Employee Safety Manual

SAFETY ALWAYS

1 TEAM GOAL

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SAFETY MANAGER'S MESSAGE

WELCOME! You are the newest member of the MSD Safety team. Your safety, the safety of your co-workers and the safety of the general public are very important to us.

The purpose of the MSD safety process is to eliminate accidents involving personal injury and/or property damage and the pain, suffering and economic loss caused by those accidents. The real tragedy in an accident is the victim who suffers loss of health, earning power, and self-esteem. His or her family also shares his/her suffering.

It is extremely important that you understand how each task should be done safely. We expect you to comply with our company safety rules, project requirements, and local, state, and federal regulations. You are the most important part of the safety process. Failure to follow the rules or work safely will lead to disciplinary action.

We expect you to participate in weekly toolbox safety talks, use personal protective equipment, and to learn and follow the safety rules. We welcome your suggestions to improve safety on the jobsite. A day's work for a day's pay has been the norm at MSD. Let's make sure it's a safe day as well.

President/CEO,

John Stewart

Safety Manager,

Phil Smith

PERSONAL PROTECTIVE EQUIPMENT

This written program documents steps Mechanical Services & Design, Inc. has taken to minimize injury resulting from various occupational hazards present at our construction sites by protecting workers through the use of Personal Protective Equipment (PPE) when the hazards cannot be eliminated.

The Safety Director is the program coordinator, acting as the representative of the company President, who has the overall responsibility for the program. This written plan is kept in the Corporate Safety Office. The program will be reviewed and updated as necessary. Copies of this program may be obtained from the Safety Director.

We at Mechanical Services & Design, Inc. believe it is our obligation to provide a hazard free environment to our employees. Any employee encountering hazardous conditions must be protected against the potential hazards. The purpose of protective clothing and equipment is to shield or isolate individuals from chemical, physical, biological, or other hazards that may be present in the workplace.

Establishing an overall written PPE program detailing how employees use PPE makes it easier to ensure that they use PPE properly in the workplace and document our PPE efforts in the event of an OSHA inspection. Mechanical Services & Design, Inc.'s PPE program covers:

- Purpose
- Hazard assessment
- PPE selection
- Employee training
- Cleaning and maintenance of PPE
- PPE specific information

If after reading this program you find that improvement can be made, please contact the Safety Director. We encourage all suggestions because we are committed to the success of our PPE Program. We strive for clear understanding, safe behavior, and involvement in the program from every level of the company.

PURPOSE

The basic element of any PPE Program is an in-depth evaluation of the equipment needed to protect against the hazards at the workplace; this is the initial hazard assessment for which written documentation is required. Two basic objectives of any PPE Program should be to protect the wearer from incorrect use and/or malfunction of PPE. The purpose of this PPE Program is to document the hazard assessment, protective measures in place, and PPE in use at the company. PPE devices are not to be relied on as the only means to provide protection against hazards, but are used in conjunction with guards, engineering controls, and sounds manufacturing practices. If possible, hazards will be abated first through engineering controls, with PPE to provide protection

against hazards, which cannot reasonably be abated otherwise.

HAZARD ASSESSMENT

To assess the need for PPE the following steps are taken:

1. The Safety Director, with other appropriate employees, identifies job classifications where exposures occur or could occur. The Safety Director or designee examines the following records to identify and rank jobs according to exposure hazards:
    a. Injury/Illness records
    b. First aid logs
2. The Safety Director conducts a walk-through survey of workplace areas where hazards exist or may exist to identify sources of hazards to employees. They consider these basic hazard categories:
    a. Impact
    b. Heat
    c. Penetration
    d. Harmful dust
    e. Compression (roll over)
    f. Light (optical) radiation
    g. Chemical

During the walk-through survey the safety Director observes and records the following hazards along with PPE currently used (type and purpose):

- Sources of motion, i.e., machinery or processes where any movement of tools, machine elements or particles could exist, or movement of personnel that could result in collision with stationary objects.
- Sources of high temperatures that could result in burns, eye injury or ignition of protective equipment, etc.
- Chemical exposure
- Sources of harmful dust
- Sources of light radiation, i.e., welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.
- Sources of falling objects or potential for dropping objects
- Sources of sharp objects, which might pierce the feet or cut the hands
- Sources of rolling or pinching objects, which could crush the feet
- Layout of workplace and location of co-workers

1. Following the walk-through survey, the Safety Director organizes the data and information for use in the assessment of hazards to analyze the hazards and enable proper selection of PPE.
2. An estimate of the potential for injuries is not made. Each of the basic hazards is reviewed and a determination made as to the frequency, type, level of risk, and seriousness of potential injury from each of the hazards found. The existences of any situations where multiple exposures occur or could occur are considered.

3. The Safety Director documents the hazard assessment via a written certificate that identifies the workplace evaluated, the person certifying that the evaluation has been performed, the date(s) of the hazard assessment, and that the document is a certification of hazard assessment.

SELECTION GUIDELINES

Once any hazards have been identified and evaluated through hazard assessment, the general procedure for selecting protective equipment is to:

1. Become familiar with the potential hazards and the type of PPE that are available, and what they can do.
2. Compare types of equipment to the hazards associated with the environment.
3. Select the PPE, which ensures a level of protection greater than the minimum required to protect employees from the hazards.
4. Fit the user with proper, comfortable, well-fitting protection and instruct employees on care and use of the PPE. It is very important that the users are aware of all warning labels and limitations of their PPE.

It is the responsibility of the Safety Director to reassess the workplace hazard situation as necessary, to identify and evaluate new equipment and processes, to review accident records, and reevaluate the suitability of previously selected PPE. This reassessment will take place as needed.

Elements, which should be considered in the reassessment, include:

- Adequacy of the PPE program
- Accidents and illness experience
- Levels of exposure (this implies appropriate exposure monitoring)
- Adequacy of equipment selection
- Number of person hours that workers wear various protective ensembles
- Adequacy of training/fitting of PPE
- Program costs
- The adequacy of program records
- Recommendation for program improvement and modification
- Coordination with overall safety and health program

EMPLOYEE TRAINING

The Safety Director provides training for each employee who is required to use PPE. Training includes:

- When PPE is necessary
- What PPE is necessary
- How to wear assigned PPE
- Limitations of PPE
- The proper care, maintenance, useful life, and disposal of assigned PPE (including employee-owned PPE)

Employees must demonstrate an understanding of the training and the ability to use the PPE properly before they are allowed to perform work requiring the use of the equipment.

Employees are prohibited from performing work without donning appropriate PPE to protect them from the hazards they will encounter in the course of that work.

If the Safety Director has reason to believe an employee does not have the understanding or skill required, the employer must retrain. Since and employee's supervisor is in the best position to observe any problems with PPE use by individual employees, the Safety Director will seek this person's input when making this determination. Circumstances where retraining may be required include changed in the workplace or changes in the types of PPE to be used which would render previous training obsolete. Also, inadequacies in an affected employee's knowledge or use of the assigned PPE, indicates that the employee has not retained the necessary understanding or skills.

The Safety Director certifies in writing that the employee has received and understands the PPE training.

Because failure to comply with company policy concerning PPE can result in OSHA citations and fines as well as employee injury, an employee who does not comply with this program will be disciplined for noncompliance:

- Verbal warning for the first offense accompanied by retraining
- Written reprimand for the second offense which goes in the employee's permanent record
- Suspension without pay for a third offense and documentation in the employee's permanent record
- Dismissal as a last resort

CLEANING AND MAINTENANCE

It is important that all PPE be kept clean and properly maintained by the employee to whom it is assigned. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. PPE is to be inspected, cleaned, and maintained by employees at regular intervals as part of their normal job duties so that the PPE provides the requisite protection. Supervisors are responsible for ensuring compliance with cleaning responsibilities by employees.

If PPE is for general use, the Safety Director has responsibility for cleaning and maintenance. If a piece of PPE needs repair or replacement it is the responsibility of the employee to bring it to the immediate attention of his or her supervisor or the Safety Director. It is against work rules to use PPE that is in disrepair or not able to perform its intended function. Contaminated PPE, which cannot be decontaminated, is disposed of in a manner that protects employees from exposure to hazards.

HEAD PROTECTION

It is the policy of the company that as a condition of employment, all regular full-time, part-time, and temporary employees working in designated work areas and/or job assignment are required to wear ANSI approved hard hats to help prevent head injuries, including those resulting from falling objects, bumping the head against a fixed object, or electrical shock.

Employees from temporary work agencies and contractors are required to wear hard hats if assigned to work in the designated work areas.

All supervisors and managers are responsible for ensuring employees under their charge are in compliance with this policy.

All employees who work in designated work areas and/or job assignments are responsible for wearing company provided hard hats to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

All employees required to wear hard hats must routinely inspect and properly care for their hard hats.

Bumps caps are not approved.

Class A:

Helmets intended to protect the head from the force of impact from falling objects or electrical

shock during contact with the exposed voltage conductors.

Class B:

Helmets intended to protect the head from the force of impact of falling objects or electrical shock during contact with exposed high voltage conductors.

Class C:

Helmets intended to protect the head from the forces of falling objects.

Note: Protective helmets are commonly called safety helmets, safety hats, and hard hats.

HEARING PROTECTION

When employees are exposed to sound levels exceeding those in the following table feasible engineering or administrative controls shall be utilized. If such controls fail to reduce sound levels within the levels of the table, personal protective equipment shall be provided and used. *Cotton is not an approved method for hearing protection.*

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

Eye and Face Protection

It is the policy of the company that as a condition of employment, all regular full-time, part-time and temporary employees working in designated work areas and/or job assignments are required to wear ANSI approved goggles/face shields to help prevent eye and face injuries, including those resulting from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or light radiation, for example. Employees in the following designated work areas are required to wear goggles/face shields:

- Sheet Metal/Fabrication Shops
- Job sites as directed by the scope of the work

Employees from temporary work agencies and contractors are required to wear goggles/face shields if assigned to work in the designated work areas.

All supervisors and managers are responsible for ensuring employees under their charge are in compliance with this policy.

All employees who work in designated work areas and/or job assignments are responsible for wearing company provided goggles/face shields to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

All employees required to wear goggles/face shields must routinely inspect and properly care for their goggles/face shields.

RESPIRATORY PROTECTION

A respirator must be worn in dusty conditions or when exposed to gases or fumes. Make sure it is the right type for the exposure. Refer to the labels and SDS. MSD does not perform work in IDLH conditions

HAND PROTECTION

It is the policy of the company that as a condition of employment, all regular full-time, part-time and temporary employees working in designated work areas and/or job assignments are required to wear gloves to help prevent hand injuries, including cuts, burns and chemical exposure.

Employees from temporary work agencies and contractors are required to wear protective gloves if assigned to work in the designated work areas.

All supervisors and managers are responsible for ensuring employees under their charge are in compliance with this policy.

All employees who work in designated work areas and/or job assignments are responsible for wearing company provided gloves to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

All employees required to wear protective gloves must routinely inspect and properly care for their assigned gloves (if the gloves are not disposable).

FALL PROTECTION

You must use an adequate form of fall protection when exposed to a fall of six feet or greater. Each field employee will be assigned a harness, lanyard, and trained in fall protection.

FOOT PROTECTION - SAFETY SHOES

It is the policy of the company that as a condition of employment, all regular full-time, part-time, and temporary employees working in designated work areas and/or job assignments are required to wear safety shoes with safety toes to help prevent foot injuries, ankle injuries, slips and falls.

Employees from temporary work agencies and contractors are required to wear safety shoes with safety toes if assigned to work in the designated work area. It is the responsibility of the agency and/or contractor to ensure the employee reports to his/her temporary assignment at this company wearing approved safety shoes.

Those employees who work in non-designated areas of the company and vendors and visitors will be allowed to walk through the designated work areas without safety shoes as long as they remain in outlined aisles or walkways.

All supervisors and managers are responsible for ensuring their employees are in compliance with this policy.

All employees who work in designated work areas and/or job assignments are responsible for purchasing and wearing safety shoes with safety toes to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

Personnel are responsible for informing new employees who are assigned to the designated work areas of the safety shoe policy and the procedure for obtaining them. The new employee is responsible for reporting to his/her first day of work wearing approved safety shoes.

Clarification-3/23/2021

A safety toed shoe with a safety toe, shall be defined as MSD Foot Protection Requirements from April 1, 2021, on.

A steel-toe or a reinforced composite-toe BOOT.

How does MSD define a safety toe boot?

1. LEATHER: All boots shall be made of real leather, no mesh, or other synthetic fibers:

    - This prevents punctures, tears, and certain elements form breaking the skin should the employee encounter them.

2. Boots will be tall enough to cover the ankle:

    - This prevents stress to the ankle joint, from twists, trips, climbing and common construction environments.

The existing MSD Foot Protection Guidelines state that all employees must wear these safety toe shoes 100% of the time when you are working in a designated area.

The only non-designated areas are also clearly defined. Those areas that DO NOT require a Safety Shoe (BOOT), are the offices and those walkways and aisles that are marked.

Absolutely NO street shoes (i.e.): tennis shoes or safety shoes that are sold as tennis shoes shall be permitted.

WORK- RELATED ACCIDENTS AND INJURIES

The following reporting steps **must** be followed when you have an accident or an "On the Job Injury" (OJI). (This is for injuries requiring more than personal first aid.)

1. Notify your Supervisor or foremen on the job right away that an injury has happened.

2. Go to nearest Concentra right away. While at Concentra, your injuries will be checked/treated, and a drug and alcohol screen will be performed.

   Depending on the injury, you may want someone to drive you. If the injury is exceptionally serious or life threatening, go to Miami Valley Hospital Emergency Room or the nearest hospital to you.

   You must undergo drug/alcohol screening within 3 hours of your accident

3. Please notify the Safety Manager or the H.R. Department before you go to Concentra or other medical facility so they may notify the medical facility of your arrival. If you cannot call before, please call the office as soon as you arrive at the medical facility. You will need to give a statement as to what has happened and where you are receiving medical treatment.

4. After receiving proper medical treatment, you may return to work immediately only if the following items have taken place:

   - A signed release from physician's care stating you are able to return to work along with a list of prescribed drugs (if any) and a list of physical restrictions (if any). This may be subject to verification by our company's physician, at our expense, if we so choose.
   - You have met with the Safety Manager and filled out an accident report. This should be done immediately following your visit to the medical facility or as soon as physically possible.
   - Your return to work has been authorized by the Safety Manager.

   PLEASE NOTE: NO WORKERS' COMPENSATION CLAIM WILL BE CERTIFIED BY THE OFFICE WITHOUT THE ACCIDENT REPORT BEING ON RECORD.

Time spent at a medical facility for a work-related injury will be compensated per Workers' Compensation guidelines.

If you are off work for 30 days or more due to your injury, you will be subject to a drug screen/physical before returning to work.

Employees are required to have a drug and alcohol screen along with medical examination after an accident or injury. Failure to submit to a drug and alcohol screen and medical examination within the guidelines of this policy, can and will lead to disciplinary action up to and including discharge.

Because we have a "Zero Tolerance" substance abuse policy, a positive test for illegal drugs and alcohol will lead to discharge from the company.

A positive drug/alcohol test or refusal to consent to a drug/alcohol test could result in being denied workers' compensation benefits.

To help prevent accidents, it is your duty to report immediately any condition that you believe is unsafe or unhealthy to your Supervisor.

EMERGENCY ACTION PLAN (EAP)

PURPOSE

OSHA's EMERGENCY ACTION PLAN (EAP) Standard, found at 29 CFR 1926.35, requires Mechanical Services & Design, Inc. to have a written EAP. This EAP addresses emergencies that our company expects may reasonably occur at Corporate or at any of our construction sites.

The EAP communicates to employees, policies, and procedures to follow in emergencies. This written plan in available, upon request, to employees, their designated representatives, and any OSHA officials who ask to see it.

Under this plan, our employees will be informed of the plan's purpose, emergency escape procedures and route assignments, procedures to be followed by employees who remain to control critical plant operations before they evacuate, procedures to account for all employees after emergency evacuation has been completed, rescue and medical duties for those employees who perform them, preferred means of reporting fires and other emergencies, types of evacuations to be used in various emergency situations, and the alarm system.

The Safety Manager is the program coordinator, acting as the representative of the company President, who has the overall responsibility for the plan. The plan will be reviewed and updated as necessary. Copies of this plan may be obtained from the corporate safety office.

If after reading this program, you find that improvements can be made, please contact the Safety Manager. We encourage all suggestion because we are committed to the success of our EAP. We strive for clear understanding, safe behavior, and involvement in the program from every level of the company.

EMERGENCY ESCAPE PROCEDURES AND ASSIGNMENTS

Our emergency escape procedures and assignments are designed to respond to many potential emergencies.

Employees need to know what to do when they are the first persons to discover an emergency and when they are alerted to a specific emergency, depending on what the emergency is. The following guidelines apply to all EAP's:

1. All employees are trained in safe evacuation procedures, and refresher training is conducted whenever the employee's responsibilities or designated actions under the plan change, and whenever the plan itself is changed. In addition, the employer must review with each employee, upon initial assignment, the parts of the plan, which the employee must know to protect the employee in the event of an emergency.
2. The training includes use of floor plans and workplace maps, which clearly show the emergency exit escape routes included in the EAP. Color-coding aids employees in determining their route assignment, the parts of the plan, which employee must know to protect the employee in the event of an emergency.

3. As a matter of general practice, stairwells are the primary means for evacuation. Elevators are used only when authorized by a fire or police officer, or to assist physically disabled personnel.
4. No employee is permitted to re-enter the building until advised by the Safety Manager (after determination has been made that such re-entry is safe).

Trained evacuation personnel conduct head counts once evacuation has been completed. Employees selected for this job are trained in the complete layout and the various alternative escape routes from the workplace. All trained personnel are made aware of employees with disabilities who may need extra assistance, such as using the buddy system, and of hazardous areas to be avoided during emergencies. Before leaving, these employees check rooms and other enclosed spaces in the workplace for employees who may be trapped or otherwise unable to evacuate the area.

Once each evacuated group of employees have reached their evacuation destinations, each trained evacuation employee:

- Takes roll of his or her group.
- Makes sure all persons are accounted for.
- Reports into a central checkpoint managed by the company Safety Director.
- Assumes role of department contact to answer questions.

RESCUE AND MEDICAL DUTY ASSIGNMENTS

Rescue and medical aid may be necessary during emergency situations.

Designated first aid responders are to provide medical assistance within their capabilities to employees requiring it during an emergency.

Professional emergency services responding in an emergency will help with and direct all rescue and medical duty assignments upon their arrival on site.

EMERGENCY REPORTING PROCEDURES

IN THE EVENT OF A FIRE

When a fire is detected, the fire alarm system is designed to automatically activate and notify the City of Dayton Fire Department. In the event the alarm does not automatically activate, notify personnel via the intercom system, evacuate the building, and call 911.

Head counts should be given to the Fire Chief or firefighter. No employees are to return to the building until the Fire Chief or firefighter gives the "all clear".

IN THE EVENT OF A TORNADO

When the National Weather Service has issued a tornado watch, the weather page will sound, followed by a weather bulletin with further information. At that point, the Safety Manager or his/her designee will turn on the scanner to monitor the weather reports.

In the event of a tornado, it is corporate policy to provide emergency warning and shelter. At the time the tornado horn sounds, all employees are responsible for evacuating to their assigned shelters in a tornado emergency.

SAFETY MANAGER RESPONSIBILITIES

Here at Mechanical Services & Design, Inc., the Safety Manager is responsible for the following activities. S/He must:

1. Develop a written EAP for regular and after hours work conditions.
2. Immediately notify the local fire or police department, and the company President in the event of an emergency affecting the office.
3. Integrate the EAP with the existing general emergency plan covering the building occupied.
4. Distribute procedures for reporting a fire, bomb threat, or other emergency, the location of fire exits, and evacuation routes to each employee.
5. Conduct drills to acquaint the employees with emergency procedures, and to judge the effectiveness of each plan.
6. Satisfy all local fire codes and regulation as specified.
7. Train designated employees in the use of fire extinguishers and the application of medical first aid techniques.
8. Keep key management personnel home telephone numbers in a safe place in the office for immediate use in the event of an emergency. Distribute a copy of the list to key persons to be retained in their homes for use in communicating an emergency occurring during non-work hours.
9. Decide to remain in or evacuate the workplace in the event of an emergency.

10. If evacuation is deemed necessary, the Safety Manager ensures that:
    a. Employees are notified and a head count is taken to confirm total evacuation of all employees
    b. When practical, equipment is placed and locked in storage rooms or desks for protection
    c. The company President is contacted and informed of the action taken and asked to assist in coordinating security protection.
    d. In locations where the company President is not available, security measures to protect employees will be decided by company management.
    e. All records and property are arranged as necessary.

TRAINING

At time of an emergency, employees should know what type of evacuation is necessary and what their role is in carrying out the plan. In cases where the emergency is very grave, total and immediate evacuation of all employees is necessary. In other emergencies, a partial evacuation of nonessential employees with a delayed evacuation of others may be necessary for continues company operation. We must be sure that employees know what is expected of them during an emergency to assure their safety.

This document is not one for which casual reading is intended or will suffice in getting the message across. If passed out as a statement to be read to oneself, some employees will choose not to read it, or will not understand the plan's importance. In addition, OSHA requires training on the plan.

DRUG FREE WORKPLACE

A. SUBSTANCE ABUSE POLICY

Mechanical Services & Design, Inc. maintains a safe and healthy environment for its employees as well as the public and customers whom we serve and have therefore implemented a "Zero Tolerance" Substance Abuse Policy. The company recognizes that employees off the job, as well as on-the-job, involvement with drugs and alcohol can have an impact on the workplace. While most employees are not involved with illegal drugs or alcohol abuse, any involvement in usage or trafficking, on or off the job, has an adverse impact on the workplace and will not be tolerated.

Specifically, any Mechanical Services & Design, Inc's., employee found with the presence of alcohol or illegal drugs in his/her system, in possession of, manufacture of, using, selling, trading, or offering for sale illegal drugs or alcohol will be discharged from the company. (Company sponsored activities, which may include the responsible service of alcoholic beverages, are not included in this provision provided abuse does not occur).

Substance abuse includes irresponsible use of alcohol, possession, use, manufacture, transfer, sale or attempt to sell drugs on or off company premises, including the parking lot. This policy also includes reporting to work under the influence of drugs or alcohol.

An employee reporting for work visibly in a questionable condition is unable to properly perform required duties and will not be allowed to work. If possible, the Supervisor will first seek another Supervisor's opinion of the employee's status. The Supervisor will subsequently consult privately with the employee about the observation to rule out any problems that may have been caused by prescription drugs.

If, in the sole opinion of the Supervisor and another qualified witness, the employee exhibits actions that may be related to alcohol or drug use, the employee will be sent to Concentra for testing. Refusal to participate in testing will subject an employee to a range of disciplinary actions, leading up to dismissal. Taxi or other safe transportation alternative will take the employee, depending on the determination of the observed behavior, accompanied by the Supervisor or another employee if necessary. The employee will not be allowed to drive, and local police will be called upon if the employee refuses to accept a ride to Concentra and insists upon driving him or herself.

Prescription drugs prescribed by the employee's physician may be taken during work hours, depending on prescribed drug and job duties. However, if the properly prescribed drugs may adversely affect the employee's work performance, the employee should notify the Supervisor. If the prescribed drug has any warnings about causing drowsiness, no driving, no operating heavy machinery, this may prohibit you from being capable of continuing your job performance. The abuse of prescription drugs will not be tolerated.

It is the responsibility of Mechanical Services & Design, Inc.'s Supervisors to counsel with an employee whenever they see changes in performance that suggest an employee problem. The supervisor may suggest that the employee voluntarily seek help.

B. EMPLOYEE PROTECTION

This program is designed to protect employees from the behaviors of substance abusers. Some of the protections built into this program are:

- Employee records like testing results and referrals for help will be kept confidential. Information will be on a need-to-know basis. Any violation of confidentiality rights is subject to disciplinary action up to and including termination of employment.
- All supervisors will be trained in their duties related to testing before this program begins.
- All employees will receive awareness education every year to help identify problems and learn where employees can go for help.

EMPLOYEE AWARENESS EDUCATION

Every employee will attend a session in which this policy is discussed. You will have a chance to ask questions. We will give everyone a copy of our written policy, and everyone will be expected to sign that they have received it. There will be a minimum of one hour of substance abuse education annually for all employees. New employees will receive a short overview about the program during orientation and will receive substance abuse education within the first quarter that they are hired.

SUPERVISOR TRAINING

Supervisors will be trained to recognize substance problems that may endanger the employees and others as well as violate this policy. This training is in addition to the employee education session. Supervisors will be trained about testing responsibilities, how to recognize behaviors that demonstrate an alcohol/drug problem and how to make referrals for help.

EMPLOYEE ASSISTANCE

MSD believes in offering assistance to employees with a substance problem. MSD does not have a rehabilitation program and we do not provide financial assistance for someone to attend a program, but we are supportive of employees taking action on their own behalf to address a substance problem. We have a list of local community resources to give to employees who come forward voluntarily to seek help. The list includes places to go for an assessment and for treatment. When an employee comes forward voluntarily with a substance problem, we'll meet with the employee to discuss the problem and its relationship to this policy. MSD reserves the right to terminate employment based on a positive test.

C. DRUG and/or ALCOHOL TESTING

Drug testing uses a two-step process in which each urine sample taken from an employee or prospective employee is divided and a portion is tested using a relatively simple, inexpensive, and accurate test (usually an immunoassay or a thin-layer chromatography test -EMIT). If the results of that test are "positive" then a second test on a portion of the remaining specimen is conducted

using a different chemical process. The second -or confirmatory- test is gas chromatography/mass spectrometry (GC/MS). Only if both portions of the divided specimen show up positive is it

considered positive by the testing lab.

The accuracy of the initial drug screen, the immunoassay test, ranges between 92-98%. The accuracy of the GC/MS confirmatory test is virtually 100% from a scientific standpoint. With the use of this two-step process and professional, accredited laboratories to eliminate human error in the process, there should be no concern regarding the accuracy of drug tests.

List of drugs that are tested for are:

- Amphetamines
- Barbiturates
- Benzodiazepines
- Cannabinoids as Carboxyl THC
- Cocaine Metabolites as Benzoylecgonine
- Methadone
- Methaqualone
- Opiates (codeine, morphine)
- Phencyclidine
- Propoxyphene

Positive or adulterated test results will result in discharge from the company. An adulterated specimen is when an individual has introduced a foreign substance into the collected sample to intentionally disguise drugs in the urine.

Employees or applicants with a dilute-negative test result will be required to submit to another drug test within 24-hours of Mechanical Services & Design, Inc. receiving the test results. A second dilute test result will require conversing with the MRO and determining if the test is negative. The position at the company will not be offered until a negative test is determined by the MRO. A dilute-positive test result will result in the denial of employment and no re-test will be offered.

An employee or applicant's refusal to submit to a re-collection for a negative dilute result is a refusal to test and employment will be denied.

A substituted specimen will result in discharge from the company. A substituted specimen is when an individual has introduced a foreign substance into the collected sample. Such specimens do not

exhibit the clinical signs or characteristics associated with normal urine.

PRE-EMPLOYMENT DRUG TESTING

All employment applicants at Mechanical Services & Design, Inc., with potential to hire, will undergo screening for the presence of illegal drugs (see list above) and alcohol as a condition of employment.

Applicants are required to voluntarily submit to a urinalysis test at a laboratory chosen by the company, and by signing the consent agreement will release the company from liability.

Any applicant with a positive or adulterated test result will be denied employment.

Applicants with a dilute-negative test result will be required to submit to another drug test within 24-hours of Mechanical Services & Design, Inc. receiving the test results. A second dilute test result will require conversing with the MRO and determining if the test is negative. The position at the company will not be offered until a negative test is determined by the MRO. A dilute-positive test result will result in the denial of employment and no re-test will be offered.

An applicant's refusal to submit to a re-collection for a negative dilute result is a refusal to test and employment will be denied.

The company will not discriminate against applicants for employment because of past use of either drugs or alcohol. It is the current use of drugs or abuse of alcohol, which prevents employees from properly performing their job that will not be tolerated.

EMPLOYEE ON THE JOB ACCIDENT AND INJURY DRUG and ALCOHOL TESTING

Employees are required to have a drug and alcohol screen after an accident or injury. Failure to submit to a drug and alcohol screen can and will lead to discharge from the company. A positive test for illegal drugs and/or alcohol will lead to discharge from the company.

A positive drug/alcohol test or refusal to consent to a drug/alcohol test could result in being denied workers' compensation benefits.

Urine specimen collection (for drugs) or breath/saliva (for alcohol) is to occur within 3 hours of the accident/injury. If the employee responsible for an employment-related accident is injured, it is a condition of employment that the employee grants the company the right to request that attending medical personnel obtain appropriate specimens (breath, urine and/or blood) for the purpose of conducting alcohol and/or drug testing. All employees grant the company access to any and all other medical information that may be relevant in conducting a complete and thorough investigation of the work-related accident including a full medical report from the examining physicians(s) or other health care providers. A signed consent to testing form is considered a condition of employment. All employees involved in an accident, regardless of how minor it may be, are subject to drug and alcohol testing.

Employees who are required to have a post-accident drug test are to volunteer for a drug and alcohol test if medical personnel do not offer it. Failure to do so can be considered a refusal and will lead to discharge from the company.

There is no waiting period for results if the drug/alcohol screening, so after post-accident testing, employees are required to return to work. The employee is to visit the safety director and complete an accident/injury report and submit any paperwork they may have from the physician or treating medical facility in order to be released from the safety director to return to work. Because we are a “Zero Tolerance" workplace, a positive test result for illegal drugs and alcohol will lead to discharge from the company and may result in being denied workers' compensation benefits.

REASONABLE SUSPICION TESTING

Reasonable suspicion testing will occur when management has reason to suspect that an employee may be in violation of this policy. The suspicion will be documented in writing prior to the release of the test findings. A reasonable suspicion test may occur based on:

- Observed behavior, such as direct observation of drug/alcohol use or possession and/or physical symptoms of drug and/or alcohol use.
- A pattern of abnormal conduct or erratic behavior.
- Arrest or conviction for a drug-related offense, or identification of an employee as the focus of a criminal investigation into illegal drug possession, use, or trafficking. The employee is responsible for notification of the company, within five (5) working days, of any drug related conviction.
- Information provided either by reliable and credible sources or independently corroborated regarding an employee's substance use; or
- Newly discovered evidence that the employee has tampered with a previous drug or alcohol test.

Employees required to take a drug and alcohol test for reasonable suspicion, are to remain off work until test results are received. Time off work is paid only if the test results are negative.

Refusal to submit to a drug and alcohol test or a positive test result for reasonable suspicion will result in discharge from the company.

FOLLOW-UP TESTING AFTER RETURNING TO WORK FROM ASSESSMENT, TREATMENT, OR LEAVE

Any employee off work for 30 days or more due to a work-related injury or non-industrial related injury or illness is required to submit to a drug screen before returning to work.

Physicals will need to be conducted before returning to work from layoff and workers' compensation.

RANDOM DRUG TESTING

Random drug testing will include 5% of all employees, including management, and is conducted on an unannounced basis. A non-company testing organization uses computer software to ensure a truly random selection process in which all employees in the testing pool have an equal statistical likelihood of being selected for testing. When the next random draw is conducted, all employees are again included in the pool with an equal chance of selection, regardless of whether an employee was previously selected. Random testing is designed to deter drug use in violation of the policy and ensure that we maintain confidence in our employees' abilities to perform their duties. The company has contracted with Concentra to perform the periodic selection of employees for inclusion in the random testing pools. The contractor selects employees at random for drug testing at any time during each calendar year. MSD will provide employee identification numbers to be used in the random selection drawings. The contactor will, in turn, furnish the company with a list of individuals to be tested at the beginning of each selection period. It shall be the responsibility of the company to notify each employee who was selected with the date, time, and location that random testing will be performed. When notified, it shall be the responsibility of the individual employee to provide a urine specimen for drug testing. The employee has three (3) hours to leave a jobsite, get to the testing location and back to the jobsite or to a new work location. The company may also elect to have a representative escort the employee to and from the testing location. In the event that it is not feasible to leave a particular job within the allotted time frame, it will then be handled according to the management's discretion. An employee's failure to comply with the request for a specimen for random testing will result in termination of employment.

STORAGE OF TEST RESULTS AND RIGHT TO REVIEW TEST RESULTS

All records of drug/alcohol testing will be stored separately and apart from the employee's general personnel documents. These records shall be maintained under lock and key at all times. Access is limited to designate company officials. The information contained in these files shall be utilized only to properly administer this policy and to provide to certifying agencies for review as required by law. Designated company officials that shall have access to these records are charged with the responsibility of maintaining the confidentiality of these records. Any breach of confidentiality with regard to these records may be an offense resulting in termination of employment. An employee may request from the coordinator, in writing, and presenting an Employee Request for Release of Drug Tests Results form, requesting that a copy of the test be provided. The company will use its best efforts to promptly comply with this request and will issue to the employee a copy of the results personally or by U.S. Certified Mail, Return Receipt requested.

OUR GOAL

Our goal at Mechanical Services & Design, Inc. is to enforce and maintain a drug free workplace by enforcing this policy. This policy does include all employees (temporary, part-time, full-time).

An employee who violates the policy is subject to disciplinary action, up to and including termination of employment on the first offense.

DISCIPLINE

After reading through this manual the commitment to safety at MSD should be obvious. Occasionally we find co-workers who disregard safety requirements. When this happens, disciplinary action is needed. Please note disciplinary actions may not always occur in this order.

1. A first offense for safety violation receives a verbal warning.
2. A second offense will result in a written warning.
3. A third offense will result in time off or discharge.

Management reserves the right to skip any and all steps depending on the egregiousness of the offense and/or the attitude of the offender.

LOCKOUT/TAGOUT (LOTO) PROGRAM

PURPOSE

Mechanical Services & Design, Inc.'s LOTO Program establishes minimum requirements for the control of hazardous energy. The purpose of this program is to ensure that machinery for equipment is isolated from all potentially hazardous energy, and energy sources are locked-out and/or tagged-out before employees perform any servicing, repairing or maintenance activities where the unexpected start-up, release of stored energy or re-energizing of stored energy could cause injury.

This program does not cover normal production operations. Minor tool changes and adjustments and other minor servicing activities, which take place during normal production operations, are not covered by this procedure unless:

- An employee is required to remove or bypass a guard or other safety device, or
- An employee is required to place any part of his/her body in the point of operation or potentially hazardous area of the equipment.

The company President or their designee is responsible for the overall coordination of the LOTO Program. Only authorized employees are permitted to perform LOTO procedures.

PREPARATION FOR LOCKOUT/TAGOUT

An inventory will be conducted to determine the powered equipment that will be covered under the LOTO procedures. The inventory will also include identifying the energy isolating devices on the equipment. The installation of new machines or equipment will be added to the inventory and will be included in the LOTO Program.

Protective devices used at the facilities under locks and tags, which are in the employee's possession. The lock is identified by a number and only used for LOTO purposes.

If a machine is capable of being locked out, the LOTO procedures will be followed. Warning tags will be used in conjunction with the lock as an additional warning device. If the machine is not capable of being locked out, then the tagout procedures will be utilized.

GENERAL LOCKOUT/TAGOUT RULES

- Under no circumstances are locks and tags to be used by anyone other than the employee they are assigned to. The locks are to be used only for LOTO procedures.
- Under no circumstance are locks and tags to be removed from machines, equipment, transmission lines or pipes, etc., by anyone other than the employee who is assigned the lock and tag.
- If two (2) or more employees are working on equipment or a machine and the work required a lockout, all employees will apply their locks utilizing multiple LOTO hasps and tags. Under no circumstance will the employees work under the protection of someone else's lock and tag.

- LOTO procedures for the equipment that is contained in this program are required to be followed at all times during repairing, servicing, and maintenance activities.
- If a machine is locked-out and the maintenance employee is ending the shift, the relief maintenance employee must apply their lock and tag to the equipment before the employee leaves the building.
- If a machine is locked-out for extended periods of time, such as waiting for the arrival of the repair parts, then the machine is required to be locked-out using department locks.

GENERAL LOCKOUT/TAGOUT PROCEDURES

- Notify all affected employees that a LOTO is going to be utilized and the reason the equipment is being locked-out. The authorized employees will be trained to recognize the type of energy the machine or equipment utilizes.
- If the machine or equipment is operating, shut it down by the normal stopping procedures.
- Operate the switch, valve, or other energy-isolating device so the equipment is isolated from its energy source. Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding, etc.
- Lockout/Tagout the energy-isolating device with an assigned lock and tag. If the equipment or machine is capable of being locked-out, a lock must be used.
- After ensuring that no personnel are exposed, and as a check on having disconnected the energy source, try to start the equipment by activating the normal operating controls to make certain the equipment will not operate.

CAUTION: Return operating controls to the "neutral" or "off" position after the test

- The equipment is now locked and tagged out.

RESTORING MACHINES OR EQUIPMENT TO NORMAL PRODUCTION

- After maintenance/servicing/set-up operations are complete and equipment is ready for normal production, check the area around the machine or equipment to ensure that no one is exposed. Make sure all tools are removed, the area is clean and that all guards have been reinstalled on the equipment.
- Notify all affected employees that the lockout/tagout devices are being removed.
- Operate the energy-isolating device to restore energy to the machine or equipment.

PROCEDURE INVOLVING MORE THAN ONE PERSON

If more than one employee is required to lockout the equipment, each employee will place his/her lock and tag on the energy-isolating device cannot accept multiple locks, a multiple lockout device (hasp, lock box, etc.) will be used. As each employee no longer needs to maintain their lockout

protection, that employee will remove his or her lock and the multiple lockout devices. This employee who initiated the lockout will be the last one to remove his/her lock.

SHIFT CHANGE

If a job is continued into the following shift or an employee change is necessary before job completion, the current lock and tag must be removed only after a replacement employee's lock and tag, or a departmental lock and tag has been placed on the equipment.

UNREMOVED LOCK AND TAG

If an authorized employee is not available to remove his/her lock or tag from a piece of equipment, the following procedures will be followed:

- The department supervisor will attempt to locate or contact the absent employee. The lock/tag will not be removed prior to assuring the absent employee is no longer on the premises.
- If the employee cannot be contacted, the department supervisor will remove the lock/tag after the following above procedures for restoring machines to normal production operations.
- The employee will be informed by the department supervisor of his/her lock removal prior to resuming work at the plant.

EMPLOYEE TRAINING

Employee training is provided to ensure the purpose and function of the LOTO Program. The training program includes the following:

- Each authorized employee (person applying the lock) is trained in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- Each affected employee (person whose work is affected by the lockout) is trained in the purpose and use of the energy control procedures.
- All other employees whose work operations are or may be in the area where energy control procedures might be utilized are instructed about the procedure and about the prohibition relating to attempts to restart or reenergize machines or equipment, which are locked or tagged out.

Employees are also trained in the following limitations of tags:

- Tags are essentially warning mechanisms attached to the energy isolating devices and do not provide the physical restraint that is provided by a lock.
- When a tag is attached to an energy isolating means, it is not to be removed without the permission of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
- Tags must be legible and understandable by all employees in order to be effective.
- Tags and their means of attachment must be made of materials, which will

understand the conditions encountered in the workplace.

- Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

- Tags must be securely attached to energy isolating devices so they cannot be inadvertently or accidentally detached during use.

Retraining will be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment, or processes that present a new hazard, or whenever there is a change in the LOTO procedures.

Additional retraining will also be conducted whenever periodic inspection reveals or whenever the company has reason to believe there are more deviations from or inadequacies in the employees' knowledge or use of the LOTO procedures. The goal of retraining is to establish the employee knowledge or use of the LOTO procedures and to reestablish employee knowledge and proficiency and introduce new or revised energy control methods and procedures as necessary.

The company will document that employee training and retraining has been conducted. The documentation will contain employees' names, dates of retraining, name of their trainer and topics covered.

At least annually, an audit will be conducted of the LOTO program to ensure compliance with the procedures.

MATERIAL HANDLING, STORAGE AND DISPOSAL

STORAGE OF MATERIAL

*See "Fire Prevention and Protection" for information on material storage. Secure all stored materials to prevent sliding, falling, or collapse.
*Keep aisles and passageways clear.
*Never store excess amounts of materials on scaffolds or runways.
*Don't store materials inside a building within 6 feet of any hoist way, or floor openings, or within 10 feet of any open sided floor.
*Store excavation or other materials at least 2 feet from the edge of a trench ore
*Make sure that materials, lumber, equipment, etc. are secure if it's liable to blow from a roof or high place during a windstorm.
*Always block or chalk cylinder shaped materials to prevent rolling.

MATERIAL HANDLING - MANUAL

Follow good lifting practices:

A. Place feet about shoulder width apart.
B. Bend at the knees to grasp the weight.
C. Keep the back straight, get a firm hold.
D. Lift gradually while straightening the legs.
E. Reverse the procedure when setting the load down.
F. If the weight is too heavy or bulky for you to lift comfortable, **get help!**

MATERIAL HANDLING - RIGGING

A. Be sure that a hoist or rigging equipment is in good working condition and rated for the capacities to be used.
B. Materials or equipment being transported by truck must be loaded, cinched, and flagged in a manner consistent with good loading and transporting practices. An authorized employee holding valid chauffeur's license of the proper class should only drive company trucks.

DISPOSAL OF WASTE

A. Keep oily rags, and flammable trash in covered metal containers.
B. Keep aisles, passageways, and work areas clear of unnecessary material.
C. Remove trash from the immediate work area as soon as possible.
D. Whenever trash is dropped more than 20 feet on the exterior or a building, and enclosed chute must be used. If trash is dropped through holes in the floor without chutes, the area must be barricaded.

HAND AND POWER TOOLS

HAND TOOLS

- Inspect all tools before using. This includes company owned tools, privately owned tools, and rented tools.
- Do not use defective tools.
- Wooden handles should be tight in the tool and free from splinters and cracks
- Impact tools such as drift pins, wedges, chisels, etc., should not have mushroomed heads.
- Keep hand tools in good condition and use them only for their intended purposes.

POWER TOOLS

- Inspect all tools before using and do not use defective power tools. Remove them from service and turn in for repair or replacement.
- Keep power tools in good condition and use them only for their intended purposes.
- All electric power tools must be grounded or double insulated.
- All power tools should be powered from a source protected by a ground fault interrupter to protect the employee from accidental exposure to an electrical shock. GFCI's must also be used with portable generators. Test all GFCI's before using.

WELDING AND CUTTING

These written Welding & Cutting Procedures establish guidelines to be followed whenever any of our employees work with welding and cutting equipment at this company or on any job site. The procedures here establish uniform requirements designed to ensure that welding and cutting safety training, operation, and maintenance practices are communicated to and understood by the affected employees. These requirements also are designed to ensure that procedures are in place to safeguard the health and safety of all employees.

It is our intent to comply with the requirements of 29 CFR 1926.350 through .354. These regulations have requirements for welding and cutting operations. We also comply with applicable requirements of:

Standard or Regulation:	**Name:**
ANSI Z49.1-1967	*Safety in Welding and Cutting*
CGA Pamphlet P-1-1965	*Safe Handling of Compressed Gases*
29 CFR 1926, Subpart D	*Occupational Health and Environmental Controls*
29 CFR 1926, Subpart E	*Personal Protective and Life Saving Equipment*
29 CFR 1926.406(c)	*Electrical-Specific Purpose Equipment and Installations*
49 CFR 192	*Minimum Federal Safety Standards for*
49 CFR 178, Subpart C	*Gas Pipelines Specifications for Cylinders*

ADMINISTRATIVE DUTIES

The Safety Director is responsible for developing and maintaining the written Welding & Cutting Procedures. These procedures are kept in the Corporate Safety Office.

TRAINING

It is the policy of Mechanical Services & Design, Inc. to permit only trained and authorized personnel to operate welding and cutting equipment. The Safety Director will identify all new employees in the employee orientation program and make arrangements with department management to schedule training.

During training, Mechanical Services & Design, Inc., covers the operational hazards of our welding and cutting operations, including:

- Hazards associated with the particular make and model of the welding and cutting equipment;
- Hazards of the workplace; and
- General hazards that apply to the operation of all or most welding and cutting equipment.

Each potential welder or cutter who has received training in any of the elements of our training program for the types of equipment which that employee will be authorized to operate and for the type of workplace in which the welding and cutting equipment will be operated need not be retrained in those elements before initial assignment in our workplace if Mechanical Services & Design, Inc. has written documentation of the training and if the employee is evaluated to be competent.

All training is done in-house.

TRAINING CERTIFICATION

After an employee has completed the training program, the instructor will determine whether the potential welder or cutter can safely perform the job. At this point, the trainee will take a performance test or practical exercise through which the instructor(s) will decide if the training has been adequate. All welding and cutting trainees are tested on the equipment they will be operating.

The Safety Manager is responsible for keeping records certifying that each employee who has successfully completed training and testing. Each certificate includes the name of the employee, the date(s) of the training, and the signature of the person who did the training and evaluation.

CURRENT WELDERS AND CUTTERS

Under no circumstances may an employee operate welding or cutting equipment until he/she has successfully completed this company's welding and cutting training program. This includes all new welders and cutters regardless of claimed previous experience. All employees have a general obligation to work safely with and around welding and cutting operations.

INSPECTIONS

A number of inspections are required under the welding and cutting regulations. To make inspections efficient, we have compiled a list of inspection items to be checked before welding or cutting, which is attached to the program.

MAINTENANCE

Any deficiencies found in our welding and cutting equipment are repaired, or defective parts replaced, before continued use. However, no modifications or additions that affect the capacity or safe operation of the equipment may be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals, must be changed accordingly. In no case may the original safety factor of the equipment be reduced.

While defective parts may be found, we prefer to invest time and effort into the proper upkeep of our equipment, which results in day-to-day reliability. Keeping up with the manufacturer's recommended maintenance schedules, and completing the proper records, will also increase our welding and cutting equipment's longevity.

CRANES, DERRICKS AND HOISTS

MSD Crane Policy: We only rent cranes when the owner includes his qualified operator and insurance in the rental agreement. Management must approve rental agreement.

USE

- Inspect equipment and rigging before use each day. Do not use any defective equipment and be sure to report it to your supervisor. Remove defective equipment from service immediately. Tag it “Defective Out of Service" and return to shop.
- Cranes, derricks, and other hoisting equipment shall be used in compliance with the manufacturer’s specifications and limitations and in accordance with safe practices and procedures.
- No modifications or additions, which affect the capacity or safe operation of the equipment, shall be made to any crane or hoist without written approval of the manufacturer.
- Only qualified and properly trained operators shall be assigned to operate crane, derricks or hoists.
- The operator shall take hand signals from only one person who has been designated as the signalman. However, the operator will obey a stop signal given from anyone.
- Radio communication will be made available to crane operator whenever possible. A separate frequency should be made available for crane use.
- Never ride the hook or the load. Never ride or stand on the sides or fender of a cherry picker.
- Never ride a material hoist or crane that is improperly rigged.

SET-UP

- Rated load capacities recommended operating speeds, special hazard warning and instructions shall be conspicuously posted at the operator's station.
- Accessible areas within the swing radius of cranes shall be barricaded.
- A fire extinguisher of 5BC or higher rating shall be at all operator stations.
- A minimum clearance of 10 feet in all directions shall be maintained for electric lines rated at 50 kV or below. For lines more than 50 kV, the clearance distance is increased by 0.4 inches for each 1 kV over 50 kV. If lines cannot be de-energized, a spotter will be used to warn operator before he violates the minimum clearance rules.

ELECTRICAL SAFETY PROGRAM

GENERAL COMPANY POLICY

The purpose of this program is to inform interested persons, including employees, that Mechanical Services
& Design, Inc. is complying with the OSHA Electrical Safety Standard, Title 29 Code of Federal Regulations 1910.333, by determining that this workplace needs written procedures for preventing electric shock or other injuries resulting from direct/indirect electrical contacts to employees working on or near energized or de-energized parts. This program applies to all work operations at Mechanical Services & Design, Inc. where employees may be exposed to live parts and/or those parts, which have been de-energized.

The Safety Director has overall responsibility for coordinating safety and health programs in this company. The Safety Director is the person having overall responsibility for the Electrical Safety Program and will review and update the program, as necessary. Copies of the written program may be obtained from the corporate safety office. Under this program, our employees receive instructions in the purpose and use of energy control procedures, as well as the other required elements of the Control of Hazardous Energy standard. This instruction includes the de-energizing of equipment, applying locks and tags, verifying de- energization, and equipment reenergizing.

If, after reading this program, you find that improvements can be made, please contact the Safety Director. We encourage all suggestions because we are committed to creating a safe workplace for all our employees and a successful electrical safety program is an important component of our overall safety plan. We strive for clear understanding, safe work practices, and involvement in the program from every level of the company.

HAZARD ANALYSIS REPORT

To determine areas of Mechanical Services & Design, Inc. that need to be included in the Electrical Safety Program, the Safety Director will conduct a hazard analysis of our workplace and individual jobsites. This analysis will be found in the corporate safety office and will provide us with information identifying which departments have equipment using electricity, various types of wiring installations, and the types of employee functions that must be covered by the Electrical Safety Program.

TRAINING PROGRAM

Every employee at Mechanical Services & Design, Inc. who faces the risk of electric shock from working on or near energized or de-energized electrical sources receives training in electrical related safety work practices pertaining to the individual's job assignment.

The goal of our electrical safety training program is to ensure that all employees understand the hazards associated with electric energy and that they are capable of performing the necessary steps to protect themselves and their coworkers.

Our electrical training program covers these basic elements:

- Lockout and tagout of conductors and parts of electrical equipment.
- Safe procedures for de-energizing circuits and equipment.
- Application of locks and tags.
- Verification that the equipment has been de-energized.
- Procedures for reenergizing the circuits or equipment.
- Other electrically related information, which is necessary for employee safety.

In our facility, all the persons working on or near energized or de-energized electric sources are considered "qualified" to work safely with electrical energy and have received the appropriate training and certification to do so. In addition to the basic training elements, our "qualified" employees are trained in the skills and techniques necessary to identify exposed live parts, determine nominal voltages, and clearance distances and corresponding voltages.

When changes occur in our company that involves electrical elements, we provide additional employee training to ensure the safety of all affected workers.

The Safety Director conducts the electrical safety training for all employees. Every employee who participates in the Electrical Safety Program receives a certificate which they sign verifying that they have completed the course, that they understand the information presented, and that they will follow all company policies and procedures regarding electrical safety. These signed certificates of training as well as all training materials and documentation are kept in the corporate safety office.

LOCKOUT AND TAGOUT PROGRAM

It is a Mechanical Services & Design, Inc. policy that circuits and equipment must be disconnected from all electric energy sources before work on them begins. We use lockout and tagging devices to prevent the accidental re-energization of this equipment. These lockout and tagging procedures are the main component of our electrical safety program. The safety procedures that make up our lockout and tagging program include these elements:

- De-energizing circuits and equipment - We disconnect the circuits and equipment to be worked on from all electric energy sources and we release stored energy that could accidentally reenergize equipment.
- Application of locks and tags - Only authorized employees are allowed to place a lock and tag 011 each disconnecting means used to de-energize circuits or equipment before work begins. Locks prevent unauthorized persons from reenergizing the equipment or circuits and the tags prohibit unauthorized operation of the disconnecting device.
- Verification of de-energized condition of circuits and equipment - Prior to work on the equipment, we require that a "qualified" employee verify that the equipment is de-energized and cannot be restarted.
- Reenergizing circuits and equipment- Before circuits or equipment are reenergized, we follow these steps in this order:

- A "qualified" employee conducts tests and verifies that all tools and devices have been removed.
- All exposed employees are warned to stay clear of circuits and equipment. o Authorized employees remove their own locks and tags.
- We do a visual inspection of the area to be sure all employees are clear of the circuits and equipment.

ENFORCEMENT

Constant awareness of and respect for electrical hazards, and compliance with all safety rules are considered conditions of employment. Supervisors and individuals in the Safety and Personnel Department reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

STAIRWAY AND LADDER SAFETY PLAN

This written Stairway and Ladder Safety Plan describes methods and practices for care and use of stairways and ladders that can be read and understood by all managers, supervisors, and employees at Mechanical Services & Design, Inc. This written plan is intended to be used to:

- Create an awareness of the hazards among our workforce,
- Standardize procedures for use and care of the equipment,
- Provide a consistent format for training employees on the proper procedures to be used,
- Minimize the possibility of injury or harm to our employees, and
- Demonstrate Mechanical Services & Design, Inc.'s compliance with stairway and ladder requirements in Subpart D of 29 CFR 1910.

The procedures establish guidelines to be followed whenever an employee works with ladders or stairways at our company.

DUTIES

Our company's Safety Manager is responsible for developing and maintaining this written Stairway and Ladder Safety Plan. This person is solely responsible for all facets of the plan and has full authority to make necessary decisions to ensure the success of this plan. The Safety Manager is also qualified, by appropriate training and experience that is commensurate with the complexity of the plan, to administer or oversee our stairway and ladder safety program and conduct the required evaluations.

This written Stairway and Ladder Safety Plan is kept in the Corporate Safety Office.

If, after reading this plan, you find that improvements can be made, please contact the Safety Manager or the Human Resources Director. We encourage all suggestions because we are committed to creating a safe workplace for all our employees, and a safe and effective stairway and ladder safety program is an important component of our overall safety plan. We strive for clear understanding, safe work practices, and involvement in the program from every level of the company.

FIXED INDUSTRIAL STAIRS

Fixed industrial stairs are provided in our facility in the following circumstances:

- For access from one structure level to another where operations necessitate regular travel between levels,
- For access to operating platforms at any equipment which requires attention routinely during operations, and
- 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.

All fixed industrial stairs are provided according to OSHA specifications for stair strength, stair width, angle of stairway rise, stair treads, stairway platforms, railings and handrails, and vertical clearance.

PORTABLE LADDERS

All portable ladders provided by Mechanical Services & Design, Inc. for use by employees are constructed according to OSHA specifications in order to ensure safety under normal conditions of usage.

Portable fiberglass ladders chosen for use by Mechanical Services & Design, Inc. are:

- Designed without structural defects or accident hazards such as sharp edges, burrs, etc.; Of sufficient strength to meet the test requirements; and
- Protected against corrosion unless inherently corrosion-resistant.

WORK PRACTICES

When ascending or descending, the climber must face the ladder.

Portable ladders are designed as a one-man working ladder based on a 300-pound load and will be used accordingly.

Portable rung and cleat ladders will be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support).

The ladder will be so placed as to prevent slipping, or it will be lashed, or held in position. The ladder base section must be placed with a secure footing.

Employees will equip all portable rung ladders with non-slip bases when there is a hazard of slipping. However, non-slip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used on oily, metal, concrete, or slippery surfaces.

The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.

On two-section extension ladders, the minimum overlap for the two sections in use will be according to OSHA specifications.

Portable rung ladders with reinforced rails will be used only with the metal reinforcement on the underside.

The bracing on the back legs of stepladders is designed solely for increasing stability and not for climbing.

Ladders will not be:

- Used in a horizontal position as platforms, runways, or scaffolds.
- Placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- Placed on boxes, barrels, or other unstable bases to obtain additional height.
- Tied or fastened together to provide longer sections. They must be equipped with the hardware fittings necessary if the manufacturer endorses extended uses.
- Used to gain access to a roof unless the top of the ladder extends at least 3 feet above the point of support, at eave, gutter, or roofline.
- Used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.

More than one person should not use ladders for which dimensions are specified at a time or with ladder jacks and scaffold planks where use by more than one man is anticipated. In such cases, specially designed ladders with larger dimensions of the parts should be used.

Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment must not be used. Employees finding ladders with any of these conditions must report them to their immediate supervisor or the Safety Manager. Improvised repairs may not be made.

Ladders made by fastening cleats across a single rail will not be used.

Tops of the ordinary types of stepladders will not be used as steps.

Middle and top sections of sectional or window cleaner's ladders will not be used for bottom sections unless the user equips them with safety shoes.

INSPECTIONS AND MAINTENANCE

Ladders will be inspected prior to each use to ensure safety and serviceability and will be maintained in good usable conditions at all times.

The joint between the steps and side rails is kept tight, all hardware and fittings are securely attached, and the movable parts operate freely without binding or undue play.

Metal bearings of locks, wheels, pulleys, etc., will be frequently lubricated. Frayed

or badly worn rope will be replaced.

Safety feet and other auxiliary equipment will be kept in good condition to insure proper performance.

Ladders, which have developed defects, will be withdrawn from service for repair or destruction and tagged or marked as *Dangerous, Do Not Use.*

If ladders tip over, the competent employee or the site supervisor will:

- Inspect the ladder for side rails dents or bends, or excessively dented rungs;
- Check all rung-to-side-rail connections;
- Check hardware connections; and
- Check rivets for shear.

If ladders are exposed to oil and grease, equipment will be cleaned and kept free of oil, grease, or slippery materials.

FIXED LADDERS

Fixed ladders are provided according to OSHA specifications for design, clearance, and pitch. All

fixed ladders are maintained in a safe condition.

Fixed ladders are to be inspected periodically by a competent person or the site supervisor.

DISCIPLINARY PROCEDURES

Constant awareness of and respect for stairway and ladder safety procedures and compliance with all safety rules are considered conditions of employment. Supervisors and individuals in the Safety and Human Resources Department reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this stairway and ladder safety program.

PROGRAM EVALUATION

Although we may not be able to eliminate all problems, we try to eliminate as many as possible to improve employee protection and encourage employee safe practices. Therefore, the Safety Manager is responsible for evaluating and updating this written plan. The evaluation will include a review of reported accidents, as well as near misses, to identify areas where additional safety measures need to be taken.

The Safety Manager will also conduct a periodic review to determine the effectiveness of the program. This review may include:

- A walk-through of the facility, and
- Interviews with employees to determine whether they are familiar with the requirements of this program and if safety measures are being practiced

SCAFFOLDING SAFETY PROCEDURES FOR CONSTRUCTION

PURPOSE

It is this company's purposes in issuing these procedures to further ensure a safe workplace based on the following formal, written procedures for scaffold work. These procedures will be reviewed and updated as needed to comply with new OSHA regulations, new best practices in scaffolding, and as business practices demand. The Safety Director is responsible for implementation and plan review.

Copies of the written program may be obtained in the Corporate Safety Office.

GENERAL PROCEDURES

The following general procedures apply to all scaffold and aerial lift operations for Mechanical Services & Design, Inc.

CAPACITY

Taking into account the OSHA rules we must apply and the engineering/manufacturing requirements of our scaffolds, the following rules apply:

- Each scaffold and scaffold component we use will support, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it.
- When we use non-adjustable suspension scaffolds, each suspension rope, including connecting hardware, will support, without failure, at least six times the maximum intended load applied or transmitted to that rope.

PLATFORM CONSTRUCTION

This section documents the procedures and safety requirements we use to construct our scaffold platforms.

The following safety rules apply for this scaffold platform construction:

- Each scaffold plank will be installed so that the space between adjacent planks and the space between the platform and uprights is no more than one inch wide.
- Except for outrigger scaffolds (3 inches) and plastering and lathing operations (18 inches), the front edge of all platforms will not be more than 14 inches from the face of the work, unless we have a guardrail or personal fall arrest system in place that meets regulations.

The following additional construction and safety information is included depending on the type of scaffold being erected:

SUPPORTED SCAFFOLDS

- Supported scaffolds with a height to base width ratio of more than four to one (4:1) must be restrained from tipping by guying, tying, bracing, or equivalent means.
- Supported scaffold poles, legs, posts, frames, and uprights will always bear on base plates and mud sills or other adequate firm foundations.

SUSPENSION SCAFFOLDS

- Before a scaffold is used, our competent person will evaluate all direct connections. Our competent person will confirm, based on the evaluation, that the supporting surfaces are capable of supporting the loads that will be imposed.
- When winding drum hoists are used on a suspension scaffold, they will never contain less than four wraps of the suspension rope at the lowest point of scaffold travel.

GAINING ACCESS TO SCAFFOLDS

We know that getting to the working platform is critical to the safety of our employees. This section outlines the mechanical requirements for gaining access to scaffold platforms such as:

1. Ladders,
2. Ramps and walkways,
3. Stair rails, and
4. Direct access from another scaffold. This section is divided into two parts. The first part is for workers gaining access to scaffold platforms to do work; the second part is access for employees erecting and dismantling scaffolds.

WORKING EMPLOYEES:

- Portable, hook-on, and attachable ladders will be positioned so as not to tip the scaffold.
- All stair rail systems and handrails will be surfaced to prevent injury to our employees from punctures or lacerations, and to prevent snagging of their clothes.

FALL PROTECTION PLAN

Fall protection planning is critical to the safety and well- being of our employees. Our fall protection plan follows the OSHA requirements, which are different depending on the type of scaffold we are using. In this plan we address fall protection for our scaffold erectors and dismantlers separately.

One fact never changes. We know we must provide fall protection for any employee on a scaffold more than 10 feet above a lower level.

WORKING EMPLOYEES:

Self-contained adjustable scaffold supported by the frame structure-We will protect each employee on our self-contained, frame structure supported, adjustable scaffolds by a guardrail system. The guardrail system:

- Has a minimum 200-pound top rail capacity.
- Will be installed before being released for use by our

employees. FALLING OBJECT PROTECTION

All employees must wear hardhats when working on, assembling, or dismantling scaffolds. This is our primary protection from falling objects. Additionally, we will:

- Install all guardrail systems with openings small enough to prevent passage of potential falling objects.
- Prevent tools, materials, or equipment that inadvertently fell from our scaffolds from striking employees by barricading the area below the scaffold.

USING SCAFFOLDS

Site preparation, scaffold erection, fall protection, and gaining access to the working platform are only part of the requirements for scaffold work. While this all takes concentration and safe work practices, the most dangerous time can be when employees are concentrating on their work and not particularly aware of the hazards of working from scaffolds. It is critical that employees who use scaffolds be trained, among other things, in the recognition of the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. Our competent person will inspect all scaffolds and scaffold components for visible defects before each work shift, and after any occurrence, which could affect a scaffold's structural integrity. However, in addition to that, all users of scaffolds in this company will know and understand the following safety rules:

- Scaffolds and scaffold components will never be loaded in excess of their maximum intended loads or rated capacities.
- Debris must not be allowed to accumulate on platforms.

SPECIFIC PROCEDURES

In addition to the general procedures in this written safety plan, there are procedures that apply to specific types of scaffolds. The safety rules for these specific types of scaffolds are found in 1926.452.

PROHIBITED PRACTICES

The following practices will never be tolerated in this company:

- Scaffold components manufactured by different manufacturers will never be intermixed unless the components fit together without force and the scaffold's structural

integrity is maintained.

- Unstable objects will never be used to support scaffolds or platform units. Footings must be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
- Cross braces will never be used as a means of access.
- The use of shore or lean-to scaffolds is prohibited.

AERIAL LIFTS

- Anytime aerial lifts, including: (1) extensible boom platforms, (2) aerial ladders, (3) articulating boom platforms, (4) vertical towers, or (5) a combination of any such devices, are used to elevate employees to job-sites above ground, the following safety rules will apply:

- No aerial lift this company owns or uses will be 'field modified' for uses other than those intended by the manufacturer unless: (1) the manufacturer certifies the modification in writing, or (2) any other equivalent entity, such as a nationally recognized testing lab, certifies the aerial lift modification conforms to all applicable provisions of ANSI A92.2-1969, and the OSHA rules at 1926.453. The lift must be at least as safe as the equipment was before modification

LADDER TRUCKS AND TOWER TRUCKS:

- Aerial ladders must be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel.

EXTENSIBLE AND ARTICULATING BOOM PLATFORMS:

- We will test lift controls each day prior to use to determine they are in safe working condition.
- Only authorized employees can operate an aerial lift.
- A full body harness must be worn, and a lanyard attached to the boom or basket when working from an aerial lift.

DUTIES OF COMPETENT AND QUALIFIED PERSONS

When working with scaffolds in this company there are some tasks that must be done by our competent or a qualified person. By definition they are:

- Competent person-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.
- Qualified person-One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject

matter, the work, or the project.

The person we have deemed competent or qualified to perform will only do the following:

Competent Person:

- We will not intermix scaffold components manufactured by different manufacturers unless the components fit together without force and the scaffold's structural integrity is maintained. Scaffold components manufactured by different manufacturers will not be modified in order to intermix them unless our competent person determines the resulting scaffold is structurally sound
- Before a suspension scaffold is used, direct connections must be evaluated by our competent person who will confirm, based on the evaluation, that the supporting surfaces are capable of supporting the loads to be imposed
- Prior to each work shift and after every occurrence, which could affect a rope's integrity, our competent person will inspect suspension scaffold ropes. Ropes will be replaced if any of the conditions outlined in 1926.451(d)(10) exist
- Scaffolds will be erected, moved, dismantled, or altered only under the supervision and direction of a competent person

Qualified Person:

- Scaffolds must be designed by a qualified person and shall be constructed and loaded in accordance with that design
- Swaged attachments or spliced eyes on wire suspension ropes of suspension scaffolds will not be used unless they are made by the wire rope manufacturer or a qualified person
- We will have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards

TRAINING

Recognizing the need for training for employees who: (1) perform work while on scaffolds, (2) are involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting scaffolds, and (3) have lost the requisite proficiency, the following training syllabus is a part of this written safety plan.

Our employees who perform work on scaffolds will be trained by a qualified person to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training will include the following areas as applicable:

- The nature of and the correct procedures for dealing with electrical hazards.

- The nature of and the correct procedures for erecting, maintaining, and

- disassembling the fall protection and falling object protection systems used.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The maximum intended load and the load-carrying capacities of the scaffolds used.
- Any other pertinent requirements of the OSHA rules.

Our employees who erect, disassemble, move, operate, repair, maintain, or inspect scaffolds will be trained by our competent person to recognize the hazards associated with the work being done. The training will include the following topics as applicable:

- The nature of scaffold hazards
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question scaffold hazards
- The design criteria, maximum intended load-carrying capacity, and intended use of the scaffold
- Any other pertinent requirements of this subpart

When we have reason to believe that one of our employees lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, we will retrain the employee so that the requisite proficiency is regained. Retraining will be done in at least the following situations:

- Where changes at the worksite present a hazard about which the employee has not been previously trained
- Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

FLOOR AND WALL OPENINGS

FLOOR OPENINGS

- All floor openings shall be protected by either standard guardrail (top-rail, mid-rails, and toe boards) or by covers that are suitable size and strength and are secured against movement, and properly marked "Hole".
- All open-sided floors, platforms, walkways, permanent or temporary, that are 4 or more feet above adjacent floor or ground level, shall be protected by standard guardrail and toe boards.
- All flights of stairs with 4 or more risers must have well braced handrails on both sides.

WALL OPENINGS

- Wall openings, from which there is a drop of more than 4 feet, and the bottom of the opening is less than 3 feet above the working surface, shall be guarded.
- When the height and placement of the opening in relation to the working surface is such that a standard rail or intermediate rail will effectively reduce the danger of falling one or both shall be provided.
- A standard toe board or an enclosing screen shall protect the bottom of a wall opening, which is less than 4 inches above the working surface.

MOTOR VEHICLES AND MECHANIZED EQUIPMENT

REQUIRED EQUIPMENT

- All motor vehicles must have an adequate braking system.
- All motor vehicles and mechanized equipment, except pick-up trucks and cars, must have a back-up alarm audible above the surrounding noise level unless the driver has a clear view to the rear.
- Vehicles used to transport employees on the jobsite must have firmly secured seats. There should be enough seats for the number of people being transported. No one is to ride on the sides or tailgate of any vehicle.
- All motor vehicles must be equipped with a fire extinguisher rated at 2-1/2 lbs. or higher.
- Driver and riders in the passenger area of all company owned vehicles must wear seatbelts.
- Truck and motorized equipment must have a working horn.
- Parking brake must be functional and "set" when equipment is parked.
- Before operating a truck or machine, check all lights, brakes, windshield wipers, steering, back-up alarms and fire extinguishers.
- Be sure any load you are transporting is secured.
- Be sure any parked equipment or vehicle is properly braked and locked, and the blade, bowl, bucket, or forks are placed on the ground.
- At night, lights, reflectors, or barricades should be positioned to warn motorists of equipment parked near a roadway or work area.

VEHICLE ACCIDENT PREVENTION (VAP) SAFETY PROGRAM

Our company has invested in a driver's VEHICLE ACCIDENT PREVENTION (VAP) safety program.

The expectation of this program has several facets, health and safety of its employees, the cost of vehicle repairs, interruptions of day-to-day business, and the list continues.

The VAP program has 4 parts of safe driving to review:

Defensive driving
Speed and space management
Backing and parking
Adverse weather

Each section of the VAP program has a short tape, 5-10 min. and a 10-question review of the tape. All employees that are assigned company vehicles and employees that may drive company vehicles will be required to have this training.

EXCAVATION PROCEDURES

One of the preventable hazards of construction work is the danger of trench cave-ins. Yet every year in the U.S., there are an estimated 75 to 200 deaths and more than 1,000 lost workdays per year from trenching accidents. Other hazards associated with trenches include contact with numerous underground utilities, hazardous atmospheres, water accumulation, and collapse of adjacent structures. For these reasons, we have written Excavation Procedures for both our daily and occasional excavation workers. It is the policy at Mechanical Services & Design, Inc. to permit only trained and authorized personnel to create or work in excavations.

ADMINISTRATIVE DUTIES

The Safety Director is responsible for developing and maintaining the written Excavation Procedures. These procedures are kept in the corporate safety office.

Our Excavation Procedures are administered under the direction of our competent person(s), someone 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.

PROTECTIVE SUPPORT SYSTEMS

The company protects each employee in an excavation from cave-ins during an excavation by an adequate protective system designed in accordance with OSHA standards. Protective system options include proper sloping or benching of the sides of the excavation; supporting the sides of the excavation with timber shoring or aluminum hydraulic shoring; or placing a shield between the side of the excavation and the work area. Mechanical Services & Design, Inc. has the following standard operating procedures regarding protective support systems for excavations, in accordance with safe practices and procedures and OSHA excavation regulations:

- If the excavation is made entirely of stable rock, then no protective system is necessary or used.
- If the excavation is less than 5 feet in depth (provided there is no indication of a potential cave-in), then no protective system is necessary or used.

TRAINING

The Safety Director will identify all new employees in the employee orientation program and make arrangements with management to schedule training.

TRAINING CERTIFICATION

After an employee has completed the training program, our company keeps records certifying that each excavation worker has successfully completed excavation training. The certificate includes the name of the worker, the date(s) of the training, and the signature of the person who did the training. The Safety Director is responsible for keeping a copy of all training certification records.

CURRENT CERTIFIED EXCAVATION WORKERS

Under no circumstances shall an employee create or work in an excavation **until** he/she has successfully completed this company's excavation training program. This includes all new excavation workers regardless of claimed previous experience.

RECORDKEEPING

We keep a copy of the following documents at the job site during construction of a particular excavation protective system and then store them in the safety office where they will be readily available to OSHA upon request:

- Tabulated data for designing any of our sloping or benching systems
- Designs of any sloping or benching systems approved by a registered professional engineer
- Manufacturer's specifications, recommendations, and limitations for designs of support systems, shield systems, and other protective systems drawn from manufacturer's tabulated data
- Manufacturer's approval to deviate from the specifications, recommendations, and limitations for designs of support systems, shield systems, and other protective systems drawn from manufacturer's tabulated data
- Tabulated data for designing any of our support systems, shield systems, and other protective systems
- Designs of all support systems, shield systems, and other protective systems approved by a registered professional engineer

CONFINED SPACES

PURPOSE

The purpose of this program is to inform interested persons, including employees, that Mechanical Services & Design, Inc. is complying with the OSHA Confined Space Standard, 29 CFR 1910.146. We have determined that this workplace needs written procedures for the evaluation of confined spaces, and where permit-required spaces are identified, we have developed and implemented a permit-required confined space entry program. This program applies to all work operations at Mechanical Services & Design, Inc. where employees must enter a permit-required confined space as part of their job duties.

The Safety Director has all the overall responsibility for coordinating safety and health programs in this company and for the responsibility for the Permit-Required Confined Space Program. The program will be reviewed and updated as necessary.

Copies of the written program may be obtained from the safety office at corporate.

Under this program, we identify permit-required spaces in Mechanical Services & Design, Inc. and provide training for our employees according to their responsibilities in the permit space. These employees receive instructions for safe entry into our specific type of confined spaces, including testing and monitoring, appropriate personal protective equipment, rescue procedures, and attendant responsibilities.

This program is designed to ensure that safe work practices are utilized during all activities regarding the permit space to prevent personal injuries and illnesses that could occur.

If, after reading this program, you find that improvements can be made, please contact the Safety Director. We encourage all suggestions because we are committed to creating a safe workplace for all employees and a safe and effective permit-required confined space entry program is an important component of our overall safety plan. We strive for clear understanding, safe work practices, and involvement in the program from every level of the company.

PERMIT REQUIRED CONFINED SPACE

A permit required confined space is a confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor, which sloped downward and tapers to a smaller cross-section
- Contains any other recognized serious safety or health hazards

HAZARD EVALUATION FOR PERMIT SPACES

To determine if there are no permit-required confined spaces in or around Mechanical Services & Design, Inc. the Safety Director has conducted a hazard evaluation of our workplace. This evaluation has provided us with the information necessary to identify the existence and location of permit-required confined
spaces in our workplace that must be *covered by* the Permit-Required Confined Space Entry Program. This written hazard evaluation is kept in the safety office.

PRE-ENTRY EVALUATION

To ensure the safety and health of our employees, before allowing authorized workers to enter a permit space, we evaluate conditions in that space to determine if the conditions are safe for entry. Any employee, who enters the space, or that employee's authorized representative, has the opportunity to observe the pre- entry and any subsequent testing. The authorized entrant or that employee's representative also has the option of requesting a reevaluation of the space if they feel that the evaluation was not adequate.

Our company follows the procedures to evaluate each permit space before entry according to 1910.146(c)(5)(ii)(C). This includes testing the internal atmosphere with a calibrated direct- reading instrument for oxygen content, flammable gases and vapors, and potential toxic air contaminants. We also periodically test the atmosphere of the space to ensure that the continuous ventilation is preventing the accumulation of a hazardous atmosphere.

CERTIFICATION

According to 1910.146(c)(5)(iii), our company verifies that the space is safe for entry and that the pre- measures required by 1910.146(c)(5)(ii) have been taken, through a written certification that contains the date, location of the space, and signature of the person providing the certification. At our company, the Safety Director is responsible for verifying these procedures. The certification is made before entry and is available to each employee entering the space.

According to 1910.146(c)(5)(ii), our company documents the basis for determining that all hazards in the permit space have been eliminated, through a certification that contains the date, location of the space, and signature of the person making the determination. At our company, the Safety Director is responsible for documenting this information. The certification is available to each employee entering the space.

EQUIPMENT

To ensure the safety and health of our employees, Mechanical Services & Design, Inc. provides appropriate equipment to all employees who work in or near our permit spaces. According to 1910.146(k)(3)(i), each authorized entrant will use a full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, *above* the entrant's head, or at another point which Mechanical Services & Design, Inc. can establish presents a profile small enough for the successful removal of the entrant. Wristlets may be used instead of the full

body harness if Mechanical Services & Design, Inc. can demonstrate that the use of a full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.

We maintain all equipment in excellent working condition, train the entrants in the correct usage of this equipment, and ensure that all equipment, including that used for personal protection is used properly.

DUTIES: ENTRY SUPERVISOR

Entry Supervisors are responsible for the overall permit space entry and must coordinate all entry procedures, tests, permits, equipment, and other relevant activities. The following entry supervisor duties are required:

- Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Verifies by checking that the appropriate entries have been made on the permit, all tests specified by the permit have been conducted and that all procedures and equipment specified by the equipment are in place before endorsing the permit and allowing entry to begin.
- Terminate the entry and cancel the permit when the entry is complete and there is a need for terminating the permit.
- Verify that rescue services are available and that the means for summoning them are operable.
- Remove unauthorized persons who enter or attempt to enter the space during entry operations.
- Determine whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space that entry operations remain consistent with the permit terms and that acceptable entry conditions are maintained.

DUTIES: ENTRY ATTENDANT

At least one attendant is required outside the permit space into which entry is authorized for the duration of the entry operation. Responsibilities include:

- Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Be aware of the possible behavioral effects of hazard exposure on entrants.
- Continuously maintain an accurate count of entrants in the permit space and ensure a means to accurately identify authorized entrants.
- Remain outside the permit space during entry operations until relieved by another attendant (once properly relieved, they may participate in other permit space activities, including rescue if they are properly trained and equipped).
- Communicating with entrants as necessary to monitor entrant status and alert entrants of the need to evacuate.
- Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the entrants to immediately evacuate if: the attendant

detects a prohibited condition, behavioral effects of hazard exposure, a situation outside the space that could endanger the entrants, or if the attendant cannot effectively and safely perform all the attendant duties.

- Summon rescue and other emergency services as soon as the attendant determines the entrants need assistance to escape the permit space hazards.
- Perform non-entry rescues as specified by the rescue procedures and entry supervisor.
- Not to perform duties that might interfere with the attendant's primary duty to monitor and protect the entrants.

- To take the following actions when unauthorized persons approach or enter a permit space while entry is under way:
  - Warn the authorized persons that they must stay away from the permit space,
  - Advise unauthorized persons that they must exit immediately if they have entered the space, and
  - Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space.

DUTIES: ENTRANTS

All entrants must be authorized by the entry supervisor to enter permit spaces, have received the required training, used the proper equipment, and observed the entry procedures and permit. The following entrant duties are required:

- Know the hazards that may be faced during entry, including information on the mode, signs, or symptoms, and necessary consequences of the exposure.
- Communicate with the attendant as necessary to enable the attendant to monitor the status of the entrants and to enable the attendant to alert entrants of the need to evacuate the space if necessary.
- Alert the attendant whenever the entrant recognizes any warning signs or symptoms of exposure to a dangerous situation, or any prohibited condition is detected.
- Exit the permit space as quickly as possible whenever:
  - The attendant or entry supervisor gives an order to evacuate the permit space
  - The entrant recognizes any warning signs or symptoms of exposure to a dangerous situation
  - The entrant detects a prohibited condition
  - Evacuation alarm is activated

ENTRY STANDARD OPERATING PROCEDURES

A Standard Operating Procedure (SOP) has been developed for each space to standardize the entry procedure. The SOP outlines:

- Hazards
- Hazard control and abatement
- Acceptable entry conditions
- Means of entry

- Entry equipment required
- Emergency procedures

PERMIT REQUIRED CONFINED SPACE ENTRY GENERAL RULES

During all confined space entries, the following safety rules must be strictly enforced:

- Only authorized and trained employees may enter a confined space or act as an entry attendant
- No smoking is permitted in a confined space or near an entrance/exit area
- During confined space entries, an attendant must be present at all times
- Constant visual or voice communication will be maintained between the attendant and employees entering a confined space
- No bottom or side entry will be made, or work conducted below the level any hanging material or material which could cause engulfment
- Air and oxygen monitoring is required before entering any Permit-Required Confined Space. Oxygen levels in a confined space must be between 19.5 and 23.5%. Levels above or below will require the use of SCBA or other approved air supplied respirators. Additional ventilation and oxygen monitoring is required when welding is performed. The monitoring will check oxygen levels, explosive gas levels and carbon monoxide levels. Entry will not be permitted if explosive gas is detected above 10% of the lower explosive limit (LEL).
- To prevent injuries to others, a barricade will protect all openings to confined spaces when covers are removed.

CONFINED SPACE ENTRY PERMITS

Confined Space Entry Permits must be completed before any employee enters a permit-required confined space. The permit must be completed and signed by an authorized member of management before entry.

Permits will expire before the completion of the shift or if any pre-entry conditions change. Permits will be maintained on file for twelve-months.

CONTRACTOR ENTRY

All work by non-company employees that involves the entry into confined spaces will follow the procedures of this program. The information of this program and specific hazards of the confined spaces to be entered will be provided to contractor management prior to commencing entry or work.

TRAINING

Every employee at Mechanical Services & Design, Inc. who faces the risk of confined space entry is provided with training so that each designated employee acquires the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them. The Safety Director conducts our permit-required confined space training. All training related materials, documents, and signed certificates are kept in the safety office.

Training for confined space entry includes:

- Duties of the Entry Supervisor, Entrant and Attendants
- Confined Space Entry Permit
- Hazards of the confined space
- Use of air monitoring equipment
- First aid and CPR training
- Emergency action and rescue procedures
- Confined space entry and rescue equipment
- Rescue training, including entry and removal from representative spaces

CONFINED SPACE HAZARDS

FLAMMABLE ATMOSPHERE

A flammable atmosphere generally arises from enriched oxygen atmospheres, vaporization of flammable liquids, byproducts of work, chemical reactions, concentrations of combustible dusts, and absorption of chemicals from inner surfaces of the confined space.

At atmosphere becomes flammable when the ratio of oxygen to combustible material in the air is neither too rich nor too lean for combustion to occur. Combustible gases or vapors will accumulate when there is inadequate ventilation in areas such as confined space. Flammable gases such as acetylene, butane, propane, hydrogen, methane, natural or manufactured gases or vapors from liquid hydrocarbons can be trapped in confined spaces, and since many gases are heavier than air, they will seek lower levels as in pits, sewers, and various types of storage tanks and vessels. In a closed top tank, it should also be noted that lighter than air gases may rise and develop a flammable concentration if trapped above the opening.

Chemical reactions forming flammable atmospheres occur when surfaces are initially exposed to the atmosphere, or when chemicals combine to form flammable gases. This condition arises when dilute sulfuric acid reacts with iron to form hydrogen or when calcium carbide makes contact with water to form acetylene. Other examples of spontaneous chemical reactions that may produce explosions from small amounts of unstable compounds are acetylene-metal compounds, peroxides, and nitrates. In a dry state, these compounds have the potential to explode upon percussion or exposure to increased temperature. Another class of chemical reactions that form flammable atmospheres arises from deposits of pyrophoric substances (carbon, ferrous oxide, ferrous sulfate, iron, etc.) that can be found in tanks used by the chemical and petroleum industry. These tanks containing flammable deposits will spontaneously ignite upon exposure to air.

Combustible dust concentrations are usually found during the process of loading, unloading, and conveying grain products, nitrated fertilizers, finely ground chemical products, and any other combustible material. High charges of static electricity, which rapidly accumulate during periods of relatively low humidity (below 50%), can cause certain substances to accumulate electrostatic

charges of sufficient charges of sufficient energy to produce sparks and ignite a flammable atmosphere. These sparks may also cause explosions when the right air or oxygen to dust or gas mixture is present.

TOXIC ATMOSPHERES

The substances to be regarded as toxic in a confined space can cover the entire spectrum of gases, vapors, and finely divided airborne dust in industry. The sources of toxic atmospheres encountered may arise from the following:

- The manufacturing process (for example, in producing polyvinyl chloride, hydrogen chloride is used as well as vinyl chloride monomer, which is carcinogenic).
- The product stored (removing decomposed organic material from a tank can liberate toxic substances, such as hydrogen sulfide (h2s)).
- The operation performed in the confined space (for example, welding or brazing with metals capable of producing toxic fumes).

During loading, unloading, formulation, and production, mechanical and/or human error may also produce toxic gases, which are not part of the planned operation.

Carbon Monoxide (CO) is a hazardous gas that may build up in a confined space. This odorless, colorless gas that has approximately the same density as air is formed from incomplete combustion of organic materials such as wood, coal, gas, and oil. It can be formed from microbial decomposition of organic m in sewers, silos, and fermentation tanks. Carbon Monoxide is an insidious toxic gas because of its poor warning properties. Early stages of CO intoxication are nausea and headache. Carbon Monoxide may be fatal at 1000 PPM in air, and is considered dangerous at 200 PPM, because it forms carboxyhemoglobin in the blood, which prevents the distribution of oxygen in the body.

Carbon monoxide is a relatively abundant, odorless gas; therefore, any untested atmosphere must be suspect. It must also be noted that a safe reading on a combustible gas indicator does not ensure that CO is not present. Carbon monoxide must be tested for specifically. The formation of CO may result from chemical reactions or work activities; therefore, fatalities due to CO poisoning are not confined to any industry. There have been fatal accidents in accidents in sewage treatment plants due to decomposition products and lack of ventilation in confined spaces.

Another area where CO results as a product of decomposition is in the formation of silo gas in grain storage elevators. In another area, the paint industry, varnish is manufactured by introducing the various ingredients into a kettle, and heating them in an inert atmosphere, usually town gas, which is a mixture of carbon dioxide and nitrogen.

In welding operations, oxides of nitrogen and ozone are gases of major toxicological importance, and incomplete oxidation may occur, and carbon monoxide can form as a byproduct.

Another poor work practice, which has led to fatalities, is the re-circulation of diesel exhaust emissions. Increased CO levels can be prevented by strict control of the ventilation and the use of

catalytic converters.

IRRITANT (CORROSIVE) ATMOSPHERES

Irritant or corrosive atmospheres can be divided into primary and secondary groups. The primary irritants exert no systematic toxic effects (effects on the entire body). Examples of primary irritants are chlorine, ozone, hydrochloric acid, hydrofluoric acid, sulfuric acid, nitrogen dioxide, ammonia, and sulfur dioxide. A secondary irritant is one that may produce systematic toxic effects in addition to surface irritation. Examples of secondary irritants include benzene, carbon tetrachloride, ethyl chloride, trichloroethane, trichloroethylene, and chloropropene.

Irritant gases vary widely among all areas of industrial activity. They can be found in plastic plants, chemical plants, the petroleum industry, tanneries, refrigeration industries, paint manufacturing, and mining operations.

Prolonged exposure to irritant or corrosive concentrations in a confined space may produce little or no evidence of irritation. This may result in a general weakening of the defense reflexes from changes in sensitivity. The danger in this situation is that the worker is usually not aware of any increase in his/her exposure to toxic substances.

ASPHYXIATING ATMOSPHERES

The normal atmosphere is composed approximately of 20.9% oxygen and 78.1% nitrogen, and 1% argon with small amounts of various other gases. Reduction of oxygen in a confined space may be the result of either consumption or displacement.

The consumption of oxygen takes place during consumption of flammable substances, as in welding, heating, cutting, and brazing. A more subtle consumption of oxygen occurs during bacterial action, as in the fermentation process. Oxygen may also be consumed during chemical reactions as in the formation of rust on the exposed surface of the confined space (iron oxide). The number of people working in a confined space and the amount of their physical activity will also influence the oxygen consumption rate.

A second factor in oxygen deficiency is displacement by another gas. Examples of gases that are used to displace air, and therefore reduce the oxygen level are helium, argon, and nitrogen. Carbon dioxide may also be used to displace air and can occur naturally in sewers, storage bins, wells, tunnels, wine vats, and grain elevators. Aside from the natural development of these gases, or their use in the chemical process, certain gases are also used as inerting agents to displace flammable substances and retard pyrophoric reactions. Gases such as nitrogen, argon, helium, and carbon dioxide, are frequently referred to as non- toxic inert gases but have claimed many lives. The use of nitrogen to inert a confined space has claimed more lives than carbon dioxide. The total displacement of oxygen by nitrogen will cause immediate collapse and death. Carbon dioxide and argon, with specific gravities greater than air, may lie in a tank or manhole for hours or days after opening. Since these gases are colorless and odorless, they pose an immediate hazard to health unless appropriate oxygen measurements and ventilation are adequately carried out.

MECHANICAL HAZARDS

If activation of electrical or mechanical equipment would cause injury, each piece of equipment should be manually isolated to prevent inadvertent activation before workers enter or while they work in confined space. The interplay of hazards associated with a confined space, such as the potential of flammable vapors or gases being present, and the build-up of static charge due to mechanical cleaning, such as abrasive blasting, all influence the precautions, which must be taken.

To prevent vapor leaks, flashbacks, and other hazards, workers should completely isolate the space. To completely isolate a confined space, the closing of valves in not sufficient. All pipes must by physically disconnected or isolation blanks bolted in place. Other special precautions must be taken in cases where flammable liquids or vapors may re-contaminate the confined space. The pipes blanked o r disconnected should be inspected and tested for leakage to check the effectiveness of the procedure. Other areas of concern are steam *valves,* pressure lines, and chemical transfer pipes. A less apparent hazard is the space referred to as a void, such as double walled vessels, which must be given special consideration in blanking and inerting.

THERMAL EFFECTS

Four factors influence the interchange of heat between people and their environment. They are (1) air temperature, (2) air velocity, (3) moisture contained in the air, (4) radiant heat. Because of the nature and design of most confined space, moisture content and radiation heat are difficult to control. As the body temperature rises progressively, workers will continue to function until the body temperature reaches approximately 102°F. When this body temperature is exceeded, the workers are less efficient, and are prone to heat exhaustion, heat cramps, or heat stroke. In a cold environment, certain physiological mechanisms come into play, which tend to limit heat loss and increase heat production. The most severe strain in cold conditions is chilling of the extremities so that activity is restricted. Special precautions must be taken in cold environments to prevent frostbite, trench foot, and general hypothermia.

Protective insulated clothing for both hot and cold environments will add additional bulk to the worker and must be considered in allowing for movement in the confined space and exit time. Therefore, air temperature of the environment becomes an important consideration when evaluating working conditions in confined spaces.

NOISE

Noise problems are usually intensified in confined spaces because the interior tends to cause sound to reverberate and thus expose the worker to higher sound levels than those found in an open environment. This intensified noise increases the risk of hearing damage to workers, which could result in temporary or permanent loss of hearing. Noise in a confined space, which may not be intense enough to cause hearing damage, may still disrupt verbal communication with the emergency standby person on the exterior of the confined space. If the workers inside are not

able to hear commands or danger signals due to excessive noise, the probability of severe accidents can increase.

VIBRATION

Whole body vibration may affect multiple body parts and organs depending upon the vibration characteristics. Segmental vibration, unlike whole body vibration, appears to be more localized in creating injury to the fingers and hands of workers using tools, such as pneumatic hammers, rotary grinders or other hand tools which cause vibration.

OTHER HAZARDS

Some physical hazards cannot be eliminated because of the nature of the confined space or the work to be performed. These hazards include such items as scaffolding, surface residues, and structural hazards. The use of scaffolding in confined spaces has contributed to many accidents caused by workers or materials falling, improper use of guardrails, and lack of maintenance to ensure worker safety. The choice of material used for scaffolding depends upon the type of work to be performed, the calculated weight to be supported, the surface on which the scaffolding is placed, and the substance previously stored in the confined space.

Surface residues in confined spaces can increase the already hazardous conditions of electrical shock, reaction of incompatible materials, liberation of toxic substances, and bodily injury due to slips and falls. Without protective clothing, additional hazards to health may arise due to surface residues. Structural hazards within a confined space such as baffles in horizontal tanks, trays in vertical towers, bends in tunnels, overhead structural members, or scaffolding installed for maintenance constitute physical hazards, which are exacerbated by the physical surroundings. In dealing with structural hazards, workers must review and enforce safety precautions to assure safety.

LEASED OR RENTED EQUIPMENT

The tools and equipment we use may be company owned, rented, or leased. Safety requirements are the same for all.

- The equipment must be properly maintained, and safety equipment properly used while at our worksites.
- Sometimes specialized equipment may only be available from rental companies. If MSD is to operate equipment, the operator must be properly trained before he/she starts to operate the equipment. No one else is allowed to operate this equipment.
- If the equipment comes with fuel, this fuel must be in a safety can. We cannot accept a non-safety gas can on our job-site.

SIGNS, SIGNALS AND BARRICADES

Barricades should be erected to keep the passage of persons or vehicles from hazardous areas.

- Signals should be placed to warn everyone of a hazardous condition.
- Signals are to be used to warn of the potential of existing hazards (back-up alarms, flashing lights, and flagmen.)
- Whenever a structure or piece of equipment is found to be unsafe, it should be tagged to warn anyone of the damage and take out of service.
- Tag should read "Defective Do Not Use".

TUNNELS, SHAFTS AND VAULTS

Before entering a tunnel, shaft, or vault:

A. Make sure that atmosphere has been checked and adequate ventilation provided.

B. Know the location of emergency equipment and emergency plans.

C. Make sure telephone or other signal communications between entrance and head of tunnel is working.

D. Make sure there is a safe means of access available to all workplaces.

- Ensure that bracing and liner plates are properly placed. Replace damaged or dislodged tunnel supports.
- Don't use internal combustion engines underground unless engines are Bureau of Mines certified diesel engines.
- Always keep someone outside to go for help if needed.

HAZARD COMMUNICATION

HazCom, "Right to Know", "Right to Understand"

- Hazard Communication, HazCom, "Right to Know", or "Right to Understand" all refer to the recently enacted Federal standards. The standards require MSD, Inc. to inform their people of known chemical hazards found in the workplace. Standards say you must recognize material safety hazards and take precautions.
- Here is a partial list of materials, considered hazardous, common to construction sites.

Gasoline	Lubricant
Form oils	Acids
Insulation	PVC, Iron pipe
Cleaning Agents	Curing Compound
Epoxies, Adhesives	Unhardened
Floor Hardeners	Concrete Concrete
Paints, Primer Wood	Coloring Solvents
Gases	Solder/Flux
Grout	Sheetmetal/Sealants
Welding Rods	Admixtures
Abrasive Saw Blades	Grind Wheels
	Diesel

- To meet standards, MSD has written a program, obtained technical information (**S**afety **D**ata **S**heets) from manufacturers and suppliers marked containers and is actively training its people to read the labels, obey all warnings and use proper protective equipment, and follow training. If asked about HazCom by an OSHA inspector, answer questions truthfully. We understand that for fear of saying something wrong, people often say nothing at all. Or by saying, "I never heard of it", or "I don't know anything about it", they think they are avoiding a mistake. This does not show commitment to safety and training and can result in substantial fines levied against the company. The best approach is to know the information and to answer any question honestly.

TRAINING

You must receive training about hazardous products before you start work. The Foreman/Superintendent or assigned Safety representative on every job must conduct HazCom training. This training must be detailed and specific to the hazards of each material.

LABELING

Warning labels giving essential information must be on the original shipping containers of materials and products. Label also any container into which you transfer the material. This includes spray cans and five-gallon buckets. The new container must be marked the same way as the original.

SAFETY DATA SHEETS (SDS)

Safety Data Sheets (formerly known as, Material Safety Data Sheets, MSDS) are the technical information bulletins obtained from the manufacturer of a product or material. A SDS for each product or material on a jobsite is available to whoever wishes to see it. These sheets contain information about the long and short- range effects of the item on people. They also tell what protective equipment is required, what to do for exposure and how to clean up spills and dispose of the waste.

SDS can be found on either: company trucks or assigned to the crew or job supervisor or in a permanent location on each jobsite. To meet standards, it is important that you find out where this information is upon arrival on a jobsite.

Safety Data Sheets are available online in the SDS

Library. Safety Data Sheet (SDS) Library:

https://cmn.m3v.net/login.html

Login: sds@msdinc.net
Password: pass1234

OFFICE SAFETY

OFFICE & CLERICAL - GENERAL

Offices are relatively safe places to work. However, some accidents still occur. To keep your area safe follow these rules:

1. Do not attempt to adjust or repair electrical equipment.
2. Desk drawers, cabinet doors slides, and files shall not be left open while unattended.
3. Chairs, wastebaskets, cords, and other articles shall not be left in aisles where they constitute a tripping hazard.
4. Clean up spills, drips, and leaks immediately.
5. Approved type ladders or other safe supports shall be used to reach material on high shelves or at other similar locations. Boxes, crates, chairs, desks, etc. shall not be used to stand on.
6. Do not stand and talk in front of closed doors; they may open suddenly.
7. Check office furniture regularly for sharp edges, loose casters, and bolts.
8. Use handles when closing files, desk drawers, and door.
9. Don't carry or push loads that block your vision.

WORKPLACE VIOLENCE and WEAPONS PROHIBITION POLICY

PURPOSE

To prohibit weapons or the verbal threat of weapons, intimidation, or violence, in the workplace to minimize risk of injury or harm resulting from violence to Mechanical Services & Design, Inc. employees and property. This policy does not apply to law enforcement personnel; any official security personnel engaged in official duties, who are named as security personnel by Mechanical Services & Design, Inc.; or any person engaged in military activities sponsored by the federal or state government, while engaged in official duties.

POLICY

All Mechanical Services & Design, Inc. employees, customers, and visitors shall not possess firearms or any other dangerous weapons in any facility owned, operated, occupied, or leased by MSD including company-owned vehicles. This prohibition applies even though an individual may be considered qualified to conceal carry or licensed to carry a concealed weapon. In addition, any other related object carried for the purpose to injure or intimidate others is not permitted on company property.

Firearms or other dangerous weapons shall include, at a minimum:

- Pistols, revolvers, shotguns, rifles, and the like
- Dangerous knives having a blade of 3 inches measured from the point where the knife blade meets the knife handle to the tip. This also includes any Balisong (butterfly) knife or switchblade knife.
- Explosive devices of any kind
- Sling shots, nunchaku sticks, and the like
- Clubs, sand clubs, throwing stars, and the like
- Metal knuckles
- Air guns, pellet guns, blow guns
- Dirks, daggers, and similar knives fitted for stabbing
- Any replica or other item that simulates any of the above items

Mechanical Services & Design, Inc. employees are prohibited from engaging in any violent behavior towards others. Any physical, verbal, or visual act (with or without a weapon) that threatens, attempts to intimidate, creates fear, or has the purpose of unreasonably interfering with an individual's work performance, creates an intimidating, hostile or offensive work environment is prohibited. This includes aggressive or hostile behavior, intentionally damaging property, committing acts motivated by, or related to, workplace harassment or domestic violence.

Non-exclusive examples of conduct, which is prohibited:

- Causing physical injury to another person;
- Making threatening remarks;
- Acting aggressively or hostilely, creating reasonable fear of injury for another

person or subjecting another individual to emotional distress;

- Damaging employer or employee property;
- Possessing a firearm or dangerous weapon in any facility owned, operated, occupied, or leased by MSD including company-owned vehicles;
- Committing hostile acts motivated by, or related to, workplace harassment or domestic violence;
- Conducting harassing surveillance, i.e., stalking;
- Threatening weapons or bringing them to the workplace;
- Displaying overt signs of extreme stress, resentment, hostility or anger;
- Making threatening remarks;
- Displaying irrational or inappropriate behavior.

PROCEDURES

Employees will report any threat or behavior as outlined above. Any employee who is subject to, or observes, violent behavior or threat of violent behavior, a firearm or other weapon, or any situation that appears to be potentially dangerous must immediately report such action to his/her supervisor, the Safety Manager, or the Human Resources Director.

Supervisors, the Safety Manager, or the Human Resources Director will immediately take corrective action to resolve any violent behavior situation. This includes, but is not limited to, summoning police officers, or calling 9-1-1.

The Human Resources Director will assist in investigating and preparing documentation for action surrounding an incident of violent behavior.

Incidents that constitute criminal acts will be referred to the City of Dayton Police Department.

Disciplinary action may be taken, up to, and including termination, for violations of this policy.

In no case shall any employee who reports threats or violence be retaliated against through disciplinary action, workload reassignments, denial of promotion, harassment, or any other manner of retribution. Any acts of retaliation will be reported immediately to the Human Resources Director.

ADDITIONAL EMPLOYEE OBLIGATIONS

Occasionally an employee may face a threat from a person outside the workplace. If any employee has reason to believe an outsider may harm the employee in any way in the workplace or on a job site, the employee is required to report those concerns to the employee's immediate supervisor or the Human Resources Director.

If an employee has obtained any legal protection order, such as a "No Contact" or "Anti-Harassment" or restraining order, against any other individual, and the employee believes the individual may attempt to contact that employee at the workplace in violation of the protective order, the employee is required to report those concerns to the employee's immediate supervisor and the Human Resources Director, and to supply a copy of the order. Such information will be kept confidential to the extent possible but will be provided to appropriate personnel on a 'need to know' basis.

Employees should contact their immediate supervisor, the Human Resources Director, or the Safety Manager if any citizen or visitor to the office, sheetmetal shop or job sites is observed with or known to possess a firearm or other dangerous weapon, or where a verbal threat of assault of an employee is observed.

CONSEQUENCES OF WORKPLACE VIOLENCE

- Lower productivity
- Reduced profitability
- Poor morale
- Increased absenteeism
- Higher sick leave costs
- Faster personnel turnover
- Strained management-employee relationships

WARNING SIGNS

- Frequent absenteeism
- Angry outbursts
- Sudden withdraw
- Extreme disorganization
- Ominous threats
- History of violent behavior
- Defensive reaction *to* criticism
- Discussion of or carrying of concealed weapon
- Low self-esteem
- Inability to accept responsibility
- Obsessive preoccupation with job
- Very low outside interests

Employers are required by the General Duty Clause of the Occupational Safety and Health Act of 1970 to provide a safe and healthful working environment to all employees.

Report incidences of workplace violence whether or not there is evidence of injury. Contact your Supervisor or the Human Resources Director immediately of any violent acts or potential for violent acts occur.

WAREHOUSE

Personal Protective Equipment (PPE)

Safety glasses, in accordance with ANSI Z87.1, shall be worn 100% of the time -

Exceptions:
a) Inside of MSD offices
b) In designated break area, during designated break time, provided that no work is being performed in the immediate area

Aisle ways

- Pedestrian traffic must remain in marked aisle way unless conducting business that requires exiting said aisle way
- Aisle ways must be kept clear of obstructions at all times (Floor to ceiling)

Distracted Driving and the Use of Electronic Devices While Driving or When on Worksite

MSD recognizes that the use of electronic devices while driving and when on the worksite may expose team member using the device and other team members to significant safety hazards. MSD also is aware that OSHA has identified texting while driving and distracted driving as recognized hazards of employment, causing or likely to cause death or serious physical harm. In light of both of these concerns, MSD has implemented the following policy to govern the use of cell phones (which include "smart phones,") tablets and other electronic communication devices while you are working for MSD.

Cell Phones

Cell phones shall not be used by team members for any purpose, while driving a company vehicle during business hours or non-business hours. This includes all cell phone use (including personal cell phones) when driving during business hours. This rule also prohibits cell phone use while driving during business hours, even if driving the team member's personal vehicle.

Business calls shall not be placed or answered on personal, or company owned cell phones when driving, at any time, even outside of normal business hours. Non-business calls shall not be placed or received on company owned cell phones while driving any vehicle at any time, even after business hours.

When a cell phone call is received while a team member is driving during business hours, the team member shall allow the call to go to voice mail. If the team member is at a location at which he/she can safely pull off the travel portion of the road, he/she may do so to listen to the voicemail and return the call.

Team members shall not place outgoing telephone calls while driving during business hours, even if the team member has access to a hands-free device.

Hands-free devices may be used by team members to **receive** cell phone calls while driving during business hours as long as the call can be answered by the team member without requiring the team member to take his/her eyes off the road for ANY time. When hands-free devices are permitted, they still may not be used in bad weather, construction zones, or heavy traffic. In bad weather, construction zones, or heavy traffic the team member shall cease his/her hands-free telephone call and either pull off the road to a safe area to complete the call or return the call after reaching his/her destination.

Texting While Driving

Texting or emailing is NEVER permitted by any team member of MSD while driving during working hours. This prohibition is not limited by the nature of the text or email message. This prohibition includes reading text or email messages, typing text or email messages and/or sending text or email messages. As with cell phone usage, this prohibition extends to any form of text messaging or emailing for a business-

related purpose even after business hours.

No one shall establish any goals or incentives that either necessitate or encourage the use of text messaging or emails while driving at any time. Any team member establishing any goals or objectives contrary to this rule will be subject to disciplinary action up to and including termination for the first offense.

Use of Cell Phone or Tablets During Business Hours

Because of the potential hazards that can arise from the use of cell phones, and electronic tablets on job sites, MSD prohibits their use in any active work zone, except in an emergency that necessitates a call for 911 assistance. Team members may use the afore referenced electronic device for personal use during scheduled breaks, but only if breaks are taken away from active work zones. Team members may use the afore mentioned electronic device for business use provided they are stationary and removed from any recognized hazards.