

# **MegaKC Corporation**

## **Corporate Safety Program**

1491 Iron Street North Kansas City, MO 64116

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## SAFETY AND HEALTH POLICY STATEMENT

It is the policy of *MegaKC Corporation* to provide a safe and healthy work environment for all employees and to abide by all federal, state and local regulations as they pertain to our operations. All practical steps shall be taken to maintain a safe, healthful workplace for all of our employees. We will maintain this Corporate Safety Program which has been designed to train our employees to follow safe practices and to recognize and correct unsafe working conditions.

Our Safety Policy has equal importance with the company's policies of providing the best quality and most productive service in our industry. It is our goal to eliminate accidents and injuries. Because of the many different hazards within our industry, we must maintain a constant safety awareness to achieve this goal.

The employees of *MegaKC Corporation* are considered our most valuable asset. For this program to be effective, the company requires the cooperation of all employees. Any observed unsafe act and/or condition in our work environments must be immediately reported.

Accidents and injuries can be prevented. When an accident occurs, everyone suffers employees, their families, dependents and the company. Let's work together, safely.

Ryan Mills

Vice President of Operations

## **PROGRAM RESPONSIBILITIES**

In order for a safety and health program to be successful, individual responsibilities must be clearly identified and distributed throughout all levels of company personnel. *MegaKC Corporation* feels that safety is the primary responsibility of all employees.

Although different levels of personnel are identified below, any employee on a *MegaKC Corporation* site may shut down a particular work operation that poses imminent danger, or if a situation arises which is immediately dangerous to life or health. When such action has been taken, the on-site foreman shall be immediately notified and actions to remedy the situation shall be implemented.

#### Director Of Safety:

- PRIMARY DUTIES AND RESPONSIBILITIES:
  - Investigate incidents within a timely manner of notice.
  - o Analyze incidents for cause and preventive measures in the future.
  - Disseminate information to entire Company, including necessary training in preventive actions.
  - o Inspect job-sites, when available, and carefully review job-site checklist.
  - o Determine incident rates for each job, and all jobs on a monthly basis.
  - o Report to President, and VP of Operations all incidents, and their analysis.
  - Support and Maintain Safety Initiatives.
  - Eliminate/reduce OSHA fines and citations.
  - Participate in continuing education courses related to safety.
  - Establish policies, procedures, and programs approved by management designed to promote safety and make known to all employees the policies, procedures, and programs established.
  - Provide educational training designed to develop and maintain an effective safety program.
    - Maintain records (this includes OSHA record keeping) and continually monitor the program for effectiveness. Formally review the written safety policy a minimum of annually.
  - Ensure that Protective Equipment for employees is available and utilized. This will be reviewed annually.

- A. Maintain a database of incident information to analyze, determine cause, and develop safety measures or training to prevent reoccurrence. Distribute findings throughout *MegaKC Corporation* in a Safety Bulletin. Analyze trends of injury types by craft and determine training and preplanning required at the workplace.
- B. Participate in or designate a representative to participate in the job pre-planning meeting to establish safety plans for all new jobs.
- C. Represent *MegaKC Corporation* in all dealings with OSHA.
- D. Maintain current OSHA 500 training certification and receives any necessary training needed to perform duties of Director of Safety.
- E. Reports to VP of Operations. Performance, goals and progress are reviewed annually.

#### Senior Management:

The effectiveness and success of this safety program depends heavily on the support and commitment shown by Senior Management. Senior Management is responsible for funding and providing the necessary safety resources to the project management team. Other responsibilities include:

- Assisting the Project Manager in determining staffing and facility needs about project safety and health.
- Establish rules and programs designed to promote safety and make known to all employees the established rules and programs.
- Establish safety training schedules.
- Perform periodic audits to evaluate the effectiveness of the Safety and Health Program and performance of the project management team.

#### Project Manager:

The Project Manager plays a very important role in administering safety and health responsibilities. Not only with *MegaKC Corporation* personnel, but the Project Manager is the communication link between the General Contractor and / or other subcontractors (whichever is applicable), who may be exposing *MegaKC Corporation* employees to unsafe acts or conditions. In this case, the Project Manager must notify the controlling party and ensure that corrective action is taken to eliminate the hazard(s), ultimately

ensuring a safe working environment for *MegaKC Corporation* employees. Project Manager responsibilities shall also include the following:

- Identifying and planning for project specific safety requirements noted in the contract documents *(example: Controlled Insurance Programs).*
- Assist Superintendent in monitoring compliance with Safety Program.
- Advise Senior Management on possible safety program deficiencies or new ideas.
- Plan ahead for added safety costs during the project's bidding process.
- Communicate customer's (GC / owner) safety, health, and loss control requirements to construction project team.
- Participate in pre-construction safety planning meeting for specific projects as necessary.

#### Superintendents:

The Superintendent is the on-site (or roaming from site to site) coordinator and overseer of all field construction operations, including safety. It is the duty of the Superintendent to ensure that site security is established and maintained, to supervise on site personnel, to coordinate *MegaKC Corporation* activities on the site and to verify that all activities are performed in a safe manner. The Superintendent is responsible for the overall safety and health practices and conditions on site. The Superintendent responsibilities shall also include the following:

- Give ongoing input into to Senior Management regarding necessary changes to this safety policy.
- See that all injuries are reported and treated.
- Require and review reports and investigations of all accidents with safety manager.
- Plan production so that all work will be done in compliance with established safety regulations.
- Make sure that proper safety materials and protective devices are available and used, and that all equipment is in safe working order.
- Provide for the protection of the public from company operations.
- Review all accidents with foremen and file completed reports.
- Perform one safety inspection a week.

#### Field Foremen:

Foremen play an essential role in the successful implementation of this program. Foremen translate management's policies into action and promote safety directly among the employees on site. Foremen have the responsibility of safeguarding, educating and training those employees who have been placed under their direction. Specific safety and health responsibilities shall include the following:

- Administer and enforce established safety and health programs at the project level.
- Set proper examples for subordinates "Leadership by example"
- Sell the employees on the value and importance of jobsite safety.
- Know and enforce company safety and health requirements.
- Personally address safety and working conditions with employees daily.
- Instruct new and existing employees who are performing new or unusual tasks on the required safe working practices necessary to complete the task
- Report unsafe conditions such as faulty equipment.
- Recognize jobsite hazards and develop / implement corrective action.
- Field and evaluate employee(s) safety complaints.
- Ensure adequate supply of personal protective equipment.
- Cooperate with Senior Management in utilizing the company's "Return to Work Program"
- Communicate with other jobsite contractors and / or General Contractor to ensure hazards are controlled for all exposed parties.
- Act as *MegaKC Corporation* "competent person" when required and authorized to do so by management.

#### Field Employees:

*MegaKC Corporation* recognizes that its employees are the most valuable asset the company has. The actions taken by each employee during his / her daily routine will ultimately determine whether or not the established safety and health program is successful.

*MegaKC Corporation* has identified the following items as being the minimum necessary responsibilities, which must be undertaken by all field employees, during the course of their employment:

- Work safely to ensure your own safety as well as that of co-workers and others.
- Participate in all safety and health training programs and orientations as required.
- Understand and comply with all safety directives as issued by company management.

- Arrive at work, mentally and physically prepared to perform assigned work in a safe manner.
- Immediately correct any noticed unsafe condition(s)
- Use all required personal protective equipment as directed by company supervision.
- Maintain and properly use all tools under your control.
- Read, understand and follow all safety signs, posters, instructions and materials used to indicate warnings, instructions and directions for safe work performance.
- Inform the foreman / supervisor of any concerns about the safety of work activities and any injuries sustained while on the job (no matter how seemingly insignificant).
- Practice good housekeeping measures while on the jobsite.
- Abstain from any horseplay, fighting and / or gambling.
- Abstain from the usage of drugs and other banned substances, as well as the usage of or possession of firearms and / or weapons.
- Become familiar with and follow all jobsite safety programs, policies and procedures, jobsite hazard communication process and any applicable emergency evacuation plan.

#### Competent Person(s):

OSHA requires a competent person be designated for particular construction activities, who can recognize hazards or potential hazards and who has the authority to correct or abate the hazard. For this reason and when required, the Project Management Team will identify who the competent person will be, in order to meet the definition set by OSHA as a Competent Person, which is defined as follows:

"**Competent Person**" means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

#### Visitors:

As with any construction project, it is a common occurrence to find visitors present on the jobsite at any given time. Some examples of "visitors" are as follows:

- Owners or owner's representatives
- Architects / engineers
- Members of the public
- City / county codes personnel
- Demonstrators

- Emergency personnel (fire, ambulance, haz-mat team, etc.)
- Vendors / suppliers
- Insurance representatives

Just like any employee performing work on the jobsite, visitors have safety and health responsibilities as well. They are as follows:

- Become familiar with and follow all jobsite safety programs, policies and procedures, jobsite hazard communication process and any applicable emergency evacuation plan.
- Understand and comply with all safety directives posted by the company and all OSHA state and federal safety laws and standards and any site specific standards or requirements established by the project's owner.
- Read, understand and follow all safety signs, posters, instructions and materials used to indicate warnings, instructions and directions for safe work performance.
- Participate in all safety and health training programs and orientations as required.
- Abstain from any horseplay, fighting and / or gambling.
- Abstain from the usage of drugs and other banned substances, as well as the usage of or possession of firearms and / or weapons.

#### Pre Construction Planning

Pre-Construction planning is essential to ensure that safety is "built-in" to the job from start to finish. The real starting point for pre-job planning is during the preparation of the estimate / bid, which should include a realistic allocation for safety. If a successful low bid results, one of the first orders of business for the contractor is a pre-job planning meeting. Those directly involved with these meetings should include owners of the contracting agency, project superintendent, safety coordinator (if applicable), and superintendents of other contractors who will be working on the job and their safety coordinators. It is vital that these individuals develop and agree on a specific safety program for the project.

## **Public Protection**

*MegaKC Corporation* will take all reasonable and necessary precautions to protect members of the public and their property, from identifiable hazards resulting from the company's construction activities. All construction operations shall be isolated from the public to the greatest extent possible.

Recognizing that every construction project site is different and potential exposures vary, the *MegaKC Corporation* team will consider the following example exposure and hazard control categories for each project site during the preplanning stages:

- Access control / gates
- Fencing / barricades
- Signage
- Street / lane closures
- Sidewalk closures / enclosures
- Walkway surface conditions / obstructions
- Illumination
- Overhead protection
- Dust / flying particles / paint overspray
- Site vehicular traffic patterns / traffic flaggers
- Security measures
- Public Property Damage
- Public Demonstrations

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**Note:** See additional instructional information contained in the "Emergency Action Plan" section of this document:

### **REPORTING OF INJURIES AND ILLNESSES**

<u>Accidents or injuries</u>, regardless of their nature, shall be reported promptly to the job supervisor. All employees and job supervisor are expected to follow the steps of *MegaKC* reporting guide. The highlights of these steps are to 1. Secure the Scene 2. Notify Safety Manager 3. Asses the injury 4. Report the injury

5.Follow-up. 911 should be called for all other emergency and life-threatening injuries.



Employees have the right to report work-related injuries and illnesses. *MegaKC Corporation* is prohibited from discharging or in any manner discriminating against employees for reporting work-related injuries and illnesses.

All employees and their representatives are advised of their right to access relevant exposure and medical records which *MegaKC Corporation* is required to maintain under OSHA's Access to Exposure and Medical Records and Recordkeeping standards, or similar state requirements. This includes injury and illness records (i.e., OSHA 300 Logs). Employees should contact their supervisor or another member of management for more information.

For further information on employee safety and health rights under the law, employees should read OSHA's "*It's the Law*" poster which has been posted in each *MegaKC Corporation* facility.

## **Injury & Incident Guide**

## **ACCIDENT INVESTIGATION**

It is the policy of *MegaKC Corporation* that all incidents, accidents and near-miss events be thoroughly investigated by the Safety manager, project Superintendent or his/her appointee(s), as soon as reasonably possible following the event.

A thorough and properly conducted investigation is necessary to obtain facts. The investigation should focus on the root cause(s) of the incident to prevent recurrence, not to assign blame.

An accident investigation report should contain, at a minimum, the following items:

- Individuals and contractors involved.
- Worksite information address of jobsite, employee occupation, weather conditions, any unusual circumstances or activities, etc.
- Accident data information what the employee was doing, how the accident occurred, who was injured and where. Diagrams, photos, video footage, etc. should be included.
- Witnesses-names of eyewitnesses and their independent statements.
- Safety rules what safety rules were in effect, which rules in effect were not followed and what could have been done to prevent the accident.
- Analysis primary, secondary and contributory causes of the accident.
- Corrective action steps to be taken to prevent recurrence of the event or similar incidents.

Upon completion, the final investigative report and related materials must be submitted to the safety manager. Through detailed analysis of the results, accident patterns and improvement opportunities may be detected, and resources directed toward future prevention.

At MegaKC we use SafeSite for Incident reporting. If you have an incident on your project, go to inspections to log it. From there you will have 7 different Incident inspections to choose from.

- MegaKC Theft
- MegaKC Property Damage
- MegaKC Injury Medical Treatment
- MegaKC First Aid / Near Miss
- MegaKC Equipment Damage
- MegaKC Utility Damage
- Subcontractor / Supplier Incident

By using the correct inspection, we will get the information needed for each type of incident.

#### DO NOT

- Use the old excel / PDF version
- Use the Safesite Log Incident option

• Log the Inspection and Not call Me

DO

- Use the correct Inspection form
- Notify Marcus and Ryan Immediately after any incident
- Take lots of pictures and add to your inspection report
- Go online and print the Inspection Report to PDF and send it to Incidents@megakc.com
- Call Marcus or Ryan if you have any questions

## **EMERGENCY ACTION PLAN**

In order to maintain a safe and healthful working environment in emergency situations, *MegaKC Corporation* has developed this emergency action plan to safeguard employees while working on construction sites. All affected employees will be trained in the use of this plan and their role in implementing it. Adherence to this policy is mandatory and must be strictly followed by all field employees, in the event of an emergency situation.

#### **General Evacuation Procedures:**

- As a subcontractor, it is important for the foreman to initially communicate and receive emergency procedural information from the general contractor's onsite superintendent, prior to the beginning of work on the project site.
- Prior to the beginning of any work on a new project, the *MegaKC Corporation* foreman will review emergency escape routes and instructions with all *MegaKC Corporation* employees working on the project. In addition to this, the foreman will identify a meeting location and an alternate location where personnel are to meet following an evacuation. This location shall be a minimum of 50 feet from the building or the affected area on the project site.
- When notified of an emergency evacuation *MegaKC Corporation's* foreman or representative in charge will alert employees of an evacuation by radio communications or word of mouth; all employees must immediately evacuate the project site, utilizing the nearest exit to them, until further instruction is given.
- Following an emergency evacuation, all employees shall immediately meet at the predetermined meeting location, in order for the foreman to conduct a head count and confirm that all employees have safely evacuated the project site.
- In the event there are employees missing and not yet accounted for, the number of employees and their last known location within the building or jobsite will be immediately forwarded to responding authorities. Only trained and authorized employees shall re-enter the hazardous area for emergency rescue operations and/or to administer first aid.
- Evacuated personnel shall remain a safe distance from the affected area or project site, until authorities deem no further hazards are present and *MegaKC Corporation* allows work to continue.
- Appropriate authorities (police, fire, rescue, hazardous materials team, ambulance, etc....) shall be notified of the emergency as soon as possible. Signs with emergency phone numbers, instructions and the jobsite address will be clearly posted near all jobsite telephones immediately following installation of each phone.

#### First Aid / Employee Injury

• If an employee is injured, *MegaKC Corporation's* Superintendent and safety manager must be immediately notified.

- If applicable, do not allow the injured party to move themselves or be moved (unless imminent danger is present).
- First aid and/or medical facilities will be made available to employees. In the absence of such medical facilities, an employee trained to render first aid will be provided on the project site.
- First aid kits must always be adequately stocked, readily accessible and located in all *MegaKC Corporation* offices (main office and each project site) or in the Superintendent's vehicle, in the absence of a project site office.
- Only people having been trained in Basic First Aid / CPR or beyond, shall administer first aid to the injured party.
- Prior to beginning work on a new project site, *MegaKC Corporation* will ensure that emergency response assistance is available, such as calling "911" for ambulance or fire. Should 911 service be unavailable, the company will arrange for alternative transportation of injured personnel to the appropriate, predetermined medical clinic or emergency facilities.

Remember, the most important issue in this situation is the care and treatment of the injured person(s).

#### Fire:

- All employees must comply with the fire safety requirements contained within *MegaKC Corporation's* written safety and health program.
- Firefighting equipment (fire extinguishers rated not less than 2A) shall be conspicuously always located throughout the jobsite and readily accessible.
- At least one ABC fire extinguisher shall be located on the jobsite for every 3,000 square feet of protected area.
- Fire extinguishers shall be periodically tested, inspected and maintained in operating conditions.
- The travel distance from any point on the project site to the nearest fire extinguisher shall not exceed 100 linear feet.
- In the event of an emergency evacuation due to fire, the *General Evacuation Procedures* described above shall be utilized.

#### **Property Damage:**

- Any property damage resulting from a project site incident must be immediately reported to *MegaKC Corporation,* regardless of who the owner of the property is, or the parties who appear to be involved in the incident.
- This section includes, but is not limited to the following properties being damaged:
  - 1. Utility lines or pipes (above or below ground)
  - 2. Contractor vehicles located on site
  - 3. Equipment / tools
  - 4. Project site trailers / office
  - **5.** Project site fencing / barricades
- Depending on the nature of the damage, some incidents involving property damage may require an immediate employee evacuation.

#### Public Property Damage:

- In the event that public owned property is damaged resulting from *MegaKC Corporation* activities, the following items at a minimum, should be noted:
  - ✓ Time of incident
  - ✓ Location of incident
  - ✓ Contractor(s) involved
  - ✓ Cause of incident (if known)
  - ✓ Extent of damage sustained
  - ✓ If property is a vehicle: obtain vehicle identification number, license plate number and state, color, make and model
  - ✓ Property owner's name, home address and phone number
  - ✓ Any abnormal weather conditions or unusual jobsite circumstances
- The person collecting the above listed information must not admit guilt or make corrective recommendations. Simply collect the information.

#### **Public Demonstrations:**

- Any public demonstration (including but not limited to: parades, any form of rioting, marches, public or organizational protests, etc.) that may disrupt normal construction activities on the project site will be addressed at the time of occurrence by *MegaKC Corporation* management.
- If necessary, normal construction activity (this may include employee parking, delivery and visitor traffic, entrances and exits to the jobsite, etc.) will be altered, in order to ensure employee as well as public safety during demonstrations near the project site.
- In the event that any actions by a public demonstration poses a threat to the safety of the project, all necessary steps will be taken by *MegaKC Corporation* to protect its employees and property. This includes, but is not limited to, notifying authorities of any unlawful acts being committed.

#### **Bomb Threats:**

- In the event that a bomb threat is made in which the project site is named or involving any subcontractor working on site, naming any area of the project site or any combination thereof, the jobsite must immediately be evacuated of all personnel, using the steps outlined above in *General Evacuation Procedures*.
- Proper authorities (police, fire, rescue, ambulance, etc....) shall be notified immediately. The jobsite shall remain evacuated of all personnel, until a complete site inspection is conducted by responding emergency personnel and the situation is deemed free of hazard by the authority possessing jurisdiction.

#### Weather Related Emergencies:

- When experiencing lightning, severe thunderstorms, flooding or tornado threatening weather, *MegaKC Corporation* will warn all its employees of the current weather conditions, as well as closely monitor up to the minute forecasts and instructions issued by local and state authorities, local media and/or the National Weather Service.
- When seeking shelter from a tornado, the preferred choice should be as far below the ground's surface as possible (cellar, basement, ditch, protected excavations, covered parking garages, etc.). If inside a building, all windows and doors shall remain open.
- Employees should avoid using equipment and small structures as a means of shelter from a tornado, nor should they position themselves in an area where there are materials, tools or equipment being stored nearby or overhead.

#### Media Exposure:

• At no time, shall any unauthorized person relay information to the media regarding project site emergencies and / or any other publicized affair related to the project. As accurate information becomes available following a publicized incident, a member of *MegaKC Corporation's* management or a designated representative of *MegaKC Corporation* will issue any / all necessary statements to the media.

This emergency action plan will be periodically reviewed to ensure that the policies outlined above remain effective and applicable, when faced with an emergency. In the event that this policy is altered, all effected employees will be notified of the amendments and receive new emergency training if necessary to comply with the plan.

## **RESPIRATORY PROTECTION PROGRAM**

#### **Policy Statement**

This program has been developed to ensure the safety and health of *MegaKC Corporation* employees in the workplace environment. In locations where it is not feasible to control atmospheric contamination by accepted engineering control measures, the company will provide appropriate respirators to the employees for their use.

#### Program Administrator

The company has designated Marcus Cody as the Program Administrator.

He is knowledgeable in this program and will oversee its implementation. He shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

#### Medical Evaluation

A medical evaluation to determine the employee's ability to use a respirator will be administered to all employees required to use a respirator in the workplace.

The company will have a physician or a licensed health care professional (PLHCP) perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire.

The medical questionnaire and examinations shall be administered confidentially during normal working hours or at a time and place convenient to the employee.

The following information must be provided to the PLHCP before a recommendation, concerning an employee's ability to use a respirator:

- The type and weight of the respirator to be used
- The duration and frequency of respirator use
- The expected physical work effort
- Additional protective clothing and equipment to be worn
- Temperature and humidity extremes that may be encountered

The PLHCP shall provide the company and employee with a written recommendation regarding the employee's ability to use a respirator.

Additional medical evaluations shall be conducted upon changes in conditions and/or recommendations by the Program Administrator.

#### Fit Testing

Before an employee is required to use a respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style and size of respirator that

will be used. The employee shall pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT) prior to initial use of the respirator and at least annually thereafter.

Additional fit tests must be conducted whenever conditions develop that could affect the respirator fit.

#### Use of Respirators

Employees with facial hair or any other condition, such as other personal protection equipment that interferes with the face-to-facepiece seal or valve function shall not be permitted to use a respirator. All individuals who use a tight-fitting respirator are to perform a user seal check to ensure that an adequate seal is achieve each time the respirator is put on. The respirator manufacturer's recommended user seal check method shall be used.

When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness the company shall reevaluate the situation. If the employee detects vapor or gas breakthrough, change in breathing resistance, or leakage of the facepiece, they should vacate the work area and report the circumstances to their supervisor immediately. <u>No employee shall return to the work area until the condition has been reevaluated and the necessary corrections made</u>. This could mean replacing the filter, cartridge or canister element before allowing the employee to return to the work area. No one should remove a respirator in a hazardous environment.

Additional instructions will be given to any employee who is exposed to an Immediately Dangerous to Life or Health (IDLH) atmosphere.

#### **Maintenance and Care of Respirators**

The company shall provide each respirator user with a respirator that is clean, sanitary and in good working order. All respirators will be cleaned, disinfected and stored according to the manufacturer's recommended procedures.

Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as needed, but no less than weekly. Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals. Respirators maintained for emergencies and fit testing shall be cleaned and disinfected after each use.

All respirators shall be inspected before each use and during cleaning in accordance with the manufacturer's recommendations.

#### Identification of Filters, Cartridges, Canisters

The company shall ensure that all filters, cartridges and canisters used in the workplace are labeled and color coded with the NIOSH approval label and that the label is not removed and remains legible.

#### Training and Information

Before any employee uses a respirator in the workplace, they shall receive respiratory training and annually thereafter. The training shall include the following:

- 1. Explanation of the company's respiratory protection program and the OSHA regulations
- 2. The name of the program administrator and his responsibility
- 3. Why the respirator is necessary and how improper fit, usage and maintenance can compromise the protection of the respirator
- 4. What the limitations and capabilities of the respirator are
- 5. Explanation of the selection process
- 6. How to put on, remove, use, inspect and check the seal of the respirator
- 7. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions
- 8. What the procedures are for maintenance and storage of the respirator
- 9. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and
- 10. Fit testing.

Retraining shall occur when there are changes in the workplace, change in type of respirator and when an employee demonstrates a lack of understanding or skill.

All employees trained must be able to demonstrate their knowledge of the respiratory protection program.

#### **Program Evaluation**

The company shall conduct evaluations of the workplace to ensure that this written respiratory program is being properly and effectively implemented. The company shall regularly consult employees required to use respirators to assess the employees' views on program effectiveness and identify any problems. Any problems that are identified during this assessment shall be corrected.

## SILICA EXPOSURE

#### **PURPOSE**

Exposure to crystalline silica can lead to silicosis, a serious and sometimes fatal respiratory disease, lung cancer, other respiratory diseases and kidney disease. The primary root of exposure is through inhalation. Excessive amounts of silica dust may be generated during activities such as: sandblasting, stonecutting, drilling, brick/block/concrete cutting, gunite operations, grinding concrete, mortar removal, demolition operations, hammering, chipping and sweeping concrete or masonry. This section applies to all occupational exposures to respirable crystalline silica in construction work, except where employee exposure will remain below 25 micrograms per cubic meter of air ( $25 \mu g/m3$ ) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

The following written exposure control plan is designed to protect employees who may come into contact with silica during the course of their work. Operations that may contain exposure crystalline silica will comply with 29CFR 1926.1153 Respirable Crystalline Silica.

#### 1. COMPETENT PERSON(S)

- a. A Competent Person will be designated for the project and will have the following responsibilities:
  - i. Identify existing and predictable silica related hazards
  - ii. Make frequent and regular inspections of the jobsite, materials, and equipment
  - iii. Implement this exposure control plan
  - iv. Insure that Table 1 controls are functioning effectively

#### 2. TRANING

- a. Employees will be trained in the following:
  - i. Health hazards associate with silica exposure
  - ii. Tasks in the workplace that could result in silica exposure
  - iii. Protective measures to protect employees from silica exposure including engineering controls, work practices, and respiratory protection
  - iv. The identity of the competent person(s)
  - v. The purpose and a description of the medical surveillance program
- 3. MEDICAL SURVEILLANCE
  - a. Medical surveillance will be made available at no cost for each employee who will be required to use a respirator for 30 or more days per year. Medical surveillance will be in compliance with 29CFR1926.1153(h)
- 4. RESPIRATORY PROTECTION
  - a. Where respiratory protection is required by this program, MegaKC will provide each employee an appropriate respirator with filter that complies with the requirements of the company's Respiratory Protection Program and the OSHA Respiratory Protection Standard (29 CFR 1910.134).
  - b. Respiratory protection is required at any time that silica dust is generated or when the silica level of 25ug/m<sup>3</sup> has the potential to be exceeded.

- 5. WORKPLACE INSPECTIONS
  - a. Routine workplace inspections will be conducted on the project to assess potential dust generating tasks and implement adequate control methods.
- 6. DESCRIPTION OF TASKS
  - a. Tasks on this project that will involve potential silica exposure controls may include the following:
    - i. Using handheld power saws for cutting or removing concrete
    - ii. Using handheld drills (impact and rotary hammer drills) to drill into concrete
    - iii. Using jackhammers and powered chipping tools for concrete removal or surface disturbance
    - iv. Using handheld grinders
    - v. Conducting general housekeeping/cleaning

#### 7. CONTROL METHODS

- a. ENGINEERING CONTROLS
- b. WORK PRACTICES
- c. RESPIRATORY PROTECTION
- d. Engineering controls, work practices, and respiratory protection will be in conjunction with Table 1. See attached modified Table 1 for information.
- e. Equipment and/or tasks that are not included within Table 1 will require exposure monitoring and implementation of necessary controls depending on monitoring results.
- f. If exposure control methods listed in Table 1 are not used then the employer must do the following:
  - i. Perform an exposure assessment to assess the exposure of each employee who is or may reasonably be expected to be exposed at or above the action level.
    - 1. The exposure assessment may include personal air sampling of affected employees or by using objective data for comparison results.
  - ii. Protect workers from exposures above the permissible exposure limit (PEL) of 50 micrograms per cubic meter of air averaged over an eight-hour day;
  - iii. Dust control measures must be used to protect workers from exposures above the PEL; and
  - iv. Provide respirators to workers when dust controls cannot limit exposures.

#### 8. HOUSEKEEPING

- a. Use of sweeping compound.
- b. Where feasible, MegaKC shall use vacuums or wet methods to perform housekeeping measures. Use of sweeping compound will constitute "wet" methods.
- c. Cleaning with compressed air will not be permitted unless the compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created or no alternative method is feasible.

#### 9. RESTRICTION TO WORK AREAS

a. Access will be restricted to work areas where potential silica dust exposure is present by the use of barricading systems.

#### 10. RECORDKEEPING

- a. MegaKC will make and maintain an accurate record of all exposure measurements taken to assess employee exposure to Respirable Crystalline Silica. This record will include at least the following information:
  - i. The date of measurement for each sample taken;
  - ii. The task monitored;
  - iii. Sampling and analytical methods used;
  - iv. Number, duration, and results of samples taken;
  - v. Identity of the laboratory that performed the analysis;
  - vi. Type of personal protective equipment (PPE), such as respirators, worn by the employees monitored; and
  - vii. Name, social security number, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.
- b. MegaKC will ensure that exposure records are maintained and made available in accordance with 29 CFR 1910.1020. Exposure records will be kept for at least 30 years.
- c. The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of the OSHA Respirable Crystalline Silica Construction Standard. This record shall include at least the following information:
  - i. The Crystalline Silica-containing material in question;
  - ii. The source of the objective data;
  - iii. The testing protocol and results of testing;
  - iv. A description of the process, task, or activity on which the objective data were based; and
  - v. Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.
- d. MegaKC will ensure that objective data and medical records are maintained and made available in accordance with 29 CFR 1910.1020. Objective data records will be kept for at least 30 years.

<b>TABLE 1:</b> Specified Exposure Control Methods When Working with Materials           Containing Crystalline Silica			
Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	

		< 4 hours/shift	> 4 hours/shift
(i) Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade.	None	None
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
(ii) Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade.	None	Respirator
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	<ul> <li>For tasks performed outdoors only:</li> <li>Use saw equipped with commercially available dust collection system.</li> <li>Operate and maintain tool inaccordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.</li> </ul>	None	None
(iv) Walk-behind saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
(v) Drivable saws	<ul> <li>For tasks performed outdoors only:</li> <li>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</li> <li>Operate and maintain tool inaccordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	None

(vii) Handheld and stand- mounted drills (including impact and rotary hammer drills)	<ul> <li>Use drill equipped with commercially available shroud or cowling with dust collection system.</li> <li>Operate and maintain tool inaccordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide the airflow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</li> <li>Use a HEPA-filtered vacuum when cleaning holes.</li> </ul>	None	None
(x) Jackhammers and handheld powered chipping tools	Use tool with water delivery system that supplies a continuous stream or spray of wateratthepointofimpact. • When used outdoors. • When used indoorsorinan enclosed area.	None	Respirator
	OR		
	Use tool equipped with commercially available shroud and dust collection system.		
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
	Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.		

(xi) Handheld grinders for mortar removal (i.e., tuckpointing)	Use grinder equipped with commercially available shroud and dust collection system.	None	Respirator
	<ul> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inchof wheel diameter and have a filter with 99% or greater efficiency and a cyclonic preseparator or filter-cleaning mechanism.</li> </ul>		
(xii) Handheld grinders for uses other than mortar removal	Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface.	o None	Respirator
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
	OR		
	Use grinder equipped with commercially available shroud and dust collection system.		
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
	Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inchof wheeldiameterandhaveafilter with99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.		

(xiii) Walk-behind milling machines and floor grinders	<ul> <li>iii) Walk-behind milling</li> <li>water delivery system that continuously</li> <li>feeds water to the cutting surface.</li> <li>Operate and maintain tool in accordance with</li> <li>manufacturer's instructions to minimize</li> <li>dust emissions.</li> </ul>		None
	OR		
	Use machine equipped with dust collection system recommended by the manufacturer.		
	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.		
	Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.		
	<ul> <li>When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.</li> </ul>		
(xiv) Small drivable milling machines (less than half-lane)	<ul> <li>Useamachineequippedwithsupplemental water sprays designed to suppress dust.</li> <li>Water must be combined with a surfactant.</li> <li>Operate and maintain machine to minimize dust emissions.</li> </ul>	None	None
(xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-	Operate equipment from within an enclosed cab.	None	None
containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None

(xviii) Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading, or fracturing silica-containing materials	Apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None
	When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None	None

## **FIRE PREVENTION PLAN**

*MegaKC Corporation* recognizes the dangers associated with fires. Employees have a responsibility in preventing losses associated with fires by using methods and practices, which protect themselves and others against fire. All foremen shall enforce and follow these guidelines.

#### Fire Types

The National Fire Protection Association (NFPA) has classified four general types of fires, based on the combustible materials involved and the kind of extinguisher needed to put them out. The four fire classifications are A, B, C, and D. Each classification has a special symbol and color identification. They are:

- **Class A**—this type of fire is the most common. The combustible materials are wood, cloth, paper, rubber and plastics. The common extinguisher agent is water, but dry chemicals are also effective. Carbon dioxide extinguishers and those using sodium or potassium bicarbonate chemicals are not to be used on this type of fire.
- **Class B**—Flammable liquids, gases, and greases create class B fires. The extinguishers to use are foam, carbon dioxide, and dry chemical. Also, water fog and vaporizing liquid extinguishers can be used.
- **Class C**—Class C fires are electrical fires and a no conducting agent must be used. Carbon dioxide and dry chemical extinguishers are to be used. Never use foam or water–type extinguishers on these fires.
- Class D—Combustible metals, such as magnesium, titanium, zirconium and sodium fires are class
   D. These fires require specialized techniques to extinguish them. None of the common extinguishers should be used since they can increase the intensity of the fire by adding an additional chemical reaction.

There are only two dry chemical extinguishers that can be used on A, B, and C fires, and those are multi-purpose ABC extinguishers, either stored pressure or cartridge operated.

Multi–purpose extinguishers (ABC) will handle all A, B, and C fires. All fire extinguishers are labeled with either ABC, or A, or B, or C, so be sure to read the label.

#### **Housekeeping to Prevent Fires**

The importance of good housekeeping ties in closely with fire prevention. If you allow debris or flammable material to accumulate, the risk of starting a fire increases. Fire prevention is part of the job of every employee. Everyone must help to keep the work area clutter—free and safe from other fire hazards, such as improperly used or stored chemicals. You need to know what to do in the case of a fire emergency. Companies must have a fire prevention plan spelling out everyone's roles, and employees must know the actions they are expected to take in the event of a fire.

When a fire starts, your first thought should be of your safety and the safety of others. Only if you have been trained to use fire extinguishers, and the fire is small enough to be extinguished by a hand-held extinguisher should you try to put it out by that method.

When the fire is out of control, the combustible material is unknown, or you have not been trained in the proper use of extinguishers, leave the firefighting to professionals with the proper equipment. In this case, sound the fire alarm, and then call for emergency help from a safe place.

#### Fire Checklist

Try not to panic. Although fire is a panic situation, when you panic, dangerous mistakes are made. The person who stays as calm as possible, assesses the extent of the blaze, and acts quickly to contain or extinguish the blaze is the one acting responsibly.

If the fire can be contained or extinguished, a properly trained person should use the right extinguisher on the blaze. When using a typical extinguisher:

- Hold the extinguisher upright.
- Pull the pin.
- Stand back eight or ten feet.
- Aim at the base of the fire.
- Squeeze the handle.

Sweep at the base of the fire with the extinguishing agent. If you aim high at the flames, you won't put out the fire. Remember too, that most extinguishers have a very limited operation time, only 8–10 seconds, so you have to act fast and spray correctly at the base of the fire, not at smoke or flames.

Time is of the essence in firefighting. You must know the location of fire alarms and extinguishers, and know your nearest fire exit and proceed to it in an orderly fashion.

Be especially aware of smoke and noxious fumes. These fumes enter the lungs and can leave a person unconscious. All fires consume oxygen to burn. Most victims of a fire suffocate from lack of oxygen. They are already unconscious or dead before the flames reach them.

Inside a building that is on fire, you should shut all doors within your reach. If you are trapped, and you can make your way to an exit, get on your hands and knees and crawl. This is important because smoke and heat rise rapidly, and you will inhale less smoke near the floor. Outside, get away from the direction of the flames and smoke to avoid inhaling smoke and fumes.

When fire extinguishers are used properly, they can and often do keep a small incident from becoming a major fire. However, you should be properly trained in their use and know their limitations. Remember that fire extinguishers are "first aid" appliances designed to answer immediate need. Early detection of a fire is essential if it is to be controlled with only an extinguisher. Call professional help immediately if the fire has spread out of control!

#### **Portable Fire Extinguishers**

The following is a table that has been designed to assist personnel in determining what type of fire extinguisher is to be place where, under certain circumstances:

Standard	Location	Туре	Distance
1926.150(c)(1)(i)	Building Area	2A	100 Foot Radius
1926.150(c)(1)(iv)	Each Floor	2A	
1926.150(c)(1)(iv)	Multi-Story Building	10B	Adjacent to Stairway
1926.150(c)(1)(vi)	5 Gallons of Flammable/Combustible Liquids or 5 Gallons of Flammable Gas	2A or Suitable for Hazard	Within 50 Feet
1926.150(c)(6)	Open Yard Storage	2A or Suitable for Hazard	100 Foot Radius
1926.152(d)(1)	Flammable Liquid Storage Room	20B	10 Feet Outside
1926.152(d)(2)	Outside Flammable Liquid Storage Area	20B	25-75 Feet
1926.152(d)(4)	Vehicles Used for Dispensing or Transporting Flammable or Combustible Liquids	20B:C	On Vehicle
1926.152(g)(11)	Service or Fuel Area	20B:C	Within 75 Feet
1926.153(I)	Liquefied Petroleum Gas Storage Area	20B:C	In Location
1926.352(d)	Welding, Cutting or Heating Areas	Suitable	In Area

#### Hot Work Permits / Fire Watch

A *Hot Work Permit* (see safetsite) obtained from *MegaKC Corporation*, shall be required for all spark producing work activities taking place within an existing structure and/or when required by the project owner. Hot work is any work that involves burning, welding, using fire or spark-producing tools, or that produces a source of ignition.

When performing hot work, the following welding/cutting guidelines shall be followed:

- Work area shall be inspected for flammable solvents, vapors and gases.
- Flammable and combustible materials shall be removed or covered.
- Appropriate fire extinguishing equipment shall be immediately available in the work area.
- A fire watch will be posted during welding/cutting operations and for one-half hour following these operations, when conditions make it appropriate. The fire watch will be instructed as per the requirements set forth in OSHA Regulation 1926.352(e) describing the duties of a fire watch.
- When the building is 75% completed/enclosed a hot work permit is required when hot work is taking place inside or within 25 feet of the building.

#### **General Instructions**

- 1. Obey "No Smoking" signs.
- 2. Store oily or paint-soaked rags in covered metal containers.
- 3. When welding or cutting, make sure area is free of combustibles and a fire extinguisher is nearby.
- 4. Store flammable liquids in proper, labeled containers.
- 5. Report all fire hazards immediately.
- 6. All tarps and blankets shall be of fire-retardant materials.
- 7. All gas bottles, such as oxygen, acetylene and propane shall be properly stored and tied in a vertical position in their designated area; all bottles not in use shall be capped.
- 8. Quantities of flammable or combustible liquids in excess of 25 gallons shall be stored in an acceptable or approved cabinet meeting the requirements of 29 CFR 1926.152.
- 9. Leakage or spillage of flammable or combustible liquids shall be recovered and disposed of promptly and safely.

## **SCAFFOLDING**

*MegaKC Corporation* has adopted the following guidelines, in order to protect employees from hazards associated with the usage of scaffolding. These policies are mandatory and must be complied with by all employees.

- A competent person before each work shift, and after any occurrence, which could affect a scaffold's structural integrity, shall inspect scaffolds and scaffold components for visible defects.
- Each platform on all working levels of scaffolds shall be fully planked or decked between the front uprights and the guardrail supports.
- Each scaffold platform and walkway shall be at least 18 inches wide.
- Each end of a platform unless cleated or otherwise restrained by hooks or equivalent means, shall extend over the centerline of its support at lease 6 inches.
- Each end of a platform, 10 feet or less in length shall not extend over its support more than 12 inches.
- On scaffolds where platforms are overlapped to create a long platform, the overlap shall occur only over supports, and shall not be less than 12 inches, unless the platforms are nailed together or otherwise restrained to prevent movement.
- Vertical ties/braces shall not exceed a 4:1 ratio with the base width of the scaffolding (i.e., if the base width of the scaffolding system is 5', then vertical ties must be installed in no more than 20' increments). Horizontal increments for ties shall not exceed 30 feet.
- Supported scaffold poles, legs, posts, frames and uprights shall bear on base plates, mudsills or other adequate firm foundation. Footings shall be level, sound, rigid and capable of supporting the loaded scaffold without settling or displacement. Unstable objects shall not be used to support scaffolds or platform units. Unstable objects shall not be used as working platforms.
- A ladder or equivalent safe access shall be provided on all scaffolding systems. If a ladder is used, it must extend 3' above the landing or platform that is being accessed. It must also be secured to the scaffolding system to prevent displacement.
- Employees are prohibited from working on scaffolds covered with snow, ice or other slippery material except as necessary for removal of such materials.
- A guardrail system consisting of a toprail, midrail and toeboards (where necessary) shall be installed on all open sides and ends of scaffolding that is at or above a height of 6 feet.
- Cross bracing can be used in lieu of a toprail or a midrail, but not both.

• If the front edge of a scaffold is more than 14 inches from the face of the structure, employees must be protected with a standard guardrail or fall arrest system

### AERIAL/SCISSORLIFTS (TECHNICALLY CONSIDERED SCAFFOLDING) General Requirements:

#### • Only authorized persons shall operate an aerial or scissor lift.

- All lifts should be equipped with operator's manual and / or checklist. All operators should become familiar with and fully comply with all manufacturers' safety instructions.
- A placard or sign identifying the lift's load capacities must be displayed somewhere on the lift. Maximum weight capacities of the lifts should never be exceeded under any circumstances.
- Lift operators should never ignore, disable or alter an installed safety device, switch or alarm.
- Lift operators must be conscious of their surroundings, with respect to pedestrian traffic and nearby activities on the ground near the base of the lift.
- Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition.
- All materials, tools or components being elevated in the lift, must remain on the floor and not so positioned that they are protruding through the handrails, or could fall from the lift.
- Lifts should only be operated on flat, level surfaces.

#### Fall Protection Requirements while Operating Lifts:

- Employees working from scissor-lifts / aerial lifts must remain on the floor of the basket at all times and shall not sit or climb on the edge of the basket or use planks, ladders or other devices for a work position.
- In aerial lifts, personal fall arrest systems (full-body harness and SRL) must be used and secured to the boom or basket during lift operation. The usage of personal fall arrest systems in scissor lifts is not required.
- Tie off to Designated tie off point to boom or basket only.
- Body belts are not allowed for fall protection equipment, they may be used for positioning work only.
- Fall arrest systems must be inspected prior to each use for wear, damage and other deterioration.
- Ensure all buckles and straps of body-harnesses are secured and snug against your body.
- Never climb up the side of the lift to enter it. Always use the steps located at the base of the lift, or equivalent, to gain access to the platform.
- Keep the end gate or chain secured at all times during use. This acts as a midrail and is necessary to protect employees from a fall hazard.
- Remain tied off at all times while in the basket (aerial lifts only).
- Never connect two (2) lanyards together to make one longer lanyard.
- Always use a "locking" type snaphook.

# FALL PROTECTION / PREVENTION

It is the policy of *MegaKC Corporation* to take all practical measures possible to prevent our employees and subcontracted employees from being injured by falls from heights. The company will take necessary steps to eliminate, prevent and control fall hazards. The first priority is given to the elimination of fall hazards. If a fall hazard cannot be eliminated, effective fall protection will be planned, implemented and monitored throughout the course of the project, in order to control the risks of injury due to falling.

Specifically, *MegaKC Corporation's* fall protection policy requires employees and subcontractors on all projects to be protected from fall hazards by fully complying with all applicable Occupational Safety and Health Administration (OSHA) standards pertaining to fall protection.

All employees exposed to a fall hazard at 6 feet or greater in height (regardless of scope of work) will be protected via the usage of one or more of the following OSHA compliant systems: personal fall arrest, guardrail, safety net or warning line.

# Fall Protection Systems

**Note**: This section contains miscellaneous summarized information pertaining to Federal OSHA fall protection requirements in the construction industry. The information contained herein does not represent all OSHA requirements related to fall protection. For a complete listing, please visit www.osha.gov.

## Personal Fall Arrest Systems

Personal fall arrest systems (PFAS) usually consist of an anchorage point, connectors and a full-body harness and may include a deceleration device, lifeline or suitable combinations. If a PFAS is used for fall protection, it must meet the following criteria:

- Limit maximum arresting force on an employee to 900 pounds when used with a body belt (Only for positioning)
- Limit maximum arresting force on an employee to 1,800 pounds when used with a body harness
- Have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet or the free fall distance permitted by the system, whichever is less
- The use of body belts for fall arrest is prohibited; a full body harness is required
- Personal fall arrest systems must be inspected prior to each use for wear, damage and other deterioration; defective or damaged component(s) found during inspection must be immediately removed from service
- Lanyards and vertical lifelines must have a 5,000 pound breaking strength
- When vertical lifelines are used, each employee must be attached to a separate lifeline
- Lifelines must be protected from damage
- Anchorage must be separate from suspended platforms and have a 5,000 pound capacity
- Lanyards must limit free fall to 6 feet or contact any lower level, if the shock absorbing type is installed; an additional 3 ½ feet is added to the free fall limit.

- Attachment point of the body harness is to be located in the center of the back at shoulder level or higher
- Snap hooks must be of the locking type and also be capable of a 5,000 pound capacity
- Prompt rescue must be provided in the event of a fall
- Personal fall arrest systems shall not be attached to guardrails unless the guardrail is capable of safely supporting the load

# **Guardrail Systems**

All guardrails must meet the following requirements:

- Toprail height must be between 39" and 45."
- Midrail height must be located halfway between the toprail and the working surface.
- Toprail must be capable of supporting a 200-pound force applied in an outward and downward direction.
- Midrail must be capable of supporting a 150-pound force applied in an outward and downward direction.
- When used, vertical stanchions are recommended every 8 feet horizontally?
- Railing must be at least ¼" diameter wire rope or greater.
- If wire rope is used to construct the toprail, it must be flagged every 6' with high visibility material.
- Top edges of wire rope toprails must not deflect to distance less than 39 inches above the working surface.
- Manila, plastic or synthetic rope rails may be used as long as strength and height requirements are met.
- Toe boards 1" x 3" are required on all open sides where work is being performed or walkways are located below the guardrail.

## Safety Net Systems

If safety nets are used for fall protection, they must meet the following criteria:

- Safety nets must be installed as close as practicable under the walking/working surface on which employees are working and never more than 30 feet below such levels
- Safety nets shall be installed with sufficient clearance underneath to prevent contact with the surface or structure below

- All nets require a border rope w/ 5,000 lb. cap.
- Defective nets shall not be used
- Safety net inspections must be conducted weekly and after any impact
- Items that have fallen into safety nets including, but not restricted to, materials, scrap, equipment and tools must be removed as soon as possible and at least before the next work shift
- Must withstand a drop test of a 400 pound bag of sand 30" in diameter from highest point
- Maximum size of each opening shall not be > 36 inches squared (6"x6")
- No greater than 6" openings on any side
- Connections must be positioned not more than 6" apart

## Warning Line Systems

## **OSHA** Definition

"Warning line system" means a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area.

## <u>Roofers</u>

- The warning line shall be erected around all sides of the roof work area.
- When mechanical equipment is not being used, the warning line shall be erected not less than 6 feet from the roof edge.
- When mechanical equipment is being used, the warning line shall be erected not less than 6 feet from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet from the roof edge which is perpendicular to the direction of mechanical equipment operation.
- Points of access, materials handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines.
- When the path to a point of access is not in use, a rope, wire, chain, or other barricade, equivalent in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area, or the path shall be offset such that a person cannot walk directly into the work area.
- Warning lines shall consist of ropes, wires, or chains and supporting stanchions erected as follows:
  - ✓ The rope, wire, or chain shall be flagged at not more than 6-foot intervals with high-visibility material;

- ✓ The rope, wire, or chain shall be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches from the walking/working surface and its highest point is no more than 39 inches from the walking/working surface;
- ✓ After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion, 30 inches above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof, or platform edge;
- ✓ The rope, wire, or chain shall have a minimum tensile strength of 500 pounds and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions;
- ✓ The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
- No employee shall be allowed in the area between a roof edge and a warning line unless the employee is performing roofing work in that area.
- Mechanical equipment on roofs shall be used or stored only in areas where employees are protected by a warning line system, guardrail system or personal fall arrest system.

# Non-Roofers

As an alternative to traditional fall protection systems (harness and lanyard, safety nets or guardrail system), a "warning line system" may also be used by non-roofing trades, provided that <u>all</u> of the following conditions are met:

- Continuously erected 15' or more from the edge
- Flag with high visibility material every 6 feet
- No lower than 34" nor higher than 39"
- No tape: must be rope, wire or chain which has minimum tensile strength of 500 pounds
- Stanchions capable of withstanding a 16 pound force
- No unprotected work to take place between the warning line and the edge
- A work rule must be effectively implemented, which prohibits employees from going past the warning line

# **Noise and Hearing Conservation**

## 1. Noise and Hearing Loss

a. Sound is nothing more than pressure waves traveling through the air. When you hear:i. Sound waves enter the ear canal and strike the eardrum, causing it to

vibrate. The waves become concentrated as they pass through the middle. ear to a small opening leading to the inner ear. The vibration sets in motion fluid within the inner ear, which agitates a delicate membrane and stimulates thousands of sensory hair cells. Nerve cells detect the vibration of these tiny cells and send impulses to the brain.

Noise is unwanted sound that is measured by its frequency (pitch) and intensity (loudness). Noise is recognized by OSHA as a hazard that can cause drowsiness, irritability, loss of concentration, stress, headaches and sleeping disorders, as well as temporary or permanent hearing loss.

When you damage your hearing, you're damaging the tiny sensory hair cells. Picture the grass in your yard. If you walk across the yard once, the blades will spring back. If you walk over the yard continuously, day after day, the grass will eventually lie down and die. This is what happens to the tiny hairs in your ear.

Hearing loss from noise is called sensorineural hearing loss. People suffering from this may still be able to hear someone talk but will have trouble understanding. This type of hearing loss can't be fixed medically or surgically, although hearing aids may help. Employees must be training on noise awareness before initial assignment and on annual basis.

## 2. OSHA's Noise Standard

Decibels (dB) are the units used to express the intensity of sound. They measure on a

scale similar to earthquakes: When decibels go up a little, the noise goes up a lot. (75 decibels are twice as loud as 70.)

The only way to know the exact levels is to use a noise meter. Some monitors will take measurements over an eight-hour period and come up with a "time-weighted average" (TWA).

OSHA has a standard that:

- Prohibits employees from working more than eight hours a day when exposure levels exceed 90 decibels (using a time-weighted average), and
- Requires an active program when exposure levels exceed 85 decibels over an eight-hour period (using a time-weighted average).

Here are some measurements of some typical construction site operations.

Typical exposures for equipment/ task	Typical	Exposures	for	Equipm	ent/Task
---------------------------------------	---------	-----------	-----	--------	----------

Measured Noise Level	Equipment / Task
90 dB	Sandblasting area
95 dB	Circular Saw
98 dB	Hand Drill
100 dB	Grinder used on concrete
100 dB	Concrete Joint Cutter
105 dB	Chipping hammer (1 hammer, outside)
107 dB	Jackhammer (1 hammer, outside
109 dB	Sandblasting (inside hood)
114 dB	Hammer Drill
115 dB	Jackhammer in an enclosed area

119dB	Pneumatic Drill
>124 dB	Hydro-Demolition

Keep in mind that other factors, such as working in an enclosed area or adding the sound from other tools or traffic, may affect the measured noise level.

# 3. Noise Controls

**a.** Engineering or Administrative Controls

This involves limiting the noise levels our employees are exposed to. OSHA

requires that we try this option first.

**Engineering Controls** – Physically change the job to reduce noise levels.

Examples include:

- Isolating noisy operations using sound barriers or distance
- Scheduling noisy operations when fewer employees are on the job
- Moving noisy equipment out of the work area
- Making sure equipment is properly maintained so that it doesn't create

unnecessary noise

• Using tools/equipment that are less noisy.

Administrative Controls – This option involves limiting the amount of

exposure time for each employee.

## b. <u>Hearing Protection Devices</u>

If engineering and/or administrative controls aren't possible or won't reduce noise exposure to the necessary level, you must wear approved hearing protection devices. Our options are:

• **Earplugs** – These can be the most effective form of hearing protection when used properly.

- Ear muffs These are especially useful when you need to remove and refit the protection.
- Combination of earplugs and earmuffs This may be necessary in very noisy areas, such as jackhammering operations. You can lower the noise levels by an additional 5 dB by wearing double protection. (See next section for more information.)

# 4. Noise Reduction Rating (NRR)

Approved hearing protection devices are rated using standards established by the Environmental Protection Agency (EPA). The rating is called the Noise Reduction Rating (NRR), and the EPA requires this label to be displayed on the devices. However, because OSHA believes it will be difficult for everyone to insert the devices properly for the "perfect" fit, the NRR cannot be used at face value. We need to apply a safety factor to reduce the rate with this formula:

NRR\* - 7 = NRR Safety Factor

\*From hearing protection device manufacturer

Example: Earplugs with a NRR of 33 dB: 33 - 7 = 26 $26 \div 2 = 13 \text{ dB}$ 

Since this is a noise reduction factor, you subtract the NRR Safety Factor from the Decibel level you'll be exposed to. For example:

Hammer Drill	114 dB
NRR (SF) for 33 earplugs	- 13 dB
Resulting Exposure	101 dB

If you're wearing a combination of earplugs and earmuffs, you don't add the NRRs together and then apply the formula. Instead, you figure the NRR Safety Factor for earplugs and then add 5. This is the industry standard for wearing earmuffs with earplugs, no matter what NRR the manufacturer assigned to the earmuffs. Here's what happens in our hammer drill example:

Hammer Drill	114 dB
NRR (SF) for 33 earplugs	- 13 dB Total reduction
NRR (SF) for earmuffs	- 5 dB of 18 dB.
Resulting Exposure	96 dB

Since OSHA wants us to reduce the noise level to 90 dB or lower, 96 dB would not be acceptable. We can't increase the NRR because earplugs currently on the market don't go higher than 33, so we would have to reevaluate engineering and/or administrative controls. Perhaps we could limit the amount of time the employee uses the hammer drill each day.

#### 5. OSHA's Permissible Noise Exposure

OSHA has a table that gives different decibel levels and exposure times that are acceptable for one day. They have set a maximum noise exposure level of 90 dBA over an eight (8) hour period of time (using a time-weighted average). This is called OSHA's Permissible Exposure Limit or PEL. Listed below are some higher levels of noise along with the duration permitted for one day (an eight-hour period).

Sound Level dBA	Duration For One Day
90	8 hours
92	6 hours, 6 minutes
95	4 hours
98	2 hours, 36 minutes
100	2 hours
102	1 hour, 30 minutes
105	1 hour
110	30 minutes
115	15 minutes

• Without hearing protection

We have added examples of equipment/tools that have been measured at the decibel levels shown; these were not provided by OSHA. This is only to give you an idea of noise levels—measurements must be taken to know the exposure on a particular job. Other factors come into play, such as the surrounding buildings/structures, traffic noise and other equipment.

Here is an example of how the chart works:

If we have a job using a circular saw those measures at a level of 95 dBA, an employee would only be able to operate that saw for 4 hours in one day if he is not wearing hearing protection.

We must first try to use engineering or administrative controls to reduce noise on a job. If that does not work, we must provide hearing protection. Do not forget to apply the safety factor to the Noise Reduction Rating (NRR) using the formula: (NRR [non-reduced from manufacturer] – 7)  $\div$  2 = NRR Safety Factor. Ear protection must be worn when working in noisy areas or around noisy equipment. Generally, if you cannot speak in your normal tone of voice and be heard at an arm's length to your fellow worker, ear protection devices should be worn. Cloth or cotton is not permitted. Earmuffs and/or ear plugs are to be used and can be obtained from your supervisor. In extremely noisy conditions, double protection (ear plugs with earmuffs) may be needed.

We must also reevaluate noise levels when new equipment is brought on the job or when our operations change.

# **CONCRETE AND MASONRY**

To protect *MegaKC Corporation* employees and subcontractors performing concrete and masonry work, *MegaKC Corporation* has implemented the following requirements.

**Please note:** this section contains miscellaneous summarized information pertaining to Federal OSHA requirements for concrete and masonry work. The information contained herein does not represent all OSHA requirements related to concrete and masonry work. For a complete listing, please review the following OSHA standard: 1926 Subpart Q – Concrete and Masonry Construction.

# **General Requirements**

- No construction loads shall be placed on a concrete structure or portion of a concrete structure unless **MegaKC Corporation** determines, based on information received from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the loads.
- All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement.
- No employee shall be permitted to ride concrete buckets.
- No employee shall be permitted to work under concrete buckets while buckets are being elevated or lowered into position.
- Elevated concrete buckets shall be routed so that no employee, or the fewest number of employees, are exposed to the hazards associated with falling concrete buckets.
- No employee shall be permitted to apply a cement, sand, and water mixture through a pneumatic hose unless the employee is wearing the appropriate PPE, including head and eye/face protection.

## **Requirements for Equipment and Tools**

- Powered and rotating type concrete troweling machines that are manually guided shall be equipped with a control switch that will automatically shut off the power whenever the hands of the operator are removed from the equipment handles.
- Concrete buggy handles shall not extend beyond the wheels on either side of the buggy.
- Concrete pumping systems using discharge pipes shall be provided with pipe supports designed for 100 percent overload.
- Compressed air hoses used on concrete pumping system shall be provided with positive fail-safe joint connectors to prevent separation of sections when pressurized.
- Concrete buckets equipped with hydraulic or pneumatic gates shall have positive safety latches or similar safety devices installed to prevent premature or accidental dumping.

- Bull float handles used where they might contact energized electrical conductors, shall be constructed of nonconductive material or insulated with a nonconductive sheath whose electrical and mechanical characteristics provide the equivalent protection of a handle constructed of nonconductive material.
- Masonry saws shall be guarded with a semicircular enclosure over the blade.

# **Requirements for Cast-in-place Concrete**

- Formwork shall be designed, fabricated, erected, supported, braced and maintained so that it will be capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork.
- Drawings or plans, including all revisions, for the jack layout, formwork (including shoring equipment), working decks, and scaffolds, shall be available at the jobsite.
- All Shoring equipment (including equipment used in reshoring operations) shall be inspected prior to erection to determine that the equipment meets the requirements specified in the formwork drawings.
- Erected shoring equipment shall be inspected immediately prior to, during, and immediately after concrete placement.
- Defective shoring equipment shall not be used.
- The design of the shoring shall be prepared by a qualified designer and the erected shoring shall be inspected by an engineer qualified in structural design.
- Forms and shores (except those used for slabs on grade and slip forms) shall not be removed until *MegaKC Corporation* determines that the concrete has gained sufficient strength to support its weight and superimposed loads. Such determination shall be based on compliance with one of the following:
  - 1. The plans and specifications stipulate conditions for removal of forms and shores, and such conditions have been followed, or
  - 2. The concrete has been properly tested with an appropriate ASTM standard test method designed to indicate the concrete compressive strength, and the test results indicate that the concrete has gained sufficient strength to support its weight and superimposed loads.
- Reshoring shall not be removed until the concrete being supported has attained adequate strength to support its weight and all loads in place upon it.

# **Requirements for Precast Concrete**

- Precast concrete wall units, structural framing, and tilt-up wall panels shall be adequately supported to prevent overturning and to prevent collapse until permanent connections are completed.
- Lifting inserts which are embedded or otherwise attached to tilt-up precast concrete members shall be capable of supporting at least two times the maximum intended load applied or transmitted to them.
- Lifting inserts which are embedded or otherwise attached to precast concrete members, other than the tilt-up members, shall be capable of supporting at least four times the maximum intended load applied or transmitted to them.

- Lifting hardware shall be capable of supporting at least five times the maximum intended load applied or transmitted to the lifting hardware.
- No employee shall be permitted under precast concrete members being lifted or tilted into position.

## **Requirements for Lift-slab Operations**

• Lift-slab operations shall be designed and planned by a registered professional engineer who has experience in lift-slab construction. Such plans and designs shall be implemented by *MegaKC Corporation* and shall include detailed instructions and sketches indicating the prescribed method of erection. These plans and designs shall also include provisions for ensuring lateral stability of the building/structure during construction.

# **Requirements for Masonry Construction**

- A limited access zone shall be established whenever a masonry wall is being constructed. The limited access zone shall conform to the following:
  - 1. The limited access zone shall be established prior to the start of construction of the wall.
  - 2. The limited access zone shall be equal to the height of the wall to be constructed plus four feet, and shall run the entire length of the wall.
  - 3. The limited access zone shall be established on the side of the wall which will be unscaffolded.
  - 4. The limited access zone shall be restricted to entry by employees actively engaged in constructing the wall. No other employees shall be permitted to enter the zone.
  - 5. The limited access zone shall remain in place until the wall is adequately supported to prevent overturning and to prevent collapse.
- All masonry walls over eight feet in height shall be adequately braced to prevent overturning and to prevent collapse unless the wall is adequately supported so that it will not overturn or collapse. The bracing shall remain in place until permanent supporting elements of the structure are in place.

# **TOOL AND EQUIPMENT SAFETY**

Each Superintendent and foreman is responsible for the safe use of hand tools, power tools, power actuated tools, mechanized and all other machines and equipment. All operations will confirm to the safety requirements of all federal, state and local codes.

# Machinery and Mechanized Equipment

- 1. All machinery and mechanized equipment shall be inspected, tested and determined to be in safe operating condition prior to use.
- 2. Any machinery or equipment determined to be in an unsafe operating condition shall be marked or tagged, "Out of Service, Do Not Use" and its use shall be prohibited until the unsafe conditions have been corrected.
- 3. Only qualified and trained operators will be allowed to operate machinery and or mechanized equipment.
- 4. Hoisting of personnel on machinery or mechanized equipment is expressly prohibited unless the machinery or mechanized equipment is designed to do so.
- 5. A full body harness with shock absorbing lanyard shall be worn and attached to the boom or the basket when working from an aerial lift.
- 6. Personnel on material handling equipment other than the operator are strictly prohibited.

## Hand Tools

- 1. Only authorized personnel may use hand tools.
- 2. All hand tools shall be kept in good repair and safe condition, including tools and equipment, which may be furnished by employees.
- 3. Hand Tools shall not be left on scaffolds, ladders or overhead working spaces when not in use.

- 4. Moving tools from one location to another shall be done in a manner so as not to jeopardize safety. Dropping tools from overhead to ground, and throwing tools from one employee to another is expressly forbidden.
- 5. Only non-sparking tools shall be used in areas where sources of ignition may cause fire or explosion.
- 6. Any damaged or malfunctioning tool will be removed from service when discovered, and not returned to service until repaired or replaced.

# **Power Operated Tools**

- 1. Only authorized personnel will be allowed to use power tools.
- 2. All power tool operators shall wear appropriate eye protection while operating power tools.
- 3. Electric tools will be provided with grounding connections or doubly insulated cases.
- 4. Electric power tools operated in wet areas expose the operator to greater shock hazard. Wet areas should be avoided when using electric power tools.
- 5. Electric power tools shall be disconnected when changing attachments, making adjustments or repairing.
- 6. All power cables shall be frequently checked for wear, breaks in the insulation and missing grounding connection. Defective cables shall be repaired or replaced immediately. If not, the equipment must be taken out of service until it has been repaired.
- 7. Electric power equipment shall not be used when the guarding system has been removed or in any way tampered with.
- 8. Gasoline driven power tools shall not be used in an unventilated areas.

# **POWERED INDUSTRIAL TRUCKS**

This policy provides the minimum requirements for training and operation of forklifts and fork trucks or *powered industrial trucks (PIT)*. Failure to adhere to the proper procedures can result in serious worker injury and property damage. This policy applies to all *MegaKC Corporation* personnel who operate forklifts, fork trucks or PIT on *MegaKC Corporation* sites. The procedures used will be in accordance with applicable Occupational Safety and Health Administration (OSHA) standards.

# Definitions

- 1. **Designated Person** one who has the requisite knowledge, training and experience to train powered industrial truck operators and to judge their competence.
- 2. Fork Truck Designations the eleven different designations of powered industrial trucks are as follows: D, DS, DY, E, ES, EE, EX, G, GS, LP and LPS.
  - a) <u>**D**</u> Diesel engine powered units non-hazardous areas only.
  - b) **<u>DS</u>** Diesel powered units with additional safeguards to the exhaust, fuel and electrical system.
  - c) <u>DY</u> Diesel powered units that are provided with all the safeguards of the DS unit and, in addition, do not have electrical equipment including the ignition and are equipped with temperature limitation devices.
  - d) <u>E</u> Electrically powered units that have minimum acceptable safeguards against inherent fire hazards.
  - e) <u>ES</u> Electrically powered units that have all the safeguards of the E unit plus additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures
  - f) <u>**EE**</u> Electrically powered units that, in addition to all the safeguards of the E and ES units, have the electric motor and all other electrical equipment completely enclosed.
  - g) <u>EX</u> Electrically powered units that differ from the E, ES and EE units that all the electrical fittings and equipment are so designed, constructed and assembled that the units may be used in certain atmospheres containing flammable vapors or dusts.
  - h) <u>**G**</u> Gasoline powered units having minimum acceptable safeguards against inherent fire hazards.
  - i) <u>**GS**</u> Gasoline powered units that are provided with additional safeguards to the exhaust, fuel and electrical systems.

- j) <u>LP</u> Liquefied petroleum gas powered units with minimum acceptable safeguards against inherent fire hazards.
- k) <u>LPS</u> Liquefied petroleum gas powered units provided with additional safeguards to the exhaust, fuel and electrical systems.
- 3. Fork Truck Classes the seven different classes of powered industrial trucks are as follows:
  - Class I: Electric Motor Rider Trucks
  - Class II: Electric Motor Narrow Aisle Trucks
  - Class III: Electric Motor Hand Trucks or Hand/Rider Trucks
  - Class IV: Internal Combustion Engine Trucks (Solid/Cushion Tires)
  - Class V: Internal Combustion Engine Trucks (Pneumatic Tires)
  - Class VI: Electric and Internal Combustion Engine Tractors
  - Class VII: Rough Terrain Forklift Trucks

#### **Responsibilities**

*MegaKC Corporation* employees are responsible to operate fork trucks only if properly trained and authorized to do so. *MegaKC Corporation* commits the organizational, motivational and financial resources necessary to develop, implement and maintain an effective forklift and powered industrial truck program including the following:

- 1. Providing for the proper training and testing of fork truck operators in accordance with OSHA 1910.178.
- 2. Certifying that the required training and evaluations have been conducted.
- 3. Keeping records on the training of the fork truck operators. Records shall include the employee's name, instructor, type and model of fork lift the employee was trained on.
- 4. Assuring the instructor is qualified and trained on the piece of equipment he/she is instructing on.
- 5. Providing or ensuring that evaluation testing is done every 3 years and meets the following requirements:

- a. A written/oral test on the safe and proper use of a fork truck
- b. An operational test on the model of equipment that the employee will be using
- 6. Retain the current training materials and course outline or the name and address of the person who conducted the training if it was conducted by an outside trainer.
- 7. Assures that fork trucks are operated by only trained and qualified fork lift operators.

# **Training**

Forklift and/or powered industrial truck training shall be provided to employees who are required to operate and use such vehicles. Training shall conclude with both a written and oral test as well as an operational evaluation. Furthermore, follow-up operational evaluations will be provided every three years to assure familiarity with the equipment being used.

Training shall include the following information:

- 1. All necessary operating instructions, warnings and precautions for the types of trucks the operator will be authorized to operate
- 2. Similarities to and differences from the automobile
- 3. Controls and instrumentation including location, what they do, and how they work
- 4. Power plant operation and maintenance
- 5. Steering and maneuvering
- 6. Visibility, including restrictions due to loadings
- 7. Fork and attachment adaptation, operation and use limitations
- 8. Vehicle capacity and stability
- 9. Vehicle inspection and maintenance
- 10. Refueling
- 11. Operating limitations

- 12. Any other operating instruction, warning, or precaution listed in the operator's manual for the type of vehicle that the employee is being trained to operate
- 13. Other unique or potentially hazardous environmental conditions that may exist in the workplace
- 14. Floor surfaces and/or ground conditions where the vehicle will be operated
- 15. Composition of probable loads and load stability
- 16. Load manipulation, stacking, un-stacking
- 17. Pedestrian traffic
- 18. Narrow aisle and restricted place operation
- 19. Operating in classified hazardous locations
- 20. Operating the truck on ramps and other sloped surfaces
- 21. Operating the vehicle in closed environments and other areas where insufficient ventilation could cause a buildup of carbon monoxide or diesel exhaust
- 22. Operators shall be retrained when new equipment is introduced, existing equipment is modified, operating conditions change, or the operator's performance is unsatisfactory
- 23. Fork truck operators shall receive annual refresher training. Their skills shall be reevaluated on a periodic basis, not to exceed twelve (12) months
- 24. The characteristics, operation and limitations of the vehicles that the trainee will be authorized to operate
- 25. Hazards associated with the workplace in which these vehicles will operate

# **General Operational Safety Rules for Fork Trucks**

# Fork Truck Operations

- 1. The fork truck design must meet the area classification in which it will be operated.
- 2. Fork trucks must be designed and used for the surfaces upon which they must operate.
- 3. Fork trucks must be maintained in safe operating condition.
- 4. Fork trucks shall be inspected before each day's use and, if defects are found, the fork truck must be removed from service until it is repaired.
- 5. Brakes will be checked for such items as slipping and grabbing.
- 6. Hydraulic system checked for leaks or leak down.
- 7. Engine lubricants, idling, smoothness should be checked.
- 8. Fork trucks should be driven with the forks in the lowered position.
- 9. No loads are allowed to be suspended from the forks of a fork truck.
- 10. Fork truck operators must obtain a vehicle entry permit prior to bringing a fork truck into a process or storage area when working in a refinery.
- 11. Fork truck operators must travel at a speed that will maintain load stability at all times. Road conditions and pedestrian traffic should also be considered.

- 12. Fork trucks may not be driven up to anyone in front of a fixed object. No employee shall stand or pass under the elevated forks, regardless of if they are loaded or not. No one may ride on a fork truck unless a seat is provided for them. Fork truck operators are required to wear seat belts at all times.
- 13. Legs and arms should never be placed between the uprights of the mast or outside the running lines of the truck.
- 14. When the fork truck is left unattended the load engaging means must be fully lowered, controls neutralized, power shut off and the brakes set. The wheels should be chocked if parked on an incline.
- 15. Fork truck operators will maintain a safe distance from the edge of ramps or platforms while on an elevated deck.
- 16. Fork trucks must not be used for opening or closing doors of buildings or freight trucks.
- 17. The brakes of highway trucks must be set and the rear wheels chocked to prevent movement of the truck or trailer while being loaded or unloaded. The flooring of trucks and trailers must be checked before they are driven onto. If driving into a trailer that is on landing jacks, make sure they are rated to hold the weight of the cargo AND the fork truck.
- 18. Fork trucks must have an overhead guard to protect against falling objects. NOTE: An overhead guard is intended to offer protection from the impact of small objects, packages, boxes, etc., but not to withstand the impact of falling load capacity. A load backrest extension must be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
- 19. A fork truck must be taken out of service if at any time it is found to be in need of repair, defective, or in any way unsafe. No truck may be operated with a leak in the fuel system.
- 20. Fork truck engines must be shut off during refueling.
- 21. Fork truck attachments must be UL/FM approved for the type of service it is being used for. Homemade or shop-built attachments must be approved in writing by a Professional Engineer (PE).

# **Traveling**

- 1. Fork truck operators must observe all traffic regulations, including job-site speed limits.
- 2. Fork truck operators must look in the direction of and keep clear view of the path of travel.
- 3. Excess speeds, stunt driving and horseplay are forbidden. The running over of loose objects on the roadway is also not allowed.
- 4. In warehouse area the driver shall slow and sound the horn at cross aisles where vision is obstructed.
- 5. If the load obstructs the operators view, the operator must travel with the load trailing.
- 6. Grades must be ascended and descended slowly. On grades in excess of ten percent (10%), the loaded trucks must travel with the load up grade.
- 7. On grades, the load and load engaging mechanism must be tilted back and, if applicable, raised only as far as necessary to clear the road surface.
- 8. During travel the truck must be operated at a speed that will permit it to be brought to a stop in a safe manor. The driver should slow down for wet or slippery conditions. Turns must be negotiated in a slow, smooth manner to as to keep the load stable.
- 9. Dock board or bridge plates must be properly secured before being driven over.

## **Loading**

- 1. Fork trucks shall handle only stable or safely arranged loads within their capacity. Long or high loads which may affect capacity must be adjusted. Off-center loads should be avoided.
- The forks must be placed as far under the load as possible. The mast tilted back slowly to stabilize the load. (Use extreme care when tilting the load forward or back, particularly when high stacking). Tilting forward with the load elevated is forbidden, except when the load is in a deposit position over a rack or stack.

## Maintenance of Fork Trucks

- 1. Fork trucks not in a safe operating condition must be removed from service and repairs made by authorized personnel. All replacement parts must be equivalent as to the safety with those in the original design.
- 2. Trucks in need of repair of the electrical system must have the battery disconnected before repairs.
- 3. Repairs to the fuel system shall be done in safe area away from any ignition sources.
- 4. Fork trucks will not be altered from the manufacturer's original design except for approved conversion of a truck from use of gasoline to LP gas as fuel. Additional counter weighting of fork trucks must not be done unless approved by the truck manufacturer.
- 5. Fork trucks must be inspected before being placed in service. The truck must not be placed in service if any condition affecting the safety of the vehicle is found. Inspection must be done each day the truck is operated. If the truck is being used around the clock it must be inspected before each shift. Maintenance shall maintain inspection records on all fork trucks to include the daily inspections.
- 6. Defects found on inspection must be reported and corrected before use.
- 7. Repairs to fork trucks will be done in such a manner as to maintain the trucks area classification.
- 8. Batteries on electrically powered fork trucks must be charged in a well-ventilated area away from volatile materials, gases and ignition sources.

# **HAZARD COMMUNICATION PROGRAM**

# <u>Purpose</u>

The purpose of this plan is to establish a program and procedures for the safe use of hazardous chemical substances at *MegaKC Corporation*.

The Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS) 29 CFR 1910.1200 (General Industry) and 29 CFR 1926.59 (Construction Industry) call for the development of a hazard communication program when employees may be exposed to any chemical in the workplace under normal conditions of use or in a foreseeable emergency. In 2012, OSHA revised the HCS to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). As a result, this program has been revised to comply with the requirements of the OSHA HCS 2012. The written hazard communication program will include and address the following criteria in order to satisfy the minimum requirements of the OSHA HCS 2012:

- List of all hazardous chemicals known to be present in the workplace or individual work area
- Methods used to ensure that all containers, including pipes and holding tanks, are labeled, tagged or marked properly
- Methods used to obtain and maintain safety data sheets (SDS)
- Methods used to provide employees with information and training on hazardous chemicals in their work areas
- Methods used to inform employees of the hazards of nonroutine work practices
- Methods used to provide the employees of other employers (e.g., consultants, construction contractors and temporary employees) on-site access to SDS for each hazardous chemical that the other employer's employees may be exposed to while working in the workplace
- Methods used to inform the employees of other employers of precautionary measures that need to be taken to protect themselves during the workplace's normal operating conditions and in foreseeable emergencies
- Methods used to inform the employees of other employers of the labeling system used in the workplace

The hazard communication program will identify the following:

- Key personnel responsible for the program
- Location of chemical inventory list and SDS
- Workplace labeling system

- Good work practices and procedures to minimize exposures
- How training will be performed
- Procedures to maintain the program and update the required information
- How records will be maintained

## **Responsibilities**

Safety Manager is responsible for administering the hazard communication program.

This person is also responsible for:

- Reviewing the potential hazards and safe use of chemicals
- Maintaining a list of all hazardous chemicals and a master file of SDS
- Ensuring that all containers are labeled, tagged or marked properly
- Providing new-hire and annual training for employees
- Maintaining training records
- Monitoring the air concentrations of hazardous chemicals in the work environment
- Properly selecting and caring for personal protective equipment
- Directing the cleanup and disposal operations of the spill control team
- Identifying hazardous chemicals used in nonroutine tasks and assessing their risks
- Informing outside contractors who are performing work on company property about potential hazards
- Reviewing the effectiveness of the hazard communication program and making sure that the program satisfies the requirements of all applicable federal, state or local hazard communication requirements

The purchasing agent Superintendents, are responsible for:

• Contacting chemical manufacturers and/or distributors to obtain SDS and secondary labels for hazardous chemicals used or stored in the workplace

The receiving department is responsible for:

- Reviewing incoming hazardous chemicals to verify correct labeling
- Holding hazardous chemicals in the receiving area until receipt of the SDS for the product

Employees are responsible for the following aspects of the hazard communication program:

- Identifying hazards before starting a job
- Reading container labels and SDS
- Notifying the supervisor of torn, damaged or illegible labels or of unlabeled containers
- Using controls and/or personal protective equipment provided by the company to minimize exposure
- Following company instructions and warnings pertaining to chemical handling and usage
- Properly caring for personal protective equipment, including proper use, routine care and cleaning, storage, and replacement
- Knowing and understanding the consequences associated with not following company policy concerning the safe handling and use of chemicals
- Participating in training

## **Chemical Inventory List**

*MegaKC Corporation* maintains a list of hazardous chemicals used, produced and/or stored at company locations. Copies of the chemical inventory list are available on SDS services.

This list will contain the product identifier that is referenced on the appropriate SDS, the location or work area where the chemical is used, and the personal protective equipment and precautions for each chemical product. This list will be updated annually and whenever a new chemical is introduced to the workplace.

## Labels and Other Forms of Warning

Each container of hazardous chemicals received from the chemical manufacturer, importer or distributor will be labeled with the following information:

- Product identifier
- Signal word
- Hazard statement(s)
- Pictogram(s)
- Precautionary statement(s)
- Name, address and telephone number of the chemical manufacturer, importer or other responsible party

*MegaKC Corporation* will use the GHS labeling system for secondary containers. When a chemical is transferred from the original container to a portable or secondary container, the container will be labeled, tagged or marked with a GHS label containing the following information:

- Product identifier
- Signal word
- Hazard statement(s)
- Pictogram(s)
- Precautionary statement(s)

Portable containers into which hazardous chemicals are transferred from labeled containers and that are intended for the immediate use of the employee who performs the transfer will need a label. If the portable container will be used by more than one employee or used over the course of more than one shift, the container must be labeled. Food and beverage containers should never be used for chemical storage.

Signs, placards, process sheets, batch tickets, operating procedures or other such written materials may be used in lieu of affixing labels to individual, stationary process containers as long as the alternative method identifies the containers to which it is applicable and conveys the information required for workplace labeling.

Where an area may have a hazardous chemical in the atmosphere (e.g., where extensive welding occurs), the entire area will be labeled with a warning placard.

Pipes that contain hazardous chemicals should be labeled in accordance with ANSI/ASME A13.1 and indicate the direction of flow (please note that this not a requirement of the OSHA HCS but a best practice or requirement of local jurisdiction).

Workplace labels or other forms of warning will be legible, in English and prominently displayed on the container or readily available in the work area throughout each work shift. If employees speak languages other than English, the information in the other language(s) may be added to the material presented as long as the information is presented in English as well.

**Note:** After Dec. 1, 2015, distributors may not ship containers labeled by the chemical manufacturer or importer unless the label on the container meets GHS labeling requirements.

# Safety Data Sheets ("SDS")

A SDS will be obtained and maintained for each hazardous chemical in the workplace. SDS for each hazardous chemical will be readily accessible during each work shift to employees when they are in their work areas.

SDS will be obtained from the chemical manufacturer, importer or distributor. The name on the SDS will be the same as that listed on the chemical inventory list.

SDS for new products or updated SDS for existing products will be obtained by the Superintendent and forwarded to the *Safety manager*. The *Safety manager* will then update the master file with new and/or updated SDS.

## **Employee Information and Training**

Employees included in the hazard communication program will receive the following information and training prior to exposure to hazardous chemicals and when new chemical hazards are introduced to their work area:

- Requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 (General Industry) or 29 CFR 1926.59 (Construction Industry)
- Operations in the work area where hazardous chemicals are present
- Location and availability of the hazard communication program, chemical inventory list and SDS
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area, such as monitoring devices, visual appearance or odor of hazardous chemicals when being released
- Physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified of the chemicals in the work area
- Measures employees can take to protect themselves from hazards, such as appropriate controls, work practices, emergency and spill cleanup procedures, and personal protective equipment to be used
- Explanation of the labels received on shipped containers
- Explanation of the workplace labeling system
- Explanation of the SDS, including order of information and how employees can obtain and use the appropriate hazard information

**Note:** To facilitate understanding of the new GHS system, the OSHA HCS requires that employees be trained regarding the new label elements and SDS format by Dec. 1, 2013. Employers are required to update the hazard communication program and to provide any additional training for newly identified physical or health hazards no later than June 1, 2016.

# Nonroutine Tasks

The Superintendent and the immediate supervisor of an employee performing a nonroutine task, such as cleaning machinery and other process equipment, is responsible for ensuring that adequate training has been provided to the employee on any hazards associated with the nonroutine task. Employees share in this responsibility by ensuring that their immediate supervisor knows that the nonroutine task will be performed.

Special work permits are required for the performance of certain nonroutine tasks, such as entry to confined spaces, breaking and opening piping systems, and welding and burning. For some special tasks, employees are required to follow special lockout/tagout procedures to ensure that all machinery motion has stopped and energy sources are isolated prior to and during the performance of such tasks.

# Recordkeeping

Records pertaining to the hazard communication program will be maintained by the Safety manager. The Safety manager will keep the following records:

- Chemical inventory list
- Hazardous material reviews
- Employee training records
- Warnings issued to employees for not following the hazard communication program

# **CRANES AND DERRICKS**

This program applies to all *MegaKC Corporation* employees who are affected by crane and/or derrick operations. All affected employees must be aware of the potential hazards involved in crane operations and shall follow safe work practices and procedures outlined throughout this program.

This program covers power-operated equipment, when used in construction, that can hoist, lower and horizontally move a suspended load. Included equipment, and exclusions, must follow 29 CFR 1926.1400(a), (b) and (c).

# **Definitions**

**A/D Director (Assembly/Disassembly Director**) - means an individual who meets the requirements set forth in 29 CFR 1926 Subpart CC for an A/D Director, irrespective of the person's formal job title or whether the person is non-management or management personnel.

**Assembly/Disassembly** - means the assembly and/or disassembly of equipment covered under 29 CFR 1926 Subpart CC. Regarding tower cranes, "erecting and climbing" replaces the term "assembly," and "dismantling" replaces the term "disassembly." Regardless of whether the crane is initially erected to its full height or is climbed in stages, the process of increasing the height of the crane is an erection process.

**Audible signal** - means a signal made by a distinct sound or series of sounds. Examples include, but are not limited to, sounds made by a bell, horn, or whistle.

**Competent person** - means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**Dismantling** - includes partial dismantling (such as dismantling to shorten a boom or substitute a different component).

**Encroachment** - is where any part of the crane, load line or load (including rigging and lifting accessories) breaches a minimum clearance distance that this subpart requires to be maintained from a power line.

*Ground Conditions* - means the ability of the ground to support the equipment (including slope, compaction, and firmness).

**Load** - refers to the object(s) being hoisted and/or the weight of the object(s); both uses refer to the object(s) and the load-attaching equipment, such as, the load block, ropes, slings, shackles, and any other ancillary attachment.

**Qualified person** - means a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, successfully demonstrated the ability to solve/resolve problems relating to the subject matter, the work, or the project.

Qualified rigger - is a rigger who meets the criteria for a qualified person.

*Supporting Materials* - means blocking, mats, cribbing, marsh buggies (in marshes/wetlands), or similar supporting materials or devices.

# Assembly/Disassembly

Equipment must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent so that, in conjunction (if necessary) with the use of supporting materials, the equipment manufacturer's specifications for adequate support and degree of level of the equipment are met.

When assembling or disassembling equipment (or attachments), *MegaKC Corporation* will comply with all applicable manufacturer prohibitions and one of the following:

- 1. Manufacturer procedures applicable to assembly and disassembly, or
- 2. *MegaKC Corporation* procedures for assembly and disassembly. If *MegaKC Corporation* procedures are implemented, they must meet the requirements set forth in 29 CFR 1926.1406.

# **General Requirements**

Assembly/disassembly must be directed by a person who meets the criteria for both a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons ("A/D Director"). Where the assembly/disassembly is being performed by only one person, that person must meet the criteria for both a competent person and a qualified person.

The A/D Director and crew members must understand the applicable assembly/disassembly procedures. Prior to commencing work, the A/D Director must ensure that crew members understand their tasks/associated hazards and the hazardous positions/locations they need to avoid.

Crew members must inform the operator before moving to a location out of the operator's view, where the crew member could be injured by movement of the equipment (or load). Operators must not move any part of the equipment until they're notified that the crew member is in a safe position.

When pins (or similar devices) are being removed, employees must not be under the boom, jib, or other components, except where the requirements of 29 CFR 1926.1404(f)(2) are met.

During all phases of assembly/disassembly, all rated capacity limits must not be exceeded for the equipment being assembled/disassembled.

The A/D Director supervising the operation must address the hazards associated with the operation, which at a minimum, include those set forth in 29 CFR 1926.1404(h)(1) – 1926.1404(h)(12).

The selection of components, and configuration of the equipment, that affect the capacity or safe operation of the equipment must be in accordance with:

- 1. Manufacturer instructions, prohibitions, limitations, and specifications. Where these are unavailable, a registered professional engineer familiar with the type of equipment involved must approve, in writing, the selection and configuration of components; or
- 2. Approved modifications that meet the requirements in 29 CFR 1926.1434.

Upon completion of assembly, the equipment must be inspected to ensure compliance with 29 CFR 1926.1412(c).

When the load to be handled and the operating radius require the use of outriggers or stabilizers, or at any time when outriggers or stabilizers are used, the requirements set forth in 29 CFR 1926.1404(q)(1) – 1926.1404(q)(6).

In addition to following the requirements in 29 CFR 1926.251 and other requirements applicable to rigging, when rigging is used for assembly/disassembly, *MegaKC Corporation* will ensure that:

- 1. The rigging work is done by a qualified rigger.
- 2. Synthetic slings are protected from: abrasive, sharp or acute edges, and configurations that could cause a reduction of the sling's rated capacity, such as distortion or localized compression.

When synthetic slings are used, the synthetic sling manufacturer's instruction, limitations, specifications and recommendations must be followed.

# Power Lines

# Assembly/Disassembly

Before assembling or disassembling equipment, *MegaKC Corporation* will determine if any part of the equipment, load line, or load (including rigging and lifting accessories) could get, in the direction or area of assembly/disassembly, closer than 20 feet to a power line during the assembly/disassembly process. If so, *MegaKC Corporation* will implement one of the following options:

- 1. Deenergize and Ground Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the worksite.
- 2. 20 Foot Clearance Ensure that no part of the equipment, load line or load (including rigging and lifting accessories), gets closer than 20 feet to the power line.
- 3. Table A Clearance Determine the line's voltage and the minimum clearance distance permitted under Table A.

TABLE A – Minimum Clearance Distances						
Voltage				Minimum	clearance	distance
(nominal, kV, alternating current)			(feet)			
up	t	0	50	10		
over	50	to	200	15		
over	200	to	350	20		
over	350	to	500	25		
over	500	to	750	35		
over	750	to	1,000	45		
over 1,000				(as established registered profe	by the utility owne essional engineer who	r/operator or o is a qualified

person	with	respect	to	electrical	power
transmis	ssion an	d distribu	tion)		

Where encroachment precautions are required under Option (2) or (3), the requirements set forth in 29 CFR 1926.1407(b)(1) - 1926.1407(b)(3)(v) must be met.

*MegaKC Corporation* prohibits the assembly/disassembly of equipment below power lines or inside the Table A clearance, unless *MegaKC Corporation* has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line(s).

# **Equipment Operation**

Before beginning equipment operations, *MegaKC Corporation* must identify the work zone by either:

- 1. Demarcating boundaries (such as with flags, or a device such as a range limit device or range control warning device) and prohibiting the operator from operating the equipment past those boundaries, or
- 2. Defining the work zone as the area 360 degrees around the equipment, up to the equipment's maximum working radius.

*MegaKC Corporation* must also determine if any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment's maximum work radius in the work zone, could get closer than 20 feet to a power line. If so, *MegaKC Corporation* will implement one of the three options listed above in the *Power Lines – Assembly/Disassembly* section.

Where encroachment precautions are required under Option (2) or (3), the requirements set forth in 29 CFR 1926.1408(b)(1) - 1926.1408(b)(5) must be met.

No part of the equipment, load line, or load (including rigging and lifting accessories) is allowed below a power line unless *MegaKC Corporation* has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line. Exceptions are located in 29 CFR 1926.1408(d)(2) – 1926.1408(d)(2)(iv).

When working near transmitter/communication towers where the equipment is close enough for an electrical charge to be induced in the equipment or materials being handled, the transmitter must be deenergized or the equipment must be provided with an electrical ground and tag lines must be non-conductive.

# Training

Each operator and crew member must be properly trained in accordance with the requirements in 29 CFR 1926.1408(g).

# Power Lines (over 350 kv)

If exposed to power lines over 350 kv, the requirements in 29 CFR 1926.1409 must be met.

# Power Line (all voltages) – Table A Zone

If operations cannot be completed without breaching the minimum clearance distances in Table A, the requirements in 29 CFR 1926.1410 must be met.

## Power Line Safety while Traveling with no Load

When equipment is traveling with no load under or near a power line, the following is required:

- The boom/mast and boom/mast support are lowered sufficiently.
- The clearances specified in Table T are maintained.

Table T – Minimum Clearance Distances while Traveling with no Load				
Voltage	While traveling-minimum clearance distance			
(nominal, kV, alternating current)	(feet)			
up to 0.75	4			
over .75 to 50	6			
over 50 to 345	10			
over 345 to 750	16			
Over 750 to 1,000	20			
Over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).			

- The effects of speed and terrain on equipment movement are considered so that those effects do not cause the minimum clearance distances to be breached.
- If any part of the equipment while traveling will get closer that 20 feet to the power line, there must be a dedicated spotter who is in continuous contact with the driver/operator.
- Additional precautions must be taken for traveling in poor visibility.
#### **Inspections**

Inspection requirements for modified and repaired/adjusted equipment are located in 29 CFR 1926.1412(a)(1) – 1926.1412(b)(4). When applicable, these requirements must be complied with.

#### Post-Assembly

Upon completion of assembly, the equipment must be inspected by a qualified person to assure that it is configured in accordance with manufacturer equipment criteria.

#### Each Shift

A competent person must begin a visual inspection prior to each shift the equipment will be used, which must be completed before or during that shift. The inspection must consist of observation for apparent deficiencies.

At a minimum, the inspection must include all the requirements in 29 CFR 1926.1412(d)(1)(i) - 1926.1412(d)(1)(xiv). If any deficiency is identified, and the competent person determines that the deficiency constitutes a safety hazard, the equipment must be taken out of service until it has been corrected.

#### Monthly

Each month the equipment is in service it must be inspected in accordance with the requirements listed above in the *Each Shift* section.

#### Annual/Comprehensive

At least every 12 months the equipment must be inspected by a qualified person in accordance with the requirements listed above in the *Each Shift* section (except the corrective actions for deficiencies).

In addition, at least every 12 months, the equipment must be inspected by a qualified person, and disassembly is required, as necessary, to complete the inspection. The equipment must be inspected as required in 29 CFR 1926.1412(f)(2)(i) - 1926.1412(f)(3).

If any deficiency is identified, an immediate determination must be made by the qualified person as to whether the deficiency constitutes a safe hazard or, though not yet a safety hazard, needs to be monitored in the monthly inspections.

If the qualified person determines that a deficiency is a safety hazard, the equipment must be taken out of service until it has been corrected. If the qualified person determines that it's not presently a safety hazard, but needs to be monitored, the deficiency will be checked in the monthly inspections.

#### **Severe Service**

Where the severity of use/conditions is such that there is a reasonable probability of damage or excessive wear, *MegaKC Corporation* will stop using the equipment and a qualified person will follow the requirements in 29 CFR 1926.1412(g)(1) – 1926.1412(g)(3).

#### Equipment not in Regular use

Equipment that has been idle for three months or more must be inspected by a qualified person in accordance with the requirements of 29 CFR 1926.1412(e) before initial use.

#### Documentation

Monthly Inspections: Items checked and the results and the name and signature of the person who conducted the inspection and date. This must be retained for a minimum of three months.

Annual/Comprehensive: Items checked and the results and the name and signature of the person who conducted the inspection and date. This must be retained for a minimum of 12 months.

#### <u>Signals</u>

#### **General Requirements**

A signal person must be provided in each of the following situations:

- The point of operation, meaning the load travel or the area near or at load placement, is not in full view of the operator.
- When the equipment is traveling, the view in the direction of travel is obstructed.
- Due to site specific safety concerns, either the operator or the person handling the load determines that it is necessary.

Signals to operators must be by hand, voice, audible, or new signals. The signals used, and means of transmitting the signals to the operator, must be appropriate for the site conditions.

The ability to transmit signals between the operator and signal person must be maintained. If that ability is interrupted at any time, the operator must safely stop operations requiring signals until it is reestablished.

Only one person may give signals to a crane/derrick at a time. However, anyone who becomes aware of a safety problem must alert the operator or signal person by giving the stop or emergency stop signal.

Where a signal person(s) is in communication with more than one crane/derrick, a system must be used for identifying the crane/derrick each signal is for.

#### Hand Signals

When using hand signals, the standard method must be used (see diagram below).

# **Mobile Crane Hand Signals**











Hoist

**Use Main Hoist** 

**Use Whipline** 

**Raise Boom** 



Lower Boom



**Raise the Boom** Lower the Load

Travel



Swing



**Dog Everything** 



Travel (Both Tracks)



Stop

**Extend Boom** 

Λ

**Emergency Stop** 

**Retract Boom** 



Retract Boom (One Hand)

Extend Boom (One Hand)



Hand signal charts must be either posted on the equipment or conspicuously posted in the vicinity of the hoisting operations.

If the use of the Standard Method for hand signals is infeasible, or where an operation or use of an attachment is not covered in the Standard Method, non-standard hand signals may be used. The use of non-standard hand signals requires the signal person, operator and lift director (if applicable) to contact each other prior to the operation and agree on the non-standard hand signals that will be used.

#### **New Signals**

Signals other than hand, voice, or audible signals may be used in accordance with 29 CFR 1926.1419(d).

#### Radio, Telephone or other Electronic Transmission Signals

The device(s) used to transmit signals must be tested on site before beginning operations to ensure that the signal transmission is effective, clear and reliable.

The operator's reception of signals must be by a hands-free system.

#### Voice Signals

Prior to beginning operations, the operator, signal person and lift director (if applicable), must contact each other and agree on the voice signals that will be used.

Each voice signal must contain the following three elements, given in the following order: function (hoist, boom, etc.), direction, distance and/or speed, function, stop command.

The operator, signal person and lift director (if applicable) must be able to effectively communicate in the language used.

#### **Operator Qualifications**

Each operator must be trained, certified/licensed and evaluated in accordance with 29 CFR 1926.1427 before operating any equipment.

An employee who has not been certified/licensed and evaluated to operate assigned equipment may only operate the equipment as an operator-in-training under supervision in accordance with the requirements in 29 CFR 1926.1427(b).

There are three options for meeting OSHA's certification requirements:

- 1. Obtaining certification from an accredited, third-party crane certification organization, as described in 29 CFR 1926.1427(d).
- 2. Developing and implementing an Audited-Employer Program, as described in 29 CFR 1926.1427(e).
- 3. Obtaining a state or local crane operator license that meets OSHA's requirements in 29 CFR 1926.1427(c).

MegaKC Corporation has adopted Option (1)

#### **Evaluation**

MegaKC Corporation must ensure that each operator is qualified by a demonstration of:

- 1. The skills and knowledge, as well as the ability to recognize and avert risk, necessary to operate the equipment safely.
- 2. The ability to perform the hoisting activities required for assigned work.

Evaluations must be conducted by an individual who has the knowledge, training and experience necessary to assess equipment operators. The evaluator must be an employee or agent of *MegaKC Corporation.* 

Completion of evaluations will be documented by *MegaKC Corporation*. The document will include: the operator's name, the evaluator's name and signature, the date, and the make, model and configuration of equipment used in the evaluation. *MegaKC Corporation* will make the document available at the worksite while the operator is employed by *MegaKC Corporation*.

#### **Retraining**

*MegaKC Corporation* will retrain each operator in relevant topics when based on the performance of the operator, or an evaluation of the operator's knowledge, there is an indication that retraining is necessary.

When *MegaKC Corporation* is required to provide an operator with retraining, *MegaKC Corporation* will re-evaluate the operator with respect to the subject of retraining.

#### **Certification Criteria**

Certifications must be based on a determination through a written and practical test. The certification criteria included in 29 CFR 1926.1427(j) must be met.

#### **Signal Person Qualifications**

Each signal person of *MegaKC Corporation* must meet the Qualification Requirements outlined in 29 CFR 1926.1428(c) prior to giving any signals.

Qualification requirements must be met by using either Option (1) or (2) below:

- 1. Third Party Qualified Evaluator 29 CFR 1926.1428(a)(1)
- 2. Employer's Qualified Evaluator 29 CFR 1926.1428(a)(2)

*MegaKC Corporation* will make the documentation available at the site while the signal person is employed by *MegaKC Corporation*. The documentation will specify each type of signaling for which the signal person meets the Qualification Requirements.

If *MegaKC Corporation* determines, based off a subsequent action, that the signal person does not meet the Qualification Requirements, *MegaKC Corporation* will not allow the individual to continue their duties until retraining and a reassessment is completed.

#### **Critical Lifts**

At a minimum, *MegaKC Corporation* will consider a lift to be a critical lift when:

- The lift exceeds 75% of the rated capacity of the crane or derrick, or
- The lift requires the use of more than one crane or derrick.

Other circumstances to consider when determining if a lift should be considered a critical lift, include, but are not limited to:

- Personnel being hoisted
- Special hazards are present, such as lifts over specialized equipment, cranes on floating barges, loads lifted closed to power lines, or lifts in high winds or other adverse weather conditions.
- Lifts made out of the view of the operator (blind pick)
- Non-routine or technically difficult rigging arrangements

Prior to making a critical lift, a critical lift plan should be considered. The plan must be prepared by a qualified person, documented in writing, and made available to all personnel involved in the lift. (*See Sample Critical Lift Plan in Appendices and Forms section*).

#### Training

In addition to the training requirements previously mentioned in this program, *MegaKC Corporation* must also train affected employees on the requirements set forth in 29 CFR 1926.1430. This includes, but is not limited to:

- Manufacturer's emergency procedures for halting unintended equipment movement.
- Avoid holes, crush/pinch points and other hazards identified in the work area.
- Tag-out and start-up procedures for those authorized to start/energize equipment or operate equipment controls.

# **LOCKOUT / TAGOUT**

### **Control of Hazardous Energy Sources**

This policy covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of machines or equipment, or release of stored energy could cause injury to employees. The purpose of this policy is to prevent accidents and injuries to employees as they relate to the control of hazardous energy sources.

#### **General Requirements**

- No employee shall be allowed to service, maintain or otherwise work on any machine or equipment in which the unexpected energization or start up of the machine or equipment, or release of stored energy could cause injury to the employee unless the machine or equipment is properly locked out.
- 2. Lockout is the preferred method and shall be used in all cases unless the machinery or equipment is not fitted with a device designed to accept a lock for purposes of controlling a hazardous energy source.
- 3. Any employee required to service, maintain, or otherwise work on any machine or equipment in which control of hazardous energy sources is required to prevent injury in case of unexpected startup, or release of stored energy, shall be properly trained in lockout procedures, including the lockout procedure for the individual, specific machine or piece of equipment on which the work will be done.
- 4. All necessary locks and lockout devices will be provided by the foreman. Group lockout devices shall be used.
- 5. Only authorized employees shall be allowed to use lockout/tagout devices.
- 6. Affected employees shall be notified by the foreman or authorized employee of the application and removal of lockout/tagout devices.
- 7. The foreman is responsible to survey each work site and identify the need of a lockout procedure. When equipment or machinery is identified as requiring a lockout procedure, the foreman shall write a lockout procedure for each piece of machinery or equipment, properly train all affected employees, and require all employees to use the procedure.
- 8. The lockout or tagout device must indicate the identity of the employee applying them.
- 9. Each lockout/tagout device must be removed by the employee who affixed it.

10. Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous material stored or residual energy must be relieved, disconnected, restrained, bled off and otherwise rendered safe.

# Definitions Applicable To Control of Hazardous Energy Source

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

**Affected Employee** - An employee whose job requires him or 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 or her to work in an area in which such servicing or maintenance is being performed.

**Energy Isolating Device** - a mechanical device that physically prevents the transmission or release of energy, including, but not limited to, the following: a manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and in addition, no pole can be operated independently; a line valve; a block, and any similar device used to block or isolate energy. Push buttons selector switches and other control circuit type devices are not energy isolating devices.

**Energy Sources** - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

**Lockout** - The placement of a lockout device on an energy-isolating device, in accordance with an established procedure. This process ensures that the energy isolating device and equipment being controlled cannot be operated until the lockout device is removed.

**Lockout Device** - A device that utilizes a positive means, such as lock, either key combination type, to hold an energy-isolating device in a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

**Servicing and Maintenance** - Work place activities, such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing equipment or machines. These activities include lubrication, cleaning or unjamming of machines or equipment, and adjusting or tool changes when the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

**Tagout Device** - A prominent warning device such as tag and a means of attachment, which can be securely fastened to an energy isolating device and the equipment being controlled, may not be operated until the tagout device is removed.

## **CONFINED SPACE ENTRY**

#### <u>Purpose</u>

The purpose of this written Permit-Required Confined Space Program is to ensure safe practices are utilized prior to and during all construction work activities in permit-required confined spaces ("permit spaces") at *MegaKC Corporation*. Our program is designed to prevent personal injuries, illness, and fatalities in confined spaces. As an employer, *MegaKC Corporation* has developed and implemented this document to meet the written program requirements specified in OSHA regulation 29 CFR 1926 Subpart AA, the Confined Spaces in Construction Standard.

This overall program is intended to control and, where appropriate, to protect employees from permit space hazards and to regulate employee entry into permit spaces. Our written program provides the basis for construction-related permit space entry operations, as well as a reference for guiding supervisors and employees (including contract employees) that we direct as an "entry employer". It also serves to assign accountabilities for all functions related to permit space entry and will aid in avoiding mistakes and misunderstandings.

#### <u>Scope</u>

The elements contained in this Permit-Required Confined Space Program for Construction must be implemented and followed in all construction work situations where entry into permit spaces is necessary. Entry means the action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional, or any work activities are actually performed in the space.

However, the program elements do not apply to construction work regulated by 29 CFR 1926 Subpart P, Excavations Standard; 29 CFR 1926 Subpart S, Underground Construction, Caissons, Cofferdams and Compressed Air Standard; nor 29 CFR 1926 Subpart Y, Diving Standard.

#### **Program and Permit Combination**

Please note that although OSHA calls for a permit space program to meet the requirements of §1926.1204, the agency allows employers to fulfill this obligation through a combination of the written permit space program *and* the entry permit itself. This gives us the opportunity to operate with a more "general" permit space program that covers numerous types of permit spaces and hazards, along with a "specific" entry permit that includes the unique hazards and practices applicable to each of those spaces. Our company has chosen to treat the permit as part of this written permit space program, when such a permit is required, in order to convey all the applicable information to employees at the required times.

#### Administrative Duties and Employee Participation

Safety manager has overall responsibility for this Permit-Required Confined Space Program for Construction and its review and revision. This Permit Space Program Administrator consults with affected employees and their authorized representatives on the development and implementation of all aspects of the program, in accordance with §1926.1212. All information required to be developed by 29 CFR 1926 Subpart AA is also available to affected employees and their authorized representatives.

This written program is made available prior to and during entry operations for inspection by employees and their authorized representatives. Copies of this written program may also be obtained from the corporate office. Refer to §1926.1202 for definitions to many of the technical terms used in this program. If, after reading this program, you find that improvements can be made, please notify your supervisor. We encourage all suggestions because we are committed to creating a safe place to work for all employees we direct. A clear and effective permit space program is a critical component of our overall safety and health efforts.

#### **Multiple-Employer Communication and Coordination**

Employees of more than one employer may be working simultaneously in a permit space or elsewhere on the site. As such, communication and coordination between the following employers is essential:

- "Entry employer" means any employer who decides that an employee it directs will enter a permit space.
- "Host employer" means the employer that owns or manages the property where the construction work is taking place. If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred to that entity the information specified in §1926.1203(h)(1), OSHA will treat the contracted management entity as the host employer for as long as that entity manages the property. Otherwise, OSHA will treat the owner of the property as the host employer. In no case will there be more than one host employer.
- "Controlling contractor" is the employer that has overall responsibility for construction at the worksite. If the controlling contractor owns or manages the property, then it is both a controlling employer and a host employer. If there is no controlling contractor present at the worksite, the requirements for, and role of, controlling contactors in §1926.1203 must be fulfilled by the host employer or other employer who arranges to have employees of another employer perform work that involves permit space entry.

The company's Foreman will take the following actions to meet multi-employer communication and coordination responsibilities: Any agreed-upon changes to our entry procedures made to coordinate entry operations will be written into our entry permit. These actions will help to ensure that employees of one employer do not endanger the employees of any other employer.

#### Identification, Evaluation, Classification, and Reclassification

A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them. Our company's competent person at the project site is our Foreman.

Before work begins at a jobsite, we ensure that a competent person:

- Identifies all confined spaces in which one or more employees we direct may work; and
- Identifies each space that is a permit space through consideration and evaluation of the elements of that space, including testing as necessary. Air testing is always performed in the following order: oxygen, then combustible gases and vapors, and then toxic gases and vapors.

The competent person, will carefully survey the project site before work begins, in order to identify the existence and location of permit spaces and to evaluate any hazards. This initial survey may find that permit spaces are located at the site. Confined spaces will be identified and located, whether they have hazards, whether they are permit or non-permit spaces, and whether it is possible to reclassify a permit space as a non-permit space by elimination or isolation of hazards, as determined by the competent person.

The competent person must be made aware of any use or configuration changes of a non-permit confined space that might increase the hazards to entrants, or there is some indication that the initial evaluation of the space may not have been adequate. When notified of the situation, a competent person must reevaluate the space, and, if necessary, reclassify it as a permit space, in accordance with §1926.1203(f).

In addition, we are allowed to reclassify a permit space as a non-permit space if a competent person determines that the requirements at §1926.1203(g)(1) to (4) have been met. If such is the case, the competent person documents the basis for determining that all hazards in a permit space have been eliminated or isolated, through a certification that contains the date, location of the space, and signature of the person making the determination. The competent person is then responsible for making the certification available to each employee entering the space or that employee's authorized representative.

If hazards arise within a permit space that has been reclassified as a non-permit space, each employee in the space must exit the space, and the competent person will then reevaluate the space and reclassify it as a permit space as appropriate.

#### **Notification and Prevention of Unauthorized Entry**

As an employer, we have decided that the employees we direct may enter a permit space in order to do construction work. Generally speaking, permit spaces are confined spaces that have or contain a recognized serious safety or health hazard, such as, but not limited to, a hazardous atmosphere, engulfment hazard, and/or configuration that may trap an entrant.

To provide a safe work environment and to prevent accidental entry of a permit space, we have implemented the following methods to inform all exposed employees, their authorized representatives, and any controlling contractor of the existence, location, and danger posed by permit spaces:

- 1. Training
- 2. Posting of signs
- 3. Verbal instruction

Moreover, entry supervisors and attendants have duties to ensure that entrants are authorized and that unauthorized persons are kept away or removed from permit spaces. See the Entry Operation Designations and Duties Section of this program for details.

#### Entry Permit System

Before entry is made into a permit space, pre-entry procedures are completed, as specified in the Preentry Operation Procedures Subsection of this written program. However, also before entry, an entry permit for the specific permit space is completed and signed by the entry supervisor identified on the entry permit, in order to authorize entry. This is done prior to entry ensuring that appropriate hazard evaluations and monitoring are performed and safeguards are in place prior to (and throughout) entry.

An entry permit (or "permit") is the written or printed document that is provided by an employer who designated the space a permit space. It allows and controls entry into a permit space. Any entry permit that authorizes entry into a permit space must include the following items:

- The name of the permit space to be entered.
- The purpose of the entry.
- The date and the authorized duration of the entry permit.
- The authorized entrants within the permit space, by name or by such other means as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space.
- Means of detecting an increase in atmospheric hazard levels in the event the ventilation system stops working.
- Each person, by name, currently serving as an attendant.
- The individual, by name, currently serving as entry supervisor, and the signature or initials of each entry supervisor who authorizes entry.
- The hazards of the permit space to be entered.
- The measures used to isolate the permit space and to eliminate or control permit space hazards before entry.
- The acceptable entry conditions.
- The results of tests and monitoring performed under §1926.1204(e), accompanied by the names or initials of the testers and by an indication of when the tests were performed.

- The rescue and emergency services that can be summoned and the means for summoning those services.
- The communication procedures used by authorized entrants and attendants to maintain contact during the entry.
- Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with 29 CFR 1926 Subpart AA.
- Any other information necessary, given the circumstances of the particular confined space, to ensure employee safety.
- Any additional permits that have been issued to authorize work in the permit space.

A completed permit will be made available to all authorized entrants or their authorized representatives at the time of entry. This allows entrants to confirm that pre-entry preparations have been completed.

The duration of a permit does not exceed the time required to complete the assigned task or job identified on the permit. Therefore, the entry permit is canceled by the entry supervisor when entry operations covered by the entry permit have been completed. The entry supervisor will also cancel a permit when a condition not allowed under the entry permit arises in or near the permit space and that condition is not covered by alternate entry procedures. However, if that prohibited condition is temporary in nature and does not change the configuration of the space or create any new hazards within it, the entry supervisor has the option to suspend the entry permit instead of cancel it, in order to fully reassess the space before allowing reentry.

Any problems encountered during entry are noted by the entry supervisor on the pertinent permit, and as an entry employer, we retain each canceled entry permit for at least one year. These are kept in the corporate office to facilitate the required review of the Permit-Required Confined Space Program for Construction. After each review, the company will take action to revise the permit space program as necessary. For more information on our review process, see the Program Review Section of this written program.

#### Entry Equipment and Personal Protective Equipment (PPE)

To ensure the safety and health of employees we direct, *MegaKC Corporation* provides appropriate equipment at no cost to each employee who works in or near our permit spaces, insofar as feasible engineering and work-practice controls do not adequately protect employees. The equipment is selected by the company based on the permit space hazards, the construction work to be done, and applicable OSHA requirements including §1926.1204(d).

Entry supervisors are responsible for ensuring that appropriate, effective, and properly maintained equipment will be available and ready for use at the permit space before entry begins. PPE to be used by employees involved in entry is consistent with 29 CFR 1926 Subpart E. Moreover, personnel involved in permit space entry operations receive necessary training in the proper use of the equipment, in accordance with the Training Section, found later in this written program. Entry supervisors will ensure that each employee uses all equipment properly.

Note that a hazardous atmosphere is a prohibited condition unless we can demonstrate that PPE will provide effective protection for each employee in the permit space and we provide the appropriate PPE to each employee.

#### Entry Procedures

#### Pre-entry operation procedures:

The following actions are completed as necessary prior to permit space entry, to ensure the safety and health of employees we direct:

- This written Permit-Required Confined Space Program for Construction is made available for inspection by employees and their authorized representatives.
- An entry permit for the permit space is prepared.
- The entry supervisor verifies that rescue services are available, that the means for summoning them is operable, and that he/she will be notified as soon as these services become unavailable.
- All equipment listed in the Entry Equipment and Personal Protective Equipment (PPE) Section for the permit space is provided and maintained near the permit space or otherwise made available to employees. This includes non-entry rescue equipment, if non-entry rescue is feasible.
- Equipment, such as ladders, needed for safe ingress entry into, safe exit from, and rescue from the permit space is provided.
- Any conditions (for example, high pressure) that could make it unsafe to remove an entrance cover are eliminated.
- Pedestrian, vehicle, or other barriers necessary to protect entrants from external hazards are made available and put in place, if possible, at this pre-entry operation stage.
- The permit space is isolated and physical hazards within the space are eliminated or isolated in accordance with the procedures noted on the entry permit for the permit space. This may include performing proper lockout/tagout procedures.
- If engulfment hazards cannot be isolated, an early-warning system that continuously monitors non-isolated engulfment hazards is provided that would alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.
- Atmospheric conditions in the space are tested (first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors) before changes to the space's natural ventilation are made. See "Notes to Pre-Entry Steps" below.
- Any atmospheric hazards are eliminated or controlled by purging, inserting, flushing, or

ventilating the permit space.

- Atmospheric conditions in the space are again tested (first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors). See "Notes to Pre-Entry Steps" below.
- If it is not possible to reduce the atmosphere below 10 percent lower flammable limit, then the permit space is inserted so as to render the entire atmosphere in the space non-combustible.
- If it is not possible to eliminate other hazardous atmospheres in the space, then employees are provided with appropriate and effective PPE to address the atmospheric hazards.
- Atmospheric hazard monitoring procedures are reviewed to ensure, in the event the ventilation system stops working during entry, those procedures are sufficient to detect an increase in atmospheric hazard levels in sufficient time for entrants to safely exit the permit space. The entry permit will specify the means of detecting an increase in levels.
- The entry supervisor completes entries on the entry permit and ensures that all tests specified by the permit have been conducted and recorded on the permit and that all procedures and equipment specified by the permit are in place.
- Conditions in the permit space are reviewed by the entry supervisor to confirm they are
  acceptable for entry. Acceptable entry conditions are conditions that must exist in a permit space,
  before an employee may enter that space, to ensure that employees can safely enter, and safely
  work within, the space. All acceptable entry conditions for a particular permit space are listed on
  the entry permit for the permit space.

#### Notes to pre-entry steps:

- 1. If isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), then pre-entry testing is performed to the extent feasible.
- 2. Each authorized entrant or his or her authorized representatives must be provided the opportunity to observe any testing of permit spaces. Each authorized entrant or that employee's authorized representative must immediately be provided with the results of any testing conducted. Testing results must be recorded on the entry permit.
- 3. The permit space must be reevaluated in the presence of any authorized entrant or that employee's authorized representative who requests that such a reevaluation be conducted when there is some indication that the evaluation of that space may not have been adequate.

#### Entry Operation Procedures

**Entry conditions:** We allow authorized entrants to enter a permit space to perform work specified on an entry permit, only after all the following conditions are met:

- The above pre-entry procedures have been completed.
- Acceptable permit conditions specified on the entry permit are found.
- The specific requirements of the entry permit are satisfied.
- An attendant is present outside the permit space. See "Note to Entry Conditions" below.
- An entry supervisor is present. See "Note to Entry Conditions" below.
- The entry supervisor authorizes entry by signing or initialing the entry permit.

**Note to entry conditions:** It is acceptable for the entry supervisor to also serve as an attendant or authorized entrant, as long as that person is trained and equipped as required for the roles he or she fills. If only two employees are present, entry may not take place unless either: (1) an authorized entrant and entry supervisor who is also the attendant are present, OR (2) an attendant and the entry supervisor who is also an authorized entrant are present.

The entry supervisor will ensure that acceptable entry conditions specified on the permit are maintained throughout entry.

#### Available Information

The completed entry permit is made available at the time of entry to all authorized entrants or their authorized representatives, by the means described in the Entry Permit System Section of this written program. The written permit space program is also made available during entry operations for inspection by employees and their authorized representatives.

#### Attendant Provision

One attendant must be provided outside the permit space into which entry is authorized for the duration of entry operations. The attendant may be stationed at any location outside the permit space. He/she may be assigned to monitor more than one permit space provided his/her duties can be effectively performed for each permit space to which the attendant is assigned. If multiple spaces are assigned to a single attendant, the means and procedures to enable the attendant to respond to an emergency affecting one or more of those permit spaces without distraction from the attendant's responsibilities must be established.

#### **Proceeding with Entry**

The entrance cover is removed. Any remaining pedestrian, vehicle, or other barriers necessary to protect entrants from external hazards are immediately put in place. These barriers are specified in the entry permit to prevent an accidental fall through the opening and to protect each employee working in the space from foreign objects entering the space.

#### Hazardous Atmosphere Protections

Employees are not allowed to enter into, or remain in, a permit space with a hazardous atmosphere unless appropriate PPE is used and will provide effective protection for each employee in the permit space.

Throughout entry operations, the permit space is monitored for atmospheric hazards. This periodic monitoring is sufficient to allow the entry supervisor to ensure that acceptable atmospheric entry conditions are being maintained during the course of entry operations.

When monitoring for atmospheric hazards, we monitor first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors. Monitoring is performed prior to entry.

Each authorized entrant or his or her authorized representative is provided the opportunity to observe any testing or monitoring of permit spaces and is immediately provided with the monitoring results. Monitoring results are also recorded on the entry permit. The permit space is reevaluated in the presence of any authorized entrant or that employee's authorized representative who requests that such a reevaluation be conducted if there is some indication that the evaluation of that space may not have been adequate.

#### Engulfment Hazard Protection

If engulfment hazards cannot be isolated, an early-warning system that continuously monitors nonisolated engulfment hazards is provided to alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.

#### Conditions That Will Prompt Evacuation

If any of the following conditions occur during entry operations, entrants must evacuate the permit space:

- An order to evacuate is given by the attendant or the entry supervisor.
- There is a warning sign or symptom of exposure to a dangerous situation.
- An injury or illness occurs during entry.
- An evacuation alarm is activated.
- The entrant detects a prohibited condition.
- There is a change in the use or configuration of the permit space.
- A permit space hazard not covered by the permit is detected.
- An unauthorized person enters the permit space.
- The designated rescue service or emergency service becomes unavailable.
- The duration specified on the entry permit is about to expire.

Prohibited condition means any condition in or near a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless we

can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space, and we provide the appropriate PPE to each employee.

#### Other Entry Operation Duties

The entry supervisor, authorized entrant(s), and the attendant will perform all other necessary duties during an entry operation, as specified in the Entry Operation Designations and Duties Section of this written program.

#### **Suspended Entry Operation Procedures**

If a prohibited condition is temporary in nature and does not change the configuration of the space or create any new hazards within it, the entry supervisor has the option to suspend the entry permit instead of cancelling it, in order to fully reassess the space before allowing reentry.

#### Post-Entry Operation Procedures

After entry operations covered by an entry permit have been completed with or without incident, and all authorized entrants have exited the permit space:

- The entry supervisor will ensure the permit space portal is closed off properly.
- The entry supervisor terminates entry and cancels the entry permit.
- The entry supervisor will note on the pertinent permit any problems encountered during an entry operation so that appropriate revisions to the permit space program can be made.
- *MegaKC Corporation* will retain each canceled entry permit for at least one year to facilitate review of the permit space program.
- Representing us as an entry employer, the company Foreman will inform the controlling contractor in a timely manner of the permit space program followed and of any hazards confronted or created in the permit space during entry operations.
- Representing us as a controlling contractor, the company Foreman will:
  - Debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space during entry operations.
  - Apprise any host employer of the information exchanged with the entry entities.

#### Alternate Entry Procedures

Conditions for Alternate Entry permit confined spaces may be entered without the need for an entry permit, attendant, or entry supervisor, provided that:

- We demonstrate that:
- All physical hazards in the space are eliminated or isolated through engineering controls so that the only hazard posed by the permit space is an actual or potential hazardous atmosphere;

- Continuous forced air ventilation alone is sufficient to maintain the space safe for entry; and
- In the event the ventilation system stops working, entrants can exit the space safely;
- We develop monitoring and inspection data to support the above demonstrations and if initial entry of the permit space is necessary to obtain the data, the entry is performed in compliance with §§1926.1204 to 1926.1211, rather than the alternate entry procedures;
- We document the determinations and supporting data required above and make them available to each employee who enters the permit space under the specific alternate entry procedures or that employee's authorized representative; and
- Entry into the permit space is performed in accordance with the Specific Alternate Entry Procedures below.

#### Specific Alternate Entry Procedures

The following specific alternate entry procedures are followed for entry into the permit space(s) demonstrated and documented to meet the criteria for alternate entry:

- Before an entrance cover is removed, eliminate any conditions making it unsafe to remove an entrance cover.
- When entrance covers are removed, immediately guard the opening by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.
- Before an employee enters the space, test the internal atmosphere, with a calibrated directreading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order.
- Provide any employee who enters the space, or that employee's authorized representative, an opportunity to observe the pre-entry testing required above.
- Do not permit a hazardous atmosphere within the space whenever any employee is inside the space.
- An employee must not enter the space until the forced air ventilation has eliminated any hazardous atmosphere.
- Direct the forced air ventilation so as to ventilate the immediate areas where an employee is or will be present within the space and continue this ventilation until all employees have left the space.
- Ensure the air supply for the forced air ventilation is from a clean source and does not increase the hazards in the space.
- The atmosphere within the space must be continuously monitored, unless it is demonstrated that equipment for continuous monitoring is not commercially available or periodic monitoring is sufficient. If continuous monitoring is not used, periodic monitoring is required. All monitoring (continuous or periodic) must ensure that the continuous forced air ventilation is preventing the

accumulation of a hazardous atmosphere.

- If continuous monitoring is used, ensure that an employee will check the monitor frequently to ensure that entrants have adequate time to escape should a specified atmospheric threshold be triggered.
- Provide any employee who enters the space, or that employee's authorized representative, with an opportunity to observe monitoring.
- If a hazard is detected during entry, each employee must leave the space immediately, the company Foreman will evaluate the space to determine how the hazard developed and will implement measures to protect employees from the hazard before any subsequent entry takes place.
- Ensure a safe method of entering and exiting the space.

#### Alternate Entry Certification

Prior to any alternate entry operation, the company Foreman verifies that the space is safe for entry and that the pre-entry measures within the specific alternate entry procedures above have been taken. This person then certifies his or her verification in writing. The written certification contains the date, the location of the space, and his or her signature. The certification is then made available to each employee entering the space or to that employee's authorized representative. A copy of the certification is maintained in the corporate office.

#### **Entry Operation Designations and Duties**

OSHA specifies three general roles for entry:

- Entry supervisor A qualified person (such as the employer, foreman, or crew chief) responsible for (1) determining if acceptable entry conditions are present at a permit space where entry is planned, (2) authorizing entry, (3) overseeing entry operations, and (4) terminating entry as required by 29 CFR 1926 Subpart AA. An entry supervisor may also serve as an attendant or as an authorized entrant, and the duties of an entry supervisor may be passed from one individual to another during the course of an entry operation.
- **Authorized entrant** An employee who is authorized by the entry supervisor to enter a permit space and who must perform entrant duties as specified in §1926.1208.
- Attendant An individual stationed outside one or more permit spaces who assesses the status of authorized entrants and who must perform attendant duties specified in §1926.1209. An attendant is critical to quickly recognizing any injury, illness, incapacitation, or impairment of ability to self-rescue, so that applicable rescue operations can be initiated as soon as possible. An attendant must remain outside the permit space during entry operations until relieved by another attendant.

Unless alternate entry conditions and procedures are met, the minimum number of persons on an entry team is two — either an authorized entrant and an entry supervisor (who is also the attendant) OR an

attendant and an entry supervisor (who is also an authorized entrant). Under alternate entry, neither an entry supervisor nor attendant is required.

#### Training

*MegaKC Corporation* provides training for each employee we direct whose work is regulated by the Confined Spaces in Construction Standard, to ensure that each employee possesses the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to him or her as they relate to the standard. Our training program is provided at no cost to the employee and in a language and vocabulary that the affected employee can understand.

Training must result in an understanding of the hazards in a permit space and the methods used to isolate, control, or in other ways protect employees from these hazards. Those employees not authorized to perform entry rescues must also understand the dangers of attempting such rescues. The company's trainer(s), provides training and re-training to affected employees at the following times:

- Before the employee is first assigned duties under the standard.
  - Before there is a change in assigned duties under the standard.
  - Whenever there is a change in permit space entry operations that presents a hazard about which an employee has not previously been trained.
  - Whenever there is any evidence of a deviation from the permit space entry procedures.
  - Whenever there are inadequacies in the employee's knowledge or use of permit space entry procedures.
  - When new or revised entry procedures are introduced.

After an affected employee has completed training, the company Foreman will determine whether the employee has proficiency in and can safely perform his/her respective, required duties. Upon successful completion of our permit space training program, a training record will be retained in the corporate office. This record includes the date and instructor. The training record is also available for inspection by employees and their authorized representatives for the period of time the employee is employed by *MegaKC Corporation*.

The training program provided to in-house rescue and/or emergency services personnel is covered in the Rescue and Emergency Services Section of this written program.

#### **Rescue and Emergency Services**

#### **Outside Services**

Permit space rescue or emergency services may be provided by an outside source. The company providing the rescue or emergency services will be contacted and consulted with prior to entry, to determine the service organization's ability to provide effective and timely confined space rescue or emergency services at this site. Following a thorough evaluation, *MegaKC Corporation* will determine whether or not the organization in question is equipped for and proficient in performing the needed rescue or emergency services for the particular permit space and has the capability of reaching the victim(s) within a time frame that is appropriate for the permit space hazards identified.

The outside service organization will be informed about the nature of the hazards its employees may confront during an operation at the site. The organization will also have access to all site permit spaces so it was able to develop appropriate plans and practice operations. The organization will agree, in writing, to make a formal notification immediately in the event that the outside service becomes unavailable.

Our official will notify the attendant(s) or entry supervisor(s) once he/she learns that outside services have become unavailable, at which time the attendant(s) or entry supervisor(s) will alert all entrants to evacuate any occupied permit spaces. A written agreement with the outside organization will be maintained in the corporate office.

#### In-House Services

*MegaKC Corporation* may plan to utilize in-house employees to perform rescue and/or emergency services in the event of the need for such an operation. This team of employees would be proactively identified.

*MegaKC Corporation* will train or arrange for training each of these employees and ensure they establish proficiency. Upon successful completion of training, a training record will be retained in the corporate office.

Each member of the In-House services team will be informed of the hazards they may confront when called on to perform at this site. At least one member of the in-house services team with current first aid and CPR certification will be available at all times during permit space entry.

The team will also have access to all site permit spaces so it can develop appropriate plans and practice operations. Prior to any permit space work, each member of the rescue team must rehearse simulated permit space rescues in the actual or representative permit space(s). Representative permit spaces must, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescues are to be performed. After initial rehearsals, rescue personnel must complete practice rescues in the same or similar permit spaces. A log of practice rescues will be maintained in the corporate office.

The In-House services team will make immediate notification to the attendant(s) or entry supervisor(s), in the event their services become unavailable. At which time the attendant(s) or entry supervisor(s) will alert all entrants to evacuate any occupied permit spaces.

#### **Rescue and Emergency Procedures**

When the permit space attendant determines that entrants may be in need of assistance to escape from a permit space due to injury, illness, incapacitation, impairment of the ability to self-rescue, or other emergency, the attendant will summon rescue and emergency services.

After this notification, while the attendant waits for services to arrive, he or she will perform a "non-entry rescue" if feasible. Non-entry rescue occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space. Non-entry rescue is infeasible if the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.

No attendant will attempt an "entry rescue" unless he/she has been relieved by another attendant and has received the specified rescue training and is equipped for rescue operations, as required by §1926.1211.

#### Non-Entry Rescue

In permit spaces where the use of non-entry retrieval systems is feasible, the entrant(s) will wear a bodybelt or full-body harness, connected to a retrieval line. The other end of the retrieval line must be attached to the retrieval mechanism located outside the permit space. Equipment that is unsuitable for retrieval must not be used, including, but not limited to, retrieval lines that have a reasonable probability of becoming entangled with the retrieval lines used by other authorized entrants, or retrieval lines that will not work due to the internal configuration of the permit space.

As soon as the attendant determines that non-entry rescue must be performed, he/she will use the device to retrieve the entrant from the permit space. Once the designated rescue service arrives, if the victim(s) are not yet rescued from the permit space, the rescue service will continue non-entry rescue if feasible.

#### Entry-Required Rescue

When non-entry rescue is infeasible, entry into the permit space for rescue of the entrants will be performed by the designated rescue service. At all times during the entry rescue operation, an attendant will be stationed outside the permit space to monitor activity in the space.

#### **Emergency Services**

Medical services and first-aid will be provided by the designated emergency service as soon as the victim(s) reaches the outside of the space. If victim(s) rescued from the permit space have been exposed to a substance for which a safety data sheet (SDS) or other similar written information is required to be kept at the site, the pertinent SDS(s) or written information will be made available to the medical facility or personnel treating the exposed victim(s).

#### **Program Review**

Within one year after each entry operation, *MegaKC Corporation* will review the canceled entry permit to identify, and then correct as necessary, inadequacies in our written Permit-Required Confined Space Program for Construction, to ensure that employees participating in entry operations are protected from permit space hazards. To accomplish this responsibility, the company will conduct a single review covering all entries performed since the previous review. The program will then be revised as necessary. If no entries were performed during a review period, no review is necessary.

However, *MegaKC Corporation* will also review entry operations sooner whenever there is reason to believe that the measures taken under the permit space program may not protect employees. The company will then revise the program to correct deficiencies found to exist before subsequent entries are authorized. Examples of circumstances requiring review of the permit space program include:

- Any unauthorized entry of a permit space.
  - The detection of a permit space hazard not covered by the permit.

- The detection of a condition prohibited by the permit.
- The occurrence of an injury or near miss during entry.
- A change in the use or configuration of a permit space.
- Employee complaints about the effectiveness of the program.

Affected employees will be retrained in any program revisions that reflect changes in duties, hazards, and/or entry procedures.

# **EXCAVATION / TRENCHING**

*MegaKC Corporation* requires that all excavations over five feet in depth be sloped, shored, sheeted, braced or otherwise supported to protect employees from a cave-in hazard while working in the excavation. When soil conditions are unstable, excavations shallower than five feet must also be provided adequate support to prevent cave-ins.

A trench is referred to as a narrow excavation in which the depth is greater than the width, although the width is not greater than 15 feet. An excavation is any man-made cavity or depression in the earth's surface, which is formed by earth removal.

In order to ensure the safety of *MegaKC Corporation* employees during excavation or trenching operations, *MegaKC Corporation* has developed the following guidelines that must be observed.

#### **Choices**

One method of ensuring the safety and health of workers in a trench or excavation is to slope the sides of the cut to the "angle of repose", the angle closest to the horizontal at which the soil will remain at rest. The angle of repose varies with different kinds of soil and must be determined on each individual project. When an excavation has water conditions, silty material, or loose boulders, or when it is being dug in areas where erosion, deep frost, or slide planes are apparent, the angle of repose must be flattened.

A second method of support is shoring sheeting, tightly placed piles, or other materials installed in manner strong enough to resist the pressures surrounding the excavation.

*MegaKC Corporation* may also use a trench box, a prefabricated movable trench shield composed of steel plates welded to a heavy steel frame. The usage of a trench box is allowed only if the protection it provides is equal to or greater than the protection that would be provided by the appropriate shoring system.

#### **Designing Adequate Protection**

Designing a support system can be a complex operation because of the details involved. Some of the considerations that must be taken into account are as follows:

- Soil structure
- Depth of cut
- Water content of the soil
- Changes due to weather and climate
- Superimposed loads
- Vibrations
- Other operations in the vicinity

#### Soil Structure

The soil structure must be carefully identified. Excavations in wet soil, sandy soil, or areas that have been back-filled are relatively unstable and must have strong support. Even hard rock sometimes can be hazardous, faults in the strata can make it unstable when cut.

#### Weather Conditions

Changing weather conditions and climate also affect how strong a shoring system must be. Excess water from rain or melting snow loosens the soil, drastically increasing the pressure on the shoring system. A rainstorm can turn a stable trench side that required only light bracing into a mass of loose soil, posing an immediate threat to the employee(s) working within. Shoring frozen ground presents another potential problem – a sudden thaw can undermine an entire section of shoring reducing the cohesiveness or soil integrity.

*MegaKC Corporation* requires that diversion dikes and ditches or other suitable means be used to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Water causes soil erosion and softening and should not be allowed to accumulate in a trench or excavation.

Large excavations, in particular, are subject to changing weather conditions because they are generally open for longer periods of time than trenches. Shoring for these excavations should provide long-range protection for a variety of weather conditions.

In some cases, additional precautions are necessary to protect excavation walls, such as covering them with plastic sheeting or spraying the soil with a moisture-limiting chemical.

#### Superimposed Loads

Superimposed loads in the vicinity of a trench or excavation increase the pressure on excavation walls. Heavy equipment and materials such as pipes or timbers should be kept as far back from the excavation as possible. When heavy loads must be located near an excavation, the walls must be braced, sheet-piled, or shored to safely support the extra weight. In some cases, it may be necessary to lessen the pressure of these loads. Pile drivers or cranes, for example, would be mounted on wooden mats or heavy planking to spread the weight more evenly.

Buildings, curbs, trees, utility poles, and other structures adjoining the excavation area also can place more stress on a trench side than it can safely accommodate. In these instances, *MegaKC Corporation* requires that shoring, bracing, or underpinning be provided, as necessary, not only to protect workers but also to prevent the dislocation of the soil beneath the structures in the vicinity.

#### **Vibrations**

Vibrations or sudden shock from passing vehicles or railways, blasting, equipment such as trucks or pile drivers, and some tools can contribute to cave-ins by loosening the soil. Even machines operated in nearby buildings, such as punch presses; can create enough vibration to endanger a shoring system. If these conditions exist near an excavation site, stronger support is vital.

#### **General Protection Requirements**

- 1) Employees working in trenches must wear hard hats and sturdy work boots.
- Employees should be safely spaced out in a trench unless there is a necessity of working together. They should also stay out of the immediate area of excavating equipment, and not work ahead of shoring.
- 3) Walkways, runways, and sidewalks are to be kept clear of excavated material. No sidewalk shall be undermined unless adequately shored.
- All employees are to wear the required protective equipment. If employees are exposed to vehicular traffic, they shall wear a warning vest made of or marked with reflectorized or high visibility material.
- 5) No persons shall be allowed under loads handled by power hoists, shovels or derricks.
- 6) A competent person shall make daily inspections.
  - a. Note: If evidence of possible cave-ins or slides is apparent, all work in the excavation shall cease until all the necessary precautions have been taken to eliminate the hazard(s).
- 7) Employees entering bell-bottom pier holes, or other similar deep and confined footing excavations, shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

#### **Excavation Requirements**

- Prior to opening an excavation, utility companies shall be contacted and advised of the proposed work activity. This includes the location of any underground installations such as sewer, telephone, water, fuel, and electrical lines that may be encountered. If underground installations are uncovered, they must be properly supported.
- 2. A evacuation permit must be filled out prior to digging as well.
- 3. Trees, boulders, and other surface encumbrances, that could create a hazard to employees shall be removed or made safe before excavating begins.
- 4. The walls and faces of all excavations in which employees are exposed to danger from moving ground shall be guarded by a shoring system.
- 5. The determination of the angle and design for the supporting systems shall be based on, depth of cut, water content, anticipated changes in materials from exposure to air, sun, freezing, and vibration from equipment. A competent person must make this determination. When utilizing "sloping" as a means of protection, the following information will be used to dictate the angle of repose:

Horizontal Length to Vertical Depth (Excavations less than 20 deep)	
Soil Type	Acceptable Angle
Stable Rock	Vertical or 90 degrees
Туре А	3/4 to 1 or 53 degrees
Туре В	1 to 1 or 45 degrees
Туре С	1-1/2 to 1 or 34 degrees

- 1. Supporting systems (piling, cribbing, shoring, etc.) shall be designed by a Qualified Person. When tie rods are used to restrain the top of sheeting, the rods shall be securely anchored. Additional stringers, ties and bracing shall be provided to allow any necessary temporary removal of individual supports.
- 2. In excavations which employees may be required to enter, excavated or other materials and tools shall be effectively stored at least two feet or more from the edge of the excavation.
- 3. Materials used for sheeting, sheet piling, cribbing, bracing, shoring, and underpinning shall be in good serviceable condition, and timbers shall be free from large or loose knots.
- 4. If it is necessary to place or operate power shovels, derricks, trucks, materials, or other heavy objects on a level above and near, an excavation shall be sheet piled, shored and braced as necessary to resist the extra pressure due to such superimposed loads.
- 5. When mobile equipment is utilized or allowed adjacent to excavations, substantial stop logs or barricades shall be installed. If possible, the grade should be away from the excavation.

#### **Trenching Requirements**

- 1. Bank more than 5 feet high shall be shored or sloped at a 1 to 1 ratio (vertical to horizontal), or some other equivalent means of protection shall be provided where employees may be exposed to moving ground or cave-ins. Trenches less than 5 feet in depth shall also be effectively protected when examination of the ground indicates hazardous ground movement may be expected.
- 2. Sides of trenches in unstable or soft material, 5 feet or more in depth, shall be shored, sheeted, braced, sloped or otherwise supported by means of sufficient strength to protect the employees working within.
- 3. Sides of trenches in hard or compacted soil, including embankments, shall be shored or otherwise supported when the trench is more than 5 feet in depth. The sides of the trench above the 5-foot level may be sloped to preclude collapse but shall not be steeper than a 1-foot rise to each half foot vertical.

- 4. When employees are required to be in trenches, four feet or more in depth, an adequate means of exit, such as a ladder or steps, shall be provided and located to require no more than 25 feet of lateral travel. Ladders must be in good condition, extend from the floor of the trench to 3 feet above the top of the excavation, and be secured in place.
- 5. Cross braces shall be placed in horizontal position, be spaced vertically and secured to prevent sliding, falling, or kickouts.
- 6. Portable trench boxes may be used for the protection of personnel.
- 7. Back filling and removal of trench supports shall progress together from the bottom of the trench. Braces shall be released slowly and, in unstable soil, ropes shall be used to pull out the jacks or braces from above after employees have cleared the trench.

#### **Definitions**

- 1. **Competent Person:** OSHA's trenching standard requires a "Competent Person" to be present whenever workers are actively involved in an excavation.
  - a. The competent person has the authority to stop work and take any corrective measures necessary to ensure the safety of employees working in an excavation. The competent person will:
    - i. design structural ramps used by employees only.
    - ii. monitor equipment and operations of water removal.
    - iii. conduct daily inspections before work begins, during the day, and after receiving any rain.
- 2. Bank: A mass of soil rising above a digging level
- 3. **Braces:** The horizontal members of the shoring system whose ends bear against the upright of stringers.
- 4. **Excavation:** Any man-made cut, cavity, trench or depression in an earth surface that is formed by earth removal.
- 5. **Kickout:** Accidental release or failure of a shore or brace.
- 6. **Sheet Pile:** A pile, or sheeting, that may form one of a continuous interlocking line, or a row of timber, concrete, or steel piles.
- 7. **Stringers:** The horizontal members of a shoring system whose sides bear against the uprights or earth.
- 8. **Trench:** A narrow excavation made below the surface of the earth; the depth is greater than the width, but the width does not exceed 15 feet.

9. **Trench Shield or Trench Box:** A shoring system composed of steel plates and bracing, welded or bolted together, which supports the walls of a trench bottom and which can be moved along as work progresses.

# ASSURED EQUIPMENT GROUNDING PROGRAM

This program has been developed to minimize or eliminate the risk of personal injury and equipment damage resulting from faulty or damaged electrical equipment. The procedures and components of this program covers all cord sets, receptacles not part of the permanent wiring of the building or structure, and equipment connected by cord and plug which are available for use or used by *MegaKC Corporation* employees.

The cord set, receptacles, and cord and plug connected equipment which must be covered under the program includes those rated or used for 15 to 20 ampere, 120 volt and single phase. The requirements do not apply to cord sets, receptacles or equipment of other ratings.

This program shall consist of the following minimum requirements:

- *MegaKC Corporation* shall designate one or more competent persons to implement the program.
  - "Competent person" means one who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are hazardous or dangerous to employees, and who has authorization to take appropriate corrective action.
- *MegaKC Corporation* shall maintain written documentation of all tests and number of cords and different types of electrical tools tested.
- Approved ground-fault circuit interrupters shall protect all 110/120 volt single-phase 15 and 20ampere receptacle outlets on construction sites, which are not part of the permanent wiring of the building or structure, which are in use by employees.
- Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage. Equipment found damaged or defective must be removed from service and may not be used until repaired.
- This daily visual inspection is required to be made only on the day that the equipment is actually used and may be made by the person using the cord set and / or cord plug connected equipment.
- The following tests shall be performed on all cord sets, receptacles that are not a part of the permanent wiring of the building or structure, and cord and plug connected equipment required to be grounded. All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.
- Each receptacle and attachment cap or plug shall be tested for correct attachment or the equipment-grounding conductor. The equipment-grounding conductor shall be connected to the

proper terminal for both the receptacle and extension cord. The grounded and ungrounded circuit legs shall be of correct polarity.

- All required tests shall be performed:
  - before first use;
  - o before equipment is returned to service following any repairs;
  - before equipment is used after any incident which can be reasonably suspected to have caused damage (for example, when a cord set is run over); and at intervals not to exceed three (3) months, except that cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding six (6) months.
- The company shall not permit the use of any equipment which has not met the requirements of assured equipment conductor program.
- Equipment, which does not pass these tests, shall be tagged and taken out of service until repaired or corrected.
- Coding schemes for assured equipment conductor test record:

<u>Month</u>	<u>Color</u>
January, February & March	RED
April, May & June	YELLOW
July, August & September	GREEN
October, November & December	BLUE

# The grounding conductor test shall be performed and recorded by the 10th of each month that a new quarter begins (January, April, July and October)

For the cords and tools that have passed the above test, one wrap of tape (specified color) shall be placed, six to eight inches back from the male end of the plug. Only one-color tape may be visible on a cord or tool.

**Note:** If ground fault circuit interrupters (GFCI) are used on all 120 volt, 15 - 20 amp. rated equipment and tools, that is not part of the permanent structure of the building, the above stated Assured Equipment Grounding Program is not mandatory. The jobsite must utilize ground fault protection through the use of GFCI's **or** an assured equipment grounding program (color coding system).

## **STEEL ERECTION**

*MegaKC Corporation* has implemented the following policy to protect employees from the hazards associated with steel erection activities involved in the construction, alteration, and/or repair of single and multi-story buildings, and other structures where steel erection occurs.

**Please note:** this section contains miscellaneous summarized information pertaining to Federal OSHA requirements for steel erection activities. The information contained herein does not represent all OSHA requirements related to steel erection activities. For a complete listing, please review the following OSHA standard: 1926 Subpart R – Steel Erection.

#### Definitions

- **Competent Person** means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- **Connector** means an employee who, working with hoisting equipment, is placing and connecting structural members and/or components.
- **Controlling Contractor** means a prime contractor, general contractor, construction manager or any other legal entity which has the overall responsibility for the construction of the project -- its planning, quality and completion.
- **Decking Hole** means a gap or void more than 2 inches in its least dimension and less than 12 inches in its greatest dimension in a floor, roof or other walking/working surface. Pre-engineered holes in cellular decking (for wires, cables, etc.) are not included in this definition.
- *Multiple Lift Rigging* means a rigging assembly manufactured by wire rope rigging suppliers that facilitates the attachment of up to five independent loads to the hoist rigging of a crane.
- **Opening** means a gap or void 12 inches or more in its least dimension in a floor, roof or other walking/working surface. For the purposes of this subpart, skylights and smoke domes that do not meet the strength requirements of 1926.754(e)(3) shall be regarded as openings.
- **Qualified Person** means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.
- **Steel Erection** means the construction, alteration or repair of steel buildings, bridges and other structures, including the installation of metal decking and all planking used during the process of erection.
- **Unprotected Sides and Edges** means any side or edge (except at entrances to points of access) of a walking/working surface, for example a, floor, roof, ramp or runway, where there is no wall or guardrail system at least 39 inches high.

#### Site layout, Site-specific Erection Plan and Construction Sequence

#### Approval to Begin Steel Erection

Before authorizing the commencement of steel erection, the controlling contractor shall ensure that the steel erector is provided with the following written notifications:

- The concrete in the footings, piers and walls and the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.
- Any repairs, replacements and modifications to the anchor bolts were conducted in accordance with 1926.755(b) Repair, replacement or field modification of anchor rods (anchor bolts).

#### Commencement of Steel Erection

*MegaKC Corporation* shall not erect steel unless it has received written notification that the concrete in the footings, piers and walls or the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

#### <u>Site Layout</u>

The controlling contractor shall ensure that the following is provided and maintained:

- Adequate access roads into and through the site for the safe delivery and movement of derricks, cranes, trucks, other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular control. Exception: this requirement does not apply to roads outside of the construction site.
- A firm, properly graded, drained area, readily accessible to the work with adequate space for the safe storage of materials and the safe operation of the erector's equipment.

#### Pre-planning of Overhead Hoisting Operations

All hoisting operations in steel erection shall be pre-planned to ensure that the requirements of 1926.753(d) are met.

#### Hoisting and Rigging

- General Requirements
  - Pre-shift visual inspection of cranes:
    - Cranes being used in steel erection activities shall be visually inspected prior to each shift by a competent person; the inspection shall include observation for deficiencies during operation in accordance with 1926.753(c)(1).
    - A qualified rigger (a rigger who is also a qualified person) shall inspect the rigging prior to each shift in accordance with 1926.251.

#### Working Under Loads

Routes for suspended loads shall be pre-planned to ensure that no employee is required to work directly below a suspended load except for:

- Employees engaged in the initial connection of the steel; or
- Employees necessary for the hooking or unhooking of the load.

When working under suspended loads, the following criteria shall be met:

- Materials being hoisted shall be rigged to prevent unintentional displacement;
- Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook; and
- All loads shall be rigged by a qualified rigger

#### Multiple Lift Rigging Procedure

A multiple lift shall only be performed if the following criteria are met:

- A multiple lift rigging assembly is used;
- A maximum of five members are hoisted per lift;
- Only beams and similar structural members are lifted; and
- All employees engaged in the multiple lift have been trained in the procedures in accordance with 1926.761(c)(1).

No crane is permitted to be used for a multiple lift where such use is contrary to the manufacturer's specifications and limitations.

Components of the multiple lift rigging assembly shall be specifically designed and assembled with a maximum capacity for total assembly and for each individual attachment point. This capacity, certified by the manufacturer or a qualified rigger, shall be based on the manufacturer's specifications with a 5 to 1 safety factor for all components.

The total load shall not exceed:

The rated capacity of the hoisting equipment specified in the hoisting equipment load charts;

• The rigging capacity specified in the rigging rating chart.

The multiple lift rigging assembly shall be rigged with members:

- Attached at their center of gravity and maintained reasonably level;
- Rigged from top down; and
- Rigged at least 7 feet apart.

The members on the multiple lift rigging assembly shall be set from the bottom up. Controlled load lowering shall be used whenever the load is over the connectors.

#### Structural Steel Assembly

Structural stability shall be maintained at all times during the erection process.

The following additional requirements shall apply for multi-story structures:

- The permanent floors shall be installed as the erection of structural members progresses, and there shall be not more than eight stories between the erection floor and the upper-most permanent floor, except where the structural integrity is maintained as a result of the design.
- At no time shall there be more than four floors or 48 feet, whichever is less, of unfinished bolting or welding above the foundation or uppermost permanently secured floor, except where the structural integrity is maintained as a result of the design.
- A fully planked or decked floor or nets shall be maintained within two stories or 30 feet, whichever is less, directly under any erection work being performed.

#### Walking/Working Surfaces – Shear Connectors and Other Similar Devices

To prevent tripping hazards, shear connectors (such as headed steel studs, steel bars or steel lugs), reinforcing bars, deformed anchors or threaded studs shall not be attached to the top flanges of beams, joists or beam attachments so that they project vertically from or horizontally across the top flange of the member until after the metal decking, or other walking/working surface, has been installed.

#### **Covering Roof and Floor Openings**

Covers for roof and floor openings shall be capable of supporting, without failure, twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time.

All covers shall be secured when installed to prevent accidental displacement by the wind, equipment or employees.

All covers shall be painted with high-visibility paint or shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

#### **Column Anchorage**

#### **General Requirements for Erection Stability**

All columns shall be anchored by a minimum of 4 anchor rods (anchor bolts).

Each column anchor rod (anchor bolt) assembly, including the column-to-base plate weld and the column foundation, shall be designed to resist a minimum eccentric gravity load of 300 pounds located 18 inches from the extreme outer face of the column in each direction at the top of the column shaft.

Columns shall be set on level finished floors, pre-grouted leveling plates, leveling nuts, or shim packs which are adequate to transfer the construction loads.
All columns shall be evaluated by a competent person to determine whether guying or bracing is needed; if guying or bracing is needed, it shall be installed.

## Repair, Replacement or Field Modification of Anchor Rods (anchor bolts)

Anchor rods (anchor bolts) shall not be repaired, replaced or field-modified without the approval of the project structural engineer of record.

Prior to the erection of a column, the controlling contractor shall provide written notification to *MegaKC Corporation* if there has been any repair, replacement or modification of the anchor rods (anchor bolts) of that column.

#### Beams and Columns

#### General Requirements

During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with at least two bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight or the equivalent as specified by the project structural engineer of record.

A competent person shall determine if more than two bolts are necessary to ensure the stability of cantilevered members; if additional bolts are needed, they shall be installed.

#### **Open Web Steel Joists**

#### **General Requirements**

Where steel joists are used and columns are not framed in at least two directions with solid web structural steel members, a steel joist shall be field-bolted at the column to provide lateral stability to the column during erection. For the installation of this joist:

- A vertical stabilizer plate shall be provided on each column for steel joists. The plate shall be a minimum of 6 inch by 6 inch and shall extend at least 3 inches below the bottom chord of the joist with a 13/16 inch hole to provide an attachment point for guying or plumbing cables.
- The bottom chords of steel joists at columns shall be stabilized to prevent rotation during erection.
- Hoisting cables shall not be released until the seat at each end of the steel joist is field-bolted, and each end of the bottom chord is restrained by the column stabilizer plate.

#### Falling Object Prevention

All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement.

*MegaKC Corporation* shall prohibit other construction processes below steel erection unless overhead protection is provided.

## **Fall Protection**

#### **General Requirements**

Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge 6 feet or more above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

#### Custody of Fall Protection

Fall protection provided by *MegaKC Corporation* shall remain in the area where steel erection activity has been completed, to be used by other trades, only if the controlling contractor or its authorized representative:

- Has directed *MegaKC Corporation* to leave the fall protection in place; and
- Has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than *MegaKC Corporation's* steel erectors to work in the area.

#### Training

The following training shall be conducted by a qualified person(s):

## Fall Hazard Training

*MegaKC Corporation* will provide training and instruction to each employee exposed to a fall hazard in the following areas:

- The recognition and identification of fall hazards in the work area;
- The use and operation of guardrail systems (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used;
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
- The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls; and
- The fall protection requirements set forth by OSHA in 1926.761.

#### Multiple Lift Rigging Procedure

*MegaKC Corporation* will provide training and instruction to employees involved in multiple lift rigging activities. This includes:

- The nature of the hazards associated with multiple lifts; and
- The proper procedures and equipment to perform multiple lifts required by 1926.753(e).

#### **Connector Procedures**

*MegaKC Corporation* will provide training and instruction to each connector in the following:

- The nature of the hazards associated with connecting; and
- The establishment, access, proper connecting techniques and work practices required by 1926.756(c) and 1926.760(b).

## Controlled Decking Zone Procedures (CDZ)

Where a CDZ is being utilized, *MegaKC Corporation* will provide training in the following areas:

- The nature of the hazards associated with work within a controlled decking zone; and
- The establishment, access, proper installation techniques and work practices required by 1926.760(c) and 1926.754(e).

# LADDER & STAIR SAFETY

Some of the most commonly used pieces of equipment in the construction industry are stairs and ladders. Although they are very simple devices, if used incorrectly they can be very dangerous.

A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of 19 inches or more and no ramp, runway, sloped embankment or personnel hoist is provided. *MegaKC Corporation* has adopted the following safe work practices and procedures, which are required to be implemented by all employees who use ladders and/or stairs.

## **Ladders**

- A double-cleated ladder or two or more separate ladders shall be provided when ladders are the only means of access or exit from a working area for 25 or more employees or when a ladder is to serve simultaneous two-way traffic.
- Extension ladders shall be placed with a secure footing and tied or otherwise positioned to prevent displacement.
   Extension ladders must be long enough for the intended job and extend at least 3 feet above the access point.
- Always face the ladder when climbing up or down.
- Employees must use both hands and both feet when ascending and descending ladders.
- Use the 4-to-1 rule when putting an extension ladder into position (for every 4 feet of vertical rise, there should be a 1foot horizontal distance between the wall and the base of the ladder).
- Short ladders shall never be spliced together to make long ladders.
- Ladders shall never be used in the horizontal position as scaffolds or work platforms.
- Never use a stepladder in place of an extension ladder. Stepladders are designed to be opened completely with their leg supports locked into position.
- Employees must never stand on the top two steps of a step ladder
- Do not use damaged or broken ladders, or ladders without safety feet.
- When working from a ladder, do not lean or reach out beyond arm's length to either side. Move the ladder.

- Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe usage.
- Ladders shall have nonconductive side rails if they are used where the employee or the ladder could contact exposed energized electrical equipment.
- Ladders shall not be loaded beyond the maximum intended load for which they were built, not beyond their manufacturer's rated capacity.
  - ➤ Type 1A 300 lbs.
  - ➤ Type 1 250 lbs.
  - ➤ Type 2 225 lbs.
  - ➤ Type 3 200 lbs.

## <u>Stairs</u>

- Stairways having four or more risers or rising more than 30 inches, whichever is less, shall be equipped with:
  - At least one handrail; and
  - One stairrail system along each unprotected side or edge
- The height of handrails shall be not more than 37 inches not less than 30 inches from the upper surface of the handrail to the surface of the tread, in line with the face of the riser at the forward edge of the tread.
- Stairrails must be at least 36" from tread to top of rail.
- Midrails should be installed at least 21 inches high between the top rail and walking level.
- Handrails and stairrails must be able to support a force of 200 lbs. applied in any downward or outward direction.
- Midrail must be able to support 150lbs applied in any downward or outward direction.
- Handrails and stairrails must be surfaced to prevent punctures / cuts, and to prevent snagging of clothing.
- Ends of stairrails and handrails shall not create a projection hazard.
- A 3-inch clear space must be provided between handrails and walls, stairrail systems, or other objects.

- Employees must not run up or down stairs; or jump from landing to landing. Walk down stairs normally.
- All stairways must be installed at an angle between 30 and 50 degrees from horizontal.
- Where doors or gates open directly on a stairway, a platform shall be provided and the swing of the door shall not reduce the effective width of the platform to less than 20 inches.
- Spiral stairs are not permitted unless they are a permanent part of the structure.
- Stairway access points must be kept clear for free passage.
- The riser height and tread depth (usually 6-1/2" to 11" respectively) must be uniformly spaced. There can be no variations over ¼ inch for any stairway.
- Metal pan landings and treads must be secured in place before filling them with concrete or other materials.
- All stairs must be kept free of hazardous projections and slippery conditions.
- Skeleton metal pan stairways cannot be used as a means of travel until the stairs are filled with temporary treads and landings, made of solid materials, which have been installed the full width and depth of the stair system.

# **GENERAL SAFETY POLICIES / PROCEDURES**

# **Personal Protective Equipment**

- 1. Helmet hard hats shall be always worn while employees are on the project site.
- 2. All employees will always wear eye protection while on the job in compliance with ANSI Z87.1. Eye protection should be worn in all warehouses and yard areas during all construction or maintenance activities. Standard protection will be provided by the company.
  - a. Those involved in grinding, chipping, sawing, hammering, working with chemicals or performing other tasks that pose a danger to the eyes should wear eye protection and face shield recommended by the product manufacturer or OSHA.
  - b. When not directly involved in hazardous operations described above, all employees should wear protective eyewear consisting of impact-resistant glasses (clear or tinted lenses) with side protection.
  - c. Employees required to wear prescription glasses are required to either wear safety-rated prescription glasses or wear glasses that fit over prescription glasses.
- 3. Ear protection must be worn when working in noisy areas or around noisy equipment. Generally, if you cannot speak in your normal tone of voice and be heard at an arm's length to your fellow worker, ear protection devices should be worn. Cloth or cotton is not permitted. Earmuffs and/or earplug are to be used and can be obtained from your supervisor. In extremely noisy condition, double protection (earplugs with earmuffs) may be needed.
- 4. Full body harness and shock absorbing SRL must be worn when:
  - a. Working from an articulating boom-lift (not required in scissor lifts); the lanyard must be attached to boom or basket
  - b. Working at heights of 6 feet or greater
- 5. Sturdy leather work boots or shoes must be always worn by employees, while working on any project site.

Gloves must always be worn 100% of the time to protect employees from lacerations, abrasions, or any other hazards. Use glove chart to indicate proper glove for your task.



# **Compressed Gas**

- 1. Valve protection caps shall be in place and secured when transporting or moving cylinders.
- 2. Cylinders shall not be lifted by crane, except in an approved cradle.
- 3. Cylinders shall be moved by tilting and rolling on their bottom edge.
- 4. When cylinders are transported by a powered vehicle, they shall be secured in an upright position.
- 5. When work is finished, valves shall be closed.
- 6. Empty gas cylinders must be marked as empty, valves closed and protection caps in place.
- 7. Never use oxygen as a substitute for compressed air.
- 8. Never use acetylene above 15 pounds per square inch.
- 9. Different types of gas cylinders must be stored apart from each other at a distance of at least 20 feet, or they can be separated by a 5' high barrier wall with a fire-resistance rating of at least 30 minutes.
- 10. Never open acetylene valves more than one full turn. Leave the wrench on the valve stem so they can be quickly closed in case of fire.
- 11. Cylinders shall be kept a safe distance or shielded from welding or cutting operations. Cylinders shall not be placed where they can contact an electrical circuit.

# Housekeeping

- 1. Keep aisles clear for safe passage of people and materials.
- 2. Clean up slippery substances, such as grease or oil spilled on floor, or cover with anti-slip material.
- 3. Rubbish, waste and useless materials constitute a fire hazard, as well as a potential trip and fall hazard. Notify the foreman if there is excessive debris due to the work of others.
- 4. Nails, pieces of wood with protruding nails, and other sharp objects must not be left on the floor. Store them where they cannot be stepped on.
- 5. Keep exits clear.
- 6. Keep fire extinguishers readily accessible and free of obstruction.
- 7. All scraps are to be removed from the floor and stored in the proper receptacle in a fashion as not to create a possible hazard.

# **Material Handling**

- Use proper lifting techniques when handling materials:
  - $\circ$  Get down close to the load.
  - Keep your back straight.
  - Lift gradually. Use your legs; do not jerk or twist.
  - Anything over 50 lbs, you are required to do a team lift or get a piece of equipment.
- If when carrying or pushing a load it should become unbalanced and start to fall, let it fall clear, rather than risk strain or injury trying to balance it.

# **RETURN TO WORK PROGRAM**

It is the policy and goal of *MegaKC Corporation* to provide a safe and healthful workplace for all its employees. Although we strive to eliminate hazards in the workplace and due to the inherent danger of the construction industry, some exposures remain. When these hazards are identified, *MegaKC Corporation* will take immediate action to reduce or eliminate the exposure.

If a job-related injury is reported, prompt first aid or medical treatment will be provided if necessary. Once an employee has been treated and the extent of their injuries has been determined, all injured employees are expected to return to work as soon as possible.

In accordance with *MegaKC Corporation's* Return to Work Program, transitional duty will be provided consistent with the doctor's recommendation. The program is designed to provide short-term transitional duty at no reduction in salary or benefits, until it has been determined by the treating physician that the injured employee is able to return to full duty.

Employees assigned to transitional duty work assignments are expected to report to all follow-up doctors' appointments on time, on the date scheduled, unless previous arrangements have been made with *MegaKC Corporation*. In addition, all employees placed on transitional duty are expected to report to work on time each day as scheduled. Failure to do so may result in disciplinary action or termination.

It is the responsibility of the injured employee, as well as *MegaKC Corporation*, to ensure that while on transitional duty assignment, the employee does not exceed physical restrictions outlined by the treating physician. In addition, it is also the responsibility of the employee to follow the policies listed below:

- Promptly report a work related injury
- Provide accurate information to the treating physician concerning physical capabilities
- Communicate any concerns regarding the injury with MegaKC Corporation
- Fully cooperate with treatment and appointment schedules
- Return to full duty work as soon as possible

# FLEET SAFETY PROGRAM

## **Policy**

Many employees operate company owned (including leased and rented) or personal vehicles as part of their jobs. Employees are expected to operate vehicles safely to prevent accidents which may result in injuries and property loss. It is the policy of *MegaKC Corporation* to provide and maintain a safe working environment to protect our employees and the citizens of the communities where we conduct business from injury and property loss.

*MegaKC Corporation* considers the use of vehicles as part of the working environment. The company is committed to promoting a heightened level of safety awareness and responsible driving behavior in its employees. Our efforts and the commitment of employees will prevent vehicle accidents and reduce personal injury and property loss claims. This program requires the full cooperation of each driver to operate their vehicle safety and to adhere to the responsibilities outlined in this Fleet Safety Program.

#### **Driver Qualifications**

No driver will operate company owned vehicles nor be considered for employment in a driving position, unless all of the below listed criteria are met:

- Minimum age of 21 years.
- Possession of a valid driver's license.
- Pass Motor Vehicle Records (MVR) review at time of hire and annually thereafter.

*MegaKC Corporation* will maintain a list of company employees who are authorized and qualified to drive company owned vehicles. All others are prohibited from driving company owned vehicles or personal vehicles on company business.

Current company drivers must immediately report the following to management:

- Any and all traffic violations and accidents for which they are ticketed (during business or personal time);
- Any and all traffic violations for which they are convicted, or plead guilty or no contest to;
- Any change in driver's license status including suspension, revocation or restriction.

#### **Motor Vehicle Records Review**

It is the policy of *MegaKC Corporation* to obtain motor vehicle records on all persons who operate company vehicles or personal vehicles on company business every twelve (12) months. MVRs will be obtained prior to employment for those individuals seeking positions that necessitate the operation of a motor vehicle.

MVRs will become part of the individual's personnel file and must be retained for a period of twelve (12) months.

In order to review an MVR, permission must be obtained from the employee or prospective employee. This will be accomplished by having the employee / prospective employee sign the consent form. This consent form will also be maintained in the employee's personnel file.

Number of Violations Past 3 Years	Number of Preventable Accidents					
	0	1	2	3+		
0	Clear	Acceptable	Questionable	Ροοι		
1	Acceptable	Acceptable	Questionable	Ροοι		
2	Acceptable	Questionable	Poor	Ροοι		
3+	Poor	Poor	Poor	Ροοι		
Any Major Past	-			_		

The following risk matrix is used by company management to score MVRs:

#### Notes:

5 Years

- 1. Individuals who score "Clear" or "Acceptable" pass the MVR review process.
- 2. Individuals who score "Questionable" pass the MVR review process but are given a warning from management.

Poor

Poor

- 3. Individuals who score "Poor" are not authorized to drive company vehicles or their own vehicle on company business.
- 4. Examples of "Major" violations include but are not limited to:
  - a. Leaving the scene of an accident

Poor

Poor

- b. Driving under the influence of drugs or alcohol
- c. Racing or excessive speed (>20 MPH over speed limit)
- d. Reckless, negligent or careless driving
- e. Felony, homicide or manslaughter involving the use of a motor vehicle
- f. License suspension or revocation resulting from accidents or moving violations
- g. Following too closely or tailgating
- h. Erratic lane-changing
- i. Attempting to elude a police officer

Any disciplinary action taken as a result of MVR reviews and/or accidents must be documented and consistently applied to all employees who fail to comply with company safety policy.

#### Personal Use of Company Owned Vehicles

Company owned vehicles are to be used for company business only. Personal use of a company vehicle is prohibited. Company vehicles may be driven home and used as transportation to and from work only if approved by management.

Employees who drive or take home a vehicle are responsible for all fines and parking expenses. The driver must make sure that the vehicle and toolboxes remain locked and equipment is stored or secured as to prevent theft.

#### Personal Vehicles Used on Company Business

Employees who drive their personal vehicles on company business are subject to the requirements of this program including the following:

- Maintain auto liability insurance with a minimum combined (bodily injury and property damage) limit of \$1,000,000.
- Maintain current state vehicle inspections when required.
- Maintain their personal vehicle in a safe operating condition when driven on company business.
- Submit proof of insurance and a copy of the policy declarations page initially and at every policy renewal.
- Pass Motor Vehicle Records (MVR) review
- No "business use" exclusion on personal insurance policy.
- Compliance with the policies and rules set forth in this Fleet Safety Program.

#### **General Driving Instructions**

- Drivers must always obey traffic signs and signals.
- Company owned vehicles must never be driven at a speed, which exceeds the area's posted speed limit.
- All passengers in the vehicle must wear seat belts.
- Drivers must always yield to emergency vehicles.
- No person(s) other than on-the-job employees and authorized personnel are permitted to ride in
  or operate company vehicles. Operators who drive company owned vehicles must be properly
  licensed and authorized by management to do so.
- Personnel will not be allowed to operate a company owned motor vehicle after having consumed any amount of alcohol and / or illegal drugs. Vehicle operators under the influence of a prescribed medication must first obtain approval from the prescribing physician before operating the vehicle.

## **Distracted Driving**

Drivers must remain alert at all times and not allow other things inside the vehicle to distract them.

The handheld use of a cellular phone or similar communication device while operating a motor vehicle is prohibited unless the person is utilizing hands-free technology (where legal) for all calls and communications. Calls while operating the vehicle shall be limited to essential business needs and shall be suspended when heavy traffic, inclement weather or other conditions requiring additional driver attention are present. If hands free technology is unavailable or the hands-free conversation requires additional attention, drivers shall find a legal and safe parking spot prior to engaging or continuing a conversation.

Creating or reading text messages and email, accessing the internet or any other function associated with smartphone technology is prohibited while operating a motor vehicle. When using the navigation feature, the destination shall be entered into the device prior to moving the vehicle.

Vehicle operators are required to know and comply with state and local laws which may be more restrictive.

#### Accident / Incident Reporting

Any incident involving the use of a company vehicle or personal vehicle being used on company business, whether or not it results in any injury to a person(s) or damage to any vehicle or property, and regardless of fault, must be reported immediately to management.

Employees will take the following actions when there are injuries to persons and/or damage to other vehicles or property:

- 1. If possible, move the vehicle to a safe location out of the way of traffic. Call for medical attention if anyone is hurt.
- Secure the names and addresses of drivers and occupants of any vehicles involved, their operator's license numbers, insurance company names and policy numbers, as well as the names and addresses of injured persons and witnesses. Record this information on the Accident Report form (in the reporting packet). Do not discuss fault with, or sign anything for anyone except a police officer.

#### Vehicle Inspection and Preventive Maintenance

Daily, the employee operating the vehicle will visually inspect the vehicle prior to operating. Any deficiencies which impact the safe or mechanical operation of the vehicle shall be reported to management prior to operating.

Monthly, the employee operating the vehicle will complete a documented safety inspection of the vehicle using the *"Vehicle Inspection Report"* found in the *"Appendices and Forms"* section of this program.

Regular, preventive maintenance of company owned vehicles will be performed on a mileage or time basis. Typical maintenance items include oil/filter changes, lubrication, tightening belts and components, engine tune-ups, brake work, tire rotation, hose inspection/replacement and radiator maintenance.

Request maintenance is performed only when the need arises. Some vehicle parts are replaced only when they fail. These include light bulbs, window glass, gauges, wiring, air lines, etc. Other "demand maintenance" items involve vehicle components that are worn based on information from the vehicle condition report. These include tires, engines, transmissions, universal joints, bushings, batteries, etc.

Since these situations are identified through periodic vehicle inspection, they can be classified within the preventive maintenance.

## **Driver Training**

Drivers hired by *MegaKC Corporation* to operate a motor vehicle will have the basic skills and credentials necessary to perform this function as confirmed through the driver selection process.

New employees will receive a copy of this program as part of their initial orientation. A formal orientation program is established to help assure all drivers are presented with the company policy, understand their responsibilities and are familiarized with their vehicle. Areas that must be addressed, with the driver, include:

- Understand, review and given a copy of the Fleet Safety Program.
- Understand accident reporting & emergency procedures.
- Review operation and controls of vehicle being assigned.
- Inspect vehicle using Vehicle Inspection Report.

Additionally, all drivers are required to complete a company-approved defensive driving training course, either online or in a classroom environment.

# **JOB SAFETY ANALYSIS (JSA)**

A Job Safety Analysis (JSA) is an analysis of the hazards associated with a particular job. It focuses on eliminating hazards or providing personal protective equipment. The analysis assesses each aspect of a task and addresses the items which could result in an injury to an individual. This involves an evaluation of the mechanics of any operation, identifying what can go wrong and how to do it safely. It also involves an analysis of the body mechanics and ergonomics involved in an operation.

There are four essential elements to a thorough JSA. They are:

- 1. Selecting jobs for analysis
- 2. Breaking the job into steps
- 3. Identifying hazards, unsafe conditions and unsafe work practices associated with the steps; and
- 4. Identifying the correct and safe way to perform the steps.

The following JSA's have been developed by *MegaKC Corporation* to address the company's specific operational hazards and their required controls:

Project Name:	Project Number:
Location:	

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Date Created:			Created by:		
Lob Description:		and Approval			
	Foreman:			Competent Person	
	Superintendent:			Qualified Person	
	Manager			Safety Representative:	
Task		Potential Hazards		Recommended Control or Equipment	s and /
1.					
2.					
3.					
4.					
5.					

# **HAZARD ASSESSMENT / SAFETY INSPECTIONS**

It is the policy of *MegaKC Corporation* to provide a competent person to conduct frequent and regular safety inspections of all company project sites.

All findings of noncompliance during inspections shall be immediately corrected by *MegaKC Corporation* personnel or the responsible subcontractor. If the identified unsafe act or condition cannot be immediately corrected, an abatement plan will be developed, and *MegaKC Corporation* will ensure to the greatest extent possible, there is no employee exposure to the hazard during the abatement period.

*MegaKC Corporation* personnel will use the company's *Safety Inspection Checklist* form on safe site as a means of documenting safety inspections and tracking / correcting any deficiencies found.

# **OSHA INSPECTION PROCEDURES**

In the event a federal or state OSHA inspector (compliance officer) arrives on the job, the superintendent in charge shall follow the procedures outlined below:

## **PRE-INSPECTION:**

- Contact your Safety Manager upon the arrival of an OSHA inspector to a project. Do not provide access to the project for the OSHA Compliance Officer (CO) until the Safety Manager or a member of management participates in the "opening conference" and gives authorization for the inspection to proceed.
- Have available but do not provide (on file in field office): SDS's, Loss Control Manual, training records, project SSSP's, and jobsite inspections.
- Ensure we know the attorney to contact if needed:
- Have a pre-planned route of travel for the inspection shortest distance.
- The safety manager or Superintendent will represent employees during the inspection.
- Inspector will ask for names of those he/she will interview.
- People may choose to NOT be interviewed.
- OSHA should not be allowed to interfere with production.
- Determine search warrant policy. (Preserve our rights to request a warrant, or by agreeing to a limited scope inspection to be determined by Safety Manager)
- CO is required to give a copy of unsigned complaint.
- OSHA must disclose scope of inspection PRIOR to field review.

# **INSPECTOR ARRIVES/OPENING CONFERENCE:**

• Verify Compliance Officers (CO) credentials.

## CO NAME: \_\_\_\_\_

(Make a copy of credentials for our records – take a picture of his/her card)

- Determine purpose of inspection.
- Do not provide copies of training, inspections, project forms or any other documents without approval from safety manager.
- Agree on how copies of pictures and videos are to be obtained from OSHA.
- Determine if exposure monitoring is to be conducted.

- Determine what records and programs are to be reviewed.
- Review information with safety manager and obtain approval to allow inspection to proceed.
- Approval given by: \_\_\_\_\_\_Time: \_\_\_\_\_PM/AM

## **DURING THE INSPECTION:**

- Contact employee representatives.
- Accompany the inspector at ALL TIMES.
- Do not make verbal admissions.
- Do not sign any statements without Legal approval.
- Do not provide any written material without following document control procedures.
- Take detailed notes on what is seen and what is said log dates, times, etc.
- Where possible document any photographs or measurements taken. Should try and take same photo frames as CO does.
- When in doubt ask CO to put questions in writing and seek assistance.
- Debrief team at end of day and review inspection with local leadership.

# **POST INSPECTION/CLOSING CONFERENCE:**

- Determine when inspection is complete. Date: \_\_\_\_\_\_\_
- Clarify any misunderstandings and provide additional relevant information.
- Document any clarifications needed.
- Do not make admissions or argue case.
- Ask for copies of all info that the CO relied on to make his/her determinations.
- Review results with: Marcus Cody, Ryan Mills, Tyler Wesselman, and Brian Gordon

# **RECEIPT OF CITATION:**

•	Date stamp citation when received.	Date:
•	Determine 15 working day contest deadline.	Date:
•	Forward copy to Safety Manager for review	
•	Promptly post citation.	
•	Schedule the informal conference (if applicable).	Date:
•	Remedy uncontested violations by the abatement date.	
•	File notice of contest (if applicable).	Date:

# **SUBSTANCE ABUSE PROGRAM**

## <u>Purpose</u>

*MegaKC Corporation* is committed to maintaining a drug-free workplace. The use of alcohol and drugs is incompatible with our obligation to provide a safe and productive work environment for our employees and business invitees.

All individuals employed by *MegaKC Corporation* will be subject to "pre-employment" testing, "for cause" testing and "post-accident" testing. It is the responsibility of all individuals employed by *MegaKC Corporation* to become familiar with and to faithfully understand the policy.

## Policy

<u>Alcohol</u> - The consumption of, possession of, or being under the influence of alcoholic beverages on company property, company job sites, in the office, or in any vehicle used for company business is strictly prohibited. Any employee who violates this policy will be subject to disciplinary action, including immediate termination of employment. Any employee who reports for work, or who is at work, is subject to blood or alcohol testing to determine the presence of alcohol in the body.

**Illegal Drugs or Controlled Substances** - *MegaKC Corporation* prohibits the sale, use of, possession of, or being under the influence of any illegal drug or controlled substances on company property, in the office, on a company job site, or in any vehicle used for company business. Illegal drugs or controlled substances shall include, but are not limited to, marijuana, cocaine, amphetamines, opiates (heroine), phencyclidine (PCP), hallucinogens (LSD), and barbiturates. Any employee who violates this policy will be subject to disciplinary action, including immediate termination of employment. Any employee who reports for work or who is at work is subject to testing to determine the presence of unauthorized drugs or controlled substances on non-company time, including conviction of drug-related or controlled substance offenses may also be the basis for termination. All employees are required to notify *MegaKC Corporation* of any criminal drug or controlled substance statute conviction, whether under State or Federal Law. The employee must make such notification to *MegaKC Corporation* no later than five (5) days after the conviction.

**Prescription Drugs and Controlled Substances** - Employees are permitted to take drugs or controlled substances prescribed for them by a licensed physician provided that such drugs or controlled substances do not affect their work performance. *MegaKC Corporation* reserves the right to have a licensed physician determine if the use of a particular prescription drug or controlled substance may increase the risk of workplace injury. All prescription drugs or controlled substances must be kept in their original container and labeled with the employee's name.

## **Testing Guidelines**

- Pre-Employment Testing In order to be eligible for employment at *MegaKC Corporation*, all final candidates for positions must submit to, and pass a pre-employment drug test. A conditional offer of employment, contingent upon the successful completion of the drug test, will be extended to final candidate(s). This will assist the company in its efforts to avoid hiring individuals who use illegal drugs.
- 2. **Testing for Cause** Individuals employed by *MegaKC Corporation* will be subject to the drug and alcohol testing procedure when there is reason to believe an individual employee may be under

the influence of drugs, controlled substances, or alcohol while on the job. *MegaKC Corporation* is particularly concerned that an individual who is under the influence of drugs, controlled substances, or alcohol while on the job may present a danger to the safety of that individual, other employee(s), business invitees of the Company, the public, or the property of the company.

3. **Post-Accident Testing** - Work related accidents are a detriment to the company, our employees, and business invitees because of the potential for personal injury and property damage. Therefore, *MegaKC Corporation* must strive for an accident-free workplace through its safety program and by testing for illegal or unauthorized drug, controlled substance, or alcohol use of those employees involved in a work-related accident in which human error could have been a factor.

## **Employee Assistance Program**

*MegaKC Corporation* encourages employees to seek help. To assist employees in obtaining treatment, the company will refer the employee to a provider or the employee may choose a provider. 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 who fail to meet performance standards will be subject to disciplinary action. Employees are solely responsible for all costs of treatment not covered by their applicable medical benefits plan.

# **DISCIPLINARY PROCEDURE**

All violations of MegaKC safety rules and procedures are subject to disciplinary action. However, the following "Blue Rules" will be enforced with Zero Tolerance. Violations of these rules <u>WILL</u> result in documented disciplinary action, up to, and including termination of employment without exception to employee or circumstance. These rules apply when an employee is performing his/her task.

- 1. **First Offense:** A verbal warning will be given to the employee.
- 2. **Second Repeated Offense:** A written reprimand will be given to the employee, along with a 2day layoff.
- 3. **Third Repeated Offense:** Employee will be subject to termination, pending a decision from *MegaKC Corporation* management.

This three-step disciplinary action may not apply to the items listed below:

- Any *MegaKC Corporation* employee engaged in fighting or creating a disturbance on company grounds, company jobsites or in a company vehicle.
- Any *MegaKC Corporation* employee found with a weapon and/or firearm in their possession while on company grounds, a company jobsite or in a company owned vehicle.

Any act of blatant disregard for the above stated violations, will be looked upon by management as a hindrance to company safety goals and objectives and is subject to immediate termination of employment.