
2. The respirator provided should be applicable and suitable for the adequate protection against the particular hazard for which it is designed in accordance with standards established by the U.S. Department of Interior, Bureau of Mines.
3. Branch Operations Manager or designated Coordinator shall be responsible to ensure that the employee shall be instructed and trained in the proper use of respirators and their limitations before they are permitted to work in the contaminated area.

I) Safety Belts, Lifelines and Lanyards

1. Lifelines, safety belts and lanyards shall be used only for employee safeguarding. Should any of these items be subjected to over stress loading, they shall be immediately removed from service and destroyed.
2. Lifelines shall be secured above the point of operation to an anchorage or structural member capable of supporting a minimum dead weight of 5,400 pounds.
3. Lifelines used in operation where the lifeline may be subjected to cutting or abrasion shall be a minimum of 7/8" wire core manila rope. For all other lifeline applications, a minimum of 3/4" manila or equivalent with a minimum breaking strength of 5,400 pounds shall be used.
4. Safety belt lanyard shall be a minimum of 1/2" nylon or equivalent, with a maximum length to provide for a fall of no greater than six feet. The rope shall have a minimal breaking strength of 5,400 pounds.
5. All safety belt and lanyard hardware shall be drop forged or pressed steel, cadmium plated in accordance with type 1, Class B plating specified in Federal Specifications QQ‑P‑416. Surface shall be smooth and free of sharp edges.
6. All safety belt and lanyard hardware except rivets shall be capable of withstanding a tensile loading of 4,000 pounds without cracking, breaking or taking a permanent deformation.
7. Definitions applicable to this section:
8. "Safety Belt" means a device usually worn around the waist, which by reason of its attachment to a lanyard and lifeline or a structure will prevent an employee from falling.
9. "Lanyard" means a rope suitable for supporting one person. One end is fastened to a safety belt or harness and the other end is secured to a substantial object or lifeline.
10. "Lifeline" means a rope, suitable for supporting one person, to which a lanyard, safety belt or harness is attached.

J) Safety Nets

1. Safety nets shall be provided when work places are more than 25' above the ground or water surface, or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or safety belts are impractical.
2. Where safety net protection is required, operations shall not be undertaken until the net is in place and has been tested.
3. Nets shall extend 8' beyond the edges of the work surface where employees are exposed.
4. The maximum mesh size of nets shall be 6" x 6" of 3/8" diameter.
5. Forged steel safety hooks or shackles shall be used to fasten the net to its supports.
6. Connections between net panels shall develop the full strength of the net.
7. Each acceptable net shall carry a label with the following information: a) Name of the manufacturer ; b) Identification of net material; c) Date of manufacture; d) Date of prototype test; e) Name of testing agency
8. The safety net suspension system shall be tested after installation and whenever there is evidence of abuse or damage. A 300-pound weight shall be dropped from a height of not less than 25'. The entire net rigging and suspension system shall be designed to safely withstand anticipated impact loading with a minimum safety factor of five (5). The job test shall be considered satisfactory if there are no broken members and no appreciable distortion of the net pattern.

K) Working over or near water

1. Employees working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard approved life jackets or buoyant work vests.
2. Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.
3. Ring buoys with at least 90' of line shall be provided and readily available for emergency rescue operation. Distance between ring buoys shall not exceed 200'.
4. At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

SCAFFOLDS

General Requirements

1. Scaffolds and other elevated work platforms are responsible for many accidents through falls and falling objects. Properly designed and constructed, scaffolding and staging may be used with no greater hazard than any other work area.
2. Scaffolds should be designed, built and inspected by competent persons. To avoid the use of makeshift platforms, each job should be carefully planned ahead so that all necessary scaffolding can be provided and on the job site when required.
3. The footing or anchorage for scaffolding shall be sound, rigid and capable of supporting the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose bricks or concrete blocks, shall not be used to support scaffolds or planks.
4. Scaffolds 4' to 6' in height, having a minimum horizontal dimension in either direction of less than 45", shall have standard guardrails installed on all open sides and ends of the platform.
5. Scaffolds more than 6' in height shall have guardrails, mid-rail and toe boards installed on all open sides and ends.
6. Scaffolds and their components shall be capable of supporting without failure at least four times the maximum the intended load.
7. Any scaffold including accessories, such as brace, brackets, trusses, screw legs, ladder, etc., damaged or weakened from any cause shall be immediately repaired or replaced.
8. All planking or platforms shall be overlapped a minimum of 12", or secured from movement.
9. An access ladder or equivalent safe access shall be provided.
10. Scaffold planks shall extend over their end supports not less than 6" nor more than 12".
11. Slippery conditions on scaffolds shall be eliminated as soon as possible after they occur.

WELDING, CUTTING & BRAZING; GAS & ARC METHODS

No employee shall weld or use gas-cutting equipment without getting approval from their supervisor. If the employee doesn't have prior welding experience or training they will not be eligible to weld or use gas cutting equipment.

A) General Requirements

1. In welding and cutting operations, suitable fire extinguishing equipment should be maintained in a state of readiness for instant use. Such equipment may consist of pails of water, buckets of sand or portable extinguisher depending upon the nature and quantity of the combustible material exposed.
2. A welder's helper or firewatcher shall be required whenever cutting or welding is performed in locations where a fire might develop. It is also advisable to have this watch continued at least half an hour after completion of the welding operations to detect and extinguish possible smoldering fires.
3. Cutting and welding are major producers of fires on construction projects because of molten metal and sparks. In cutting and welding, sparks may be showered 25' to 30' and may retain heat for several seconds which is sufficient to ignite combustible material.
4. Good housekeeping to remove all loose and easily combustible materials and removal of all highly volatile materials, such as gasoline and solvents
5. Shield all wood planking, scaffolds, wooden forms and other combustible material that cannot be removed with asbestos, sheet metal or other suitable material.
6. No employee shall cut or weld on closed containers (example gas container).
7. When removing excess welded metal, faulty weldments or slag, the welder removes or raises their shield in order to see. The chips flying from the cleaning hammer are dangerous, especially to the eyes so safety goggles or a protective face shield shall be used.
8. Gloves should be worn to protect the hands and wrists. Flying chips travel a considerable distance and may be dangerous to other personnel in the area.
9. Gloves should be worn when cleaning and brushing surfaces to be welded, also when wire‑brushing metal.
10. Clothing should be free of oil and grease. Woolen clothing is not as readily ignited as untreated cotton clothing and aids in protecting the welder from changes in temperature.
11. Safety shoes are recommended, low‑cut shoes with unprotected tops should not be worn.
12. High quality welding helmets of the approved type shall be worn. The proper shade of welding lenses shall be required and an adequate supply of cover lenses shall be available. Employees assisting the welding operator shall also wear protective lenses to avoid "welding flash" of the eyes.
13. Careless disposal of hot stubs may result in: a) injury to other employees, especially those working at lower levels; b) a falling hazard, if dropped on the floor, walkway or other surfaces; c) a fire hazard, if dropped into combustible material.
14. When cutting or welding lead, zinc, cadmium‑coated, lead bearing or other toxic materials, proper ventilation shall be provided for the removal of fumes or the use of proper respiratory equipment shall be used.

# CRANE SAFETY AND RIGGING

1. The employer shall comply with the manufacturer's specifications and limitations.
2. Rated load capacities, recommended operating speeds, and special hazard warnings or instruction shall be posted on all equipment and be visible from the operator's station.
3. Equipment shall be inspected before each use and all deficiencies corrected before further use.
4. Accessible areas within the swing radius of the revolving structure shall be barricaded.
5. Except where electrical distribution and transmission lines have been de-energized and visibly grounded at point of work, or where insulating barriers not a part of or an attachment to the equipment or machinery have been erected to prevent physical contact with the lines, no part of a crane or its load shall be operated within 10' of a line rated 50 kV or below, 10' + 0.4" for each 1 kV over 50 kV for lines rated over 50 kV; or twice the length of the line insulator, but never less than 10'.
6. When a crane is being used on a job, someone familiar with proper crane hand signals or portable radio will be used.
7. Rigging equipment for material handling shall be inspected prior to use each shift and as necessary during its use to ensure that it is safe.
8. Rigging equipment shall not be loaded in excess of its recommended safe working load.

# ON THE JOB SAFETY REQUIREMENTS

A) Pre‑Job Safety Procedures

1. Examine job drawings and job site conditions to determine what safeguards shall be taken and safety devices required to protect yourself, your employees, company property and the property of others.
2. Requisition from warehouse, accident prevention signs as warning of temporary or permanent hazards; tags to attach on part of a structure and equipment to warn of existing or immediate hazards; barricades as an obstruction to deter the passage of persons or vehicles.
3. Contact the General Contractor for additional safety regulations that apply to your operations.
4. Inspect all tools and equipment for faults and defects before they are used on the job site.
5. Have knowledge of Fire Protection Regulations and location of equipment.
6. Know the location of available First‑Aid facilities.
7. Check the proper amounts of Personal Protective Equipment to meet employee requirements.
8. Set up a plan for Employee Safety Education and monthly safety meetings.
9. Check for any additional local or state requirements that must be complied with.

B) General Requirements

1. No employee shall be permitted to work in such proximity to any part of a high voltage electrical power circuit that they may contact the same in the course of their work unless the employee is protected against electric shock by de‑energizing the circuit and grounding it or by guarding it by effective insulation.
2. All equipment shall be installed in accordance by local code, manufactures installation procedure, or COMPANY installation manual.
3. Sufficient space shall be provided and maintained in the area of equipment to permit ready and safe operation and maintenance of such equipment.
4. All equipment shall be installed in a neat and professional like manner.
5. All equipment shall be firmly secured to the surface on which it is mounted.
6. All extension cords shall be of the three‑wire type used only in continuous lengths without splice, except suitable molded or vulcanized splices may be used where properly made and the insulation shall be equal to the cable being spliced.
7. Cords shall be kept clear of working spaces and walkways or other locations in which they are readily exposed to damage.
8. Worn or frayed extension cords shall not be used.
9. Treat so-called “dead line” as though it is “hot”. Use testing equipment to convince yourself that the voltage has been disconnected.

# ASBESTOS ENVIRONMENTAL CONTROLS

REQUIREMENTS FOR ASBESTOS REMOVAL, DEMOLITION AND RENOVATION

A) Wherever feasible the employer or general contractor shall establish negative pressure enclosures before commencing removal, demolition, and renovation operations.

B) The employer or general contractor shall designate a competent person to perform or supervise the following duties:

1. Set up the enclosure and integrity of enclosure;

2. Supervise all employees’ exposure;

3. Control entry and exit to enclosure;

4. Ensure that employees wear protective clothing and respirators.

5. Ensure that employees are trained in the use of personal protective equipment.

6. Ensure that employees observe decontamination procedures.

7. The competent person shall periodically examine work clothes worn by employees for rips or tears.

1. The employer or general contractor shall keep an accurate record of all measurements taken to monitor employee exposure to asbestos.

# LOCK - OUT / TAG – OUT

In our facility we recognize that Lock - Out is the preferred method of isolating machines or equipment from energy sources. It is our policy that all equipment that is capable of accepting lock-out devices will be locked-out and tagged whenever it is undergoing servicing or maintenance.

If any equipment exists in our facility that will not accept lock-out devices, we will use tag-out procedures and devices when working on that equipment.

We realize that OSHA regulations require that any equipment that has undergone major repair, renovation or modification after October 31, 1989 or any new equipment that has been installed after the same date must accept lock-out devices. To assure that we are in compliance with this portion of the regulation whenever we install a new machine in our facility or perform major repairs or modifications to our equipment we check to make sure that the equipment will accept a lock-out device.

In our facility we have developed two type of Energy Control Procedures. The first is a “General” procedure, which we utilize when the equipment and situation qualify for the “exemption” in the OSHA regulations. We realize that to qualify for this exemption, the following elements must exist:

* The equipment has no potential for stored or residual energy after shutdown.
* The equipment has a single energy source, which can be readily identified and isolated.
* The isolation and locking out of that energy source will completely de-energize and de-activate the equipment.
* We isolate the equipment for the energy source and lock it out when we are working on the equipment.
* A single lock-out device will achieve a locked out condition.
* The lock-out device will be under the exclusive control of the authorized employee performing the work on the equipment.
* Servicing the equipment does not create other hazards for other employees.
* There have been no accidents involving unexpected activation or re-energization of the equipment during previous servicing.

The following procedure is used for certain, straight- forward Lock-Out / Tag-Out situations. In order to use this procedure, the equipment being worked on and the circumstances involved with that work must meet the criteria previously listed for use of the “General” Energy Control Procedure. This procedure comes form the appendix to the OSHA “Lock-Out / Tag-Out” regulations and has been paraphrased for use in our facility.

#### BASIC RULES FOR USING LOCK-OUT OR TAG-OUT SYSTEM PROCEDURES

1. All equipment will be locked-out or tagged-out to protect against accidental or inadvertent operation, when this operation could cause injury to personnel.
2. Do not attempt to operate any switch, valve or other energy-isolating device when it is locked or tagged out.

#### SEQUENCE OF LOCK-OUT OR TAG-OUT SYSTEM PROCEDURE

1. Notify all affected employees that a lock-out or tag-out system is going to be utilized on a piece of equipment, as well as the reason lock-out / tagged-out is being performed. The maintenance employee must know the type and magnitude of the energy that the equipment uses and understand the hazards of this energy.
2. If the equipment is operating, shut it down by the normal stopping procedure (depress the stop button, open the toggle switch, etc.)
3. Operate the appropriate switches, valves or other energy isolating devices so that the equipment is isolated from its energy sources. Stored energy (such as that in springs, parts of the equipment that are elevated and could drop, rotating fly-wheels, capacitors, hydraulic system, and air, gas, steam or water pressure, etc.) must be dissipated or restrained. This can be accomplished by methods such as repositioning, blocking, bleeding down, grounding, etc.
4. Lock-out and / or tag-out the energy isolating devices with the appropriate individual lock and / or tags.
5. After making sure that no personnel are exposed, check the effectiveness of having locked/tagged out the energy sources. Operating the push button can do this or other normal operating controls to make sure the equipment will not operate. (CAUTION: RETURN OPERATING CONTROLS TO “NEUTRAL” OR “OFF” POSITION AFTER PERFORMING THESE TESTS.)
6. The equipment is now locked and / or tagged out.

#### RESTORING EQUIPMENT TO NORMAL PRODUCTION OPERATIONS

1. After the work being performed is completed and the equipment is ready to resume normal production operations, check the area around the equipment to ensure that no one is exposed.
2. After all tools have been removed from around the equipment, guards have been reinstalled ( if applicable ) and employees are in the clear, remove all lock-out / tag-out devices. Operate the energy isolating devices to restore energy to the equipment.

#### PROCEDURE INVOLVING MORE THAN ONE PERSON

1. In the proceeding steps, if more than one person is required to lock-out or tag-out equipment, each person will place their own personal lock-out or tag-out device on the energy isolating devices.
2. When an energy-isolating device can not accept multiple locks or tags, a multiple lock-out / tag-out device (such as a multi-holed hasp) may be used.
3. As each person no longer needs to maintain their lock-out protection, the person will remove their lock from the multiple lock-out / tag-out device.

While we can use the “General” Energy Control Procedure when working with some of our powered equipment some equipment may require a separate Energy Control Procedure written specifically for that piece of equipment.

Each specific Energy Control Procedure will include the following information:

1. Identity and description of the equipment to which the procedure applies.
2. The controls that exist on each piece of equipment (such as “on/off “ buttons, toggle switches, etc.)
3. The types of energy used by the equipment.
4. Energy sources and energy isolation devices associated with that equipment.
5. Shutdown procedures to be used to de-energize the equipment.
6. Release and start-up procedures to be used with the equipment.

We realize that these procedures may need to be revised if modifications are made to the equipment or our energy systems. Whenever modifications of this type are made, we will review the Energy Control Procedures associated with the affected equipment.

We also realize that our Energy Control Procedures should be periodically reviewed to make sure they are accurate and up-to-date.

WRITTEN HAZARD COMMUNICATION PROGRAM

# FOR COMPANY

One of the major goals of the Occupational Safety and Health Administration (OSHA) is to regulate industries to promote safe work practices in an effort to minimize the incidence of chemically related employee illnesses and injuries. Relative to this goal, OSHA has enacted the Hazard Communication Standard, codified as 29 CFR 1910.1200. The purpose of the Hazard Communication Standard is to establish uniform work place requirements for the communication of hazards and hazardous chemical information to all potentially exposed employees. COMPANY has implemented this written Hazard Communication Program to meet the letter and intent of the OSHA Hazard Communication Standard. The objective of this written program is to effectively disseminate pertinent data on the safe handling of hazardous chemicals in the workplace to all appropriate personnel and to outline their rights and responsibilities under the OSHA Hazard Communication Standard.

#### RESPONSIBILITY PROFILES

There are four major “categories of responsibility” that are essential to the effective implementation of the facility’s Hazard Communication Program. These are:

* The “Right - To - Know” Coordinator
* Managers and Supervisors
* Hazard Communications Training Instructors
* The Facility’s Employees

“RIGHT-TO-KNOW” COORDINATOR

The “Right-To-Know Coordinator will be responsible for overall management and support of the facility’s Hazard Communication Program. Activities, which are delegated to the “Right-To-Know” Coordinator typically include, but are not, limited to:

* Overall responsibility for implementing the Hazard Communication Program for the company.
* Develop and administer any additional policies and procedures needed to support the effective implementation of this program.
* Revise and update this program when necessary.
* Collect and maintain suitable reference library on the Federal Hazard Communication Regulations and chemical safety information.
* Act as facility liaison during OSHA inspections.
* Delegate responsibility to appropriate personnel for support of the Hazard Communications Program. Such activities will include:

1. Designation of personnel responsible for requesting and collecting MSDSs from all manufacturers and suppliers.
2. Designation of personnel responsible for labeling containers holding hazardous chemicals.
3. Designation of personnel responsible for conducting periodic facility audits to update hazardous chemical inventory and to assure general compliance with the program.
4. Designation of Hazard Communication Trainers.

The Safety Director has been appointed as the company “Right-To-Know” Coordinator.

**MANAGERS AND SUPERVISORS**

The General Manager or designated Coordinator will be responsible for the “on-site” management of the Hazard Communication Program. Activities that they will be responsible for include:

* Seeing that training is given to employees on the proper handling of hazardous substances in their work area and use of necessary personal protective equipment.
* Maintaining a supply of personal protective equipment (i.e. gloves, face shields, respirators), as needed.
* Informing the “Right-To-Know” Coordinator and Hazard Communication Trainer of all new employees in the work area.
* Insuring that all containers, including transfer containers, are appropriately labeled.
* Consulting with the “Right-To-Know” Coordinator regarding any questions concerning the Hazard Communication Program and any new hazardous chemicals in the work area.

#### HAZARD COMMUNICATION TRAINING INSTRUCTOR

The Hazard Communication Trainer will be responsible for the education and training of all personnel who are exposed to or handle hazardous substances. Activities falling under the direction of the trainer include:

* Develop suitable training program.
* Scheduling periodic training seminars for employees.
* Maintaining appropriate training documentation such as sign-in sheets, quizzes, manuals, etc.
* Periodically reviewing the training programs with the “Right-To-Know” Coordinator and supervisor to include appropriate new information.
* The General Manager will select the facility’s Hazard Communication Trainer.

#### EMPLOYEES

As with all the facility’s activities, our employees have the most important role in the Hazard Communications Program, for the ultimate execution of the program rests in their hands. In this role they must:

* Know which chemicals in their work area are hazardous.
* Attend the Hazard Communication Training Session conducted by the Hazard Communication Trainer.
* Become familiar with the information on the MSDSs for the hazardous chemicals in their work area.
* Observe all the handling precautions noted on the MSDSs and as discussed in the training sessions.
* Inform supervisor :
* Before performing a non-routine task in which hazardous chemicals are involved.

1. When encountering hazardous chemicals in the work area which are either not labeled properly, not identified in the inventory listing, or do not have and MSDS sheet in the MSDS manual.

#### HAZARD DETERMINATION

In general, or facility has elected to rely on the data contained on the manufacturer’s Material Safety Data Sheet for evaluating the hazards associated with any chemical processed, used, or stored on-site. In the event an MSDS is not available from the manufacturer or supplier, or the information on the MSDS is insufficient, the following information will be used for the proper evaluation of a chemical or substance in the work place. Any chemical, chemical mixture, or material shall be considered hazardous for the purpose of this Hazard Communication Program when evaluation of the available chemical data demonstrates that the substance meets any of the following criteria:

Carcinogen: A chemical is considered a carcinogen if:

* It has been evaluated by the International Agency for Research on Cancer (IARC), and found to be a carcinogen or potential carcinogen.
* It is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology (NTP).
* OSHA regulates it as a carcinogen.

Corrosive: A chemical that causes visible destruction of, or irreversible alterations in living tissue by chemical action at the site of contact.

Irritant : A chemical which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.

Sensitizer: A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

Target Organ Effects : The following is a target organ categorization of effects which may occur due to chemical exposure. This categorization of effects is not intended to be all-inclusive:

* Hepatoxins; chemicals which produce liver damage.
* Nephrotoxins; chemicals which produce kidney damage.
* Neurotoxins : chemicals which produce their primary toxic effects on the nervous system.
* Agents which act on the blood or hematopoietic system; decrease hemoglobin function, deprive the body tissues of oxygen.
* Agents which damage the lungs; chemicals which irritate or damage the pulmonary tissue.
* Reproductive toxins; chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis).
* Cutaneous hazards; chemicals which affect the dermal layer of the body.
* Eye hazards; chemicals which affect the eye or visual capacity.

Toxic and Hazardous Substances : A chemical is considered hazardous if:

* It is listed in 29 CFR 1910 Subpart Z, Toxic and Hazardous Substances, OSHA manual.
* It is listed in “Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment”, American Conference of Governmental Industrial Hygienists, ACGIH.

Physical Hazards : Materials which display any of the following characteristics or conditions should be considered hazardous:

* Combustible liquid; having a flash point at or above 100 F, but below 200 F or higher total volume of which make up 99 percent or more of the total volume of the mixture.
* Compressed gas; any gas or mixture of gases having, in a container, either an absolute pressure exceeding 40 pounds per square inch at 70 F or an absolute pressure exceeding 104 pounds per square inch at 130 F, or both.
* Explosive; a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure or high temperature.
* Flammable liquid; any liquid having a flash point below 100 F except any mixture having components with flash points of 100 F or higher, the total of which make up 99 percent or more of the total volume of the mixture.
* Organic peroxide; an organic compound that contains the bivalent -0-0 structure and which may be considered to be a structural derivative of hydrogen atoms has been replaced by an organic radical.
* Oxidizer; substance that readily yields oxygen to stimulate combustion.
* Pyrophoric; a chemical that will ignite spontaneously in air at temperature of 130 F or below.
* Unstable (reactive); a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense or will become self-reactive under conditions of shocks, pressure or temperature.
* Water-reactive; a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

MATERIAL SAFETY DATA SHEET ACQUISITION

For our facility, Administration Department has been given the responsibility of maintaining up-to-date MSDS records. All manufacturers or distributors that supply chemicals or products containing chemicals to our facility must have been contacted by Administration Department in order to obtain MSDSs for those chemicals. All of the MSDSs for this area are kept on file and review of MSDS records will be conducted periodically.

# CONTAINER LABELING

In general, our facility will rely on manufacturers and suppliers to appropriately label all incoming containers they deliver in accordance with the OSHA standard. However, we recognize that the following materials are exempt form the Hazard Communication Labeling requirement, and will therefore accept these materials for delivery without the labeling required by the Standard.

* Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency.
* Any food, food additive, color additive, drug, cosmetic, or medical veterinary device, including materials intended for use as ingredients in such products (e.g. flavors and fragrances), such terms are defined in the Federal Food Drug and Cosmetic Act.
* Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act and Federal Hazardous Substances Act respectively when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission.

# LABELING REQUIREMENTS

We recognize that the minimum amount of information required by the Hazard Communication Standard for container labels are;

* Identity of the hazardous chemical contained therein.
* Name and address of the chemical manufacturer, importer, distributor or other responsible party.
* Appropriate hazard warnings.

In our facility Administration Department is responsible for seeing that incoming containers of potentially hazardous chemicals are checked to ensure that labeling covering these requirements is affixed.

# IN-HOUSE LABELING GUIDELINES

We also recognize that our facility is responsible for labeling “in-house”, secondary containers. General Manager or designated Coordinator is responsible for seeing that these containers of materials which are used or produced exclusively within this facility, are labeled using the following guidelines:

* When hazardous materials are transferred from original containers to secondary containers, each secondary container is labeled, tagged or clearly marked to identify the container contents, appropriate hazard warnings and recommended personal protective equipment.
* Stationary vessels, tanks, or pipes that contain hazardous materials have clearly affixed labels, sign, or placards which identify the container contents and have the appropriate hazard warnings.
* “Empty” containers are not reused for other than originally contained substances unless the original labels are removed or defaced and a new label is attached to identify the new contents and associated hazard warnings.

We are aware that labeling is not required for portable containers into which hazardous materials are transferred when the material is intended for use within the same work shift and it remains under the immediate control of the employee who performed the transfer. However, our facility will label even these “single use” container whenever possible.

NOTIFICATION OF ON-SITE CONTRACTORS

We will require that all contractors disclose all the hazardous materials they intend to bring into the facility and provide MSDS sheets on those substances. Administration Department has been designated as our facility’s liaison with these contractors and will provide and obtain this information.

CHEMICAL INVENTORIES AND

MATERIAL SAFETY DATA SHEETS

A Hazardous Chemical List has been compiled for our facility and additional inventories will be conducted periodically to assure the accuracy of this list. In general, our facility will rely of the MSDS information provided by the manufacturer or supplier to determine if a specific chemical or product is to be included in the “Hazardous Chemical List”. In situations where products are unique mixtures or where no data is available, the hazard determination procedure outlined in the “Hazard Determination” section of this plan will be used as a method of evaluation.

The following classes of materials are, however, excluded from the hazard determination requirements contained with this program, as provided by OSHA and therefore, have not been included on the Hazardous Chemical List:

* Any Federally regulated hazardous waste.
* Tobacco or Tobacco Products
* Wood and Wood Products
* Articles
* Food, drugs, or cosmetics intended for personal consumption by employees while in the work place.

Administration Department has been assigned the responsibility of making sure that all employees requesting copies of the Hazardous Chemical list or MSDS sheets receive them within five working days of the date the list is requested. To make sure that employees have “workplace access” to this information copies are kept at appropriate locations in our facility.

MATERIAL SAFETY DATA SHEET

RECORDKEEPING PROCEDURES

We recognize that it is very important that our facility has a Material Safety Data Sheet for each potentially hazardous substance we use. That is one reason that we periodically compare the list of hazardous chemicals used in our facility with the materials that we actually use, and notify Administration Department of any adjustments that need to be made.

The procedure below is followed as part of our normal operations in order to make sure that we have MSDS sheets for all the materials that we use in the facility:

* For any shipment of a potentially hazardous substance that is received at the facility, Administration Department checks to see if a Material Safety Data Sheet was received with the shipment.
* If there was an MSDS received with the shipment, Administration Department checks to see if we have an existing copy of an MSDS for that chemical on file. If we do have an MSDS already on file for the chemical, they will determine whether the MSDS received with the shipment should supersede the one that is on file, and take appropriate action.
* If no MSDS was received with the shipment, Administration Department checks to see whether we have an existing MSDS for that chemical on file. If we do have an existing MSDS for the substance, no further action is taken. If we do not have an MSDS for that substance the Administration Department will request a MSDS from the supplier of that chemical.
* For any chemical that doesn’t come through the shipping and receiving department, the employee that obtains the chemical shall give the appropriate information to the Administration Department so they can request MSDS from the supplier.

HAZARD COMMUNICATION

EDUCATION AND TRAINING

With the Hazard Communication Program our facility has instituted an employee education and training program regarding the handling of hazardous chemicals in the workplace. All personnel who are exposed to chemical hazards in their jobs will be trained at the time of their initial assignment, and whenever circumstances in the work place change involving the addition of a new hazard, or new hazardous chemical. This education and training program will be given to all of our employees at least annually, to keep their knowledge in these areas current. Additionally all new employees will be trained as part of our “new employee orientation program” so that they are adequately prepared to deal with the chemicals they will be using in their new jobs.

The topics covered in the educational program will include, but not be limited to, all of the following subjects:

* The Hazard Communication Standard.
* Employee Rights under the Standard.
* The area’s Hazardous Chemical List.
* Physical and health hazards associated with the types of hazardous chemicals identified on the list.
* Methods and observations which can be used by employees to detect the presence of hazardous chemicals in the work area.
* Recommended work practices which employees can use to protect them from exposure including the use of appropriate personal protective equipment.
* How to read and interpret information contained on MSDS.
* How to read and interpret container labeling information.
* Emergency procedures and first aid required during an incident involving a hazardous chemical.

# SUBSTANCE ABUSE PROGRAM

The use, sale, transfer, possession, or “Under the Influence” of alcohol, drugs, controlled substances, drug paraphernalia, or any combination on any Company premises or worksites (including Company vehicles) will be grounds for disciplinary action up to and including termination.

“Under the Influence” is defined as being unable to perform work in a safe and productive manner, being in a physical or mental condition which creates a risk to the safety and well-being of the individual, other employees, the public, or Company property; or having any detectable level, in excess of a trace, of alcohol, drugs, or controlled substances, or any combination in the blood.

An employee’s refusal to submit to a lawful exam (e.g., interview, lawful electronic devices), to a search or inspection of his or her personal property located on Company premises, worksites or facilities, including, but not limited to, Company parking lots, or refusal to submit to physical testing (e.g., urine sample, blood sample, physical examination, sobriety examination) will be grounds for disciplinary action up to and including termination.