Milestone Industrial Welding Services

Fabrication Shop Safety Program

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Milestone Industrial Welding Services Llc

Safety and Health Policy Statement

It is the policy of Milestone Industrial Welding Services Llc to provide a work environment that is inherently safe. The safety and health of our employees is of primary importance as they are our most important resource. Safety takes a commitment from all personnel within our organization.

Milestone Industrial Welding Services Llc has developed a comprehensive safety program that addresses specific safety concerns and provides guidance for the performance of our individual job tasks within the framework of appropriate Occupational Safety & Health Administration (OSHA) standards.

There also may be times when Milestone Industrial Welding Services Llc requires its employees to meet safety policies that are specific to our company. If we implement these additional policies, they must have more stringent safety requirements than what OSHA has developed. These policies can be found listed in the Safety Program Addendum at the end of this safety program when applicable.

All employees will receive interactive safety training using the information contained in this safety program. For this training, we may have safety meetings, on-the-job training, on-line courses, formal instruction, and/or any other relevant methods needed.

Safety training needs will be identified by continual reassessment of work methods, equipment, and work stations; as well as employee and management input.

Frequent and regular workplace inspections will be conducted by supervisory personnel and/or other competent persons. Employees in violation of the established safety procedures of Milestone Industrial Welding Services Llc will be subject to our disciplinary procedures. Observation of unsafe acts will be addressed immediately.

At every workplace, there will be a competent person, by virtue of training or experience, who will have the authority to stop work. Additionally, all employees have stop work authority for their immediate task if they are aware of a safety hazard that cannot be immediately corrected. If an employee stops work for an unresolved safety hazard, the supervisor will be contacted immediately.

Equipment operator/owner manuals will be readily available and the safety procedures contained therein will be followed. Equipment will be inspected prior to use and, if defective, tagged out of service. Manufacturer's warning labels on all equipment will not be removed, painted over or defaced.

Emergency medical response will be available at the workplace either by an emergency rescue service within reasonable distance, by time, or an assigned emergency responder.

Safety requires not only that each person understand and perform individual tasks in a safe manner, but also that each individual is aware of his surroundings and is actively involved in the safety of others.

Each Employee is encouraged to contact their supervisor immediately should a safety or health risk exist so that corrective action may be taken immediately.

This Policy Statement will be conspicuously posted.

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Vincent Noriega

Safety Director

Milestone Industrial Welding Services Llc

New Hire Safety Orientation Policy Statement

Vincent Noriega, the safety director at Milestone Industrial Welding Services Llc, or a designated competent person, will ensure that all new hires are aware of the accessibility of the safety program and, through interactive discussion or practical demonstration, be assured that the new hire understands the safety policies and procedures that pertain to the actual work the new hire will perform.

Further, each new hire will read (or have explained) the contents of our employee handbook and **sign** the Employee Acknowledgement form which states:

> I have read and understand the contents of the Milestone Industrial Welding Services Llc Employee Handbook.
>
> I will, to the best of my ability, work in a safe manner and follow established work rules and procedures.
>
> I will ask for clarification of safety procedures of which I am not sure **prior** to performing a task.
>
> I will report to the workplace supervisor or competent person any unsafe acts or procedures and will ensure they are addressed and resolved before continuing work.
>
> I understand that the complete safety program is located at the address below and is available for my review:
>
> 22330 N 184th Lane
>
> Surprise, AZ, 85387
>
> 6026171996

It will be explained to all new hires that safety training and safety performance is an on-going process. Depending on circumstances, training will take the form of some or all of the following: safety meetings, on-the-job instruction, formal and informal training.

Lastly, all new hires will be informed of the importance of the inspection and enforcement policies and procedures of Milestone Industrial Welding Services Llc.

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Vincent Noriega

Safety Director

Milestone Industrial Welding Services Llc

Stop Work Authority and Workers' Right to Refuse Dangerous Work Policy Statement

As referenced in the New Hire Safety Orientation, each employee is:

a. To work in a safe manner and follow established work rules and procedures to the best of their ability.
b. To ask for clarification of safety procedures of which they are not sure prior to performing a task.
c. To report to the job site supervisor or competent person any unsafe acts or procedures and will ensure they are addressed and resolved before continuing work.

Specific procedures have been established to ensure that all employees understand the importance of **not** performing a job task if it cannot be performed safely and in accordance with appropriate standards.

Stop Work Authority Procedures training will be given during the new hire safety orientation before initial assignment to any job task. Training will be documented and include the employee's name, dates of training, and subject.

All employees not only have the authority to stop work when control of a health, safety, or environment hazard or risk is not clearly established or understood, they have an obligation to stop work.

Procedures:

a. Upon discovery or realization that control of a health, safety, or environment hazard or risk is not clearly established or understood, the employee will immediately stop work.
b. Employees with whom he/she is working will be immediately informed so a health, safety, or environment hazard or risk does not impact them or their work.
c. The supervisor/competent person will be notified as soon as possible so the situation may be addressed (corrected).
d. If the supervisor/competent person can successfully address the issue, work will resume. If it is not resolved, work will remain stopped until it is. Most stop work procedures can be resolved in a timely manner at the job site. On occasion, it may require additional investigation to determine the root cause of the problem and the proper procedures to proceed.
e. The stop work will be documented with a stop work report.

Supervisor Review:

Supervisors reviewing stop work reports can determine employee participation in the program, the quality of the interventions, trend common issues, and identify opportunities for improvement and establish new safety procedures to preclude a reoccurrence.

Follow-up:

After the stop work intervention has been initiated and closed, the supervisory review has been completed, all safety issues have been resolved in a timely manner at the job site to the satisfaction of all persons concerned prior to the resumption of work (or, if needed, after additional investigation and corrective actions required to identify and address root causes have been completed), the **importance of follow-up** can be demonstrated by:

a. providing a learning tool for developing improved training.
b. establishing new safety procedures.
c. facilitating sharing of learning.

Responsibilities:

Employee: Initiate a stop work intervention when warranted.

Supervisor/competent person: notify all affected personnel and supervision of the stop work issue, correct the issue, and resume work when safe to do so.

Management: Establish a culture where stop work authority is exercised freely.

Employees, while fulfilling their **obligation** to stop work when warranted, are reminded that under no circumstances will fulfilling this obligation result in any form of retribution or intimidation from our company or the company for whom we are working

This Policy Statement will be conspicuously posted.

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Vincent Noriega

Safety Director

Milestone Industrial Welding Services Llc
Section I
General Policies & Procedures

Standards:

29 CFR 1904 - Recordkeeping

Safety Program Overview

This comprehensive safety & health training program has been developed to address our specific safety concerns and to provide guidance for the performance of individual job tasks within the framework of appropriate Occupational Safety & Health Administration (OSHA) standards.

Safety demands a commitment from all personnel within Milestone Industrial Welding Services Llc. We have an obligation to ensure that all our employees are afforded the protection of an appropriate safety & health program.

Hazard assessment, pre-planning, and engineering controls, where feasible, will be the preferred method of providing a safe workplace. Hazards that remain will be minimized or eliminated through training which provides our employees the ability to recognize workplace hazards and understand the proper procedural and/or personal protective equipment requirements.

Each employee is encouraged to contact their supervisor immediately should a safety or health risk exist so that corrective action may be taken to eliminate the hazard entirely or deal with the hazard in a safe manner through modified work procedures, PPE, and/or other appropriate action.

Vincent Noriega, our Safety Director, or a designated competent person will make routine and random inspections to both identify new hazards and to monitor the effectiveness of our safety & health program.

In the final analysis, the success of our safety effort depends on all employees from senior management to the newest hire demonstrating a commitment to safety by working in a safe manner. Safe job performance is how our safety effort is ultimately measured.

Accident/Injury Prevention

Our safety program is designed so that our employees do not work in conditions that are unsanitary, hazardous, or dangerous to their health or safety.

One lax moment in terms of safety may result in a lifetime of needless pain and suffering. Disregarding safety standards may even be fatal. While an accident may happen in an instant, the consequences may last for years.

Accident prevention requires a commitment from all personnel within our company to actively participate in our safety program. All personnel should be aware of workplace-related hazards and follow procedures to eliminate these hazards by using proper work methods, use of personal protective equipment, and proper use of tools and equipment. All persons are encouraged to ask questions and make positive suggestions for safety improvement.

Competent persons will be designated to provide workplace expertise, as well as regular inspections of equipment, materials, and procedures.

Competent persons will have the authority to stop work if a safety hazard is identified and it cannot be corrected immediately.

All machinery, tools, materials, and equipment deemed unsafe will be taken out of service by physically removing, tagging, or locking controls to render them inoperable.

Only persons qualified by training or experience will be allowed to operate equipment or machinery.

All tools and items of equipment will be used for the purpose for which they were designed. For example, a wrench is not a hammer, a ladder is not a horizontal plank, and a fire extinguisher is not a cooler!

Never take chances or attempt any procedure without being aware of the proper methods, the potential safety hazards, and the methods to reduce or eliminate risk.

Company Personnel

The following are descriptions of the different roles and expectations for all personnel of Milestone Industrial Welding Services Llc.

Safety Director

The safety director at Milestone Industrial Welding Services Llc is Vincent Noriega and has overall responsibility for the implementation of our program. Vincent Noriega will ensure each employee has appropriate safety training for the tasks to be performed.

Additionally, Vincent Noriega will perform hazard assessments of the workplace to determine if hazards are present, or are likely to be present, which will necessitate the use of personal protective equipment (PPE).

Identified hazards which cannot be eliminated through engineering controls or changes in procedures will be addressed by the use of selected PPE.

While the responsibilities of Vincent Noriega cannot be further delegated, most of the duties can be assigned to those who are competent persons by virtue of training or experience.

Safety Program Administrator

Vincent Noriega, the safety program administrator, has deemed competent by our Safety Director and may perform the below duties:

a. The actual training of personnel.
b. Maintenance of training records.
c. Random inspections to verify adherence to safety rules and policies.
d. Completion of specific tasks identified within our OSHA compliance programs.
e. Hazard assessments.

Note: The safety director and the safety program administrator may or may not be the same person.

Employees

All employees are required to participate actively in the safety & health program at Milestone Industrial Welding Services Llc. Do not hesitate to point out perceived safety deficiencies to your supervisor or the competent person – you may prevent an injury to yourself or a fellow worker. With the goal of providing a safer workpalce for all of us, employee suggestions for improving safety management are welcomed and encouraged. Never perform a task when you don't understand all of the safety procedures. If in doubt, ask your immediate supervisor for guidance.

Safety Meetings

Scheduled safety meetings provide an opportunity for reinforcing the importance of general safety as well as specific work-related procedures applicable to the work at hand.

Properly prepared safety meetings will focus on one or two topics and be direct and to the point. All safety questions will be addressed, and interactive participation is encouraged.

Housekeeping

Housekeeping? What's that all about? It's about safety!

Employees are to maintain a neat and orderly work area as far as practical. Housekeeping and general cleanliness have a direct effect on safety and health. Proper housekeeping can prevent slips and falls, allow easy egress in the event of an emergency, prevent falling object injuries, and enhance fire safety. Below listed are general housekeeping rules:

a. All areas of the workplace - passageways, storerooms, service rooms, and walking-working surfaces – will be kept in a clean, orderly, and sanitary condition.
b. Walking-working surfaces will be maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice.
c. Stored materials will be neatly stacked.
d. Containers, when not in use, will be sealed.
e. No objects will be left unattended on stairways.
f. Entrances and exits will be properly marked and not blocked.
g. Tools will be properly cleaned and put away after use.
h. The floor of each workroom will be maintained in a clean and, to the extent feasible, dry condition. When wet processes are used, drainage must be maintained and, to the extent feasible, dry standing places, such as false floors, platforms, and mats must be provided.

Sanitation

This applies to permanent places of employment.

Waste Disposal

Any receptacle used for perishable solid or liquid waste or refuse must be constructed so that it does not leak and may be thoroughly cleaned and maintained in a sanitary condition. All receptacles must be equipped with a solid tight-fitting cover unless it can be maintained in a sanitary condition without a cover.

All sweepings, solid or liquid wastes, refuse, and garbage will be removed in such a manner as to avoid creating a menace to health, and as often as necessary or appropriate to maintain the place of employment in a sanitary condition.

Vermin Control

Every enclosed workplace must be constructed, equipped, and maintained, so far as reasonably practicable, as to prevent the entrance or harborage of rodents, insects, and other vermin. A continuing and effective extermination program must be instituted if their presence is detected.

Water Supply

Potable Water

Potable water will be provided for drinking, washing of the person, cooking, washing of foods, washing of cooking or eating utensils, washing of food preparation or processing premises, and personal service rooms.

Portable drinking water dispensers must be designed, constructed, and serviced so that sanitary conditions are maintained, be capable of being closed, and be equipped with a tap.

Open containers such as barrels, pails, or tanks for drinking water from which the water must be dipped or poured, whether or not they are fitted with a cover, are prohibited.

A common drinking cup and other common utensils are prohibited.

Non-Potable Water

Outlets for non-potable water, such as water for industrial or firefighting purposes, must be marked in a manner that will indicate clearly that the water is unsafe and is not to be used for drinking, washing of the person, cooking, washing of food, washing of cooking or eating utensils, washing of food preparation or processing premises, or personal service rooms, or for washing clothes.

Construction of non-potable water systems or systems carrying any other non-potable substance must be such as to prevent backflow or back-siphonage into a potable water system.

Non-potable water cannot be used for washing any portion of the person, cooking or eating utensils, or clothing. Non-potable water may be used for cleaning work premises, other than food processing and preparation premises and personal service rooms provided that this non-potable water does not contain concentrations of chemicals, fecal coliform, or other substances which could create unsanitary conditions or be harmful to employees.

Toilet Facilities

Note: The below requirements do not apply to mobile crews or to normally unattended work locations so long as employees working at these locations have transportation immediately available to appropriate, nearby toilet facilities.

Toilet facilities, in toilet rooms separate for each sex, must be provided in all places of employment in accordance with table J-1 below. The number of facilities to be provided for each sex will be based on the number of employees of that sex for whom the facilities are furnished. Where toilet rooms will be occupied by no more than one person at a time, can be locked from the inside, and contain at least one water closet, separate toilet rooms for each sex need not be provided. Where such single-occupancy rooms have more than one toilet facility, only one such facility in each toilet room can be counted.

Table J-1

Number of Employees	**Minimum Number of Water Closets [1]**
1 to 15	1
16 to 35	2
36 to 55	3
56 to 80	4
81 to 110	5
111 to 150	6
Over 150	1 additional fixture for each additional 40 employees.
[1] Where toilet facilities will not be used by women, urinals may be provided instead of water closets, except that the number of water closets in such cases shall not be reduced to less than 2/3 of the minimum specified.	

The sewage disposal method must not endanger the health of employees.

Each water closet must occupy a separate compartment with a door and walls or partitions between fixtures sufficiently high to assure privacy.

Washing Facilities.

Washing facilities must be maintained in a sanitary condition.

Lavatories

Note: The below requirements do not apply to mobile crews or to normally unattended work locations so long as employees working at these locations have transportation immediately available to appropriate, nearby lavatory facilities.

Each lavatory must be provided with hot and cold running water, or tepid running water.

Hand soap or similar cleansing agents will be provided.

Individual hand towels or sections thereof, of cloth or paper, air blowers or clean individual sections of continuous cloth toweling, convenient to the lavatories, will be provided.

Showers.

Whenever showers are required:

a. One shower will be provided for each 10 employees of each sex, or numerical fraction thereof, who are required to shower during the same shift.
b. Body soap or other appropriate cleansing agents will be provided.
c. Showers will be provided with hot and cold water feeding a common discharge line.
d. Employees who use showers must be provided with individual clean towels.

Change Rooms

Whenever employees are required by a particular standard to wear protective clothing because of the possibility of contamination with toxic materials, change rooms equipped with storage facilities for street clothes and separate storage facilities for the protective clothing will be provided.

Where working clothes are provided by the employer and become wet or are washed between shifts, provision must be made to ensure that such clothing is dry before reuse.

Consumption of Food and Beverages

Note: This applies only where employees are permitted to consume food or beverages, or both, on the premises.

Employees are not permitted to consume, or store, food or beverages in a toilet room, or in any area exposed to a toxic material.

Receptacles will be provided to use for the disposal of waste food, and they will be constructed of smooth, corrosion resistant, easily cleanable, or disposable materials. The number, size, and location of such receptacles will encourage their use and not result in overfilling. Containers must be emptied not less frequently than once each working day, unless unused, and will be maintained in a clean and sanitary condition. Receptacles have to have a solid tight-fitting cover unless sanitary conditions can be maintained without use of a cover.

All employee food service facilities and operations must be carried out in accordance with sound hygienic principles. In all places of employment where all or part of the food service is provided, the food dispensed must be wholesome, free from spoilage, and processed, prepared, handled, and stored in such a manner as to be protected against contamination.

Safe Office Practices

When employees are working in areas such as offices, warehouses, storage areas, garages, etc., compliance with the below safety practices/procedures is mandatory. Supervisors will insist that the safety practices and procedures are observed and are expected to take disciplinary action against employees for non-compliance.

Employees must:

a. Report all unsafe conditions and equipment to their supervisor or Vincent Noriega, our safety program administrator.
b. Report all incidents, injuries and illnesses to their supervisor or Vincent Noriega immediately.
c. Keep means of egress unblocked, well-lit, and unlocked during work hours.
d. Sound the alarm and evacuate in the event of fire.
e. Upon hearing fire alarm, stop work and proceed to the nearest clear exit and then gather at the designated muster location.
f. Not attempt to respond to a fire or other emergency unless trained to do so.
g. Keep stairways clear of items that can be tripped over.
h. Not store combustibles under stairways that are egress routes.
i. Not store materials and equipment against doors or exits, fire ladders or fire extinguisher stations.
j. Keep aisles clear at all times.
k. Maintain work areas in a neat, orderly manner. Place trash and refuse into proper waste containers.
l. Wipe up all spills promptly.
m. Store files and supplies in such a manner as to preclude damage to the supplies or injury to personnel when they are moved. Heaviest items should be stored closest to the floor and lightweight items stored above.
n. Ensure all cords running into walk areas are taped down or inserted through rubber protectors to preclude them from becoming tripping hazards.
o. Never stack material precariously on top of lockers, file cabinets or other high places.
p. Never leave desk or cabinet drawers open that present a tripping hazard. Use care when opening and closing drawers to avoid pinching fingers.
q. Not open more than one upper drawer at a time, particularly the top two drawers on tall file cabinets.
r. Always use the proper lifting techniques. Never attempt to lift or push an object which is too heavy. Contact your supervisor when help is needed to move a heavy object.
s. Exercise caution when carrying material to ensure firm footing and clear line of sight.
t. Plug all electrical equipment into appropriate wall receptacles or into an extension of only one cord of similar size and capacity. Three- pronged plugs should be used to ensure continuity of ground.

u. Keep individual heaters at work areas clear of combustible materials such as drapes or waste from waste baskets. Heaters which are equipped with tip over switches should be used.
v. Keep appliances such as coffee pots and microwaves in working order and inspected for signs of wear, heat, or fraying of cords.
w. Ensure fans used in work areas are guarded. Guards must not allow fingers to be inserted through the mesh. All fans must be equipped with proper guards which have openings of ½ inch or less.
x. Use equipment such as scissors, staplers, etc. for their intended purposes only. They are not to be used as hammers, pry bars, screwdrivers, etc. Misuse can cause damage to the equipment and possible injury to the user.
y. Store cleaning supplies away from edible items on kitchen shelves.
z. Store cleaning solvents and flammable liquids in appropriate containers.
aa. Keep solutions that may be poisonous or not intended for consumption in well-labeled containers.
ab. Not remove or deface equipment or product ANSI or other warning signs/symbols and they must heed their warnings.
ac. Ensure owner's manuals for office equipment are readily available.
ad. Ensure a list of hazardous chemicals, if applicable, and SDS are readily available.

The above list is not all inclusive. Employees are encouraged to suggest additional safety ideas and/or procedures to Vincent Noriega, our Safety Director for inclusion in weekly safety meetings.

Lifting, Pushing, and Pulling

Back injuries are often caused by the obvious – putting excessive strain on the lower back by lifting an object that is too heavy or awkward, or by bending and/or twisting while lifting.

However, lifting injuries are also caused by less obvious reasons:

a. Poor physical condition
b. Poor posture
c. Poor judgment (lifting, pulling, pushing an object that is obviously too heavy or awkward without seeking assistance or a mechanical lifting device.)
d. Lack of exercise
e. Excessive body weight

Proper lifting techniques are important for employee safety. Below are lifting techniques that will reduce the likelihood of injury:

a. Lift objects comfortably, not necessarily the quickest or easiest way.
b. Lift, push, and pull with your legs, not your arms or back.
c. When changing direction while moving an object, turn with your feet, not by twisting at the waist.
d. Avoid lifting higher than your shoulder height.
e. When standing while working, stand straight.
f. When walking, maintain an erect posture; wear slip-resistant, supportive shoes.
g. When carrying heavy objects, carry them close to the body and avoid carrying them in one hand.
h. When heavy or bulky objects need to be moved, obtain help or use a mechanical aid such as a dolly, hand truck, forklift, etc.
i. When stepping down from a height of more than eight inches, step down backwards, not forward.
j. Handle heavy objects close to the body – avoid reaching out.
k. Lift gradually and smoothly. Avoid jerky motions.
l. Maintain a clear line of vision.

Slips, Trips, and Falls

Slips, trips, and falls are among the most common occupational accidents and they are easily preventable. Below are some of the causes of slips, trips, and falls:

a. Running at the workplace.
b. Engaging in horseplay.
c. Working off a ladder that is not firmly positioned.
d. Carrying an object that blocks line of vision.
e. Work boots not laced or buckled.
f. Working off a scaffold without safety rails.
g. Using ladders that have oil and grease on the rungs.
h. Not using a handrail on steps.
i. Messy work areas with debris strewn about.
j. Not paying attention to what one is doing.

This list can go on and on, but all of the above are easily preventable by adherence to common safety procedures, common sense, and awareness of potential hazards.

Drugs, Alcohol, and Other Prohibited Behaviors

Drug Free Workplace

Because the type of work we perform can result in serious injury if employees are not capable of focusing not only on their job task, but their surroundings and others with whom they work, it is the policy of Milestone Industrial Welding Services Llc to hire only persons free from any evidence of illegal use of controlled substances or other drugs including alcohol.

Note: OSHA has determined that drug testing after injuries or illnesses that occur at the workplace can be considered retaliatory or discriminatory, and thus discourage employees from properly reporting the injury or illness. This can be the case in situations where the injury or illness wouldn't have been reasonably expected to be the result of impairment.

Example: A bee sting that results in an allergic reaction and leads to a stay at the hospital. There is not a reasonable belief that a bee sting would be caused by impairment and thus drug testing would be considered retaliatory or discriminatory.

With the exception of over the counter drugs such as aspirin or drugs prescribed by a physician, there will be no drugs or alcohol within our facility. Alcohol and drug abuse cause an unacceptable level of safety hazard not only for the offending employee, but for others in the vicinity. Those found to be under the influence of drugs and/or alcohol will be immediately removed from the work area by the competent person and further disciplinary action will be taken by Vincent Noriega, our Safety Director.

Chemical dependency is a devastating problem for not only the employee, but also the employee's family and co-workers. For obvious safety reasons, it cannot be tolerated in the workplace. Those with such a problem should seek professional help. Vincent Noriega will assist any employee in finding appropriate treatment should they voluntarily come forward.

Smoking

There will be no smoking except in designated smoking areas. Under no circumstances will there be smoking during refueling of vehicles or within 50 feet of flammable materials.

Prohibited Behaviors

The use, bringing onto company property, possession, concealment, transportation, promotion or sale of the following substances or items by any employee of the below items is strictly prohibited:

a. Illegal drugs, unauthorized controlled substances, look-a-likes, designer, synthetic or any other drug which may affect an employee's motor functions or alter a person's working perception.
b. Prescription drugs/over the counter medication except under the following conditions:
    1. The employee will inform his supervisor prior to using any prescription drug or over the counter medication and receive written permission to possess such drug while working.
    2. The prescription vial will be labeled by the dispensing pharmacy and the label will show the employees name, physician, prescription number, date the prescription was filled and the dosage rate. Prescriptions more than 30 days old will not be allowed.
    3. The over the counter medication will be in its original package or container.
    4. The employee may only possess enough medication for his normal shift.
c. Alcoholic beverages.
d. Firearms, weapons, explosives, and ammunition.
e. Unauthorized items such as stolen property.

Workplace Violence

Although OSHA does not have any standards concerning workplace violence, to comply with Section 5(a)(1) of the Occupational Safety and Health Act (OSHA) of 1970, which requires us to provide our employees with a place of employment that is free from recognizable hazards that are causing or likely to cause death or serious harm to our employees, we are employing this policy regarding workplace violence.

Workplace violence can be defined as: “any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site.” Keep in mind actions such as shouting, swearing, and destroying or throwing items could be considered workplace violence if the complaining employee feels their safety is in jeopardy.

The CDC identifies 4 types of workplace violence:

a. Criminal Intent - workplace violence occurring during the process of criminal activity (e.g., robbery)
b. Customer/Client - workplace violence targeting an employee of a business by a customer/client
c. Worker-on-Worker - workplace violence occurring between two (2) employees
d. Personal Relationship - workplace violence occurring between an employee and a personal acquaintance who has no ties to the workplace.

When possible and applicable, we will implement recommended engineering and administrative controls to prevent or reduce the likelihood of all types of workplace violence. Some of these controls may include, but are not limited to:

a. Lighting controls
b. Surveillance (e.g., cameras, mirrors)
c. Establishing a good relationship with local police
d. Training on specific workplace violence events, such as responding to an active shooter
e. Performing appropriate background checks and reference verification on new hires

In the event that our employees are exposed to workplace violence instigated by acts of our employees or others, the following steps will be taken immediately:

a. Those not directly threatened or exposed to the violent acts will immediately warn others and remove themselves from the area. Call 911, or local police authorities, when you’ve reached a point of safety.
b. If you feel you are about to become a victim of workplace violence and you do not have the opportunity to flee, try to remain calm. Do nothing threatening. At the first opportunity, seek safety and call 911 or local police authorities.

Any employee who is a victim of any type of workplace violence, physical or verbal, is to immediately notify his or her supervisor. If an employee's direct supervisor is the offender, the employee should go to the next level of management. Violent actions that result in injury will be reported to the police without exception.

An internal investigation will begin immediately and will include interviews with involved parties, including potential witnesses. When possible, we will do our best to maintain privacy during the investigation and follow-up response. Our company expressly prohibits retaliation of any kind against any employee bringing a complaint or assisting in the investigation of a complaint. Such employees may not be adversely affected in any manner related to their employment. Retaliation is also illegal under federal law.

Any breach of workplace behavior that leads to a violent action against another employee will be treated as a serious safety violation subject to extreme corrective action, up to and including termination.

Emergency Action Plan

An Emergency Action Plan, if appropriate, will be posted along with emergency telephone numbers and an escape route diagram.

After a hazard assessment of our facilities, Vincent Noriega, our Safety Director, may determine that conditions may develop that could possibly warrant an evacuation. In this case an emergency action plan will be developed to address the threat.

Events may occur which dictate the evacuation of our facility such as a fire, explosion, power failure, etc. Additionally, events may occur which dictate the need for emergency medical responders. These sets of events fall under our Emergency Action Plan and a multitude of objectives must be met.

The first and foremost objective is the safety of all our personnel. To achieve this level of safety, our plan is designed to get personnel away from danger, treat injury, and provide for a thorough and accurate accounting of all employees.

There may be situations where certain employees, trained in first aid and/or firefighting procedures, may prevent a small emergency situation from becoming a major disaster. In these types of situations, specifically identified employees will remain to perform the function for which they are trained, provided they may perform these duties in a safe manner. At no time will any employee put himself/herself at risk.

To the extent possible, all personnel will have clear, direct egress.

The actual implementation of this plan must be direct and carried out without confusion. Employees must know how to alert others, how to call for assistance, the location of fire extinguishers and first aid kits, the escape route, and the rendezvous point (being accounted for so that others do not put themselves at risk looking for a person who has already reached safety).

Emergency Medical Response

Should an injury occur that requires an emergency medical responder, the below listed actions will be taken in the order given:

a. Call 911 or the emergency response number posted at the workplace.
    1. In the absence of 911 services, the telephone numbers of physicians, hospitals, or ambulances will be conspicuously posted with our emergency phone numbers. The method of contacting emergency services must be effective at the required location and should be tested to ensure reliability.
    2. In remote areas that do not have automatic location capability for 911, we will post either the latitude and longitude of the worksite or other location identification information that effectively communicates the location of the worksite in a conspicuous location.
b. Provide any medical assistance you are trained and certified to do. DO NOT provide any medical assistance you are not trained to do.
c. Designate an individual to direct the emergency responders to the injured person and provide Safety Data Sheets, if applicable.
d. Notify the competent person who, in turn, will notify the office.

Fire Protection

The phone number of the local fire department will be posted with other emergency numbers.

If a fire should occur, all personnel and the local fire department will be notified. As in all emergency situations, per the American Trauma Society, people calling the fire department should:

a. Remain calm
b. Speak clearly and slowly
c. Give the exact location
d. Describe the situation
e. Give the phone number from where you are calling.
f. Do not hang up until told to do so

Fire Prevention Plan

Fire Prevention deals not with handling a fire emergency, but rather preventing a fire in the first place.

To reduce the likelihood of a fire, personnel are to adhere to the following rules:

a. Smoking is allowed only in designated areas and smoking materials will be totally extinguished and placed in the appropriate receptacles.
b. All chemical products will be handled and stored in accordance with the procedures noted on their individual SDS.
c. Heat producing equipment will be properly maintained and operated per the manufacturer's instructions to prevent accidental ignition of combustible materials.
d. Precautions will be taken when working with an open flame (such as welding) and those areas will be made fire safe by removing or protecting combustibles from ignition.
e. Combustible liquids must be stored in approved containers.
f. Chemical spills must be cleaned up immediately. This is particularly important for combustible and reactive liquids. Damaged chemical containers and cleanup materials must be properly disposed.

   Note: Information on appropriate personal protective equipment, proper disposal, proper cleanup procedures, required ventilation, etc. is found on the product's SDS.

g. Combustible liquids and trash must be segregated and kept from ignition sources.
h. Keep clear access to fire hydrants as well as portable fire extinguishers.
i. Personnel will be notified by their Supervisor or the competent person of any unusual fire hazard conditions.
j. Good housekeeping, good housekeeping!

Portable Fire Extinguishers

All personnel will receive instruction on the proper use of fire extinguishers.

a. Fire extinguishers will be inspected monthly for general conditions and adequate charge. They will be serviced and certified by qualified personnel at least annually.
b. Portable fire extinguisher locations will be clearly identified and easily accessible.

Portable fire extinguishers will be distributed as indicated below:

Class	Distribution	Notes
A “A” on a green triangle	75 feet or less travel distance between the employee and the extinguisher	For use on wood, paper, trash, etc.
B “B” on a red square	50 feet or less travel distance between hazard area and the extinguisher	For use on flammable liquid, gas, etc.
C “C” on a blue circle	Based on the appropriate pattern for the existing Class A or Class B hazards	For use on electrical fires
D “D” on a yellow star	75 feet or less travel distance between the combustible metal working area and the extinguisher or other containers or Class D extinguishing agent	For use on combustible metals

Appropriate portable fire extinguishers will be used, as noted above. Supervisors will ensure that at least one extinguisher is on each floor of a project near the stairway.

Using the wrong fire extinguisher on some fires can actually spread the fire. Using a Type-A extinguisher on an electrical fire, for example, could cause serious injury. When a fire occurs, it is imperative to use the proper extinguisher.

First Aid and First Aid Kits

Should a medical emergency occur, other than minor scrapes and bruises, and it is serious enough to call for professional medical assistance, you should call the Emergency Response Number posted on the bulletin board. Before the first aid providers arrive, to the extent possible, clear the way so they can reach the injured employee in the most direct way possible.

Unless trained and licensed in CPR/first aid and a designated first aid provider as an additional job as part of the company bloodborne pathogen program, employees will not expose themselves to blood or other bodily fluids of other employees at any time.

Per OSHA, first aid is limited to:

a. Using a non-prescription medication, such as aspirin, at non- prescription strength.
b. Cleaning, flushing or soaking wounds on the surface of the skin;
c. Using wound coverings such as bandages, Band-Aids™, gauze pads, etc., or using butterfly bandages or Steri-Strips™.
d. Using hot or cold therapy.
e. Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.
f. Using temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.).
g. Draining fluid from a blister.
h. Using eye patches.
i. Removing foreign bodies from the eye using only irrigation or a cotton swab.
j. Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means.
k. Using finger guards.
l. Using massages.
m. Drinking fluids for relief of heat stress.

If an employee is injured and emergency responders have been called, stay calm and reassure the injured employee that help is coming.

Below is basic first aid for various common workplace injuries. Mostly, it is what **not** to do. When dealing with any injury, stay calm and never do anything unless you know what you are doing.

MINOR BURNS

(Redness or blisters over a small area)

Flush with cold water; apply a sterile dressing.

Do not use butter on any burn.

Do not break open blisters.

MAJOR BURNS

(White or charred skin; blisters and redness over a large area; burns on face, hands, or genital area)

Cover with sterile dressing and seek medical attention promptly.

Do not apply salves, ointments or anything else.

Do not break blisters.

CHEMICAL BURNS

(Spilled liquid or dry chemical on skin)

Liquid: Flush with large amounts of water immediately (Keep water flow gentle).

Dry: Brush as much off as possible before flushing with water. After flushing at least 5 minutes, cover with sterile dressing.

Seek medical attention promptly.

Do not use anything but water on burned area.

Do not break open blisters.

EYE - FOREIGN OBJECT

(Object visible; feeling of something in the eye)

Have patient pull upper eyelid over lower eyelid.

Run plain water over eye.

If object does not wash out, cover both eyes with a gauze dressing.

Seek medical attention promptly.

Do not rub the eye.

EYE - WOUNDS

(Wound on eyelid or eyeball; pain; history of blow to eye area; discoloration)

Apply loose sterile dressing over both eyes.

Seek medical help immediately.

For bruising, cold compress or ice pack may relieve pain and reduce swelling.

Do not try to remove any embedded object.

Do not apply pressure to eye.

EYE - CHEMICAL BURN

(Chemical splashed or spilled in eye)

Flush immediately with water over open eye for at least 10 minutes

(20 minutes if alkali). It may be necessary to hold patient's eyelid open.

Note: In work situations where a possibility of eye (or body) exposure to corrosive materials exists, suitable facilities for quick-drenching or flushing will be provided in the immediate work area.

Cover both eyes with sterile dressing.

Seek medical help immediately.

Do not put anything but water in eye.

HEAT EXHAUSTION

(Fatigue; weakness; profuse sweating; normal temperature;
pale clammy skin; headache; cramps; vomiting; fainting)

Remove from hot area.

Have victim lay down and raise feet. Apply cool wet cloths.

Loosen or remove clothing.

Allow small sips of water if victim is not vomiting.

HEAT STROKE

(Dizziness; nausea; severe headache; hot dry skin;
confusion; collapse; delirium; coma and death)

Call for immediate medical assistance.

Remove victim from hot area.

Remove clothing. Have victim lay down.

Cool the body (shower, cool wet cloths)

Do not give stimulants.

First Aid Kits:

First aid kits are worthless if not readily accessible. Therefore, they will not be locked up at the workplace. They're also not very valuable if the items you need are missing. It's very important that the kits have the proper items and that they are replenished as they are used.

OSHA defers to ANSI for determining what qualifies as an acceptable first aid kit for the workplace. The ANSI standard that addresses first aid kits is ANSI/ISEA Z308.1-2015. Two important topics covered in this standard are what items are required to be included in a first aid kit: Class, and in what kind of container the kit is kept: Type.

Class

There are two classes of first aid kits: Class A and Class B. The two classes are divided based on the type of first aid items included and the number of those items available in the kit. ANSI has defined the classes as follows:

Class A first aid kits are intended to provide a basic range of products to deal with the most common types of injuries encountered in the workplace including: major wounds, minor wounds (cuts and abrasions), minor burns and eye injuries.

Class B first aid kits are intended to provide a broader range and quantity of supplies to deal with injuries encountered in more populated, complex and/or high-risk work environments.

The biggest difference between the classes of first aid kits is the amount of items included in the kit. Class B kits have more of each item and are needed at a workplace that has many workers.

Keep in mind that sterile items will be individually wrapped, sealed, and used only once. Other items, such as tape or scissors, can be reused and should be kept clean.

The supplies consumed in first aid kits can actually be used as a measure of safety. For example, if a kit constantly needs replacement of bandages used for minor cuts, there is an obvious problem. Why are cuts happening in the first place? Actual trends can be established, and corrective procedures initiated, such as a protective glove requirement or improved handling practices.

Remember, improper medical treatment can be more dangerous than no treatment at all. Only provide care that you have been trained and certified to do.

Below are the required contents, items and quantities of Class A and B first aid kits:

Class A	Class B
16 Adhesive Bandage 1 x 3 in.	50 Adhesive Bandage 1 x 3 in.
1 Adhesive Tape 2.5 yd (total)	2 Adhesive Tape 2.5 yd (total)
10 Antibiotic Application 1/57 oz	25 Antibiotic Application 1/57 oz
10 Antiseptic 1/57 oz	50 Antiseptic 1/57 oz
1 Breathing Barrier	1 Breathing Barrier
1 Burn Dressing (gel soaked) 4 x 4 in.	2 Burn Dressing (gel soaked) 4 x 4 in.
10 Burn Treatment 1/32 oz	25 Burn Treatment1/32 oz.
1 Cold Pack 4 x 5 in.	2 Cold Pack 4 x 5 in.
2 Eye Covering w/ means of attachment 2.9 sq. in.	2 Eye Covering w/ means of attachment 2.9 sq. in.
1 Eye/Skin Wash 1 fl oz total	1 Eye/Skin Wash 4 fl. oz. total
1 First Aid Guide	1 First Aid Guide
6 Hand Sanitizer 1/32 oz	10 Hand Sanitizer 1/32 oz
2 pr Medical Exam Gloves	4 pr Medical Exam Gloves
1 Roller Bandage 2 in. x 4 yd	2 Roller Bandage 2 in. x 4 yd
1 Scissors	1 Roller Bandage 4 in. x 4 yd
2 Sterile pad 3 x 3 in.	1 Scissors
2 Trauma pad 5 x 9 in.	1 Splint
1 Triangular Bandage 40 x 40 x 56 in.	4 Sterile pad 3 x 3 in.
	1 Tourniquet
	4 Trauma pad 5 x 9 in.
	2 Triangular Bandage 40 x 40 x 56 in.

Type

As important as the contents are, the first aid kit won't be very useful if it's not properly protected from the workplace environment. It the supplies are soaked from rain or smashed from being tossed around, they just won't be able to provide any help when needed. ANSI has addressed this by providing guidelines for the containers that first aid kits can be stored in at the workplace.

They are broken down into four categories: **Type I, Type II**, **Type III**, & **Type IV.** Here are the descriptions that ANSI provides for each type.

Type I first aid kits are intended for use in stationary, indoor settings where the potential for damage of kit supplies due to environmental factors and rough handling is minimal. Type I first aid kits will have a means for mounting in a fixed position and are generally not intended to be portable.

Note: Typical applications for Type I first aid kits may include, but are not limited to, the following: general indoor use, an office setting or a manufacturing facility. First aid cabinets would generally fall into the Type I classification.

Type II first aid kits are intended for portable use in indoor settings where the potential for damage of kit supplies due to environmental factors and rough handling is minimal.

Note: Typical applications for Type II first aid kits may include, but are not limited to, the following: general indoor use, an office setting or a manufacturing facility.

Type III first aid kits are intended for portable use in mobile, indoor and/or outdoor settings where the potential for damage of kit supplies due to environmental factors is not probable. Type III kits will have a means to be mounted in a fixed position and will have a water-resistant seal.

Note: Typical applications for Type III first aid kits may include general indoor use and sheltered outdoor use.

Type IV first aid kits are intended for portable use in the mobile industries and/or outdoor settings where the potential for damage to kit supplies due to environmental factors and rough handling is significant. Type IV kits will have a means to be mounted in a fixed position and will meet the performance requirements set forth by ANSI.

Note: Typical applications for Type IV first aid kits may include, but are not limited to, the following: the transportation industry, the utility industry, the construction industry, and the armed forces.

Accident Investigation

The purpose of Accident Investigation is to prevent the same type of accident from reoccurring. An accident investigation will begin immediately after the medical crisis is resolved. The supervisor /competent person will complete an Accident Investigation Form as soon as feasible. The five questions that must be answered are: Who? What? When? Where? And most importantly, why did the accident happen?

An apparently simple accident may actually be caused by many complex reasons. Example: an employee gets a finger crushed in a piece of machinery. With just the facts presented, the fault would seem to totally rest with the employee whose finger was hurt.

An accident investigation may reveal other contributing factors by answering questions like:

a. Were machine guards in place? Had they been altered in an unauthorized manner to make them ineffective?
b. Were gloves required and were they available?
c. Was the machinery improperly locked or tagged out of service with residual hazardous energy remaining in its system?
d. Had the employee received training on operating the specific machine and been given an opportunity to clarify questions concerning its operation?
e. Was there adequate supervision?
    1. Did the supervisor perform regular and frequent inspections of the operations in question?
    2. Had this employee or others, operated the machine incorrectly over a period of time so that the improper method became the standard method?
    3. Were violations of safety procedures documented?

After determining the cause of the accident, steps can be taken to prevent a reoccurrence. Near-miss mishaps, events which result in no injury or damage, should be investigated because even though the outcomes are different, the causes are the same.

OSHA Forms 300; 300A & 301

As a matter of law, all employers with 11 or more employees **at any one time** in the previous year must maintain OSHA Form 300, *Log of Work- Related Injuries and Illnesses*, OSHA Form 301, *Injury and Illness Incident Report*, and OSHA Form 300A, *Summary of Work-Related Injuries and Illnesses*.

OSHA Forms 300 and 301 are used to record and classify occupational injuries and illnesses. The information on the OSHA Form 300 is related to employee health and must be used in a manner that protects the confidentiality of the employees to the extent possible. Recordable injuries and illnesses must be entered on OSHA Forms 300 and 301 within seven (7) days of receiving information that a recordable injury or illness has occurred.

Electronic Submission of Records

Effective February 25th, 2019, certain employers are required to electronically submit injury and illness data from their OSHA Form 300A Summary of Work-Related Injuries and Illnesses to OSHA. This includes all employers with 250 or more employees and employers with 20-249 employees who have a NAICS code listed in Appendix A to Subpart E of Part 1904 - Recording and Reporting Occupational Injuries and Illness.

Click here to see Appendix A.

Note: Contact your local worker's compensation office if you're uncertain of your NAICS code.

If Milestone Industrial Welding Services Llc is required to submit records electronically, the information from our 300A must be submitted by March 2 of the following year (for example, 2018 data must be submitted by March 2, 2019).

OSHA provides a secure website that offers three options for data submission:

a. Users will be able to manually enter data into a webform.
b. Users will be able to upload a CSV file.
c. Users will have the ability to transmit data electronically via an API if they have an automated recordkeeping system.

Click Here to Access the Injury Tracking Application

Retention of Forms:

Old OSHA Forms 101 and 200, as well as OSHA Forms 300, 300A, and 301, will be retained for five years following the year to which they relate.

Items to be recorded on OSHA Forms 300, 300A and 301:

Work related injuries and illnesses and fatalities are to be recorded using the criteria found in Part 1904, *Recording and Reporting Occupational Injuries and Illnesses*.

Injuries and illnesses must be recorded if they result in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness, or if the injury or illness involves a significant injury diagnosed by a physician or licensed health care professional even if it does not meet the forgoing conditions.

Note: First aid (which is not reportable) is defined in 29 CFR 1904.7(b)(5)ii.

Employee Involvement:

As an employee, you have the right and responsibility to report all work-related injuries and illness without the fear of being retaliated against, discriminated against, or terminated from employment.

Note: OSHA has determined that drug testing after injuries or illnesses that occur at the workplace can be considered retaliatory or discriminatory, and thus discourages employees from properly reporting the injury or illness. This can be the case in situations where the injury or illness wouldn't have been reasonably expected to be the result of impairment.

Example: A bee sting that results in an allergic reaction and leads to a stay at the hospital. There is not a reasonable belief that a bee sting would be caused by impairment and thus drug testing would be considered retaliatory or discriminatory.

As a matter of policy, all employees are to report all work-related accidents and injuries immediately to the competent person/supervisor at the workplace. The competent person/supervisor will complete an accident investigation form and will forward it to Vincent Noriega, the Safety Director.

Vincent Noriega will extrapolate appropriate information for completion of the OSHA Form 300 and complete a review of our policies and procedures to help ensure that there isn't a reoccurrence of the reported injury or illness.

Failure to report injuries or illnesses would be a violation of our company's reporting policy and is not acceptable.

Catastrophic Reporting Requirements:

The following events have to be reported to OSHA:

a. All work-related fatalities
b. All work-related in-patient hospitalizations of one or more employees
c. All work-related amputations
d. All work-related losses of an eye

Milestone Industrial Welding Services Llc must report work-related fatalities within 8 hours of finding out about it. For any in-patient hospitalization, amputation, or eye loss, we must report the incident within 24 hours of learning about it.

Only fatalities occurring within 30 days of the work-related incident must be reported to OSHA. Further, an inpatient hospitalization, amputation or loss of an eye incident must be reported to OSHA only if they occur within 24 hours of the work-related incident.

There are three options for reporting the event:

a. By telephone to the nearest OSHA Area Office during normal business hours. The phone numbers can be found at the following website: https://www.osha.gov/html/RAmap.html.
b. By telephone to the 24-hour OSHA hotline (**1-800-321-OSHA or 1-800-321-6742**).
c. By using OSHA's new means of reporting events electronically. This can be done online at the following website: https://www.osha.gov/pls/ser/serform.html.

Information to Be Reported:

When reporting a fatality, in-patient hospitalization, amputation or loss of an eye to OSHA, following information must be reported:

a. Establishment name
b. Location of the work-related incident
c. Time of the work-related incident
d. Type of reportable event (i.e., fatality, in-patient hospitalization, amputation or loss of an eye)
e. Number of employees who suffered the event
f. Names of the employees who suffered the event
g. Contact person and his or her phone number
h. Brief description of the work-related incident

Note: An event does not have to be reported if it:

a. Resulted from a motor vehicle accident on a public street or highway, except in a construction work zone; employers must report the event if it happened in a construction work zone.

b. Occurred on a commercial or public transportation system (airplane, subway, bus, ferry, street car, light rail, train).

c. Occurred more than 30 days after the work-related incident in the case of a fatality or more than 24 hours after the work-related incident in the case of an in-patient hospitalization, amputation, or loss of an eye.

Note: Milestone Industrial Welding Services Llc must report an in-patient hospitalization due to a heart attack, if the heart attack resulted from a work-related incident.

Location of OSHA Forms 300 and 301:

As a general rule, the OSHA Forms 300 and 301 will be maintained in our main office.

Incident Rate:

One indication of the success of the safety effort put forth by Milestone Industrial Welding Services Llc is our "incidence rate". When bidding a job, our incidence rate could be a determining factor in a successful bid. The incidence rate is determined by the following formula:

N/EH X 200,000 where:

N = number of injuries and/or illnesses

EH = total hours worked by all employees during the calendar year.

200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

To find the "Lost Workday Injury Rate" (LWDI), the following formula is used:

WDI Rate = (# LWDI's X 200,000)/# employee hours worked

LWDI = sum of LWDI's in reference years

employee hours worked = sum of employee hours in reference years

200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year)

When accidents and injuries occur, they have an immediate detrimental impact on those employees involved. Additionally, they have a potential lingering negative impact on our company and our ability to get work.

Postings

There will be a prominently displayed bulletin board or area for postings. Every employee must be aware of this policy. Certain postings are required as a matter of law in all cases and other postings are required depending on circumstances and types of work being done.

In all cases, the following must be posted to meet OSHA requirements:

a. OSHA Form 3165, It's the law!
b. During the period from 1 February through to April 30, OSHA Form 300A, Summary of Work-Related Injuries and Illnesses, must be posted for work-related injuries and illnesses which have occurred during the previous year.
c. Emergency phone numbers and site address for emergency response.

If appropriate, the following must be posted:

a. OSHA citations.
b. Notice of informal hearing conference.
c. Names and location of assigned first aid providers.
e. Emergency action plan.

Access to Employee Medical Records & Exposure Records

29 CFR 1910.1020 - Access to employee exposure and medical records

All employee exposure records and medical records are under the control of Vincent Noriega, our Safety Program Administrator.

Exposure Records must be retained for 30 years.

Medical Records must be retained for the duration of employment plus 30 years.

An employee's medical record means: "a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel, or technician."

This would include:

a. Medical and employment questionnaires or histories (including job description and occupational exposures).
b. The results of medical examinations (pre-employment, pre- assignment, periodic, or episodic) and laboratory tests (including chest and other X-ray examinations taken for the purpose of establishing a base-line or detecting occupational illnesses) and all biological monitoring not defined as an "employee exposure record".
c. Medical opinions, diagnoses, progress notes, and recommendations.
d. First aid records.
e. Descriptions of treatments and prescriptions.
f. Employee medical complaints.

Note: An employee's medical record does not include:

a. Physical specimens (e.g., blood or urine samples) which are routinely discarded as a part of normal medical practice.

b. Records concerning health insurance claims if maintained separately from the employer's medical program and its records, and not accessible to the employer by employee name or other direct personal identifier (e.g., social security number, payroll number, etc.).

c. Records created solely in preparation for litigation which are privileged from discovery under the applicable rules of procedure or evidence.

d. Records concerning voluntary employee assistance programs (alcohol, drug abuse, or personal counseling programs) if maintained separately from the employer's medical program and its records.

An employee's **exposure record** means a record containing any of the following kinds of information:

a. Environmental (workplace) monitoring or measuring of a toxic substance or harmful physical agent, including personal, area, grab, wipe, or other form of sampling, as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained.
b. Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (e.g., the level of a chemical in the blood, urine, breath, hair, fingernails, etc.) but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs.

c. Safety data sheets indicating that the material may pose a hazard to human health.
d. In the absence of the above, a chemical inventory or any other record which reveals where and when used and the identity (e.g., chemical, common, or trade name) of a toxic substance or harmful physical agent.
e. Objective Data for Exemption from Requirement for Initial Monitoring.

Employee Information

Upon first entering into employment, and at least annually thereafter, each employee will be informed of the following:

a. The existence, location, and availability of any records covered by 29 CFR 1910.1020.
b. The person responsible for maintaining and providing access to records (Vincent Noriega).
c. The employee's rights of access to his/her records.
d. That a copy of 29 CFR 1910.1020 and its appendices will be maintained in Vincent Noriega's office and made readily available upon request.

Informational materials concerning access to medical records received from or provided by the Assistant Secretary of Labor for Occupational Safety and Health will be distributed to all current employees.

Access to Records

Employees or their designated representatives will have access to their medical or exposure records within 15 working days of their request, or, if this is not possible, Vincent Noriega will provide, within 15 working days, the reason for the delay and provide a best estimate of when the records will be available.

Copies of employee medical or exposure records will be provided in a reasonable time, place, and manner and **at no cost to the employee**.

Upon request, Vincent Noriega will provide access to representatives of the Assistant Secretary of Labor for Occupational Safety and Health employee exposure and medical records and to analysis using exposure or medical records.

Analysis Using Medical or Exposure Records

"Analysis using exposure or medical records" means any compilation of data or any statistical study based at least in part on information collected from individual employee exposure or medical records or information collected from health insurance claims records, provided that either the analysis has been reported to the employer or no further work is currently being done by the person responsible for preparing the analysis.

Before access is granted to an analysis using medical or exposure records, all personal identifiers must be removed that could reasonable directly identify the employee. Identifiers would include: name, SSN, address, etc. Identifiers that could indirectly identify the employee will also be removed. These would include date of hire, sex, job title, etc.

Confidentiality

Nothing in the OSHA standards is intended to affect existing legal and ethical obligations concerning the maintenance and confidentiality of employee medical information, the duty to disclose information to a patient/employee or any other aspect of the medical-care relationship, or affect existing legal obligations concerning the protection of trade secret information.

Transfer of Records

Should Milestone Industrial Welding Services Llc cease to do business, the successor employer will receive and retain all the above medical and exposure records.

Should Milestone Industrial Welding Services Llc cease to do business and there is no successor employer to receive and retain the above medical and exposure records, they will be transmitted to the Director of the National Institute for Occupational Safety and Health (NIOSH).

At the expiration of the retention period for the above medical records, Milestone Industrial Welding Services Llc will notify the Director of the NIOSH at least 3 months prior to the disposal of such records and will transmit those records to the Director of the NIOSH if he requests them within that period.

Enforcement

It is expected that all employees will abide by the safety rules and guidelines that Milestone Industrial Welding Services Llc has in place, not only to protect themselves, but also to protect their fellow workers from harm. If a safety violation occurs, the following steps will be taken by the employee's immediate supervisor:

Minor Safety Violations: Violations which would **not** reasonably be expected to result in serious injury.

a. The hazardous situation will be corrected.
b. The employee will be informed of the correct procedures to follow and the supervisor will ensure that these procedures are understood.
c. The supervisor will make a written report of the occurrence using the Enforcement Documentation Form and inform the employee that this documentation will be forwarded to Vincent Noriega, our Safety Director, for a retention period of one year.
d. A repeat occurrence of the same minor safety violation is considered substantially more serious than the first.

Major Safety Violations: Violations which would reasonably be expected to result in serious injury or death.

a. The hazardous situation will be corrected.
b. The employee will be informed of the correct procedures to follow and their supervisor will impress upon the individual the severity of the violation and the likely consequences should this type of violation be repeated. The supervisor will ensure that the individual understands the correct procedures and will be cautioned that a reoccurrence could result in disciplinary action up to and including discharge.
c. The supervisor will make a written report of the occurrence using the Enforcement Documentation Form and inform the employee that this documentation will be forwarded to Vincent Noriega for a retention period of one year.

Willful Major Safety Violations: Intentional violation of a safety rule which would reasonably be expected to result in serious injury to the employee or a fellow worker.

a. The hazardous situation will be corrected.
b. The employee will be removed from the job site, the event will be documented and forwarded to Vincent Noriega, and the employee will be discharged.

Employees are to understand that the primary purpose of documenting safety violations is to ensure that the important business of employee safety is taken seriously and that the potential for injury is reduced to the lowest possible level.

Schedule of Enforcement Actions

Violations Occurring within a 1 Calendar Year Period

Minor Violation

Offense	Action	Repeat of Same Offense	Action
1st	Written Notice	1st	1 Day Off
2nd	Written Notice	2nd	3 Days Off
3rd	1 Day Off	3rd	Dismissal
4th	2 Days Off		
5th	3 Days Off		
6th	Dismissal		

Major Violation

Offense	Action	Repeat of Same Offense	Action
1st	Written Notice	1st	4 Days Off
2nd	2 Days Off	2nd	Dismissal
3rd	4 Days Off		
4th	Dismissal		

Milestone Industrial Welding Services Llc
Section II
Site/Job Specific Policies and Procedures

Abrasive Blasting

When performing abrasive blasting operations, from a safety standpoint, there are numerous hazards that must be addressed.

First and foremost are respiratory hazards. During blasting operations, dust hazards are created as the abrasive materials and the surface coatings are shattered and pulverized to particles of respirable size. The composition and **toxicity of the abrasive dust** as well as the coating must be known to determine the:

a. Specific respiratory hazards.
b. Appropriate respirator to be selected to negate these hazards.

The many types of abrasive materials have varying degrees of hazard – silica sand being probably the most hazardous mineral abrasive used. Whenever possible, its use should be limited and, if possible, a substitute material used. Other types of abrasives include: synthetic or natural mineral grains; metallic shot or hard grit (made of steel or chilled cast iron); and organic abrasives such as ground corncobs and walnut shells. These and other engineering controls such as containment and ventilation are important for employee safety.

The hazards of steel or cast-iron dust are relatively minimal, however, combustible organic abrasives may be pulverized fine enough to be capable of forming explosive mixtures with air.

The coatings that are being blasted may, for example, contain lead (in paints); arsenic (in furnaces); cadmium (plating); and even silica sand (embedded in the surface of castings). All these types of hazards require specific respiratory protection and are serious health hazards.

Surprisingly, construction standards do not address abrasive blasting as an "all-encompassing" topic – each hazard must be dealt with on its own.

In addition to respiratory hazards, the following safety concerns, which apply to both abrasive blasting workers **and** those who may be exposed to hazards they create, depending on the job, need to be addressed during abrasive blasting operations:

a. Protective clothing and equipment must provide protection to the eyes, face, and body of the **operator**.
   Note: Equipment for the protection of the eyes and face will be supplied to the operator when the respirator design does not provide such protection.
b. Protective clothing and equipment must provide protection to the eyes, face, and body of all personnel working in the vicinity of abrasive blasting operations.
   Note: Equipment for the protection of the eyes and face will be supplied to any other personnel working in the vicinity of abrasive blasting operation.
c. Fall protection.
d. Scaffold & ladder safety.
e. Release of toxic dust.
f. **Potentially explosive mixtures**. The blast nozzle must be bonded and grounded to prevent the buildup of static charge.
   1. Organic abrasives which are combustible will only be used in automatic systems. Reference NFPA 68-1954.
g. High pressure hoses and couplings.
h. Securing the work area to deny unauthorized entry.

i. Working in a permit-required confined space.

j. Injury from the blast, itself. To reduce the likelihood of injury, the **blast cleaning nozzles must be equipped with an operating valve that must be held open manually**. A support will be provided on which the nozzle may be mounted when it is not in use.

There may be times during sandblasting operations that hazardous dusts are released into the atmosphere that exceed the concentrations specified in 29 CFR 1910.1000 - Table Z-3 Mineral Dust, listed below:

Table Z-3 - Mineral Dusts		
Substance		
Silica:		
Crystalline	250[b] ------- %SiO_2 + 5	10 mg/m^3 [e] ------ % SiO_2 + 2
Quartz (Respirable)[f]		
Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz.[f]		
Tridymite: Use ½ the value calculated from the formulae for quartz [f]		
	20	80 mg/m^3 _____ %SiO^2
Amorphous, including natural diatomaceous earth		
Silicates (less than 1% crystalline silica):	20	
Mica	20	
Soapstone	20[c]	
Talc (not containing asbestos)		
Talc (containing asbestos) Use asbestos limit		
Tremolite, asbestiform (see 29 CFR 1910.1001)	50	
Portland cement	15	
Graphite (Natural)		
Coal Dust:		
		2.4 mg/m^3 [e]
Respirable fraction less than 5% SiO_2		
		10 mg/m^3 [e]
		_____ %SiO_2 + 2
Respirable fraction greater than 5% SiO_2		
Inert or Nuisance Dust:[d]	15	5 mg/m^3
Respirable fraction	50	15 mg/m^3

Total dust

Note-Conversion factors - mppcf × 35.3 = million particles per cubic meter = particles per c.c.

[a] Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

[b] The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

[c] Containing less than 1% quartz; if 1% quartz or more, use quartz limit.

[d] All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1.

[e] Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m^3 in the table for coal dust is 4.5 mg/m^{3K}.

[f] This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or is otherwise not in effect.

Operational Procedures and General Safety: Dust will not be permitted to accumulate on the floor or on ledges outside of an abrasive-blasting enclosure, and dust spills will be cleaned up promptly. Aisles and walkways will be kept clear of steel shot or similar abrasive which may create a slipping hazard.

The PEL for particles not otherwise regulated is 5.0 mg/m³. The PEL for respirable dust containing crystalline silica is determined by the below formula:

PEL = 10 mg/m³ □ (%SiO_2+2), where %SiO_2+2 refers to the amount of crystalline silica measured in the sample.

Below the above threshold limits, no action is required, however, employees may wear dust masks for personal comfort.

As always, engineering controls are preferred to personal protective equipment to deal with workplace hazards. Therefore, local exhaust ventilation is a preferred method of maintaining atmospheres that have dust levels below the concentrations noted in the Dust Table, above.

If it is necessary to use respiratory protection equipment [when effective engineering controls are not feasible or while they are being instituted] as defined in paragraph 1910.134(a) and (b), we will follow the provisions of our respiratory protection program as described in 1910.134. Respirators will be selected that prevent atmospheric contamination of harmful dust, fogs, fumes, mists, gases, smokes, sprays, or vapors.

Per NIOSH:

Type CE abrasive-blast supplied-air respirators are the only respirators suitable for use in abrasive-blasting operations. * Currently, there are four kinds of Type CE abrasive-blast respirators certified by NIOSH. These four kinds of respirators and the NIOSH recommended assigned protection factors (APF) are:

a. A continuous-flow respirator with a loose-fitting hood and an APF of 25;
b. A continuous-flow respirator with a tight-fitting face piece and an APF of 50;
c. A positive-pressure respirator with a tight-fitting half-mask face piece and an APF of 1000;
d. A pressure-demand or positive-pressure respirator containing a tight-fitting full-face piece and an APF of 2000.

Note: Air purifying and powered-air purifying respirators are not recommended for abrasive blasting operations, but may be suitable for auxiliary work such as outside clean-up operations.

Also per NIOSH:

a. Silica sand should NOT be used as an abrasive medium.
b. Respirators should not be used as the only means of preventing or minimizing exposures to airborne contaminants. Dust source controls such as containment systems, local exhaust systems, and good work practices should be implemented as the primary means of protecting workers. When dust source controls cannot keep exposures below the recommended exposure limits, controls should be supplemented with the use of respiratory protection.
c. Environmental monitoring by trained personnel should be conducted in all abrasive-blasting applications. This is necessary to select the proper respirator (APF) and insure that workers are not overexposed (i.e., measured contaminant concentration is less than the exposure limit multiplied by the respirator APF).
d. Anytime environmental conditions, airborne contaminants, or their concentrations are highly variable or poorly defined, high level respiratory protection should be used, even if silica is not the abrasive agent.
e. If silica sand is used, despite its much greater hazard relative to other abrasive agents, only the highest level protection respirators (i.e., respirators certified by NIOSH as pressure-demand or positive pressure and with NIOSH recommended APFs of 1000 or 2000) should be used.
f. Respirators will only provide a satisfactory level of protection when they are selected, fitted, used, and maintained according to the manufacturer's written instructions, NIOSH approval limitations and guidelines, and OSHA regulatory requirements.

If a compressor is used for supplying breathable air by way of airline hoses to an abrasive blasting respirator, it is a Type "C" system. The hose couplings used on these systems must not be compatible with any other gas systems. Breathable air -- not pure oxygen -- is used in these systems. **By definition, this breathable air must and will be free from harmful quantities of dust, mist, and noxious gases**.

An abrasive-blasting respirator will be used which covers the wearer's head, neck, and shoulders to protect the wearer from rebounding abrasive.

All safety and standby devices will be maintained in working order such as alarms to warn of compressor failure or overheating. Compressors will be located so that contaminated air does not enter the system and suitable in-line filters will be installed. A receiver of sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in the event of a compressor failure will be in place. If an oil lubricated system is used, it will have a high temperature and carbon monoxide alarm.

Additionally, Milestone Industrial Welding Services Llc will ensure that compressed air does not have oxygen concentrations that are greater than 23.5%.

Compressors used to supply breathing air to respirators must be constructed and situated so as to:

a. Prevent entry of contaminated air into the air-supply system;
b. Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg. C) below the ambient temperature;
c. Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters will be maintained and replaced or refurbished periodically following the manufacturer's instructions.
d. Have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag will be maintained at the compressor.

For compressors that are not oil-lubricated, Milestone Industrial Welding Services Llc will ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.

For oil-lubricated compressors, Milestone Industrial Welding Services Llc will use a high temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply will be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

If cylinders are used to supply breathing air to respirators, they will meet the following requirements:

a. Cylinders will be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178);
b. Cylinders of purchased breathing air will have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air; and
c. The moisture content in the cylinder will not exceed a dew point of -50 deg. F (-45.6 deg. C) at 1 atmosphere pressure.

Note: Under no circumstances are employees to use compressed air for cleaning unless the pressure is reduced to less than 30 psi. [10 psi. in California]. Flying debris can injure the employee or a fellow worker.

Symptoms of Silicosis:

Silicosis (especially the acute form) is characterized by shortness of breath, fever, and cyanosis (bluish skin); it may often be misdiagnosed as pulmonary edema (fluid in the lungs), pneumonia, or tuberculosis. Severe mycobacterial or fungal infections often complicate silicosis and may be fatal in many cases.

Three types of silicosis:

a. Chronic silicosis usually occurs after 10 or more years of exposure to crystalline silica at relatively low concentrations.
b. Accelerated silicosis results from exposure to high concentrations of crystalline silica and develops 5 to 10 years after the initial exposure.
c. Acute silicosis occurs where exposure concentrations are the highest and develops after a few months or as long as 2 years following exposures to extremely high concentrations of respirable crystalline silica.

NIOSH Safety Recommendations:

NIOSH recommends the following measures to reduce crystalline silica exposures in the workplace and prevent silicosis and silicosis-related deaths:

a. Prohibit silica sand (or other substances containing more.than 1% crystalline silica) as an abrasive blasting material and substitute less hazardous materials.
b. Conduct air monitoring to measure worker exposures.
c. Use containment methods such as blast-cleaning machines and cabinets to control the hazard and protect adjacent workers from exposure.
d. Practice good personal hygiene to avoid unnecessary exposure to silica dust.
    1. Wash hands and face before eating.
    2. No eating, drinking or tobacco products in the blasting area.
    3. Shower before leaving work site.
    4. Vehicles parked away from contaminated area.
e. Wear washable or disposable protective clothes at the worksite; shower and change into clean clothes before leaving the worksite to prevent contamination of cars, homes, and other work areas.
f. Use respiratory protection when source controls cannot keep silica exposures below the NIOSH REL.
g. Provide periodic medical examinations for all workers who may be exposed to crystalline silica.
h. Post signs to warn workers about the hazard and to inform them about required protective equipment.
i. Provide workers with training that includes information about health effects, work practices, and protective equipment for crystalline silica.
j. Report all cases of silicosis to the state health department as well as OSHA.

Abrasive Wheels

29 CFR 1910.215: Abrasive wheel machinery

Specific technical requirements for operating and using abrasive wheels, either on portable equipment or abrasive wheel machinery, are found in the machine guarding standards noted above. However, there are general precautions and requirements that apply to all abrasive wheel operations.

An abrasive wheel is defined as a cutting tool consisting of abrasive grains held together by organic (resin, rubber, shellac or similar bonding agent) or inorganic bonds. Hazards that present themselves during abrasive wheel operations include physical contact with the rotating wheel; destruction of the wheel, itself; inhalation of the bonding particles; being struck by flying fragments. All these hazards can be eliminated through adherence to appropriate machine guarding principles, hoods and enclosures with an exhaust system, and/or respiratory protection.

Immediately before mounting, wheels must be inspected and sounded (ring test) to ensure they have not been damaged. Ensure the spindle speed does not exceed the maximum operating speed noted on the wheel.

Ring Test: Wheel to be tested must be dry and free from sawdust. Wheels should be tapped gently with a light nonmetallic implement, such as the handle of a screwdriver, or a wooden mallet for heavier wheels. If they sound cracked (dead), they may not be used. It should be noted that organic bonded wheels do not emit the same clear metallic ring as do vitrified and silicate wheels. Tap the wheels about 45° each side of the vertical centerline and about one or two inches from the periphery. Rotate the wheel about 45° and repeat the test. A sound, undamaged, wheel will give a clear metallic tone.

Aisles

29 CFR 1910.22 - General Requirements

Permanent aisles and passageways will be clearly marked and kept clear of obstructions. Where mechanical handling equipment is used, sufficient clearance will be provided for aisles, doorways and turns.

Combustible & Flammable Liquid Handling

Only approved containers and portable tanks will be used for storage and handling of flammable and combustible liquids. Approved safety cans or Department of Transportation approved containers will be used for handling and use of flammable liquids in quantities of 5 gallons or less.

Note: The above does not apply to flammable liquid materials which are highly viscid (extremely hard to pour) which may be used and handled in their original shipping containers.

Note: For quantities of one gallon or less, the original container may be used for storage, use and handling.

Flammable or combustible liquids may not be stored in areas used for exits, stairways, or normally used for the safe passage of people.

Inside a facility, no more than 25 gallons of flammable or combustible liquids may be stored in a room outside of an approved storage cabinet.

Gasoline: General Information

Because most persons use or indirectly handle gasoline on a regular basis – from filling up automobiles to lawn mowers – the hazards presented by this product may have become obscure. Just because you are familiar with gasoline, never lose sight of the lethal hazards that it may contain.

Gasoline is a flammable liquid which means it has a flash point of less than 100ºF. The actual flash point – lowest temperature at which a liquid gives off enough vapor to form a flammable mixture with air – of gasoline is -45ºF. The auto-ignition temperature – the temperature at which, with sufficient oxygen, gasoline will ignite on its own and burn – is 536ºF.

Gasoline has a specific gravity – the weight of the gasoline compared to the weight of an equal volume of water – of 0.73. Further, gasoline has a negligible solubility in water. Basically, what the above means is that if water is used to extinguish a gasoline fire, it will only spread it because the gasoline will float on the water and continue to give off a vapor and form a flammable mixture with air. Gasoline fires must be fought with an extinguisher that is rated for Class B fires such as carbon dioxide, dry chemical, or foam. It should be noted that water spray may be used to cool containers that may be exposed to the heat of the fire to prevent an explosion.

Conditions to Avoid: heat, flame, & sources of ignition

Materials to Avoid: strong oxidizers

Health Hazard Information: routes of entry: inhalation, skin, ingestion

Signs & Symptoms of Overexposure: headache, nausea, drowsiness, breathlessness, fatigue, convulsions, loss of consciousness, dermatitis

If there is a spill, notify emergency response personnel, evacuate area, remove ignition sources, and build a dike to contain flow – do not flush to sewer or open water. Pick up with inert absorbent and place in closed container for disposal.

Gasoline is a carcinogen – a cancer causing agent.

General Rules: Post “No Smoking” signs around gasoline storage and ensure that it is enforced. Use only approved plastic or metal containers for portable gasoline carriers. They must not contain more than 5 gallons.

Double check with local ordinances for storage requirements.

Company Vehicles

Note: The below applies only to employees who DO NOT operate a commercial motor vehicle (CMV) in interstate or intrastate commerce.

Only authorized employees may operate, in the course of their work, any company-owned motor vehicle.

Prior to authorization, the employee must possess a valid and current license to operate the vehicle. Vincent Noriega, our Safety Director, or authorized representative, will ensure that the employee has demonstrated his/her ability to operate the motor vehicle in a safe and competent manner.

Under no circumstances may any motor vehicle be operated under the influence of alcohol, illegal drugs, or prescription or over-the-counter drugs medications that may impair their driving skills.

When driving over the road vehicles, employees will ensure that the vehicle registration and proof of insurance is within the vehicle. In the event of an accident, Vincent Noriega will be notified **immediately** after all potential injuries are addressed and a police report is filled out. Employees must report all traffic violations to Vincent Noriega and they (employees) are responsible for paying all penalties imposed by law.

Loads in vans and trucks will be properly secured (strapped or blocked) to prevent any shift or movement and care will be taken to not exceed the vehicles weight limits.

All company motor vehicles will be maintained in safe operating condition and in accordance with the manufacturer's recommended maintenance schedule.

Before use, a walk around inspection will be performed by the operator checking tires (tread depth and pressure), glass (chips and cracks), horn and lights, and general vehicle condition. **No vehicle will be operated that is not in safe mechanical condition.**

It is expected that the below safe vehicle operation/driving procedures will be followed at all times:

a. Seat belts will be worn by all occupants at all times while the vehicle is in motion
b. Safe distance (one vehicle length per 10 MPH) will be maintained
c. Posted speed limits will not be exceeded
d. During fuel stops, all fluids will be checked, and the windows, headlights and taillights will be cleaned
e. Constant attention will be maintained by always being aware of road conditions and surrounding vehicles

   Note: Unnecessary distractions will not be permitted such as using hands to dial or receive cell phone calls or changing radio stations while the vehicle is in motion.

f. Before backing up any vehicle, check behind and blow horn for the safety of others.

Compressed Air

29 CFR 1910.101 - Compressed gases (general requirements)
29 CFR 1910.242 - Hand and Portable Powered Tools and Other Hand-Held Equipment
29 CFR 1910.169 - Air Receivers

Prior to using compressed air, employees will receive training in:

a. Safe use of compressed air.
b. Pneumatic power tools.
c. Inspection of compressed gas cylinders

Safe Use of Compressed Air:

The below applies to compressed air receivers, and other equipment used in providing and utilizing compressed air for performing operations such as cleaning, drilling, hoisting, and chipping.

a. Air receivers will be so installed that all drains, handholes, and manholes therein are easily accessible. Under no circumstances will an air receiver be buried underground or located in an inaccessible place.
b. A drain pipe and valve will be installed at the lowest point of every air receiver to provide for the removal of accumulated oil and water. Adequate automatic traps may be installed in addition to drain valves. The drain valve on the air receiver will be opened and the receiver completely drained frequently and at such intervals as to prevent the accumulation of excessive amounts of liquid in the receiver.
c. Every air receiver will be equipped with an indicating pressure gauge (so located as to be readily visible) and with one or more spring-loaded safety valves. The total relieving capacity of such safety valves will be such as to prevent pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10 percent.
d. No valve of any type will be placed between the air receiver and its safety valve or valves.
e. Safety appliances, such as safety valves, indicating devices and controlling devices, will be constructed, located, and installed so that they cannot be readily rendered inoperative by any means, including the elements.
f. All safety valves will be tested frequently and at regular intervals to determine whether they are in good operating condition.

Compressed Gas Cylinders

29 CFR 1910-253 - Oxygen-Fuel Gas Welding and Cutting

Compressed Gas Cylinders Use

Compressed gas cylinders are used at many workplaces – the most common being oxygen and acetylene for welding.

Failure to follow basic safety procedures could result in serious injuries such as:

a. Flash burn – due to explosion.
b. Fragment impalement – due to explosion.
c. Compression of the foot – due to mishandling of tanks.
d. Inhalation of hazardous gases – due to leakage.

Basic safety procedures for compressed gas cylinders:

a. Cylinders must remain upright and chained to a substantial support or cart when in use.
b. Wear appropriate personal protective equipment for the job – such as steel toed shoes, apron, goggles, gloves, helmet, etc.
c. Read and understand the SDS for the gas being used and know the location of the SDS in case of an emergency.
d. Have appropriate fire extinguisher readily available
e. To release the gas, open the cylinder valve slowly – standing away from the face and back of the gage – and leave the opening tools in place (on the valve stem) for quick shut-off in the event of an emergency.
f. Ensure cylinder valves, regulators, couplings, and hose are free of oil and grease and ensure all connections are tight.
g. When using oxygen-fuel systems, use flashback arrestors and reverse-flow check valves to prevent flashback.
h. Keep cylinders away from open flames and sources of heat.
i. Cylinders are never allowed in confined spaces.
j. Do not alter or attempt to repair safety devices or valves.
k. Remove the regulators when: a) moving cylinders; b) work is completed; and c) cylinders are empty.
l. Take care to prevent combustible materials from exposure to welding or cutting operations.

Inspection of Compressed Gas Cylinders:

We will determine that compressed gas cylinders under the control of Milestone Industrial Welding Services Llc are in a safe condition to the extent that this can be determined by visual inspection. Visual & other inspections will be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 & 14 CFR part 103).

Where those regulations are not applicable, visual and other inspections will be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962, which is incorporated by reference as specified in Sec. 1910.6.

Note: Compressed gas cylinders, portable tanks, and cargo tanks will have pressure relief devices installed and maintained in accordance with Compressed Gas Association Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963, which is incorporated by reference as specified in Sec. 1910.6.

Training

All employees who use compressed gas cylinders will be trained in their proper storage, handling, and use.

Specific requirements for compressed gas cylinder use include:

a. Compressed gas cylinders will be clearly marked to identify the gas contained therein. Gas identification must be stamped or stenciled on the gas cylinder or a label affixed. No gas cylinder will be accepted for use that does not legibly identify its content by name.
b. Visual or other inspections will be performed by the competent person on site to ensure the compressed gas cylinders are in a safe condition.
c. Compressed gas cylinders will be inspected to ensure they are equipped with the correct regulator. Before use, regulators and cylinder valves will be inspected to ensure they are free from oil, dirt, and solvents.
d. Compressed gas cylinders will have valve protectors in place when not in use or connected for use.
    1. When a cylinder cap cannot be removed by hand, the cylinder will be tagged "Do Not Use" and returned to the designated storage area for return to the vendor.
e. The user of the compressed gas cylinders will use only the tools supplied by the provider to open and close cylinder valves.
f. Valves will be closed before the cylinder is moved, when the cylinder is empty, and at the completion of each job.
g. Leaking cylinders will be moved to an isolated, well-ventilated area, away from ignitions sources.

    Note: Soapy water will be used to detect the exact location of the leak. If the leak is at the junction of the cylinder valve and cylinder, do not attempt to repair it. The supplier will be contacted and asked for proper response instructions.

h. Gasses may never be mixed in a cylinder. Only professionals may refill gas cylinders.
i. Hoses and connections will be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.

Transportation of Compressed Gas Cylinders

a. Compressed gas cylinders must be transported in a vertical secured position using a cylinder basket or cart.
b. Regulators should be removed, and cylinders capped before movement.
c. Cylinders may never be rolled. Cylinders should not be dropped or permitted to strike violently.
d. Protective caps are not to be used to lift cylinders.

Compressed Gas Cylinders Storage

a. Cylinders must be secured at all times in such a way as to avoid them being knocked over or damaged. They must be stored in a vertical position. They must be segregated based on contents. 20 feet should be maintained between oxidizers and flammables or firewalls erected at least 5 feet high with a fire rating of 30 minutes.
b. Cylinders must be protected from damage, corrosion, sunlight.
c. Cylinders must be stored in well protected, well ventilated, dry locations away from sunlight. Cylinders will never be kept in unventilated enclosures such as lockers or cupboards.
d. Cylinders must be stored away from stairs, elevators, and gangways.
e. Clearly designated and labeled separate storage area will be provided for full and empty cylinders.
f. Empty cylinders that are no longer needed must be marked as “MT” and dated when empty. Empty cylinders must be handled as carefully as full cylinders.
g. Cylinders will be capped when they are not being used.

29 CFR 1910.179 - Overhead and Gantry Cranes
29 CFR 1910.180 - Crawler locomotive and truck cranes

Cranes, like all pieces of heavy equipment, if not properly operated, inspected and maintained have a potential for causing major bodily injury or property damage. Care must be taken in all facets of crane operation.

Not only do cranes require a thorough annual inspection (a record of the dates and results of these inspections will be maintained by Vincent Noriega, our safety program administrator), they require inspection prior to each use and even during use by a competent person. Any deficiencies will be repaired or replace before continued use. All inspections will be made by qualified, competent person(s). An inspection form for daily and monthly inspections is found in our project manual. Monthly inspections must be certified by Vincent Noriega.

As with all items of machinery, only those trained in safe work practices and deemed qualified will be designated as authorized persons to operate cranes.

Overhead and Gantry Cranes:

An overhead crane is a machine for lifting and lowering a load as well as moving it horizontally on a fixed runway structure. The hoisting mechanism is an integral part of the crane.

The rated load of the crane must be marked plainly on each side of the crane and, if the crane has more than one hoisting unit, each hoist must have its rated load marked on it or its load block. This marking must be clearly legible from the ground or floor.

A minimum of 3 inches overhead and 2 inches laterally must be provided and maintained between the crane and obstructions. Where passageways or walkway are provided, obstructions must not be placed so that safety or personnel will be jeopardized by movements of the crane.

Only designated employees, who have received training in crane operations, will be permitted to operate a crane.

The operator must always have a clear view of the load.

The operator must have training in the use of fire extinguishers.

Note: Under no circumstances will a carbon tetrachloride extinguisher be used.

All exposed moving parts which might constitute a hazard during normal operating conditions must be guarded.

Specific requirements for crane installation, set-up, and testing are found in 29 CFR 1910.179 and must be followed. Frequent [daily to monthly intervals] and periodic [1 to 12-month intervals] inspections must be accomplished.

Inspections:

Frequent Inspection - Daily to monthly intervals:

a. All functional operating mechanisms for maladjustment interfering with proper operation. Daily.
b. Deterioration or leakage in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems. Daily.

c. Hooks with deformation or cracks. Visual inspection daily; monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and the serial number, or other identifier, of the hook inspected. For hooks with cracks or having more than 15 percent in excess of normal throat opening or more than 10 percent twist from the plane of the unbent hook refer to paragraph (l)(3)(iii)(a) of 29 CFR 1910.179.
d. Hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations. Visual inspection daily; monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and an identifier of the chain which was inspected.
e. All functional operating mechanisms for excessive wear of components.
f. Rope reeving for noncompliance with manufacturer's recommendations.

Periodic Inspection - 1 to 12-month Intervals:

a. Deformed, cracked, or corroded members.
b. Loose bolts or rivets.
c. Cracked or worn sheaves and drums.
d. Worn, cracked or distorted parts such as pins, bearings, shafts, gears, rollers, locking and clamping devices.
e. Excessive wear on brake system parts, linings, pawls, and ratchets.
f. Load, wind, and other indicators over their full range, for any significant inaccuracies.
g. Gasoline, diesel, electric, or other power plants for improper performance or noncompliance with applicable safety requirements.
h. Excessive wear of chain drive sprockets and excessive chain stretch.
i. Electrical apparatus, for signs of pitting or any deterioration of controller contactors, limit switches and pushbutton stations.
j. All ropes must be inspected at least once a month and a certified record of these inspections will be maintained recording the dates of the inspections and the signature of the person who performed the inspection.

Before any repairs are started, a warning or “Out of Order” sign will be placed on the crane. A preventive maintenance program based upon the crane manufacturer’s recommendations will be established.

Crawler Locomotive and Truck Cranes:

A mobile crane is an indispensable piece of equipment at the workplace. Its ability to lift massive weight to extreme heights allows work to be done that would be impossible without it. If you are not directly involved in crane or hoisting operations, stay clear! Crane safety involves the integrity of the crane itself, the knowledge and skill of the operator, and the actual hoisting procedures including setup, inspection, and operations.

Only designated employees, who have received training in crane operations, will be permitted to operate a crane.

The operator must always have a clear view of the load.

The operator must have training in the use of fire extinguishers and a CO2 or dry chemical fire extinguisher must be in the cab or readily accessible.

Written reports on rated load tests and the test procedures and confirming the adequacy of any repairs or alterations will be maintained.

All running ropes will be inspected at least once a month & a certified record of these inspections will be maintained recording the dates of the inspections & the signature of the person who performed the inspection. All ropes in storage for a month or more will be thoroughly inspected before use & the above inspection records will be maintained.

A rating chart, with clearly legible letters & figurers will be affixed securely in each crane cab and be readily visible to the crane operator.

It should be noted that most common crane accident involves crane or boom contact with energized power lines.

However, all the below safety items are important and should be included in any safety audit, a review, or inspection of:

a. The entire construction area to determine how the crane operation affects other operations and crafts working with or around the crane.
b. Operator training and qualification.
c. All crane records including frequent (performed by the operator at the start of each shift) and periodic (at 1 to 12-month intervals) inspections used to determine the need for repair or replacement of components to keep the machine in proper operating condition. Inspection and maintenance records, the operator's manual, and load charts must be readily available.
d. The actual crane set-up to include proximity of electrical power lines; leveling; clearance for rotation; outriggers, if applicable; & stability (the relationship of the load weight, angle of the boom, & its radius to the center of gravity of the load).
e. The structural integrity of the crane's main frame, crawler, track and outrigger supports, boom sections, and attachments.
f. All wire ropes, cables, hydraulic lines, chains, hooks, etc.
    1. All ropes will be thoroughly inspected before crane is used and certified by record of inspection, ID of the rope inspected and signature of the person performing the inspection.

Because working around or near electrical power lines is identified as the leading cause of crane accidents, there must be a minimum clearance of 10' from lines and:

a. Cranes should not handle materials or loads stored under electric power lines.
b. Operation of mobile cranes near de-energized electric power lines is not recommended until the following steps have been taken:
    1. The power company or owner of the power line has deenergized the lines.
    2. The lines are visibly grounded and appropriately marked.
    3. Durable warning signs are installed at the operator's station and on the outside of the crane identifying the clearance requirements between the crane/load and electric power lines.
    4. A qualified representative of the power company or owner of the electric power line is at the site to verify that the power lines have been de-energized or properly grounded.

Prior to authorization to operate a crane, operators of cranes with a boom length of 25 feet or more and a maximum rated load capacity of 15,000 pounds or more must:

a. Have a valid certificate of competency issued by an Accredited Certifying Entity for the type of crane being used.
b. Pass a physical examination that meets the requirements of either ASME B30.5-2000 or US DOT standard 49 CFR 392.41 through 391.49.
c. Pass a written examination that covers, at least:
    1. Operational characteristics and controls for the crane type for which qualification is being sought.
    2. Emergency control skills such as a response to fire, power line contact, loss of stability, and control malfunction.
    3. Demonstration of basic arithmetic skills necessary for crane operation and the ability to read and comprehend the crane manufacturer's operation and maintenance instruction manuals, including load capacity information **(load charts)** for the crane for which certification is sought.
    4. Pass a hands-on examination to demonstrate proficiency in operating the specific crane including pre-start and post-start inspection, maneuvering skills, shutdown, and securing procedures.

Operator certificates are valid for five (5) after which recertification is required.

All crawler, truck, or locomotive cranes will meet the applicable requirements for design, inspection, construction, testing, maintenance and operations as prescribed in ANSI B30.5-1968. A crane inspection certification record will be maintained which shows the date, the items inspected, the serial number of the crane and the signature of the inspector. The operator will ensure that a 5BC (or greater) fire extinguisher is readily accessible during operation.

All rated load capacities recommended operating speeds, special hazard warnings or instructions must be readily visible to the operator while operating the crane. At all times, the manufacturer's specifications and limitations will be adhered to. Attachments will not exceed the capacity, rating, or scope recommended by the manufacturer.

Any modifications to crane equipment which might affect safety may only be done with written approval from the manufacturer.

While cranes easily have the lifting ability to hoist employees on a personnel platform, this is absolutely prohibited except in cases when the erection, use, and dismantling of conventional means of reaching the worksite would be more hazardous or is not possible because of structural design or worksite conditions. A conventional means would include: a personnel hoist, ladder, stairway, aerial lift, elevating work platform or scaffold.

It is absolutely imperative that the possibility of electrocution be totally eliminated. This can be accomplished by adhering to the safe distances from various currents noted in *Heavy Equipment and Electrical Power Lines*, below.

Except where electrical distribution and transmissions lines have been deenergized and visibly grounded at point of work or where insulating barriers (not attached to the vehicle) have been erected to prevent physical contact with the lines, the following clearance -- between any part of the vehicle and the line -- will be observed:

Line Rating	Minimum Clearance
50 kV. or below	10 feet
Over 50 kV.	10 feet plus .04 inch for each 1 kV. over 50 kV, or twice length of the line insulator, but never less than 10 feet.

In transit, equipment clearance must be a minimum of:

Line Rating	Minimum Clearance
50 kV. or below	4 feet
Over 50 kV. to 345 kV.	10 feet
Over 345 kV. to 750 kV.	16 feet

A ground guide will be designated to observe clearance of the equipment and give warning to the equipment operator in situations where it is difficult for the equipment operator to maintain the desired clearances by visual means.

An overhead wire will be considered energized unless the owner of the line or the electrical utility authorities indicate that it is not energized, and it has been visibly grounded.

Dangers associated with cranes include numerous moving parts. These dangers can be minimized or eliminated by ensuring that all guards are in place and not tampered with.

Care must be taken to ensure that areas within the swing radius of the rear of the rotating superstructure of the crane are barricaded to prevent a person from being struck or crushed.

All employees must keep clear of loads that are about to be lifted as well as suspended loads.

When using slings made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three strand construction), and synthetic web (nylon, polyester, and polypropylene), the following safe operating practices will be observed:

a. Slings will not be shortened with knots or bolts or other makeshift devices.
b. Sling legs will not be kinked.
c. Slings used in a basket hitch will have the loads balanced to prevent slippage.
d. Slings will be padded or protected from the sharp edges of their loads.
e. Hands or fingers will not be placed between the sling and its load while the sling is being tightened around the load.

All slings and associated equipment/attachments will be inspected before use by a competent person and defective items will be tagged out of service.

Hand signals used to guide the crane operator will be consistent with the ANSI standard for the type of crane in use and an illustration of the signals must be posted at the workplace. A copy of these hand signals is in our Project Manual.

Care must be taken while actually operating the crane in hoisting applications as well as when relocating the crane superstructure.

The competent person on site will ensure that the flooring or ground on which equipment is to be placed is substantial enough to safely hold the weight of the load and equipment with adequate safety margin. If the strength of the floor is unknown and/or cannot be determined, a professional engineer will determine the pounds per square foot required and, if necessary, the appropriate shoring to be installed to sustain the weight.

When operating in enclosed spaces, atmospheric testing will be accomplished to ensure clean breathable air. These tests will be recorded and maintained by Vincent Noriega, our safety program administrator.

Delivery Crane Trucks

Note: The below information is applicable to the following crane types and operations:

1. **Articulating/knuckle-boom truck cranes that deliver material to a construction site when used to transfer materials from the truck crane to the ground, without arranging the materials in a particular sequence for hoisting.**
2. **Articulating/knuckle-boom truck cranes that deliver material to a construction site when the crane is used to transfer building supply sheet goods or building supply packaged materials from the truck crane onto a structure, using a fork/cradle at the end of the boom, but only when the truck crane is equipped with a properly functioning automatic overload prevention device. Such sheet goods or packaged materials include but are not limited to: sheets of sheet rock, sheets of plywood, bags of cement, sheets or packages of roofing shingles, and rolls of roofing felt.**

Note: The above articulating/knuckle-boom crane exclusion does not apply when it is used to 1) hold, support or stabilize the material to facilitate a construction activity, such as holding material in place while it is attached to the structure; 2) when the material being handled is a prefabricated component such as precast concrete members or panels, roof trusses, prefabricated building sections such as, but not limited to: floor panels, wall panels, roof panels, roof structures, or similar items; and, 3) when the material being handled by the crane is a structural steel member (for example, steel joists, beams, columns, steel decking (bundled or unbundled) or a component of a systems-engineered metal building.

All other crane operations fall under *Subpart CC—Cranes and Derricks in Construction*, located here 29 CFR 1926.1400

Cranes, like all pieces of heavy equipment, if not properly operated, inspected and maintained, have a potential for causing major bodily injury or property damage. Care must be taken in all facets of crane operation.

Not only do cranes require a thorough annual inspection (a record of the dates and results of these inspections must be maintained) they require inspection prior to each use and even during use by a competent person.

All rated load capacities, recommended operating speeds, and special hazard warnings or instructions must be readily visible to the operator of the crane.

While cranes easily have the lifting ability to hoist employees on a personnel platform, this is **absolutely prohibited** except in cases when the erection, use, and dismantling of conventional means of reaching the worksite would be more hazardous or is not possible because of structural design or worksite conditions. A conventional means would include: a personnel hoist, ladder, stairway, aerial lift, and elevating work platform or scaffold.

It is absolutely imperative that the possibility of electrocution be totally eliminated. This can be accomplished by adhering to the safe distances from various currents noted in *The Control of Hazardous Energy (Lockout/Tagout)*, located at **29 CFR 1910.147.**

Dangers associated with cranes include numerous moving parts. These dangers can be minimized or eliminated by ensuring that all guards are in place and not tampered with.

Care must be taken to ensure that areas within the swing radius, of the rear of the rotating superstructure of the crane, are barricaded to prevent a person from being struck or crushed.

All employees must keep clear of loads that are about to be lifted as well as suspended loads.

When using slings made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three strand construction), and synthetic web (nylon, polyester, and polypropylene), the following safe operating practices will be observed:

a. Slings will not be shortened with knots or bolts or other makeshift devices.
b. Sling legs will not be kinked.
c. Slings used in a basket hitch will have the loads balanced to prevent slippage.
d. Slings will be padded or protected from the sharp edges of their loads.
e. Hands or fingers will not be placed between the sling and its load while the sling is being tightened around the load.

Hand signals used to guide the crane operator will be consistent with the ANSI standard for the type of crane in use and an illustration of the signals must be posted at the workplace.

Care must be taken while actually operating the crane in hoisting applications as well as when relocating the crane superstructure.

The competent person on site will ensure that the flooring on which equipment may be placed is substantial enough to safely hold the weight of the load. If the strength of the floor is unknown and/or cannot be determined, a professional engineer will determine the pounds per square foot required and, if necessary, the appropriate shoring to be installed to sustain the weight.

Disposable Respirators

OSHA requires that employees who voluntarily use disposable respirators in situations where respiratory protection is not specifically required by OSHA standard (in atmospheres where exposures are below the permissible exposure limit) essentially for personal comfort or additional, though not required, respiratory protection be informed of 29 CFR 1910.134 Appendix D, printed below.

> **Standard Number: 1910.134 App D**
>
> **Standard Title: (Mandatory) Information for Employees Using Respirators When Not Required Under Standard.**
>
> Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, of if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard. You should do the following: 1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations. 2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you. 3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke. 4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.
>
> [63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998]

All disposable respirators, such as Moldex, 3M, Wilson, North Safety, etc. must be marked with the manufacturer’s name, the part number, the protection provided by the filter, and “NIOSH”.

Disposable filters are actually negative pressure respirators. They protect the user by filtering particles out of the air breathed.

Though disposable filters cannot be fit-tested in the traditional sense, they must be fit-tested in accordance with the manufacturer’s instructions.

Dockboards

The employer must ensure that each dockboard used meets the requirements of this section. The employer must ensure:

a. Dockboards are capable of supporting the maximum intended load in accordance with §1910.22(b);

   Dockboards that are put into initial service on or after January 17, 2017 must be designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge.

   Exception: When the employer demonstrates there is no hazard of transfer vehicles running off the dockboard edge, the employer may use dockboards that do not have run-off protection.

b. Portable dockboards are secured by anchoring them in place or using equipment or devices that prevent the dockboard from moving out of a safe position. When the employer demonstrates that securing the dockboard is not feasible, the employer must ensure there is sufficient contact between the dockboard and the surface to prevent the dockboard from moving out of a safe position;

c. Measures, such as wheel chocks or sand shoes, are used to prevent the transport vehicle (e.g. a truck, semi-trailer, trailer, or rail car) on which a dockboard is placed, from moving while employees are on the dockboard.

d. Portable dockboards are equipped with handholds or other means to permit safe handling of dockboards.

29 CFR 1910.305 - Wiring methods, components, and equipment for general use
29 CFR 1910.332 - Training
29 CFR 1910.333 - Selection and use of work practices
29 CFR 1910.334 - Use of equipment

No electrical work will be performed on electric distribution circuits or equipment, except by a qualified person or by a person trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person. Disconnecting devices will be locked out and suitably tagged by the persons who perform such work, except that in cases where locking out is not possible, such devices will be opened and suitably tagged by such persons. Locks or tags will be removed only by the persons who installed them or, if such persons are unavailable, by persons authorized by the operator or his agent.

Only qualified or trained personnel may perform electrical work.

All electrical work will be done according to the latest adopted National Electrical Code as well as established local codes.

Only qualified persons may work on electric circuit parts or equipment that has not been de-energized. These persons must be made familiar with the use of special precautionary techniques, PPE, insulating & shielding materials and insulated tools.

Note: When dealing with safety related work practices to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, a Qualified Person is defined as one who: "is permitted to work on or near exposed energized parts" and who, at a minimum, has been trained in and is familiar with:

a. The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment, and

b. The skills and techniques necessary to determine the nominal voltage of exposed live parts, and

c. The clearance distances specified in 29 CFR 1910.333(c) and the corresponding voltages to which the qualified person will be exposed

Approach Distances for Qualified Employees Alternating Current	
Voltage Range (phase to phase)	Minimum Approach Distance
300V and Less	Avoid Contact
Over 300V, not over 750V	1 ft. 0 in. (30.5 cm).
Over 750V, not over 2kV	1 ft. 6 in. (46 cm).
Over 2kV, not over 15kV	2 ft. 0 in. (61 cm).
Over 15kV, not over 37kV	3 ft. 0 in. (91 cm).
Over 37kV, not over 87.5kV	3 ft. 6 in. (107 cm).
Over 87.5kV, not over 121kV	4 ft. 0 in. (122 cm).
Over 121kV, not over 140kV	4 ft. 6 in. (137 cm).

Note:	**When an unqualified person is working overhead lines, the location will be such that the person and the longest conductive object he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:**	
	For voltages to ground 50kV or below	**10 feet**
	For voltages to ground over 50kV	**10 feet plus 4 inches for every 10kV over 50kV.**
Note:	**When an unqualified person is working on the ground in the vicinity of overhead lines, the person may not bring any conductive object closer to unguarded, energized overhead lines than the distances given above.**	

Electrical Safety Measures:

a. Daily, prior to use, all electrical equipment – including extension cords – will be inspected and defective items will be tagged out of service and not used.
b. With the exception of double insulated tools (with UL approval), all electrical tools and equipment will be grounded.
c. Tools will not be hoisted by their flexible electrical cords.
d. Except in an emergency, load rated switches and circuit breakers will be used for the opening and closing of circuits under load conditions as opposed to fuses and splice connections.
e. While working on electrical equipment, unauthorized persons will be kept clear by barriers or other means of guarding.
f. Temporary wiring and extension cords will be kept off of walking working surfaces & vehicle traffic areas or covered to prevent tripping & vehicle damage.
    1. Electrical cords will not be suspended with staples, hung from nails, or suspended by wire.
    2. Worn or frayed electric cords or cables will not be used.
g. Hands will be dry when working on electrical equipment including plugging in extension cords.
h. When working around any electrical power circuit, employees will:
    1. Protect themselves by de-energizing the circuit and grounding it or by establishing insulation between themselves and the current.
    2. Ensure that any conductive materials and equipment that are in contact with any part of their body will be handled in a manner that will preclude contact with exposed energized conductors or circuit parts.
    3. Use portable ladders that have non-conductive siderails.
    4. Remove or insulate conductive articles of jewelry and clothing that might contact exposed energized parts.
i. Only qualified persons may perform testing work on electric circuits or equipment.
j. Sufficient access and working space must be maintained about all electric equipment to permit ready and safe operation and maintenance. This space must be kept clear, i.e., it cannot be used for storage.
k. Portable ladders must have non-conductive side rails.
l. Conductive items of jewelry or clothing must not be worn around electricity unless rendered non-conductive by covering, wrapping, or other insulating means.

Ground Fault Circuit Interrupters

A ground fault circuit interrupter (GFCI) provides protection for all 120-volt, 15-, 20-, and 30-ampere receptacle outlets that are not a part of the permanent wiring by detecting lost current resulting from a short, overheating, and/or ground fault. It should be noted that an extension cord into which electrical devices are plugged are not part of the permanent wiring; therefore, GFCI's are required.

A GFCI will "trip" when the amount of current amperes going to an electrical device in the hot conductor and the amount of current returning from an electrical device differs by approximately 5 milliamps. The GFCI can interrupt the current within as little as 1/40th of a second.

The current that is missing is being lost through a ground fault, whether it is in the actual grounding, a short in the equipment, or electricity going through the employee to the ground.

A GFCI will not protect an employee who comes in contact with two hot wires or a hot wire and a neutral wire. A GFCI will provide protection against fires, overheating, damage to insulation, and, the most common form of electrical shock hazard -- the ground fault. GFCI’s must be tested before use.

Extension Cords

Extension cords (temporary wiring), temporary electrical power, and lighting installations of 600 volts, nominal, or less may be used only as follows:

a. during and for remodeling, maintenance, or repair of buildings, structures, or equipment, and similar activities.
b. for a period not to exceed 90 days for Christmas decorative lighting and similar purposes.
c. during emergencies.

Temporary wiring will be removed immediately upon completion of the project or purpose for which the wiring was installed.

Extension cords will not replace permanent wiring and the following safety precautions will be adhered to:

a. Extension cords will be kept off of walking working surfaces or be covered to prevent tripping. Cords will not be placed in vehicle traffic lanes.
b. Electrical cords will not be suspended with staples, hung from nails, or suspended by wire.
c. Worn or frayed electric cords or cables will not be used.

Prior to using an extension cord, an employee must:

a. Inspect the cord for cracks and cuts and a defective cord will be tagged and removed from service.
b. Ensure the cord has a three prong plug for grounding.
c. Use the shortest continuous length of cord possible. Cords may not be spliced together.
d. Make certain the cord does not lay in water.
e. Ensure cord is properly rated for the job.

Fixed Industrial Stairs

Fixed industrial stairs includes interior and exterior stairs around machinery, tanks, and other equipment, and stairs leading to or from floors, platforms, or pits. It does not apply to stairs used for fire exit purposes, to construction operations to private residences, or to articulated stairs, such as may be installed on floating roof tanks or on dock facilities, the angle of which changes with the rise and fall of the base support.

Fixed stairs will be provided for access from one structure level to another where operations necessitate regular travel between levels, and for access to operating platforms at any equipment which requires attention routinely during operations.

Fixed stairs will also be provided where access to elevations is daily or at each shift for such purposes as gauging, inspection, regular maintenance, etc., where such work may expose employees to acids, caustics, gases, or other harmful substances, or for which purposes the carrying of tools or equipment by hand is normally required.

Spiral stairways will not be permitted except for special limited usage and secondary access situations where it is not practical to provide a conventional stairway. Winding stairways may be installed on tanks and similar round structures where the diameter of the structure is not less than five (5) feet.

Guarding Floor and Wall Openings and Holes

Protection for floor openings:

Every stairway floor opening will be guarded by a standard railing. The railing will be provided on all exposed sides (except at entrance to stairway). For infrequently used stairways where traffic across the opening prevents the use of fixed standard railing (as when located in aisle spaces, etc.), the guard will consist of a hinged floor opening cover of standard strength and construction and removable standard railings on all exposed sides (except at entrance to stairway).

Every ladder way floor opening, or platform will be guarded by a standard railing with standard toeboard on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.

Every hatchway and chute floor opening will be guarded by one of the following:

a. Hinged floor opening cover of standard strength and construction equipped with standard railings or permanently attached thereto so as to leave only one exposed side. When the opening is not in use, the cover will be closed or the exposed side will be guarded at both top and intermediate positions by removable standard railings.
b. A removable railing with toeboard on not more than two sides of the opening and fixed standard railings with toeboards on all other exposed sides. The removable railings will be kept in place when the opening is not in use.

Where operating conditions necessitate the feeding of material into any hatchway or chute opening, protection will be provided to prevent a person from falling through the opening.

Every pit and trapdoor floor opening, infrequently used, will be guarded by a floor opening cover of standard strength and construction. While the cover is not in place, the pit or trap opening will be constantly attended by someone or will be protected on all exposed sides by removable standard railings.

Every manhole floor opening will be guarded by a standard manhole cover which need not be hinged in place. While the cover is not in place, the manhole opening will be constantly attended by someone or will be protected by removable standard railings.

Every temporary floor opening will have standard railings or will be constantly attended by someone.

Every floor hole into which persons can accidentally walk will be guarded by either:

a. A standard railing with standard toeboard on all exposed sides, or
b. A floor hole cover of standard strength and construction. While the cover is not in place, the floor hole will be constantly attended by someone or will be protected by a removable standard railing.

Every floor hole into which persons cannot accidentally walk (on account of fixed machinery, equipment, or walls) will be protected by a cover that leaves no openings more than 1 inch wide. The cover will be securely held in place to prevent tools or materials from falling through.

Protection for Wall Openings and Holes:

Every wall opening from which there is a drop of more than 4 feet will be guarded by one of the following:

a. Rail, roller, picket fence, half door, or equivalent barrier. Where there is exposure below to falling materials, a removable toe board or the equivalent will also be provided. When the opening is not in use for handling materials, the guard will be kept in position regardless of a door on the opening. In addition, a grab handle will be provided on each side of the opening with its center approximately 4 feet above floor level and of standard strength and mounting.
b. Extension platform onto which materials can be hoisted for handling, and which will have side rails or equivalent guards of standard specifications.

Every temporary wall opening will have adequate guards but these need not be of standard construction.

Where there is a hazard of materials falling through a wall hole, and the lower edge of the near side of the hole is less than 4 inches above the floor, and the far side of the hole more than 5 feet above the next lower level, the hole will be protected by a standard toeboard, or an enclosing screen either of solid construction.

Protection of Open-Sided Floors, Platforms, and Runways:

Every open-sided floor or platform 4 feet or more above adjacent floor or ground level will be guarded by a standard railing on all open sides except where there is entrance to a ramp, stairway, or fixed ladder. The railing will be provided with a toeboard wherever, beneath the open sides,

a. Persons can pass,
b. There is moving machinery, or
c. There is equipment with which falling materials could create a hazard.

Every runway will be guarded by a standard railing on all open sides 4 feet or more above floor or ground level. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard will also be provided on each exposed side.

Runways used exclusively for special purposes (such as oiling, shafting, or filling tank cars) may have the railing on one side omitted where operating conditions necessitate such omission, providing the falling hazard is minimized by using a runway of not less than 18 inches wide. Where persons entering upon runways become thereby exposed to machinery, electrical equipment, or other danger not a falling hazard, additional guarding that is specified may be essential for protection.

Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment, pickling or galvanizing tanks, degreasing units, and similar hazards will be guarded with a standard railing and toe board.

If an employee's work requires him or her to work at a height of 4 feet or more above a lower level and standard guardrails are not available, fall protection will be provided by a safety harness and lanyard. Particular attention will be paid to the anchorage point to ensure that it is capable of the stresses that may be placed upon it.

While on a host employer's property, protection for fixed stairways, ladder openings, hatchway openings, manholes, skylights, ramps, and platforms will not be compromised. Requests to make any changes will not take place without direct permission from the host employer.

Hazardous Workplace Chemical Exposure

Our employees may encounter various hazardous chemicals while performing their work duties. If employees have been properly trained on a particular hazard, they may continue work as required. If employees have not been trained on the hazard they encounter, they are to stop work immediately and notify their supervisor.

Per *Hazard Communication*, located at **29 CFR 1910.1200**, Milestone Industrial Welding Services Llc will keep on site, and readily available SDS for each chemical to which we may be exposed. This information will be provided by the facility operator.

Asbestos Awareness

NIOSH Pocket Guide to Chemical Hazards - Asbestos

At some facilities, employees may have potential exposure to asbestos if precautionary steps noted below are not taken. Asbestos can be found in older tile flooring, pipe and mechanical insulation, plaster, fireproofing, soundproofing, roofing materials, and in sprayed-on materials located on beams, in crawl spaces, and between walls. Undisturbed, it is perfectly safe.

Asbestos is not a specific mineral, but rather a fibrous form of various minerals. It is a remarkable product because it is resistant to corrosive chemicals, it is a nonconductor of electricity, it has a high tensile strength (equal to that of steel wire) and is resistant to heat (it will not burn but will disintegrate at extremely high temperatures). Some forms of asbestos, such as chrysotile, can be spun into thread. In fact, one pound of chrysotile can produce 30,000 feet of thread -- it is that fine. Other types of asbestos have fibers which cannot be spun but are excellent for their frictional properties (brakes) and their insulation and sound deadening properties. The actual minerals found in asbestos include iron, magnesium, silica, and water. Asbestos is a truly remarkable product which has been serving mankind since the ancient Greeks and Romans.

Unfortunately, asbestos has a downside that has been discovered and statistically documented in recent years – it is hazardous to your health.

There are two types of asbestos, friable and non-friable.

Friable asbestos can be crumpled with hand pressure and is likely to emit minute fibers can cause serious long-term health effects. Fluffy sprayed-on materials used for fireproofing, insulation, or sound proofing are considered to be friable.

Non-friable asbestos, undisturbed, poses no health risk. Vinyl-asbestos floor tile or roofing felt are considered non-friable if intact and generally do not emit airborne fibers unless subjected to sanding, sawing and other aggressive operations. Asbestos-cement pipe or sheet can emit airborne fibers if the materials are cut or sawed, or if they are broken.

The health hazards associated with asbestos are caused by the microscopic fibers which, when released, enter the deepest portion of the lung (past your natural defenses such as hairs, mucus, cilia, and macrophages). Scar tissues can develop, and the lung stiffens thus reducing gas exchange. This is called asbestosis. Another disease associated with asbestos is lung cancer. High exposure levels of asbestos increase one's chance of lung cancer by a factor of five. Mesothelioma, a disease caused primarily by exposure to amosite and crocidolite, can be fatal. Lastly, though not likely, it is possible to get cancer of the stomach and colon.

The health hazards associated with asbestos are chronic and, as such, present themselves after a long period of time.

Asbestos Awareness Training is required for all employees who work in areas that contain or may contain asbestos. This training will be documented.

Steps to avoid asbestos exposure:

a. Under no circumstances will asbestos containing material (ACM) or presumed asbestos containing material (PACM) be disturbed during work activities.
b. If you believe the materials you will be working with contain asbestos, do not disturb the material and contact your supervisor.
c. Obey all asbestos warning signs & labels. ACM and PACM will not be disturbed.
d. All exposure to thermal system insulation, sprayed-on, and troweled-on surfacing material will be assumed to be asbestos exposure unless results of laboratory analysis show that the material does not contain asbestos.

For the record, permissible exposure to airborne asbestos fibers may not exceed 0.1 fibers per cubic centimeter of air (0.1 f/cc) averaged over the 8-hour workday, and 1 fiber per cubic centimeter of air (1.0 f/cc) averaged over a 30-minute work period.

Crystalline Silica Awareness

Silica, Crystalline (Respirable Size), National Institute of Health

Crystalline Silica can be readily found at many workplaces in rocks, as well as many concrete and masonry products. Crystalline Silica can be released in the air when employees are performing such tasks as:

a. Chipping, hammering, drilling, crushing, or hauling rock.
b. Abrasive blasting.
c. Sawing, hammering, drilling, or sweeping concrete or masonry.

Unprotected respiratory exposure to crystalline silica may cause a lung disease called silicosis as well as cancer and death.

Occupational silica exposure is completely preventable through employee training, use of a silica substitute, use of engineering controls, improved work practices, and, lastly, use of personal protective equipment.

Employees who are potentially exposed to an environment containing airborne concentrations of silica will receive training prior to working with silica and receive periodic refresher training after work has started.

Employee Information and Training

We will ensure that at least the following hazards are addressed: Cancer, lung effects, immune system effects, and kidney effects.

Additionally, we must ensure that our employees can demonstrate knowledge and understanding of at least the following:

a. The health hazards associated with exposure to respirable crystalline silica;

   Silicosis is caused by exposure to respirable crystalline silica dust. Crystalline silica is a basic component of soil, sand, granite, & most other types of rock, & it is used as an abrasive blasting agent. Silicosis is a progressive, disabling, & often fatal lung disease. Cigarette smoking adds to the lung damage caused by silica.

   Silicosis (especially the acute form) is characterized by shortness of breath, fever, and cyanosis (bluish skin); it may often be misdiagnosed as pulmonary edema (fluid in the lungs), pneumonia, or tuberculosis. Severe mycobacterial or fungal infections often complicate silicosis and may be fatal in many cases.

Three types of Silicosis:

Chronic Silicosis:	Usually occurs after 10 or more years of exposure to crystalline silica at relatively low concentrations
Accelerated Silicosis:	Results from exposure to high concentrations of crystalline silica and develops 5 to 10 years after the initial exposure.
Acute Silicosis:	Occurs where exposure concentrations are the highest and develops after a few months or as long as 2 years following exposures to extremely high concentrations of respirable crystalline silica.

b. Specific tasks in the workplace from Table 1 that could result in exposure to respirable crystalline silica;
c. Specific measures we have implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;

   Engineering controls would include local exhaust ventilation, blasting cabinets, and establishing a clearly identified exposure area.

   Work practice controls would include use of water sprays, wet methods for cutting, chipping, drilling, sawing, grinding, etc.

   Eating, drinking, or smoking near crystalline silica dust is prohibited.

   Employees will wash hands and face before eating, drinking or smoking away from silica exposure area.

   Personal protective equipment would include appropriate half-face or full-face respirator.
d. The contents of 29 CFR 1910.1053;
e. The purpose and a description of the medical surveillance program required by paragraph (i) of 29 CFR 1910.1053.

We will make a copy of 29 CFR 1910.1053 readily available and without cost to our employees covered by this program.

NIOSH Safety Recommendations:

NIOSH recommends the following measures to reduce crystalline silica exposures at the workplace and prevent silicosis and silicosis-related deaths:

a. Prohibit silica sand (or other substances containing more than 1% crystalline silica) as an abrasive blasting material and substitute less hazardous materials.
b. Conduct air monitoring to measure worker exposures.
c. Use containment methods such as blast-cleaning machines and cabinets to control the hazard and protect adjacent workers from exposure.
d. Practice good personal hygiene to avoid unnecessary exposure to silica dust.
   1. Wash hands and face before eating.
   2. No eating, drinking or tobacco products in the blasting area.
   3. Shower before leaving work site.
   4. Vehicles parked away from contaminated area.

e. Wear washable or disposable protective clothes at the workplace; shower and change into clean clothes before leaving the workplace to prevent contamination of cars, homes, and other work areas.
f. Use respiratory protection when source controls cannot keep silica exposures below the NIOSH REL.
g. Provide periodic medical examinations for all workers who may be exposed to crystalline silica.
h. Post signs to warn workers about the hazard and to inform them about required protective equipment.
i. Provide workers with training that includes information about health effects, work practices, and protective equipment for crystalline silica.
j. Report all cases of silicosis to the state health department.

Lead Hazard Awareness:

Pure lead (Pb) is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form numerous lead compounds.

OSHA standard **29 CFR 1910.1025 - Lead**, addresses occupational exposure to lead in the construction industry. The word "lead" within this standard refers to elemental lead, all inorganic lead compounds, and a class of organic lead compounds called lead soaps. This standard does not apply to other organic lead compounds.

There may be times when employees are working within the vicinity of lead or lead-containing materials.

Under no circumstances will employees be exposed to lead above the action level which, for lead, is 30 micrograms of lead per cubic meter of air (30 μ/m^3), averaged over an 8-hour workday. As a matter of interest, the permissible exposure limit (PEL) for lead is 50 micrograms of lead per cubic meter of air (50 μ/m^3), averaged over an 8-hour workday.

Lead found in paints, coatings, and compounds that are undisturbed, pose no risk of hazard exposure and work around these items do not require respirators, special clothing, or negative pressure enclosures.

Care will be taken by all employees to not abrade, remove, touch, or in any way disturb lead or lead containing compounds within the work area.

To drive home the point of the importance of leaving lead at the workplace undisturbed and avoided, employees must be aware of the health hazards associated with lead exposure.

The below is extracted from 29 CFR 1910.1025 App A, *Substance data sheet for occupational exposure to lead*:

> II. HEALTH HAZARD DATA
>
> A. "Ways in which lead enters your body". When absorbed into your body in certain doses, lead is a toxic substance. The object of the lead standard is to prevent absorption of harmful quantities of lead. The standard is intended to protect you not only from the immediate toxic effects of lead, but also from the serious toxic effects that may not become apparent until years of exposure have passed. Lead can be absorbed into your body by inhalation (breathing) and ingestion (eating). Lead (except for certain organic lead compounds not covered by the standard, such as tetraethyl lead) is not absorbed through your skin.

When lead is scattered in the air as a dust, fume, or mist it can be inhaled and absorbed through your lungs and upper respiratory tract. Inhalation of airborne lead is generally the most important source of occupational lead absorption. You can also absorb lead through your digestive system if lead gets into your mouth and is swallowed. If you handle food, cigarettes, chewing tobacco, or make-up which have lead on them or handle them with hands contaminated with lead, this will contribute to ingestion. A significant portion of the lead that you inhale or ingest gets into your blood stream. Once in your blood stream, lead is circulated throughout your body and stored in various organs and body tissues. Some of this lead is quickly filtered out of your body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in your body will increase if you are absorbing more lead than your body is excreting. Even though you may not be aware of any immediate symptoms of disease, this lead stored in your tissues can be slowly causing irreversible damage, first to individual cells, then to your organs and whole-body systems.

B. "Effects of overexposure to lead" - (1) "Short term (acute) overexposure". Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill you in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short-term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead adversely affects numerous body systems and causes forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.

(2) "Long-term (chronic) overexposure". Chronic overexposure to lead may result in severe damage to your blood - forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain. Damage to the central nervous system in general and the brain (encephalopathy) in particular is one of the most severe forms of lead poisoning. The most severe, often fatal, form of encephalopathy may be preceded by vomiting, a feeling of dullness progressing to drowsiness and stupor, poor memory, restlessness, irritability, tremor, and convulsions. It may arise suddenly with the onset of seizures, followed by coma, and death. There is a tendency for muscular weakness to develop at the same time. This weakness may progress to paralysis often observed as a characteristic "wrist drop" or "foot drop" and is a manifestation of a disease to the nervous system called peripheral neuropathy. Chronic overexposure to lead also results in kidney disease with few, if any, symptoms appearing until extensive and most likely permanent kidney damage has occurred. Routine laboratory tests reveal the presence of this kidney disease only after about two-thirds of kidney function is lost. When overt symptoms of urinary dysfunction arise, it is often too late to correct or prevent worsening conditions, and progression to kidney dialysis or death is possible. Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead can alter the structure of sperm cells raising the risk of birth defects. There is evidence of miscarriage and stillbirth in women whose husbands were exposed to lead or who were exposed to lead themselves. Lead exposure also may result in decreased fertility, and abnormal menstrual cycles in women.

The course of pregnancy may be adversely affected by exposure to lead since lead crosses the placental barrier and poses risks to developing fetuses. Children born of parents either one of whom were exposed to excess lead levels are more likely to have birth defects, mental retardation, behavioral disorders or die during the first year of childhood. Overexposure to lead also disrupts the blood - forming system resulting in decreased hemoglobin (the substance in the blood that carries oxygen to the cells) and ultimately anemia. Anemia is characterized by weakness, pallor and fatigability as a result of decreased oxygen carrying capacity in the blood.

(3) "Health protection goals of the standard". Prevention of adverse health effects for most workers from exposure to lead throughout a working lifetime requires that a worker's blood lead level (BLL, also expressed as PbB) be maintained at or below forty micrograms per deciliter of whole blood (40 ug/dl). The blood lead levels of workers (both male and female workers) who intend to have children should be maintained below 30 ug/dl to minimize adverse reproductive health effects to the parents and to the developing fetus. The measurement of your blood lead level (BLL) is the most useful indicator of the amount of lead being absorbed by your body. Blood lead levels are most often reported in units of milligrams (mg) or micrograms (ug) of lead (1 mg=1000 ug) per 100 grams (100g), 100 milliliters (100 ml) or deciliter (dl) of blood. These three units are essentially the same. Sometime BLLs are expressed in the form of mg percent or ug percent. This is a shorthand notation for 100g, 100 ml, or dl. (References to BLL measurements in this standard are expressed in the form of ug/dl.)

BLL measurements show the amount of lead circulating in your blood stream, but do not give any information about the amount of lead stored in your various tissues. BLL measurements merely show current absorption of lead, not the effect that lead is having on your body or the effects that past lead exposure may have already caused. Past research into lead - related diseases, however, has focused heavily on associations between BLLs and various diseases. As a result, your BLL is an important indicator of the likelihood that you will gradually acquire a lead - related health impairment or disease.

Once your blood lead level climbs above 40 ug/dl, your risk of disease increases. There is a wide variability of individual response to lead, thus it is difficult to say that a particular BLL in a given person will cause a particular effect. Studies have associated fatal encephalopathy with BLLs as low as 150 ug/dl. Other studies have shown other forms of diseases in some workers with BLLs well below 80 ug/dl. Your BLL is a crucial indicator of the risks to your health, but one other factor is also extremely important. This factor is the length of time you have had elevated BLLs. The longer you have an elevated BLL, the greater the risk that large quantities of lead are being gradually stored in your organs and tissues (body burden). The greater your overall body burden, the greater the chances of substantial permanent damage. The best way to prevent all forms of lead - related impairments and diseases -- both short term and long term -- is to maintain your BLL below 40 ug/dl. The provisions of the standard are designed with this end in mind.

Hoists

A hoist is a useful mechanical device which gives one the ability to lift and move heavy objects – not people. No person is to ride on a hoist. As with all mechanical devices, improper use may lead to injury. You must know what you are doing, and you must be careful.

Before use, hoists must be inspected for bent or damaged components. Particular attention should be paid to guarding. Fingers and loose clothing could be snagged in exposed mechanisms. Chains, cables, or rope slings must not be kinked, twisted, or frayed.

Loads must be properly rigged with hooks or slings, and they must never exceed the hoist's rated capacity.

Ensure that the area around the hoist is free from debris and, most importantly, people. Do not allow yourself or others to be under a hoisted load.

Ladders

29 CFR 1910.23 Ladders
29 CFR 1910.24 Step Bolts and Manhole Steps

All employees using ladders are required by OSHA standards to receive training and understand proper procedures for ladder use before using a ladder in a work situation.

American National Standards Institute (ANSI) and **NIOSH** approval labels should never be covered with paint or tape. Having ladders that are constructed to standard will prevent collapse and resultant falls.

The following general requirements apply to all ladders:

a. Ladder rungs, steps, and cleats must be parallel, level, and uniformly spaced when a ladder is in position for use.

b. Ladder rungs, steps, and cleats must not be spaced less than 10 inches (25 cm) and not more than 14 inches (36 cm) apart, as measured between the centerlines of the rungs, cleats, and steps.

Exceptions: **Ladder rungs and steps in elevator shafts must be spaced not less than 6 inches (15 cm) apart and not more than 16.5 inches (42 cm) apart, as measured along the ladder side rails; and**

Fixed ladder rungs and steps on telecommunication towers must be spaced not more than 18 inches (46 cm) apart, measured between the centerlines of the rungs or steps.

c. Steps on stepstools must not be spaced less than 8 inches (20 cm) apart and not more than 12 inches (30 cm) apart, as measured between the centerlines of the steps.

d. Ladder rungs, steps, and cleats must have a minimum clear width of 11.5 inches (29 cm) on portable ladders and 16 inches (41 cm) (measured before installation of ladder safety systems) for fixed ladders.

Exceptions: **1. The minimum clear width does not apply to ladders with narrow rungs that are not designed to be stepped on, such as those located on the tapered end of orchard ladders and similar ladders;**

2. Rungs and steps of manhole entry ladders that are supported by the manhole opening must have a minimum clear width of 9 inches (23 cm);

3. Rungs and steps on rolling ladders used in telecommunication centers must have a minimum clear width of 8 inches (20 cm); and

4. Stepstools must have a minimum clear width of 10.5 inches (26.7 cm).

e. Wooden ladders must not be coated with any material that may obscure structural defects.

f. Metal ladders must be made with corrosion-resistant material or protected against corrosion.

g. Ladder surfaces must be free of puncture and laceration hazards.

h. Ladders must only be used for the purposes for which they were designed.

i. Ladders must be inspected before initial use in each work shift, and more frequently as necessary, to identify any visible defects that could cause employee injury.

j. Any ladder with structural or other defects must be immediately tagged "Dangerous: Do Not Use" or with similar language in accordance with **§1910.145** and removed from service until repaired in accordance with **§1910.22(d)** or replaced.

k. Each employee must face the ladder when climbing up or down it.
l. Each employee must use at least one hand to grasp the ladder when climbing up and down it.
m. No employee should carry any object or load that could cause the employee to lose balance and fall while climbing up or down the ladder.

The following additional requirements apply to the use of portable ladders:

a. Rungs and steps of portable metal ladders must be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping.
b. Each stepladder or combination ladder used in a stepladder mode must be equipped with a metal spreader or locking device that securely holds the front and back sections in an open position while the ladder is in use.
c. Ladders must not be loaded beyond the maximum intended load.

Note: The maximum intended load, as defined in §1910.21(b), includes the total load (weight and force) of the employee and all tools, equipment, and materials being carried.

d. Ladders are to be used only on stable and level surfaces unless they are secured or stabilized to prevent accidental displacement.
e. Portable single rail ladders are prohibited.
f. A ladder must not be moved, shifted, or extended while an employee is on it.
g. Ladders placed in locations such as passageways, doorways, or driveways where they can be displaced by other activities or traffic must be secured to prevent accidental displacement or guarded by a temporary barricade, such as a row of traffic cones or caution tape, to keep the activities or traffic away from the ladder.
h. The cap (if equipped) and top step of a stepladder must not be used as steps.
i. Portable ladders used on slippery surfaces must be secured and stabilized.
j. The top of a non-self-supporting ladder must be placed so that both side rails are supported, unless the ladder is equipped with a single support attachment.
k. Portable ladders used to gain access to an upper landing surface must have side rails that extend at least 3 feet (0.9 m) above the upper landing surface (see **Figure D-1**).
l. Ladders and ladder sections must not be tied or fastened together to provide added length unless they are specifically designed for such use.
m. Ladders must not be placed on boxes, barrels, or other unstable bases to obtain additional height.

All fixed ladders must meet the requirements of **29 CFR 1910.23(d)**. Mobile ladder stands and mobile ladder stand platforms must meet the requirements of **29 CFR 1910.23(e)**. Step bolts and manhole steps will meet the requirements of **29 CFR 1910.24**.

Lighting

A competent person will ensure that all work areas have adequate lighting. Adequate lighting serves a two-fold purpose – allowing tasks to be more readily performed as well as providing the additional safety factor of being seen by persons not involved with the work – especially vehicular traffic.

If generators are used for auxiliary lighting, they will be operated and maintained by authorized persons who are competent by training or experience.

LP - Gas Storage

Liquefied petroleum gas (LP-Gas) is sometimes used at the workplace to provide fuel for temporary heating devices.

LP-Gas systems must have containers, valves, connectors, manifold valve assemblies, and regulators of an approved type. All cylinders must be DOT approved.

Rules for inside storage (under construction standards) are simple -- **it is not allowed!**

Under industry standards, up to 300 pounds of LP-Gas may be stored, with adherence to specific safety procedures. Also, highway mobile vehicles and trailers stored in garages in accordance with **§1910.110** may be equipped to carry more than one LP-gas container, but the total capacity of LP-gas containers per work vehicle stored in garages must not exceed 100 pounds of LP-gas. All container valves must be closed when not in use.

Rules for outside storage requires that containers be in a suitable ventilated enclosure or otherwise protected against tampering. At least one approved portable fire extinguisher having a rating of not less than 20-B:C must be readily available.

The distances from buildings or groups of buildings that containers must be stored are as follows:

Quantity of LP-Gas Stored	Distance in Feet
500 lbs or less	0
501 to 6,000 lbs	10
6,001 to 10,000 lbs	20
over 10,000 lbs	25

Storage must not be near building openings or vehicular traffic.

Machine Guarding

29 CFR 1910.212: General requirements for all machines.

29 CFR 1910.217: Mechanical power presses.

29 CFR 1910.217: App A Mandatory requirement for certification/validation of safety systems for presence sensing device initiation of mechanical power presses

29 CFR 1910.217: App B Non-mandatory guidelines for certification/validation of safety systems for presence sensing device initiation of mechanical power presses

29 CFR 1910.217: App C Mandatory requirements for OSHA recognition of third-party validation organizations for the PSDI standard

29 CFR 1910.217: App D Non-mandatory supplementary information

29 CFR 1910.219: Mechanical power-transmission apparatus

29 CFR 1910.269 - Telecommunications

Most injuries that occur when operating a machine happen at the point of operation -- the point on a machine where the actual work (cutting, bending, spinning) occurs. This is also the point where guards can protect fingers and hands exposed to that danger. Machine guarding also protects employees from other dangers such as flying pieces of metal, sparks, gears, belts, and rotating parts.

Accident prevention in this area is a function of machine design, engineering controls, and operator training. Types of machine guarding are almost as numerous as types of machines with the most common being a physical barrier to prevent accidental insertion of body parts. Guards are vital for safety reasons and machine guards designed into a machine should never be altered or removed. The speed and tremendous forces generated in modern machines is such that severe injury or even death could occur without warning and without even slowing the machine down.

Training and proper work methods go a long way toward reducing machine accidents. Like all safeguards, there is generally a way to bypass safety features that are engineered into machines. This is sometimes done to increase speed or just to make one's job easier. This could result in a tragic, avoidable accident. The few seconds saved could cause a lifetime of grief. Do not bypass safety systems.

Horizontal belts, pulleys, and gears which are less than seven feet from the floor will be guarded. Operate all machines according to the instruction manual and follow all safety procedures.

Because of the seriousness of machine guarding, specific guidelines for point of operation guarding follow:

Reference our Lockout-Tagout - Control of Hazardous Energy Program and Personal Protective Equipment Program.

OSHA’s machinery and machine guarding standards require that one or more guarding methods be utilized to protect employees (operating, minor servicing and others nearby) from exposure to hazardous machine energy.

Methods of Machine Safeguarding

There are many ways to safeguard machines. The type of operation, the size or shape of stock, the method of handling, the physical layout of the work area, the type of material, and production requirements or limitations will help to determine the appropriate safeguarding method for the individual machine.

As a general rule, power transmission apparatus is best protected by fixed guards that enclose the danger areas. For hazards at the point of operation (where moving parts actually perform work on stock) several kinds of safeguarding may be possible. One must always choose the most effective and practical means available.

Safeguard Classifications:

Guards

a. Fixed

A fixed guard is a permanent part of the machine. It is not dependent upon moving parts to perform its intended function. It may be constructed of sheet metal, screen, wire cloth, bars, plastic, or any other material that is substantial enough to withstand whatever impact it may receive and to endure prolonged use. This guard is usually preferable to all other types because of its relative simplicity and permanence.

b. Interlocked

When this type of guard is opened or removed, the tripping mechanism and/or power automatically shuts off or disengages, and the machine cannot cycle or be started until the guard is back in place. An interlocked guard may use electrical, mechanical, hydraulic, or pneumatic power or any combination of these. Interlocks should not prevent "inching" by remote control if required. Replacing the guard should not automatically restart the machine. To be effective, all movable guards should be interlocked to prevent occupational hazards.

c. Adjustable

Adjustable guards are useful because they allow flexibility in accommodating various sizes of stock.

d. Self-adjusting

The openings of these barriers are determined by the movement of the stock. As the operator moves the stock into the danger area, the guard is pushed away, providing an opening which is only large enough to admit the stock. After the stock is removed, the guard returns to the rest position. This guard protects the operator by placing a barrier between the danger area and the operator. The guards may be constructed of plastic, metal, or other substantial material. Self-adjusting guards offer different degrees of protection.

Devices

a. Presence Sensing

1. Photoelectrical (optical)

The photoelectric (optical) presence-sensing device uses a system of light sources and controls which can interrupt the machine's operating cycle. If the light field is broken, the machine stops and will not cycle. This device must be used only on machines which can be stopped before the worker can reach the danger area. The design and placement of the guard depends upon the time it takes to stop the mechanism and the speed at which the employee's hand can reach across the distance from the guard to the danger zone.

2. Radiofrequency (capacitance)

The radiofrequency (capacitance) presence-sending device uses a radio beam that is part of the machine control circuit. When the capacitance field is broken, the machine will stop or will not activate. Like the photoelectric device, this device will only be used on machines which can be stopped before the worker can reach the danger area. This requires the machine to have a friction clutch or other reliable means for stopping.

3. Electromechanical

   The electromechanical sensing device has a probe or contact bar which descends to a predetermined distance when the operator initiates the machine cycle. If there is an obstruction preventing it from descending its full predetermined distance, the control circuit does not actuate the machine cycle.

b. Pullback

   Pullback devices utilize a series of cables attached to the operator's hands, wrists, and/or arms. This type of device is primarily used on machines with stroking action. When the slide/ram is up between cycles, the operator is allowed access to the point of operation. When the slide/ram begins to cycle by starting its descent, a mechanical linkage automatically assures withdrawal of the hands from the point of operation.

c. Restraint

   A restraint (holdout) device utilizes cables or straps that are attached to the operator's hands at a fixed point. The cables or straps must be adjusted to let the operator's hands travel within a predetermined safe area. There is no extending or retracting action involved. Consequently, hand-feeding tools are often necessary if the operation involves placing material into the danger area.

d. Safety Controls

   Safety trip controls provide a quick means for deactivating the machine in an emergency situation.

   1. Safety Trip Control

      i. Pressure-Sensitive Body Bar

         A pressure-sensitive body bar, when depressed, will deactivate the machine. If the operator or anyone trips, loses balance, or is drawn toward the machine, applying pressure to the bar will stop the operation. Therefore, the positioning of the bar is critical. It must stop the machine before a part of the employee's body reaches the danger area.

      ii. Safety Trip Rod

         When pressed by hand, the safety trip rod deactivates the machine. Because the trip rod has to be actuated by the operator during an emergency situation, its proper position is also critical.

      iii. Safety Tripwire Cable

         Safety tripwire cables are located around the perimeter of or near the danger area. The operator must be able to reach the cable with either hand to stop the machine. All of these tripwire rods or other safety devices must be manually reset to restart the machine. Simply releasing the tripwire to restart the machine will not ensure that the employee is out of danger when the machine restarts.

   2. Two-Hand Control

      The two-hand control requires constant, concurrent pressure by the operator to activate the machine. This kind of control requires a part-revolution clutch, brake, and a brake monitor if used on a power press. With this type of device, the operator's hands are required to be at a safe location (on control buttons) and at a safe distance from the danger area while the machine completes its closing cycle.

3. Two-Hand Trip

   A two-hand trip requires concurrent application of both the operator's control buttons to activate the machine cycle, after which the hands are free. This device is usually used with machines equipped with full-revolution clutches. The trips must be placed far enough from the point of operation to make it impossible for the operator to move his or her hands from the trip buttons or handles into the point of operation before the first half of the cycle is completed. The distance from the trip button depends upon the speed of the cycle and the band speed constant. Thus, the operator's hands are kept far enough away to prevent them from being placed in the danger area prior to the slide/ram or blade reaching the full "down" position. To be effective, both two-hand controls and trips must be located so that the operator cannot use two hands or one hand and another part of his/her body to trip the machine.

Gates

A gate is a movable barrier that protects the operator at the point of operation before the machine cycle can be started. In many instances' gates are designed to be operated with each machine cycle.

a. Interlocked

   To be effective, the gate must be interlocked so that the machine will not begin a cycle unless the gate guard is in place. It must be in the closed position before the machine can function. If the gate is not permitted to descend to the fully closed position, the press will not function. Another potential application of this type of guard is where the gate is a component of a perimeter safeguarding system. Here the gate may provide protection not only to the operator but to pedestrian traffic as well.

Location/Distance

A thorough hazard analysis of each machine and particular situation is absolutely essential before attempting this safeguarding technique. To consider a part of a machine to be safeguarded by location, the dangerous moving part of a machine must be so positioned that those areas are not accessible or do not present a hazard to a worker during the normal operation of the machine. This may be accomplished by locating a machine so that the hazardous parts of the machine are located away from operator work stations or other areas where employees walk or work and/or positioning a machine with its power transmission apparatus against a wall and leaving all routine operations conducted on the other side of the machine. Additionally, enclosure walls or fences can restrict access to machines.

Another possible solution is to have dangerous parts located high enough to be out of the normal reach of any worker. The feeding process can be safeguarded by location if a safe distance can be maintained to protect the worker's hands. The dimensions of the stock being worked on may provide adequate safety. For instance, if the stock is several feet long and only one end of the stock is being worked on, the operator may be able to hold the opposite end while the work is being performed. An example would be a single-end punching machine. However, depending upon the machine, protection might still be required for other personnel in the area. The positioning of the operator's control station provides another potential approach to safeguarding by location. Operator controls may be located at a safe distance from the machine if there is no reason for the operator to tend it.

Warning Signs

If telecommunication work exposes energized or moving parts that are normally protected, danger signs will be displayed and barricades erected, as necessary, to warn other personnel in the area.

When power plant machinery in telecommunications centers is operated with commutators and couplings uncovered, the adjacent housing will be clearly marked to alert personnel to the rotating machinery. See *Signs & Tags*.

Basic Policy

Power machinery must not be “energized” [connected to an energy source or containing residual or stored energy] unless it is under the control of a trained operator and the point of operation is guarded by one or more physical barriers or a physical device with the following exception:

> Minor tool changes and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered by this standard [Control of Hazardous Energy] if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection.

or as provided under the servicing and maintenance testing and positioning requirements of paragraph 29 CFR 1910.147(f):

> Testing or positioning of machines, equipment or components thereof. In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions will be followed:
>
> (i) Clear the machine or equipment of tools and materials.
>
> (ii) Remove employees from the machine or equipment area.
>
> (iii) Remove the lockout or tagout devices.
>
> (iv) Energize and proceed with testing or positioning.
>
> (v) De-energize all systems and reapply energy control measures to continue the servicing and/or maintenance.

Do not confuse the requirements of our Lockout-Tagout - Control of Hazardous Energy Program with the requirements of Machine Guarding. Even though minor tool changes, adjustments, and other minor servicing activities which take place during normal production operations are not covered by the Control of Hazardous Energy standard because they are routine, repetitive, and integral to the use of the equipment for production, machine guarding is still required to protect the employee who is performing the servicing operations mentioned above.

Failure to follow point of operation safety procedures and guidelines can generally result in loss of fingers. However, loss of any body part or even a fatal accident is a possibility.

Machinery

Spinning, pounding, and moving – gears, pulleys, levers – electricity, fuel, and hydraulics – action, reaction, force: danger! Machinery takes energy and performs a task or a multitude of tasks. Machinery, from a safety standpoint, is a collection of individual, simple machines (pulleys, gears, etc.) combined to work in harmony to accomplish a specific job.

The danger is obvious: the power, speed, movement, and momentum of machinery is not going to be altered by something as insignificant as an employee's finger, hand, or even body.

How does one deal with the dangers of machinery?

a. N**ever** operate any machinery until you have received proper training and you thoroughly understand safety procedures as well as procedures to follow for adjustments, power interruption, jamming, lubrication, and inspection.
b. Ensure the guarding systems are in place, functioning properly, and have not been altered or removed.
c. If a hazard assessment of the machinery operation dictates specific personal protective equipment (PPE), wear it!
d. From purely a safety standpoint, think of any power operated item with moving parts as machinery. This would include items as diverse as a small electric drill to an 80,000-pound tractor-trailer.

Material Storage

General Requirement for Storage

All materials stored in tiers will be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling or collapse.

Maximum safe load limits of floors within buildings and structures, in pounds per square foot, will be conspicuously posted in all storage areas, except for floor or slab on grade. Maximum safe loads will not be exceeded.

Aisles and passageways will be kept clear to provide for the free and safe movement of material handling equipment or employees. Such areas will be kept in good repair.

When a difference in road or working levels exist, means such as ramps, blocking, or grading will be used to ensure the safe movement of vehicles between the two levels.

Material Storage

Material stored inside buildings under construction will not be placed within 4 feet of any hoistway or inside floor openings, nor within 10 feet of an exterior wall which does not extend above the top of the material stored.

Each employee required to work on stored material in silos, hoppers, tanks, and similar storage areas will be equipped with personal fall arrest equipment meeting the requirements of Fall Protection of this Safety Manual.

Noncompatible materials will be segregated in storage.

Bagged materials will be stacked by stepping back the layers and cross-keying the bags at least every 10 bags high.

Materials will not be stored on scaffolds or runways in excess of supplies needed for immediate operations.

Brick stacks will not be more than 7 feet in height. When a loose brick stack reaches a height of 4 feet, it will be tapered back 2 inches in every foot of height above the 4-foot level.

When masonry blocks are stacked higher than 4 feet, the stack will be tapered back one-half block per tier above the 6-foot level.

Used lumber will have all nails withdrawn before stacking.

Lumber will be stacked on level and solidly supported sills and will be so stacked as to be stable and self-supporting.

Mold & Mildew

Molds and mildew are fungi that can be found inside a building in which employees of Milestone Industrial Welding Services Llc are working. Within the United States, there are about 1,000 species of mold.

Problems may arise when mold starts eating away at materials, affecting the look, smell, and possibly, with the respect to wood-framed buildings, affecting the structural integrity of the buildings.

Molds can grow on virtually any substance, as long as moisture or water, oxygen, and an organic source, **such as wood**, are present. Molds reproduce by creating tiny spores (viable seeds) that usually cannot be seen without magnification. In fact, mold spores continually floating through both the indoor and outdoor air and these spores, alone, **do not create a problem**.

The problem occurs when mold spores land on a damp spot and begin growing. They digest whatever they land on in order to survive. Molds can grow on wood, paper, carpet, foods, insulation, and even dust and dirt that gathers in moist areas a building.

Over time, molds can gradually damage building materials and furnishings. If left unchecked, mold can eventually cause structural damage to a wood framed building, weakening floors and walls as it feeds on moist wooden structural members.

Most molds do not present a true health hazard in the general population. Molds can, however, cause adverse effects by producing allergens and the allergic reactions to mold can be either immediate or delayed. Allergic responses would include hay fever-type symptoms such as runny nose and red eyes.

Should mold be discovered on any of our locations, we will seek a professional mold remediation contractor.

Should mold develop at the facility where our employees are working, the following precautionary steps will be taken:

a. Dust mask may be used for personal employee comfort.
b. Items damaged by mold may be discarded a general waste with no special precautions needed.

NFPA 70E

Standard for Electrical Safety in the Workplace

OSHA has adopted by reference NFPA 70E-2000, *Standard for Electrical Safety Requirements for Employee Workplaces.*

A national consensus standard, such as NFPA 70E-2015, however, can sometimes be relevant to a general duty clause citation in the sense that the consensus standard may be used as evidence of hazard recognition and the availability of feasible means of abatement. The general duty clause, Section 5(a)(1) of the OSH Act, is violated if an employer has failed to furnish a wokrplace that is free from recognized hazards causing or likely to cause death or serious physical harm. The general duty clause is used where there is no standard that applies to the particular hazards involved.

All electrical work will be done in compliance with the National Electric Code (NEC), OSHA standards, and NFPA 70E. Both OSHA standards and NFPA 70E deal with worker safety, while the NEC deals with the design, installation, and inspection of electrical installations.

A copy of NFPA 70E will be readily available for reference, training, and employee use.

Training:

All employees who face electrical hazards that are not reduced to a safe level by the applicable electrical installation requirements will be trained in safety-related work practices and procedural requirements as necessary to provide protection from the electrical hazards associated with the job assignments. Employees will be trained to identify and understand the relationship between electrical hazards and possible injury.

Training will be in a classroom and/or on-the-job and the degree of training will be determined by the risk to the employee.

Employees will receive training in emergency procedures including methods of release from contact with exposed energized electrical conductors or circuit parts, methods of first aid, and CPR if the duties warrant such training. Vincent Noriega, our Safety Director will certify that employees have been trained in approved methods of resuscitation annually.

Training for Qualified Persons:

Note: A qualified person has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to recognize and avoid the hazards involved.

a. Qualified persons must be trained and knowledgeable of the construction and operation of equipment or a specific work method and to recognize and avoid the electrical hazards with respect to the equipment or work methods.
    1. Qualified persons will be familiar with the proper use of special precautionary techniques, PPE, including arc-flash, insulating and shielding materials, and insulated tools and test equipment.

        Note: A person can be qualified with respect to certain equipment and methods but still be unqualified for others.

2. Qualified persons will be permitted to work with the Limited Approach Boundary of exposed energized electrical conductors and circuit parts operating at 50 volts or more and will be trained in the following:
    i. The skills and techniques necessary to distinguish exposed energized electrical conductors and circuits parts from other parts of electrical equipment
    ii. The skills and techniques necessary to determine the nominal voltage of exposed energized electrical conductors and circuit parts.
    iii. The approach distances specified in Table 130.2(c) and the corresponding voltages to which the qualified person will be exposed.
    iv. The decision-making process necessary to determine the degree and extent of the hazard and the PPE and job planning necessary to perform the task safely.

c. If undergoing OJT and, in the course of the OJT has demonstrated an ability to perform duties safely under the direct supervision of a qualified person, this person will be considered qualified for the performance of these duties.
d. Tasks performed less often that once per year will require retraining before performance of the work practices involved.
e. Qualified persons will be trained to select an appropriate voltage detector and demonstrate how to use a device to verify the absence of voltage, including interpreting indications provided by the device. They will be trained to understand all limitations of each specific voltage detector that may be used.

Training for Unqualified Persons:

Unqualified persons will be trained in and be familiar with any of the electrical safety related practices that are necessary for their safety.

Note: Unqualified persons will not be permitted to enter spaces that are required to be accessible to qualified employees only unless the electric conductors and equipment involved are in an electrically safe work condition.

Retraining:

Retraining will be given when.

a. Supervisors or annual inspections indicate that the employee is not complying with the safety-related work practices.
b. New technology, new types of equipment, or changes in procedures necessitate the use of safety-related work practices that are different than those the employee would normally use.
c. If the employee must employ safety-related work practices that are not normally used during regular job duties.

Training Documentation:

The company will document that each employee has received the training above after the employee demonstrates proficiency in the work practices involved and will be maintained for the duration of the employee's employment. Training documentation will contain the employee's name and dates of training.

Host Employer Responsibilities:

The host employer will inform contract employers of:

a. Known electrical hazards that are related to the contract employer's work that might not be recognized by the contract employer or its employees.
b. Information about the employer's installation that the contract employer needs to make assessments.

The host employer will report observed contract employer related violations (dealing with electrical work) to the contract employer.

Contract Employer Responsibilities:

a. The contract employer will ensure that each of its employees is instructed in the hazards communicated to the contractor employer by the host employer. This instruction is in addition to the basic instruction required by NFPA 70E.
b. The contract employer will ensure that each of its employees follow the work practices required by NFPA 70E and safety-related work rules required by the host employer.
c. The contractor employer will advise the host employer of:
    1. Any unique hazards presented by the contract employer's work.
    2. Any unanticipated hazards found during the contract employer's work that the host employer did not mention.
    3. The measures the contractor took to correct any violations reported by the host employer & prevent such violations from recurring in the future.

Electrical Safety Program:

The employer will implement and document an overall safety program that directs activity appropriate for the voltage, energy level, and circuit conditions. Safety related work practices are only one component of an overall an electrical safety program.

Electrical Safety Program Procedures:

The program will address safety related work practices for working within the Limited Approach Boundary. Program elements found in Annex E to NFPA 70E would be included such as evaluations, anticipating unexpected events, electrical flash arc hazard analysis, and the fact that all electrical parts are considered live until proven otherwise.

Risk/Hazard Evaluation Procedures:

Risk/hazard evaluation procedures are to be used before work is started within the Limited Approach Boundary of energized electrical conductors & circuit parts operating at 50 volts or more or where an electrical hazard exists. An example of Hazard/Risk Evaluation Procedures as well an example of a Hazard Risk Analysis Evaluation Flow Chart is found in Annex F to NFPA 70E. In would contain event severity, frequency, probability & avoidance to determine the level of safe practices to be employed.

Pre-Job Briefings for Routine Work:

Prior to performing routine work (routine work is not complicated or particularly hazardous and the employee should be able to recognize and avoid hazards presented), a job briefing will be held before each job and include all employees involved. Topics would include hazards associated with the job, work procedures involved, special precautions, energy source controls, & PPE requirements.

Test Instruments and Equipment:

All test instruments, equipment, and their accessories will be rated for the circuits and equipment to which they will be connected. Further they will meet the requirements of ANSI/ISA-66010-1, *Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1*: *General Requirements*, for rating and design requirements for voltage measurement and test instruments intended for use on electrical systems 1000 volts and below.

Operations Verification:

When test instruments are used for the testing for the absence of voltage on conductors or circuit parts operating at 50 volts or more, the operation of the test instrument will be verified before and after an absence of voltage test is performed.

Insulating PPE Maintenance and Use:

Electrical protective equipment will be maintained in a safe, reliable condition. Insulating equipment will be inspected for damage before each day's use and immediately following any incident that can reasonably be suspected of having caused damage. Insulating gloves will be given for an air test along with the inspection.

Maximum test intervals for rubber insulating equipment will be in accordance with NFPA 70E Table 130(c)(6)(c). Time frames for testing would include: 1) Blankets-before first issue/every 12 months, thereafter, 2) Gloves-before first issue and every 6 months, and, 3) Sleeves-before first issue and every 12 months. Covers and line hose will be tested if insulating value is suspect.

Energized Electrical Work Permit:

Reference Annex J to NFPA 70E. Energized Electrical Work Permits **are not** part of NFPA 70E. Within Annex J, however, are both an example of an Energized Electrical Work Permit and a Flow Chart to illustrate items to consider when determining the need for the permit.

In every case, if the voltage level is **≥** 50 volts and there are exposed live parts, an Energized Electrical Work Permit is required.

In Part I [to be completed by the Requester] of the Energized Electrical Work Permit will include:

a. Job/Work Order Number.
b. Description of the work to be done.
c. Justification of why the circuit/equipment cannot be de-energized or the work deferred until the next scheduled outage.
d. Requester Name, Title, and Date.

In Part II (to be completed by the Electrically Qualified persons doing the work) of the Energized Electrical Work Permit will include:

a. Detailed job description procedure to be used in performing the above detailed work.
b. Description of the Safe Work Practices to be employed.
c. Results of the Shock Hazard Analysis.
d. Determination of the Shock Protection Boundaries.
e. Results of the Arc Flash Hazard Analysis.
f. Determination of the Arc Flash Protection Boundary.
g. Necessary personal protective equipment to safely perform the assigned task.
h. Means employed to restrict the access of unqualified persons from the work area.
i. Evidence of completion of a Job Briefing including discussion of any job-related hazards.
j. A signed and dated agreement by each Electrical Qualified Person that the above work can be done safely.

In Part III of the Energized Electrical Work Permit will include:

Signed and dated approval(s) by persons such as:

a. Manufacturer Manager
b. Safety Manager
c. General Manager
d. Maintenance/Engineering Manager
e. Electrically Knowledgeable Person

Illumination of Work Areas:

Employees will not enter spaces containing electrical hazards unless illumination is provided that enables the employees to perform the work safely. Where lack of illumination or an obstruction precludes observation of the work to be performed, employees will not perform any task with the Limited Approach Boundary of energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.

Platforms

Open sided platforms or floors 4 feet above a lower level must be guarded by standard railings. If an employee's work requires him or her to work at a height of 4 feet or more above a lower level and standard guardrails are not available, fall protection will be provided by a safety harness and lanyard. Particular attention will be paid to the anchorage point to ensure that it is capable of the stresses that may be placed upon it.

Press Brake Operations

During press brake operations, under normal circumstances, machine guarding procedures are required in the same manner as any other machine. However, because of constraints imposed by certain manufacturing or fabricating processes, safeguarding by maintaining a safe distance from the point of operation is an acceptable procedure when safeguarding by physical barriers or devices is not feasible. “Safe distance” means the clearance between an employee (typically his or her fingers holding and supporting a piece part) and the power press brake point of operation.

Safeguarding by maintaining a “safe distance” is acceptable only if the following conditions are met:

a. It is demonstrated that physical barriers and physical devices are not feasible to guard the press brake point of operation. Physical devices typically include: two hand controls, holdouts or restraints and presence sensors.

   Remember normal machine guarding procedures, where feasible, will be employed at hazardous energy sources, not at the point of operation and elsewhere on the machine.

b. It is demonstrated that power press brake point of operation guarding by maintaining a safe distance is limited to one-time only fabrications of made-to-order or custom-made piece parts. Small quantity runs may be affected by this provision; high volume piece part rates of production will not. A “small quantity run” is defined as “fabrication of more than one of the same piece parts over a continuous time frame of not more than four hours per month.

   Note: Special feasibility guidelines for small quantity runs: When physical guards and physical devices are not feasible for small quantity runs as defined above, safeguarding by maintaining a safe distance as described is an alternative to power press brake replacement or major renovation which otherwise could provide employee protection.

c. A safety program is established which includes safe work procedures, training, and supervision to ensure that work is performed using “safe distance” alternative measures.

d. A workplace history of operating power press brakes safely by maintaining a safe distance from the point of operation can be demonstrated. Such a history is characterized by absence of injuries related to failure to maintain a safe distance.

While ANSI B511.3-2012, the standard that covers power press brakes, does not specify a specific “safe distance, OSHA has decreed that the operating employee and helping employee(s) must not approach closer than necessary and in no case closer than 4 inches to the power press brake point of operation. The minimum safe distance of 4 inches is measured from the exterior point of contact of the power press brake die closest to an employee.

“Safe Distance” Safeguarding:

All press brake operator and helpers, through interactive training, will have a thorough understanding of:

a. The need for a safety oriented working relationship between the press brake operator and, when required, his or her helper(s).
b. The function and purpose of operating controls; operating mode controls; die space height adjustment positions; and other brake controls.
c. The hazards of placing any parts of the body within the point of operation.
d. The hazards and potential exposure related to each specific piece part bending operation particularly with respect to the piece part itself (for example whipping) and to tooling (including loading and unloading).
e. The function and purpose of hand-feeding tools.
f. The dangers of unsafe work practices, inattention, horseplay, and misuse of equipment.
g. The necessity and importance of reporting immediately to the supervisor any condition concerning the power press brake and its operation that may affect the safety of an employee.

Effectiveness of Training:

It will be assured that, after training, employees perform applicable exposure procedures proficiently. Power press brake operators and helpers must also comply with safe operating instructions and recommendation of the power press brake manufacturer or industry-recognized safe working practices for power press brakes. Successful completion of apprenticeship training may be referenced to demonstrate this element of employee proficiency.

Retraining:

Retraining must be conducted whenever a periodic inspection reveals, or whenever there is reason to believe, that there are deviations from or inadequacies in an employee’s knowledge or use of exposure prevention procedures(s) or other work practices required to operate a power press brake. Retraining will be used to introduce new or revised control methods and procedures, as necessary, and must reestablish employee proficiency to operate the power press brake safely.

Supervisors will ensure that power press brakes are operated only by trained employees and will enforce the work practices on which the power press brake training is based. Any deviation from safe work practices will be corrected immediately.

At least annually, a periodic inspection of the “safe distance” exposure prevention procedures will be conducted to ensure that they are being properly followed. This inspection will be performed by a trained person (an inspector) who is other than the person using the “safe distance” exposure prevention procedure. This periodic inspection report will include:

a. A joint review by an inspector and each trained employee of that employee’s responsibility under the exposure prevention procedure.
b. The identity of the power press brake on which the exposure prevention procedures was being utilized.
c. The date of the inspection.
d. The name(s) of the employees included in the inspection.
e. The name of the inspector.

Ramps

To load or unload lawn care equipment from truck and/or trailers, ramps generally will be used. Employees are to ensure that ramp capacities are not exceeded.

Portable ramps should be level and securely fastened to the truck or trailer bed. If the ramp does not have hooks, straps will be used.

Scissor-Lift Fall Protection

What type of fall protection is required for scissor-lifts? This apparently simple question has a relatively simple answer. However, how it is derived is somewhat complicated because OSHA does not have a standard to deal with this issue.

Clearly, there is a hazard – falling from height. However, fall protection while using a scissor-lift is not covered in the fall protection, scaffold and ladder fall protection, nor aerial lift fall protection standards.

Section 5(a)(1) of the Occupational Safety and Health Act, commonly referred to as the General Duty Clause is a “catch all clause” which states: "Each employer will furnish to each of its’ employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

In the absence of a specific standard relating to a safety or health risk, the above is the reference OSHA will cite.

When assessing compliance efforts, OSHA considers the requirements of pertinent national consensus standards. In the case of scissor-lifts, ANSI/SIA A92.6-1990, *Self-propelled Elevated Work Platforms*, and ANSI/SIA A92.3, *Manually Propelled Elevating Aerial Platforms*, are used.

Fall protection is provided by employees maintaining firm footing on the lift and using guardrails. Under no circumstances are employees to place ladders or other items on the lift to extend their reach. Per ANSI/SIA standards, with which OSHA concurs, "Use of planks, ladders, or any other device on the aerial platform for achieving additional height or reach will be prohibited.” Use of these items negates the value of the guardrail system and may possibly exceed the scissor-lift’s design limits for stability.

Further, personnel are not to tie off to items adjacent to the lift – the most obvious reasons are: the anchorage point may not be sufficient, and movement of the lift would pull the employee out of and off of the lift.

If, for some reason, guardrails are not being provided for specific operational reasons, then a personal fall protection system may be used which would include an anchorage point, lanyard and safety harness.

However, this option is severely limited because its design would have to be approved by a registered engineer or the scissor-lift manufacturer would have to approve the use of the lift as an anchorage.

Under ideal conditions, rarely found on a construction site, scissor-lifts may be moved with the lift extended. However, should obstacles, debris, drop-offs, holes, depressions, ramps or other hazards be present, the lift must be lowered prior to movement.

Finally, if the employee leaves the safety of the scissor-lift platform while working at height, some sort of approved fall protection system must be employed.

Signs & Tags

29 CFR 1910.145: Specifications for accident prevention signs and tags

When appropriate, signs and tags will be used to warn of specific hazards. Types of signs are classified according to their use, and their design is regulated by OSHA standard. All personnel will be instructed in the meaning of the various types of signs. Sign usage includes:

a. Danger Signs (Red, Black & White): indicates immediate danger and denotes that special precautions are necessary.
b. Caution Signs (Yellow Background): warns of a potential hazard or cautions against an unsafe practice.
c. Safety Instruction Signs (White Background): used to provide general instructions and suggestions relative to safety measures.

The wording on signs must be positive, clear, concise, and easy to understand or the sign loses its value.

Accident prevention tags are to warn of hazardous or potentially hazardous conditions that are out of the ordinary, unexpected, or not readily apparent. They are not used where signs, guarding or other positive means of protection are used. All tags must have:

a. A signal word: “Danger,” “Caution,” “Warning,” “BIOHAZARD” (or its symbol) and a major message, and
b. A major message such as: “High Voltage” or “Do not start”. (Major messages indicate the specific hazardous condition.)

The color scheme is basically the same as for signs:

red =	danger
yellow =	caution
orange =	warning
fluorescent orange =	biological hazard

a. Danger Tags: indicate an immediate hazard that presents a threat of death or serious injury.
b. Caution Tags: indicate a non-immediate hazard or unsafe practice that presents a lesser threat of injury.
c. Warning Tags: indicate a hazard between “Danger” and “Caution”.
d. BIOHAZARD Tags: indicate the actual or potential presence of a biological hazard and identify equipment, rooms, containers, etc. that may be contaminated.

Pay attention to signs and tags and realize that they are in place for only one reason – your safety.

Slings

29 CFR 1910.184 - Slings

A sling is the assembly which connects a load to the material handling equipment. There are many types of slings including, but not limited to:

a. Bridle wire rope sling
b. Cable laid endless sling-mechanical joint sling
c. Cable laid grommet-hand tucked sling
d. Cable laid rope sling-mechanical joint sling
e. Strand laid endless sling-mechanical joint sling
f. Strand laid grommet-hand-tucked sling

Additionally, slings are made of various materials such as alloy steel chain, wire rope, and natural and synthetic fiber rope. Each of these materials has their own operating limits which include not only capacity, but temperature, kinks, cuts, and specific conditions.

Detailed instructions on the use of each type of sling can be found here: **29 CFR 1910.184 – Slings.**

All slings, regardless of type, must be inspected each day before use and all fastenings and attachments must be inspected for damage or defects by a competent person. Depending on work conditions, additional inspections may be required. Damaged or defective slings will be immediately removed from service.

Below are safe operating practices which must be followed:

a. Slings may not be shortened with knots or bolts or other makeshift devices.
b. Sling legs may not be kinked.
c. Slings may not be loaded in excess of their rated capacities.
d. Slings used in a basket hitch must have the load balanced to prevent slippage.
e. Slings must be securely attached to their loads.
f. Slings must be padded or protected from the sharp edges of their loads.
g. Suspended loads must be kept clear of all obstructions.
h. All employees must be kept clear of loads about to lifted and of suspended loads.
i. Hands or fingers may not be placed between the sling and its load while the sling is being tightened around the load.
j. Shock loading is prohibited.
k. A sling may not be pulled from under a load when the load is resting on it.

Spray Operations

29 CFR 1910.94 - Ventilation
29 CFR 1910.106 - Flammable and combustible liquids
29 CFR 1910.107 - Spray finishing using flammable and combustible materials
29 CFR 1910.160 - Fixed extinguishing systems, general
29 CFR 1910.161 - Fixed extinguishing systems, dry chemical

The primary hazards that must be addressed when performing spray operations are respiratory, electrical, and fire.

Even the simplest of spray operations - spraying water-based paint from a handheld aerosol can - would involve protection from the hazardous and/or toxic ingredients within the paint as indicated on the product's SDS. Care must be taken to ensure that employees are not exposed to chemical hazards above the permissible exposure limit. If needed, respiratory protection and other types of PPE, as appropriate (such as eye protection), must be employed.

More complex spraying operations would involve applying coatings within a spray booth. A spray booth is a power-ventilated structure designed to enclose a spraying operation and limit the escape of spray, vapor, and/or residue. Excess spray, vapor and/or residue is directed to an exhaust system which contains filters.

Employees will receive training in spray booth operations including emergency procedures, PEL's, PPE, electrical hazards, and fire protection prior to use. Appropriate SDS will be readily available.

Spray booth designs will meet the requirements of 29 CFR 1910.107. All spray booths must be equipped with approved automatic sprinklers on the upstream and downstream sides of the filters.

Note: A dry chemical extinguishing system or a carbon dioxide system may be installed in lieu of the above per 29 CFR 1910.160 and 29 CFR 1910.161.

The system will be checked at least annually (semi-annually for the weight and pressure of refillable containers, if applicable) and employees will be trained on its operation including recognition of alarms.

The OSHA requirements that address inside storage of flammable materials such as paints including the maximum size of the room, ventilation, fire protection systems, and electrical wiring and equipment inside the room are found in 29 CFR 1910.106(d)(4).

Tools - Hand

29 CFR 1910.242 - Hand and Portable Powered Tools and Equipment - General
29 CFR 1910.243 - Guarding of Portable Powered Tools
29 CFR 1910.269 - Telecommunications

All hand and power tools and similar equipment, whether furnished by the employer or the employee, will be maintained in a safe condition.

Portable electric hand tools will be:

a. equipped with a three-wire cord having the ground wire permanently connected to the tool frame and means for grounding the other end; **or**
b. of the double insulated type and permanently labeled as "Double Insulated"; **or**
c. connected to the power supply by means of an isolating transformer, or other isolated power supply.

Here are basic procedures for the use of hand tools:

a. Hand tools will be used only for the purpose for which they are designed.
b. Hand tools will be kept clean and, where appropriate, oiled.
c. Hand tools which are damaged will not be used.
d. Handheld cutting tools will be kept sharp and will be sheathed or retracted when not in use.
e. When using a striking tool such as a hammer or chisel, safety glasses or safety goggles will be used.
f. Do not force tools.
g. If you are unfamiliar with the proper procedure for using a tool, ask your Supervisor for instruction.
h. Power tools may be operated only by those persons who are qualified by training or experience.
i. Do not alter guards on power tools; wear appropriate PPE.
j. Electrical tools must be grounded, and, in the absence of permanent wiring, a Ground Fault Circuit Interrupter must be used.
k. Electric tools will not be lifted by their cords and pneumatic tools will not be lifted by their hoses.

Nominal 120V or less portable generators used for providing power at work locations do not require grounding if the output circuit is completely isolated from the frame of the unit.

Vehicle-mounted utility generators used for providing nominal 240V AC or less for powering portable tools and equipment need not be grounded to earth if all of the following conditions are met:

a. One side of the voltage source is solidly strapped to the metallic structure of the vehicle;
b. Grounding-type outlets are used, with a "grounding" conductor between the outlet grounding terminal and the side of the voltage source that is strapped to the vehicle;
c. All metallic encased tools and equipment that are powered from this system are equipped with three-wire cords and grounding-type attachment plugs, except as detailed below.

Portable lights, tools, and appliances having noncurrent-carrying external metal housing may be used with nominal 120V or less portable generators as described above without an equipment grounding conductor. When operated from commercial power, metal parts of these devices must be grounded, unless these tools or appliances are protected by a system of double insulation, or its equivalent. Where such a system is employed, the equipment will be distinctively marked to indicate double insulation.

Soldering Devices and Lead Work

Grounding will be omitted when using soldering irons, guns, or wire-wrap tools on telecommunications circuits.

The wiping of lead joints using melted solder, gas fueled torches, soldering irons or other appropriate heating devices, and the soldering of wires or other electrical connections do not constitute the welding, cutting, and brazing described in **1910 Subpart Q**. When operated from commercial power the metal housing of electric solder pots must be grounded. Electric solder pots may be used with nominal 120V or less portable generators as described above without a grounding conductor. Wiping gloves or cloths and eye protection must be used in lead wiping operations. A drip pan to catch hot lead drippings must also be provided and used.

Tools - Pneumatic Powered

Pneumatic powered tools must be safeguarded whenever there are hazardous employee exposures. This is especially important for point of operation guarding.

Three specific hazards associated with pneumatic powered tools which are unique to their use are noise levels, tool retention, and air hose pressure.

Care must be taken to assure that noise levels are within acceptable limits (noise monitoring may be necessary) and, if required, engineering controls and/or ear protection will be employed.

Eye protection will be worn when using pneumatic powered tools in accordance with the owner/operator's manual.

a. Pneumatic power tools will be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
b. Safety clips or retainers will be securely installed & maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.
c. All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 p.s.i. pressure at the tool will have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.
d. Compressed air will not be used for cleaning purposes except where reduced to less than 30 p.s.i. & then only with effective chip guarding & personal protective equipment which meets the requirements of 29 CFR 1926 Subpart E. This would include eye, face, hand, head, & foot protection. The 30 p.s.i. requirement does not apply for concrete form, mill scale & similar cleaning purposes.
e. The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings will not be exceeded.
f. The use of hoses for hoisting or lowering tools will not be permitted.
g. All hoses exceeding 1/2-inch inside diameter will have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
h. Airless spray guns of the type which atomize paints and fluids at high pressures (1,000 pounds or more per square inch) will be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released.
   Note: In lieu of the above, a diffuser nut which will prevent high pressure, high velocity release, while the nozzle tip is removed, plus a nozzle tip guard which will prevent the tip from coming into contact with the operator, or other equivalent protection, will be provided.
i. Lastly, abrasive blast cleaning nozzles will be equipped with an operating valve which must be held open manually. A support will be provided on which the nozzle may be mounted when it is not in use.

Care must be taken to ensure that employees are not exposed to unsafe levels of respirable dust or crystalline silica.

The PEL for particles not otherwise regulated is 5.0 mg/m³. The PEL for respirable dust containing crystalline silica is determined by the below formula:

PEL = 10 mg/m³ ÷ (%SiO_2+2), where %SiO_2+2 refers to the amount of crystalline silica measured in the sample.

Our operations would not exceed these PEL's and respiratory protection is not required.

29 CFR 1910.94 - Ventilation

CPL 03-00-008 - Combustible Dust National Emphasis Program

There may be times in the course of our work such as grinding, cutting, sawing, sanding, etc. that hazardous dusts are released into the atmosphere that exceed the concentrations specified in 29 CFR 1910.1000 - Table Z-3 Mineral Dust, listed below:

Table Z-3 - Mineral Dusts		
Substance	**mppcf[a]**	**mg/m3**
Silica:		
Crystalline		
Quartz (Respirable)[f]	250[b] ------- %SiO_2 + 5	10 mg/m^3 e ------ % SiO_2 + 2
Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz.[f]		
Tridymite: Use ½ the value calculated from the formulae for quartz [f]		
Amorphous, including natural diatomaceous earth	20	80 mg/m^3 $\overline{\%SiO_2}$
Silicates (less than 1% crystalline silica):		
Mica	20	
Soapstone	20	
Talc (not containing asbestos)	20[c]	
Talc (containing asbestos) Use asbestos limit		
Tremolite, asbestiform (see 29 CFR 1910.1001)		
Portland cement	50	
Graphite (Natural)	15	
Coal Dust:		
Respirable fraction less than 5% SiO_2		2.4 mg/m^3 e
		10 mg/m^3 e
Respirable fraction greater than 5% SiO_2		$\overline{\%SiO_2}$ + 2
Inert or Nuisance Dust:[d]		

Respirable fraction	15	5 mg/m^3
Total dust	50	15 mg/m^3

Note-Conversion factors - mppcf × 35.3 = million particles per cubic meter = particles per c.c.

[a] Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

[b] The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

[c] Containing less than 1% quartz; if 1% quartz or more, use quartz limit.

[d] All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1.

[e] Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m^3 in the table for coal dust is 4.5 mg/m^{3K}.

[f] This standard applies to any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or is otherwise not in effect.

Below these threshold limits, no action is required; however, employees may wear dust masks for personal comfort.

Note: OSHA requires that employees who voluntarily use disposable respirators in situations where respiratory protection is not specifically required by OSHA standard (in atmospheres where exposures are below the permissible exposure limit) essentially for personal comfort or additional, though not required, respiratory protection be informed of 29 CFR 1910.134 Appendix D.

As always, engineering controls are preferred to personal protective equipment to deal with workplace hazards. Therefore, local exhaust ventilation is a preferred method of maintaining atmospheres that have dust levels below the concentrations noted in the Mineral Dusts Table, above. Local exhaust ventilation must be designed so that they prevent dispersions of dust in concentrations causing harmful exposure and that dusts are not drawn through the work area of employees. The dust collected by an exhaust or ventilating system will be discharged to the outside atmosphere.

If concentrations are so great that a dust separator is used, the dust & refuse will be disposed of in such a manner as to not harm employees. Of course, if the above ventilation procedures do not reduce the dust levels to acceptable limits, respirators will be used.

29 CFR 1910.252 - General requirements
29 CFR 1910.253 - Oxygen-fuel gas welding and cutting
29 CFR 1910.254 - Arc welding and cutting
29 CFR 1910.1026 - Chromium (VI)
29 CFR - Table Z-1 – Limits for Air Contaminants

Employees assigned to operate arc welding, cutting, and oxygen-fuel welding and/or brazing equipment, **and their supervisors**, must be properly trained and instructed in the operation of such equipment. Proper PPE will be worn by all welders.

Before welding or cutting, the supervisor or competent person will inspect the area with emphasis on fire prevention and authorize welding or cutting using our Hot Work Permit noting special precautions that must be taken.

An appropriate fire extinguisher and first aid equipment will be readily available for immediate use.

Compressed Gas Cylinders Use:

Compressed gas cylinders are used at many facilities – the most common being oxygen and acetylene for welding.

Failure to follow basic safety procedures could result in serious injuries such as:

a. Flash burn – due to explosion.
b. Fragment impalement – due to explosion.
c. Compression of the foot – due to mishandling of tanks.
d. Inhalation of hazardous gases – due to leakage.

Basic safety procedures for gas cylinder use:

a. Cylinders must remain upright and chained to a substantial support or cart when in use.
b. Wear appropriate personal protective equipment for the job – such as steel toed shoes, apron, goggles, gloves, helmet, etc.
c. Read and understand the SDS for the gas being used and know the location of the SDS in case of an emergency.
d. Have appropriate fire extinguisher readily available.
e. To release the gas, open the cylinder valve slowly – standing away from the face and back of the gauge – and leave the opening tools in place (on the valve stem) for quick shut-off in the event of an emergency.
f. Ensure cylinder valves, regulators, couplings, and hoses are free of oil and grease and ensure all connections are tight.
g. When using oxygen-fuel systems, use flashback arrestors and reverse-flow check valves to prevent flashback.
h. Keep cylinders away from open flames and sources of heat.
i. Cylinders are never allowed in confined spaces.
    1. When welding or cutting in a confined space, the tanks must remain outside the confined space.
    2. Appropriate ventilation must be assured, portable equipment must be secured to prevent movement, if appropriate, and a rescue plan should be prepared.

3. If the rescue plan involves pulling the person out, attachment of the lifelines should be so the person's body does not jam in the exit and prevent his extraction.
4. If arc welding is suspended for a substantial period of time, the electrodes must be removed to prevent accidental contact and the machine must be disconnected from the power source.
5. If gas cylinder work is suspended, the torch valves must be closed and the fuel-gas and oxygen supply must be positively shut off or disconnected outside the confined space.
6. After welding operations are completed, the welder must mark the hot metal or provide some other means of warning other workers.

j. Do not alter or attempt to repair safety devices or valves.
k. Remove the regulators when: a) moving cylinders; b) work is completed, and/or c) cylinders are empty.

Compressed gas cylinders will:

a. Have valve protectors in place when not in use or connected for use.
b. be legibly marked to identify the gas contained therein.
c. Have the valves closed before the cylinder is moved, when the cylinder is empty, and at the completion of each job.
d. Be stored in areas away from intense heat, electric arcs, and high temperature lines.
e. Be secured upright (chained in portable dolly), in storage or transportation, to prevent tipping, falling, rolling, and damage from passing or falling objects. Oxygen cylinders must be kept 20 feet from any flammable gases or petroleum products.
f. Be marked "EMPTY" when appropriate.
g. Be removed from service if the regulators or gauges are defective.
h. Be used only for the purpose for which they are designed -- for example, cylinders will not be used as rollers or supports.
i. Be kept away from stairs.
j. Workers in charge of oxygen or fuel-gas supply equipment (including distribution piping systems and generators) must be instructed and judged competent for such work.

Regulators and gauges will be inspected daily.

All cylinders, cylinder valves, couplings, regulators, hoses and apparatus will be kept free of oily or greasy substances.

Operators of welding equipment will report any equipment defect or safety hazards and discontinue use of equipment until its safety has been assured. Repairs will be made only by qualified personnel.

Persons performing arc welding and cutting must be properly instructed and qualified to operated such equipment and, if performing gas shielded arc welding, must be familiar with ***Recommended Safe Practices for Gas-Shielded Arc Welding***, A6.1-1966, American Welding Society, as well as **29 CFR 1910.252.**

Electric welders will be inspected daily before use with emphasis on the cables. All splicing of cables must maintain the insulated protection with no exposed metal parts. Cables in need of repair will not be used.

The competent person will ensure that ventilation within a confined space is adequate to negate the possibility of a respiratory or explosion hazard.

A fire watch will be assigned when there is potential a fire might develop. Of course, any person assigned to fire watch must have received training in the specific fire extinguishing equipment being used. When welding, cutting, or brazing an object near a fire hazard that is not readily movable, the fire hazard will be removed. If any fire hazards remain, shields will be used to confine the sparks, heat, and slag. If the provisions of this paragraph cannot be met, welding and/or cutting **may not** take place. In fact, as a company policy, if welding cannot be conducted safely, it may not be conducted.

Fire watchers are required in all locations where other than a minor fire might develop and any of the below conditions exist:

a. Appreciable amounts of combustible materials closer than 35 feet to point of operation.
b. Appreciable combustibles are 35 feet or more away but are easily ignited by sparks.
c. Wall or floor openings within a 35-foot radius expose combustible material in adjacent areas including concealed spaces in walls or floors.
d. Combustible materials are adjacent to the opposite side of metal partitions, ceilings, or roofs that are likely to be ignited by conduction or radiation.

The fire watch must be maintained at least one-half hour after welding or cutting operations have ceased to detect, and extinguish, possible smoldering fires.

When performing operations capable of producing heat at chemical plants, refineries, or other facilities which have a higher degree of hazard than normal work sites, a hot work permit is generally required. Included in these types of operations are burning, cutting, heating, and welding.

Located with our Hot Work Permit are fire safety instructions that must be read and understood by the persons identified on the permit.

Welding, cutting, and heating of metals of toxic significance (lead, zinc, cadmium, mercury, beryllium, or exotic metals or paints) in enclosed spaces will require either general mechanical ventilation of sufficient capacity and so arranged as to produce the number of air changes necessary to maintain welding fumes and smoke within safe limits **or** local exhaust ventilation consisting of freely movable hoods intended to be placed by the welder or burner as close as practicable to the work. This system will be of sufficient capacity and so arranged as to remove fumes and smoke at the source and keep the concentration of them in the breathing zone within safe limits.

This would include inert-gas metal-arc welding performed on stainless steel to protect against dangerous concentrations of nitrogen dioxide.

When performing welding operations on stainless steel & there is exposure to airborne chromium (VI) above its action level of 2.5 micrograms per cubic meter of air (2.5 $\mu g/m^3$) calculated as an 8-hour time-weighted average (TWA), the provisions of 29 CFR 1910.1026 must be adhered to. The PEL is 5 $\mu g/m^3$. If air monitoring, as described in 29 CFR 1910.1026, is below .5 $\mu g/m^3$, the provisions of this standard do not apply.

Walking and Working Surfaces

29 CFR 1910.22 General Requirements

Access and Egress

First and foremost, Milestone Industrial Welding Services Llc will provide, and ensure each employee uses, a safe means of access and egress to and from all work areas.

Surface Conditions

Milestone Industrial Welding Services Llc will ensure that all our employees have access walking and working surfaces, including passageways, storerooms, and service rooms, that are kept in a clean, orderly, and sanitary condition.

The floor of each workroom will be maintained in a clean &, to the extent feasible, in a dry condition. When wet processes are used, drainage must be maintained &, to the extent feasible, dry standing places, such as false floors, platforms, & mats must be provided.

All walking-working surfaces must also be maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice.

We will ensure that all walking and working surface do not have materials or equipment on them in excess of the maximum intended load for that surface. When storing materials, the weight of any equipment on, or that might be on, that surface must also be considered in addition to the materials being stored.

Inspection, Maintenance, and Repair

We must ensure that all walking and working surfaces are inspected, regularly and as necessary, and maintained in a safe condition. If a hazardous condition on walking or working surfaces is found, it must be corrected or repaired before an employee uses that surface again.

If the correction or repair cannot be made immediately, the hazard must be guarded to prevent employees from using the surface until the hazard is corrected or repaired.

If any correction or repair involves the structural integrity of a walking or working surface, a qualified person must perform or supervise the correction or repair.

Support Structures:

Employees, materials, and equipment will not be supported on any portion of a pole structure, platform, ladder, walkway, or other elevated structure or aerial device unless the support structure is first inspected by a competent person and it is determined to be adequately strong, in good working condition, and properly secured in place.

Protection for Floor Openings:

Every stairway floor opening will be guarded by a standard railing. The railing will be provided on all exposed sides (except at entrance to stairway). For infrequently used stairways where traffic across the opening prevents the use of fixed standard railing (as when located in aisle spaces, etc.), the guard will consist of a hinged floor opening cover of standard strength and construction and removable standard railings on all exposed sides (except at entrance to stairway).

Every ladder way floor opening, or platform will be guarded by a standard railing with standard toeboard on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.

Every hatchway and chute floor opening will be guarded by one of the following:

a. Hinged floor opening cover of standard strength and construction equipped with standard railings or permanently attached thereto so as to leave only one exposed side. When the opening is not in use, the cover will be closed, or the exposed side will be guarded at both top and intermediate positions by removable standard railings.
b. A removable railing with toeboard on not more than two sides of the opening and fixed standard railings with toeboards on all other exposed sides. The removable railings will be kept in place when the opening is not in use.

Where operating conditions necessitate the feeding of material into any hatchway or chute opening, protection will be provided to prevent a person from falling through the opening.

Every pit and trapdoor floor opening, infrequently used, will be guarded by a floor opening cover of standard strength and construction. While the cover is not in place, the pit or trap opening will be constantly attended by someone or will be protected on all exposed sides by removable standard railings.

Every manhole floor opening will be guarded by a standard manhole cover which need not be hinged in place. While the cover is not in place, the manhole opening will be constantly attended by someone or will be protected by removable standard railings.

If performing work on another employer's property, we will not modify fall protection for fixed stairways, ladder openings, hatchway openings, manholes, skylights, ramps, and platforms. We will request direct permission from the property owner if we need to make any changes.

Every temporary floor opening will have standard railings or will be constantly attended by someone.

Every floor hole into which persons can accidentally walk will be guarded by either:

a. A standard railing with standard toeboard on all exposed sides, or
b. A floor hole cover of standard strength and construction. While the cover is not in place, the floor hole will be constantly attended by someone or will be protected by a removable standard railing.

Every floor hole into which persons cannot accidentally walk (on account of fixed machinery, equipment, or walls) will be protected by a cover that leaves no openings more than 1 inch wide. The cover will be securely held in place to prevent tools or materials from falling through.

Protection for Wall Openings and Holes:

Every wall opening from which there is a drop of more than 4 feet will be guarded by one of the following:

a. Rail, roller, picket fence, half door, or equivalent barrier. Where there is exposure below to falling materials, a removable toe board or the equivalent will also be provided. When the opening is not in use for handling materials, the guard will be kept in position regardless of a door on the opening. In addition, a grab handle will be provided on each side of the opening with its center approximately 4 feet above floor level and of standard strength and mounting.
b. Extension platform onto which materials can be hoisted for handling, and which will have side rails or equivalent guards of standard specifications.

Every temporary wall opening will have adequate guards, but these need not be of standard construction.

Where there is a hazard of materials falling through a wall hole, and the lower edge of the near side of the hole is less than 4 inches above the floor, and the far side of the hole more than 5 feet above the next lower level, the hole will be protected by a standard toeboard, or an enclosing screen either of solid construction.

Protection of Open-Sided Floors, Platforms, and Runways:

Every open-sided floor or platform 4 feet or more above adjacent floor or ground level will be guarded by a standard railing on all open sides except where there is entrance to a ramp, stairway, or fixed ladder. The railing will be provided with a toeboard wherever, beneath the open sides,

a. Persons can pass,
b. There is moving machinery, or
c. There is equipment with which falling materials could create a hazard.

Note: Guardrails and toeboards may be omitted on distribution frame mezzanine platforms for telecommunication operations to permit access to equipment. This exemption applies only on the side or sides of the platform facing the frames and only on those portions of the platform adjacent to equipped frames.

Every runway will be guarded by a standard railing on all open sides 4 feet or more above floor or ground level. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard will also be provided on each exposed side.

Runways used exclusively for special purposes (such as oiling, shafting, or filling tank cars) may have the railing on one side omitted where operating conditions necessitate such omission, providing the falling hazard is minimized by using a runway of not less than 18 inches wide. Where persons entering upon runways become thereby exposed to machinery, electrical equipment, or other danger not a falling hazard, additional guarding that is specified may be essential for protection.

Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment, pickling or galvanizing tanks, degreasing units, and similar hazards will be guarded with a standard railing and toe board.

If an employee's work requires him or her to work at a height of 4 feet or more above a lower level and standard guardrails are not available, fall protection will be provided by a safety harness and lanyard. Particular attention will be paid to the anchorage point to ensure that it is capable of the stresses that may be placed upon it.

Milestone Industrial Welding Services Llc
Section III
Specific Compliance Programs

Bloodborne Pathogens & Other Infectious Material

Exposure Control Plan

29 CFR 1910.1030 - Bloodborne Pathogens

The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents within our facility.

Recordkeeping: all work-related injuries from needle-sticks and cuts, lacerations, punctures and scratches from sharp objects contaminated with another person's blood or other potentially infectious materials (OPIM) are to be recorded on the OSHA 300 as an injury.

Note: Our first aid kits do not contain sharps or needles. However, a contaminated sharp, such as a broken pair of glasses, may trigger the above.

a. **To protect the employee's privacy, the employee's name may not be entered on the OSHA 300**

b. **If the employee develops a bloodborne disease, the entry must be updated and recorded as an illness.**

Policy Statement

This Exposure Control Plan has been developed to eliminate or minimize the risk of exposure to bloodborne pathogens and other potentially infectious materials. This plan presents methods and procedures to eliminate and/or minimize the hazards associated with occupational exposure to bloodborne pathogens or other infectious materials.

As a matter of policy, universal precautions will be used.

Additional components of this plan include exposure determinations by job classification, standard operating procedures to eliminate or reduce the likelihood of disease transmission, the methods of disease transmission, definitions of terms, post exposure procedures and follow-up, training documentation, and recordkeeping.

Compliance with this plan not only fulfills the requirements of the Occupational Safety and Health Administration, but more importantly it fulfills our desire to maintain a safe working environment and safeguard the health of our employees.

All affected employees should feel free to review this plan at any time and are encouraged to consult with Vincent Noriega, our Exposure Control Plan Administrator, to resolve any issues affecting its implementation. Our Plan is to be made available to the Assistant Secretary of Labor for Occupational Safety and Health or a designated representative.

Definitions

All employees should know the "language" of this plan. Because some of the words and/or terms are not used in everyday life, each person must be aware of the definitions so that we are all "on the same page."

Below are OSHA definitions:

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

Blood means human blood, human blood components, and products made from human blood.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated means the presence, or the reasonably anticipated presence, of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination means the use of a physical or chemical procedure to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Director means the Director of the National Institute for Occupational Safety & Health, U.S. Department of Health & Human Services, or designated representative.

Engineering Controls means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the work area.

Exposure Incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Hand-Washing Facilities means a facility providing an adequate supply of running potable water, soap, and single use towels or hot air-drying machines.

Licensed Healthcare Professional means a person whose legally permitted scope of practice allows him or her to independently perform the activities required by 29 CFR 1910.1030(f), *Hepatitis B Vaccination & Post-exposure Evaluation and Follow-up*.

HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

Needleless Systems means a device that does not use needles for:

a. The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established,
b. The administration of medication or fluids, or
c. Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials:

a. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, anybody fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;
b. Any unfixed tissue or organ (other than intact skin) from a human (living or dead);
c. HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions, and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral means piercing mucous membranes or the skin barrier through such events as needle-sticks, human bites, cuts, and abrasions.

Personal Protective Equipment means specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sharps with Engineered Sharps Injury Protections means a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source Individual means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions means an approach to infection control. According to the concept of Universal Precautions, all human blood & certain human body fluids are treated as if known to be infectious for HIV, HBV, & other bloodborne pathogens.

Work Practice Controls means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

Exposure Control Plan

This Exposure Control Plan is provided for all personnel who, as a result of the performance of their duties, would have reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials.

This plan will be reviewed and updated annually and whenever necessary as new or modified tasks and procedures are introduced which affect occupational exposure to bloodborne pathogens or other potentially infectious materials. The review and update of this plan will:

a. Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens.
b. Annually document consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

First aid providers are employees responsible for direct trauma victim care, who are potentially exposed to injuries for contaminated sharps, will be asked for input on the identification, evaluation, and selection of effective engineering and work practice controls.

This Exposure Control Plan, with a copy of 29 CFR 1910.1030 – Bloodborne Pathogens, will be made accessible to all employees as well as the Assistant Secretary and the Director (see definitions) who may examine and copy this plan.

Exposure Determination

Three (3) lists will be prepared and they will be maintained at the end of this exposure control plan for bloodborne pathogens & other infectious material, located **here.**

List I: A list of all job classifications in which all employees have occupational exposure.

List II: A list of job classifications in which some employees have occupational exposure.

List III: A list of all tasks and procedures, or groups of closely related tasks and procedures, in which occupation exposure occurs and are performed by employees in job classifications noted in List II.

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Methods of Compliance

Universal precautions will be used. Milestone Industrial Welding Services Llc will treat all trauma victims' blood, bodily fluids, & other potentially infectious materials as if they are known to be infectious. Unfortunately, there is no immediate, practical way to determine if HIV, HBV, & other bloodborne pathogens are present so, to be safe, we will assume they are.

Traditionally, isolation of infectious materials has been diagnosis-driven. This meant that if a person were diagnosed to have HIV or HBV infection, for example, then isolation precautions would be taken. Because the infection status of each trauma victim cannot be immediately known, it makes sense to treat all trauma victims and their body fluids as if they were infected.

The precautions to take depend on the procedures being performed. For example, if one's hands will be in contact with body substances, disposable gloves will be worn. If there is risk of one's eyes being splashed with body fluids, eye protection will be worn.

An impermeable barrier must be placed between yourself and the potentially infectious bodily fluids. Overkill is not necessary. Cleaning up a minor spill on a counter top does not require a mask, eye protection, and plastic apron. It does, however, require disposable gloves.

All employees will strictly adhere to the below engineering and work practice controls to eliminate or reduce the possibility of occupational exposure to bloodborne pathogens or other potentially infectious materials. Specific controls and procedures noted below will be used to eliminate or minimize employee exposure.

Handwashing Equipment and Procedures:

Handwashing facilities are provided which are readily accessible to all employees.

Employees will wash their hands & any other skin area exposed to blood or other potentially infectious materials with soap & water immediately or as soon as feasible:

a. After removal of gloves or other personal protective equipment.
b. Following contact with blood or other potentially infectious materials.

Particular attention will be given to fingernails and between fingers and rings under which infectious material may lodge. Furthermore, one should be aware that rings and jewelry are a good hiding place for bloodborne pathogens and other potentially infectious materials.

Examples of situations where handwashing is appropriate:

a. Before and after examining any trauma victim.
b. After handling any soiled waste or other materials.
c. After handling any chemicals or used equipment.

If for some reason handwashing facilities are not functioning, appropriate antiseptic hand cleaner and clean cloth/paper towels (antiseptic towelettes) will be provided and used. If antiseptic hand cleaner and clean cloth/paper towels are used, hands will be washed with soap and water as soon as feasible.

Eating, Drinking, Smoking:

There will be no eating, drinking, smoking, applying cosmetics or lip balm, or handling contact lenses in areas where there is a likelihood of occupational exposure to bloodborne pathogens or other potentially infectious materials.

Furthermore, food & drink will not be kept in refrigerators, freezers, shelves, cabinets, on countertops, or benches where blood or other potentially infectious materials are present.

Contaminated Needles & Other Contaminated Sharps:

Contaminated needles will not be sheared or broken.

Furthermore, all contaminated needles and other contaminated sharps will not be bent, recapped, or removed unless:

a. It can be demonstrated that no alternative is feasible or that it is required by a specific medical procedure.
b. Recapping or needle removal may be accomplished through the use of a mechanical device or a one-handed method.

Contaminated **reusable** sharps will be placed in appropriate containers immediately or as soon as possible after use until properly reprocessed. These containers will:

a. Be puncture resistant.
b. Have warning labels affixed to containers potentially infectious material and contain the following legend:

Note: The above label will be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Labels will be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

Red bags or red containers may be substituted for labels.

c. Be leak proof on the sides and bottom.

Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

Contaminated **non-reusable** sharps will be discarded immediately or as soon as feasible and placed in containers that:

a. Are closable
b. Are puncture resistant
c. Are leak proof on sides and bottom
d. Have warning labels affixed that contain the following legend:

Note: The above label will be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Labels will be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

Red bags or red containers may be substituted for labels.

Contaminated **non-reusable** sharps will not be stored or processed in such a manner that requires employees to reach by hand into the containers where these sharps have been placed.

During use, containers for contaminated sharps must be:

a. Easily accessible to our employees.
b. Located as close as feasible to the immediate area where sharps are used or can be reasonably anticipated to be found.
c. Maintained upright throughout use.
d. Replaced routinely and not be allowed to overfill.

If leakage is possible when removing a container of contaminated sharps, it will be placed in a second container with the following container requirements:

a. It will be closable,
b. It will be constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping, and
c. Colored coded red or labeled as noted above.

Reusable containers will not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous (introduced through the skin such as a cut) injury.

Other Regulated Waste - Containment:

The provisions that apply to contaminated sharps, above, apply to other regulated waste.

Disposal of Contaminated Sharps & Other Regulated Waste:

The actual disposal of all regulated waste will be in compliance with applicable state laws.

Specimens of Potentially Infectious Materials:

Specimens of blood & potentially infectious materials will be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

Splashing, Spraying of Potentially Infectious Materials:

All procedures involving blood or other potentially infectious materials will be performed in such a manner as to minimize splashing, spraying, spattering, and the generation of droplets of these substances.

Mouth Pipetting:

Mouth pipetting & mouth suction of blood or other potentially infectious materials is prohibited.

Exposure Control Plan Administrator

Vincent Noriega, our designated Exposure Control Plan Administrator, will be knowledgeable in all aspects of this Plan as it relates to our operations and be available to answer questions raised by our first aid providers. Vincent Noriega may call upon professionals in the Medical Arts to field questions that are of technical nature outside of the area of expertise.

Vincent Noriega will:

a. Ensure this Plan is kept current.
b. Ensure training is provided as required.
c. Maintain all records associated with this plan.

Designated First Aid Provider

Before one may be designated as a first aid provider, he/she must have a valid certificate in first aid training from the U.S. Bureau of Mines, the Red Cross, or equivalent training that can be verified by documentary evidence. No person is to administer any medical assistance for which they are not appropriately trained. It is noted that the rendering of first aid is not the primary job of our designated first aid providers.

Personal Protective Equipment (PPE)

In spite of work practice and engineering controls, there is a requirement for appropriate personal protective equipment to provide an impermeable barrier between potentially infectious materials and the employees work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

Employees will use appropriate personal protective equipment when there is a possibility of occupational exposure to bloodborne pathogens or other potential infectious materials.

Personal protective equipment will be provided in appropriate sizes and at no cost to the employees. Further, maintenance and replacement of personal protective equipment will be provided at no cost to the employee.

Personal protective equipment will be discarded immediately if its ability to function as a barrier is compromised.

Most importantly, employees must understand that personal protective equipment is useless unless it provides an impermeable barrier between bloodborne pathogens and other potentially infectious materials and the employee's clothes, skin, eyes, mouth, or other mucous membranes.

Personal Protective Equipment is considered appropriate if it prevents potentially infectious materials from reaching work/street clothing or body surface when used under normal conditions.

Disposable Gloves:

Disposable, single use gloves, such as surgical or examination gloves will be worn when it can be reasonably anticipated that the employee may have hand contact with blood or other potentially infectious materials and when handling or touching contaminated items or surfaces. Disposable gloves will always be used when there is a possibility of contact with bloodborne pathogens or other potentially infectious materials.

Disposable gloves will never be washed, decontaminated, or reused.

Disposable gloves will be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or their ability to function as a barrier is compromised.

Should any employee be allergic to the normal gloves provided, an appropriate alternative (such as hypoallergenic and/or powderless gloves) will be provided in the proper size at no cost to the employee.

Utility Gloves:

Utility gloves may be used for general cleanup (not for any trauma victim procedure) when there is anticipated exposure to bloodborne pathogens or other potentially infectious materials. Utility gloves may be decontaminated for re-use if the integrity of the gloves is not compromised. They will be discarded if they are cracked, peeling, torn, punctured, or exhibit signs of deterioration or when their ability to function as a barrier is compromised.

Eye and Respiratory Protection:

Eye (goggles, glasses, face shield, etc.) and respiratory (mask, etc.) protection will be used when it can reasonably be expected that bloodborne pathogens or other potentially infectious materials may splash or spray in or around the eyes, nose, mouth, and general head area of the employee.

Protective Body Clothing:

Protective body clothing such as gowns, aprons, lab coats, etc. will be worn as determined by the professional judgment of the employee in relation to task. The protective body clothing will certainly be worn where there can reasonably be expected exposure to bloodborne pathogens or other potentially infectious materials to the body area.

Laundry:

Personal protective equipment will be cleaned, laundered, and disposed of at no cost to the employee.

Note: In rare and extraordinary circumstances, an employee, in her/his professional judgment, may decline to temporarily and briefly wear personal protective equipment if he/she deems that the equipment would prevent the delivery of health care or would have increased the hazard of occupational exposure to the employee or his/her co-workers. Should this event occur, it will be documented, investigated, and procedures will be developed to prevent a reoccurrence.

Housekeeping

Housekeeping is an ongoing, never ending procedure which not only enhances our work environment but also eliminates health risk to our personnel. In the area of bloodborne pathogens and other hazardous materials, to ensure proper cleaning, decontamination, sterilization, and disinfecting of surfaces within our work area, cleaning will be accomplished only by employees who have received training in universal precautions and the provisions of this plan. The documented Housekeeping Schedule & Checklist is found at the end of this exposure control plan for bloodborne pathogens & other infectious material. This Schedule will be adhered to following an incident that results in the potential exposure to bloodborne pathogens or other potentially infectious materials.

Broken, potentially infected glassware should be picked up and disposed of using mechanical means such as a brush and dustpan or forceps. All sharps will be stored in a manner that allows easy access and safe handling. Infectious waste will be placed in containers that are color coded red. These containers will be decontaminated as soon as practical.

Subsequent to rendering any procedures, employees will ensure that all surfaces on which blood, body fluids, bloodborne pathogens, or other infectious materials may be present are cleaned with an appropriate disinfectant.

Hepatitis B Epidemiology

Hepatitis B (serum hepatitis) routes of infection include parenteral, oral, or direct contact. The virus can also spread by contact with the respiratory tract. Its sources include contaminated needles and surgical instruments as well as contaminated blood products. Hepatitis B virus has also been found in urine. Further, the hepatitis B virus can live for up to seven (7) days on a dry surface and can be easily be transmitted by a single needle stick. Its incubation period is quite lengthy generally between 45 and 180 days. It affects all age groups. Recovery from hepatitis B does provide immunity. Generally, one can expect a complete recovery from viral hepatitis; however, it is potentially fatal depending on many factors including the virulence (aggressiveness) of the virus, prior hepatic damage, and natural barriers to damage and disease of the liver. It is possible for viral hepatitis to lead to fulminating viral hepatitis and sub-acute fatal viral hepatitis both of which are fatal. Onset symptoms may include headache, elevated temperature, chills, nausea, dyspepsia, anorexia, general malaise, and tenderness over the liver. These types of symptoms will last about one (1) week, and then subside, and jaundice will occur. Jaundice is caused by damaged liver cells. The convalescent stage begins with the disappearance of the jaundice and may last several months. Recovery is expected in six (6) months.

Risk of Exposure

Per the Department of Human Services of the Center for Disease Control, below is the risk of infection after occupational exposure:

HBV:

First aid providers who have received hepatitis B vaccine and have developed immunity to the virus are at virtually no risk for infection. For an unvaccinated person, the risk from a single needle-stick or cut exposure to HBV-infected blood ranges from 6-30% and depends on the hepatitis B e antigen (HBeAg) status of the source individual. In individuals who are both hepatitis B surface antigen (HBsAG) positive and HBeAg positive have more virus in their blood and are more likely to transmit HBV.

HCV:

Based on limited studies, the risk for infection after a needle-stick or cut exposure to HCV-infected blood is approximately 1.8%. The risk following a blood splash is unknown, but is believed to be very small; however, HCV infection from such an exposure has been reported.

HIV:

The average risk of HIV infection after a needle stick or cut exposure to HIV-infected blood is 0.3% (i.e., three-tenths of one percent, or about 1 in 300). Stated another way, 99.7% of needle-stick/cut exposures do not lead to infection.

The risk after exposure of the eye, nose, or mouth to HIV-infected blood is estimated to be, on average, 0.1% (1 in 1,000).

The risk after exposure of the skin to HIV-infected blood is estimated to be less than 0.1%. A small amount of blood on intact skin probably poses no risk at all. There have been no documented cases of HIV transmission due to an exposure involving a small amount of blood on intact skin (a few drops of blood on skin for a short period of time). The risk may be higher if the skin is damaged (for example, by a recent cut) or the contact involves a large area of skin or is prolonged (for example, being covered in blood for hours). All employees with occupational exposure are encouraged to accept the hepatitis B vaccination.

Hepatitis B Vaccination

The hepatitis B vaccination series will be provided, at no cost, to all unvaccinated first aid providers as soon as possible (within 24 hours of initial exposure). All exposed first aid provider employees are encouraged to take this vaccination series unless they have previously received the complete hepatitis B vaccination series; antibody testing has revealed that the employee is immune; or the vaccine is contraindicated (not recommended) for medical reasons. Post-exposure evaluation, prophylaxis (prevention of or protection from disease), and follow-up will be provided at no cost to the employee.

The Hepatitis B vaccination will be performed under the supervision of a licensed physician or other licensed healthcare professional.

All laboratory tests will be conducted by an accredited laboratory at no cost to the employee.

Should routine booster dose(s) of hepatitis B vaccine (as recommended by the U.S. Public Health Service at a future date) be required, they will be provided at no cost as long as the employee remains a first aid provider.

An employee may decline the Hepatitis B vaccination and this declination will not reflect unfavorably upon him/her; however, this declination must be in writing. See the Hepatitis B Declination Form.

It is important to note that if a first aid provider initially declines the hepatitis B vaccination series, he/she may decide at a later date to accept the vaccination series and it will be provided at no cost assuming he/she is still occupationally exposed to bloodborne pathogens or other potentially infectious materials.

Sharps Injury Log

A Sharps injury log will be maintained for the recording of percutaneous injuries from contaminated sharps.

The information on the log will be recorded and maintained in such manner as to protect the confidentiality of the injured employee.

The sharps injury log will contain:

a. The type and brand of device involved in the incident.
b. The department or work area where the exposure incident occurred.
c. An explanation of how the incident occurred.

The sharps injury log will be maintained for the period of five years.

First Aid Provider Input

As a matter of policy, all first aid providers who are responsible for first aid delivery as an additional job are encouraged to suggest methods to improve our engineering and workplace controls. This input may be made verbally to Vincent Noriega at any time. Additionally, suggestions will be solicited during the annual refresher training.

Plan Review

This plan will be reviewed, and if necessary, updated annually to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. As new medical devices are developed which reduce employee exposure, they will be introduced into our practice. A review of the sharp's injury log will help identify problem areas and/or ineffective devices which may need replacement.

Post-Exposure Evaluation and Follow-Up

The information that has preceded *Post-Exposure Evaluation and Follow-up* has dealt with the methods to restrict occupational exposure to bloodborne pathogens and other infectious materials. Post-exposure evaluation and follow-up deals with the steps to take immediately following a potential exposure incident and the steps that will be taken over time to protect our employees from further health risk.

All incidents involving exposure to blood or other potentially infectious materials will be reported to Vincent Noriega, in writing, before the end of the shift in which the incident occurred using the Exposure Incident Report, located at the end of this exposure control plan for bloodborne pathogens & other infectious material. This Report will be prepared regardless of whether or not there has been an "Exposure Incident" as defined in this Plan and in 29 CFR 1910.1030. A separate Exposure Incident Report will be completed for each employee who was occupationally exposed. Information in this Report will include:

a. The date and time the incident occurred.
b. A brief description of the events leading up to the exposure (what happened).
c. The name of the individual exposed.
d. The route of exposure.
e. "Source individual" and "exposed individual" information, including the acceptance or rejection of hepatitis B vaccination series.
f. A determination of whether or not an actual "exposure incident" occurred. Refer to Definitions in this Plan or 29 CFR 1910.1030.

Vincent Noriega or his authorized representative will review the Exposure Incident Report and determine if methods or procedures may be altered to prevent a reoccurrence of the incident.

Further, an occupational bloodborne pathogens exposure incident which results in the recommendation for hepatitis B vaccination would be recorded on OSHA Form 300 as an injury. See Recordkeeping.

All unvaccinated employees who have assisted in any situation involving blood will be afforded the opportunity to receive the hepatitis B vaccination series as soon as possible but not later than twenty-four (24) hours after the situation.

A confidential medical evaluation and follow-up will be provided immediately, at no cost, to the employee. The healthcare professional evaluating an employee after an exposure incident will be provided a copy of 29 CFR 1910.1030.

Further, the healthcare professional will be provided a description of the exposed employee's duties as they relate to the exposure incident; documentation of the route(s) of exposure; the circumstances under which the exposure occurred; the results of the source individual's blood testing, if available; and all medical records relevant to the appropriate treatment of the employee including vaccination status which is maintained by our office. See Recordkeeping.

The confidential medical evaluation and follow-up will include:

a. Documentation of the route(s) of exposure.
b. The circumstances under which the exposure incident occurred.
c. The identification and documentation of the source individual, unless it can be established that the identification is not feasible or prohibited by state or local law.
d. The exposed employee's blood will be collected as soon as feasible and tested after consent is obtained.

   Note: If the employee consents to baseline blood collection but does not consent at that time for HIV serologic testing, the sample will be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing will be done as soon as feasible.

e. The source individual's blood will be tested as soon as feasible to determine HBV and HIV infectivity unless it is already known, in which case this procedure is not necessary.

If consent to test the source individual's blood cannot be obtained the following will occur:

a. It will be established and documented that legally required consent cannot be obtained.
b. When the source individual's consent is not required by law, the source individual's blood will be tested, and the results documented.

The results of the source individual's testing will be made available to the exposed employee and the employee will be informed of applicable laws and the identity and infectious status of the source individual.

The employee will be provided post-exposure prophylaxis, when medically indicated, and counseling.

The employee will be provided with a copy of the healthcare professional's written opinion within 15 days of the completion of the evaluation. The written opinion will be limited to:

a. Whether Hepatitis B vaccination is indicated and if the employee has received such vaccination.
b. An indication that the employee has been informed of the results of the evaluation.
c. An indication that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

All other findings or diagnoses will remain confidential and will not be included in the written report.

Recordkeeping

Complete and accurate medical records will be maintained for each employee with occupational exposure. These records will remain confidential and will not be disclosed or reported to any person within or outside the workplace without the employee's express written consent, except as required by law.

Medical records will be maintained for at least the duration of employment plus 30 years.

Included in the employee's medical record will be:

a. The employee's name
b. A copy of the employee's hepatitis B vaccination status including the date of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination.
    1. If the employee has declined to receive the hepatitis B vaccination series when appropriate, this declination will be included in the person's medical records.
c. A copy of all results of examinations, medical testing, and follow-up procedures as required following an exposure incident.
d. The employer's copy of the healthcare professional's written opinion following an exposure incident.
e. A copy of all information provided to the healthcare professional following an exposure incident.

All work-related injuries from needle-sticks and cuts, lacerations, punctures and scratches from sharp objects contaminated with another person's blood or other potentially infectious materials are to be recorded on the OSHA 300 as an injury.

a. To protect the employee's privacy, the employees name may not be entered on the OSHA 300.
b. If the employee develops a bloodborne disease, the entry must be updated and recorded as an illness.

Training

All of our first aid providers must have current certificates of first aid and CPR training on file. These records will be maintained by Vincent Noriega.

Initial training, training at the introduction of a new or altered task affecting exposure to bloodborne pathogens or other potentially hazardous materials, and annual training will be provided by a person knowledgeable in the subject matter contained in this Plan.

Training will be interactive between the instructor and employee. An opportunity to ask questions will be provided. Further, this Plan as well as **29 CFR 1910.1030**, *Bloodborne Pathogens*, will be readily available for review.

All training will be documented using the forms found in our Training Information and Documentation Program. Training documentation will be maintained for a period of three (3) years from the date on which the training occurred.

Training will include, but not be limited to, the following topics and materials:

a. A complete review of our Exposure Control Plan and its accessibility.
b. An accessible copy of 29 CFR 1910.1030 and an explanation of its contents.
c. A general explanation of the epidemiology and symptoms of bloodborne diseases.
d. An explanation of the modes of transmission of bloodborne pathogens.
e. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
f. An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment.
g. Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
h. An explanation of the basis for selections of personal protective equipment.
i. Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
j. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
k. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
l. Information on the post-exposure evaluation and follow-up that is provided after an exposure incident.
m. An explanation of the color coding required by 29 CFR 1910.1030(g)(1).
n. A request for input from employees in the identification, evaluation, and selection of effective engineering and work practice controls.

Waste Management

Waste management, if necessary, will comply with State EPA standards regarding handling, storage, and shipping of medical wastes.

Summary

The whole thrust of the exposure control plan for bloodborne pathogens & other infectious material Plan is to provide an awareness of the dangers of bloodborne pathogens, provide a means of reducing the possibility of occupational exposure, and, should occupational exposure occur, provide a means of reducing health risk.

Milestone Industrial Welding Services Llc

Exposure Determination Form - List I

All job classifications in which all employees have occupational exposure.

1. First Aid Providers
2. _____
3. _____
4. _____
5. _____
6. _____

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Note: The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents within our facility.

Milestone Industrial Welding Services Llc

Exposure Determination Form - List II

Job classifications in which some employees have occupational exposure:

1. None

2. _____

3. _____

4. _____

5. _____

6. _____

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Note: The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents within our facility.

Milestone Industrial Welding Services Llc

Exposure Determination Form - List III

All tasks and procedures or groups of closely related tasks and procedures in which occupation exposure occurs and are performed by employees in job classifications noted in List II.

	Job Classification	Tasks
1.	None	
2.		
3.		
4.		

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Note: The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents within our facility.

Milestone Industrial Welding Services Llc

Housekeeping Schedule & Checklist

SCHEDULE

Following every incident where there is a possibility of the presence of residual bloodborne pathogens or other potentially infectious materials.

CHECKLIST

Only personnel who have had training in our Exposure Control will ensure that all surfaces are decontaminated and that cleaning materials are properly disposed of. Areas to consider include, but are not limited to:

	YES	NA
FLOORS	☐	☐
WALLS	☐	☐
EQUIPMENT	☐	☐
PRODUCT	☐	☐
WASTE CONTAINERS	☐	☐
TOOLS	☐	☐

Broken, potentially infected glassware should be picked up and disposed of using mechanical means such as a brush and dust pan or forceps.

All sharps will be stored in a manner that allows easy access and safe handling.

Infectious waste will be placed in containers that are color coded red. These containers will be decontaminated as soon as practical.

Subsequent to rendering any procedures, employees will ensure that all surfaces on which blood, body fluids, bloodborne pathogens, or other infectious materials may be present are cleaned with an appropriate disinfectant.

Milestone Industrial Welding Services Llc

Hepatitis B Declination Form

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis V vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

_____ _____

(WITNESS) (EMPLOYEES SIGNATURE)

_____

(PRINTED NAME)

_____

(DATE)

Milestone Industrial Welding Services Llc

Sharps Injury Log

Note: A sharps injury log will be maintained for the recording of percutaneous injuries from contaminated sharps.

The information on the log will be recorded and maintained in such manner as to protect the confidentiality of the injured employee.

This sharps injury log will be maintained for the period of five years.

_____ _____
(Incident Date) (Employee SSN)

Type and brand of device involved in the incident:

_____

Work area where the exposure incident occurred:

_____

Explanation of how the incident occurred:

_____
_____
_____
_____
_____
_____
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_____
_____

_____

Vincent Noriega
Safety Program Administrator

Milestone Industrial Welding Services Llc

Annual Exposure Control Plan Review

This Exposure Control Plan was prepared:

At least annually, this program will be reviewed and, if necessary, updated to reflect innovations in procedures and technological developments that eliminates or reduces exposure to bloodborne pathogens.

As part of the annual review, the below will be considered:

a. Employee Input
b. Sharps Injury Log
c. Exposure Incident Reports
d. Professional Journals

Date Reviewed:	Signature	Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Milestone Industrial Welding Services Llc

Exposure Incident Report

ALL INFORMATION ON THIS FORM IS TO REMAIN CONFIDENTIAL

THIS FORM WILL BE COMPLETED AS SOON AS FEASIBLE AFTER AN EXPOSURE INCIDENT BUT, UNDER NO CIRCUMSTANCES, AFTER THE SHIFT ON WHICH THE INCIDENT OCCURRED.

DATE: _____ TIME: _____

NAME OF EMPLOYEE: _____

ROUTE OF EXPOSURE: _____

SOURCE INDIVIDUAL'S NAME: _____

a. Above individual did / did not consent to be tested for HBV or HIV.

b. Testing was done by: _____

1. Results: _____

EMPLOYEE WAS OFFERED AND ACCEPTED:	**NO**	**YES**	
a. Hepatitis Vaccination Series. [Date(s)]	☐	☐	_____
1. If "NO", written declination was signed.			
b. Post Exposure Evaluation and follow-up.	☐	☐	
c. Employee consents to baseline blood collection.	☐	☐	_____ (Signature)

Description of events leading to this exposure incident:

_____

_____

_____

_____

Corrective Measures to Prevent a Reoccurrence:

_____

_____

_____

_____

_____ _____

Vincent Noriega Employee Signature

29 CFR 1910.140 – Personal Fall Protection Systems

Self-Rescue

As required by §1910.140(c)(21), special consideration must be given to rescuing an employee promptly should a fall occur. The availability of rescue personnel, ladders, or other rescue equipment will be considered because our employees are not to self-rescue. After a fall, it is likely an employee will be unable to self-rescue due to an injury.

As a matter of policy, under no circumstances will employees of Milestone Industrial Welding Services Llc attempt to perform a self-rescue.

The rationale for this policy is as follows:

a. Expecting a suspended employee to perform self-rescue presupposes that the employee is:
   1. Of clear mind after the fall, and
   2. In excellent physical condition, and
   3. Has not sustained any injuries from the fall arrest, and
   4. Did not have a medical event that caused the fall in the first place (fainting, for example).
b. Because employees at Milestone Industrial Welding Services Llc are not professional rescue persons, in depth self-rescue training would be required and practice self-rescue exercises performed for each possible combination of fall scenarios.
c. Specialize self-rescue equipment and training on that equipment would be required.

Prompt Rescue Procedures:

As a matter of policy, an employee performing work requiring a personal fall arrest system **will not work alone**. He/she will be in sight of another employee using a personal fall arrest system or be monitored by a safety monitor whose sole job will be to ensure there is not a fall event that goes unnoticed.

Prior to performing work requiring a personal fall arrest system, Vincent Noriega, our Safety Program administrator, or a designated competent person, will:

a. Assess the possible fall scenarios; and
b. Take inventory of in-house equipment that is readily available for possible rescue (ladders, forklifts, mobile scaffold, etc.); and
c. Be prepared to implement a plan of action utilizing our in-house equipment should a fall occur; or
d. Call an emergency rescue service and give them:
   1. Our exact location.
   2. A quick synopsis of what happened.
   3. The height of the suspended person.
   4. Known or suspected injuries.

Overview

One of the most serious hazards faced by the employees of Milestone Industrial Welding Services Llc is falls from heights. Our Fall Protection Program has been developed to prevent injury from falls of four (4) feet or more from a walking/working surface to a lower level, to prevent objects falling from above and striking persons below, and to prevent employees from falling into holes or onto dangerous machinery or equipment.

Within the context of this program, the term “fall hazard” does not refer to tripping & falling, which is addressed in our general safety & health program, nor does it apply to falling off a ladder or scaffold. Scaffold & ladder safety is addressed within their own topics.

A copy of this Fall Protection **Program** can be found readily accessible to our employees at appropriate facilities. If needed, a copy of a Fall Protection **Plan** will be available in the area of the facility where needed.

Our Fall Protection Program may be reviewed at any time by employees at Milestone Industrial Welding Services Llc. Should a question arise concerning this Program, personnel are encouraged to consult with their supervisor, or Vincent Noriega, our Fall Protection Program Administrator.

At any facility where fall hazards exist, there will be at least one competent person who has the training and ability to identify fall hazards and the authority to ensure that proper fall protection systems are properly implemented.

The following areas of concern are addressed by this Program:

a. The need to know where fall protection is required.
b. Selection of fall protection systems which are appropriate for given situations.
c. Construction and installation of safety systems.
d. Supervision of employees.
e. Implementation of safe work procedures.
f. Training in selection, use, and maintenance of fall protection systems.

Duties of the Program Administrator

The duties of Vincent Noriega include:

a. Training of personnel.
b. Maintenance of training records.
c. Random, unannounced facility inspections to assure compliance with both OSHA standards and company safety policies.
d. Resolution of specific problems that may present themselves regarding a particular situation.
e. Designating a competent person (by training or experience) at each applicable facility who will ensure:
    1. A copy of our fall protection program/plan is readily accessible to all appropriate employees at the facility.
    2. A written certification record has been prepared documenting that employees who have potential exposure to fall hazards at the facility have received the required training.

3. The fall protection system(s) utilized at the facility are appropriate for the hazard(s) present.
4. That, before any work is initiated, the walking/working surfaces at the facility are capable of supporting both our personnel, materials, and equipment that might be used.

Vincent Noriega will be familiar with all applicable standards and will keep up-to-date of developments in the field of fall protection.

Hazard Assessment

Fall protection requires a joint effort by all personnel at Milestone Industrial Welding Services Llc to identify work situations in which fall hazards exist, determine the most appropriate fall protection system to be utilized, and to ensure that all persons understand the proper methods of utilizing the selected fall protection systems. A hazard assessment, by a competent person, will often provide the information needed to make these determinations.

Care will be taken to assure that load limits are not exceeded on walking/working surfaces and attachment points and hardware is capable of withstanding (with the appropriate safety factor) the potential forces that may be generated during an actual fall incident.

Fall protection hardware and equipment will be NIOSH/ANSI approved and it is assumed that the manufacturer's technical specifications and capabilities are accurate.

Definitions

There are a number of terms and phrases, not common in everyday life, which must be understood to grasp the thrust of our Fall Protection Program. For those employees directly involved with this Program or affected by it, there are specific requirements and procedures which would be meaningless without an understanding of the "language" of our Fall Protection Program.

Note: Words used within the definitions which are themselves defined are printed in bold italic.

Anchorage means a secure point of attachment for ***lifelines***, ***lanyards*** or ***deceleration devices***.

Belt Terminal means an end attachment of a window cleaner's positioning system used for securing the belt or harness to a window cleaner's belt anchor.

Body Belt means a strap with means both for securing about the waist and for attaching to other components such as a lanyard used with positioning systems, travel restraint systems, or ladder safety systems.

Body Harness means straps that secure about the employee in a manner that will distribute the fall arrest over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of a ***personal fall arrest system***.

Buckle means any device for holding the ***body harness*** closed around the employee's body.

Carabiner means an oval metal ring with a snap link used to fasten a rope to the piton [a spike (attachment) with an eye to which a rope can be secured.]

CFR means Code of Federal Regulations.

Competent Person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees; and who has authorization to take prompt corrective measures to eliminate them.

Connector means a device which is used to couple (connect) parts of the ***personal fall arrest system*** and ***positioning device systems*** together. It may be an independent component of the system, such as a ***carabineer***, or it may be an integral component of part of the system (such as a ***buckle*** or d-ring sewn into a self-retracting ***lanyard***).

D-Ring means a connector used:

a. In a harness as an integral attachment element or fall arrest attachment;
b. In a lanyard, energy absorber, lifeline, or anchorage connector as an integral connector; or
c. In a positioning or travel restraint system as an attachment element.

Dangerous Equipment means equipment (such as pickling or galvanizing tanks, degreasing units, machinery, electrical equipment, and other units) which, as a result of form or function, may be hazardous to employees who fall onto or into such equipment.

Deceleration Device means any mechanism, such as a ***rope grab***, rip-stitch ***lanyard***, specially-woven ***lanyard***, tearing or deforming ***lanyards***, automatic self-retracting ***lifelines***/***lanyards***, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

Deceleration Distance means the additional vertical distance a falling employee travels from the point at which the ***deceleration device*** begins to operate before stopping, excluding ***lifeline*** elongation and ***free fall distance***. It is measured as the distance between the location of an employee's ***body harness*** attachment point at the moment of activation (at the onset of fall arrest forces) of the ***deceleration device*** during a fall, and the location of that attachment point after the employee comes to a full stop.

Equivalent means alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

Failure means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

Free Fall means the act of falling before a ***personal fall arrest system*** begins to apply force to arrest the fall.

Free Fall Distance means the vertical displacement of the fall arrest attachment point on the employee's ***body harness*** between onset of the fall & just before the system begins to apply force to arrest the fall. This distance excludes ***deceleration distance***, & ***lifeline***/***lanyard*** elongation, but includes any ***deceleration device*** slide distance of ***self-retracting lifeline/lanyard*** extension before they operate & fall arrest forces occur.

Guardrail System means a barrier erected to prevent employees from falling to ***lower levels***.

Hole means a gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, ***roof***, or other ***walking/working surface***.

Lanyard means a flexible line of rope, wire rope, or strap which generally has a ***connector*** at each end for connecting the ***body harness*** to a ***deceleration device***, ***lifeline***, or ***anchorage***.

Lifeline means a component consisting of a flexible line for connection to an ***anchorage*** at one end to hang vertically (vertical lifeline), or for connection to ***anchorages*** at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of ***personal fall arrest system*** to the ***anchorage.***

Lower-Levels means those areas or surfaces to which an employee can fall. Such areas or surfaces to include, but are not limited to, ground levels, floors, platforms, ramps, runways, pits, tanks, material, water, equipment, structures, or portions thereof.

Opening means a gap or void 30 inches or more high and 18 inches or more wide, in a wall or partition through which employees can fall to a ***lower level***.

Person Fall Arrest System means a system used to arrest an employee in a fall from a working level. It consists of an ***anchorage***, ***connectors***, a ***body harness,*** and may include a ***lanyard***, ***deceleration device***, ***lifeline***, or suitable combination of these. **The use of body belts for fall arrest is prohibited.**

Personal Fall Protection System means a system (including all components) an employer uses to provide protection from falling or to safely arrest an employee's fall if one occurs. Examples of personal fall protection systems include personal fall arrest systems, positioning systems, and travel restraint systems.

Positioning System (work-positioning system) means a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free. Positioning systems also are called "positioning system devices" and "work-positioning equipment."

Qualified Person means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

Rope Grab means a ***deceleration device*** which travels on a ***lifeline*** and automatically, by friction, engages the ***lifeline*** and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

Safety Factor means the ratio of the design load & the ultimate strength of the material.

Self-Retracting Lifeline/Lanyard means a ***deceleration device*** containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

Snaphook means a ***connector*** comprised of a hook-shaped member with a normally closed keeper of similar arrangement which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types:

a. The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection;
b. The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. The use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

Toeboards means a low protective barrier that will prevent the fall of material and equipment to ***lower levels*** and provide protection from falls for personnel.

Travel Restraint (tether) means line means a rope or wire rope used to transfer forces from a body support to an anchorage or anchorage connector in a travel restraint system.

Travel Restraint System means a combination of an anchorage, anchorage connector, lanyard (or other means of connection), and body support that an employer uses to eliminate the possibility of an employee going over the edge of a walking-working surface.

Window Cleaner's Belt means a positioning belt that consists of a waist belt, an integral terminal runner or strap, and belt terminals.

Window Cleaner's Belt Anchor (window anchor) means specifically designed fall-preventing attachment points permanently affixed to a window frame or to a building part immediately adjacent to the window frame, for direct attachment of the terminal portion of a window cleaner's belt.

Window Cleaner's Positioning System means a system which consists of a window cleaner's belt secured to window anchors.

Unprotected Sides and Edges means any side or edge (except at entrances to points of access) of a ***walking/working surface***, e.g., floor, ***roof***, ramp, or runway where there is no wall or ***guardrail system*** at least 39 inches high.

Walking/Working Surface means any surface, whether horizontal or vertical, on which an employee walks or works, including, but not limited to, floors, ramps, bridges, runway; not including ladders, vehicles, or trailers on which employees must be located in order to perform their job duties.

Work Area means that portion of a ***walking/working surface*** where job duties are being performed.

Where Fall Protection is Required

The "key" distance is four (4) feet. All employees must be aware that if there is a possibility of falling four (4) feet or more at least one (1) fall protection system will be implemented. Further, protection from being struck by falling objects from above will be provided.

Below listed are specific situations where fall protection systems will be utilized.

Unprotected Sides and Edges:

Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge, which is 4 feet or more above a lower level, will be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

Hoist Areas:

Each employee in a hoist area will be protected from falling 4 feet or more to lower levels by guardrail systems or personal fall arrest systems.

If a guardrail system is utilized in a hoist area and portions of the system are removed to facilitate the hoisting operation, and an employee must lean through the access opening or out over the edge of the access opening, that employee must be protected by a fall arrest system.

Holes:

Each employee on walking/working surfaces will be protected from falling through holes (including skylights) more than 4 feet above lower levels by personal fall arrest systems, covers, or guardrail systems.

a. Each employee on a walking/working surface will be protected from tripping in or stepping into or through holes (including skylights) **(regardless of height)** by covers.
b. Each employee on a walking/working surface will be protected from objects falling through holes **(regardless of height)** by covers.

Ramps, Runways, and Other Walkways:

Each employee on ramps, runways, and other walkways will be protected from falling 4 feet or more to lower levels by guardrail systems.

Dangerous Equipment:

Each employee less than 4 feet above dangerous equipment will be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards.

Each employee 4 feet or more above dangerous equipment will be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems.

Wall Openings:

Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 4 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface, will be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

Walking/Working Surfaces not Otherwise Addressed:

Each employee on a walking/working surface 4 feet or more above a lower level that is not addressed in the preceding categories will be protected from falling by a guardrail system, a safety net system, or a personal fall arrest system except when:

a. Working on scaffolds, fall protection requirements are covered by 29 CFR 1926 Subpart L.
b. Working on certain cranes and derricks, fall protection requirements are covered by 29 CFR 1926 Subpart N.
c. Performing steel erection work in buildings, fall protection requirements are covered by 29 CFR 1926 Subpart R.
d. Working on certain types of equipment used in tunneling operations, fall protection requirements are covered by 29 CFR 1926 Subpart S.
e. Engaged in the construction of electric transmission and distribution lines, equipment fall protection requirements are covered by 29 CFR 1926 Subpart V.
f. Working on stairways and ladders fall protection requirements are covered by 29 CFR 1926 Subpart X.

Note: On multi-employer work sites, employees of all contractors and subcontractors must understand the fall protection hazards that exist and be aware of the various methods of fall protection even if they are NOT directly exposed to fall hazards in their particular work area. For example, a contractor may have a controlled access zone in place and all persons on the job site, regardless of their employer, must understand the importance of remaining outside that CAZ.

Guardrail System:

A guardrail system is a physical barrier erected to prevent employees from falling to lower levels.

Specific guardrail systems criteria are found in 29 CFR 1926.502(b) and we will erect guardrail systems that comply with the cited criteria.

The main advantage of a guardrail system is that it is a “passive” system which, once installed, requires no employee involvement in its function. A guardrail will stop an employee who inadvertently walks into it.

A guardrail system is an acceptable fall protection system in each of the OSHA designated work areas, except one: “Formwork and Reinforcing Steel.”

Guardrail Systems at Hoisting Areas:

When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section will be placed across the access opening between the guardrail sections when hoisting operations are not taking place.

Note: If a portion of the guardrail system is removed at a hoisting area to facilitate the hoisting operations and an employee must lean out over the opening, then that employee must be protected by a personal fall arrest system. In this instance it is important to remember that the personal fall arrest system may not be attached to the guardrail system.

Guardrail Systems at Holes:

Guardrail systems used at holes will be erected on all unprotected sides of the edges of the hole.

When the hole is to be used for the passage of materials, the hole will not have more than two sides provided with removable guardrail sections to allow the passage of materials. When the hole is not in use, it will be closed over with a cover **or** protected with a guardrail system on all unprotected sides or edges.

Note: Guardrails need not be erected around holes while employees are working at the hole, passing materials through the hole, etc. When work is completed around the hole, the hole must be protected by guardrails on all sides of the hole or by covers.

Guardrail systems used around holes which are used as points of access (such as ladder ways) will be provided with a gate or be offset so that a person cannot walk directly into the hole.

Guardrail Systems on Ramps and Runways:

Guardrail systems used on ramps and runways will be erected along each unprotected side or edge. Ramps, runways, and other walkways on which employees need protection from falling 4 feet or more to a lower level must be protected by a guardrail system and only a guardrail system.

Personal Fall Arrest System:

A personal fall arrest system is, as the name implies, a means of safely decelerating a falling body before a lower level is hit. The three (3) main components of a personal fall arrest system are the:

a. Anchorage point
b. Lanyard
c. Body harness

Note: Body belts <u>will not</u> be used in a personal fall arrest system.

The tie-off attachment point must be at or above the connection point on the harness to prevent additional free fall distance.

As are guardrails, personal fall arrest systems are “passive” and require no employee involvement once they are properly rigged.

For all practical purposes, d-rings and locking type snaphooks will have a minimum tensile strength of 5,000 pounds and lanyards and vertical lifelines will have a minimum breaking strength of 5,000 pounds. Anchorages must be capable of supporting 5,000 per employee.

Anchorages used in personal fall arrest systems must be independent of any anchorage being used to support or suspend platforms.

Note: Knots in a rope lanyard or lifeline can reduce its strength by as much as 50% and having a lanyard go over or around sharp edges can completely destroy its effectiveness.

With the exception that harnesses, and components may be used as positioning device systems, personal fall arrest system components may not be used for purposes other than that for which they were designed.

Positioning device system components will be inspected prior to each use for wear, damage, and other deterioration and defective components will be removed from service.

Should a personal fall arrest system actually be used to stop a fall, it will be removed from service and not used again until inspected and determined to be undamaged and suitable for reuse by a competent person.

Safety Net System:

As required by 29 CFR 1910.29(c), specific safety net systems criteria are found in 29 CFR 1926.502(c).

Safety nets will be installed as close as practical under the walking/ working surface on which employees are working and in no case will they be more than 30 feet below such level.

Safety nets will be inspected at least once per week and after an occurrence which could affect the integrity of the system. Defective nets will not be used.

All items that have fallen in a safety net will be removed as soon as possible and at least before the next work shift.

Safety nets will be drop-tested after initial installation and before being used as a fall protection system, whenever relocated, after major repair, and at six-month intervals if left in one place.

Note: If it is demonstrably unreasonable to perform a drop-test, a designated competent person will prepare a certification in accordance with 29 CFR 1926.502(c)(4)ii.

Warning Line System:

A warning line system is a barrier erected on a roof to warn employees that they are approaching an unprotected edge and which designates an area in which work may take place without the use of guardrail, body harness, or safety net systems to protect employees in the area.

A warning line system is to be used only work on low-sloped roofs over 50-feet in width with unprotected sides and edges 4-feet or more above lower levels (on a simple rectangular roof, width is the lesser of the two primary overall dimensions. This is also the case with roofs which are sloped toward or away from the roof center). Most importantly, warning line systems must be used in conjunction with either a guardrail system, a safety net system, a personal fall arrest system, or a safety monitoring system.

Note: In the above scenario, either a guardrail system, a safety net system, or a personal fall arrest system alone provides adequate fall protection.

Specific warning line systems criteria are found in 29 CFR 1910.29(d) and we will use warning line systems that comply with the cited criteria.

As a general rule, warning line systems will be used in conjunction with a safety monitoring system.

A warning line made of ropes, wires, chains, and supporting stanchions will be flagged at no more than 6-feet intervals with high-visibility material. As the name implies, this line will only “warn” employees that they are approaching an unprotected side or edge. The horizontal resisting force of a warning line is 16 pounds versus 200 pounds for a guardrail system.

No personnel are allowed in the area between a roof edge and a warning line unless they are performing roofing work in that area.

Mechanical equipment on roofs will only be used in areas that are protected by either a warning line system, a guardrail system, or a personal fall arrest system.

The warning line will be erected around all sides of the roof work area not less than 6-feet from the roof edge unless mechanical equipment is being used. In that case, the warning line will be erected not less than 6-feet from the roof edge which parallels the mechanical operation and not less than 10 feet from the roof edge which is perpendicular to the direction of the mechanical operation.

Points of access, material handling areas, storage areas, and hoisting areas will be connected to the work area by an access path formed by two warning lines. When the aforementioned areas are not in use, the warning line will be adjusted to completely seal off the work area so that a person cannot inadvertently enter the area.

Positioning System:

A positioning system consists of a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

Specific positioning systems criteria are found in 29 CFR 1910.140 and we will use positioning systems that comply with the cited criteria.

Positioning systems must be inspected prior to each use for wear, damage, and other deterioration. Defective components must be removed from service. Components of positioning systems must never be used for purposes other than that for which they were designed -- specifically fall protection and/or positioning on a vertical surface.

Covers:

Covers can prevent an employee from stepping into a hole, tripping over a hole, falling through a hole, or being injured by objects falling through a hole.

Note: When work is completed around a hole, the hole must be protected by guardrails on all sides of the hole or by covers.

Specific cover criteria are found in 29 CFR 1910.29(e) and we will use covers that comply with the cited criteria.

Covers must be capable of supporting, without failure, twice the weight of the employees, equipment, and/or materials that may be imposed upon them.

Covers, when used, must be secured to prevent accidental displacement by wind, equipment, or employees.

All covers must be color coded or marked with the word: “HOLE” or “COVER” to identify the hazard.

Note: The above does not apply to cast iron manhole covers or roadway steel grates.

Covers, and only covers, will be used on walking/working surfaces to protect employees from tripping or stepping into or through a hole (including skylights). This provision is **regardless of the height** of the hole above a lower surface.

Covers, and only covers, will be used to protect employees from objects falling through holes (including skylights). This provision is **regardless of the height** of the hole above a lower surface.

Protection from Falling Objects:

Specific protection from falling objects criteria are found in 29 CFR 1910.29 and we will use that criteria to protect employees of Milestone Industrial Welding Services Llc from falling objects.

Covers are to be used to protect employees from objects falling through holes from upper surfaces regardless of heights.

Toeboards, used to prevent objects from falling on employees on a lower level must be at least 3½ inches high with not more than a ¼ inch clearance between the toeboard and the walking/working surface. When tools, materials, or equipment are piled higher than the top edge of the toeboard, paneling or screening will be erected from the top of the toeboard to the appropriate mid or top rail of the guardrail system to provide adequate protection to employees below.

Accidents and Near Accidents

Accidents and near accidents involving fall hazards will be investigated by Vincent Noriega to determine the cause of the incident and a method of preventing a reoccurrence. Questions to be considered are:

a. Was the fall protection system selected appropriate for the hazard?
b. Was the system properly installed?
c. Was the person involved in the accident following proper procedures?
d. Were there contributing factors such as ice, wind, debris, etc.?
e. Is retraining or a change of the Fall Protection Plan required?

Training

Milestone Industrial Welding Services Llc will provide any necessary training to anyone who uses personal fall protection systems or who is exposed to a potential fall hazard by a qualified person.

The training will cover at least the following topics:

a. The nature of the fall hazards in the work area and how to recognize them.
b. The procedures to be followed to minimize those hazards.
c. The correct procedures for installing, inspecting, operating, maintaining, and disassembling the personal fall protection systems that the employee uses.
d. The correct use of personal fall protection systems and equipment, including, but not limited to, proper hook-up, anchoring, and tie-off techniques.
e. The correct methods of equipment inspection and storage, as specified by the manufacturer.

All employees are required to be trained in the requirements of this paragraph on or before May 17, 2017.

Retraining

Employees will be retrained when there is reason to believe they do not have the understanding and skill required work safely around fall hazards. Situations requiring retraining include, but are not limited to, the following:

a. When changes in the workplace render previous training obsolete or inadequate;

b. When changes in the types of fall protection systems or equipment to be used render previous training obsolete or inadequate; or
c. When inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee no longer has the requisite understanding or skill necessary to use equipment or perform the job safely.

Should the competent person, a supervisor, or Vincent Noriega suspect that an employee lacks the skills needed for proper fall protection, that employee will be retrained.

Changes to the facility, types of fall protection systems, or equipment being used will also necessitate retraining.

Only the latest Training Certificate will be kept on file.

Safety Net Installation Certification

As required by 29 CFR 1910.29(c), specific safety net systems criteria are found in 29 CFR 1926.502(c).

This is to certify that the Safety Net identified below was installed with sufficient clearance under it to prevent contact with the surface or structures below when subjected to an impact force equivalent to the drop test specified in 29 CFR 1926.502(c)(4)(i).

SAFETY NET MAKE: _____

SAFETY NET MODEL: _____

SAFETY NET LOCATION: _____

It was found to be unreasonable to perform the below listed drop test for the following reasons:

_____

_____

_____

_____

_____

Drop Test (Circle appropriate drop test to which the certification applies):

a. After initial installation and before using drop test.
b. After relocation drop test.
c. After major repair drop test.
d. After remaining in the same location for 6 months drop test.

_____ _____

(Competent Person) (Date)

Milestone Industrial Welding Services Llc

Fall Protection Plan

(Required when standard fall protection systems are not feasible)

With changes: _____

(If no changes, enter "None")

This Fall Protection Plan is specific for the following project:

Project Name: _____

Location of Job: _____

_____

Date Plan Prepared: _____ by: _____

(Must be a Qualified Person)

Date Plan Modified: _____ by: _____

(Must be a Qualified Person)

Date Plan Modified: _____ by: _____

(Must be a Qualified Person)

Plan Approved by: _____

Plan Supervised by: _____

Policy Statement

This Fall Protection Program has been developed to protect our employees from the easily identifiable danger associated with working at height: falling. While the general concept of Fall Protection is straight forward, those employees to whom this Program applies must have specific training applicable to their individual jobs. It is recognized that the nature of fall hazards may vary from project to project and even change during a specific project. Training will be on-going to reflect the various existing work situations.

A copy of our Fall Protection Program can be found in the main office at:

22330 N 184th Lane

Surprise, AZ, 85387

6026171996

A copy of our Fall Protection Plan will be found on every applicable Job Site.

Fall Protection Systems to be Used on this Job

All employees on this job/project will be protected from fall hazards by the use of one or more conventional fall protection systems. These systems include guardrail systems, safety net systems, personal fall arrest systems, positioning device systems, warning line systems, controlled access zones, safety monitoring systems, covers, and protection from falling objects.

Further, the conventional fall protection system used in each required circumstance will be in compliance with 29 CFR 1926.502(k) which addresses which systems are appropriate (allowed) for specific types of work.

Training

All personnel at Milestone Industrial Welding Services Llc working on this job/project have received training in our Fall Protection Program and are able to recognize fall hazards and understand procedures to minimize these hazards. Further, they have been trained, as necessary, by a competent person qualified in the following areas using both formal and hands on training:

a. The nature of fall hazards in the work area.
b. The procedures for erecting, maintaining, disassembling, and inspecting the fall protections to be used.
c. The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems-controlled access zones, and other protection to be used.
d. Their role in the safety monitoring system when this system is used.
e. The limitations on the use of mechanical equipment during the performance of roofing work on low sloped roofs.
f. The procedures for handling and storage of equipment and materials and the erection of overhead protection.
g. The roll of employees in fall protection plans.

Enforcement

Awareness of and respect for fall hazards, and compliance with all safety rules are of great importance. Appropriate disciplinary action will be taken should an employee disregard the safety guidelines of Milestone Industrial Welding Services Llc.

Accident Investigation

All accidents that result in injury to employees, regardless of their nature, will be investigated and reported. It is important that documentation of accidents take place as soon as possible so that the cause may be determined, and steps may be taken to prevent a reoccurrence.

Changes to this Plan

Changes to this plan, specifically a deviation from conventional fall protection systems, will be documented by a qualified person whose name appears on the front of this fall protection plan.

Changes will be limited to:

a. Leading edge work

   Note: Leading edge work involves construction which moves the location of the edge forward (backward). Working at the edge of a walking/working surface (such as a roof) is not leading-edge work - it is (roofing) work at an unprotected side or edge.

b. Precast concrete construction work
c. Residential construction work

The criteria for determination that a conventional fall protection is infeasible is that it is impossible to perform construction work with a conventional fall protection system or it is technologically impossible to use a conventional fall protection system. Inconvenience and cost are not acceptable considerations.

Specific Fall Protection Plan criteria are found in 29 CFR 1926.502(k) and we will, if necessary, create a Fall Protection Plans that comply with the cited criteria.

A separate change will be made for each situation where conventional fall systems cannot be used.

Milestone Industrial Welding Services Llc

Changes to Fall Protection Plan

CHANGE NUMBER: _____

This change to the Fall Protection Plan for the below listed project will be attached to the original Fall Protection Plan and a copy will be available at the job site.

Project Name: _____

Location of Job: _____

Date Change Prepared: _____ by: _____
(Must be a Qualified Person)

Date Change Modified: _____ by: _____
(Must be a Qualified Person)

Change Approved by: _____

Change Supervised by: _____

Reference the above.

Changes to this Fall Protection Plan for this specific project are required for the following reason(s):

Specific work that requires fall protection other than conventional fall protection:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Specific work areas where the above work will take place:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Before any non-conventional fall protections are used as part of the work plan, a controlled access zone (CAZ) will be clearly defined by the competent person_____ as an

(Name(s) of Competent Person)

area where a recognized hazard exists. The demarcation of the CAZ will be communicated by the competent person in a recognized manner such as:

Circle one or more of the below:

a. signs
b. wires
c. tapes
d. ropes
e. chains
f. other: _____

All access to the CAZ will be restricted to authorized entrants. Those entrants will be identified by _____

(Color hard hats; arm bands, etc.)

and are listed below:

_____ _____ _____

_____ _____ _____

_____ _____ _____

The competent person will ensure the protective elements of the CAZ are implemented prior to the beginning of work.

Specific reasons why conventional fall protection is either infeasible or creates a greater hazard:

_____

_____

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_____

Specific measures to be taken to reduce or eliminate fall hazards for personnel who cannot be provided conventional fall protection:

_____

_____

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_____

_____

_____

_____

In the above CAZ, a safety monitoring system will be implemented in conformance with 29 CFR 1926.502(h).

Forklifts

29 CFR 1910.178 - Powered Industrial Trucks

Overview

This program has been developed to make our truck operators aware of the hazards associated with motorized truck use as well as to provide guidance for safe truck operations.

Persons will be authorized to operate our forklifts only after they have successfully demonstrated their understanding of proper procedures for truck inspection, use, and refueling/recharging. Operators will demonstrate their truck knowledge and abilities by passing a written test and performing designated truck maneuvers. All truck operators will be evaluated by Vincent Noriega, our Forklift Program Administrator, or a designated competent person.

Because of their power, weight, size, restricted visibility, &, often, high center of gravity, operation of industrial trucks takes skill and attention to detail. One moment of inattention can lead to a major mishap in an instant. Additionally, the load presents potential hazards if not properly secured, balanced, and/or properly placed on the truck.

In accordance with 29 CFR 1910.178(b)12, Vincent Noriega, or other competent person, will determine whether the atmosphere or location in which our industrial trucks will operate is hazardous or non-hazardous &, after further assessing our needs, will determine which types of trucks are appropriate & allowed for our specific operations.

In the unlikely event that unsafe industrial motor truck operations are observed, retraining will be given with emphasis on correcting the improper behavior. To prevent the possibility of severe injury to the operator (or a bystander), our forklifts must be operated in a professional manner and anything less will not be tolerated.

All truck operators will have ready access to this program, appropriate OSHA standards, and the truck owner/operator manuals.

Forklifts

Forklifts are designed to move items quickly, safely, and cleanly. Forklift training would also apply to numerous types of powered industrial trucks such as: tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines.

While many safety features are designed into forklifts, accidents still happen, and they are generally the result of operator error.

There is a general agreement among safety professionals, as well as OSHA, that requiring training for all persons (including part-time, seasonal, and temporary employees) who operate forklifts will significantly reduce the accident and injury rates.

General Requirements

All truck operators must be thoroughly familiar with the truck, itself. This includes knowing:

a. Instinctively, what each and every control does.
b. How to perform a truck safety check.
c. The truck's limitations such as maximum load, height and width, visibility, stability, and surface requirements.
d. The truck's stopping and turning ability and its effect on loads.

The below safety rules and guidelines to which one must adhere while operating a forklift have been established. These rules are designed to protect the operator and/or persons adjacent to truck operations.

Specifically:

a. No person will operate one of our trucks unless authorized in writing.
    1. Prior to authorization, the operator will have read this program, received training, passed a quiz on truck operations, and been evaluated on operational skills.
    2. Authorization to operate one type of truck does not automatically authorize a person to operate all trucks. Different power sources, visibility restrictions, controls, and capacities may dictate, in the judgment of Vincent Noriega, that a separate certification process may be required for a different type of truck. There may be instances where a new vehicle does not necessitate new training and a demonstration of proficiency. A newer model of a currently used truck may be identical to the truck the operator is qualified on as far as safety and operations are concerned. As a general rule, each type of truck has its own characteristics, limitations, and idiosyncrasies -- each model of a type of truck may or may not be unique.
b. No riders are allowed on our forklift unless:
    1. The truck is specifically designed for such use.
    2. The rider is authorized by Vincent Noriega.

    Note: Forklifts are generally designed to move product, supplies and equipment, not personnel.
c. Vincent Noriegawill revoke the authority to operate a truck if unsafe acts are observed or it is apparent that the operator has not retained the knowledge and job skills necessary to safely perform truck operations.
    1. An operator who has lost his authorization to operate a truck will be retrained, reevaluated, and, if appropriate, re-certified.
d. At the beginning of each shift, the operator will inspect the truck using our Forklift Daily Checklist.
    1. If deficiencies relating to safety are found, the deficiencies will be noted on the Checklist and reported to Vincent Noriega or other designated person. The vehicle will not be used until safety defects are repaired.
    2. If cosmetic damage is discovered during the daily check, it will be noted on the Checklist, but the truck will be used. Cosmetic faults will not delay our operations.

Hazards

The major personal safety hazards involved in truck operation include:

a. Physically hitting a person/object with the truck or load.
b. Having a load fall and hit the operator or other person.
c. Having the truck tip and crush the operator or other person.
d. Fire or explosion during refueling/recharging.

Below are rules and guidelines to control the hazards identified & reduce the likelihood of accident/injury. While some of the procedures may seem too obvious to mention or just plain common sense, remember this —serious, even fatal, accidents have occurred because for one split second an operator forgot or ignored a basic safety rule.

Falling/Hitting a Person/Object:

a. Never drive up to a person standing in front of a fixed object.
b. When possible, stay within delineated travel lanes or aisles.
c. Be seen and/or heard.
d. Ensure that adequate lighting is available.
e. Maintain a clear view of travel. If the load blocks or restricts the view, the operator will drive with the load trailing (backwards).
f. Slow down, sound horn, and do not pass where vision is restricted.
g. Operate the truck at speeds that will allow it and the load to be stopped in a safe, smooth, manner.
h. Be aware of floor conditions. Remove loose objects that have found their way to the truck travel lanes. Operate the truck at slower speeds on wet or slippery floors.
i. Of course, stunt or reckless driving is prohibited.
j. Be aware of the height of the truck and, if equipped, its mast and load. Carelessness can damage ceiling, lights, pipes, etc.
k. Never allow anyone to stand or pass under an elevated portion of any truck at any time.

Falling Loads:

a. Know your load – do not "over stack." Because practically all loads lifted or hauled by a forklift are not secured to the truck, ensure the load is properly stacked. Cartons generally should be interlaced or banded.
b. If lifting a load or pallet, get the forks (or other engaging means) as far under the load as possible.
c. Travel with the load in the lowest position for stability as well as prevention of hitting objects overhead. If using forks, tilt the load backward for stabilization.
d. Do not exceed the truck's rated capacity or stack loads too high.
e. Do not make "jerky" movements such as slamming the brakes or high speed turns.
f. A load backrest extension will reduce the possibility of part of the load falling rearward.
g. When using a fork lift, the forks may be tilted forward only for picking up or setting down a load.

Tipping:

Forklifts are, by design, narrow allowing them greater access within the work setting. Unfortunately, a narrow track offers less stability. Tipping or falling off an edge (or dock) is a preventable accident by following the guidelines below. If your truck tips, keep your body and limbs within the safety of the cage. Wear a seat belt if the truck is so equipped.

a. Stay within travel lanes.
b. If entering a trailer, ensure:
    1. The trailer brakes are engaged.
    2. The trailer is secured from movement by means of chocks and/or a locking mechanism.

3. The tractor is either shut off or removed from the trailer.
4. The trailer is squared up with the dock opening and dock plates are secure.
5. The trailer floor is capable of supporting the forklift and its load.
6. The lighting within the trailer is adequate.

Note: Falling off a dock edge because a trailer has moved is invariably a serious accident. Do not count on the tractor-trailer driver to lock his brakes or even trust that his brakes work. Physically check and ensure that the trailer into which you are taking your forklift is flush against the dock. If possible, the trailer should be actually attached to the dock, but in all cases, it should be chocked.

c. Travel with the load in the lowest possible position and avoid sharp turns at higher speeds as well as abrupt truck movements.
d. Be aware of the surface on which you are traveling -- its traction, ability to hold weight, slope, and surface.

Fire/Explosion during Refueling/Recharging:

Refueling accidents are not common experiences, however should they occur, they would be sudden and possibly catastrophic. Follow the manufacturer's owner's manual and local fire laws.

a. There is absolutely NO SMOKING or open flame during any portion of the refueling/recharging process.
b. Per 29 CFR 1910.110, Storage and handling of liquefied petroleum gases, paragraph (f)(7), at least one approved portable fire extinguisher having a minimum rating of 8-B, C must be readily available when refueling propane.
c. Facilities for quick drenching of the eyes and body must be readily available.

Other Concerns

The program deals primarily with the personal safety of our forklift operators. However, when discussing truck operations, we would be remiss if it were not pointed out that improper truck operations could also result in physical damage to products, trucks, and/or facilities. Proper truck operation will reduce personal injury accidents, and, as an added benefit, prevent general damage.

Operator Protection

A hazard assessment of forklift operations will be conducted by Vincent Noriega. Particular attention will be given to hand, head, eye, and foot protection, as well as environmental conditions such as atmospheres, heat, or cold. If the truck is equipped with a seat belt, it must be worn when the truck is moving.

Keep your limbs within the running lines of the truck and keep your hands and fingers away from moving parts -- particularly the mast on a fork lift truck.

Vincent Noriega will perform a hazard assessment of our truck operations and determine what, if any, personal protective equipment (PPE) requirements are appropriate. If PPE (examples: steel toed boots, leather gloves, hard hat, eye protection, etc.) is required, it must be worn.

Forklift Operations

In addition to safety operating practices previously identified in this manual, the following will be considered general operating procedures:

a. Fire aisles, access to stairways, and fire equipment must be kept clear.
b. Operators leaving their trucks must ensure the load is fully lowered, controls neutralized, and brakes set. On an incline, the wheels must be blocked. If the operator is 25 feet or more from the truck or does not have a clear view of the truck, the power to the truck must be shut off.
c. A safe distance will be maintained from the edge of ramps or platforms while on any elevated dock, platform, or freight car.
d. Trucks will not be used for opening or closing freight doors.
    1. Trucks, like all items of equipment, will be used for the purpose for which they were designed.
e. Be aware that if the operator of a semi-trailer has placed the rear wheels in a far forward position, the trailer may act as a “teeter-totter” when a heavy forklift enters the trailer. When a trailer is not coupled to a tractor, fixed jacks may be necessary to support the semi-trailer during loading or unloading.
f. Be aware that the overhead guard (used as protection against falling objects) is designed to prevent injury from the impact of small packages, boxes, bagged material, etc. -- it is not necessarily designed to withstand the impact of a falling capacity load.
g. In the event persons are lifted by a truck, a lifting platform must be securely attached to the lifting mechanism and the persons on the safety platform must have means of shutting off power to the truck.
h. If more than one truck is operated, they must be separated by a safe distance (at least three truck lengths) and they may not pass each other in intersections, blind spots, or other dangerous locations. The right of way will be yielded to other trucks in emergency situations.
i. Trucks traveling in the same direction will not be passed at all.
j. Driving on grades:
    1. Grades will be ascended or descended slowly.
    2. When ascending or descending grades in excess of 10 percent, loaded trucks will be driven with the load upgrade.
k. Motorized hand trucks must enter confined areas with the load end forward.

Maintenance

While the operator is responsible for checking the truck before use, actual mechanical maintenance must be performed by an authorized person.

a. If at any time a forklift is found to be in need of repair, defective, overheating, or in any way unsafe, the truck will be taken out of service until it has been restored to safe operating condition.
b. Forklifts should be kept reasonably clean and free of excess oil and grease.

Duties of our Forklift Administrator

The duties of Vincent Noriega include:

a. Operator training and certification.
b. Hazard assessment of our truck operations.
c. Identification of truck operators who, through their performance have demonstrated a lack of retained knowledge or ability to safely operate a powered truck. These people will receive retraining.
d. Keeping up-to-date of developments in the materials handling field with an emphasis on safety.

Additionally, Vincent Noriega will ensure that all truck operators have ready access to 29 CFR 1910.178, *Powered Industrial Trucks*, this program, and the individual truck's Operator/Owner Manual.

Training

will administer the training portion of this program.

Interactive training will be given by a competent (one with knowledge, training, and experience) person with ample opportunity to ask questions and clarify all aspects of truck operation relating to safety.

Prior to actual truck operation on the job, all truck operators will become familiar with the contents of this program as well as the operator's manual applicable to the specific powered truck they will operate. Each operator will demonstrate an understanding of truck operations and complete a driving test which will include truck inspection, maneuvering, and fueling/charging.

New truck operators may operate powered trucks in a training capacity:

a. When they are under the direct supervision of persons who have the knowledge, training, and experience to train and evaluate their competence.
b. Where such operation does not endanger themselves or others.

will ensure that all truck operators have a complete understanding of the below listed topics:

Truck-Related Topics:

a. Operating instructions, warnings, and precautions for the type of truck the operator will be authorized to operate.
b. Differences between the truck and the automobile.
c. Truck controls and instrumentation: where they are located, what they do, and how they work.
d. Engine or motor operation.
e. Steering and maneuvering.
f. Visibility (including restrictions due to loading).
g. Fork and attachment adaptation, operation, and use limitations.
h. Vehicle capacity.
i. Vehicle stability.

j. Any vehicle inspection & maintenance that the operator will be required to perform.
k. Refueling and/or charging and recharging of batteries.
l. Operating limitations.
m. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

Work-Related Topics:

a. Surface conditions where the vehicle will be operated.
b. Composition of loads to be carried and load stability.
c. Load manipulation, stacking, and unstacking.
d. Pedestrian traffic in areas where the vehicle will be operated.
e. Narrow aisles and other restricted places where the vehicle will be operated.
f. Hazardous (classified) locations where the vehicle will be operated.
g. Ramps and other sloped surfaces that could affect the vehicle's stability.
h. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
i. Other unique or potentially hazardous environmental conditions in the work area that could affect safe operation.

Refresher training in relevant topics will be provided to the operator when:

a. If unsafe truck operations are observed.
b. After an accident or near-accident.
c. Operator has received an evaluation that reveals that the operator is not operating the truck safely
d. If the operator is to be assigned to drive a different type of truck.
e. If work area changes could affect safe operation of the truck.

An evaluation of each powered industrial truck operator's performance must be conducted at least once every three years and refresher training will be provided as needed.

Hazard Communication

29 CFR 1910.1200, Hazard Communication
29 CFR 1910.1200 Appendix A, Health Hazard Criteria (Mandatory)
29 CFR 1910.1200 Appendix B, Hazard Determination (Mandatory)
29 CFR 1910.1200 Appendix C, Allocation of Label Elements (Mandatory)
29 CFR 1910.1200 Appendix D, Safety Data Sheets (Mandatory)
29 CFR 1910.1200 Appendix E, Definition of "Trade Secret" (Mandatory)

Purpose

The purpose of our hazard communication program is to ensure that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to our employees. The provisions of our hazard communication program are consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Revision 3. The transmittal of information is to be accomplished by means of our comprehensive hazard communication program.

We will develop, implement, and maintain **at each workplace** a comprehensive written hazard communication program for our employees which includes container labeling and other forms of warning, safety data sheets and employee training.

Note: Where employees must travel between workplaces during a work shift, *i.e.*, their work is carried out at more than one geographical location, the safety data sheets may be kept at the primary workplace facility. In this situation, the employer will ensure that employees can immediately obtain the required information in an emergency.

Hazard communication applies to any hazardous substance which is known to be present in the work place in such a manner that employees may be exposed under normal conditions of use or in a reasonably foreseeable emergency resulting from work place operations.

Manufacturers and importers will obtain or develop a safety data sheet for each hazardous substance they produce or import. We will obtain from the manufacturer or seller an SDS of each hazardous substance which we use.

We will maintain a list of the hazardous substances known to be present using an identity that is referenced on the appropriate SDS. This list may be compiled for the workplace as a whole or for individual work areas.

We will also maintain copies of the required SDS for each hazardous chemical & will ensure that they are readily accessible to each employee when they are in their work areas.

Electronic access and other alternatives to maintaining paper copies of the safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.

As a matter of course, before a new product is purchased, we will review its SDS to determine the presence of carcinogenic or other extremely hazardous chemicals. Using this information from the SDS, we will be able to inform employees how they will be protected from carcinogens at the workplace.

Prior to performing a non-routine task (for example, the cleaning of reactor vessels), an employee will be given information by a competent person or supervisor concerning the hazardous chemicals to which he may be exposed. This information will include:

a. Specific chemical hazards
b. Protective/safety measures the employee is to use.
c. Measures taken to lessen the hazards including ventilation, respirators, presence of another employee and emergency procedures.

Should work activities be performed in areas where chemicals are transferred through unlabeled pipes, the employee will be informed by the competent person or supervisor of:

a. The chemical in the pipes.
b. Viscosity, pressure, heat.
c. Potential Hazards.
d. Safety precautions to be taken.

In multi-employer workplaces, our written hazard communication program will include the methods we will use to inform any other employers sharing the same work area of the hazardous chemicals to which their employees may be exposed while performing their work, & any suggestions for appropriate protective measures, including the following:

The competent person at the workplace will inform those with whom Milestone Industrial Welding Services Llc work of any hazardous chemical products we are using & will provide them with the appropriate SDS for their review. SDS for all chemical products used at the workplace will be readily available.

Should Milestone Industrial Welding Services Llc introduce a new chemical product to the facility that contains a physical or health safety hazard, the product's SDS will accompany that product and, before use, employees will be given instruction on the products hazards.

Labels and Other Forms of Warning

The manufacturer, importer, or distributor will ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked. Where the manufacturer or importer is required to label, tag or mark the following information will be provided:

a. Product identifier;
b. Signal word;
c. Hazard statement(s);
d. Pictogram(s);
e. Precautionary statement(s); and,
f. Name, address, and telephone number of the manufacturer, importer, or other responsible party.

The manufacturer or importer preparing the safety data sheet will ensure that the information provided accurately reflects the scientific evidence used in making the hazard determination. If the manufacturer or importer, become aware of any significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information will be added to the safety data sheet within three months. If the chemical is not currently being produced or imported, the manufacturer or importer will add the information to the safety data sheet before the chemical is introduced into the workplace again. Milestone Industrial Welding Services Llc will replace safety data sheets with updated copies as they are received.

Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

Example below for labeling:

HS85
Batch number: 85L6543

Warning
Harmful if swallowed

Wash hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Dispose of contents/container in accordance with local, state and federal regulations.

First aid:
If swallowed: Call a doctor if you feel unwell. Rinse mouth.

GHS Example Company, 123 Global Circle, Anyville, NY 130XX Telephone (888) 888-8888

We may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by the above to be on a label. The written materials will be readily accessible to the employees at Milestone Industrial Welding Services Llc in their work area throughout each work shift. We may use such written materials in lieu of affixing labels to individual containers as long as the alternative method identifies and accompanies the containers to which it is applicable and conveys the information required to be on a label.

We **are not required** to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer.

We will not remove or intentionally deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

We will ensure that workplace labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. If we have employees who speak languages other than English, we will add the information to the presented material translated to the appropriate language and the information will be presented in their language.

Note: OSHA pictograms do not replace the diamond shaped labels that the U.S. Department of Transportation (DOT) requires for the transport of chemicals, including chemical drums, chemical totes, tanks, or other containers. Those labels must be on the external part of a shipped container and meet the DOT requirements set forth in 49 CFR 172, Subpart E.

Employee Information and Training

Milestone Industrial Welding Services Llc will provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard is introduced into their work area. Information and training may relate to general classes of hazardous chemicals to the extent appropriate and related to reasonably foreseeable exposures of the job. Chemical-specific information must always be available through labels and safety data sheets.

Information and training will consist of at least the following topics:

a. Employees will be informed of the requirements of 29 CFR 1910.1200, Hazard Communication, and its appendices.
b. Employees will be informed of any operations in their work area where hazardous chemicals are present.
c. Employees will be informed of the location and availability of the written hazard communication program, including the list(s) of hazardous chemicals and safety data sheets required by this section.
d. Employees will be trained in the methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as conducting specific monitoring, using continuous monitoring devices, learning the visual appearance or odor of hazardous chemicals when being released, etc.).
e. Employees will be trained in the physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area, and the measures they can take to protect themselves from these hazards, including specific procedures that Milestone Industrial Welding Services Llc has implemented to protect our employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.
f. Our employees will be trained in the details of our hazard communication program, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer and the safety data sheet, and how our employees can obtain and use the appropriate hazard information.

Documentation of Training

Documentation of safety and health training will be maintained for at least one (1) year.

Documentation will include:

a. employee name or other identifier
b. training dates
c. type(s) of training
d. training providers

Employees will be informed employees of the right:

a. To personally receive information regarding hazardous substances to which they may be exposed, according to the provisions of this section;
b. For their physician or collective bargaining agent to receive information regarding hazardous substances to which the employee may be exposed according to provisions of this section;
c. Against discharge or other discrimination due to the employee's exercise of the rights afforded pursuant to the provisions of the Hazardous Substances Information and Training Act.

Whenever Milestone Industrial Welding Services Llc receives a new or revised safety data sheet, such information will be provided to employees on a timely basis not to exceed 30 days after receipt, if the new information indicates significantly increased risks to, or measures necessary to protect, employee health as compared to those stated on a safety data sheet previously provided.

Milestone Industrial Welding Services Llc

Request for Safety Data Sheets

TO:

_____
(Date)

_____
(Supplier)

_____
(PO Box/Street Address)

_____
(City, State, ZIP)

To whom it may concern:

On _____, we received a shipment of _____,
(Date) (Product Name)

Reference Invoice:_____.
(Invoice Number)

The above product was received without an accompanying Safety Data Sheet (SDS). Per 29 CFR 1910.1200, we are unable to use this product without its SDS.

Please furnish the appropriate SDS as soon as possible to:.

Milestone Industrial Welding Services Llc

22330 N 184th Lane
Surprise, AZ, 85387
6026171996

Thank you,

_____
Vincent Noriega
Safety Director

Milestone Industrial Welding Services Llc

List of Hazardous Chemicals

The Safety Data Sheets for the below listed Hazardous Chemicals will follow this list. The Safety Data Sheets are arranged in the order listed below:

Chemicals

Lockout/Tagout - Control of Hazardous Energy

29 CFR 1910.147 - The Control of Hazardous Energy (Lockout/Tagout)
29 CFR 1910.333 - Selection and Use of Work Practices

Overview

Milestone Industrial Welding Services Llc will comply with the provisions of **29 CFR 1910.147**, *The Control of Hazardous Energy (Lockout/Tagout)* and **29 CFR 1910.333**, *Selection and Use of Work Practices,* the standards on which this program is based.

Coordination will be established between Milestone Industrial Welding Services Llc and, if appropriate, contractors at our facility to clearly indicate who is responsible for what function of the program, as well as the identifying characteristics of the lockout/tagout devices, shape, color, color codes for locks and tags, if used.

Coordination is required because – for example: our employee may complete lockout/tagout procedures and perform maintenance on a fixed piece of equipment while a contractor's employee is affected by that work.

All our employees affected by this program will be "authorized employees" by virtue of their work (see "Definitions" below.)

Definitions

There are a number of terms and phrases which must be understood by all employees to grasp the general thrust of this Program. For those employees directly involved with this Program or affected by it, there are specific requirements and procedures which would be meaningless without an understanding of the "language" of Control of Hazardous Energy.

Affected Employee means an employee whose job requires him/her to operate or use a machine or equipment on which servicing, or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized Employee means a person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing service or maintenance covered under 29 CFR 1910.147, The Control of Hazardous Energy (Lockout/Tagout).

Note: An authorized employee is authorized to service only machines and equipment with which he/she is familiar by training and/or experience.

Capable of Being Locked Out means an energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energized means connected to an energy source or containing residual or stored energy.

Energy Isolating Device means a mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: a manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

Energy Source means any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Fixed Equipment means equipment fastened in place or connected by permanent wiring methods.

Hot Tap means a procedure used in the repair, maintenance and service activities which involves welding on a piece of equipment (pipelines, vessels, or tanks) under pressure in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

Lockout means the placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device means a device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal Production Operations means the utilization of a machine or equipment to perform its intended production function.

Other Employees means those employees whose work operations are or may be in an area where energy control procedures may be utilized.

Servicing and/or Maintenance means workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment, and making adjustments or tool changes where the employee may be exposed to the unexpected energization or startup of equipment or release of hazardous energy.

Setting Up means any work performed to prepare a machine or equipment to perform its normal production operation.

Tagout means the placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout Device means a prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Applicability

The provisions of this program apply when there is a possibility of injury due to the unexpected energization, start up, or release of stored energy while constructing, installing, setting up, adjusting, inspecting, modifying, maintaining, or servicing fixed machinery. Stored energy in an electro/mechanical system can be found in rotating flywheels, weights and counter-weights, hydraulic and pneumatic pressure, thermal and chemical energy, springs, and unbalanced loads.

This program does not apply to:

a. Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or startup of the equipment is controlled by unplugging the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.
b. Hot tap operations provided:
    1. Continuity of service is essential.
    2. Shut down of the system is impractical.
    3. Documented procedures are followed and special equipment is used which will provide proven effective protection for employees.

Procedures for Control of Hazardous Energy

The general procedures for lockout, tagout, or lockout and tagout are quite similar. Below are instructions which apply to all control of hazardous energy procedures. Exceptions and specific requirements for lockout without tagout; tagout without lockout; and lockout used in conjunction with tagout are noted in their own subchapters.

General Procedures

Note: Throughout this section, lockout/tagout refers to lockout without tagout; tagout without lockout; and lockout used in conjunction with tagout.

Purpose and Scope: Effective hazardous energy control procedures will protect employees during machine and equipment servicing and maintenance where the unexpected energization, start up or release of stored energy could occur and cause injury. Further, effective hazardous energy control procedures will protect employees when working near or on exposed de-energized electrical conductors and parts of electrical equipment. Hazards being guarded against include, but are not limited to, being cut, struck, caught, crushed, thrown, mangled, and/or shocked by live electrical circuits caused by the unexpected release of hazardous energy. One (1) piece of machinery can have more than one (1) real or potential source of hazardous energy that must be guarded against.

These procedures for the control of hazardous energy will ensure that machines and equipment are isolated properly from hazardous or potentially hazardous energy sources during servicing and maintenance and properly protected from re-energization as required by 29 CFR 1910.147.

While any employee is exposed to contact with parts of fixed electrical equipment or circuits which have been de-energized, the circuits energizing the parts will be locked out and/or tagged in accordance with the requirements of 29 CFR 1910.333 (b)(2).

Preparation for Shutdown: Prior to lockout/tagout, all energy isolating devices must be located which apply to the specific machine in question. **There may be more than one energy source**. While electrical is most common, other sources could be: hydraulic, pneumatic, chemical, thermal, rotational, spring, etc. All must be isolated. The Energy Source Evaluation Form and the Control Procedures Form must be completed prior to isolation. These forms must be completed by an authorized employee. Once completed, it is recommended that these evaluations remain on file for future use. Any changes in design or energy hazard will require an update of these forms. Not only the energy source hazard, but its magnitude must be recorded on the Energy Source Evaluation Form. Example: Energy Source: Pneumatic. Magnitude: 125 psi.

Before an authorized or affected employee turns off the piece of equipment, the authorized employee must have knowledge of the type and magnitude of the energy to be controlled and the methods or means to control the energy. Refer to the Control Procedures Form for specific energy control procedures.

Machine or Equipment Shutdown: Before lockout/tagout controls are applied, all affected employees will be notified and given the reasons for the lockout/tagout.

If a machine or equipment is operating, it will be shut down by normal stopping procedures by either the affected or authorized employee.

Lockout/Tagout Device Application: Authorized employees will lockout/tagout the energy isolating devices with assigned individual locks. Locks or other lockout/tagout devices will be color coded and will be used for no other purpose. Lockout/tagout devices will indicate the identity of the authorized employee applying the device.

Lockout/tagout devices will be durable and capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected. They will be standardized in color and be substantial enough to prevent their removal without the use of excessive force or unusual techniques such as bolt cutters or other metal cutting tools. Key or combination locks are acceptable. Tagout device attachments will be non-reusable, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds. The tagout attachment will have the general design and basic characteristics of, at a minimum, a one-piece, all environmental tolerant nylon cable tie.

Lockout/tagout devices will be applied so that they will hold the energy isolating devices in a "Neutral" or "Off" position. Protective materials and hardware will be provided for isolating, securing or blocking of machines or equipment from energy sources. These protective materials and hardware include, but are not limited to, locks, tag chains, wedges, key blocks, adapter pins, self-locking fasteners, etc.

Release of Stored Energy: All stored energy will be blocked or dissipated. Types of stored energy include flywheels, springs, hydraulic or pneumatic systems, etc. Should there be a possibility of re-accumulation of stored energy, verification of isolation must be continued until servicing is complete.

Verification of Isolation: Prior to starting work on machines or equipment that have been locked out and after ensuring that no personnel are exposed to the release of hazardous energy, the authorized employee will operate the normal operating controls to verify that the machine or equipment has been de-energized & that it will not operate.

After the above test, the operating controls will be returned to the "NEUTRAL" or "OFF" position. At this point, the machine/equipment is now locked out. The work may proceed.

Release from Lock/Tagout: Before the lockout/tagout devices are removed and energy is restored to the machine or equipment, the following procedures will be implemented to ensure the safety of everyone involved:

a. The work area will be inspected to ensure that nonessential items have been removed and to ensure that the machine or equipment components are operationally intact.
b. The work area will be checked to ensure that all employees have been safely positioned or removed.

After the lockout/tagout devices have been removed and before the machine or equipment is started, affected employees will be notified that the lockout/tagout devices have been removed. Each lockout/tagout device must be removed by the authorized employee who applied it.

Note: The one exception to the above is when the authorized employee who applied the lockout/tagout device is not available to remove it. That device may be removed under the direction of the competent person provided that the below specific procedures are followed:

a. Verification by the competent person that the authorized employee who applied the lockout/tagout device is not at the facility.
b. All reasonable efforts will be made to contact the authorized employee to inform him/her that his/her lockout/tagout device has been removed.
c. Ensuring that the Authorized employee has been informed of the above before resuming work.

The person who removes the device must be an authorized employee.

Each type of control of hazardous energy procedure will be documented using the Energy Source Evaluation Form and the Control Procedures Form **except** when all the below listed conditions exist:

a. The machine or equipment has no potential for stored or residual energy or re-accumulation of stored energy after shut down which could endanger employees; and
b. The machine or equipment has a single energy source which can be readily identified and isolated; and
c. The isolation and locking out of that energy source will completely de-energize and deactivate the machine or equipment; and
d. The machine or equipment is isolated from that energy source and locked out during servicing and maintenance; and
e. A single lockout device is under the exclusive control of the authorized employee performing the servicing and maintenance; and
f. The servicing and maintenance does not create hazards for other employees; and
g. No accidents have occurred involving the unexpected activation or re-energization of the machine or equipment during servicing or maintenance.

The above exceptions apply to documentation only. Whether using lockout, tagout, or lockout and tagout, the general procedures are the same.

Device Selection Criteria for Non-Electrical Hazardous Energy

A lock, color coded with either paint or tape and identifiable with the name of the employee who applied it, will be placed on each energy-isolating device where feasible. Lockout is the primary means of non-electrical hazardous energy isolation and, where possible, will always be used in lieu of tagout. In the event a machine or piece of equipment will not accept a lock on its energy isolating device(s), it will be modified to do so whenever it is replaced, renovated, or undergoes a major repair.

There are occasions where lockout cannot be accomplished and, in those instances, tagout alone may be used as long as it provides full employee protection as explained below:

a. A tag may be used without a lock if a lock cannot be physically applied. This procedure must be supplemented with at least one additional safety measure providing a level of safety equivalent to that obtained by the use of a lock. Examples of additional safety measures include, but are not limited to the:
    1. Removal of an isolating circuit element.
    2. Blocking of a controlling switch.
    3. Opening of an extra disconnecting device.

    Note: A tag may be used without a lock if it can be demonstrated that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock. This demonstration must be documented. This is an allowable, but not preferred, option.

All affected persons must be fully aware of the fact that tags used in tagout procedures are essentially a warning device affixed to energy isolating devices. Unlike locks, tags do not physically restrain. Tags will:

a. Be capable of withstanding the environment to which they have been exposed for the maximum period of time that exposure is expected.
b. Be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.
c. Be standardized in at least one (1) of the following:
    1. Color
    2. Shape
    3. Size
d. Be standardized in print and format.
e. In their method of attachment, be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment methods and means will be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum strength of no less than 50 pounds and have the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.
f. Indicate the identity of the employee applying the tag.
g. Warn against the hazardous conditions if the machine or equipment is energized and will include a legend such as the following: *Do Not Start, Do Not Open, Do Not Close, Do Not Operate, etc.*

Control of Electrical Hazardous Energy on Fixed Equipment

Electrical hazards associated with fixed equipment present a special hazard class and, in each case, a determination must be made whether lockout, tagout, or lockout used in conjunction with tagout is to be utilized.

The guidelines for this determination are found in 29 CFR 1910.333. 29 CFR 1910.333 makes no mention of maintenance or servicing. Its provisions apply to any possible exposure to contact with fixed electrical equipment or circuits which have been de-energized. Live parts that operate at less than 50 volts to ground need not be de-energized if there will be no increased exposure to electrical burns or to explosion due to electric arcs. Fixed equipment is defined as: "equipment fastened in place or connected by permanent wiring methods."

Before circuits and/or equipment are de-energized, safe procedures will be determined before the fact. At a minimum:

a. The circuits and equipment to be de-energized will be disconnected from all electric energy sources. Control circuit devices, such as push buttons, selector switches, and interlocks, may not be used as the sole means for de-energizing circuits or equipment. Interlocks for electric equipment may not be used as a substitute for lockout and tagging procedures.
b. Stored electric energy which might endanger personnel will be released. Capacitors will be discharged, and high capacitance elements will be short-circuited and grounded if the stored electric energy might endanger personnel. Be aware of the shock potential of capacitors and associated equipment. If they are handled in meeting this requirement (discharging), they will be treated as energized until they have been totally discharged.
c. Stored non-electrical energy in devices that could reenergize electric circuit parts will be blocked or relieved to the extent that the circuit parts could not be accidentally energized by the device.

Device Selection Criteria for Electrical Hazardous Energy

Note: When dealing with safety related work practices to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, a Qualified Person is defined as one who: "is permitted to work on or near exposed energized parts" and who, at a minimum, has been trained in and is familiar with:

a. The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment, and

b. The skills and techniques necessary to determine the nominal voltage of exposed live parts, and

c. The clearance distances specified in 29CFR 1910.333(c) and the corresponding voltages to which the qualified person will be exposed.

A lock and tag will be placed on each disconnecting means used to de-energize circuits and equipment on which work is to be performed except:

a. A tag may be used without a lock if it can demonstrate that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock. This demonstration must be documented. This is an allowable, but not preferred, option. A tag may also be used without a lock, if a lock cannot be physically applied. Under either of the above two circumstances that a tag is used without a lock, the procedures must be supplemented with at least one additional safety measure that provides a level of safety equivalent to that obtained by the use of a lock. Examples of additional safety measures include:
    1. The removal of an isolating circuit element.
    2. The blocking of a controlling switch.
    3. The opening of an extra disconnecting device.
b. A lock may be used without a tag if, and only if:
    1. Only one circuit or piece of equipment is being de-energized, and
    2. The lockout period does not extend beyond the work shift, and
    3. Employees exposed to the hazards associated with re-energizing the circuit are familiar with this procedure -- utilizing a lock without a tag.

After electrical hazards are locked out, tagged out, or locked and tagged out, a Qualified Person must verify de-energization before work can proceed on de-energized equipment. Verification by the Qualified Person will include:

a. Operation of the equipment's operating controls, or otherwise verifying that the equipment cannot be restarted.
b. Using test equipment to test the circuit elements and electrical parts of equipment to which employees will be exposed and verifying that the circuit elements and equipment parts are de-energized.
c. Using test equipment to determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back feed even though specific parts of the circuit have been de-energized and presumed to be safe.

Note: If the circuit to be tested is over 600 volts, the test equipment will be checked for proper operation immediately before and immediately after this test.

Re-energizing Electrical Equipment

The process of re-energizing electrical equipment, even temporarily, must be accomplished as noted below in the order listed:

a. A Qualified Person will conduct tests and visual inspections, as necessary, to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed, so that the circuit and equipment can be safely energized.
b. Employees exposed to the hazards associated with re-energizing the circuit or equipment will be warned to stay clear of circuits and equipment.
c. Each lock and tag will be removed by the authorized employee (who must also be a Qualified Person when dealing with electrical hazards).

d. If the person who applied the lock or tag is absent from the facility, the competent person may designate another Qualified Person to remove the lock and/or tag provided that:
    1. It is assured that the Authorized Person who applied the lock or tag is not available at the facility, and
    2. It is assured that the Authorized Person who applied the lock and/or tag is aware that the lock and/or tag has been removed before he/she resumes work at the facility.
e. A visual determination will be accomplished to ensure all employees are clear of the circuits energized.

Special Considerations

Whether using lockout, tagout, or lockout and tagout procedures, the below special considerations apply.

There may be special circumstances where, during a lockout procedure, a machine or equipment must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine or equipment or components thereof. The below procedures will be followed to accomplish this task:

a. The machine or equipment will be cleared of tools and nonessential items and, if it is to be operated, all components will be operationally intact.
b. The work area will be checked to ensure that all employees have been safely positioned or removed.
c. The standard release from lockout procedures will be implemented.
d. The machine or equipment will be energized, and testing or positioning will proceed.
e. After testing or positioning, de-energize all systems and reapply the energy control device following standard procedures.

Group Lockout and/or Tagout Procedures

In the event that servicing, or maintenance is performed by more than one individual, the following will be implemented:

a. One person will be designated as Group Leader and that person will have overall responsibility for a set number of employees working under his/her control.
b. The Group Leader will have exclusive control of a Master Group Lockout and/or Group Tagout device.
c. The Group Leader will ascertain the exposure status of individual group members with regard to the lockout and/or tagout of the machine or equipment.
d. Each authorized employee within the group will affix his personal lockout/tagout device to a group lockout box or comparable device before beginning work and will remove his/her personal lockout/ tagout device upon completion of work.

If there is more than one group of personnel working a machine or piece of equipment, an employee will be designated to coordinate and take responsibility for all the individual groups.

Shift and/or Personnel Changes

In the event that Energy Control Procedures must extend into the next shift or if there are individual or group personnel changes, the procedures listed below will be implemented in the order listed:

a. If the energy isolation device will accept two lockout/tagout devices:
    1. The authorized employee coming on duty will place his personalized lockout/tagout device in place, and
    2. After the above step has been completed, the employee going off duty will remove his lockout/tagout device.
b. If the energy isolation device will not accept two lockout/tagout devices, both the incoming and outgoing authorized employees will:
    1. Ensure that all affected employees are aware that a lockout/tagout change is about to take place, then
    2. Ensure that the area is clear of tools and affected employees, then
    3. The outgoing authorized employee will remove his lockout/tagout devices and immediately the incoming authorized employee will install his lockout/tagout devices, and
    4. The incoming authorized employee will inform the affected employees that the change has been completed.

Following the above procedure will ensure the energy isolating device was never disturbed and that complete control of hazardous energy was maintained. The above procedure provides for continuing protection for both incoming and outgoing employees from the potential hazards of the unexpected release of hazardous energy and an orderly transfer of lockout/tagout responsibilities.

Periodic Inspections

Vincent Noriega, our Safety Director will conduct periodic inspections of this Control of Hazardous Energy Program at least annually to ensure that the procedures and requirements of 29 CFR 1910.147 are being followed. The information gleaned from the periodic inspection will be used to correct any deviations or inadequacies identified. These inspections will be documented and certification will be prepared to identify the machine or equipment on which an energy control procedure was utilized, the date of the inspection, the employees included in the inspection, and the name of the person performing the inspection. It should be noted that all periodic inspections will be conducted by a competent person, designated by Vincent Noriega, **other** than the person who actually used the energy control procedure being inspected.

Training

Control of Hazardous Energy training will be documented giving the name of the trainer, the name of the trainee, and the date. Authorized employees must be familiar with this program and will be trained in the following areas: recognition of all applicable hazardous energy sources, types and magnitude of energy sources, methods and means necessary for energy isolation and control, and changes to our program.

Retraining will be conducted when a periodic inspection reveals inadequacy in an authorized employee's knowledge, there has been a deviation from established policy or procedure, or our procedures are changed.

All training will be interactive with applicable standards readily accessible.

Milestone Industrial Welding Services Llc

Machine/Equipment Identification: _____

Location of Machine Equipment:_____

Authorized Person Name:_____ Date: _____

Energy Sources Evaluation & Control Procedures Form

MACHINE OR EQUIPMENT NAME: _____ LOCATION: _____

MODEL: _____ SERIAL NUMBER: _____ PROCEDURE NUMBER: _____

ENERGY SOURCE	MAGNITUDE (Volts; Amps; Phase; HP; Lbs.; RPM; Ft-lbs.; psi.; F/C; Highly Reactive)	LOCATION OF ISOLATING DEVICE	MEANS OF ISOLATION	COMMENTS
CAPACITOR				
CHEMICAL				
COUNTER WEIGHT				
ELECTRICAL				
ENGINE				
FLYWHEEL				
HYDRAULIC				
PNEUMATIC				
SPRING				
THERMAL				
OTHER				
OTHER				

Note: This form must be completed by an Authorized Employee.

EVALUATION CONDUCTED BY:

NAME: _____DATE:_____

(MUST BE AN AUTHORIZED EMPLOYEE)

Machine/Equipment Identification: _____

Location of Machine Equipment: _____

Authorized Person Name: _____ Date: _____

These Procedures must be accomplished in the order listed.

1. **PREPARATION FOR SHUTDOWN:** The Authorized Employee will be totally familiar with the first page of this form. The Affected Employees will be notified that the piece of equipment is about to be shut down and locked out.

Specific Instructions:_____

_____

_____

_____

2. **SHUTDOWN:** Affected Employees will be given the reason(s) for the lockout/tagout procedures. If the machine is running, it will be turned off using normal procedures. It may be shut down by either the Authorized Employee or the Affected Employee.

Specific Instructions:_____

_____

_____

_____

3. **MACHINE ISOLATION:** All real or potential hazardous energy listed on the first page of this form will be isolated from their source. The location of the isolation devices and the methods used are also found on the first page of the form.

Specific Instructions:_____

_____

_____

_____

4. **LOCKOUT/TAGOUT DEVICE APPLICATION:** Authorized Employees will (circle appropriate procedure): [lockout] [tagout] [lockout and tagout] the energy isolating devices. Lock and tag devices will be color coded and they will contain the identity of the Authorized Employee actually performing this procedure. The lockout/tagout devices will be applied so that they hold the energy isolating device in a "Neutral" or "Off" position.

Specific Instructions: _____

_____

_____

4a. If a tag is used in lieu of a lock because the energy isolating device will not accept a lock, the following additional safety precautions will be taken [29 CFR 1910.147 c(3)(ii) & 29 CFR 1910.333(2)(b)(iii)((D)]:

_____

_____

_____

Specific Instructions: _____

_____

_____

_____

5. **RELEASE OF STORED ENERGY:** All stored energy will be blocked or dissipated. Reference page one (1) of this form to ensure real or potential stored energy in a system is identified and controlled.

Specific Instructions:_____

_____

_____

_____

6. **VERIFICATION OF ISOLATION:** Prior to starting work on the piece of equipment and after ensuring that no personnel are exposed to the release of hazardous energy, the Authorized Employee will operate the controls to verify that there has been de-energization and that the equipment will not operate. After this verification, the operating controls will be returned to the "Neutral" or "Off" position.

Specific Instructions:_____

_____

_____

_____

7. **RELEASE FROM LOCKOUT/TAGOUT:** The Authorized Employee will 1.) Ensure that all Employees have been safely positioned or removed and the work area will be cleared of non-essential items, 2.) Ensure the equipment or equipment components are operationally intact; 3.) Ensure machine guards have been replaced; 4.) Inform the Affected Employees that lockout and or tagout devices are going to be removed; 5.) Remove the lockout and or tagout devices including all energy restraints such as blocks; and 6.) Inform the Affected Employees that the equipment is ready for operation.

Specific Instructions:_____

_____

_____

_____

Milestone Industrial Welding Services Llc

Group Leader Documentation Form

One (1) person will be designated as Group Leader. The Group Leader will have overall responsibility for a set number of employees.

The Group Leader will have exclusive control of a Master (Group) Lockout and/or Group Tagout device.

The Group Leader will ascertain the exposure status of individual group members with regard to the lockout and/or tagout of the machine or equipment.

Each individual authorized employee within the group will affix his personal lockout/tagout device to a group lockout box or comparable device before beginning work and will remove his/her personal lockout/tagout device upon completion of work.

If there is more than one group of personnel working on a machine or piece of equipment, an employee will be designated to coordinate and take responsibility for all the individual groups.

NAME OF DESIGNATED GROUP LEADER: _____

EQUIPMENT REQUIRING CONTROL OF HAZARDOUS ENERGY

NAME: _____ SERIAL NUMBER: _____

DATE: _____ MODEL NUMBER: _____

AUTHORIZED (QUALIFIED) EMPLOYEES OF THE GROUP

_____ (Name)	_____ (Signature)
_____ (Name)	_____ (Signature)
_____ (Name)	_____ (Signature)
_____ (Name)	_____ (Signature)

_____

Vincent Noriega

Program Administrator

SIGNATURE OF GROUP LEADER: _____

Milestone Industrial Welding Services Llc

Periodic Inspection Documentation Form

EQUIPMENT ON WHICH CONTROL OF HAZARDOUS ENERGY PROCEDURES WERE UTILIZED

NAME: _____ SERIAL NUMBER: _____

DATE: _____ MODEL NUMBER: _____

WERE ALL THE CORRECT PROCEDURES CORRECTLY APPLIED? YES NO

If yes, sign the form and return to Vincent Noriega.
If no, complete the below section, sign the form and return to Vincent Noriega.

EMPLOYEES PERFORMING THE PROCEDURE

_____ _____
(Name) (Signature)

_____ _____
(Name) (Signature)

_____ _____
(Name) (Signature)

_____ _____
(Name) (Signature)

_____ _____
(Name) (Signature)

_____ _____
(Name) (Signature)

IMPROPER PROCEDURES NOTED

_____

_____

_____

_____

_____

_____

_____ _____
(SIGNATURE OF INSPECTOR) (Date)

Note: If improper procedures are noted, the above employees must have retraining or the Program must be modified.

Permit-Required Confined Space Program

29 CFR 1910.1046 - Permit-Required Confined Spaces
29 CFR 1910.1000 - Air Contaminants
29 CFR 1910.1000 - Table Z-1 Limits for Air Contaminants
29 CFR 1910.1000 - Table Z-2
29 CFR 1910.1000 - Table Z-3 Mineral Dusts

Overview

All employees required to enter into confined or enclosed spaces will be instructed as to the nature of the hazards involved, the necessary precautions to be taken, and in the use of protective and emergency equipment required. Milestone Industrial Welding Services Llc are to comply with any specific regulations applying to this potentially dangerous situation. 29 CFR 1910.146, *Permit-Required Confined Spaces*, applies to confined space entry.

Confined Spaces

Confined spaces are dangerous because of their configuration, their actual or potential atmosphere, and other hazards that may present themselves such as engulfment.

This Program is designed to:

a. Identify and evaluate permit space hazards before entry.
b. Provide a system of testing conditions before entry and monitoring conditions during entry.
c. Provide a system of preventing unauthorized entry.
d. Provide a method of eliminating or controlling hazards for safe permit-space entry operations.
e. Provide a method of ensuring at least one (1) Attendant is stationed outside the permit space for the duration of the entry operations.
f. Provide a method of coordinating and monitoring entry operations when employees of more than one employer are to be working in the permit space.
g. Provide appropriate procedures for emergency rescue.
h. Establish a written procedure for preparation, issuance, use, and cancellation of entry permits.
i. Provide a system for review and revision of our Program.
j. Provide a complete understanding of OSHA Standard **29 CFR 1910.146** for all workers affected by the provisions.

After all is said and done, the bottom line is this:

a. A confined space is a space that:
    1. Is large enough and so configured that an employee's body can enter and perform assigned work and
    2. Has limited or restricted means for entry or exit. At the workplace, these spaces may include: ventilation or exhaust ducts, bins and tanks, boilers, sewers, tunnels and open top spaces more than 4 feet in depth such as pits, tubs, and vessels and
    3. Is not designed for continuous employee occupancy.
b. A Permit-Required Confined Space is:
    1. A confined space that contains any recognized serious safety or health hazards.

Definitions

The Permit-Required Confined Space standard contains terms which must be understood by all those involved with entry to confined space, permit-required or not. These terms should be known to avoid miscommunication:

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

Attendant means an individual stationed outside one or more permit spaces who monitors the Authorized Entrants and who performs all Attendant's duties identified and assigned in our permit-required confined space program.

Authorized Entrant means denotes an employee who is authorized to enter a permit space.

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

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

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

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

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

Entry Permit (*PERMIT*) means the document that is prepared to allow and control entry into a permit space and that contains the below listed information:

a. The permit space to be entered.
b. The purpose of the entry.
c. The date and authorized duration of the entry permit.
d. The authorized entrants listed in a manner that will allow the attendant to determine, for the duration of the permit, quickly and accurately which entrants are inside the confined space.
e. The names of personnel currently serving as attendants.
f. The name of the individual serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry.
g. The hazards of the permit space to be entered.
h. The measures used to isolate the permit space and to eliminate or control permit space hazards before entry, i.e., lockout or tagging of equipment, as well as procedures for purging, inerting, ventilating, and flushing permit spaces.

i. The acceptable entry conditions.

j. The results of initial and periodic tests accompanied by the names or initials of the testers and by an indication of when the tests were performed. Permit space conditions will be evaluated as follows:

1. Testing of conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin. If isolation of the space is not feasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing will be performed to the extent feasible before entry is authorized. If entry is authorized, entry conditions will be continuously monitored in the areas where Authorized Entrants are working.
2. Testing and/or monitoring the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations.
3. Testing for atmospheric conditions will be conducted in this order: 1) oxygen; 2) combustible gases and vapors; and 3) toxic gases and vapors.

Entry Supervisor means the person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required.

Hazardous Atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (i.e., escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

a. Flammable gas, vapor, or mist in excess of 10% of its lower flammable limit.

b. Airborne combustible dust at a concentration that meets or exceeds its lower flammable limit.

c. Atmosphere oxygen concentration below 19.5% or above 23.5%.

d. Atmospheric concentration of any substance for which a dose or permissible exposure limit is published in 29 CFR 1910 Subpart G, Occupational Health and Environmental Control, or 29 CFR 1910 Subpart Z, Toxic and Hazardous Substances, and which could result in employee exposure in excess of its dose or permissible exposure limit.

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

Hot Work Permit means the written authorization to perform operations capable of providing a source of ignition, i.e., riveting, welding, cutting, burning, and heating.

Immediately Dangerous to Life or Health (IDLH) means any condition that poses an immediate or delayed threat to life, causes irreversible adverse health effects, or interferes with an individual's ability to escape unaided from a permit space.

Inerting means the displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

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

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

LFL means lower flammable limit.

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

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

Oxygen Deficient Atmosphere means an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen Enriched Atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.

PEL means Permissible Exposure Limit.

Permit-Required Confined Space means a confined space that has one or more of the following characteristics:

a. Contains or has a potential to contain a hazardous atmosphere.
b. Contains a material that has the potential for engulfing an entrant.
c. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
d. Contains any other recognized serious safety or health hazard.

Permit System means our written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

Prohibited Condition means any conditions in a permit space that is not allowed by the permit during the period when entry is authorized.

Rescue Service means the personnel designated to rescue employees from permit spaces.

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

Stratified Atmosphere means layered atmosphere.

Testing means the process by which the hazards confronting entrants of a permit space are identified and evaluated. Testing includes specifying the tests to be performed in the permit space.

Workplace Evaluation

The Entry Supervisor will evaluate the workplace to determine if any spaces are permit-required spaces. Should a permit-required confined space(s) be identified, all exposed employees will be informed of the location and danger by posting a sign that reads:

DANGER-PERMIT-REQUIRED CONFINED SPACE

DO NOT ENTER

Personnel are not allowed in the Permit-Required Confined Space except under the provisions of this Program. The above sign will remain in place unless the space is re-evaluated and re-designated a non-permit confined space. Reevaluations of confined spaces will be made if changes have occurred or employees or their representative request a reevaluation.

By the same token, non-permit confined space(s) will be re-evaluated as configurations, uses, and changes in hazards are identified, and, if necessary, re-classified as a permit-required confined space.

This program will be used for all Permit-Space Entry by our employees.

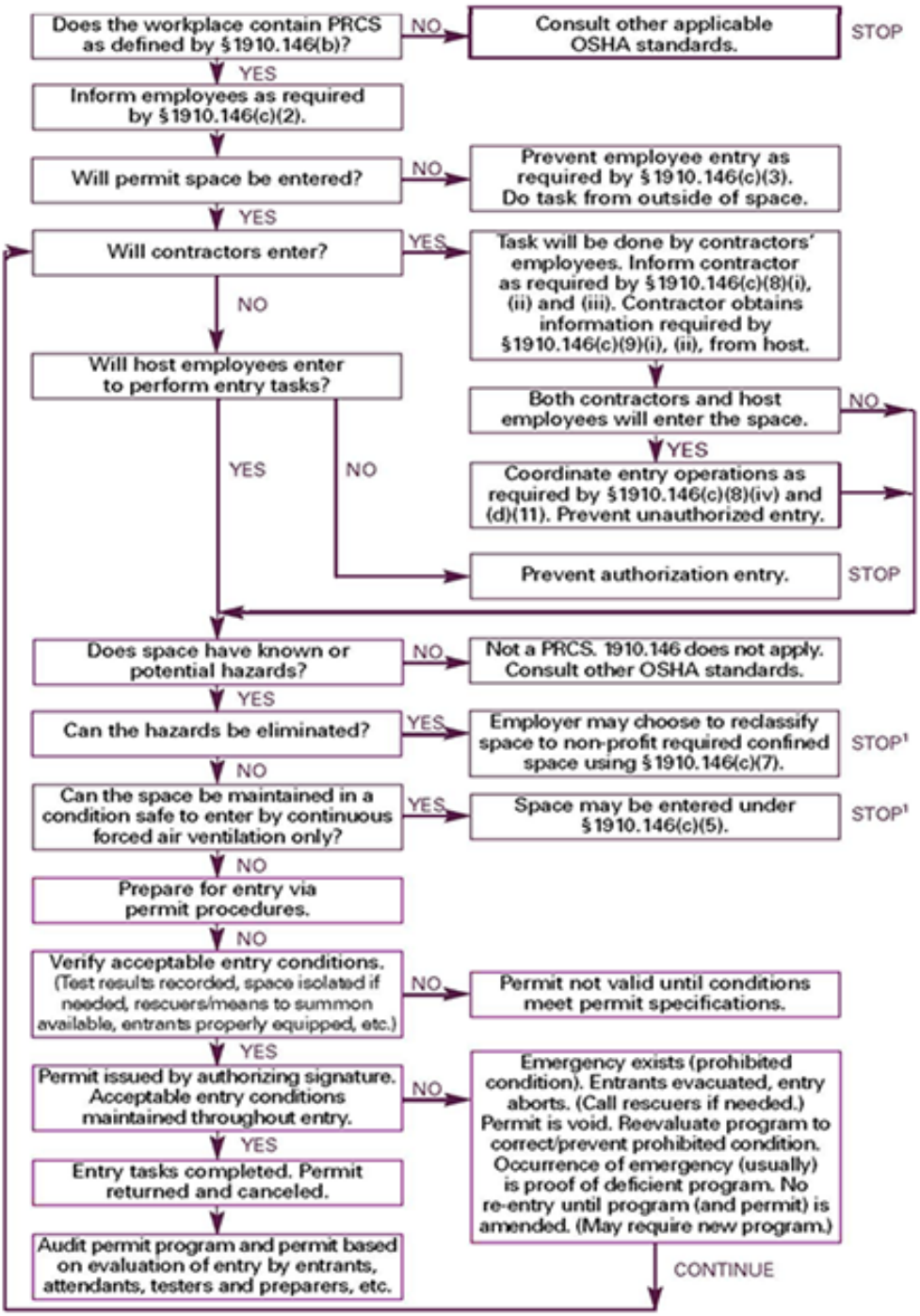
Procedures for Coordinating Entry Operations for Multi-Employers:

The procedures for coordinating entry operations for multi-employers so that employees of one employer do not endanger the employees of another employer are as follows:

a. All employees of every employer who are not involved with the confined space entry will be kept clear of the confined space by signage and the Entry Supervisor.
b. An Entry Supervisor and Attendant will be designated, in writing, as the Senior Entry Supervisor and Senior Attendant, who have authority over all entrants regardless of company for whom they work.
c. All persons involved with the confined space entry will be involved in preparing a Job Task Analysis with emphasis on reasons the space is designated a (permit-required) confined space; the specific tasks each employee will be performing in the confined space; special precautions to be taken to protect employees of one employer from hazards created by employees of another; specific hazards and experiences with the confined space; and a review of rescue procedures.
d. Actual entry will be made following our entry procedures.

A decision flow chart will be used to identify permit-required confined spaces and proper procedures to be followed.

The below flow chart is from 29 CFR 1910.146, Appendix A:



As a general policy, no employee will enter any confined space, permit -required or not, unless entry is dictated by work assignment. Entry of permit-required confined spaces will be made under the provisions of this Program.

Measures to Prevent Unauthorized Entry

Unauthorized entry will be prevented by:

a. Posting of the below sign:

DANGER--PERMIT-REQUIRED CONFINED SPACE

DO NOT ENTER

b. Posting of Attendants outside the permit-required confined space to ensure that unauthorized personnel are not allowed in.

c. Ensuring that the Entry Supervisor is aware of his authority, under 29 CFR 1910.146(j)(5), to remove unauthorized individuals who enter or attempt to enter the permit space during entry operations.

d. Ensuring the Authorized Entrants are aware of the provisions of 29 CFR 1910.146(h)(5)(iii) which requires an immediate evacuation in the event of the detection of a prohibited condition. An unauthorized entrant is a prohibited condition.

A roster system which allows the Attendant to keep track of the Authorized Entrants within the permit space will be used. The times in and out are recorded. This system accomplishes two major safety goals and one time-management goal:

a. Identifies who is actually in the permit-required space.

b. Records the time of exposure to the hazardous condition(s).

c. Documents the time required for accomplishing the assigned task.

Atmospheric Testing

Note: Entrants, or their representatives, will have the opportunity to observe the pre-entry atmospheric testing as well as any periodic testing that may be deemed necessary for employee safety. Employees or their representative may request additional air monitoring at any time.

Atmospheric testing is required for two (2) distinct purposes: evaluation of the hazards of the permit space and verification that acceptable conditions exist for entry into that space.

a. Evaluation testing - The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity to identify and evaluate any hazardous atmospheres existing or arising so that appropriate permit entry procedures can be developed and acceptable entry conditions stipulated for that space. Evaluation and interpretation of these data and development of the entry procedure should be reviewed by a technically qualified professional (e.g., OSHA consultation service, certified industrial hygienist, registered safety engineer, or certified safety professional) based on evaluation of all serious hazards.

b. Verification testing - The atmosphere of a permit space which may contain a hazardous atmosphere should be tested for residues of all contaminants identified by evaluation testing using permit specified equipment to determine that residual concentration at the time of testing and entry are within the range of acceptable entry conditions. Testing order should be oxygen, flammables, and then toxics. Results of testing (i.e., actual concentration) should be recorded on the permit in the space provided adjacent to the stipulated acceptable entry condition.

Duration of Testing

Measurement of values for each atmospheric parameter should be made for at least the minimum response time of the test instrument specified by the manufacturer.

Testing Stratified (Layered) Atmospheres

When monitoring for entries involving a descent into atmospheres which may be stratified, the atmospheric envelope should be tested at a distance of approximately four (4) feet in the direction of travel and to each side. If a sampling probe is used, the entrant's rate of progress should be slowed to accommodate the sampling speed and detector response.

Periodic re-testing will verify the atmosphere remains within acceptable entry conditions.

Procedures and Practices for Permit Space Entry

The confined space will be evaluated to determine if, in fact, it is a Permit-Required Confined Space. The decision process will be aided by using the Permit-Required Confined Space Decision Flow Chart. The Entry Supervisor will make this determination.

Questions to be answered in the decision-making process includes:

a. Does the atmosphere have an oxygen content of between 19.5% & 23.0% by volume?
b. Does the atmosphere contain or have a potential to contain a hazardous atmosphere?
c. Does the confined space contain a material with a potential for engulfing the entrant?
d. Does the confined space have an internal configuration capable of entrapping or asphyxiating the entrant?
e. Does the confined space contain any other recognized hazards?

Once it has been determined that the procedures for Permit-Required Confined Space operations will be implemented, the following actions will be taken:

a. The space will be secured and isolated to prevent non-authorized entry. Barriers, or some other protection as dictated by circumstance, will be erected or installed to protect entrants from external hazards such as pedestrians, vehicles, falling objects, etc.
b. The Pre-Entry Check List will be prepared.
c. A check will be made of the records of all personnel involved with the operations to insure they have had appropriate training for the hazards involved. Safety Data Sheets will be made available.
d. Before entry, a comprehensive rescue plan will be written, and a check of the rescue team's qualifications will be made.
e. All feasible engineering controls will be implemented. The atmosphere will be purged, ventilated, inserted, and/or flushed to control or eliminate the hazardous atmosphere.

f. Before entry, all personnel involved will review the Pre-Entry Check List and have a complete understanding of what the operations are to accomplish, the safety measures available, and the rescue plan.

g. All available data will be sought from our client concerning the space including its history, its hazards, their experience with the space and, if applicable, problems encountered. At the completion of the project, all information pertinent to the confined space operation will be provided to the client. Coordination of work and the assignment of one (1) Senior Attendant will be made.

Throughout the duration of an authorized entry into a permit confined space, conditions will be continually verified for acceptability.

After all measures listed above are met: training; testing; identification of hazards; evaluation; specifying acceptable entry conditions; controlling the atmospheric hazards and other identified hazards through engineering controls, such as forced air ventilation, isolation, and control of hazardous energy (lockout/tagout); preparing a rescue plan; barricading; equipping the appropriate employees with personal protective gear and notifying them of all hazards involved with the entry, etc., the Entry Permit will be issued and signed by the Entry Supervisor.

The duration of the Entry Permit may not exceed the time required to complete the assigned task identified on the permit and will be terminated:

a. When the assigned task is completed.

b. When a condition that is not allowed under the entry permit arises in or near the permit space.

During Permit-Required Confined Space entry, employees will be provided, at no cost, the following:

a. Testing and monitoring equipment to test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin and, if acceptable conditions exist, to continually monitor conditions during the entry process to ensure that acceptable conditions are maintained.

b. Ventilating equipment, if required, to maintain acceptable atmospheric conditions.

c. Communications equipment, or a method of communicating, between the entrant(s) and the Attendant.

d. Personal protective equipment should feasible engineering controls not adequately protect the entrants.

e. Adequate lighting to provide safe working conditions and enhance the ability of entrants to safely and quickly evacuate the permit-required confined space in an emergency.

f. Required equipment, such as ladders, for safe entry and exit for the Authorized Entrants.

g. Rescue equipment, such as wristlets, lifelines, and harnesses to extricate entrants in the event of an emergency. The Emergency Rescue Plan will be implemented so that rescue personnel are either on call or on station with adequate medical resources.

Rescue and Emergency Services Plan

One of the most important elements of any Permit-Required Confined Space Program is the Rescue and Emergency Services Plan. There will be, as a matter of policy, at least one Attendant for each applicable confined space. Regardless of the emergency, if only one Attendant is on duty, he will not enter a Permit-Required Confined Space to attempt a rescue until replaced by a second Attendant as required by 29 CFR 1910.146 (i)(4).

Should an employee be assigned to be a member of a Rescue Team, that employee must have had documented training in:

a. Proper use of personal protective equipment and rescue equipment.
b. The same training as required of the entrant.
c. A simulated rescue within at least twelve (12) months in the same type of confined space (i.e., representative space of the same general dimensions, opening size, hazard type, and accessibility.)

At least one member of the Rescue Team must be trained and certified in basic first aid and cardiopulmonary resuscitation (CPR) and that documentation will be on file. This person must also have training in bloodborne pathogens and exposure control.

The attendant will ensure that only authorized rescue personnel identified on the entry permit be allowed to attempt a rescue.

The Attendant will notify the rescue service before permit-required confined space entry is made to coordinate a possible rescue. The rescue service will be informed of the exact location of the project, the hazards involved, the number of entrants, the types of protective equipment worn by the entrants, etc. If needed, a practice rescue will be accomplished. If a rescue effort is required, the attendant will call the rescue service immediately by phone.

If the entry involves a possible IDLH situation, the rescue service will be on-site while work is being performed.

Non-entry rescue will be used by retrieval systems, where possible, in lieu of actual entry unless the retrieval system would contribute to the overall risk of the entrant.

Retrieval systems to be considered include:

a. A chest or full body harness with a retrieval line attached at the center of the entrant's back near shoulder level.
b. Wristlets if they create a lesser danger to the entrant than the above.
c. A retrieval line attached to a mechanical lifting (pulling) device fixed to an anchorage outside the permit space.

Should a potential rescue be required to retrieve an entrant from a five (5) foot vertical drop, a mechanical retrieval device will be employed.

The Attendant will have on site the SDS for all chemical substances to which the entrant will be exposed. The emergency responders as well as the treating hospital will be provided this information.

The rescue procedure to be used will be noted on the Entry Permit before entry.

Confined Space Entry Using Forced Air Ventilation

For Control of Hazardous Atmosphere

(NO OTHER HAZARDS ARE IDENTIFIED)

IF it can be demonstrated that the only hazard posed by the permit space is an actual or potential hazardous atmosphere; and

IF it can be demonstrated that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry; and

IF monitoring and inspection data supports the above; and

IF the initial entry of the permit space is necessary to obtain the above data, it is carried out by the complete Permit-Required Confined Space Program; and

IF the determinations and supporting data for the above are documented and made available to each employee who enter the permit space; then

ENTRY may be made provided:

THAT any conditions making it unsafe to remove an entrance cover have been eliminated before the cover is removed; and

THAT when the entrance covers are removed, the openings will be promptly guarded by a railing, temporary cover, or other temporary barrier preventing an accidental fall through the opening, and protecting each employee working in the space from foreign objects entering the space; and

THAT before entering the space, the internal atmosphere will be tested, with a calibrated direct-reading instrument, for the following conditions in the order given:

a. Oxygen content
b. Flammable gasses and vapors
c. Potential toxic air contaminants, and

THAT there be no hazardous atmosphere within the space whenever any employee is inside the space, and

THAT continuous forced air ventilation will be used, as follows:

a. No employee may enter the space until the forced air ventilation has eliminated any hazardous atmosphere; and
b. The forced air ventilation will be so directed as to ventilate the immediate areas where an employee is or will be present within the space and will continue until all employees have left the space; and
c. The air supply for the forced air ventilation will be from a clean source and may not increase the hazards in the space; and

THAT the atmosphere within the space will be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere; and

THAT if a hazardous atmosphere is detected during entry:

a. Each employee will leave the space immediately; and
b. The space will be evaluated to determine how the hazardous atmosphere developed; and
c. Measures will be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place; and

THAT all the above is verified with a written certification that contains the date, location of the space, and the signature of the person providing the certification before entry and made available to each employee entering the space.

THEN, per 29 CFR 1910.146(c)(5)(i) & (c)(5)(ii), we may use an alternate procedure for Confined Space Entry which does not require compliance with the following provisions of 29 CFR 1910.146:

a. Permit-Required Confined Space Program
b. Permit System
c. Entry Permit
d. Duties of Authorized Entrants
e. Duties of Attendants
f. Duties of Entry Supervisors
g. Rescue and Emergency Services

In spite of the above, this type of confined space is still a Permit-Required Confined Space. We are only talking about authorized entry here. Remember, when the forced air ventilation has been removed, the hazardous atmosphere will return.

At first glance, this may seem like a way to avoid much of the paperwork and compliance requirements. To a small degree, it is. However, the confined space which falls under these provisions of the OSHA standard do require documented evaluation, training of employees, barricading of the area, a plan for emergency contingencies, and record keeping. Adherence to all applicable safety standards and practices must be maintained.

This is an alternate set of procedures which may or may not be used. If they are used, all employees should be aware that their safety is first and foremost and that provisions of 29 CFR 1910 (5)(c)(i) & (5)(c)(ii) will be adhered to. Specifically, what we are dealing with is a space with only one hazardous condition (atmosphere) before any action (i.e., forced air ventilation) is taken. Before entry is made, the hazardous atmosphere is made acceptable through continuous forced air ventilation, and the safety of the atmosphere is periodically checked to ensure that the atmosphere remains safe whenever an employee is within the space in question.

Training

Training will be given to all employees whose work is regulated by this plan. Training will be conducted prior to initial assignment, prior to a change in assigned duties, and, if a new hazard has been created or special deviations have occurred, training will be given to address these changes and or deviations. Training will ensure that these persons have the knowledge and skills necessary for the safe accomplishment of their assigned jobs with a confined space. Training will include the duties and responsibilities of each Permit-Required Confined Space position: Authorized Entrant, Attendant, Entry Supervisor, and Rescue Team Member.

Training will be documented and certified with the trainee's name and signature; the trainer's name and signature; and the date of the training. This certification will be available for inspection by the employees and their authorized representatives.

Training will be accomplished before any assignment involving permit-required confined space operations & when there is a change in assigned duties. Further training will be given at the introduction of a new hazard for which the employee has not been trained.

Should actual job experience indicate a lack of knowledge or proficiency, training will be re-accomplished.

Training for the various Permit-Required Confined Space job positions is noted below.

Authorized Entrants:

Authorized Entrants will be trained in:

a. An awareness of the hazards that may be encountered during entry, including: information on the mode, signs or symptoms, & consequences of the exposure.
b. Proper use of monitoring equipment, ventilation equipment, communications equipment, personal protective equipment, lighting equipment, rescue equipment, entry and egress equipment, barriers to protect entrants from external hazards, and other equipment necessary for safe entry into and rescue from permit spaces.
c. The skills necessary to communicate with the Attendant should a reason for evacuation be present.
d. The requirement to alert the Attendant whenever:
    1. The entrant notices a warning sign or symptom of exposure to a dangerous situation. An example of this may be a tingling of the skin, dizziness, or a headache. Consult the SDS for information on specific chemical hazards.
    2. A prohibited condition is detected.
e. Exit procedures which include the need to exit the permit space as quickly as possible whenever:
    1. An order to evacuate is given by the Attendant or the Entry Supervisor.
    2. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
    3. A prohibited condition is recognized.
    4. An evacuation alarm is activated.

Attendants:

Attendants will be trained in:

a. An awareness of the hazards that may be encountered during entry, including the mode, signs or symptoms, and consequences of the exposure.
b. An awareness of possible behavioral effects of hazard exposure in Authorized Entrants.
c. The method used to continuously maintain an accurate count of Authorized Entrants in the permit space and the use of a roster on the entry permit to readily identify who is in the permit space.
d. The requirement that, while an external rescue attempt may be attempted (such as the use of an external retrieval system), they may not attempt to enter a permit-required confined space to attempt a rescue under any circumstances unless:
    1. They are relieved by a second Attendant.
    2. They are thoroughly trained and certified in appropriate rescue techniques as required by the Rescue and Emergency Services Plan of this Program.
e. Communication procedures, as necessary, with Authorized Entrants to monitor entrant status and alert entrants of the need to evacuate if one of the following conditions presents itself:
    1. A prohibited condition is detected by the Attendant.
    2. The Attendant detects the behavioral effects of hazard exposure in an Authorized Entrant.
    3. The Attendant detects a situation outside the space that could endanger the Authorized Entrants.
    4. The Attendant realizes that he/she cannot perform all the required duties of this Plan.
f. The procedures to summon rescue and other emergency services as soon as the Attendant determines that Authorized Entrants need assistance to escape from permit space hazards.
g. Taking the following steps when unauthorized persons approach or enter a permit space while entry is underway:
    1. Warn the unauthorized persons that they must stay away from the permit space.
    2. Advise the unauthorized persons they must exit immediately if they have entered the permit space.
    3. Inform the Authorized Entrants and the Entry Supervisor if unauthorized persons have entered the permit space.
h. The procedures for safe non-entry rescues as specified by our rescue procedure.
i. An awareness that no duties may be performed which might interfere with the Attendant's primary duty to monitor and protect the Authorized Entrants. The Attendant must remain outside the Permit Space during entry operations until relieved by another Attendant.

Entry Supervisor:

The Entry Supervisor will be trained in:

a. An awareness of the hazards that may be encountered during entry including information of the mode, signs, symptoms, and consequences of the hazard exposure.
b. Verification procedures, especially checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
c. Termination procedures. Operations will terminate when:
    1. The entry operations covered by the entry permit have been completed, or
    2. A condition arises in or near the permit space that is not allowed.
d. Verifying that rescue services are available and that means for summoning them are operational.
e. An awareness that unauthorized personnel who enter or attempt to enter the permit space must be removed.
f. Maintaining entry operations consistent with the terms of the entry permit. Whenever responsibility for a permit space entry operation is transferred, and at intervals dictated by the hazards and operations performed within the space, the entry operations must remain consistent with the terms of the entry permit and acceptable entry conditions must be maintained.

Rescue and Emergency Services:

Rescue and Emergency Services (Teams and/or Personnel) will be trained and knowledgeable in all areas applicable to Authorized Entrants as well as:

a. The use of personal protective equipment and rescue equipment.
b. Rescue duties consistent with the permit space involved and the identified hazards or potential hazards.
c. First aid -- at least one (1) member of a rescue team will be certified in basic first aid and CPR.

Assigned rescue personnel must complete permit space simulated rescues at least once every twelve (12) months from representative permit spaces similar to the permit space in question with regard to size, configuration, hazards involved, accessibility, and opening size.

Review of Program

Canceled entry permits will be retained for at least one (1) year to facilitate the review of the permit-required confined space program. Any problems encountered during an entry operation will be noted on the appropriate permit so this program may be revised to correct deficiencies before subsequent entries are authorized.

This Permit-Required Confined Space Program will be reviewed and altered, if appropriate, at the following times:

a. When there is reason to believe the measures taken under this program may not protect employees such as: unauthorized entry; detection of a permit space hazard not covered by the permit; occurrence of an injury or near injury; change in the use or configuration of a permit space; or employee complaints about the effectiveness of this Program.
b. Within one year of each entry to ensure employees participating in entry operations are protected from permit space hazards.

Note: A single review may be conducted covering all entries during a twelve (12) month period.

Re-Designation of Confined Spaces

Confined spaces will be reevaluated and re-designated as appropriate. If all hazards, both atmospheric and non-atmospheric, are eliminated from a confined space, it will be re-classified as a Non-Permit Confined Space. This will be accomplished provided that actual and potential hazards are eliminated.

By the same token, should a space that is classified a Non-Permit Confined Space be found to have a hazard, it will be reclassified as a Permit-Required Confined Space.

Should a Non-Permit Confined Space, by virtue of altered configuration, use, addition, or identification of hazards become a Permit-Required Confined Space, its designation will change accordingly.

A confined space is one of the following:

a. A non-permit confined space not falling under the Confined Space standards.
b. A confined space whose one and only hazard is atmospheric and can be controlled by forced air ventilation. The Pre-Entry Check List provides this information.
c. A permit-required confined space; all hazards must be identified. The Pre-Entry Check List and Entry Permit provide this information.

Controlling and eliminating hazards are two distinct concepts. Controlling an atmosphere to make it acceptable (i.e., forced air ventilation) does not eliminate the hazard. Stop the forced air ventilation, and the hazard returns.

Summary

All employees who, by virtue of their work assignments, fall under the provisions of this standard should have a comprehensive understanding of confined spaces and the potential dangers involved when working in them. Certain items cannot be overemphasized; safety is so important. Most accidents are sudden and unexpected. It is much wiser to plan ahead for possible courses of action in response to potential danger than wait until an accident happens and find, for example, there is no external retrieval system or method of summoning qualified medical response.

Some of the provisions of this program may, on first review, seem unnecessary and/or harsh. One item is the requirement forbidding the Attendant trained in rescue, CPR, and First Aid, and having the proper safety equipment on site to enter a Permit-Required Confined Space to rescue a fellow worker until he/she is replaced by another Attendant. Another item is the requirement to evacuate the Permit-Required Confined Space immediately at the first sign of a problem.

An explanation of these two items might help to clarify the importance of the whole program.

In the first case, the worker has succumbed to a hazard in a Permit-Required Confined Space. The following information is assumed: the Authorized Entrant entered the space in question after the Pre-Entry Check List and Permit were issued; he/she is aware of the dangers and trained and qualified for entry; he/she has all the required personal protective gear and it is properly worn and functioning. The worker is down! The Attendant would, at the time of the emergency, have no additional information. Therefore, whatever hazard fell the first worker would certainly fall the Attendant, if the Attendant were to enter the space. No one would know there are now two people to rescue. Even if they did, by the time the Emergency Response Team arrived, they would now be dealing with two people instead of one. The time lost could be critical to the survival of the Authorized Entrant and to the unwitting Attendant who, while trying to save his friend, actually put his life at greater risk.

Let’s analyze the second case concerning immediate evacuation. Suppose you are in a smoke-free environment such as an office, a house, or room and someone lights a cigarette. Even a smoker can detect the odor in a few moments. This gives an indication of how fast the gases in an atmosphere mix even at room temperature (it would be faster at higher temperatures). Immediate evacuation means just that – immediate. If an Authorized Entrant has just a few seconds to complete a work assignment in a permit-required confined space and is told by the Attendant to evacuate; a warning sign or symptom of exposure is noticed; a prohibited condition is observed; or an evacuation alarm is activated, the entrant must stop work at once and evacuate. Time is of the essence – hazardous atmospheres may spread quickly. Other hazards (such as engulfment) can happen instantly with little or no warning. It is much easier to re-assess a situation and re-group from outside the permit-required confined space.

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Emergency Phone Numbers

(To be accessible to attendant)

Main Office: 6026171996

Police: 911 [_____]
(If no 911 Service Available)

Fire: 911 [_____]
(If no 911 Service Available)

Ambulance: 911 [_____]
(If no 911 Service Available)

Hospital Name:

EMERGENCY RESCUE SERVICE NAME: _____
PHONE: _____

Vincent Noriega Work: 6026171996
Safety Director Cell: _____

OTHER:

_____ Work: _____
(Name/Title) Cell: _____

_____ Work: _____
(Name/Title) Cell: _____

_____ Work: _____
(Name/Title) Cell: _____

_____ Work: _____
(Name/Title) Cell: _____

When calling for EMERGENCY RESPONSE, this location is:

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Permit-Space Information & Attendant Designation

CONFINED SPACE DATE: _____

SPACE IDENTIFICATION: _____
SPACE LOCATION: _____
CLIENT: _____

1. Reasons the above confined space is designated a Permit-Required Confined Space:

_____
_____
_____

2. Special precautions taken to protect personnel in or around the above space:

_____
_____
_____

3. Specific hazards and experience with the above confined space:

_____
_____
_____

CLIENT UNDERSTANDING

I, _____, have been provided the above
(Client Representative)
information and understand that permit space entry is allowed only through compliance with a Permit Space Program meeting the requirements of 29 CFR 1910.146.

In the event our employees and your company's employees are working near or in the same Permit-Required Confined Space, the below listed person is designated as the one and only Senior Attendant. The person, listed below, will have authority over other Attendants.

_____
(Designated Senior Attendant)

_____ _____
(Client Representative Signature/Title) **(Date)**

_____ _____
Vincent Noriega (Date)
Safety Director

[A copy of this form will be kept at the facility during all operations.]

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Entry Roster

CONFINED SPACE DATE: _____

SPACE IDENTIFICATION _____
SPACE LOCATION: _____

AUTHORIZED ENTRANT	TIME IN	TIME OUT	TIME IN	TIME OUT	TIME IN	TIME OUT	TIME IN	TIME OUT

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Entry Permit

Permit-Required Confined Space

Note: This Entry Permit must be used with the attached Pre-Entry Checklist.
Additional pages may be added as necessary.

PERMIT VALID FOR _____ HOURS

CONFINED SPACE-HAZARDOUS AREA:

CONFINED SPACE IDENTIFICATION: _____ START DATE: _____

SPACE LOCATION: _____ TIME: _____

PURPOSE OF ENTRY: _____

SUPERVISOR(S) in charge of crew:

_____

_____

AUTHORIZED ATTENDANTS:

_____

_____

_____

_____

ATMOSPHERE (GAS) TESTER'S SIGNATURE & INITIALS: _____ _____

ATMOSPHERE TESTING EQUIPMENT USED:

_____ (Type)	_____ (Model and/or Serial Number)	_____ (Calibration date)
_____ (Type)	_____ (Model and/or Serial Number)	_____ (Calibration date)
_____ (Type)	_____ (Model and/or Serial Number)	_____ (Calibration date)

_____ **(Signature of Entry Supervisor/Date)**

_____ **(Signature of Vincent Noriega/Date)**

REVIEWED BY: (Confined Space Operations Personnel)

Note: The below listed persons, or their representative, have had the opportunity to observe the pre-entry atmospheric testing as well as any periodic testing that may be deemed necessary for employee safety.

_____ (Print Name)	_____ (Signature)	_____ (Print Name)	_____ (Signature)
_____ (Print Name)	_____ (Signature)	_____ (Print Name)	_____ (Signature)
_____ (Print Name)	_____ (Signature)	_____ (Print Name)	_____ (Signature)
_____ (Print Name)	_____ (Signature)	_____ (Print Name)	_____ (Signature)

Pre-Entry Checklist

This checklist is an integral part of our Permit System and MUST be maintained with the Entry Permit.

All items on the Pre-Entry Checklist must be completed before entry, for items that do not apply enter N/A.

Initial Atmospheric Check (before ventilation)

Date:_____ Time: _____		**Acceptable Parameters**	**Tester's Initials**
Oxygen: _____% _____%		**>19.5% <23.5%**	**_____**
Flammable Gases & Vapors Present:			
Name			
1. _____	**_____% LEL**	**<10.0%**	**_____**
2. _____	**_____% LEL**	**<10.0%**	**_____**
3. _____	**_____% LEL**	**<10.0%**	**_____**
Potential Toxic Air Contaminants:			
Name			
1. _____	**_____ PPM**	**<_____ PPM**	**_____**
2. _____	**_____ PPM**	**<_____ PPM**	**_____**
3. _____	**_____ PPM**	**<_____ PPM**	**_____**

Note: mg/m^3_may be substituted for PPM. For further reference see 1910.94.

Method of Isolation (atmospheric conditions): _____

_____

Means of Ventilation (to control atmospheric conditions): _____

_____

Atmospheric Check (after ventilation & isolation and immediately prior to initial entry)

Time: _____	**Acceptable Parameters**	**Tester's Initials**	
Oxygen: _____% _____%		**>19.5% <23.5%**	**_____**
Flammable Gases & Vapors Present:			
Name			
1. _____	**_____% LEL**	**<10.0%**	**_____**
2. _____	**_____% LEL**	**<10.0%**	**_____**
3. _____	**_____% LEL**	**<10.0%**	**_____**
Potential Toxic Air Contaminants:			
Name			
1. _____	**_____ PPM**	**<_____ PPM**	**_____**
2. _____	**_____ PPM**	**<_____ PPM**	**_____**
3. _____	**_____ PPM**	**<_____ PPM**	**_____**

Note: mg/m^3_may be substituted for PPM. For further reference see 1910.94

OTHER HAZARDS:

(Type, i.e., configuration, engulfment, unacceptable atmosphere, any recognized serious safety or health hazard)

(Engineering controls to control or eliminate the hazard to the extent feasible.)
____
____
____

______________________________ ____
(Type, i.e., configuration, engulfment, unacceptable atmosphere, any recognized serious safety or health hazard)

(Engineering controls to control or eliminate the hazard to the extent feasible.)
____
____
____

______________________________ ____
(Type, i.e., configuration, engulfment, unacceptable atmosphere, any recognized serious safety or health hazard)

(Engineering controls to control or eliminate the hazard to the extent feasible.)
____
____
____

______________________________ ____
(Type, i.e., configuration, engulfment, unacceptable atmosphere, any recognized serious safety or health hazard)

(Engineering controls to control or eliminate the hazard to the extent feasible.)
____
____
____

______________________________ ____
(Type, i.e., configuration, engulfment, unacceptable atmosphere, any recognized serious safety or health hazard)

(Engineering controls to control or eliminate the hazard to the extent feasible.)
____
____
____
____

HAZARDS NOT COMPLETELY ELIMINATED BY ENGINEERING CONTROLS AND SAFETY GEAR REQUIRED (i.e., respirators (specific type), special boots, gloves, suits, eye protection, etc.):

______________________________ ____
(HAZARD) (SAFETY GEAR)

______________________________ ____
(HAZARD) (SAFETY GEAR)

______________________________ ____
(HAZARD) (SAFETY GEAR)

COMMUNICATIONS PROCEDURES:

____
____
____
____
____
____

[NOTE: Acceptable, non-electrical, suggestions include, but are not limited to, predetermined rapping sounds, tugs on a rope or line, air horn signals, voice communications]

BELOW LISTED ITEMS MUST BE COMPLETED AND REVIEWED PRIOR TO ENTRY:

NOTE: For items that do not apply, enter N/A.

REQUIREMENT COMPLETED	DATE	TIME	REQUIREMENT COMPLETED	DATE	TIME
Lock Out/De-energize/Try Out	_____	_____	Full Body Harness w/"D" ring	____	____
Lines Broken/Capped/blanked	_____	_____	Emergency Escape Retrieval Equipment	____	____
Purge-Flush & Vent	_____	_____			
Ventilation	_____	_____	Lifelines	____	____
Secure Area (Post & Flag)	_____	_____	Fire Extinguishers	____	____
Breathing Apparatus	_____	_____	Lighting (Explosion Proof)	____	____
Resuscitator-Inhalator	_____	_____	Protective Clothing	____	____
Standby Safety Personnel	_____	_____	Respirator(s) (Air Purifying)	____	____
Hoisting Equipment	_____	_____	Direct reading gas monitor tested	____	____
All electric equipment listed Class I, Division I, Group D	_____	_____	Non-Sparking Tools	____	____
SCBA's for entry & standby	_____	_____	Powered Communications	____	____
Other: _____	_____	_____	Burning & Welding Permit	____	____
Other: _____	_____	_____	Other: _____	____	____

EMERGENCY AND RESCUE PROCEDURES

	YES	NO	N/A
Rescue Procedures will be implemented by Company Employees.	☐	☐	☐
Company Rescue Personnel have had training in:			
a. Use of Personal Protective Equipment.	☐	☐	☐
b. Use of Rescue Equipment.	☐	☐	☐
c. Practiced simulated permit space rescue within the past 12 months for a space representative of the space for which this permit is issued.	☐	☐	☐

Each member of the Rescue Team has had training in basic First Aid and cardiopulmonary resuscitation (CPR) and at least one (1) member is currently certified.

NAME OF CERTIFIED PERSON (CPR): _____

NAME OF CERTIFIED PERSON (1st AID): _____

Appropriate Safety Data Sheets, are at the facility.	☐	☐	☐
The retrieval line is affixed to the entrants and a fixed point outside the space or a mechanical device should the space be a vertical type more than five (5) feet deep.	☐	☐	☐
All entrants will wear a chest or full body harness with a retrieval line attached at the center of the entrant's back neat shoulder level, or above the entrant's head.	☐	☐	☐
Entrants will wear wristlets, in lieu of the above, should they create a lesser danger to the entrants.	☐	☐	☐

	YES	NO	N/A
Rescue procedures will be implemented by a rescue service consisting of persons who are not employees.	☐	☐	☐

This rescue service has been provided with:

a. information on all hazards or potential hazards they may confront.	☐	☐	☐
b. access to all permit spaces from which rescue may be necessary to enable the rescue service to develop appropriate rescue plans and practice rescue procedures.	☐	☐	☐

SPECIFIC RESCUE PLAN FOR AN EMERGENCY IN THIS CONFINED SPACE:

Record of Continuous Monitoring

[The results of continuous monitoring, if applicable, are to be recorded below every two (2) hours.]

TESTS TO BE TAKEN	Permissible Entry Level	TIME/ RESULTS	TIME/ RESULTS	TIME/ RESULTS	TIME/ RESULTS	TESTER'S INITIALS	DATE
PERCENT OF OXYGEN	19.5 to 23.5%	____/____	____/____	____/____	____/____	________	________
LOWER EXPLOSIVE LIMIT	Under 10%	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________
________________	*_____ **_____	____/____	____/____	____/____	____/____	________	________

***8 Hour Time Weighted Average: Employee can work in area 8 hours (longer with appropriate protection).**

****Short term exposure limit: Employee can work in area up to 15 minutes.**

This six (6) page Entry Permit and Pre-Entry Checklist as been prepared by the Entry Supervisor and reviewed by all personnel involved in this Permit-Required Confined Space Entry Operation.

ENTRY SUPERVISOR: ______________________________ ______________________________ ____________

(Name) (Signature) (Date)

6 of 6

Milestone Industrial Welding Services Llc

Pre-Entry Checklist Using Forced Air Ventilation pt. 1

and

Certification of Compliance with 29 CFR 1910.146(c)(5)(ii)

for

Confined Space Entry Using Forced Air Ventilation

for Control of Hazardous Atmosphere

(NO OTHER HAZARDS ARE IDENTIFIED)

I certify that the below listed confined space falls under the Permit-Required Confined Space Standard, 29 CFR 1910.146(c)(5)(i) & entry will be performed under the provisions of 29 CFR 1910.146(c)(5)(ii).

CONFINED SPACE IDENTIFICATION: _____ DATE: _____

SPACE LOCATION: _____ TIME: _____

WORK TO BE ACCOMPLISHED IN CONFINED SPACE: _____

PRE-ENTRY CHECKLIST

INITIAL ATMOSPHERIC CHECK (BEFORE VENTILATION): TIME: _____

		Acceptable Parameters
Oxygen: _____%	**_____%**	**> 19.5 % < 23.5 %**
Flammable gases and vapors:		
_____: (NAME)	**_____% LEL**	**< 10.0 %**
_____: (NAME)	**_____% LEL**	**< 10.0 %**
_____: (NAME)	**_____% LEL**	**< 10.0 %**
Potential toxic air contaminants:		
_____: (NAME)	**_____ PPM**	**< _____PPM**
_____: (NAME)	**_____ PPM**	**< _____PPM**
_____: (NAME)	**_____ PPM**	**< _____PPM**

NOTE: mg/m³ may be substituted for PPM. See Table Z-1 to Z-3, Subpart Z 29 CFR 1910. Reference Subpart G, 29 CFR 1910.

METHOD OF ISOLATION: _____

_____

MEANS OF VENTILATION: _____

_____

ATMOSPHERIC CHECK (AFTER VENTILATION & ISOLATION): TIME: _____

		Acceptable Parameters
Oxygen: _____%	**_____%**	**> 19.5 % < 23.5 %**
Flammable gases and vapors:		
_____: (NAME)	**_____% LEL**	**< 10.0 %**
_____: (NAME)	**_____% LEL**	**< 10.0 %**
_____: (NAME)	**_____% LEL**	**< 10.0 %**
Potential toxic air contaminants:		
_____: (NAME)	**_____ PPM**	**< _____PPM**
_____: (NAME)	**_____ PPM**	**< _____PPM**
_____: (NAME)	**_____ PPM**	**< _____PPM**

NOTE: mg/m³ may be substituted for PPM. See Table Z-1 to Z-3, Subpart Z 29 CFR 1910. Reference Subpart G, 29 CFR 1910.

PERMIT AND CHECK

LIST PREPARED BY: _____

(Entry Supervisor/Date)

APPROVED BY: _____

(Vincent Noriega/Date)

REVIEWED BY: (Confined Space Operations Personnel)

NOTE: The below listed persons, or their representative, have had the opportunity to observe the pre-entry atmospheric testing as well as any periodic testing that may be deemed necessary for employee safety.

(Print Name)	**(Signature)**	**(Print Name)**	**(Signature)**
(Print Name)	**(Signature)**	**(Print Name)**	**(Signature)**
(Print Name)	**(Signature)**	**(Print Name)**	**(Signature)**

THE ATMOSPHERE WITHIN THE SPACE WILL BE PERIODICALLY TESTED AS NECESSARY TO ENSURE THAT THE CONTINUOUS FORCED AIR VENTILATION IS PREVENTING THE ACCUMULATION OF A HAZARDOUS ATMOSPHERE.

IF CONDITIONS ARE IN COMPLIANCE WITH THE ABOVE REQUIREMENTS AND THERE IS NO REASON TO BELIEVE CONDITIONS MAY CHANGE ADVERSELY, THEN PROCEED TO THE PERMIT SPACE PRE-ENTRY CHECK LIST. COMPLETE AND POST WITH THIS FORM. MAINTAIN THIS FORM AND SUPPORTING DOCUMENTATION FOR A PERIOD OF ONE (1) YEAR.

THIS PERMIT AND SUPPORTING DOCUMENTATION WILL BE KEPT AT THE FACILITY. AT COMPLETION OF THE JOB, THIS COPY WILL BE FORWARDED TO Vincent Noriega.

Milestone Industrial Welding Services Llc

Pre-Entry Checklist Using Forced Air Ventilation pt. 2
For
Confined Space Entry Using Forced Air Ventilation
for Control of Hazardous Atmosphere
(NO OTHER HAZARDS ARE IDENTIFIED)

PART 2

I certify that the below listed confined space falls under the Permit-Required Confined Space Standard, 29 CFR 1910.146(c)(5)(i) & (c)(5)(ii):

CONFINED SPACE PRE-ENTRY CHECK LIST

A confined space either is entered through an opening other than a door (such as a manhole or side port) or requires the use of a ladder or rungs to reach the working level. Test results must be satisfactory. This check list must be filled out whenever the workplace meets this criteria.

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

NOTE: If any of the above questions are answered "NO", DO NOT ENTER. Contact your immediate supervisor.

JOB LOCATION: _____ DATE: _____

COMPETENT PERSON NAME: _____ SHIFT: _____

COMPETENT PERSON SIGNATURE/DATE: _____

EMERGENCY PHONE NUMBERS

LOCAL FIRE DEPARTMENT (RESCUE): _____

LOCAL FIRE DEPARTMENT (FIRE): _____

ON-SITE EMERGENCY PHONE NUMBER: _____

POLICE: _____

Personal Protective Equipment – General

29 CFR 1910.132 - General Requirements
29 CFR 1910.133 - Eye and Face Protection
29 CFR 1910.135 - Head Protection
29 CFR 1910.136 - Occupational Foot Protection
29 CFR 1910.138 - Hand Protection

Overview

This Personal Protective Equipment (PPE) Program has been prepared to inform our employees of potential hazards at our facility and to identify the proper PPE to be used to reduce or eliminate these hazards. This Program relies on a cooperative effort by all personnel to understand the reasons for PPE and to protect themselves from harm.

The use of PPE does not lessen an employee's obligation to use safe work practices and procedures. Employees are expected to be aware of the hazards within their area of responsibility and properly use prescribed PPE.

Our operations, work methods, and individual facility present specific hazards which must be identified, analyzed, and matched with the appropriate PPE through a continuing hazard assessment process.

A Certificate of Hazard Assessment will be kept at the facility for inspection purposes.

Duties of the PPE Program Administrator

The primary duties of Vincent Noriega, our Program Administrator include: hazard assessment; PPE selection; PPE training; and monitoring of our PPE Program. Certain types of PPE may require hands-on training before on the job use (primarily for sizing and fitting) and this training may be further delegated to competent persons.

Hazard Assessment and PPE Selection

A careful, systematic personal protective equipment selection process is used to identify what, if any, protection is required to reduce or eliminate the possibility of eye, hand, foot, limb, or head injury.

Hazard assessment, performed by Vincent Noriega, or a designated competent person, starts with a thorough knowledge of our facility, work procedures, and methods of operation. The basic hazard categories are: impact, penetration, compression, chemical, heat, harmful dust, and light radiation.

Identifying the source of the above hazards allows for consideration of administrative or engineering controls to eliminate the hazard as opposed to providing protection against it. Examples would include: redirecting traffic flow, ventilation, temporary weather barriers, non-slip surfaces, etc.

Because administrative and engineering controls are passive -- no employee involvement is required -- they are preferable to PPE.

A PPE selection is made by analyzing the above information and evaluating the type of risk, the level of risk, the potential for injury and the possible seriousness of that injury. PPE, which is compatible with the above risks and work situation, is considered. Actual selection involves all the above factors plus an attempt to provide a level of protection greater than the minimum required.

In all situations where it has been determined that a particular type of PPE is to be used, it will be used. There will be no exceptions, by virtue of position or rank, to this policy. Within an area at the facility where the possibility of falling objects exists, hard hats will be worn. It follows that once an item of PPE (hard hat, in this case) is selected, it must be used by all persons in the identified area regardless of job title or function.

Having Vincent Noriega, or designated competent person, at the facility determine the PPE requirements allows for knowledgeable selection and consistency, and eliminates chaos that would result if each individual were to decide when, where, and if PPE should be used.

29 CFR 1910 Subpart I - Appendix B, Non-mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection, provides excellent selection guidelines for eye and face protection, head protection, foot protection, and hand protection.

Dissemination of PPE Selection Information

Employees must understand when PPE is necessary and what type(s) of PPE are necessary.

All persons for whom PPE will provide a measure of safety will be given appropriate training on that item of PPE as well as an explanation of the importance of its use.

ANSI Standards and PPE

Most items of PPE are manufactured in accordance with a specific American National Standards Institute (ANSI) standard. For example, protective eye and face devices purchased after 07/05/94 must comply with ANSI standard ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection; protective helmets purchased after 07/05/94 must comply with ANSI standard ANSI Z89.1-1986, American National Standard for Personnel Protection-Protective Headwear for Industrial Employees-Requirements.

PPE safety products are tested to ensure they meet ANSI standards. Because products are tested in the manner in which they are designed to be used, ANSI certification is valid only if the user follows the manufacturer's instructions for proper sizing, fitting, wearing, and adjusting. A review of OSHA citations reveals that fines can be levied because employees were improperly using PPE. For example, a hard hat worn with the bill toward the rear may provide adequate protection from impact; however, because it is tested with the bill toward the front, this improper use is cause for a safety violation.

PPE will be provided to our employees at no cost to them. Prior to purchase, items of selected PPE will be checked to ensure they were manufactured in accordance with the proper ANSI standard.

The importance of hazard assessment takes on added significance when judgments are made matching the hazard to the protection desired in cases where ANSI certification is not available. What matters most is: does the selected PPE do what it is intended to do?

Employee owned PPE must be approved for use by Vincent Noriega. Further, such equipment must be properly maintained and cleaned in accordance with the manufacturer's instructions.

Sizing and Fitting

The word “personal” in the phrase “personal protective equipment” correctly implies that the equipment is for a specific person. As such, sizing and fitting are important for a variety of reasons.

a. Function: An improperly fitted piece of PPE may not do its job. For example, eye protection against dust must have an excellent face seal.
b. Comfort: The likelihood of continued use is increased if the PPE selected is comfortably fitted. Example: gloves that fit poorly and, over time, make a person’s hands hot and clammy are likely to be removed exposing that person to the hazard for which the gloves were required in the first place.
c. Safety: Ill-fitting PPE may actually cause an accident. Example: loose hard hat may slip and block one’s vision.

Most PPE come in a variety of sizes and within those size groups, adjustments may be made to affect a perfect fit. It is important to understand the procedures for donning, adjusting, using, and removing PPE. Each person who is required to use any type of PPE will be taught, before initial issue, the specific procedures for properly donning, adjusting, using, and removing the specific PPE. This instruction will generally be given by the employee’s Supervisor. When available, the manufacturer’s instructions will be issued with the PPE.

Care and Maintenance of PPE

PPE will be visually inspected before each use and if defects are noticed, it will not be used. Some types of PPE are expendable (cotton gloves) and have a limited life span after which they are discarded, and new PPE is reissued. Plastic safety glasses become scratched and they too must be exchanged for new ones when vision is impaired. Other types of safety equipment consist of both non-expendable and expendable components. A cartridge respirator is an example of this, with the respirator being non-expendable while the cartridges “wear out” and become expendable (discarded and replaced). PPE will be maintained in accordance with the manufacturer’s instructions and, where appropriate, kept in a sanitary condition.

Cleanliness takes on an added importance when dealing with PPE designed to protect the eyes and face. Dirty or fogged lenses can impair vision and, rather than offer protection from a hazard, actually becomes a contributory factor in causing an accident.

Lastly, should PPE become contaminated with a chemical substance and decontamination is impossible, the PPE will be properly disposed of following the disposal instructions on the Safety Data Sheet, or SDS, for that substance.

Training

Affected employees will be given an understanding of:

a. When PPE is necessary.
b. What PPE is necessary.
c. How to properly put on, take off, adjust, and wear PPE.
d. The limitations of the PPE.
e. The proper care, maintenance, useful life and disposal of the PPE.

Retraining will be given in situations when changes in PPE requirements render the previous training obsolete or it is noticed that an employee is not following our PPE policies -- specifically, not properly wearing the selected PPE in identified locations or work situations.

Eye and Face Protection

29 CFR 1910.133 - Eye and Face Protection

Your eyes are a marvel of engineering. Most of us take them for granted as we do all our senses, until an accident, injury, or disease forces us to realize the miracle we lost or almost lost. Can you imagine a system that can take (absorb) light and convert it to electrical signals (by way of the 120 million rods and 6 million cones on the retina) and transfer these signals through an optic nerve which has about one million fibers directly into the brain?

Most of us see the world in living color and with depth perception. The body itself does much to protect the eyes. Bony eye sockets in the skull protect the eye from many mechanical injuries. Orbital fluids and tissues cushion direct blows. Eyelids close reflexively from visual or mechanical stimuli. Eyes reflexively rotate upward with the lid closing to protect the cornea. Tears can flush away chemicals and foreign bodies. We all come with these safeguards. Sometimes, they are not enough.

Eye protection is required when there is a possibility of eye injury. Eye injury is not confined to flying objects. Eye injury can be caused by bright light, dust, chemicals, heat, and, literally, anything that can reach them. Different hazards require different types of protection.

Eye (and face) protection is required when one is exposed to flying particles, chemicals, or injurious light radiation. Types of eye protection include: impact resistant safety glasses, safety glasses with side shields, goggles, goggles with a face seal, face masks, and shaded goggles with varying degrees of darkness.

Affected employees who wear prescription lenses will wear eye protection over the prescription lenses without disturbing the proper positioning of the prescription lenses or will wear eye protection that incorporates their prescription into the design.

All prescription glasses should be made with impact-resistant lenses. Hardened lenses, through a tempering process, are extremely hard and resistant to impact and breakage. Safety lenses are similar to hardened lenses but are 1 mm thicker. Safety lenses are used in goggles where there is a danger of flying glass or chips of metal.

All employees who wear contact lenses must also wear appropriate eye and face protection in hazardous environments.

Welding helmets and face shields, if required, should be worn over primary eye protection (spectacles or goggles).

An inexpensive pair of safety glasses can save your priceless eyesight.

Head Protection

Talking about head protection is really talking about brain protection. Your brain, either through divine providence, evolution, or quirk of nature, is you. The brain, that soft mass of gray and white convoluted matter, is what you are all about. Destroy your brain and you no longer exist.

Your brain is naturally protected by a cranium. Your skull actually has many bones which protect your brain and support your face. Obviously, there are other parts to your head which need protecting such as your eyes, ears, nose, tongue, skin, etc., but your brain is the most important.

Head protection is required when there is a possibility of injury to the head from falling objects and when working near exposed electrical conductors which could contact the head.

Brain injury is the second most common cause of major neurologic deficits and causes more deaths than injury to any other organ.

When the skull receives an impact, it actually can indent and deform. A fracture may occur and the fracture may be distant from the point of impact. A direct blow to the head can cause the brain to actually move within the skull. Surprisingly, there is often a reverse correlation between skull damage and brain damage. Just because there is no external visible injury to the skull does not preclude the possibility of brain injury.

Wearing head protection (a hard hat) accomplishes two major objectives: it reduces the rate of energy transfer and spreads out the area of energy transfer. Just as your head should be checked out at a hospital after a head impact, so should your hard hat. A hard hat can absorb energy by destructing and this destruction may be unnoticeable.

A head injury may occur after a blow to the head and the following symptoms may be present: unconsciousness or disorientation, confusion, nausea, vomiting, and/or double vision. Get medical help immediately. Cover open wounds lightly with sterile dressing. Keep victim still, warm, and reassured. DO NOT move the victim unless he/she would be in greater danger if you did not. DO NOT apply pressure to a head wound. DO NOT try to stop blood or clear fluid coming from ears, nose, or mouth.

Foot Protection

When purchasing new protective footwear, ensure that it complies with ASTM F-2412-2005, "Standard Test Methods for Foot Protection," and ASTM F-2413-2005, "Standard Specification for Performance Requirements for Protective Footwear."

Specific hazards require specific types of protective footwear. Certain types of footwear can offer traction, crush protection, penetration protection, electrical protection, chemical resistance, heat and/or fire resistance, dryness, cushion, or ankle-protection. Further, certain activities may require a combination of these features.

Your foot is a remarkable piece of engineering which is composed of 26 bones, muscles, fatty tissue, nerves, tendons, skin and joints. The foot itself can absorb a tremendous amount of punishment without damage. But there are limits and it would be a shame to lose a foot, or part of a foot, because of failure to wear the prescribed protective footwear.

Hand Protection

Your hand is composed of 20 muscles, 3 major nerves, and 27 bones (14 of which are in your fingers) plus skin, fatty tissue, tendons, and joints. There are 15 muscles in your forearm which provide power to your hand. Your hand is your gateway to the world. It lets you do what you think. Its function is feeling and grasping.

Try to pick up something while holding your thumb still. It is very difficult. If the nerve to the small muscles of the thumb is severed, 80% of the total hand function is lost.

There are numerous types of hand protection (gloves) available -- each with a specific purpose. The most common are general purpose cotton work gloves which provide protection from minor skin abrasions and cold. However, there are many other types of gloves. Hands need protection from chemicals, abrasions, cuts and lacerations, temperature extremes, germs, radiation, impact, punctures, electricity, and other hazards on the facility. Specific job requirements determine the type of hand protection needed. Proper hand protection must do more than protect your hand; it must allow you to accomplish your job assignment with efficiency as well as safety.

Wearing hand protection could prevent your hand and/or fingers from being severed, burned, crushed, punctured, lacerated, cut, or generally abused.

Respiratory Protection

Employees who, by nature of their work, are exposed to harmful aerosols, vapors, gases, contaminated air, or non-breathable air will be provided air purifying or air supplying respirators after training, medical evaluation, and fit testing per our Respiratory Protection Program. The one exception is dust masks worn solely for comfort and not for respiratory protection.

Miscellaneous Personal Protection

PPE immediately brings to mind eye, head, hand, and foot protective equipment. However, there may be other types of protective equipment which are readily available and which have the capability of protecting employees from identified hazards on the facility. Some of these items may not fall under a specific OSHA standard or may not be ANSI approved or disapproved; however, in the judgment of Vincent Noriega, they may be appropriate for use in our operations.

Summary

The true beneficiary of PPE utilization is the user. The whole thrust of this Program is to protect our employees from injury. This is accomplished by, among other things, explaining the process of hazard assessment, the reasons for PPE use, and the necessity of using the PPE selected.

What possible justification could there be for maiming, losing, or even slightly injuring a body part because available (and required) PPE was not used? “I forgot”; “I was in a hurry”; “I misplaced my PPE”; “I felt silly wearing PPE”; or “I really didn’t believe PPE was necessary” will not undo what could be a lifetime of regret.

Milestone Industrial Welding Services Llc

Certificate of Workplace Hazard Assessment

In accordance with 29 CFR 1910.132(d)(2), I certify that, this date, I have performed a hazard assessment of our facility located at:

22330 N 184th Lane

Surprise, AZ, 85387

6026171996

This hazard assessment was performed to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE).

Identified hazards which cannot be eliminated through engineering controls or changes in procedures will be addressed by the use of selected PPE.

All affected employees will be informed of the required PPE for specific work locations or specific types of work to be performed and will receive initial training or retraining, if necessary, before being allowed to perform work requiring PPE.

If conditions or procedures change, a reassessment will be made.

_____ _____

Vincent Noriega Date

PPE Program Administrator

29 CFR 1910.95 - Occupational Noise Exposure

Overview

This Hearing Conservation Program is designed for one purpose – to prevent hearing damage caused by occupational noise exposure.

Most forms of personal protective equipment (PPE) are a response to an obvious hazard and are easy to understand. A hard hat will protect your head from falling objects, for example.

Hearing protection is different from most other types of PPE because loss of hearing generally occurs painlessly over a period of time and, when finally realized, the damage is permanent.

Because of the above, it is vital that cooperation between all affected employees & management be established to prevent occupational hearing loss. To achieve this goal, our Hearing Conservation Program focuses on the effects of noise on hearing as well as the selection & use of hearing protectors. Information is provided on how sound is transmitted to your brain, & lastly, the actual application of our Hearing Conservation Program.

While our Hearing Conservation Program has all the elements required of a complete safety program, it is not necessary to understand all the technical formulas and procedures that are required of licensed monitors, doctors, and hygienists. Individual employees are required to wear appropriate hearing protection when so directed and to understand the importance of protecting their hearing from damage. If workplace noise bothers you and those noises are below the threshold for required ear protection, you should bring this to the attention of Vincent Noriega, our Hearing Conservation Program Administrator for resolution.

Wherever it is not feasible to reduce the noise levels or duration of exposures to those specified in Table G-16, below, ear protective devices will be provided and used.

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Hearing damage is caused by noise level and duration of exposure to the noise. If, after using the formula below, the equivalent noise exposure exceeds unity (1), then a Hearing Conservation Program will be initiated.

F(e)=(T(1)divided by L(1))+(T(2)divided by L(2))+ ... + (T(n) divided by L(n)) where:
F(e) = The equivalent noise exposure factor.
T = The period of noise exposure at any essentially constant level.
L = The duration of the permissible noise exposure at the constant level (from Table G-12).
If the value of F(e) exceeds unity (1) the exposure exceeds permissible levels.
A sample computation showing an application of the formula in paragraph (d)(2)(ii) of this section is as follows. An employee is exposed at these levels for these periods:
110 db A 1/4 hour.
100 db A 1/2 hour.
90 db A 1 1/2 hours.
F(e) = (1/4 divided by 1/2)+(1/2 divided by 2)+(1 1/2 divided by 8)
F(e) = 0.500+0.25+0.188
F(e) = 0.938
Since the value of F(e) does not exceed unity, the exposure is within permissible limits.

Hearing protection is different from most other types of PPE because loss of hearing generally occurs painlessly over a period of time and, when finally realized, the damage is permanent.

As one would reasonably expect, acoustic trauma to your hearing can cause instant and permanent damage.

The initial determination of excessive noise levels is generally subjective. Indications of excessive noise would include: actual information pertaining to specific machines, personal observation, complaints from employees, and noticed indications of hearing loss. It is requested that employees draw attention to work situations where there is an apparent loudness that possibly requires hearing protection.

Duties of the Program Administrator

The duties of Vincent Noriega, our Hearing Conservation Program Administrator, include identifying work areas where the equivalent noise exposure factor exceeds unity, determining what types of noise level monitoring may be necessary, and ensuring that all personnel who are directed to wear hearing protection are trained in its proper use, cleaning, and storage.

Vincent Noriega will also be responsible for recordkeeping, testing, and training. Lastly, Vincent Noriega will keep abreast of developments in the hearing conservation field and he is encouraged to seek outside professional help when needed.

When a Hearing Conservation Program is Required

The industry standard that deals with occupational noise exposure, 29 CFR 1910.95 - Occupational Noise Exposure*,* is what this program is based.

Hearing protection will be provided at 85 dbA or greater **or** when it is not feasible to reduce the noise levels or duration of exposures to those specified in Table G-16 below, ear protective devices will be provided and used.

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES	
Duration per day, hours	Sound level dbA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Footnote[1] **When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: C(1)/T(1) + C(2)/T(2) C(n)/T(n) exceeds unity, then, the mixed exposure should be considered to exceed the limit value. Cn indicates the total time of exposure at a specified noise level, and Tn indicates the total time of exposure permitted at that level.**

C = total length of work day in hours

T = period of noise exposure at any essentially constant level

C(n) = total time of exposure at a specific noise level

T(n) = total time of exposure permitted at that level

Footnote[2] **When the daily noise exposure is composed of two or more periods of Impulsive or impact noise should not exceed 140 dB peak sound pressure level.**

A continuing, effective hearing conservation program will be administered when employees are exposed to sound levels greater than 85 dbA on an 8 hour time-weighted average basis.

This Hearing Conservation Program must be implemented when the equivalent noise exposure exceeds unity (the number 1) using the below formula and example:

F(e)=(T(1)divided by L(1))+(T(2)divided by L(2))+(T(n) divided by L(n))

where:

F(e) = The equivalent noise exposure factor.

T = The period of noise exposure at any essentially constant level.

L = The duration of the permissible noise exposure at the constant level (from **T**ABLE G-16).

If the value of F(e) exceeds unity (1) the exposure exceeds permissible levels.

Because the action level is an 8-hour time-weighted average of 85 decibels measured on the A-scale, slow response, we will implement a monitoring program when this level is reached.

A sample computation showing an application of the formula is as follows.

An employee is exposed at these levels for these periods:

110 db A 1/4 hour

100 db A 1/2 hour

90 db A 11/2 hours

F(e) = (1/4 divided by 1/2)+(1/2 divided by 2)+(1 1/2 divided by 8)

F(e) = 0.500+0.25+0.188

F(e) = 0.938

Since the value of F(e) does not exceed unity, the exposure is within permissible limits.

Definitions

There are certain words in our Hearing Conservation Program which are not used in everyday life. So that all may have a clearer understanding of this program, the below definitions are presented:

Action Level means an 8-hour time-weighted average of 85 decibels measured on the A-scale, slow response, or equivalently, a dose of fifty percent.

Attenuate means to lessen the intensity.

Audiogram means a chart, graph, or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.

Audiologist means a professional, specializing in the study and rehabilitation of hearing, who is certified by the American Speech-Language-Hearing Association or licensed by a state board of examiners.

Baseline Audiogram means the audiogram against which future audiograms are compared.

Criterion Sound Level means a sound level of 90 decibels.

Decibel (dB) means unit of measurement of sound level.

Dosimeter means an instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.

Hertz (HZ) means unit of measurement of frequency, numerically equal to cycles per second.

Medical Pathology means a disorder or disease which should be treated by a physician specialist.

NIHL means noise Induced Hearing Loss.

Noise Dose means the ratio, expressed as a percentage, of:

1. the time integral, over a stated time or event, of the 0.6 power of the measured SLOW exponential time-averaged, squared A-weighted sound pressure and
2. the product of the criterion duration (8 hours) and the 0.6 power of the squared sound pressure corresponding to the criterion sound level (90 dB).

Otolaryngologist means a physician specializing in diagnosis and treatment of disorders of the ear, nose and throat.

Representative Exposure means measurements of an employee's noise dose or 8-hour time-weighted average sound level that the employers deem to be representative of the exposures of other employees in the workplace.

Sound Level means ten times the common logarithm of the ratio of the square of the measured A-weighted sound pressure to the square of the standard reference pressure of 20 micro pascals. Unit: decibels (dB). For use with OSHA standard 29 CFR 1910.95, SLOW time response is required.

Sound Level Meter means an instrument for the measurement of sound level.

Time-Weighted Average means that sound level, which if constant over a sound level 8-hour exposure, would result in the same noise dose as is measured.

Noise Monitoring Procedures

Initially, the implementation of a noise monitoring program is the result of subjective reasoning by Vincent Noriega. Indications of excessive noise would include: actual information pertaining to specific machines, personal observation, complaints from employees, and noticed indications of hearing loss. It is requested that employees draw attention to work situations where there is an apparent loudness that possibly requires hearing protection.

The measure of a sound's strength is referred to as "sound level" and it is measured in units called "decibels" (dB).

To provide some idea of the loudness of 85 dB, the following comparisons are provided:

Sound of	Approximate Decibels
Softest sound heard with normal hearing	0 dB
Ordinary speech at conversational distance	65 dB to 70 dB
Telephone dial tone	80 dB
Train whistle at 500 feet	90 dB
Power mower	107 dB
Jet engine at 100 feet	140 dB
Gun Shot	140 dB

Sound levels above 80 dB may become uncomfortable; sound above 125 dB may be painful.

Individual occupational sound exposures above 85 dB do not trigger the need for noise monitoring or a Hearing Conservation Program -- it is when the equivalent noise exposure factor exceeds unity. The two factors that cause occupational hearing loss are: 1) loudness and 2) the duration of time one is exposed to that loudness. **In spite of the above**, when information indicates employee exposure may equal/exceed the 8 hr time-weighted avg. of 85 decibels, the monitoring program will be implemented to identify employees to be included in the hearing conservation program.

Hearing loss generally occurs over a lengthy period of time. Of course, as one would reasonably expect, acoustic trauma to your hearing can cause instant and permanent damage.

Our monitoring program is designed to identify:

a. Areas where feasible administrative controls may be implemented to reduce noise exposure. Example: shorter exposure times.
b. Areas where feasible engineering controls may be implemented to reduce noise exposure. Example: soundproofing.
c. Which employees should be included in our hearing conservation program.
d. The types of hearing protection to be used.

Noise monitoring equipment and procedures will be determined by employee mobility, variations in workplace sound levels, individual types of noise such as impact, impulse, or steady stream; and/or the noise type combinations.

Noise Level Monitoring

The monitoring equipment and procedures will be designed to determine the actual sound levels that reach the employee's ears and the length of time there is exposure to those levels.

Noise level monitoring is generally conducted by using a dosimeter, a sound level meter, or both. Because a sound level meter takes one measurement at one point in time, it is useful when sound is fairly constant and the employee is not moving in and out of the noise area.

A dosimeter, on the other hand, stores sound level measurements and can produce an average noise exposure which can be calculated into an 8-hour time weighted average. When using a dosimeter in an area where employees are exposed to varying sound levels or they move in and out of the noise area, the dosimeter is actually worn and the sound pick-up is placed close to the employee's ear to get an accurate measurement of the sound level exposure. Generally, a dosimeter is the best choice for the workplace.

Noise level monitoring results, as well as 29 CFR 1910.95, will be made available to affected employees and copies of these items be posted in the workplace.

Monitoring Plan

All continuous, intermittent and impulsive sound levels from 80 dB to 130 dB will be integrated into the noise measurements.

All instruments used to measure employee noise exposure will be calibrated to ensure measurement accuracy.

Representative personal sampling will be used, in lieu of area sampling, when there is high employee mobility, significant variations in sound levels, or a significant component of impulse noise.

Area sampling will be used when sound levels are relatively constant and employees have a constant exposure to them.

When there is a change in workplace activity or equipment which would likely increase noise levels, additional monitoring will be undertaken.

a. All persons found to be exposed to sound levels at or above the action level will be notified.
b. Affected employees or their representatives will be allowed to observe the noise monitoring process.

Noise Level Monitoring Records

All noise level monitoring records will be kept for a period of two (2) years.

Audiometric Testing Program

Audiometric testing will be made available at no cost to affected employees.

When noise exposures reach the action level, 8-hour time-weighted average of 85 dbA, the audiometric testing will be initiated.

Audiometric tests will be performed by a licensed or certified audiologist, otolaryngologist, physician, technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using, maintaining, and checking calibration and proper functioning of the audiometers being used. A technician who operates microprocessor audiometers does not need to be certified. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist, or physician.

Baseline Audiogram

Within 6 months of an employee's first exposure at or above the action level, a valid baseline audiogram will be established against which subsequent audiograms can be compared. Hearing loss can occur as a result of age, trauma, drug reaction, and exposures that are not work related. However, with a baseline audiogram -- which measures the frequency (125 or 250 Hz to 8000 Hz) and loudness (-10 or 0 dB to 110 dB) -- it is possible from subsequent audiograms to determine with accuracy if hearing loss is due to occupational noise exposure or some other cause.

For the purposes of this program, audiograms must measure, in each ear, at least the frequencies of 500, 1000, 2000, 3000, 4000, and 6000 Hz.

Occupational hearing loss occurs within the inner ear in the cochlea. By using a bone-conduction vibrator, sounds can be carried directly to the inner ear and bypass the outside and middle ear areas.

An annual audiogram may be substituted for the baseline audiogram if the audiologist, otolaryngologist or physician who is evaluating the audiogram determines:

a. The standard threshold shift revealed by the audiogram is persistent.
b. The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram.

Procedure

To ensure an accurate test, employees must not be exposed to occupational noises for at least 14 hours prior to the establishment of a baseline audiogram. To meet this requirement, if needed, hearing protectors may be worn during the preceding work shifts. This procedure is to factor out temporary hearing changes from the test.

Annual Audiogram

At least annually, after obtaining the baseline audiogram, a new audiogram will be obtained for each employee exposed at or above an 8-hour time-weighted average of 85 decibels. Each employee’s annual audiogram will be compared to that employee’s baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If a standard threshold shift has occurred, the employee will be notified in writing within 21 days of this determination.

A standard threshold shift would be a change in hearing of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

While audiograms may be compared by a technician, problem audiograms will be referred to an audiologist, otolaryngologist, or physician for further evaluation.

The person performing this evaluation will be provided the following:

a. A copy of this program including all standards.
b. The baseline audiogram and most recent audiogram of the employee to be evaluated.
c. Measurements of background sound pressure levels in the audiometric test room as required in Appendix D to 29 CFR 1910.95.
d. Records of audiometer calibrations.

Note: If the annual audiogram shows that an employee has suffered a standard threshold shift, the employee will be re-tested within 30 days and these results will be considered the annual audiogram.

If the physician determines that a standard threshold shift has occurred, the following steps will take place:

a. Those employees not using hearing protectors will wear them and be trained in their use and care.
b. Those employees using hearing protectors will be re-evaluated and refitted and provided with hearing protectors that offer greater attenuation. They will also be retrained using this program with emphasis on the need for hearing protection.
c. The employee will be referred for a clinical audiological evaluation or an ontological examination if additional testing is necessary or if it is suspected that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors.
d. The employee will be informed, if necessary, of the need for an ontological examination if a medical pathology of the ear that is unrelated to the use of hearing protectors is suspected.

Audiometric Tests - Recordkeeping

Audiometric test records will be retained for the duration of the affected employees' employment.

These records will include:

a. The employee's name and job classification.
b. The date of the audiogram.
c. The examiner's name.
d. The date of the last acoustic or exhaustive calibration of the audiometer.
e. The employee's most recent noise exposure assessment.
f. Accurate records of the measurements of the background sound pressure levels in audiometric test rooms.

Upon request, employees may have access to these records.

Hearing Protectors

At no cost, and replaced as necessary, hearing protectors will be provided to all employees exposed to an 8-hour time-weighted average of 85 dB or greater.

Ear protective devices inserted in the ear will be fitted or determined individually by competent persons.

Appropriate hearing protectors will be available in a variety of styles from which to choose to provide a comfortable fit and employees will be made aware of the proper use and care of the protectors selected.

In selecting appropriate hearing protectors, Vincent Noriega the below factors:

a. The hearing protector's noise reduction rating (Subject Fit) [NRR(SF)].

   Note: The NRR(SF), measured in dB and found as a number on the hearing protector, can be used by subtracting that number from an A-weighted sound level or a time-weighted average noise exposure to determine the level of protection for most (84%) of the users.

   Note: The NRR(SF) is based on tests of continuous noise and may not be an appropriate indicator for protection against impulse or impact noise.

b. The user's daily equivalent noise exposure.
c. Variations in noise levels.
d. User preference.
e. Communication needs.
f. Hearing ability.
g. Compatibility with other safety equipment.
h. User's physical limitations.
i. Climate and other working conditions.
j. Replacement, care, and use requirements.

Training

Affected employees (those exposed to action level noise) will receive training in our Hearing Conservation Program and this training will be repeated annually. Training will be updated to be consistent with changes in the PPE and work processes. An employee who is required to wear hearing protectors and fails to do so will be retrained with emphasis on the needless and permanent damage to hearing caused by careless exposure to hazardous noises in the work environment.

Interactive training will include, but not be limited to:

a. The effects of noise on hearing.
b. The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care.
c. The purpose of audiometric testing and an explanation of the test procedures.
d. A review of the program including all appropriate standards.

Process of Hearing

Hearing involves, in its simplest terms, conducting sounds from outside your body to your brain. The ear is divided into three main sections:

a. External Ear — collects sounds and directs them to the tympanic membrane (ear drum).

Major Components:

- Pinna: the visible part of the ear.
- External auditory canal: approximately 1¼ inch tube to direct sound to the eardrum.
- Tympanic membrane: vibrates as it is hit with incoming sounds.

b. Middle Ear — air filled space that connects outer ear to inner ear.

Major Components:

- Ossicles: three bones commonly called the “hammer”, the “anvil”, and the “stirrup”. These bones collect the sound, amplify it, and transfer it to the fluid in the inner ear.
- Eustachian tube: small tube connected to the throat that brings air into the middle ear allowing pressure equalization of both sides of the ear drum.

c. Inner Ear — transfers sound vibrations to nerve impulses and sends them to the brain.

Major Components:

- Vestibule: helps maintain balance.
- Cochlea: takes vibrations of the middle ear bones and transfers them into nerve impulses that go the brain. The stirrup, in the middle ear, vibrates through a small opening in the cochlea. This opening is connected to fluid filled canals. The pressure waves in the fluid cause small hair type cells to bend. As they bend, they release a nerve impulse which is sent to the brain. The brain perceives these impulses as sound. This is where noise induced hearing loss occurs.
- Semicircular canals: involved with equilibrium (balance)
- Acoustic nerve:
  a. cochlear nerve: connects the cochlea to the brain.
  b. vestibular nerve: connects the semicircular canals to the brain.

Noise Induced Hearing Loss (NIHL)

Moderate exposure to loud noise (over 90 dB for one or more hours) may cause reversible changes within the inner ear such as: subtle intracellular changes in the hair cells or swelling of the auditory nerve endings. These temporary changes present themselves as temporary threshold shifts (TTS) 10 dB or more at various frequencies in either ear. This temporary hearing loss will go away within hours -- 16 hours maximum.

How this loss may occur is as follows: continued sound may decrease the stiffness in the hair bundles at the top of the hair cells in the inner ear. This in turn would cause less vibration at a given sound level and an accompanying loss in hearing.

However, continued exposure to loud noise over time will result in permanent threshold shift (PTS) and the resultant permanent, non-reversible hearing loss.

Additionally, the most common cause of tinnitus (an annoying ringing in the ears) is damage to the ear from noise exposure resulting in hearing loss.

Because the loss of hearing is so gradual, so painless, so unnoticeable, there may be a tendency to not take hearing conservation seriously until it is too late and you have lost one of your major contacts with the world around you – your hearing.

Why bother with a Hearing Conservation Program? Why not, instead, just require hearing protectors at all times, in all situations?"

This misses the point. Your hearing – just as your sight, touch, and smell – is your means of contact and placement in the world around you. By wearing hearing protectors when not needed, you lessen your ability to hear and be in touch with your environment.

You certainly wouldn't want to save your hearing and lose your life because you didn't hear the warning "Watch out!", "Stop!" or you missed the sound of approaching danger.

Hearing Conservation Program Recordkeeping

The below records will be retained.

a. All noise level monitoring records.
b. All employee exposure measurements.
c. All employee audiometric test records which will include:
    1. The employee's name and job classification.
    2. The date of the audiogram.
    3. The examiner's name.
    4. The date of the last acoustic or exhaustive calibration of the audiometer.
    5. The employee's most recent noise exposure assessment.
    6. Accurate records of the measurements of the background sound pressure levels in audiometric test rooms.

Record Retention:

The below records will be retained at least for the period indicated:

Noise exposure measurement records will be retained for two years.

Audiometric test records will be retained for the duration of the affected employee's employment.

Access to Records:

All the above records will be provided upon request to employees, former employees, representatives designated by the individual employee, and the Assistant Secretary.

Transfer of Records:

If Milestone Industrial Welding Services Llc ceases to do business, we will transfer to the successor employer all above records and the successor employer will retain them for the remainder of the period noted above.

Personal Protective Equipment - Respiratory Protection

29 CFR 1910.134 - Respiratory Protection
29 CFR 1910.134 App C - OSHA Respirator Medical Evaluation Questionnaire

Overview

The best respiratory protection one can have is clean, breathable air. Engineering controls are our first line of defense against contaminated or oxygen deficient air. These controls include, but are not limited to, using measures such as enclosure or confinement to keep atmospheric hazards away from employees, general or local ventilation to exhaust hazardous atmospheres, and/or substitution of less toxic materials to avoid hazardous atmospheres in the first place. When effective engineering controls are not feasible, or during the time frame they are being instituted, appropriate respirators will be used.

The concept of respiratory protection is quite simple. Certain types of atmospheric hazards are simply particles that can be filtered out of the air, through the use of an air-purifying respirator. Air-purifying respirators force the harmful particles into a filter specifically designed for the hazard(s) where they are trapped or absorbed. The air reaching the employee's lungs is essentially free of the hazard.

a. If the action of inhalation causes the ambient air to be sucked through the filter, the respirator is considered a negative pressure respirator.
b. If the ambient air is forced through the respirator filter (with a blower, for example), the respirator is considered a positive pressure respirator.

A respirator that removes harmful contaminants is of no value in an oxygen deficient (less than 19.5% oxygen) or oxygen enriched (more than 23.5 % oxygen) atmosphere.

An atmosphere-supplying respirator will be used in oxygen deficient atmospheres or in atmospheres where a filter cannot reduce the particulate hazard to an acceptable level. This type of respirator provides clean, breathable air from a source independent of the ambient atmosphere.

Different types of respirators provide different levels of protection. Never may an air-purifying respirator be substituted for a required atmosphere-supplying respirator.

Unfortunately, respiratory protection is more complicated than it first appears. Because of the variety and severity of respiratory hazards, the types of respirators and their limitations, the methods for fitting and testing, and, most importantly, the detrimental ramifications of respirator misuse, this respiratory protection program is required.

Proper respirator selection and use can prevent occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, and vapors. In atmospheres that are immediately dangerous to life or health, proper respirator selection and use will save your life.

When required, employees will be supplied appropriate respirators and all incidental costs associated with respirator use (fit testing, repair parts, filters, medical examinations, cleaning supplies, etc.) will be borne by the company.

Duties of the Respiratory Program Administrator

Vincent Noriega, our Respiratory Protection Program Administrator, will keep abreast of developments in the respiratory protection field and ensure that our personnel are provided safe respiratory working conditions.

Additionally, Vincent Noriega will:

a. Measure, estimate, or review data on the concentration of airborne contaminants in the work area prior to respirator selection.
b. Select the appropriate type of respirator that will provide adequate protection from the airborne contaminants or provide clean, breathable air.
c. Maintain applicable records including:
    1. Fit test record
    2. Medical records
    3. Inspection records
    4. Evaluation records
    5. Training records

Definitions

There are a number of terms and phrases, not used in ordinary everyday life, which must be understood by affected employees.

Air-Purifying Respirator means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Atmosphere-Supplying Respirator means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere & includes supplied-air respirators (SARs) & self-contained breathing apparatus (SCBA) units.

Canister or Cartridge means a container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.

Demand Respirator means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

Emergency Situation means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.

Employee Exposure means exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

End-of-Service-Life Indicator (ESLI) means a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

Escape-Only Respirator means a respirator intended to be used only for emergency exit.

Filter or Air-Purifying Element means a component used in respirators to remove solid or liquid aerosols from the inspired air.

Filtering Facepiece (DUST MASK) means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

Fit Factor means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit Test means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

Helmet means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

High Efficiency Particulate Air (HEPA) Filter means a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

Hood means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Immediately Dangerous to Life of Health (IDLH) means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Loose-Fitting Facepiece means a respiratory inlet covering that is designed to form a partial seal with the face.

Negative Pressure Respirator (Tight Fitting) means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Oxygen Deficient Atmosphere means an atmosphere with an oxygen content below 19.5% by volume.

Physician or Other Licensed Health Care Professional (PLHCP): an individual whose legally permitted scope of practice allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required medical evaluation.

Positive Pressure Respirator means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Powered Air-Purifying Respirator (PAPR) means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure Demand Respirator means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Qualitative Fit Test (QLFT) means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quantitative Fit Test (QNFT) means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Respiratory Inlet Covering means that portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

Self-Contained Breathing Apparatus (SCBA) menas an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

Service Life means the period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.

Supplied-Air Respirator (SAR) or Airline Respirator means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

Tight-Fitting Facepiece means a respiratory inlet covering that forms a complete seal with the face.

User Seal Check means an action conducted by the respirator user to determine if the respirator is properly sealed to the face.

Respirator Selection

Respirators will be selected on the basis of hazards to which the employee will be exposed. Using an inappropriate respirator is just as bad, if not worse, than using no respirator at all because it can evoke a false sense of security while offering no protection to the hazard at hand.

All respirators will be NIOSH approved.

Work area surveillance will be made by Vincent Noriega taking into consideration the actual work area conditions, the degree of exposure and employee stress.

Respirator selection will take into consideration the air quality, the contaminant, the amount of the contaminant, the time exposure to that contaminant, and the work area surveillance.

Oxygen-deficient atmospheres as well as atmospheres in which the respiratory hazard exposure cannot be determined are considered immediately dangerous to life or health and the use of one of the below listed respirators is required:

a. A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
b. A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

Note: Respirators provided only for escape from IDLH atmospheres will be NIOSH-certified for escape from the atmosphere in which they will be used.

Generally, but not always, work area atmospheres that require respiratory protection are not IDLH and in these cases respirator selection offers more options. The respirator selected will be adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements under routine and reasonably foreseeable emergency situations. Of course, the respirator selected will be appropriate for the chemical state and physical form of the contaminant.

For protection against gases and vapors, the respirator provided will be:

a. Atmosphere-supplying.
b. Air-purifying, provided that:
    1. It is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or
    2. If there is no ESLI appropriate for conditions in respiratory hazard area, a change schedule for canisters and cartridges will be used that is based on objective data that will ensure that canisters and cartridges are changed before the end of their service life.

Vincent Noriega will rely on past experience and cartridge manufacturer recommendations. If the competent person on site or any respirator user notices that breathing becomes more strained, the change schedule will be modified.

For protection against particulates, the respirator provided will be:

a. Atmosphere-supplying; or
b. Air-purifying equipped with a filter certified by NIOSH under 30 CFR part 11 like a HEPA filter; or

Note: Filters manufactured under 30 CFR part 11 standards may continue to be used, however, as of July 10, 1998, other than PAPR's, they are not to be purchased. Only 42 CFR part 84 type filters will be used.

c. Air-purifying equipped with a filter certified for particulates by NIOSH under 42 CFR part 84; or

Note: These respirators and filters, other than PAPR's are identified on the packaging with numbers that take the form: TC-84A-XXX.

a. Filters will have an "N", "R", or "P" designation followed by "100", "99" or "95." Examples: N100 or R99
1. "N" indicates the filter is for any solid or non-oil containing particulate contaminant.
2. "R" indicates the filter is for any particulate contaminant. If used for an oil containing particulate, a one shift use limit applies.
3. "P" indicates the filter may be used with any particulate contaminant.

b. The number indicates the filter efficiency -- the higher the number, the more efficient. 100 = 99.97% efficiency; 99 = 99% efficiency; and 95 = 95% efficiency.
1. Air-purifying equipped with any filter certified for particulates by NIOSH for contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers.

Often, the permissible exposure limit (PEL) and suggested respirator is listed on an SDS. Published exposure limits for the contaminant at hand will assist in determining respirator selection.

Vincent Noriega will select respirators based on:

a. The nature of the hazardous operation or process.
b. The type of respiratory hazard including permissible exposure limits.
c. The period of time for which respiratory protection must be worn.
d. The activities of workers in the hazardous area.
e. The respirator's characteristics, capabilities, and limitations.

Particulate Respirator Selection

Prior to respirator selection, the following factors must be known:

a. The identity and concentration of the particulates in the work area air.
b. The permissible exposure limit (PEL), the NIOSH recommended exposure limit (REL) or other occupational exposure limit.
c. The hazard ratio (HR). The HR is obtained by dividing the airborne particulate concentration by the exposure limit.

d. The assigned protection factor (APF) for the type of respirator to be used. The APF is the minimum anticipated level of protection provided by each type of respirator worn in accordance with an adequate respiratory protection program. For example, an APF of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, or to 10% of the work area concentration.
e. The immediately dangerous to life or health (IDLH) concentration, including oxygen deficiency.

The APF should be greater than the HR and multiplying the occupational exposure limit by the APF gives the maximum work area concentration in which the respirator may be used.

All filters will have a 99.97% efficiency rating indicated by the number 100.

Service Life of Filters

If the selected filters have an end-of-service-life indicator (ESLI), the filters will be used until the indicator shows that it is time to be replaced.

In the absence of an ESLI, the following is our policy of service life of filters:

All HEPA filters manufactured under 30 CFR part 11 (for PAPR's) will be replaced at least daily (once each work shift) or if breathing resistance becomes excessive or if the filter suffers physical damage (tears, holes, etc.) If PAPR filters become available under 42 CFR part 84 standards, they will be used and fall under the below schedule:

All filters will be replaced whenever they are damaged, soiled, or causing noticeably increased breathing resistance.

N-series filters may be used and reused subject only to considerations of hygiene, damage, and increased breathing resistance. If the competent person determines the work area to be exceptionally dirty, the filters will be changed each work shift.

R-series filter will be changed every work shift if oil is present. If oil is not present, they may be used and reused subject only to considerations of hygiene, damage, and increased breathing resistance. If the competent person determines the work area to be exceptionally dirty, the filters will be changed each work shift.

P-series filters will be used and reused in accordance with the manufacturer's time-use limitations when oil aerosols are present.

P-series filters can be used and reused subject only to consideration of hygiene, damage, and increased breathing resistance if oil aerosols are not present.

Medical Approval for Respirator Use

Before respirator use – even before fit testing – it must be determined that one is physically capable to wear the type of respirator to be assigned. Wearing negative pressure respirators can place an increased strain on one's respiratory system, and, depending on the task and the environmental conditions (especially heat and cold), respirators can put an additional strain on your whole body. Prior to respirator use, an employee must have a medical examination. The actual medical tests, if any, depend on the hazards involved, the condition of the employee, and the judgment of the physician or other licensed health care professional (PLHCP). If respirators are used to prevent exposure to certain toxic and hazardous substances (for example, lead or asbestos), then additional medical tests and surveillance procedures are required appropriate for the hazard.

A PLHCP will be identified to perform medical evaluations using the medical questionnaire with this program. The PLHCP will be given a copy of this program as well as the appropriate standards.

A follow-up medical examination will:

a. Be given to an employee who gives a positive response to any question among questions 1 through 8 in Section 2, Part A of Appendix C, or whose initial medical examination demonstrates the need for a follow-up medical examination.
b. Include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

The medical questionnaire and examinations will be given confidentially during normal working hours or at a time and place convenient to the employee. The employee will be given the opportunity to discuss the questionnaire and examination results with the PLHCP.

The PLHCP will be provided the following information to be used in determining an employee's ability to use a respirator:

a. The type and weight of the respirator to be used by the employee.
b. The duration and frequency of respirator use.
c. The expected physical work effort.
d. Additional protective clothing and equipment to be worn.
e. Temperature and humidity extremes that may be encountered.

An annual review of medical status is not required and additional medical evaluations are required only if:

a. An employee reports medical signs or symptoms that are related to ability to use a respirator.
b. a PLHCP, supervisor, or Vincent Noriega determines that the employee needs to be reevaluated.
c. Fit testing and work area program evaluation indicates a need.
d. A change occurs in work area conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

A negative pressure respirator may place an undue burden on an employee’s system and the PLHCP may recommend a PAPR be used instead.

Medical records will be retained for 30 years.

Once medical approval is received allowing the respirator use, fit testing may proceed. The employee will be provided with a copy of this determination.

Respirator Fit Test

There are various protocols for fit testing respirators and they can be found in 29 CFR 1910.134 App A. One (1) of the four (4) qualitative protocols listed below will be used:

Protocol/Fit Test Procedure	Appendix A to 29 CFR 1910.134
Isoamyl Acetate Fit Test Procedure	Paragraph B2 Paragraph B2(b)
Saccharin Solution Aerosol Fit Test Procedure	Paragraph B3 Paragraph B3(b)
BitrexTM Solution Aerosol Fit Test Procedure	Paragraph B4 Paragraph B4(b)
Irritant Smoke (Stannic Chloride) Fit Test Procedure	Paragraph B5 Paragraph B5(c)

The purpose of fit testing is to ensure that the respirator selected will actually do the job for which it was intended. Different manufacturers make different sizes of each model. Fit testing, following the OSHA approved protocols, will ensure that the specific make, model and size are appropriate for the user. An employee may only use the specific respirator(s) on which he/she has passed a fit test.

Eye glasses pose special problems when dealing with respirators. Normal eye glasses, while they do not interfere with the skin to facepiece seal of a ½ face respirator, will prevent a proper seal on a full face respirator and thus will not be worn. If glasses are needed, special adapters can be provided to hold lenses within the respirator.

Upon successful completion of respirator fit testing, a Record of Respirator Fit Test form will be completed and maintained with the employee's records. Only the latest fit test record need be retained. The Respirator Fit Test will be repeated at least annually or when:

a. A different respirator facepiece (size, style, model or make) is used.
b. There has been a weight change of at least 20 pounds.
c. There has been significant facial scarring in the area of the face piece seal.
d. There has been significant dental changes; i.e., multiple extractions without prosthesis or acquiring dentures.
e. Reconstructive or cosmetic surgery.
f. Any other condition that may interfere with facepiece sealing.

As explained in the protocols, the fit tests will not be conducted if there is any hair growth between the skin and the facepiece sealing surface. Further, there will not be mustaches that are so long as to interfere with the inlet or exhaust valves in the respirator. Of course, these requirements apply not only to fit testing procedures, but they also apply to actual on the job use where the seal between face and respirator must be maintained.

User Seal Check

A user seal check, performed in accordance with the manufacturer's instructions or 29 CFR 1910.134 App B, will be made prior to each use by the wearer of a tight-fitting respirator.

A user seal check is solely for respiratory protection of the employee and without this check there is no way of knowing if the selected respirator is actually working. Failure to perform a seal check may result in the use of a respirator which is of little or no value.

One would not be wearing a respirator in the first place if there were not some detrimental health consequences of non-use. Often, these consequences are chronic (long term) and immediately unnoticeable.

If respirator failure would lead to noticeable physical or mental impairment, then, in these situations, two (2) employees will be assigned in the same area and in view of each other. If one employee presents symptoms of physical or mental distress, the second employee will remove the first employee from the area. If there is not an immediate, total recovery, the affected employee will be provided medical care by emergency responders.

In the event work is being performed in an IDLH atmosphere, a safety harness and safety lines will be used so that the employee may be pulled to safety. Suitable rescue equipment will be available and a standby man or men with suitable self-contained breathing apparatus will be at the nearest fresh air base for emergency rescue.

All personnel should be aware of the appropriate SDS for the products they are working with, and particular attention should be given to health hazards; both acute and chronic, symptoms of overexposure, first aid measures, emergency procedures, and exposure limits.

Work Area Surveillance

The competent person at the work area where respirator use is required will maintain appropriate surveillance of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, Vincent Noriega, or competent person will reevaluate the continued effectiveness of the respirator.

Employees are to leave the respirator use area:

a. To wash their face and respirator facepiece as necessary to prevent eye or skin irritation associated with respirator use.
b. If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.
c. To replace the respirator or the filter, cartridge, or canister elements.

Defective respirators will be repaired or replaced before returning to the respirator use area.

Air Quality

Atmosphere-supplying respirators, depending on the type (supplied-air or SCBA) use compressed air, compressed oxygen, liquid air or liquid oxygen. Compressed and liquid oxygen must meet the requirements of the United States Pharmacopoeia for medical or breathing oxygen. Compressed breathing air must meet the requirements of Grade "D" breathing air including: oxygen content (v/v) of 19.5-23.5%; hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less; carbon monoxide content of 10 ppm or less; carbon dioxide content of 1,000 ppm or less; and lack of noticeable odor. Compressed oxygen will not be used in supplied-air respirators or open circuit self-contained breathing apparatus that have previously used compressed air. Oxygen must never be used with airline respirators.

Breathing air may be supplied to respirators from cylinders or air compressors. If cylinders are used, they will be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 178).

If a compressor is used for supplying breathable air by way of airline hoses to a respirator mask, it is a Type "C" system. The hose couplings used on these systems must not be compatible with any other gas systems. Breathable air -- not pure oxygen -- is used in these systems. All safety and standby devices will be maintained in working order such as alarms to warn of compressor failure or overheating. Compressors will be located so that contaminated air does not enter the system and suitable in-line filters will be installed. A receiver of sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in the event of a compressor failure will be in place. If an oil lubricated system is used, it will have a high temperature and carbon monoxide alarm.

Cleaning, Inspection, and Maintenance

Respirators issued for the exclusive use of one worker will be cleaned and disinfected after each day's use or more often, if necessary. A respirator used by more than one person will be cleaned and disinfected after each use by the employee who used it. Cleaning should be done using the manufacturer’s recommendations or the guidelines in 29 CFR 1910.134 App B. Remove or protect the filters/cartridges before cleaning because moisture can defeat the effectiveness of a filter. During cleaning, an inspection of the respirator will be made to ensure it retains its original effectiveness. Valves, straps, canisters, elasticity, facepiece, if applicable, will be inspected per the manufacturer’s instructions. Defective parts will be replaced before reuse.

Employees who use respirators will be instructed in the replacement of parts as allowed by the manufacturer (such as valves and straps). Respirators that require a higher level of repair will be returned to the manufacturer. All replacement parts will be of the same manufacture as the respirator and all replacement parts will be NIOSH approved. Maintenance will be limited to replacing parts (straps, filters, valves, etc.) allowed by the manufacturer. Only respirators in 100% working order will be used.

Cleaning supplies and replacement parts will be provided at no cost. In the event a respirator is not used for thirty (30) days, it will be inspected by a competent person. Particular attention will be paid to SCBA apparatus and Type "C" connections. SCBA apparatus will be inspected monthly and air and oxygen cylinders will be fully charged according to the manufacturer’s instructions. All warning devices will be checked to ensure they are properly functioning.

Maintenance of Emergency/Unassigned Respirators

Emergency and unassigned respirators (respirators used by more than one person) will be cleaned and inspected for defects every thirty (30) days and after each use. Particular attention will be given to the elasticity of the respirator and ensuring that the respirator is defect free. Only the latest record of this inspection will be maintained. A tag showing the name of inspector, the date, and condition of the respirators will be attached to the respirator.

Storage of Respirators

Respirators will be stored in a convenient, clean, and sanitary location in such a manner as to protect them from dust, heat, sunlight, extreme cold, excessive moisture, and damaging chemicals. In the work area, a plastic bag can help protect a respirator from dust and moisture. Respirators will not be stored in lockers or toolboxes unless they are in cases or cartons. Respirators will be stored with the facepiece and exhalation valve resting in a normal position. This will also prevent the soft, pliable material of which respirators are made from setting in an abnormal position, changing shape, and reducing face to mask seal.

Program Evaluation

This Program will be evaluated on a continual basis and updated if the need arises. Reasons for upgrading would include new atmospheric hazards; new respiratory protection equipment; new or altered work procedures; the introduction of new engineering controls; the failure of employees to follow standard operating procedures.

Often, the effects of breathing contaminated atmospheres are chronic in nature and thus some employees may tend to become lax in using their respirators properly. Supervisors must be on alert for this tendency.

Employees must realize that they must use the provided respiratory protection in accordance with the instructions and training received.

Training

Training will be given by a competent person, prior to use, to ensure each affected employee can demonstrate knowledge of at least the following:

a. Why a respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
b. What the limitations and capabilities of the respirator are.
c. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
d. How to inspect, put on and remove, use, and check the seals.
e. The procedures for maintenance and storage of the respirator.
f. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
g. The general concepts of this program.

Retraining will be given annually and when:

a. Changes in the work area or the type of respirator render previous training obsolete.
b. Inadequacies in the employee's knowledge or use of the respirator indicate that the employee lacks the required understanding or skill.
c. A situation arises in which retraining appears necessary to ensure safe respirator use.

Dust Masks – Use of Respirators when not Required

Vincent Noriega, or competent person, in the work area will determine when respirator use is **required**. Dust masks may be used at any time to reduce annoying particles in the air in the work area.

An employee who wants to wear an actual respirator in the work area for comfort or an additional level of safety that is **not required** for health reasons according to standards, must obtain medical approval for respirator use according to the procedures outlined in this program.

Additionally, that employee should read this program (formal training is not required) and:

a. Read and heed all manufacturers' instructions on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
b. Choose a respirator certified for use to protect against the contaminant of concern. The respirator must be NIOSH approved.
c. Not wear the respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. A respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
d. Not interchange the respirator with another employee.

Disposable Respirators:

OSHA requires that employees who voluntarily use disposable respirators in situations where respiratory protection is not specifically required by OSHA standard (in atmospheres where exposures are below the permissible exposure limit) essentially for personal comfort or additional, though not required, respiratory protection be informed of 29 CFR 1910.134 Appendix D.

All disposable respirators, such as Moldex, 3M, Wilson, North Safety, etc. must be marked with the manufacturer's name, the part number, the protection provided by the filter, and "NIOSH".

Disposable filters are actually negative pressure respirators. They protect the user by filtering particles out of the air breathed.

Though disposable filters cannot be fit-tested in the traditional sense, they must be fit-tested in accordance with the manufacturer's instructions.

Under no circumstances may any respirator other than the above disposable respirators be used without compliance with a respiratory protection program.

Standard Number: 1910.134 App D

Standard Title: (Mandatory) Information for Employees Using Respirators When not Required Under Standard.

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, of if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard. You should do the following: 1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations. 2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you. 3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke. 4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

[63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998]

Milestone Industrial Welding Services Llc

Respiratory Protection Program Evaluation Form

Vincent Noriega, or a designated competent person, will conduct work area and administrative evaluations to ensure the provisions of our respiratory protection program are being properly implemented. Discrepancies noted will be immediately corrected.

A random sampling of affected personnel addressed the below listed concerns and the responses are indicated below:

	Yes	No
Is the respiratory protection program understood?	☐	☐

Problem areas: _____

Corrective action: _____

_____

Do respirators fit without interfering with job performance?	☐	☐

Problem areas: _____

Corrective action: _____

_____

Are respirators being properly maintained?	☐	☐

Problem areas: _____

Corrective action: _____

_____

Are appropriate respirators selected for the hazard?	☐	☐

Problem areas: _____

Corrective action: _____

_____

_____ _____

(Signature of Person performing evaluation) (Date)

Note: Retain only the latest evaluation.

Milestone Industrial Welding Services Llc

Report of Medical Examination

_____
(Date)

_____
(Applicant's Name)

_____
Job for which person is being examined: _____

Reason for medical examination: Respirator use.

Type(s) of respirator to be used: _____

Atmospheric hazards for which the above respirators will be used: _____

_____ _____ _____

Note: Circle the appropriate paragraphs and subparagraphs.

1. Based on the information available to me, it is my opinion that the above-named person may be placed in the job position with no restrictions in work assignments.
2. Based on all the information available to me, it is my opinion that the above-named person has a detected medical conditions(s) or finding(s) which:
   a. Places this person or others at increased risk of material impairment of health from anticipated or potential occupational exposures or activities.
   b. May be aggravated by occupational exposures or activities.
   c. May interfere with safe and/or effective performance.
   d. Needs follow-up. This includes changes which may be with "normal limits" based on the current assessment and/or comparison with previous results. Based on available data, the casual relationship of these findings to occupational exposures appears to be positive/negative/ill defined.
   e. Other: (Explain)_____
3. On the basis of the above, I recommend:
   a. No restrictions in work assignments for the above job.
   b. Restricted activities: (List)_____
   c. Limited exposure: (Note)_____
   d. Special protective measures: (Note)_____
   e. Medical follow-up: (Note)_____
   f. Limitation on the use of a negative pressure or air purifying respirator: (Explain)_____

g. Other:(Note) _____

4. I have advised the employee of any detected medical condition of finding which dictates further medical examination or treatment and have appropriate recommendations regarding medical follow-up and exposure. This will be documented in writing.
5. Additional comments: _____

_____

_____

_____

_____

6. I understand that a copy of this report will be given to the examinee by the person receiving it.

DATE: _____ _____

(Physician's Signature)

_____

(Address)

_____

(City, State, ZIP)

_____

(Telephone Number)

Return this form to:
Milestone Industrial Welding Services Llc
Vincent Noriega
22330 N 184th Lane
Surprise, AZ, 85387
6026171996

Milestone Industrial Welding Services Llc

Medical Opinion for Respirator Use

_____
(Date)

_____
(Applicant's Name)

TO: Return this form to:

Milestone Industrial Welding Services Llc
Vincent Noriega
22330 N 184th Lane
Surprise, AZ, 85387
6026171996

RE: Medical Opinion for Respirator Use

On this date, based on the employee medical questionnaire and/or further medical examination, the above named applicant is found to be:

a. Eligible to use a respirator._____
(Respirator type, i.e., ½ face; full face; PAPR; SCBA)

_____
_____
_____

b. Eligible to use a respirator with the following restrictions:

_____
_____
_____
(Respirator type, i.e., ½ face; full face; PAPR; SCBA)

c. Not eligible to use a respirator.

_____
(Signature of physician or licensed healthcare professional)

_____
(Typed or Printed Name)

_____
(Street Address)

_____
(City, State, ZIP)

Milestone Industrial Welding Services Llc

Respirator Fit Test Summary

Name of employee: _____

Date of Testing: _____ Test Conducted By: _____

Respirator(s) Selected: _____ _____
(Manufacturer) **(Model/Series)**

☐ Pass

_____ ___ _____
☐ Fail **(Respirator Size)** **(NIOSH Certification #)**

Respirator(s) Selected: _____ ___ _____
(Manufacturer) **(Model/Series)**

☐ Pass

_____ ___ _____
☐ Fail **(Respirator Size)** **(NIOSH Certification #)**

Respirator(s) Selected: _____ ___ _____
(Manufacturer) **(Model/Series)**

☐ Pass

_____ ___ _____
☐ Fail **(Respirator Size)** **(NIOSH Certification #)**

Testing Agent (Protocol): Circle One

a. Isoamyl Acetate Protocol.	(Banana Oil)
b. Saccharin Solution Aerosol Protocol.	(Saccharin Taste)
c. BitrexTM Solution Aerosol Protocol	(Denatonium Benzoate)
d. Irritant Smoke Protocol.	(Irritant Smoke)

Signature of Person Conducting the Test: _____

Signature of Employee: _____

The Respirator Fit Test will be repeated at least annually or when:

a. A different respirator facepiece (size, style, model or make) is used.
b. There has been a weight change of at least 20 pounds.
c. There has been significant facial scarring in the area of the face-piece seal.
d. There has been significant dental changes; i.e., multiple extractions without prosthesis or acquiring dentures.
e. Reconstructive or cosmetic surgery.
f. Any other condition that may interfere with facepiece sealing.

Milestone Industrial Welding Services Llc

Record of Inspection

EMERGENCY/UNASSIGNED RESPIRATORS

All emergency and unassigned respirators were inspected and cleaned on the date indicated. Any defects found were corrected or the respirator was removed from service. This inspection was performed after each use and/or monthly.

DATE	SIGNATURE OF INSPECTOR	NOTES

Note: Only the latest record must be retained.

Prevention of Heat and Cold Stress

Prevention of Cold Stress

Cold related work illness is a real threat to our employees who work outside during months of cold weather. In order to lessen this threat, this program has been prepared.

All current employees will be given instruction in this program prior to working outside where the possibility of frostbite and hypothermia exist.

On days when applicable environmental conditions exist (temperatures or wind chill factors equal to or less than 30 degrees F), the site supervisor will, before the morning shift starts, remind workers of the danger of frostbite and hypothermia, the procedures to lessen its impact, and, in the worst case, the procedure for medical response.

All persons should recognize the symptoms of cold related illness.

Frostbite

(Sensations of coldness; tingling, stinging or aching feeling of the exposed area followed by numbness of ears, fingers, toes, cheeks, and noses. Frostbitten areas appear white and cold to the touch)

Seek medical assistance immediately.

Frostbitten parts should be covered with dry, sterile gauze or soft, clean cloth bandages.

DO NOT massage frostbitten tissue

Take measures to prevent further cold injury.

General Hypothermia

(Shivering, an inability to do complex motor functions, lethargy, and mild confusion)

Conserving remaining body heat. Providing additional heat sources. Seek medical assistance for persons.

Severe Hypothermia

(Unresponsive and not shivering)

Seek medical attention immediately. Reduce heat loss by:

a. Obtaining shelter.
b. Removal of wet clothing.
c. Adding layers of dry clothing, blankets, or using a pre-warmed sleeping bag.

The four environmental conditions that cause cold-related stress are low temperatures, high/cool winds, dampness and cold water. Wind chill, a combination of temperature and velocity, is a crucial factor to evaluate when working outside. For example, when the actual air temperature of the wind is 40°F (4°C) and its velocity is 35 mph, the exposed skin receives conditions equivalent to the still-air temperature being 11°F. A dangerous situation of rapid heat loss may arise for any individual exposed to high winds and cold temperatures.

The purpose of this program is to take definitive measures prior to the onset of cold related illnesses so that medical response will not be necessary. If the above conditions do present themselves, the supervisor, who will always have access to a mobile phone, will follow our standard emergency procedures.

Definitive measures to prevent cold related illness include:

Personal Protective Clothing

Personal Protective Clothing is the most important step in fighting the elements is providing adequate layers of insulation from them. Wear at least three layers of clothing:

a. An outer layer to break the wind and allow some ventilation (like Gore-Tex® or nylon);
b. A middle layer of wool or synthetic fabric (Quallofil or Pile) to absorb sweat and retain insulation in a damp environment. Down is a useful lightweight insulator; however, it is ineffective once it becomes wet.
c. An inner layer of cotton or synthetic weave to allow ventilation.

   Pay special attention to protecting feet, hands, face, and head. Up to 40% of body heat can be lost when the head is exposed. Footgear should be insulated to protect against cold and dampness. Keep a change of clothing available in case work garments become wet.

Engineering Controls

Engineering Controls help reduce the risk of cold-related injuries.

a. Use an on-site source of heat, such as air jets, radiant heaters, or contact warm plates.

   Note: During telecommunication operations, flame-type heaters may not be used within ground tents or on platforms within aerial tents unless the tent covers are constructed of fire-resistant materials and adequate ventilation is provided to maintain safe oxygen levels and avoid harmful buildup of combustion products and combustible gases.

b. Shield work areas from drafty or windy conditions.
c. Provide a heated shelter for employees who experience prolonged exposure to equivalent wind-chill temperatures of 20°F or less.
d. Use thermal insulating material on equipment handles when temperatures drop below 30°F.

Safe Work Practices

Safe Work Practices, such as changes in work schedules and practices, are necessary to combat the effects of exceedingly cold weather. Possible workable safe practices include:

a. Allowing a period of adjustment to the cold before embarking on a full work schedule.
b. Permitting employees to set their own pace and take extra work breaks when needed.
c. Reducing, as much as possible, the number of activities performed outdoors. When employees must brave the cold, selecting the warmest hours of the day and minimize activities that reduce circulation.
d. Ensuring that employees remain hydrated.
e. Establishing a buddy system for working outdoors.
f. Educating employees to the symptoms of cold-related stresses – heavy shivering, uncomfortable coldness, severe fatigue, drowsiness, or euphoria.

Provision of Water

Employees will have access to adequate quantities of potable drinking water.

Where the supply of water is not plumbed or otherwise continuously supplied, water will be provided in sufficient quantity.

Supervisor will provide frequent reminders to employees to drink frequently, and, if needed, more water breaks will be provided.

Drinking water will be dispensed in containers with a tight sealing lid and labeled as Drinking Water. Drinking water containers are to be cleaned daily. Water containers will be placed as close as possible to the workers.

Supervisors will monitor water consumption and water supply and ensure adequate levels are available to last the whole shift.

Disposable/single use drinking cups will be provided to employees.

Supervisors will remind employees that personal military style canteens may be worn containing water. In cold weather conditions, employees are encouraged to drink warm, sweet beverages (sugar water, sports-type drinks). They should avoid drinks with caffeine (coffee, tea, or hot chocolate). Employees are cautioned, however, that sharing water from a personal canteen is forbidden and, because of the health hazard to the user and the person with whom it is shared, disciplinary action will be taken against both employees if they drink out of the same container. This disciplinary action will be documented using our disciplinary enforcement form.

Training

All employees will read this program and be given interactive training in its provisions. A copy of this program will be kept at the work area during applicable periods of cold weather.

All supervisors will read the below informational items prior to utilization of this program and have an opportunity for discussion and clarification with Vincent Noriega, our Safety Director.

OSHA Cold Stress QuickCard 3156

OSHA Cold Stress QuickCard 3158 (Spanish)

Prevention of Heat Stress

Heat related work illness is a real threat to our employees who work outside during months of high heat and humidity. In order to lessen this threat, this program has been prepared.

All current employees will be given instruction on this program prior to working in heat illness inducing environments or other severe environmental conditions.

On days when applicable environmental conditions exist - periods of hot weather (equal to or greater than 85ºF and 40% Relative Humidity) -the site supervisor will, before the morning shift starts, remind workers of the danger of heat illness, the procedures to lessen its impact, and, in the worst case, the procedure for medical response.

All persons should recognize the symptoms of heat related illness.

Heat Exhaustion

(Fatigue; weakness; profuse sweating; normal temperature; pale clammy skin; headache; cramps; vomiting; fainting)

Remove from hot area.

Have victim lie down and raise feet.

Apply cool wet cloths.

Loosen or remove clothing.

Allow small sips of water if victim is not vomiting.

Heat Stroke

(Dizziness; nausea; severe headache; hot dry skin; confusion; collapse; delirium; coma and death)

Call for immediate medical assistance.

Remove victim from hot area.

Remove clothing.

Have victim lay down.

Cool the body (shower, cool wet cloths)

Do not give stimulants.

The purpose of this program is to take definitive measures prior to the onset of heat exhaustion and heat stroke so that medical response will not be necessary. If the above conditions do present themselves, the supervisor, who will always have access to a mobile phone, will follow our standard emergency procedures.

Definitive measures to prevent heat related illness include:

a. Provision of water
b. Provision of shade
c. Provision of rest (recovery period)
d. Modified work procedures

Provision of Water

Water is a key preventive measure to minimize the risk of heat related illnesses. Employees will have access to adequate quantities of potable drinking water.

Where the supply of water is not plumbed or otherwise continuously supplied, water will be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift.

Supervisors will encourage the frequent drinking of water. The supervisor or a designated person will monitor water consumption every 30 minutes. Employees are encouraged to report bad tasting water or low levels of water immediately so the situation can be corrected.

Supervisor will provide frequent reminders to employees to drink water, and, if needed, more water breaks will be provided.

Every morning during conditions where this program is applicable, there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift.

Drinking water will be dispensed in containers with a tight sealing lid and labeled as Drinking Water. Drinking water containers are to be cleaned daily. Water containers will be placed as close as possible to the workers.

Supervisors will monitor water consumption and water supply and ensure adequate levels are available to last the whole shift. Disposable/single use drinking cups will be provided to employees. During extreme conditions, the supervisor will blow an air horn to remind workers to take a water break.

Supervisors will remind employees that personal military style canteens may be worn containing water. Employees are cautioned, however, that sharing water from a personal canteen is forbidden and, because of the health hazard to the user and the person with whom it is shared, disciplinary action will be taken against both employees if they drink out of the same container. This disciplinary action will be documented using our disciplinary enforcement form.

As a reminder of the importance of water to the human system, the following information is supplied:

Fluids

If you heard in advance that this safety meeting was on fluids, you may well have thought that the meeting would focus on the storage, use, clean-up, and possible emergency procedures involved with the liquid chemical products used on or near work areas. You'd be wrong. While the above are important topics and questions related to them should be addressed to the competent person, this safety meeting is about **your** bodily fluids.

From a safety standpoint, you must not neglect your need for potable (drinkable) fluids. Water is not only the most abundant of all compounds found on the earth, it is the most abundant part of you – actually about 65% of you is water.

Drink fluids! From a life process standpoint, what fluid intake is doing is keeping you healthy by allowing your body to maintain its core body temperature at its appropriate level. When your brain senses that cooling action is needed, your body circulates blood to your skin to allow it to cool with the outside temperature. If the water used for sweat is not replaced, a water deficit starts to occur. The millions of chemical reactions taking place in your body at every moment can only occur in the presence of water. The fluids in your body transport nourishment, gases, and waste.

Imagine your body as a water based chemical factory that functions only within a narrow temperature range. An average, healthy person, at rest, has an oral temperature of between 98.6ºF and 100.4ºF. If your body temperature reaches 105.8ºF, convulsions may occur. Your whole central nervous system is impaired when your body temperature raises 9ºF above normal. At 106.0ºF, the thermoregulatory center in your brain fails and, because of damage to your central nervous system, the sweating (cooling) mechanism cuts off when you need it most. It is a vicious circle – the hotter you get, the more heat you generate through metabolism. In fact, at 107.6ºF, cellular metabolism is 50% higher than at normal temperatures.

Without getting too graphic, here are some of the problems associated with extreme water loss: cells will shrink; the skin will lose its elasticity; skin and mucous membrane cells will dry out eyeballs will become soft; weight loss will occur; the body temperature will rise; apprehension, restlessness, and even coma may occur; urine will become concentrated; renal shutdown will occur; red blood cells will shrink; death.

Stay healthy! Drink water! Water is truly the stuff of life.

Provision of Shade

The supervisor will ensure that employees have access to shade to minimize the risk of heat related illnesses. If natural shade is not available, the supervisor will ensure that sun umbrellas or portable canopies are provided in adequate number. These umbrellas or canopies will be place in close proximity to the work activity (i.e., no more than 50-100 yards).

Ideally, if available, employees will be allowed to get out of the sun by entering an air conditioned structure such as a building or job trailer. This not only provides shade, it provides a cool, less humid, atmosphere. Any employee who feels the need for shade will protect himself/herself from the sun for a period of not less than 5 minutes.

Lastly, but importantly, persons must provide personal shade in the form of shirts (preferably light colored to reflect the sun). Shirts are required to prevent sunburn, another health hazard.

Provision of Rest (Recovery Period)

While shade and rest often go hand in hand, they are two distinct activities. Any employee who, due to heat, humidity, or exertion under the provisions of this program, may rest for a period of not less than 5 minutes if that employee believes a preventative recovery period is required.

Modified Work Procedures

The supervisor will make every effort, consistent with our effort to properly perform our job tasks, to modify work procedures. Example would include performing work requiring heavy exertion during the cooler hours of the day, assigning more persons to a job task to lessen the effort required of each, and the use of machinery in lieu of physical effort.

All employees, but new employees in particular, should be allowed to acclimate to hotter weather. It takes a body four to fourteen days to acclimate to hotter weather. Reduced workloads and careful attention to new employees may be required.

Training

All employees will read this program and be given interactive training in its provisions. A copy of this program will be kept at the work area during applicable periods of heat and humidity.

All supervisors may wish to read the below informational items prior to utilization of this program and have an opportunity for discussion and clarification with Vincent Noriega, our Safety Director.

American Red Cross Heat Wave Safety

CAL OSHA Heat Illness Prevention etool

Milestone Industrial Welding Services Llc
Safety Program Addendum

There also may be times when Milestone Industrial Welding Services Llc requires its employees to meet safety policies that are specific to our company. If we implement these additional policies, they must have more stringent safety requirements than what OSHA has developed.