



## Safety Manual Index

<u>Administrative</u>	<u>Page</u>
Safety Policy Statement	2
Roles & Responsibilities	3
New Employee Orientation	4
General Safety Rules	5
Disciplinary Action	6
Return to Work Policy	7-9
Incident Reporting	9-10
Accident Investigation	11
Root Cause Analysis	12
Emergency Action Plan	13-16
Workplace Violence	17
Fleet Safety Program	18-19
Drug & Alcohol Policy	20-22
<u>Environmental</u>	<u>Page</u>
Hearing Conservation Program	23
Illumination	24
Ventilation	24
Heat/Cold Exposure	24
Airborne Contaminants	24
Snow Removal	24
Housekeeping	25
<u>Hazardous Communication</u>	<u>Page</u>
Right-to-Know – Labeling/SDS	26
Compressed Gases	27
Flammable/Combustible Liquids	28
Spray Finishing	28
Asbestos	29
Lead	30
<u>Safe Operating Procedures</u>	<u>Page</u>
Hazard Recognition	31-32
Blood borne Pathogens	33
Elevated Work	34-39
Material Handling	39
Machinery & Machine Guarding	40
Hand & Portable Power Tools	41-42
Welding, Cutting, Brazing	42-46
Personal Protective Equipment	47
Respiratory Protection	48-50
Electrical Safety – Lock Out/Tag Out	50-52
Trenching & Excavating	52-53
Confined Space Entry	53



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## **Simplicity Safety Policy Statement**

City Air Mechanical holds our employees as our most valuable resource. In order to protect our employees, the company has set in place and enforces a safe work policy that includes a complete Safety Management Program, training, education and other resources to protect you and your fellow workers.

In order to maintain a safe working environment for all concerned, individual employees are obligated to practice safe work procedures and actively seek to identify and notify the company of any safety concerns, near misses, or incidents immediately for corrective action. Failure to comply with City Air Mechanical's safe work policy will result in disciplinary action and possible dismissal.

The Simplicity Safety Programs success depends in the involvement and participation of the all employees. Keeping a safe workplace is a team effort. Together we can make a difference and together, we CAN prevent accidents and injuries.

Heather Jones  
President/CEO  
City Air Mechanical, Inc.

## **Roles & Responsibilities**

### **Management**

1. Develop and implement a company Safety Management Program.
2. Develop and implement administrative controls on equipment and machinery.
3. Provide a reasonable and safe workplace for all.
4. Develop and maintain communication lines between front line workers and management for safe operating ideas, concerns and policy questions.
5. Monitor Safety Management performance, working environment and conditions.
6. Assert a commitment to Continuous Improvement on Safety Policies & Standard Procedures.

### **Supervisors/Foreman/Journeyman**

1. Be a coach. Encourage and recognize good safety performance and corrective action as needed. Answer questions and personally complying with safety standards. Set a positive example.
2. Conduct or delegate the safety orientation of new hires about safety policies, rules and work procedures.
  - a. Point out & explain potential hazardous conditions.
  - b. Personal Protective Equipment assigned and instructed on use.
  - c. Orient newly transferred employees to your site specific safety issues.
3. Perform work site inspections with corrective action on a daily basis. If additional resources are needed, discuss with Safety Coordinator.
4. Correct unsafe conditions anywhere observed in the workplace. If additional resources or authorization is required, notify Safety Coordinator immediately.
5. Ensure hazardous concerns, near misses or injuries are reported to Management by the employee.
6. Report and investigate all reported accidents and near misses in accordance with company policies and procedures.
7. Administer first aid or make sure injured employee receives the medical attention needed. Do not allow employee to drive themselves to the medical attention.
8. Duty and authority to approve and carry out disciplinary actions for those who violate the policies, procedures and/or rules and regulations relating to the Safety Management Program.
9. If they witness a hazard or violation presenting an immediate danger to life or health, intervene immediately to the extent necessary to prevent injury without placing him or herself in danger.
10. 5S your job site, shop or vehicle work space daily.
11. Assert a commitment to Continuous Improvement on Safety Policies & Standard Procedures

### **Individual Employee**

1. Learn, understand and follow Company Safety Policies, rules and procedures to include awareness of potential hazards pertaining to their work assignment.
2. Perform duties as assigned but NEVER perform a task that they believe to be dangerous or unsafe.
3. Use PPE when it's required in accordance with company policy and/or Job Safety Analysis (JSA's).
4. Prior to beginning special or new work tasks, review applicable JSA's and appropriate safety rules
5. Discuss or question all safety concerns with your immediate supervisor, together determine safe operating procedure. If issue cannot be resolved, immediately talk to the Safety Coordinator. All issues still unresolved, take directly to the President.
6. Perform work site inspections with corrective action on a daily basis. If additional resources are needed, discuss with immediate Supervisor.
7. Be aware and observe any hazardous condition or unsafe work practice, defective tools, etc and report immediately to your Supervisor.
8. 5S your job site, shop or vehicle work space daily.
9. Assert a commitment to Continuous Improvement on Safety Policies & Standard Procedures

## New Employee Orientation

The Safety Director should provide safety training to all newly hired employees. Each new employee will be given a copy of the safety manual.

General safety orientation containing information common to all employees should be reviewed, *before beginning their regular job duties*. Recommendations include (at a minimum):

- Review the Safety Manual, with extra time spent on: Accident & hazard reporting procedures, emergency procedures, first aid, personal protective equipment, and special emphasis programs (Drug-Free Workplace Policy, Incentive Programs, etc.)
- Encourage & motivate employee involvement in safety. Make each accountable for their safety and the safety of their coworkers.
- Explain the workers' compensation system and fraud prevention
- Review any known workplace hazards.
- Conduct training on any topics that are not schedule to be addressed within a reasonable timeframe and are relevant to the employee's job.

Job-specific training *provided before performing the task* should include:

- Review completed JSAs
- Specific safety rules, procedures, hazards, and special emphasis programs (Lockout/Tagout, etc.) to complete their job
- Identify employee's or employer's responsibilities

Continual training should be provided to new hires. The senior employee should act as a mentor and ensure that the employee is working safely and exhibits a positive safe attitude.

All City Air Mechanical employees are required to complete a OSHA-10 hour Construction training. You will be assigned online access to complete this training. To be eligible to work on sites governed by Energy Coalition for Contractor Safety(ECCS) you will be required to complete a 7.5 hour class room refresher every three years after completion of an OSHA-10 hour construction certification. Both online and classroom training are provided by UAW and SMWIA to be completed after your normal working hours on your own time.

## **GENERAL SAFETY RULES**

1. NEVER perform a work task that is considered unsafe, in violation of a regulatory standard, or may likely result in an injury. Discuss all unsafe conditions or situations with immediate supervisor to resolve. If still unresolved, the Safety Director will make the final determination as to the danger of the job.
2. Hazard Recognition or self inspections are to be performed prior to beginning any new work task. Identify any hazardous conditions, ensure proper machine guarding is in place, tag any defective tools or equipment, locate associated JSA and ensure proper PPE is in place. Report all found deficiencies for repair or replacement prior to use and report unsafe conditions or practices immediately to supervisor.
3. Danger, caution and warning signs are posted to identify specific hazards, PPE use and control measures. These instructions provide employee awareness and protection. Only the Safety Director may authorize changes or removal.
4. The use of makeshift equipment is not allowed. All tools and equipment are to be used for the purpose for which they are designed and are not to be modified. Apparatus, tools, equipment and machinery shall not be repaired or adjusted while in operation. All broken and defective tools/ equipment should be tagged and removed from operation.
5. Proper dress attire is required on all company job sites and in the shop. This includes long pants, closed toed leather boots, properly fitted clothes, long hair must be tied back so that nothing bears risk of catching or snagging on powered equipment. Jewelry or metal watchbands must not be worn around energized equipment.
6. All employees should always be aware of powered vehicles in the work area and/or at the work site. Drivers may not always have a clear view or may not be able to stop without warning.
7. Everything has a place and should be in it's place. 5S = Sort, Straighten, Shine, Standardize, Sustain with the sixth being safety. Keep all work areas free of debris or obstructions.
8. No one shall be allowed to perform work tasks of any kind while under the influence of drugs or alcohol. No one shall knowingly be permitted or required to work with impaired ability or alertness caused by fatigue, illness or other factors that might cause the employee or others to be exposed to accident or injury.
9. All near misses and incidents shall be reported immediately so arrangements can be made for medical, first aid treatment, accident investigation and corrective action.
10. It is necessary to educate yourself on our Safety Management Program that is in place and available for use at all times. Attend company safety meetings, participate fully in tool box meetings and educate yourself on all things safety within the company.

*These rules MUST be abided by at all times. If you have any questions or concerns regarding these General Safety Rules, please contact a member of City Air Mechanical's management.*

## **Discretionary Progressive Discipline Process for Non Conformance**

### **Step One – Informal Talk**

Friendly and informal talk to clear up the problem if the employee has not had previous problems with discipline and the offense is minor.

### **Step 2– Written Warning**

At the employer/managers discretion, a written warning may be placed in the file of the employee. This warning may contain a statement of the violation and what the potential consequences may be if the incident occurs again. The employer/manager may encourage the employee to improve and seek to support that improvement.

### **Step 3 - Disciplinary Layoff/Suspension**

If the incidents have occurred repeatedly and warnings have been ignored, disciplinary layoff or suspension may be the next step

### **Step 4 – Transfer or Demotion**

Demotion, transfer may be considered when determined applicable by the employer/manager.

### **Step 5 – Termination**

Termination is the final step in the progressive disciplinary process.

Note:

1. It shall be known that the above outlines progressive discipline process is only meant as an optional guideline for handling employee non-conformance. Employees can be discharged immediately and any of the above steps may be omitted at the employer's/manager's discretion.
2. Such acts of misconduct that may constitute dismissal include, but are not limited to, absenteeism or tardiness, conflict of interest, damage to property, fighting, threats or weapons, fraud, dishonesty or false statements, harassment, insubordination, misuse or property, sleeping or inattention, solicitation or distribution, substance abuse, theft, unlawful activity, unsafe work practices or other applicable misconduct.
3. "Poor Performance," although technically not a "misconduct" is also a basis for termination

## **Return-to-work policy**

### **Objectives**

City Air Mechanical has developed a return-to-work policy. Its purpose is to return workers to employment at the earliest date following any injury or illness. We desire to speed recovery from injury or illness and reduce insurance costs. This policy applies to all workers and will be followed whenever appropriate.

City Air Mechanical defines “transitional” work as temporary modified work assignments within the worker’s physical abilities, knowledge, and skills.

Where feasible, transitional positions will be made available to injured employees in order to minimize or eliminate time loss.

The physical requirements of transitional/temporary work needs to be provided by the attending physician. Transitional/temporary positions are then developed with consideration of the worker’s physical abilities, the business needs of City Air Mechanical, and the availability of transitional work.

### **Transitional temporary work assignment**

City Air Mechanical will determine appropriate work hours, shifts, duration, and locations of all work assignments. City Air Mechanical reserves the right to determine the availability, appropriateness, and continuation of all transitional assignments and job offers.

### **Communication**

It is the responsibility of the worker and/or supervisor to immediately notify Safety Coordinator of any changes concerning a transitional/temporary work assignment. Safety Coordinator will then communicate with the attending physician as applicable.

### ***Employee responsibilities***

#### **Accident reporting**

- An accident is any unplanned event that disrupts normal work activities and may or may not result in injury or property damage. All work-related accidents, injuries, and near misses must be reported immediately to Safety Coordinator. Refer Incident Reporting Procedures on page 9.

#### **Worker’s physical condition**

- If professional medical treatment is sought, the worker should inform the attending physician that City Air Mechanical has a return-to-work program with light duty/modified assignments available.
- The worker should obtain a **Transitional Duty Evaluation form** and completed **Physical Requirement Assessment** form (if available) from Personnel. This should be provided to the treating physician and should be returned to Safety Coordinator following the initial medical treatment.

#### **Worker able to return to work**

- If the attending physician releases the worker to return to work, as evidenced by completion of a **Transitional Duty Evaluation** form and **Physical Requirements Assessment** form, the form(s) must be returned to Personnel within 24 hours for assignment of light duty/modified work. The worker must report for work at the designated time.
- **The worker cannot return to work without a release** from the attending physician.
- If the worker returns to a transitional/temporary job, the worker must make sure that he or she does not go beyond either the duties of the job or the physician’s restrictions. If the worker’s restrictions change at any

time, he or she must notify his or her supervisor at once and give the supervisor a copy of the new medical release.

### **Worker unable to return to work**

- If the worker is unable to report for any kind of work, the worker must call in at least weekly to report medical status.
- While off work, it is the responsibility of the worker to supply Safety Coordinator with a current telephone number (listed or unlisted) and an address where the worker can be reached.
- The worker will notify Safety Coordinator within 24 hours of all changes in medical condition.

### ***Employer responsibilities***

#### **Accident reporting**

- Safety Coordinator report to the nearest OSHA office (701-250-4521) all work-related fatalities within 8 hours, and call work-related inpatient hospitalizations, all amputations and all losses of an eye within 24 hours.
- The supervisor or safety committee member will conduct an accident investigation on all accidents, regardless of whether an injury occurs.
- When an accident occurs which results in injury requiring **professional medical treatment**, Safety Coordinator will complete a workers' compensation claim within 24 hours of the injury or illness.
- Other information will be forwarded as soon as developed, including:
  - Name of worker's attending physician
  - Completed **Transitional Duty Evaluation form** from attending physician and medical documentation, if appropriate
  - Completed transitional/modified or regular **Job Description**
  - **Transitional Job Offer** letter and responses

#### **Medical treatment and temporary/transitional duty physical condition**

- A **Transitional Duty Evaluation** form and a **Physical Requirement Assessment** form (if available) will be provided to the worker to take to the attending physician for completion and/or approval.
- At the time of first medical treatment the **Transitional Duty Evaluation** form must be completed and returned to Personnel. If one is not, Safety Coordinator will request one from the attending physician.
- The completed **Transitional Duty Evaluation** form will be reviewed by Safety Coordinator. A temporary/transitional Job Description form will be prepared from information obtained from the attending physician for review and approval.

#### **Transitional Job Offer**

- Upon receipt of a signed **Transitional Duty Evaluation** form from the attending physician, a written **Transitional Job Offer** letter will be prepared by the employer. It will be mailed by both regular and certified mail to the worker's last known address or presented to the worker.
- The letter will note the doctor's approval and will explain the job duties, report date, wage, hours, report time duration of transitional work assignment, phone number, and location of the transitional assignment.



- The worker will be asked to sign the bottom of the **Transitional Job Offer** letter indicating acceptance or refusal of the offered work assignment.
- Copies of the **Physical Requirement Assessment, Transitional Duty Evaluation, and Transitional Job Offer** letters will be forwarded to Workforce Safety & Insurance.

### **Supervisor**

- The supervisor will monitor the worker's performance to ensure the worker does not exceed the worker's physician release.
- The supervisor will monitor the worker's recovery progress through regular contact to assess when and how often duties may be changed. The supervisor will assess the company's ability to adjust work assignments upon receipt of changes in physical capacities.

### **Incident Reporting Procedures**

If you have a near-miss situation while working, notify your supervisor immediately and complete a near miss report. The situation will be investigated and corrective action implemented to prevent future injury. Employees and witnesses must fully cooperate in the investigation.

#### **If you are injured on the job:**

- a. Contact your supervisor, or the nearest coworker (who should notify a supervisor) if you are unable to contact your supervisor due to the severity of your injury.
- b. First aid kits, which are made available in the jobsite trailers and work vehicles, should be used on less severe injuries. Medical supplies will be replenished quarterly, unless sooner is required.
- c. In the event of a severe emergency call 911 and/or your supervisor/co-worker must drive you to the Emergency Room of the closest hospital. If the injury is less severe and driving yourself could be dangerous to you and/or others your supervisor/co-worker should drive you to your selected Designated Medical Provider(DMP) or City Air Mechanical's Designated Medical Provider **Sanford Health Occupational Medicine (Bismarck, Dickinson, & Minot) 701-323-5222.**
- d. If rescue personnel are summoned, the supervisor should delegate an individual to wait for the rescue team and escort them to the injured employee.
- e. A post-accident drug and/or alcohol test will be conducted in accordance with the company's Drug-Free Workplace Policy.
- f. The injured worker or, if unable to call, the project foreman should immediately notify the company main office of the accident who will file a workers' compensation claim based on the information completed on the Injury Report on the next page.
- g. All witnesses to the accident should be available to speak with the Safety Committee Investigator and/or supervisor and cooperate in all accident investigations.

Every accident or near-miss situation should be reported immediately to ensure a workers compensation claim is made available to the injured worker. Injured employees and witnesses to the accident will assist the supervisor in completing an accident investigation. Injured employees must comply with the medical treatment provided by the treating physician, cooperate with the insurance company and its designees, and abide by the company's return-to-work policy.

## Near Miss/Hazard Report SAFETY CONCERN REPORT

Date of Incident	Supervisor:
Location of Incident:	
Incident/Hazard:	
Cause of Incident/Hazard:	
Corrective Action Taken:	
Submitted By: (Optional)	Date

## INJURY REPORT

Property Damage	Incident W/ Medical	Incident W/O Medical
Date of Incident	Time	Location
Name of Persons Involved:		
Description of Incident		
Desc & Extend of Injury & Body Part Injured		
Treating Physician/Medical Facility		
Witness to Incident		
How could the accident have been prevented?		
Employee Signature	Date	

## **Accident Investigation - See Root Cause Analysis for Investigation Procedures**

When an accident occurs, it is an indication that something has gone wrong. Accidents don't just happen, they are caused. The basic cause(s) of accidents are unsafe acts and/or conditions. The supervisor must investigate every accident to determine the cause and to initiate corrective action to assure that similar type accidents will not recur from the same causes.

Supervisors should complete the following accident investigation form and submit a copy to the Safety Director for review. The Safety Director should evaluate the corrective action taken or suggested by the supervisor and instruct if additional changes should be made.

### **Tips on accident investigations:**

1. Every accident is caused. Carelessness is not a cause, but the result of some deficiency. Telling employees to be more careful will not eliminate the real accident cause.
2. An accident investigation is not a trial to find fault or to place blame. Its purpose is to find accident causes so that corrective measures may be taken to prevent future accidents.
3. Most accidents result from a combination of human error (unsafe behavior) and a physical hazard (unsafe condition). Do not overlook the possibility of multiple errors and hazards.
4. Don't stop at the obvious answer. For instance, a missing machine guard does not cause an accident. The accident happened because the operator entered the point of operation. Determine why the operator did this and why the guard was off the machine. Only by correcting both problems can you prevent future accidents.
5. The accident investigation should be conducted as soon after the accident as possible. Facts should be gathered while the accident is fresh in the minds of those involved. If possible, question every employee who was involved, or witnessed, the incident. Delay interviewing injured employees until after medical treatment has been received.
6. Other employees who did not witness the accident but work in the area may contribute information regarding the injured workers' activities prior to the accident and conditions at the time of the accident.
7. The accuracy and completeness of the information received from the injured worker(s) and witnesses depends on how well the interview is conducted. Supervisors should:
  - a. Put employees at ease.
  - b. Ask what happened and how it happened.
  - c. Permit employees to answer without interruptions.
  - d. Show concern.
  - e. Remember, nothing is gained with criticism or ridicule.
  - f. Ask why questions only to clarify the story.
  - g. Repeat the story as you understand it.
  - h. Give the employee the chance to correct any misunderstandings that you have.
  - i. Photographs of the conditions as they exist immediately following the accident, including photos so the damaged equipment are very helpful.
  - j. Damaged equipment should be removed or secured for future testing and used as evidence.
  - k. Take immediate action to correct any obvious unsafe conditions. Determine the basic accident causes and correct or recommend action to prevent reoccurrence.

## Root Cause Analysis

The thorough investigation and analysis of incidents (both actual events and near-misses), along with appropriate follow-up, provides one of the most effective means of improving the safety of our employees. In order for our safety program to continuously improve, we need to learn from our mistakes and mishaps that cause injuries and property damages to occur. As an integral part of our safety efforts, City Air Mechanical is incorporating root cause analysis (RCA) into our incident investigation procedure. RCA is a class of problem solving methods aimed at identifying the root causes of problems or events (accidents) and is predicated on the belief that injuries are best prevented by attempting to correct or eliminate the root cause, as opposed to merely addressing the immediately obvious symptom.

There are several different methods of conducting a root cause analysis and we have decided that the “5 Whys” method will best serve our company. Regardless of what method is used, an effective RCA is solely dependent upon the quality and quantity of information that is gathered during the investigation. Having the right people selected to conduct the investigation is critical; usually people who are knowledgeable of the operations, company policies/procedures and were present on the job when the accident took place are necessary to conduct a quality investigation. The first step in conducting the RCA is to collect information about what happened. The information will generally come from personnel interviews, and observations of the work environment. If possible, take photographs or video the entire working environment where the accident took place. At this stage of the investigation, it is especially important not to jump to conclusions but to let the facts speak for themselves.

Once the information gathering is more or less complete, the investigation team should develop a timeline that outlines the sequence of events. As the timeline is developed, it will become clear that certain information items are missing or not detailed enough, so the team will need to go back and gather the necessary information.

Individual incidents are usually indicative of a broader range of management or system problems. Simply correcting the actions or events that led to a particular incident that is being investigated represents an opportunity missed; what is needed is a process for identifying underlying or root causes so that a broader range of future incidents can be avoided. Understanding this, the following is a description of the process we will take while conducting the “5 Whys” root cause analysis:

1. Conduct thorough investigation and gather all important information. Have team review all information, timeline of events and photographs/videos.
2. Once team is “up to speed”, write down the specific problem, or direct cause of the accident.
3. Ask why the problem happened and write the answer down below the problem.
4. If the answer you just provided does not seem to identify the root cause of the problem, continue to ask why until the team agrees that the root cause was found. On average, “why” will need to be asked 5 times before a root cause can be determined, but it is simply a rule of thumb; sometimes it will only take 3 whys and other times it may take 7. There is no set number of times; that will be determined by the team.
5. Create and issue the report to all affected parties and take appropriate corrective actions to prevent recurrence of similar events. This report should summarize the event itself, the root causes that were identified and recommendations as to how the findings may be addressed.

# EMERGENCY ACTION PROGRAM

## I. Purpose

This Emergency Action Program has been developed in accordance with Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.38. The purpose of this plan is to ensure the protection of all employees in an emergency situation. (Tornado, fire, earthquake, severe storm, death, etc.) The personal safety of each employee is and always will be of primary importance to City Air Mechanical, Inc.

## II. General Program Management

### A. Responsibility

It is the responsibility of the management to protect their employees. The company Safety Coordinator is responsible for this program and has authority to make necessary decisions to ensure the success for this plan. Copies of the written program may be obtained from the City Air Mechanical office.

### B. Program Review and Update

The Emergency Action Program will be reviewed and/or updated under these circumstances:

- Annually, on or before February 28th of each year,
- when new equipment, facility construction, or personnel changes might affect the plan's procedures.

## III. Methods of Compliance

### A. Emergency Escape Procedures

Emergency escape routes will be kept clear at all times. The escape routes and emergency procedures are documented in **Appendix A**. A copy of the escape route and emergency procedures will be posted on the employee bulletin board. This company also has designated safe areas for employees to report to in the case of an emergency. Refer to **Appendix B** for designated safe areas.

### B. Procedures to Account for Employees

Supervisors will be responsible for accounting for employees after an emergency evacuation. The responsible persons will be provided with a list of names of all the employees they are responsible for in their area. This list will be updated with each new employee hired and non-employees will be deleted.

The following employees will be responsible for conducting procedures to account for employees after the emergency evacuation. These procedures are designed to account for all employees, determine if an employee needs assistance in evacuating, and to determine their possible location.

Name/Position	Alternate	Department
General Foreman/Foreman	Journeyman	Sheet Metal
General Foreman/Foreman	Journeyman	Plumber/Piping
Owner/Manager	Office Manager	Office/Shop

### C. Procedure for Reporting Emergencies

Our goal is to provide prompt and immediate action in any emergency to protect lift, property, and equipment. The quicker and more efficient emergencies are reported, the greater the chance for saving lives and property. The following is the procedure for reporting an emergency in this company. This procedure will be posted on the employee bulletin board.

Emergency Situation	Reporting Procedures
<b>Fire</b>	<b>911 to report fire</b> <b>Attend to injured worker(s)</b> <b>Report to Foreman/Journeyman</b> <b>Notify Job site Superintendent</b> <b>Notify 701-223-3775 CA Office</b>
<b>Tornado, Fuel or Chemical Release, Earthquake, Severe Injury or Death</b>	<b>911 for Injuries</b> <b>Attend to injured worker(s)</b> <b>Report to Foreman/Journeyman</b> <b>Notify Job site Superintendent</b> <b>Notify 701-223-3775 CA Office and Safety Coordinator</b>

**Heather Jones 701-391-6051**

**Eric Paul 701-426-0169**

**Troy Mueller 701-471-4341**

### F. Alarm Systems

The emergency alarm system will provide warning for necessary emergency action as called for in this program. This alarm system will be capable of being perceived above ambient noise or light levels by all employees in the workplace. Tactile devices may be used to alert those employees who would not otherwise be able to recognize the audible or visual alarm.

### G. Training and Record keeping

Safety Coordinator is responsible for training all employees covered under this program. As part of the Emergency Action Program our employees will be trained under the following circumstances:

- At the time of initial assignment and annually thereafter,
- when an employee's responsibility changes under this program.

Employees responsible for leading the evacuation will be trained in evacuation inspections of closed rooms, alternate escape routes, employees that may need additional assistance, buddy system, and hazardous areas to avoid during evacuation procedures.

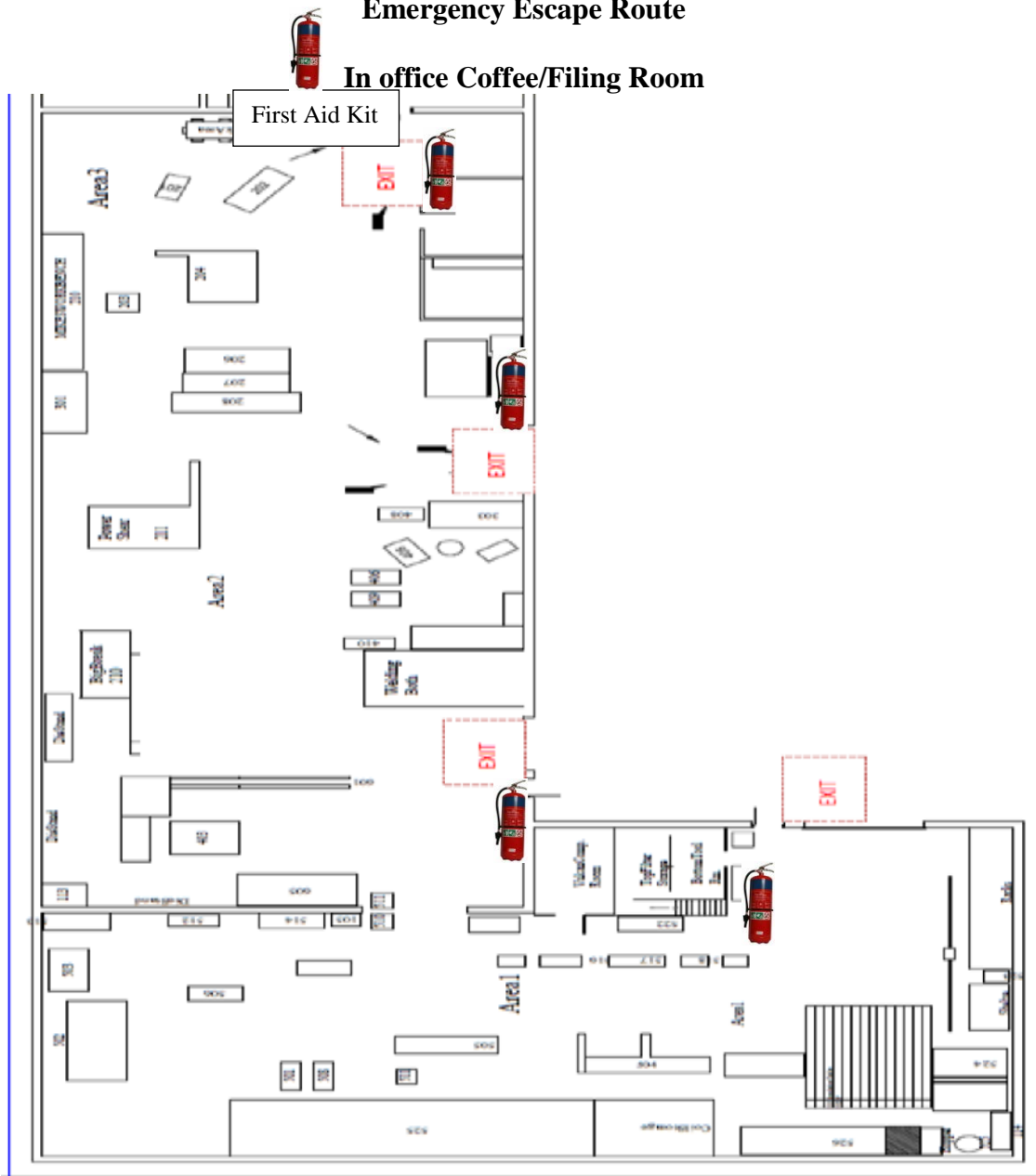
For additional information or explanation of the duties under the Emergency Action Program contact the company Safety Officer.

To ensure that proper training is given to our employees, we keep accurate records of our employees' training. This information is kept in the City Air Mechanical office.

## Appendix A

### Emergency Escape Route

#### In office Coffee/Filing Room



#### Before Shelter/Evacuate

- Account for all Employees
- Shut off equipment/ tools
- Secure items(only if time allows)
- Continue to Designated Safe Areas(Appendix B)

#### After Emergency

- First Aid/contact 911
- Account for all Employees
- Report incident to Safety Coordinator, President, and/or management
- Keep communications between all City Air Staff and emergency personnel
- No communication should be provided to news reporters when emergency situation caused by human/equipment error until investigation and management

## Appendix B

### Designated Safe Areas at City Air Shop

Emergency Situation	Designated Safe Area
Fire	Credit Collection Bureau parking Lot
Tornado	Office File Room
Fuel or Chemical Release inside shop	Credit Collection Bureau parking Lot
Fuel or Chemical Release outside shop	Stay indoors until directed by emergency personnel

### Designated Safe Areas on Job Sites

Emergency Situation	Designated Safe Area
Fire	<p><b>Follow General Contractor emergency plan or meet in Job Site Trailer if its safe distance from hazard</b></p> <p><b>In case of Tornado when you're outside with no shelter</b></p> <ul style="list-style-type: none"> <li>• Immediately get into a vehicle, buckle your seat belt and try to drive to the closest sturdy shelter. If your vehicle is hit by flying debris while you are driving, pull over and park.</li> <li>• Take cover in a stationary vehicle. Put the seat belt on and cover your head with your arms and a blanket, coat or other cushion if possible.</li> <li>• Lie in an area noticeably lower than the level of the roadway and cover your head with your arms and a blanket, coat or other cushion if possible.</li> </ul> <p><b>In case of Lightning when you're in open area</b> Go to a low place such as a ravine or valley. Be alert for flash floods.</p>
Tornado	
Lightning	
Fuel or Chemical Release	



## Workplace Violence Prevention Program

### **Purpose**

To establish guidelines to protect employees against workplace violence.

### **Policy**

Nothing is more important to the Company than the safety and well being of its employees. Threats, threatening behavior, or acts of violence against employees, visitors, guests, or other individuals by anyone on Company property will not be tolerated. Violations of this policy will lead to disciplinary action, which may include dismissal, arrest, and prosecution.

Any person who makes substantial threats, exhibits threatening behavior or engages in violent acts shall be removed from the premises as quickly as safety permits and shall remain off premises pending the outcome of an investigation. The Company will initiate an appropriate response, including but not limited to suspension, reassignment of duties, termination of employment and/or business relationship, and/or criminal prosecution of the person(s) involved.

No existing policy, practice, or procedure should be interpreted to prohibit decisions designed to prevent a threat from being carried out, a violent act from occurring, or a life-threatening situation from developing.

All Company personnel are responsible for notifying their supervisor or the management representative(s) designated below of any threats that they have witnessed, received, or have been told that another person has witnessed or received. Even without an actual threat, personnel should also report any behavior they have witnessed which they regard as threatening or violent, when that behavior is job related or might be carried out on at a Company site. Employees are responsible for making this report regardless of the relationship between the individual initiating the threat or threatening behavior and the person(s) receiving the threat, including domestic problems which they fear may result in violent acts against them or a coworker.

All individuals who apply for or obtain a protective or restraining order which lists the Company locations as protected areas must provide a copy of the petition used to obtain the order, as well as a copy of the protective or restraining order which was granted, to their immediate supervisor or the designated representative(s) listed below.

The Company understands the sensitivity of the information requested and has developed confidentiality procedures that recognize and respect the privacy of the reporting employee(s).

The designated management representative(s):

Name: Heather Jones  
Title: President Dept: \_\_\_\_\_  
Location: Bismarck, ND Telephone: 701-223-3775

Name: Travis Mowbray  
Title: Vice President Dept: \_\_\_\_\_  
Location: Minot, ND Telephone: 701-852-1491

## Fleet Safety Program

### Motor Vehicles Rules

All employees who drive a company car or delivery vehicle must abide by the following safety rules:

1. Employees are required to inspect their assigned vehicle (before taking it on the road) to ensure that it is in safe working condition. This includes properly working brakes, horns, and back-up alarms.
2. Any defects in the company vehicle should be reported promptly.
3. Employees are required to obey all state, local, and company traffic regulations.
4. Engines are to be stopped and ignition keys removed when parking, refueling, or leaving the company vehicles.
5. Passengers not employed by the company are not permitted to ride in company vehicles unless authorized by the supervisor.
6. Employees should drive safely. Defensive driving must be practiced by all employees.
7. Seat belts and shoulder harnesses are to be worn at all times.
8. Vehicles must be locked when unattended to avoid criminal misconduct.
9. Vehicles must be parked in legal spaces and must not obstruct traffic.
10. Employees should park their vehicles in well-lighted areas at or near entrances to avoid criminal misconduct.
11. Employees should keep their headlights on at all times when driving a vehicle.
12. A vehicle when loaded with any material extending 4 feet or more beyond its rear shall have a red flag or cloth 12 inches square attached by day, or a red light visible for 300 feet by night, on the extreme end of the load.
13. Articles, tools, equipment, etc. placed in cars or truck cabs are to be hung or stored in such a manner as not to impair vision or in any way interfere with proper operation of the vehicle.
14. When you cannot see behind your vehicle (truck), the driver should walk behind the truck prior to backing.
15. Personal use of vehicles is not permitted without approval of management. Children are prohibited from using company vehicles.
16. Operating a company vehicle while under the influence of alcohol and other drugs is prohibited. Violators are subject to termination of employment.
17. Every accident should be reported to the Safety Director. The Safety Director should investigate all accidents and review them with the Supervisor and employees.
18. All subcontractor personal vehicles must be parked in areas designated as contractor parking.
19. When operating vehicles on the job site, use reasonable judgment for speed and conditions.
20. Cell phone use while operating a company vehicle is strictly prohibited without the use of hands free device.

### Motor Vehicles Records (MVR)

1. All prospective and current employees will undergo annual motor vehicle record checks.
2. Violations (gathered from MVRs) are categorized as follows:

**TYPE A VIOLATION:** Includes, but is not limited to, DWI/DUI/OWI/OUI, refusing a drug/alcohol test, reckless driving, manslaughter, hit & run, eluding a police officer, any felony, drag racing, license suspension, and driving while under license suspension. Any driver with these types of violations is a major concern and could be subject to removal of driving privileges and/or termination of employment.

**TYPE B VIOLATION:** Includes all vehicle accidents, regardless of fault. Any driver determined to be at fault for an accident could be subject to removal of driving privileges.

**TYPE C VIOLATION:** Includes all moving violations not classified as Type A or B (i.e. speeding, improper lane change, failure to lead, running red lights or stop signs, etc.). Any driver with more than one type “C” violation will be evaluated by management. More than two type “C” violations listed on the drivers MVR may result in reassignment to a non-driving position.

**TYPE D VIOLATION:** Includes all non-moving violations (i.e. parking, vehicle defects, etc.)

3. NOTE: It is required of all current employees to report Type A, B, and C violations to supervisor regardless if involving company property/trucks or not.

### Driver Qualification File

The company will maintain the appropriate qualification files for each regularly employed driver.

### Accident Reporting

#### **Driver Conduct at the Scene of the Accident**

1. Take immediate action to prevent further damage or injury.
  - Pull onto the shoulder or side of the road.
  - Activate hazard lights (flashers) and place warning signs promptly.
  - Assist any injured person, but don’t move them unless they are in danger of further injury.
2. Call the Police
  - If someone is injured, request medical assistance.
  - If you are near a phone, write a note giving the location and seriousness of the accident and give it to a “reliable” motorist and ask him/her to contact the police.
3. The vehicle should not be left unattended, except in an extreme emergency.
4. Exchange identifying information with the other driver. **Make no comments about assuming responsibility.**
5. Secure names, addresses, and phone numbers of all witnesses, or the first person on the scene if no one witnessed the accident.
6. Call the company immediately and report the accident to the Safety Director and/or Company Office.
7. You are required to undergo a post accident drug test in accordance with the company’s Drug-Free workplace policy.

#### **Complete the Vehicle Accident Report Form**

1. Complete the Vehicle Accident Report Form (a copy can be obtained from the Safety Director) and provide it to the Safety Director. Write legibly. Answer all questions completely or mark “not known.” Use additional sheets of paper as needed to provide pertinent information.

### Inspection Records & Preventative Maintenance

All drivers must regularly inspect, repair, and maintain their company vehicle. All vehicle parts and accessories must be in a safe and proper working order at all times. The following apply:

1. Drivers of company vehicles shall complete a vehicle inspection quarterly. Inspections can be completed on Canvas App –Vehicle Quarterly Inspection Check list and/or on the available form.
2. Before the vehicle is driven again, any safety defects must be repaired.
3. Preventative maintenance must be conducted on each vehicle quarterly or every 5,000 miles.
- 4.. Maintenance and inspection records must be kept at the company for 1 year or for 6 months after the vehicle leaves the company’s ownership.
5. All vehicles are subject to a search by Company Management at any time.

## **DRUG / ALCOHOL PROGRAM**

The Drug/Alcohol Free Workplace Act, requires that City Air Mechanical, Inc. notify each employee, as a condition of employment, that each employee must:

1. Comply with the companies drug/alcohol free workplace policy.
2. Notify the company of any convictions for drug/alcohol related offense committed in the workplace, within five (5) days of conviction.
3. Any employee who violates the policy shall be subject to disciplinary action, up to and including termination of employment.

This policy certifies City Air Mechanical, Inc. intent to maintain a drug/alcohol free workplace. In response to the federal and state requirements for drug/alcohol free workplace, and in keeping with City Air Mechanical, Inc. concern for the health and safety of our employees, City Air Mechanical, Inc. has instituted the following drug/alcohol free workplace policy.

### **POLICY:**

City Air Mechanical is committed to the provision of high quality services, humanistic relations with and among employees, as well as a substance abuse free workplace. Any unlawful or unauthorized transfer, sale, distribution, manufacture, possession, or use of a controlled substance or alcohol by an employee on the job, in the workplace or where our facility work is performed is prohibited. This policy applies to all official or unofficial break and meal periods, and all other times during the working day in which an employee has reported for work.

City Air Mechanical reserves the right to contact proper law enforcement officials and/or State licensing/certifying boards regarding any matter, subject to this policy. Violation of the substance abuse program will be subject to disciplinary action up to and including termination.

### **DEFINITIONS:**

“Alcohol” includes all forms of beer, wine, or distilled liquor containing alcohol or any substance containing alcohol.

“Drug” means any substance that has a known mind or function altering effects on humans.

“Under the Influence or Impaired” means that alcohol or a drug or a combination of alcohol or drug affects an individual, such that the person is limited in the performance of his/her work in a safe and productive manner.

“Illegal drugs” in this policy means inhalants and controlled substances, and includes medications, which contain a controlled substance, which are used for a purpose or by a person for which they were not prescribed or intended or otherwise used under the supervision of a licensed health care professional.

“Reasonable suspicion or reason to suspect” means a basis to form a belief based on specific facts and inferences drawn from those specific facts.

### **AUTHORIZED USE OF PRESCRIBED MEDICINE:**

An employee undergoing prescribed medical treatment with any drug which may alter his or her physical or mental ability must report this treatment to the company. City Air Mechanical, Inc. shall determine whether a temporary change in the employee's job assignment during the period of treatment is warranted.

Definition of positive alcohol test:

Alcohol test shall be considered positive if the breath test indicates an alcohol presence of 0.04% or greater. If an alcohol test indicates an alcohol concentration of at least 0.02%, but less than 0.04%, the test is considered negative, but the employee will be taken out of service for 24 hours. If the test results are positive, the employee and supervisor will be notified before the employee leaves the test site.

Definition of positive controlled-substance test:

A test will be considered positive if an illegal controlled substance, or an unacceptable level of certain prescription medication, is found in the urine.

City Air Mechanical, Inc. employees must:

1. Read and understand the written program and policy which is adapted from the Federal Drug/Alcohol Free Workplace Act.
2. Read, sign, and date the POLICY ACKNOWLEDGEMENT SHEETS.

TESTING WILL BE CONDUCTED IN THE FOLLOWING MANNER:

(Testing conducted by Preble Medical)

- a. Random in house and field testing.
- b. Unannounced testing
- c. Announced testing
- d. For Cause

**Procedures for all location are as follows:**

- A. Upon hire each new employee should be given information about the Drug Free Workplace Act and should sign that they have been trained, reviewed and received a copy. The signed Drug Free Workplace Act notice shall be placed in the employee's personnel file.
- B. Issues and questions involving drug and alcohol use should be presented to the Human Resources Representative, or the Employee Relations Department for consideration and determination.
- C. Employees are not permitted to use, transfer, possess, distribute or work under the influence of drugs or alcohol. For the purposes of this policy a positive drug test is sufficient to establish "use" and a positive alcohol test is sufficient to establish "under the influence."

The Company may also test for substance abuse in reasonable cause and post-accident situations.

- a. FOR CAUSE – in instances where illicit drug is suspected, an employee may be asked to submit to a drug test in conjunction with the Company's Substance Abuse Policy.
- b. POST- ACCIDENT – when an employee is involved in a work related accident requiring medical treatment, lost time, personal injury to others or property damage, an employee may be asked to submit to a drug test in conjunction with the Company's Substance Abuse Policy.

- D. Subject to any limitations imposed by law, a refusal or delaying to provide a body substance sample under the conditions described above may result in disciplinary action up to and including termination. Contact the Human Resources Manager prior to any disciplinary action being taken.
- E. If any illegal drug paraphernalia are found on the company property, the appropriate manager shall be notified immediately. The possession, use, transfer or sale of illegal drugs during work hours or company events or on company property is prohibited and will result in disciplinary action up to and including termination.
- F. Employees involved in illegal drug use or suffering from drug/alcohol dependency are encouraged to seek medical treatment and/or rehabilitation. Employees can use earned sick and vacation time or may be granted an unpaid leave of absence for rehabilitation. However, to avoid any disciplinary action, it is the responsibility of each employee to seek assistance before any drug problem leads to a violation of company policy. Job performance will be the primary determinant of personnel actions affecting employees who suffer from drug dependency and return to work following or during rehabilitation. Satisfactory performance remains a requirement, even if chemically dependent employees seek medical help.
- G. Supervisors and managers will enforce the Substance Abuse Policy and will be responsible for drug awareness communication and education. Supervisors and managers are responsible for managing job performances and for ensuring that employees report to work free from the influence of drugs and alcohol. Employees are responsible for seeking assistance, cooperating with testing and reporting violations of the Company's Substance Abuse Policy.

**EMPLOYEE ASSISTANCE**

Our Company encourages employees to seek help. To assist employees in obtaining treatment, we will refer the employee to a provider or the employee may choose a provider. This may include an Employee Assistance Program (EAP) which provides an assessment, counseling, aftercare and referral service for employees with drug-related problems and other personal problems. Confidentiality is assured. Employees who undergo voluntary counseling or treatment, and continue to work are subject to the same job performances and behavior standards as other employees. As is the case of all employees, those seeking voluntary counseling or treatment that fails to meet performance standards will be subject to disciplinary action. When treatment is necessary, coverage is based on the parameters set forth in the medical benefits plan. Employees are solely responsible for all costs of treatment not covered by their applicable medical benefits plan.

City Air Mechanical's EAP provider, The Village Business Institute, can be contacted by the below telephone number and website. To access the City Air EAP by the web you will be required to type in a User Name: CAMCREW



# Hearing Conservation Program

## PURPOSE:

A noise survey was conducted in our shop located at 3505 E Rosser Ave Bismarck, ND that calculated an 8 hour time weighted average decibel readings at various areas of the shop with various equipment running and back ground noise. This was to determine the proper amount of ear protection required at different areas and activities in the shop. Decibel readings that exceed 85 decibels require ear protection.

## RESULTS:

Baseline: Back ground noise, No equipment Running 73 dBC

*Note: Only equipment that will require ear protection while operating are listed below*

### **Area 1- Back Shop**

<b>Equipment</b>	<b>Decibel Reading</b>	<b>Equipment</b>	<b>Decibel Reading</b>
1. 502 Plasma Table	85	2. 120 Dewalt Chop Saw	103
3. 509 Cleat Bender	89	4. Ductmate Chop Saw	111
5. 506 Snap Lock	87	6. Dewalt Hand Grinder	91
7. Air Gun Hammer	113	8. 504 Power Break	91
9. Notcher	91.5	10. 103 Hammer Lock	94
11. 104 Seamer	85	12. 500 Coil Line Shear	94

### **Area 2 – Spiral Area**

<b>Equipment</b>	<b>Decibel Reading</b>	<b>Equipment</b>	<b>Decibel Reading</b>
1. 600 Spiral Machine	90	2. 403 Clinch Machine	87
3. Dewalt Hand Grinder	91	4. 113 Air Compressor	90

### **Area 3 – Specialty Metals Area**

<b>Equipment</b>	<b>Decibel Reading</b>	<b>Equipment</b>	<b>Decibel Reading</b>
1. Power Shear	95	2. Band Saw	102
3. Dewalt Hand Grinder	91		

## SUMMARY:

Ear Plugs with a 30 decibel reduction rating will be provided and used in all areas where the above equipment is under operation. This rating will provide adequate protection against all activities/process in our shop and on jobsites. Proper training on installation and/or use of ear protection is attached. If additional guidance is needed, please contact your immediate supervisor for instruction. Administrative signs will be posted on all equipment requiring ear protection in the shop. When on project sites or operating other equipment, follow the rule of thumb below. Failure to follow this policy will result in disciplinary action.

Rule of Thumb: ***IF YOU HAVE TO RAISE YOUR VOICE, YOU SHOULD HAVE EAR PROTECTION!***

## **Illumination**

Appropriate lighting is necessary for safe job performance. Our facility maintains an average foot candle reading of 78.2. This provides an adequate amount of lighting to perform any duties required by our facility. We understand that work performed outside of our facility may not have adequate lighting and foot candle readings are not readily available so a certain amount of personal judgment is required. If you have to squint or move closer than what seems to be normal in a controlled environment, such as our shop facility, get extra light, such as a treble light.

## **Ventilation**

Always ensure that work areas are properly ventilated with items such as open doors/windows or proper exhaust systems are in place. If working in a confined, poorly ventilated area, take appropriate measures, such as PPE, to ensure contaminants are not being inhaled. Certain activities, such as welding/soldering/painting require substantial ventilation to be performed. Hood exhaust systems or outdoor working environments are usually required. Job Safety Analysis are available for reference for specific job tasks requiring proper ventilation.

## **Heat /ColdExposure**

When working for any duration in the heat, ensure that plenty of cool water is readily available constantly to keep well hydrated. Also, make sure breaks are taken no less than the regularly scheduled time. In extreme heat cases, breaks may be needed more frequently. For Cold exposure, proper work attire is required. Coveralls, winter jacket, boots, gloves and hat are a minimum requirement when working in cold temperatures and wind. Notify the project foreman immediately, if you begin to feel faint or ill. They will take the associated steps to get you to a safe location.

## **Airborne Contaminants**

The best defense against airborne contaminants is to know what contaminants we are dealing with. Investigations will be performed prior to on site work as to what we may encounter, whether it be dust or asbestos, the proper PPE, ventilation or abatement procedure will be trained and provided.

## **Snow Removal**

City Air Mechanical contracts a snow removal company to remove the majority of the snow from our site and premises. However, this does not include doorway entrances. These entrances are to be clear of snow and debris daily. This is the responsibility of every employee that enters/exists. During icy conditions, ice melt is to be poured over any slippery doorways or entrances to ensure that falls/injuries are minimized.



## Housekeeping

City Air Mechanical has adopted the **5S Standard** for housekeeping as illustrated below.

**5S** is the name of workplace organization methodology that uses a list of five Japanese words which, translated into English, start with the letter S. The list describes how items are stored and how new order is maintained. The decision making process usually comes from dialogue about standardization which builds a clear understanding among employees of how work should be done. It also instills ownership of the process in each employee.

1. **Sorting**

Go through all tools, materials, etc in the shop and work area. *Keep only essential items.* Everything else is to be stored or discarded.

2. **Straighten or Set in Order**

There should be a place for everything and everything in its place. The place should be *clearly labeled and arranged in a manner that promotes efficient work flow.* Each tool, part or piece should be kept close to where it will be used (i.e. straighten the work flow path).

3. **Sweeping/Shining**

Keep the workplace clean as well as neat. At the end of each shift, clean the work area and be sure everything is restored to its place. This makes it easy to know what goes where and ensures that everything is where it belongs. *A key point is that maintaining cleanliness should be part of the daily work* – not an occasional activity initiated when things get too messy.

4. **Standardizing Work**

Work practices should be *consistent and standardized.* Everyone should know exactly what his or her responsibilities are for adhering to the first 3 S's.

5. **Sustaining the Discipline**

Maintain and review the standards. Once the previous 4S's have been established, they become the new way to operate. Maintain focus on the new and do not allow a gradual decline back to the old ways. Always be open to suggested improvements, review and make appropriate changes to the first 4S's.

The *sixth phase, Safety* is sometimes added. It is reasonable to assume that a properly planned and executed 5S program will inherently improve workplace safety.

### Additional Topics:

- a. Unless otherwise specified, waste material and scrap must be put in the proper containers and removed from the job site in accordance with EPA regulations.
- b. Work areas, passageways and stairs, in and around buildings and structures must be kept clear of debris. Construction materials should be stored in an orderly manner. Job site storage areas and walkways must be maintained free of dangerous depressions, obstructions, and debris.
- d. Failure to maintain adequate housekeeping and clean-up will result in contractual action by the contractor.

## **HAZARD COMMUNICATION/RIGHT-TO-KNOW**

A written Hazard Communication Program shall be developed, implemented, and maintained. This Hazard Communication Plan will apply to all City Air Mechanical worksites where there may be exposure to a hazardous chemical.

The Responsible Safety Person shall conduct an evaluation of the written Hazard Communication Program at least annually. This written program will be available in the office of the Responsible Safety Person at the company main office. Any employee may review this program in person at the aforementioned location or may obtain a written copy by submitting a written request, which is dated, signed, and contains a full return address.

The Responsible Safety Person shall be informed of all chemicals introduced and/or removed from the work location.

The chemical Safety Data Sheets (SDS) inventories shall be kept current.

### **Responsibilities**

The Responsible Safety Person is responsible for:

- Chemical inventory
- Hazard evaluations
- Chemical / material spill cleanup
- SDS procurement and maintenance.
- Training.
- Written program administration.

The employee is responsible to:

- Read and follow all label directions
- Report the use of new chemicals brought on site
- Report any chemical / material spills
- Promptly report concerns

### **Container Labeling**

All manufacturers' containers received for use will be clearly labeled;

- As to the contents,
- The appropriate warning hazard, including specific information regarding physical and health hazards, and
- The name and address of the manufacturer.

All secondary containers will be labeled with either an extra copy of the original manufacturer label, or with a generic label which will include;

- Identity of hazardous chemicals.
- Appropriate hazard warnings.
- Name of the chemical manufacturer, importer or other responsible party.
- Labels shall not be removed until the chemical or substance has been removed.

If a different material is placed in a container, the label for the hazardous material contents must be changed to reflect the true contents in the container.

The Responsible Safety Person will review the company labeling system annually and update as required.

Portable containers for use on the job may be filled from larger containers and need not be labeled if;

- The chemical is drawn for immediate use,

- The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container, and
- The contents will be used-up within the work shift in which it is transferred.

## **Safety Data Sheets (SDS)**

The Responsible Safety Person will be responsible for obtaining new SDS's from the manufactures and for maintaining the SDS system, of each product used, for the company. The Responsible Safety Person will review incoming SDS's for new and significant health and safety information and see that any new information is passed on to all affected employees.

Employees will be trained to recognize and interpret SDS's, labels, warnings, color-coding, and signs affixed to containers that they might handle.

Where employees must travel between workplaces during a work shift, (i.e., their work is carried out at more than one geographical location) the material safety data sheets may be kept at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.

Safety Data Sheets (SDS's) for all hazardous chemicals or substances that employees may be exposed to will be maintained at the office of the Safety Director and readily available to all employees.

In case of an emergency SDS will be made available, upon request, to employees or their designated representatives.

In order to facilitate these copies contact the:

- Facility/Supervision's office,
- Safety Detector,
- Online database or
- Subcontractor Coordinator's Office

In areas where employees are handling or exposed to hazardous or corrosive chemicals, there shall be intermediate access to a safety shower/eyewash station.

## **Compressed Gases**

### **Storage**

1. Keep smallest supply of compressed gases needed in the work area. Cylinders in use must be secured and in an upright position. Cylinders not manifolded in use with equipment shall be kept in a designated storage area protected from the weather.
2. Store in cool place but avoid extreme colds, ice/snow, dampness and/or direct sunlight to prevent rusting or pressure build up.
3. Cylinders stored outdoors must be off the ground on concrete pads or storage racks built of fire resistant material. Area should be free of other combustible debris such as grass, weeds or paper.
4. Oxygen and gas cylinders must be separated by at least 20' and stored away from other combustible materials such as oil or gas.
5. Empty cylinders shall be stored separately from full with proper labeling attached.
6. Properly label cylinder storage areas and mark "NO SMOKING PERMITTED". Keep all sparks and flames and other ignition sources away from cylinder storage.

### **Safe Use**

1. Treat all cylinders as if they were full, even if empty. They contain the same hazards as if they were full.
2. Always open valves slowly, crack for an instant to clear opening of dirt or particles, while pointing away from body or others. Never use toward clothing, hair or skin.
3. Before removing regulator from the cylinder, close valve and release gas from regulator.

4. Store all cylinders with valves closed and caps in place and secure with straps, chains or ropes to keep from tipping over.
5. Use compressed gases only in well ventilated areas, never use in confined spaces.
6. Cylinder shall be in the upright position during use with the appropriate regulator in place for the contents of the cylinder. Never use the regulator to shut off the cylinder.

### Leaking Tanks

1. Do use tank if leaking and close cylinder valve to stop the flow of gas. Attach a regulator to temporarily stop leak and move to open air away from buildings or other ignition sources and tag out.
2. Notify others and supervisors and call supplier to remove the cylinder.
3. If you are unsure of leak, soap water test all valves, fittings and connectors and watch for bubbles to appear indicating a leak.

### Transportation of Compressed Gases

1. Transport in an upright, rack secured position. Do not drag, roll or slide them on the ground.
2. Do not drop or let cylinders bang together.

### Operation

1. Crack valve open then shut immediately
2. Open cylinder valve slowly, not more the 1-1/2 turn is necessary.

## **Flammable Liquids & Gases**

### Storage & Handling

1. Flammable liquids & gases are not to be stored in the same area compressed gases, any spark producing equipment or machinery.
2. Area needs to be well ventilated and easy access to fire extinguishing equipment.
3. Proper labeling is required on all containers clearly identifying the contents and the container shall only be used for that particular content.
4. Container lids must be self closing to secure contents.
5. When transferring or disposing of flammable liquids, the receiving container must be secured to the ground to prevent spillage.
6. Only trained personnel shall be permitted to handle or dispose of flammable liquids or gases.
7. Care is essential when handling drums or containers so that they are not damaged or punctured and that it is properly labeled.
8. Never us the contents of containers without proper identification of contents.

## **Spray Finishing**

1. Paints are not to be stored in the same area compressed gases, any spark producing equipment or machinery.
2. Area needs to be well ventilated and easy access to fire extinguishing equipment.
3. Container lids must be self closing to secure contents.
4. When transferring or disposing of paint or spray finishing, the receiving container must be secured to the ground to prevent spillage.

## **Asbestos**

### **Purpose**

The purpose of this procedure is to formally establish the company's actions for employees who encounter Asbestos Containing Material (ACM) on the job site. It is the policy of this company not to engage in activities involving ACM, when such activities would result in the exposure of our employees to friable (*Easily crumbled and made airborne*) asbestos.

### **Responsibilities**

#### *Estimators/Project Managers/Foreman*

It is the responsibility of the estimator / project manager to make the initial inquiry to the building owner if ACM is present prior to work activities by completing the Asbestos Information Document, (See Appendix A). During the Construction, it is the project foreman's responsibility in coordination with the Project Manager to ensure our employees do not disturb and are not exposed to asbestos.

#### *Safety Committee*

Shall be responsible for the training of personnel on asbestos awareness.

#### *Employees*

Shall be responsible for reporting areas suspected of containing ACM and company guidelines to prevent accidental release.

### **Pre-Planning**

The project manager or foreman shall forward the Asbestos Information Document (Appendix A), to have the client disclose the presence of ACM in their building or on their premises if the facility was constructed prior to 1980 or is suspected to have ACM. This document will be completed and reviewed prior to the beginning of any work activity.

### **Permitted Work**

Repair & Maintenance operations where ACM is present but are encapsulated or contained in a manner where disturbance is unlikely may be conducted under the following circumstances.

1. A written work plan is prepared which will assure our employees are not exposed.
2. Specific Training of effected employees to assure knowledge and adherence to the plan.
3. The foreman assures that the provisions of the plan are followed and no release of ACM occurs.

### **Accidental Exposure**

If accidental exposure is suspected, the foreman shall take the following actions.

1. Immediately clear the area, minimizing dust exposure to employees and generate a list of employees in the area.
2. Immediately notify the project manager who will immediately contract the Owner's representative and request information the Owner may have on the material in question.
3. If the material is of unknown nature, a sample shall be taken and placed in a sealed plastic bag, clearly marked and forwarded to the Owner for lab analysis.
4. If the material is determined to contain asbestos, the exposed employees will be administered a written medical evaluation.

# **Lead**

## **Purpose**

The purpose of this procedure is to formally establish the company's actions for employees who encounter lead or lead based paint on the job site. It is the policy of this company not to engage in activities involving lead where the amounts exceed the allowable limits, when such activities would result in the exposure of our employees or building occupants to lead chips or dust.

## **Responsibilities**

### *Estimators/Project Managers/Foreman*

It is the responsibility of the estimator / project manager to make the to make the initial inquiry to the building owner if lead is present prior to work activities. During the Construction, it is the project foreman's responsibility in coordination with the Project Manager to ensure our employees do not disturb more than the allowable limit of lead and/or lead based paint.

### *Safety Committee*

Shall be responsible for the training of personnel on lead awareness.

### *Employees*

Shall be responsible for following the guidelines set forth by City Air Mechanical and report any deviations to your supervisor immediately.

## **Permitted Work**

Minor repair activities as defined by the EPA are as follows and work is permitted in these areas.

1. Interior Work – disturbing less than 6 sqft per room of painted surface is exempt from the cleanup regulations unless it involves window replacement, demolition or prohibited practices. (Note: HUD requirement is 2 sqft)
2. Exterior Work – disturbing less than 20sqft of painted surface in expempt from the work cleanup regulations, unless it involves window replacement, demolition or prohibited practices. (Note: Work performed in the same area within 30 days is considered the same job.)

Encounters that exceed the above regulations require a certified renovator to perform the work. In these cases, treat it as a hazardous material, discontinue work and contact management.

## **Examples of Lead We May Encounter**

Roof Drains	Cast Iron Pipe Joints
Lead Water Mains	Lead Base Paint
Lead Base Glazed Pottery	Lead Crystal

## **Symptoms of Lead Exposure**

Headache	Stomach Ache
Irritability	Fatigue
Loss of Appetite	Joint & Muscle Pain

If you experience any of these symptoms after exposure to lead, please seek medical attention immediately.

## **Hazard Recognition Program**

City Air Mechanical, Inc. understands that one effective way to identify workplace hazards is through the process of self-inspection. Through this process, we will identify safe and unsafe conditions/behaviors as well as compliance with OSHA regulations that are applicable to our operations. Our workplace inspections should be performed daily by all employees, but will be formally conducted and documented on a quarterly basis. All workplace hazards that are identified should be reported immediately to management via a Safety Concern report. All items that are found to be unsatisfactory during the quarterly inspection will be included in a corrective action plan that identifies the item to be corrected, who is responsible for addressing it and when it is to be fixed. It is managements goal to correct any deficiencies noted as soon as possible or within 30 days.

We have identified 3 different types of inspection checklists to assist us in recognizing those items/conditions that could lead to an incident. They include; Shop Inspection, Equipment/ Vehicles Inspection and Job Site Inspection. These checklists are by no means all-inclusive and should only be used as guidance documents. As our work environment, processes, equipment, personnel, accident history and regulations change, so will our checklists. We will strive to keep these checklists up-to-date and meaningful to assist us in maintaining a safe workplace. As we gain experience in inspecting our work areas, our checklists will become “fine tuned” to meet our safety needs. Through our efforts to recognize job hazards, the following areas/topics should always be reviewed;

**Processing, Receiving, Shipping and Storage** - equipment, job planning, layout, heights, floor loads, projection of materials, material handling and storage methods, training for material handling equipment.

**Building and Grounds Conditions** - floors, walls, ceilings, exits, stairs, walkways, ramps, platforms, driveways, aisles.

**Housekeeping Program** - waste disposal, tools, objects, materials, leakage and spillage, cleaning methods, schedules, work areas, remote areas, storage areas.

**Electricity** - equipment, switches, breakers, fuses, switch-boxes, junctions, special fixtures, circuits, insulation, extensions, tools, motors, grounding, national electric code compliance.

**Lighting** - type, intensity, controls, conditions, diffusion, location, glare and shadow control.

**Heating and Ventilation** - type, effectiveness, temperature, humidity, controls, natural and artificial ventilation and exhausting.

**Machinery** - points of operation, flywheels, gears, shafts, pulleys, key ways, belts, couplings, sprockets, chains, frames, controls, lighting for tools and equipment, brakes, exhausting, feeding, oiling, adjusting, maintenance, lockout/tagout, grounding, work space, location, purchasing standards.

**Personnel** - training, including hazard identification training; experience; methods of checking machines before use; type of clothing; PPE; use of guards; tool storage; work practices; methods for cleaning, oiling, or adjusting machinery.

**Hand and Power Tools** - purchasing standards, inspection, storage, repair, types, maintenance, grounding, use and handling.

**Chemicals** - storage, handling, transportation, spills, disposals, amounts used, labeling, toxicity or other harmful effects, warning signs, supervision, training, protective clothing and equipment, hazard communication requirements.

**Fire Prevention** - extinguishers, alarms, sprinklers, smoking rules, exits, personnel assigned, separation of flammable materials and dangerous operations, explosion-proof fixtures in hazardous locations, waste disposal and training of personnel.

**Maintenance** - provide regular and preventive maintenance on all equipment used at the worksite, recording all work performed on the machinery and by training personnel on the proper care and servicing of the equipment.

**PPE** - type, size, maintenance, repair, age, storage, assignment of responsibility, purchasing methods, standards observed, training in care and use, rules of use, method of assignment.

**Transportation** - motor vehicle safety, seat belts, vehicle maintenance, safe driver programs.

**First Aid Program/Supplies** - medical care facilities locations, posted emergency phone numbers, accessible first aid kits.

**Evacuation Plan** - establish and practice procedures for an emergency evacuation, e.g., fire, chemical/biological incidents, bomb threat; include escape procedures and routes, critical plant operations, employee accounting following an evacuation, rescue and medical duties and ways to report emergencies.

### Job Safety Analysis (JSA)

To supplement our hazard recognition program, City Air Mechanical, Inc. has implemented a proactive, JSA initiative. Through our safety committee, we will identify those job tasks that create the most hazardous working conditions and complete the job hazard analysis.

Specifically, the JSA is a method to identify, analyze and record 1) the steps involved in performing a specific job, 2) the existing or potential safety and health hazards associated with each step, and 3) the recommended actions or procedures that will eliminate or dramatically reduce the risk of a workplace injury or illness.

Once the JSA's are complete, they will be contained in a binder and will be used to educate our employees during regular safety meetings and used to train all new hires during the orientation process. The safety committee will review all completed JSA's on a regular basis (annually) to ensure that all dangerous work tasks have been addressed and that all JSA's are still relevant to our operations and contain up to date procedures and control measures.



## **Bloodborne Pathogens**

Bloodborne pathogens are defined as a microorganisms that is present in human blood and human body fluids, that can cause disease in a human. They include, but are not limited to Hepatitis B (HBV) and Human Immunodeficiency (HIV).

HBV & HIV cause acquired immunodeficiency syndrome (AIDS). Puncture wounds, or instrument used which could cause puncture wounds, can transmit both diseases through body fluids, which are considered potentially infectious body fluids. *Semen, vaginal secretion, cerebrospinal fluid, amniotic fluid and body fluids that are visibly contaminated with blood as well as any tissue or organ from humans.*

The following are NOT considered infectious unless there is visible blood: urine, feces, saliva, sweat or tears.

How can your body be infected?

- a. Accidental injury by sharp object contaminated with infectious material
- b. Open cuts, nicks, skin abrasions, dermatitis, acne and mucous membranes of the mouth, eyes or nose.
- c. Indirect transmission, such as touching a contaminated object or surface and transferring the infectious material to your mouth, eyes, nose or open skin.

Infectious materials are anything that can pierce, puncture or cut the skin such as, but not limited to, needles, broken glass, scalpels, exposed ends, wires, etc.

How do I protect myself?

- a. Follow safe work practices
- b. Cut away from body when using sharp objects
- c. Always place sharp objects in protective coverings when not in use.
- d. Use proper tools for proper tasks.
- e. Never use a tool that has been in contact with blood or other potentially infectious materials.
- f. Practice 5S and good housekeeping on all worksites.
- g. Avoid eating, drinking, smoking or touching face while in work areas where the likelihood of exposure exists.
- h. Do not perform work around any area labeled “BIOHAZARD”

What do I do if exposure exists?

- a. Always assist other employees with the provided first aid kit. It includes protective gloves, band aids and help with all life threatening situations without serious risk of injury to themselves.
- b. Wash contaminated area with soap and running water immediately. Hand cleaner and antiseptic wipes can be used as an immediate and temporary measure until you can reach soap and water.
- c. Avoid splashing, spraying or spattering
- d. Fill out incident/accident report
- e. Get tested for exposure
- f. Hepatitis B vaccinations are available 10 days after exposure.

## **Elevated Work**

All elevated work surfaces shall be kept clean and orderly in accordance with proper housekeeping procedures as outlined previously in the Environmental section.

## **Fall Protection**

It is the policy of City Air Mechanical to take all measures possible to eliminate, prevent, and control fall hazards. If a fall hazard can't be eliminated, effective fall protection will be planned, implemented, and monitored to control the fall hazard. Fall protection equipment and training will be provided to all employees exposed to fall hazards. A fall hazard exists if an employee is exposed to falling 6 feet or more from an unprotected side or edge. In such case a guardrail system, safety net system, personal fall arrest system, or safety monitoring system must be used.

### Guardrail System

- must have overall height of 42 inches(give or take 3 inches)
- must have a top and mid rail and toe boards
- All rails must be a smooth surface, at least a minimum of ¼ inch thick
- Top rail must be capable of withstanding 200 pounds of pressure with total deflection of no more than three inches at a point within two inches of the top
- If rail is made of wire rope, it must be flagged with highly visible material at an interval of not less than every six feet and rope minimum of ¼ inch thick

### Safety Net Systems

- Generally not used for fall protection of roofing job.
- If and when a safety net system is proposed for a specific job management should be involved to set up system according to requirements of the Fall Protection Standandar 29 cfr 1926, 502c

### Fall Arrest Systems

- Includes safety equipment components such as body harness, lanyards, deceleration devices, drop lines and/or vertical lifelines and anchorages interconnected and rigged as to arrest a free fall
- Must with stand twice the potential impact of a fall or 5,000 pounds

## **Rescue Plan**

This rescue plan is intended to reduce risks to an employee's health after a fall arrest event. It is a strategy planned in advance to safely retrieve a person who has fallen from an elevated work surface and is suspend in a fully body harness. Planning is to be documented on Resuce Plan for all employees to understand how a rescue should be executed to rescue a fall victim. Prompt rescue of the victim should be less than six minutes to eliminate them from experiencing suspension trauma. Suspension trauma is a serious medical condition that can lead to unconsciousness, injury or death, which can occur when a worker is suspended in a harness for too long after a fall.

What to do if caught suspended in your harness

1. make sure someone knows where you are at all times
2. Call for help and have them contact emergency 911 immediately

3. Stand in suspension relief strap and loosen leg straps to help blood circulation
4. Try to get your legs up as high as you can , prop them against a structure – best possible position is to have knees up next to chest
5. Keep your legs moving to help pump the blood from your legs back to your heart
6. After rescue stay in a seated position for at least 45 minutes, DO NOT lie down. Seating allows slow reintroduction of pooled blood back into circulation. Move your legs gently to help restore circulation, but DO NOT walk for 45 minute.

**Self Rescue:** if person working at heights has properly selected and used his or her fall protection equipment he/she will be able to perform their own rescue following these steps:

- 1) Climbing back up to level from which he/she fell(from a few inches to 2-3 feet)
- 2) Returning to the floor or ground to be evaluated for possible medical attention
- 3) Remove all components of fall arrest system impacted by the fall event from service and documenting (tag out) the components with name, date, and activity at the time of the fall and giving the equipment to management.

**Assisted Rescue with Mechanically aided aerial lift:**

- 1) Rescuer will get into aerial lift and make sure there is a second fall protection devise, such as a shock absorbing lanyard or self-retracting lifeline available for the fallen worker
- 2) The aerial lift must be maneuvered into position underneath fall worker so that the rescuer can perform the rescue
- 3) Attach the second lanyard or self-retracting lifeline in the aerial lift to the fallen worker
- 4) Disconnect the rescued worker from the impacted all arrest equipment.
- 5) Lower the worker to the ground and provide medical aid or transport to emergency hospital
- 6) Remove all components of fall arrest system impacted by the fall event from service and document(tag out) the components



## **Ladders**

All ladders shall be inspected prior to each use. Inspect main supports for any structural damage, inspect all rungs for any damage or debris on rung, inspect spreader bars to verify that they work properly, and inspect locking mechanism on extension ladders. If any damage is found the ladder must be tagged and taken out of use immediately. Do not place any ladder in front of doors, doorways, or walkways. If ladder must be placed in front of a door, doorway, or walkway use a spotter to make sure people don't walk into the ladder. The feet of ladders shall be equipped with insulated non-slip material. Always set ladders on a solid working surface only, do not prop or shim legs of ladder. Always face the ladder when ascending or descending and use the three point climbing method. Never have more than one person on a ladder at one time.

### **Step Ladders**

- Open legs fully and lock spreader bar.
- Take the time to use the proper ladder. Never stand on the top two steps.
- Do not:
  - Use a stepladder as a straight ladder.
  - Sit on the top of the ladder.
  - Straddle the ladder when trying to reach an object.
  - Climb up the back supports rungs.

### **Straight and Extension Ladders**

- When determining the working angle of the ladder use the ¼ rule. The base of the ladder should be ¼ the height of the ladder away from the working surface.
- When using an extension ladder the section shall overlap by the following:
  - Up to and including 36 feet, the overlap shall be at least 3 feet.
  - Over 36 feet, up to and including 48 feet, the overlap shall be at least 4 feet.
  - Over 48 feet, up to 60 feet, the overlap shall be at least 5 feet.
- When using an extension ladder to reach from one level to another, the top of the ladder should extend past the upper level by three to four feet.
- The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.
- Never carry tools or supplies up a ladder, either haul items up in a pouch or hoist items up with a rope.
- Always be aware of your surroundings when carrying an extension ladder, be aware of overhead power lines and other obstacles.

## **Elevated Storage**

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

In the filter storage mezzanine area stacking boxes above the top of the railing is prohibited. When using the removable railing to raise or lower items from mezzanine area proper precaution shall be taken to prevent any fall hazards when railing is open.

### **Fixed Stairs**

Fixed stairways shall be designed and constructed to carry a load of five times the normal live load anticipated but never of less strength than to carry safely a moving concentrated load of 1,000 pounds.

Fixed stairways shall have a minimum width of 22 inches with stair treads constructed of reasonably slip-resistant material and stair nosing to have a non-slip finish. The leading edge must be readily identifiable by personnel descending the stairway.

Stairway platforms shall be no less than the width of a stairway and a minimum of 30 inches in length measured in the direction of travel.

Standard railings shall be provided on the open sides of all exposed stairways and stair platforms. Handrails shall be provided on at least one side of closed stairways preferably on the right side descending.

Vertical clearance above any stair tread to an overhead obstruction shall be at least 7 feet measured from the leading edge of the tread.

### **Aerial Work Platforms**

Only personnel that have been properly trained are allowed to operate aerial work platforms.

A complete inspection of the equipment and work area is to be done prior to use each day. Verify all controls at the operator station and on the ground are in working order each day.

Personnel in the aerial platform are to be wearing a personnel fall arrest system and be tied off to the platform at all times. Tying off to other equipment or adjacent structures is prohibited. Sitting or standing on the railing of the platform is prohibited. Never exceed the load limit of the lift.

Always be aware of your surroundings when working from an aerial work platform, make sure the ground is in good condition and can support the working load of the platform. Never drive an aerial work platform on an incline greater than what it is designed for.

## **Scaffolding**

Only personnel that are considered the competent person or personnel working directly under the supervision of the competent person shall erect scaffolding. A competent person is someone that has been trained and certified to erect and inspect scaffolding.

All scaffolding shall be erected and used under the strict guidelines set forth by the manufacturer. No alteration shall be made to any scaffolding without the approval of the manufacturer or certified engineer.

A scaffolding safety checklist shall be completed daily on all scaffolding to ensure the overall integrity of the scaffold is intact. See the Simplicity Binder for a scaffolding safety checklist.

## **Material Handling & Back Safety**

1. Know the approximate weight of your load and make certain your equipment is rated to handle it. (All powered equipment and rigging is rated as to safe working load. This rating is posted on the equipment. Never exceed the manufacturer's recommended safe working load).
2. Lift heavy objects as instructed, with the leg muscles and not with the back. On average, do not manually lift over 50 pounds.
3. Call for assistance as needed for handling heavy or bulky objects or materials.
4. Use an appropriate, approved lifting device (i.e. special trucks, racks, hoists, and other devices) for lifting very heavy, bulky, large or unyielding objects.
5. All ropes, chains, cables, slings, etc., and other hoisting equipment must be inspected each time before use.
6. A load should never be lifted and left unattended.
7. Wear safety gloves when handling materials when appropriate.
8. Properly stack and secure all materials prior to lifting or moving to prevent sliding, falling, or collapse.
9. Avoid moving or lifting loads by hand whenever possible.

### **Tips for manual lifting:**

- a. Get a good footing.
- b. Place feet about shoulder width apart.
- c. Bend at the knees to grasp the weight.
- d. Keep back as straight as possible.
- e. Get a firm hold.
- f. Lift gradually by straightening the legs.
- g. Don't twist your back to turn. Move your feet.
- h. When the weight is too heavy or bulky for you to comfortably lift - GET HELP.
- i. When putting the load down, reverse the above steps.

**Note:** If lifting stacked materials, materials should be carefully piled and stable. Piles should not be stacked as to impair your vision or unbalance the load. Materials should not be stacked on any object (i.e. floor, scaffold) until the strength of the supporting members have been checked.

## **Machine Guarding**

Responsibility is as follows but not limited to.

1. Management  
Ensure all machinery is properly guarded
2. Supervisors  
Train assigned employees of specific machine guard rules  
Monitor & Inspect & Correct any deficiencies
3. Employees  
Do not remove guards unless equipment is locked and tagged out  
Replace guards properly  
Report machine guard problems to supervisors  
Do not operate machines unless guards are in place and functional  
Only trained and authorized employees may remove machine guards

### Guarding Requirements

1. Guards shall be affixed to the machine where possible and secured
2. Guard shall not offer an accident in itself or prevent employee performing their tasks quickly and comfortably.
3. Point of Operation of machines whose operation exposes an injury risk shall be guarded
4. Revolving drums, barrels, containers, etc shall be guarded by an enclosure
5. Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

### Requirements for Machine Guards

1. Guards must prevent hands, arms or any part of an body from making contact with moving parts.
2. Guards should not be easily removed or tampered with, made of durable materials to withstand normal use.
3. Guards should ensure that no objects could fall into moving parts, such as a small tool or screw that could become a projectile.
4. Guards should have no sharp or jagged edges.
5. Lubrication or maintenance points should be placed outside the guarded area to eliminate the need for guard removal.

### Training

All employees shall be provided training in the hazards of machines and the importance of proper machine guards.



## **Hand and Portable Power Tools**

Proper personnel protective equipment shall be worn when using any hand or portable power tool. Even if you are going to use the tool for just a second, take the time to wear the proper PPE.

### **Hand Tools**

Keep all hand tools in good working condition with regular maintenance. Inspect each tool prior to use, do not use any tools that are worn out and impose a safety hazard. Use tools for their proper use only, take the time and get the right tool for the job.

Wrenches, including adjustable, pipe, end, and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs. Impact tools, such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads. The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool. Direct saw blades and knives away from yourself and other employees when cutting.

### **Portable Power Tools**

Proper training is required and will be provided for all portable power tools. If any questions arise about proper use of any tool ask the supervisor before using. All tools shall be used with the proper guard recommended by the manufacturer.

### **Electrical Portable Power Tools**

All electrical portable power tools are required to be grounded or double insulated. Grounded tools must have the ground prong in tact and should never under any circumstance be clipped. A double insulated tool will have one of the following three distinguishing marks on the label:

- A capital case D
- A capital case D with a square around it , or
- A square within a square

All cords are to be inspected prior to each use, if the cord is cut or has any damage in the outer insulation, even if the conductors aren't damaged, must be taken out of service and repaired. Never carry an electrical portable power tool by the cord. Route cords so that they are not exposed to sparks, heat, sharp edges or oil when working. Always unplug tool before servicing or changing attachments. Never yank the cord to unplug from receptacle, always grab the cord end to unplug.

### **Pneumatic Portable Power Tools**

Never carry a pneumatic portable power tool by the hose. Route hoses so that they are not exposed to sparks, heat, sharp edge or oil when working. Never exceed manufacturer's recommended safe operating pressure for tools, hoses, valves, filters or other fittings.

The use of compressed air for cleaning purposes or blowing off clothing is prohibited.

### **Fuel Powered Portable Tools**

All fuel powered tools shall be shut down while refueling, servicing, or maintaining. When using a fuel powered tool in an enclosed space the proper measure shall be taken to ensure

proper ventilation and avoid the build up of toxic gases. All fuel shall be transported in approved containers.

#### Powder Actuated Portable Tools

Only employees that have been trained in the use of powder actuated tools are authorized to use a powder actuated tool.

## **Welding, Cutting & Brazing**

### PURPOSE

Welding and Hot Work, such as welding or cutting presents a significant opportunity for fire and injury. All precautions of this program must be implied prior to commencing any welding or cutting work by company employees, outside vendors or contractors. These procedures shall not apply to cutting and welding operations that may be or become part of routine and normal processes.

### DEFINITIONS

Welding/Hot Works Procedures: any activity which results in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions.

Examples of Hot Works: Cutting, Brazing, Soldering, Thawing Pipes, Grinding and Welding.

Special Hazard Occupancies: Any area containing Flammable Liquids, Dust Accumulation, Gases, Plastics, Rubber and Paper Products.

### TRAINING

Training shall include:

- a. Use of Hot Works Permit System
- b. Supervision Responsibilities
- c. Fire Watch Responsibilities
- d. Operator Responsibilities
- e. Contractors Responsibilities
- f. Documentation Requirements
- g. Respirator Usage Requirements
- h. Fire Extinguisher Training

### HOT WORKS PROCEDURE

Required fire prevention actions for welding/hot works.

- a. Where practicable all combustibles shall be relocated at least 35 feet from the work site.
- b. Where relocation is impractical, combustibles shall be protected with flameproof covers, shielded with metal, guards, curtains, or wet down material to help prevent ignition of material.
- c. Where cutting or welding is done near walls, partitions, ceilings, or roof of combustible construction, fire-resistant shields or guards shall be provided to prevent ignition.
- d. If welding is to be done on a metal wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction or radiation

- of heat.
- e. Where combustibles cannot be relocated on the opposite side of the work, a fire watch person shall be provided on the opposite side of the work.
- f. Welding shall not be attempted on a metal partition, wall, ceiling or roof having a covering or on walls having combustible sandwich panel construction.
- g. Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.
- h. Cutting or welding shall not be permitted in the following situations:
  - In areas not authorized by management.
  - In the presence of potentially explosive atmospheres, e.g. flammable.
  - In the areas near the storage of large quantities of exposed, readily ignitable materials.
  - In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot works will be conducted.
- i. Suitable extinguishers shall be provided and maintained ready for instant use.
- j. A fire watch person shall be provided during and for ½ hour past the completion of the welding project.
- k. A cutting/welding permit will be issued on a welding or cutting outside of the designated welding are.

#### Welding & Hot Work fire prevention measures

- a. Floors swept and clean of combustibles within 35 ft. of work area.
- b. Flammable and combustible liquids and material will be kept 35 ft. from work area.
- c. Adequate ventilation should be provided in the work area.
- d. At least one 10-lb. dry chemical fire extinguisher should be within access of the 35 ft. of work area.
- e. Protective dividers such as welding curtains or non-combustible walls will be provided to contain sparks and slag to the combustible free are.
- f. Hot works permit must be completed and complied with prior to welding operation.
- g. Respiratory protection is mandatory unless an adequate monitored airflow away from the welder and others present can be established and maintained.
- h. Plastic materials will be covered with welding tarps during welding procedures.
- i. Fire Watch must be provided for all hot work operations.

#### WELDING STANDARD OPERATING PROCEDURES

The following list is Welding Standard Operating Procedures (SOP) and is applicable for all electric and gas welding.

##### ELECTRIC/GAS WELDING

1. Perform Safety Check on all equipment
2. Ensure fire extinguisher is charged and available
3. Ensure electrical cord, electrode holder and cables are free from defects (no cable splices are allowed within 10 feet of the electrode holder.
4. Ensure PPE (welding hood, gloves, rubber boots/soled shoes, and aprons) are available and have no defects

5. Ensure the welding unit is properly grounded
6. All defective equipment must be repaired or replaced before use
7. Remove flammables and combustibles
8. No welding is permitted on or near containers of flammable material, combustible material or unprotected flammable structures
9. Place welding screen or suitable barricade around work area to provide a fire safety zone and prevent injuries to passersby (Do not block emergency exits or restrict ventilation).
  - Ensure Adequate Ventilation and Lighting.
  - Execute Hot Work Permits procedures.
10. Uncoil and spread out welding cable. To avoid overheating, ensure proper contact of work leads and connections, remove any metal fragments from work clamps (to avoid electric shock do not wrap welding cables around a body part and avoid welding in wet conditions).
  - Fire watch for one ½ hour after welding and until all welds have been cooled.
  - Perform final fire watch and terminate permit.

### GAS WELDING

Perform Safety Check on all equipment.

Ensure fittings are tight on gas/oxygen cylinders.

Open valves on oxygen and gas tanks to desired flow.

Ensure fire extinguisher is charged and available.

Ensure hoses have no defects when done performing work shut tank valves and relieve hose pressure. Then properly coil or store hoses in proper receptacles.

Ensure PPE (welding hood, gloves, rubber boots/soled shoes, and aprons where applicable) are available and have no defects.

All defective equipment must be repaired or replace before use.

Fire watch for one ½ hour after welding and until all welds has cooled.

Perform final fire watch and terminate permit.

### FIRE WATCH

Personal designated for fire watch, shall be trained in the following:

- a. First Aid and CPR
- b. Fire extinguisher use
- c. Will be knowledgeable in the Emergency action plan
- d. Will be able to operate communication equipment required
- e. Will be trained as to location of first aid equipment
- f. Will be trained in the hot work permit process
- g. Will be trained and have authority to terminate hot work permits

Eye Protection

To protect from injurious light radiation, all affected employees should use equipment with filter lenses. The following chart outlines appropriate shade numbers for various operations.

Filter Lenses for Protection Against Radiant Energy

Operation	Electrode Size (1/32)	Amps	Minimum Protective Shade*
Shielded metal arc welding	Less than 3/32	Less than 60	7
	3/32-5/32	60-160	8
	5/32-8/32	160-250	10
	More than 8/32	250-500	11
Gas metal and flux cored arc welding		Less than 60	7
		60-160	10
		160-250	10
		250-500	10
Gas tungsten arc welding		Less than 50	8
		50-150	8
		150-500	10
Air carbon	Light	Less than 500	10
Arc cutting	Heavy	500-1000	11
Plasma arc welding		Less than 20	6
		20-100	8
		100-400	10
		400-800	11
Plasma arc cutting	Light**	Less than 300	8
	Medium**	300-400	9
	Heavy**	400-800	10
Torch soldering			2
Torch brazing			3
Carbon arc welding			14
Gas Welding:			
Light	Under 1/8	Under 3.2	4
Medium	1/8-1/2	3.2-150	5
Heavy	Over 1/2	Over 12.7	6
Oxygen Cutting:			
Light	Under 1	Under 25	3
Medium	1-6	25-50	4
Heavy	Over 6	Over 50	5

\*In selecting eye and face protection, start with a shade that is too dark to see the weld zone. Then, without going below the minimum, go to a lighter shade which gives sufficient view of the weld zone. In oxyfuel gas welding or cutting where the torch produces a bright yellow light, it is recommended that a filter lens be used to absorb the yellow or sodium line in the visible light of the (spectrum) operation.

\*\*These values apply where the actual arc is clearly seen. Experience has shown that lighter filters might be used when the arc is hidden by the work piece.

### Selection

There are different types of eye and face protection designed for particular hazards. In selecting protection, consider type and degree of hazard. Where a choice of protection is given, worker comfort should be the deciding factor in selecting eye protection.

Employees who use corrective eye glasses should wear face shields, goggles, or spectacles of one of the following types:

- Spectacles with protective lenses providing optical correction;
- Goggles or face shields worn over corrective spectacles without disturbing the adjustment of the spectacles; or
- Goggles that incorporate corrective lenses mounted behind the protective lenses.

### Inspection and Maintenance

Eye protection lenses should be kept clean at all times. Continuous vision through dirty lenses can cause eye strain. Daily inspection and cleaning of eye protection with hot, soapy water is also recommended. Pitted lenses should also be replaced immediately as they can be a source of reduced vision. Deeply scratched or excessively pitted lenses are also more likely to break. Employees are responsible for taking care of their eye protection. They are also responsible for turning in eye protection that is in poor shape to their immediate supervisor.

## **Personnel Protective Equipment (PPE)**

Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shield and barriers shall be provided, used and maintained in a sanitary and reliable condition.

City Air Mechanical will assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of PPE. If such hazards are present, or likely to be present City Air Mechanical will provide the proper PPE and training associated with each piece of PPE to all employees that will be present on the job site.

### **Eye and Face Protection**

Each employee will be provided with non-prescription eye and face protection. Employees are required to wear safety glasses at all times in the shop and are required to wear safety glasses on job sites. When exposed to hazards that affect the eyes and face, such as grinding, safety glasses and face shields are required. See Cutting, Welding, and Brazing section of safety manual for tint requirements.

### **Head Protection**

Each employee will be provided with an approved hard hat. Anytime there is a potential hazard from falling objects or walking into low level object a hard hat is required. Inspect the suspension and shell of the hard hat every day, if defects or damage are found replace hard hat immediately. Never paint the shell of the hard hat or store where direct sunlight can hit and deteriorate the shell.

### **Foot Protection**

All employees working in the shop or in the field are required to wear work boots at all times. When working at power plants, mines, or other jobs that require steel-toe boots all employees on that particular job are required to wear steel-toes boots.

### **Hand Protection**

Each employee will be provided with appropriate hand protection. Employees are required to wear appropriate hand protection when exposed to such hazards as skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns and harmful temperature extremes.

### **Hearing Protection**

All employees will be provided with hearing protection in the form of ear plugs or ear muffs. Employees working in the shop can reference the hearing conservation program located in the environmental section of the safety manual to see when hearing protection is required. Employees in the field are expected to use their better judgment on when to wear hearing protection. A good rule of thumb is that if you have to raise your voice even a little bit to have a conversation with somebody standing next to you then you should be wearing hearing protection. If in doubt, wear it!

## **RESPIRATORY PROTECTION**

### *SCOPE*

To provide adequate respiratory protection for our employees and to maintain a continuous program of training as to the proper use of and care of the respirator devices to insure this level of protection. Protective equipment that offers protection against the conditions that are likely to exist to develop within the area where employees are required to work shall be provided and used. This program shall be a mandatory program for any employee that is exposed to airborne contaminants during the time of his employment.

### *RESPONSIBILITIES*

All Employees shall follow the requirements of the Respiratory Protection Program.

Management shall:

- Implement the requirements of the program.
- Provide a selection of respirators where needed.
- Enforce all provisions of the Respiratory Protection Program.
- Appoint a Designated individual to conduct the Respiratory Protection Programs.

Program Administrator shall:

- Review sanitation/storage procedures.
- Ensure respirators are properly, stored, inspected and maintained.
- Monitor compliance of the program.
- Provide training for affected employees.
- Review compliance and ensure monthly inspections of all respirators.
- Provide respirator fit testing where required.

### *Program Evaluation*

Evaluations of the workplace are necessary to ensure that the written respiratory protection program is being properly implemented, this included consulting with employees to ensure that they are using the respirators properly. Evaluations shall be conducted as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective. Program evaluation will include discussions with employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Assessment may include but not be limited to:

- Respirator fit (included the ability to use respirator without interfering with effective workplace performance).
- Appropriate respirator selection for the hazards to which employee may be exposed.
- Proper respirator use under the conditions to which employee encounters; and
- Proper respirator maintenance.



## *RECORD KEEPING*

Company will retain records (written) regarding medical evaluations, fit testing, and the respirator program. This information shall facilitate employee involvement in the respirator program; assist the Company in evaluating the adequacy of the program.

## *TRAINING AND INFORMATION*

Company shall provide training for employees who are required to use respirators. The training will be comprehensive, understandable, and shall be reviewed annually or more often if necessary. Training shall be provided to new employees' prior to use of respirators. The training shall ensure that each employee (new employees included) can demonstrate knowledge of the following:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the effectiveness of the respirator.
- Limitations and capabilities of the respirator.
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- How to inspect and put on and remove, use, and check the seals of the respirator
- What the procedures are for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent effective use of the respirator.
- The general requirements of this program.

Retraining shall be conducted annually or as needed when:

- Changes in the workplace or type of respirator renders previous training obsolete.
- Inadequacies of the employee's knowledge or use of the respirator indicates that the employee has not retained the understanding or skill of respirator use.
- Other situations arise in which retraining appears necessary to ensure safe respirator use.

Training shall be conducted in house and by outside consultants where necessary.

Instruction shall include but not limited to:

1. Overview of the Company Respiratory Protection Program
2. Respiratory Protection Safety Procedures. (See APPENDIX A)
3. Respirator selection
4. Respirator Operation and Use
5. Why respirators are needed
6. How improper fit, usage, or maintenance can compromise protective effectiveness
7. Limitations and capabilities of the respirator
8. How to inspect, put-on and remove, use, and check of the respirator
9. Use of the respirator in emergency situations, including respirator malfunction
10. Recognition of medical signs and symptoms that may limit or prevent effective use of respirator

Hands on respirator training shall include but not limited to the following:

1. Respirator inspection
2. Respirator cleaning and sanitizing
3. Record keeping
4. Respirator storage
5. Respirator fit check
6. Emergency situations

## **Lock-Out/Tag-Out**

### Purpose

To establish a procedure to protect and prevent personnel from injury by 1) accidental activation of any powered or damaged equipment, and 2) the uncontrolled release of electrical energy. A secondary purpose is to remain in compliance with OSHA regulations, 29 CFR 1910.147.

### Responsibility

The Safety Committee shall train supervisors on proper lockout/tagout procedures, audit and/or oversee the application of the procedures, ensure corrective actions are taken when problems arise, and conduct an annual inspection/evaluation. Supervisors are responsible for training effected and authorized employees on the purpose and use of these procedures. The Safety Committee should periodically monitor training activities and assist as required to ensure compliance with OSHA regulations and company goals. All affected and authorized employees involved in lockout/tagout procedures must receive annual training. A list of authorized, trained individuals will be maintained by the Safety Director (see the attached log).

### Scope

This procedure applies to all Company personnel and contract employees. It will be enforced during installation, cleaning, servicing, maintenance, or inspection work is performed on any powered equipment and/or processes in which the activation of such could injure an employee or cause property damage. This procedure does not apply to adjustment or other activities which require the equipment be operating at the time of service, provided other protective measures are employed.

### Definitions

#### Lockout:

The application of a lock, chains, or other appropriate apparatus, and a danger identification tag to de-energize electrical equipment and/or process system to ensure that the equipment or system cannot be activated. Note: OSHA regulations require that locks be used to secure equipment whenever possible. Chains can be wrapped around valve handles and then locked in such a way that the valve cannot be operated. Tags alone can be used when it is not possible to use a lock.

#### Tagout:

The application of a danger identification tag when a physical lockout or de-energizing is not feasible or a lock has already been applied. Tags should bear the name of the employee applying the tag, the date of application, and a brief description of the work needed.

### Energy Source:

The switch or valve through which energy is controlled to the unit (e.g. motor control center (disconnect) switches, (circuit) breaker panel switches, valves, locking pins, etc.). This energy may come be: 1) electric power, 2) mechanical power, 3) hydraulic power, 4) pneumatic energy, 5) chemical system, or 6) thermal energy.

### Authorized Employees:

A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.

### Affected Employees:

An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed. An effected employee becomes an authorized employee when the effected employees' duties include servicing or maintenance.

### Lockout/Tagout Procedures

1. Each piece of equipment or system must be evaluated to identify all energy sources to be locked or tagged out. The evaluation should be done periodically by a supervisor or an authorized employee with familiarity with the equipment/system, using the attached energy source determination checklist.
2. If the machine is determined by OSHA that formal lockout/tagout procedures are required, this should be done by an authorized employee and logged on the attached form titled "List of Lockout & Tagout Procedures." These procedures should then be followed. If no specific procedures are required, or provided by the equipment manufacturer, complete the following tasks.
3. Deactivate (turn off) and secure the equipment/system at the energy source. Relieve pressure, release stored energy from all systems, and restrain or block them. (Operators must tag the appropriate switches or controls inside the control room as part of this step).
4. Attach a lock to each isolation device and a tag to the lock. Sign and date the tag, along with providing pertinent information.
5. Check to ensure that no personnel are exposed to the equipment/system, then attempt to activate the normal operating controls to ensure proper lockout/tagout. (A voltmeter can check the switch)

**CAUTION:** Always return the operating control to the "neutral" or "off" position after completing this test.

6. The equipment/system is now locked and tagged out.

### Lockout/Tagout Removal Procedures

1. After installation, servicing, maintenance, inspection, or cleaning is complete, verify that all tools have been removed, all guards have been reinstalled, the area is clean and orderly, and the equipment is safe to operate.
2. Ensure that employees are not exposed to the equipment and all employees are aware of the removal of the lock and tag.
3. The locks and tags should be removed only by the employee who applied them or the supervisor. The supervisor should only remove the locks and tags after a reasonable effort is made to contact the employee and notify him of the removal.
4. Activate energy source as required.

### Procedures involving more than one person

If more than one individual is required to lockout or tagout equipment, each shall use his/her own assigned lockout/tagout device on the energy source. When the energy source cannot accept multiple locks or tags, a multiple lockout/tagout device (hasp) should be used. A single key should be used to lockout the equipment/system, with the key being placed in a lockout box or cabinet. This cabinet or lockout box must allow multiple locks to secure it. Each employee will then use his/her own lock to secure the box or cabinet. As each person no longer needs to maintain the lockout protection, that person will remove his/her lock from the cabinet. Proper removal procedures should be followed.

### **Excavation and Trenching**

- a. The design of the supporting system should be considered carefully based on the following: depth of cut, anticipated changes in the soil due to air, sun, and water, ground movement caused by blasting, and earth pressures
- b. Any trench or excavation over 4 feet deep must be sloped, shored, benched, or braced. If soil conditions are unstable, excavations shallower than 4 feet must also be sloped, supported, or shored.
- c. Contractors should use OSHA specified trench boxes when needed.
- d. Shoring systems should be installed from the top down. Cross beams should be placed in a horizontal position and spaced vertically at appropriate intervals. Braces must ..... also be secured to prevent sliding, falling, or kickouts.
- e. All materials used for shoring should be in good condition and free of defects.
  - a. Timbers with large or loose knots should not be used.
- f. Installation of shoring should closely follow the excavation work.
- g. One of the following methods of support should be used to ensure worker safety: shoring-sheeting; tightly placed timber shores; bracing; trench jacks; piles; or other materials installed in a manner strong enough to resist the pressures surrounding the excavation.
- h. OSHA standards require that diversion dikes or ditches be used to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Water should not accumulate in a trench or excavation as it causes erosion and soil softening.
- i. Excavations greater than four feet deep should be inspected daily for oxygen deficiencies and hazardous gases, etc. If hazardous conditions exist, proper

- respiratory protection or ventilation should be provided by the Contractor.
- j. Exit ladders must be stationed no farther than 25 feet from any person in the trench.
  - k. Locations of all underground utilities should be located before excavation begins.
  - l. Trenches should be inspected daily for cracks, slides, and wall fractures. Inspections should also be made after rain storms or any other changes in conditions. If any dangers are detected, all work must stop until the problem is corrected.
  - m. As soon as all work is completed and the shoring is dismantled, backfilling should begin. If the soil is unstable, ropes must be used to pull out the jacks or braces from above.

## **Confined Space Entry**

### **Purpose:**

It is our policy to ensure that our employees are protected from the potential hazards involved in entering confined space. We will make every effort to comply with OSHA Permit Required Confined Space Standard (CFR 1910.146) and to exceed those requirements when necessary to ensure the safety of our workers.

### **Definitions:**

- *Confined Space*  
Limited or restricted means of entry or exit that is large enough for an employee to perform work tasks, but is not designed for continuous occupancy. Ex: Underground vaults, manholes, tanks, pits, silos, etc.
- *Permit Required Confined Space*  
Is a confined space plus one or more of the following characteristics
  1. Potential to contain a hazardous atmosphere
  2. Contains material with the potential of engulfing the entrant
  3. Internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section.
  4. Contains another recognized serious safety or health hazard.

### **Permit Required Confined Space**

Supervisor will issue a permit that specifies the location, type and duration of the work to be done and the date. It will certify that the supervisor has evaluated and secured all of the following

1. Isolate the space from potential hazards, if possible, to provide for safe entry.
2. Purge, inert, flush, ventilate to eliminate atmospheric hazards.
3. Provide external barriers and warning signs.
4. Perform pre-entry oxygen, flammable gas and toxicity air test and recorded on the permit. Is hazards cannot be isolated, periodic monitoring is required. Proper clean ventilation required to clear area of hazards.
5. One trained attendant outside of each confined space entry in use.
6. Ensure rescue and emergency services and equipment are in place.
7. Ensure all equipment provided is provided maintained and properly used.
8. Continue monitoring and attendant until work is complete and employee is safely removed from the confined space.