Corporate Safety

Purpose
This corporate safety philosophy provides a guiding vision and general policy by which we conduct business and safety together every day. This philosophy is a statement of the ideals the company would like to achieve in safety.

Corporate Safety Philosophy
We believe that the safety of employees is of utmost importance, along with quality, production, and cost control. Maintenance of safe operating procedures at all times is of both monetary and human value, with the human value being far greater to the employer, employee, and the community. The following principles support this philosophy:

1. All injuries and accidents are preventable through establishment and compliance with safe work procedures.
2. The prevention of bodily injury and safeguarding of health are the first considerations in all workplace actions and are the responsibility of every employee at every level.
3. Written safety plans describing the safe work practices and procedures to be practiced in all work place actions are an essential element of the overall work place safety program. All employees at every level are responsible for knowing and following the safety practices described in the written safety plans.
4. Off the job, all employees should be similarly safe and demonstrate awareness of potential hazards.

Employer Responsibility to Provide a Safe Work Environment
It is the policy of this company to provide a place of employment reasonably free from hazards that may cause illness, injury, or death to associates.

It is also this company's policy to establish an effective and continuous safety program incorporating educational and monitoring procedures maintained to teach safety, correct deficiencies, and provide a safe, clean working environment.

All this company supervisors, managers, directors, and officers are responsible for the enforcement of safety policies and practices. They must ensure that:

- Their staff members are trained in appropriate safety procedures, including chemical specific training as required. Individual safety files are maintained in Personnel for all associates.
- They notify the Safety and Security Manager, and complete the necessary forms if an accident or a work related health problem occurs in their department.
- Equipment and property within their area of responsibility is maintained in a safe, hazard free condition.

Employee Responsibility to Follow Safety Rules and Work Safely at All Times
All employees have a responsibility to themselves and to the company for their safety and the safety of the coworkers. All employees are required to:

- Comply with all Federal, State, and Local rules and regulations relevant to their work.
- Observe all company rules and regulations related to the efficient and safe performance of their work.
- Integrate safety into each job function and live by this philosophy in the performance of job duties.
- Report or correct unsafe equipment and practices.
- Report any accidents that occur while on the job.

The Safety and Security Manager heads up the company's overall safety program. That person is responsible for:

- The written Hazardous Communications Program, and the general Right to Know Training (the general training not the chemical specific) for all associates.
- Developing, completing, and filing all necessary documentation and/or reports to meet local, state, and federal reporting and record keeping requirements, and working with local and state agencies as needed.
- Maintaining the master MSDS binder, and ensuring that departmental/ area MSDS binders are kept up to date.

The maintenance department staff conducts monthly work place safety inspections, files a report on the results with the Safety and Security Manager, and corrects/repairs listed deficiencies as soon as possible.

Inspections
Frequent and regular inspections of the jobsites shall be accomplished by this company at least weekly or more often if required by other sections of this program or any other OSHA requirement. This inspection shall be accomplished by a competent person as defined by the OSHA regulations. A written record of this program shall be formulated and maintained by this company for a minimum period of 6 months. Any hazards identified shall be immediately abated or employees immediately removed from the hazard area until such hazards have been abated.

Supervisors Responsibility to Recognize and Penalize violators of Safety Codes
Supervisors are directly responsible for the enforcement of all company safety policies and practices at this company.

They must ensure that employees under their direct supervision are trained in appropriate safety practices and procedures, and that they follow safe work practices at all times in their daily work.

If an employee is found to be violating safe work practices or procedures, the supervisor is responsible for disciplining the employee and reinforcing the correct method of work. Discipline will depend upon the severity of the safety rule infraction, and can range anywhere from a verbal reprimand to a written warning to suspension or even dismissal. (See Explanation of Penalty System for Noncompliance with Safety Rules, further in this policy.)

Intent to Comply with All Government Regulations
The company will comply with appropriate safety and security laws and regulations such as those established by:

- The Occupational Safety and Health Act (OSHA),
- The Environmental Protection Agency (EPA),
- The Department of Transportation (DOT),
- All other applicable federal, state, and local safety and health regulations.

Explanation of the Penalty System for Noncompliance with Safety Rules
Upon violation of any company safety rule, the violating employee will be penalized. The list of possible disciplinary actions include:

- **Verbal reprimand** - An informal discussion of the incorrect behavior that should take place as soon as possible after the supervisor has knowledge of the safety misconduct.
- **Written reprimand** - A written form documenting the safety misconduct, to be presented to the employee and placed in the employee's personnel file.
- **Warning of probation** - A written form documenting the safety misconduct and warning the employee that another incident will lead to probation, to be presented to the employee and placed in the employee's personnel file.
- **Probation** - A trial period in which the employee is given specific rules and goals to meet, during which, if he or she cannot meet the rules and goals, he or she is subject to termination.
- **Warning of suspension** - A written form documenting the safety misconduct and warning the employee that another incident will lead to suspension, to be presented to the employee and placed in the employee's personnel file.
- **Suspension** - A period of time in which the employee is debarred from the function of attending work and during which the employee is not paid.
- **Dismissal/termination of employment** - The permanent separation of an employee from the company, initiated for disciplinary reasons, safety misconduct.

The severity of the penalty will be in direct correlation to the severity of the safety violation. Injury or damage is not a necessary constituent to warrant disciplinary action. It is the violation of the rule itself and not necessarily its end result that is the subject of the discipline.

Sign-off Area at the End of the Policy
The following employees of this company participated in the creation of the written corporate safety policy:

PRINT NAME	SIGNATURE
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Accident Reporting and Investigation

Purpose

This Accident Investigation and Reporting Plan prescribes methods and practices for reporting and investigating accidents at all work sites of this company. This Accident Reporting and Investigation Plan provides a means to deal with job site accidents in a standardized way. In addition, it is the policy of this company to comply with all workers' compensation laws and regulations.

Accident Reporting Procedures

1. Employees injured on the job are to report the injury to the supervisor (if possible) as soon as possible after the incident/accident. "Near Miss" accidents or incidents should be reported as well. (i.e., when an employee nearly has an accident but is able to avoid it.)
2. The supervisor is to complete the company Accident Report with the employee, any witnesses, and or other relevant people as soon as possible after the accident is reported.
3. The supervisor is to immediately notify the Safety Manager, and to send a copy of the written Accident Report to the Safety Manager as soon as possible after the accident.
4. Any employee witnessing an accident at a job site is to call emergency help or whatever assistance appears to be necessary. In addition, the employee is immediately to report the accident to his or her supervisor and take part in answering questions related to the Accident Report and Accident Investigation.

Accident Investigation Procedures

Use the following list as guidelines for all of your accident investigations. The Safety Manager is to:

1. Conduct the accident investigation at the exact site of the injury as soon after the injury as safely possible.
2. Ask the employee involved in the accident and any witnesses, in separate interviews, to tell you in their own words exactly what happened. Do not interrupt or ask for more details at this time, just let the employee describe it in his or her own style.
3. Repeat the employees' version of the event back to him/her and allow him to make any corrections or additions.
4. After the employee has given his/her description of the event, ask appropriate questions that focus on causes.
5. When finished, remind the employee the investigation was to determine the cause and possible corrective action that can eliminate the cause(s) of the accident and provide a safer work site for all workers.
6. Attached is a sample investigation report with sample classification codes. Complete section "A" with the employee and review data with employee for accuracy. This will provide you with information you can put into database format.
7. The Accident Investigation Report is to be used for:
    - Tracking and reporting injuries on a monthly basis
    - Grouping injuries by type, cause, body part affected, time of day, and process involved.
    - Determining if any trends in injury occurrence exist and graph those trends if possible.
    - Identifying any equipment, materials, or environmental factors that seem to be commonly involved in injury incidents.
    - Discussing with the safety team and superiors the possible solutions to the problems identified.
    - Proceed with improvements to reduce the likelihood of future injuries.

Thorough accident investigations will help the company determine why accidents occur, where they happen, and any trends that might be developing. Such identification is critical in preventing and controlling hazards and potential accidents at work sites.

Injury/Medical Issues

1. If any accident, at the work site, at the home office, or in a vehicle in the course of work, results in injury or illness requiring hospitalization of three or more employees or a fatality of one or more employees, the employer will report the incident within eight hours by phone or in person to the nearest OSHA office.
2. If an injured person is taken to a doctor, a statement from the doctor should be attached to the accident report form.
3. Weekly compensation for work site injuries or illnesses requiring time off work, as indicated by law, applies after the third day of wage loss. (Sundays are not included in the waiting period, unless Sunday is a normal workday.)
4. If the disability continues for more than seven calendar days, workers' compensation goes back to day one.
5. On the day of injury, the company will cover the time loss due to doctor and/ or emergency room visits or inability to work, up to a maximum of four hours.
6. Any time an employee is away from work because of an accident on-the-job, it should be recorded on the time sheet under Accident On Duty.
7. Any Group Health and/or Dental coverage will continue for eight weeks. The company and disabled employee will each continue to pay their share of the premium during this time. If the medical disability period extends for a longer period, the company will pay 60 percent of its previous contribution level for up to eight additional weeks.

Reporting Fatalities/injuries to OSHA

What must be reported

This company will report the following to OSHA:

- All work-related fatalities
- All work-related inpatient hospitalizations of one or more employees
- All work-related amputations
- All work-related losses of an eye

Coverage

All employers under OSHA jurisdiction must report all work-related fatalities, hospitalizations, amputations and losses of an eye to OSHA, even employers who are exempt from routinely keeping OSHA injury and illness records due to company size or industry.

An amputation is defined as the traumatic loss of a limb or other external body part. Amputations include a part, such as a limb or appendage, that has been severed, cut off, amputated (either completely or partially); fingertip amputations with or without bone loss; medical amputations resulting from irreparable damage; and amputations of body parts that have since been reattached.

Reporting Timeframe

This company will report work-related fatalities within 8 hours of finding out about them.
Employers only have to report fatalities that occurred within 30 days of a work-related incident.
Any inpatient hospitalization, amputation, or eye loss will be reported within 24 hours of learning about it.
An inpatient hospitalization, amputation or loss of an eye that occurs within 24 hours of a work-related incident need not be reported.

Reporting procedure
There are three options for reporting the event:

- By telephone to the nearest OSHA Area Office during normal business hours.
- By telephone to the 24-hour OSHA hotline at 1-800-321-OSHA (6742).
- OSHA is developing a new means of reporting events electronically, which will be available soon at www.osha.gov.

Required reporting information
Any fatality that occurs within 30 days of a work-related incident, we will report the event within 8 hours of finding out about it.
Any inpatient hospitalization, amputation, or eye loss that occurs within 24 hours of a work-related incident, we will report the event within 24 hours of learning about it.
When reporting a fatality, inpatient hospitalization, amputation or loss of an eye to OSHA we will report the following information:

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

Employers do not have to report an event if it:

- Resulted from a motor vehicle accident on a public street or highway. Employers must report the event if it happened in a construction work zone.
- Occurred on a commercial or public transportation system (airplane, subway, bus, ferry, streetcar, light rail, train).
- Occurred more than 30 days after the work-related incident in the case of a fatality or more than 24 hours after the work-related incident in the case of an inpatient hospitalization, amputation, or loss of an eye.

Employers do not have to report an inpatient hospitalization if it was for diagnostic testing or observation only. An inpatient hospitalization is defined as a formal admission to the inpatient service of a hospital or clinic for care or treatment.

Employers do have to report an inpatient hospitalization due to a heart attack, if the heart attack resulted from a work-related incident.

ACCIDENT REPORT FORM

Note: The immediate supervisor of the employee involved in the accident must fill out this accident report as soon as possible after the occurrence of the accident.

Employee Name: _____

Date & Time of Accident: _____

Telephone: _____ S.S.#: _____

Employee Address: _____

Birthdate _____ Female/Male _____ Married/Single _____

Area: _____ Job Title: _____

Salary/Hourly Wage: _____ Hours Worked/Day _____

Location of Accident: _____
_____

Description of Accident: _____
_____
_____

Medical Treatment for Employee: (answer none if none) _____
_____

Clinic/Physician (name/address/phone) _____
_____
_____

Did Injury Cause Lost Work Time? Yes No

First Lost Day _____ Date Returned: _____

Other Relevant Accident/Employee Information: _____
_____
_____
_____
_____
_____
_____

_____
Project Name

ACCIDENT/INCIDENT INVESTIGATION REPORT

FOR OFFICIAL USE ONLY

This document contains privileged, limited-use safety and privacy act protected information. Unauthorized use or disclosure can subject you to criminal prosecution, termination of employment, civil liability, or other adverse actions.

Project Name:		Project Location:	
Completed By:	Date:	Accident Date:	Time:
Personal Injury		Property Damage	
Name:		Property Damaged:	
Employee#:	Hire Date:	Nature of Damage:	
Performing Regular Job:			
Type of Injury:			
Nature of Injury:			
Part of Body Injured:			
Description of Accident: (What occurred? Include photos and diagram.)			
Cause of Accident: (How and why did it occur. Documentation to support training.)			
Witnesses: (Anyone who may have seen the accident occurred. Name, company, phone#)			
Corrective Actions: (Actions taken to prevent recurrence.)			

RETURN TO WORK

POLICY STATEMENT

It is the policy of JDL Warm to maintain and support a Return-to-Work Program. It is designed to minimize the disruption and uncertainty that can accompany any injury or illness for both the company and for all its employees.

The cornerstone of this Return-to-Work Program is communication. As such, a specific responsibility for communicating return-to-work information is central to its success and is the basis for this program.

PROCEDURES

I. As soon as possible after an injury* occurs the worker should report the injury to his/her supervisor who in turn will report it to the safety manager. This should be accomplished within 24-hours. Any necessary paperwork will be provided and, if necessary, assistance given for completing it. All appropriate information will be submitted to our insurance administrator, including all return-to-work information.

II. The worker will be provided with a copy of "Worker Responsibilities When Injured on the Job" when an injury is reported.

III. While off work with an injury contact with The safety and health manager should be maintained as follows:

A. The worker is to report his/her return-to-work status after each doctor's appointment. Unless otherwise arranged between the worker and the program administrator, The safety and health manager this shall be done in person by providing a copy of a work release, a physical capacity form or a job analysis signed by the attending physician.

B. The worker should contact The safety and health manager by telephone or in person each week. This contact is intended to keep the worker informed of pertinent company information and the company informed of the worker's current condition/needs for return-to-work.

IV. If the worker leaves work to see a physician he/she is to relay information to the physician regarding the availability of transitional work. The communication of this information may be done in writing or verbally.

In any event, when the attending physician is known, information regarding available transitional, either in the form of a specific job analysis/task list or a request for physical capacity information, will be provided. A job analysis for the worker's regular job also will be provided if one is available.
The worker will be assigned to a job or task(s) according to the restrictions/approval of the attending physician and the business needs of JDL Warm at the time of the release. This assignment may be in a different department or on a different shift than worked at the time of injury. It may be a portion of the regular job if the restrictions require a reduction in hours or the elimination /reassignment of a work activity/activities essential to the performance of the job.

V. Transitional jobs are temporary in nature and are intended to ease the employee back to regular duty. The transitional work will be monitored by a supervisor on an on-going basis. Should the

attending physician change the worker's restrictions, the transitional assignment may be adjusted accordingly. In any case, workers will not be expected to exceed the restrictions given.

If the transitional assignment lasts for more than (14 days), it will be reviewed at that time and at (14-day) intervals thereafter. It may be extended or ended at the discretion of the supervisor.

Any problems with the transitional assignment will be discussed with the worker and any changes needed will be defined.

VI. When the attending physician gives a release to transitional work, a **job offer letter** may be given in person or mailed CERTIFIED mail, with a response requested. It shall include a description of the job duties, the start date and hours, the duration of the job (if known), where and to whom to report, the wage to be paid and a copy of the work release and/or signed job analysis.

VII. The transitional job will end when whichever of the following occurs first:

A. the worker is released for full duty regular employment;

B. the worker returns to a job that is not part of the Return-to-Work Program;

C. the transitional job is no longer available or has not been extended under the terms of this program; or

D. the workers' compensation claim is closed.

VIII. Should the worker be given permanent restrictions by his/her attending physician, each case will be reviewed individually outside this Return-to-Work Program and in accordance with all state and federal guidelines.

* For the purpose of this Return-to-Work Program, an "injury" also includes an occupational disease as defined by the governing state workers' compensation statutes.

EMPLOYEE RESPONSIBILITIES WHEN INJURED ON-THE-JOB

1. Report all accidents or illnesses, no matter how minor, to the supervisor.

2. If you need to see a physician, please contact your supervisor immediately.

3. Written or verbal information regarding the availability of light duty work should be given to the physician at the time of the first visit. In any case, the information will be provided to your attending physician in accordance with JDL Warm' Return-to-Work Program.

4. Immediately report to the safety and health manager the results of each physician visit. This should be done in person unless other arrangements have been made.

5. Contact should be made with The safety and health manager each week for updates on your condition and your ability/needs to return-to-work. Any information from the company will be provided to you at this time.

6. All work releases must be reported to the company's main office immediately so your return-to-work can be scheduled.

7. If the safety and health manager is unavailable, you should contact human resources department.

8. If you have any questions or have concerns about the light duty job, it is your responsibility to consult your supervisor or The safety and health manager immediately to discuss them. If they have any questions or concerns, they will discuss them with you.

9. Doctor or physical therapy appointments should be scheduled outside working hours if possible. If not possible, arrangements need to be made with human resources.

I have read the above responsibilities information. I have been given the opportunity to ask questions about my responsibilities. I understand that failure to follow them may result in disciplinary action and/or adversely affect my workers' compensation benefits. I have received a copy of this document.

_____

Worker Signature Date

Contractor/Subcontractor Safety

Purpose

This document is provided to ensure all safety plans, policies and procedures are communicated to all participating contractors on projects for which we serve as the head contractor. It also provides an avenue for subcontractors to communicate their safety plans, policies and procedures to us as the head contractor. This program aims to prevent personal injuries and illnesses.

Explanation of Responsibilities

General Contractor Responsibilities

This company has specific safety responsibilities when hiring subcontractors. Company responsibilities when hiring contractors include the following listed steps. The company will:

1. Take steps to protect contract workers who perform work on or near a potentially hazardous process.
2. Obtain and evaluate information regarding the contract employer's safety performance and programs.
3. Inform the contractor of known potential fire, explosion, or toxic release hazards related to the contractor's work and the process.
4. Explain the applicable provisions of the emergency action plan to the contractor, and require that the contractor disperse that information to all workers who will work at this site.
5. Develop and implement safe work practice procedures to control subcontractor employee entry into hazardous work areas in which they are not performing work.
6. Maintain a subcontractor employee injury and illness log.
7. Periodically evaluate the contract employers' fulfillment of his or her responsibilities under this policy.
8. Hire and use only contractors who meet Contractor Selection Criteria as listed in the next section of this policy.

Subcontractor Responsibilities

Considering that subcontractors often perform very specialized and potentially hazardous tasks, their work must be controlled. Subcontractor responsibilities when accepting contracts with this company include the following listed steps. The subcontract employer will:

1. Assure that all subcontractor employees are trained in the work practices necessary to safely perform their respective job;
2. Instruct all subcontractor employees in the potential fire, explosion, or toxic release hazards related to his or her job and the process;
3. Assure that all subcontractor employees know the applicable provisions of the emergency action plan;
4. Document all subcontractor employees training;
5. Inform all subcontractor employees of and then enforce safety rules of the work site.
6. Require that all subcontractors abide by the same rules to which the contractor is bound by this section;
7. Abide by the work site smoking rules. Smoking is prohibited in certain areas of some work sites. Therefore, permission must be requested before subcontractor's employees are allowed to smoke in any area.

Guidelines for Subcontractor Selection

The following listed steps are the standard procedures for evaluating and choosing subcontractors who will work on any work site for which this company is head contractor.

1. Obtain and evaluate information regarding a subcontractor employer's safety performance and programs when selecting a subcontractor to perform any type of work that might bring them into contact with any hazardous chemical or process on the premises of the work site.
   To determine that past safety performance, the group or individual selecting the head contractor should consider the subcontractor's:
   - Employee injury records such as Experience Modification Rate (EMR or MOD) for workers' compensation for the past three years and the contractors past safety record in performing jobs of a similar nature.
   - OSHA log, which includes the injury and illness rates (number of lost time accident cases, number of recordable cases, number of restricted workday cases, number of fatalities) for the past three years.
   - Incidence rates for lost-time accidents and recordables for the past three years.
   - Written safety program and training system.

   For subcontractors whose safety performance on the job is not known, obtain information on injury and illness rates and experience and obtain subcontractor references.

2. Subcontractor work methods and experience should be evaluated. Ensure that for the job in question the subcontractor and its employees have the appropriate:
   - Job skills,
   - Equipment,
   - Knowledge, experience, expertise, and
   - Any permits, licenses, certifications, or skilled trades' people necessary to be capable of performing the work in question.

3. The subcontractor must be willing and able to provide a current certificate of insurance for workers' compensation and general liability coverage with the contracting company.
4. Each subcontractor must be responsible for ensuring that its employees comply with all applicable local, state, and federal and General Contractor safety requirements, as well as with any safety rules and regulations set forth by this company, for which it is performing the contracted work.
   Possible ways to determine past compliance with such safety regulations are:
   - To request copies of any citations for violations occurring within the last three years, to determine the frequency and type of safety laws violated.
   - To have all bidders on jobs describe in detail in writing any safety programs in place at the contractor, infractions, accidents, and workers' compensation claims within the last three years. This information will provide the company with a solid background on that contractor's safety performance and adherence to safety rules and regulations.

Guidelines for Contracts

Contracts that are entered into by this company as head contractor must contain safety provisions and information on the following topics, as applicable for the job and or work site being contracted:

- The Hazard Communication programs and hazardous chemicals being used by the subcontractor;
- Necessary and expected personal protective equipment (PPE) for the job or work site in question;
- The set of general safety rules to be followed at the work site;
- Designation of at least one safety person or representative from the head contractor and the subcontractor;
- Designation of financial responsibility for OSHA fines to whichever contractor created the hazard cited, even if other employers' employees were the ones exposed and other employers were the ones cited.

Explanation of the Penalty System for Noncompliance with Safety Rules

Upon violation of any company safety rule, the violating employer will be penalized. The list of possible disciplinary actions include:

- Verbal reprimand - An informal discussion of the incorrect behavior that should take place as soon as possible after the contractor has knowledge of the safety misconduct.
- Written reprimand - A written form documenting the safety misconduct, to be presented to the employer and placed in the employer's personnel file.
- Monetary penalty – A monetary penalty assessed against the violating employer.
- Dismissal/termination of contract - The permanent separation of an employee from the company, initiated for disciplinary reasons, safety misconduct.

  The severity of the penalty will be in direct correlation to the severity of the safety violation. Injury or damage is not a necessary constituent to warrant disciplinary action. It is the violation of the rule itself and not necessarily its end result that is the subject of the discipline.

Guidelines for Information Exchange

General Contractors Guidelines for Information Exchange

Before the contract work begins, the subcontractor must:

1. Designate a representative to coordinate all safety and health issues and communicate with subcontractors' designated representative.
2. Provide documentation of any necessary safety training, as described in the Training Requirements section of this policy, to this company's designated representative.
3. Provide information to the designated representative on the safety and health hazards that may arise during the course of the contractor's work and the means necessary to avoid danger from those hazards, including Hazard Communication and all other potential hazards.
4. Obtain from this company any safety rules and regulations in effect at the site or potential hazards present that may affect the contractor's work.
5. Be certain to be informed of any emergency signals and procedures that may be put into operation in areas where the contractor's employees are working. The contractor should be certain to have the telephone numbers of the nearest hospital, ambulance service, and fire department.
6. Advise and train its employees on hazards associated with the work to be performed, including any Hazard Communication or other hazard information provided the contractor by this company's designated representative.
7. Keep the designated representative of this company fully informed of any work that may affect the safety of this company's employees or property. This includes complying with the state and federal

right-to-know legislation and providing the designated representative appropriate material safety data sheets (MSDSs) or other required information about chemicals the contractor will bring onto the site.
8. Know who to call and what to do in emergencies, including where first aid and medical services are located and train employees on this.

During the contract work, the subcontractor will:

1. Have a designated site safety coordinator present and attentive to the work being carried out at all times that any employee is working at the site.
2. Make sure that any equipment, chemicals, or procedures used by the contractor to perform contracted work meet all OSHA requirements.
3. Be held responsible and accountable for any losses or damages suffered by this company and/or its employees as a result of contractor negligence.
4. Provide its employees with medical care and first aid treatment.
5. Ensure that each contractor employee is issued and wears some form of easily seen identification.
6. Provide supervisors and employees who are competent and adequately trained, including training in all health and safety aspects of the work involved in the contract.
7. Provide all tools and equipment for the work, including personal protective equipment (PPE), and ensure the equipment is in proper working order and employees are instructed in its proper use.
8. Maintain good housekeeping at the work site.
9. Follow specific instructions supplied by this company should emergency alarms be activated.
10. Notify the designated representative immediately of any OSHA recordable injury or illness to contractor employees or subcontractor employees occurring while on the site of this company. Provide a copy of each accident report to the designated representative.
11. Receive and use a copy of the head contractor's written safety policies and procedures.

After conclusion of the contract work, the contractor is responsible for cleaning all work areas and disposing of any discarded materials in a proper and legal manner.

General Contractor Guidelines for Information Exchange

Before contract work begins, this company must:

1. Designate a representative to coordinate and communicate all safety and health issues and communicate with the subcontractor. The designated representative will have a copy of the work document, be thoroughly familiar with its contents, and with the safety and health aspects of the work, or know whom to call to obtain this information. The designated representative is responsible for ensuring that all company responsibilities listed below are carried out.
2. Provide a copy of the work site's written safety policies and procedures to the subcontractor.
3. Inform the subcontractor of any emergency signals and procedures that may be put into operation in areas where the subcontractor's employees are working. The subcontractor should be given the telephone numbers of the nearest hospital, ambulance service, and fire department.
4. Conduct an inspection of the proposed work site area before the pre-start up meeting so any known information about on-site hazards, particularly non-obvious hazards, are documented and thoroughly communicated to the subcontractor.
5. Work directly with the subcontractor's designated representative, with whom all contacts should be made.
6. Conduct a pre-start up meeting (walk through) with the subcontractor's designated representative and a supervisor from each of the areas of the work site involved in the subcontractor's work.
7. Review all contract requirements related to safety and health with the contractor's designated representative, including, but not limited to, rules and procedures, personal protective equipment (PPE), and special work permits or specialized work procedures. Advise the subcontractor that the work site

safety and health policies must be followed. A copy of the work site's safety plans must be furnished to the subcontractor.

8. Inform the subcontractor's designated representative of the required response to employee alarms and furnish the subcontractor with a demonstration or explanation of the alarms.
9. Communicate thoroughly with the subcontractor's designated representative any safety and health hazards (particularly non-obvious hazards and hazard communication issues) known to be associated with the work, including those in areas adjacent to the work site. Tell them it is the subcontractor's responsibility to convey this information to its employees.
10. Review preparation of work site before the subcontractor begins initial work.
11. Identify connect-points for all services, such as steam, gas, water, electricity, etc. Define any limitations of use of such services.
12. Ensure that all affected employees at the work site receive training on all hazards to which they will be introduced by other subcontractors.

During the contract work, this company must:

1. Limit, as necessary, the entry of other contractors' employees into hazardous subcontractor work areas.
2. Monitor the subcontractor's compliance with the contract throughout the duration of the work. When checking subcontractor work during the project, note any negligent or unlawful act or condition in violation of safety standards or requirements. Any items noted should be brought immediately to the attention of the subcontractor's designated representative in writing, with a copy of the notice being sent to the subcontractor's home office concurrently. However, if an unsafe act or a condition is noted that creates an imminent danger of serious injury, immediate steps should be taken with the sub-contractor's designated representative, or in his or her absence, the subcontractor's employees to stop the unsafe act or condition. Do not allow work that is in violation of a regulation to continue.
3. Document all discussions, including place, time, and names of subcontractor employees in attendance.
4. Approve the subcontractor beginning work each day, unless it is routine service or maintenance work or periodic outdoor service or maintenance work.
5. For work for which this company has developed specific and generally applicable procedures, make sure subcontractors follow the same procedures.
6. Do not allow loaning of tools and equipment to subcontractors. The subcontractor is required to provide the necessary tools and equipment.
7. Contact the nearest medical facilities, when available, in emergency situations where severity of the injury dictates immediate attention.
8. Obtain a copy of each OSHA recordable injury report from the subcontractor. Investigate and report to the facility manager all personal injuries to subcontractor employees. Investigate and report any property losses. Maintain a subcontractor accident report file.

After conclusion of the contract work, complete a post-project assessment of the subcontractor's safety performance for the site manager to be used for future reference, with a recommendation on whether or not to re-hire the subcontractor.

Training Requirements

Subcontractor Requirements - The subcontractor must:

1. Train all workers on all safety and health hazards and provisions applicable to the type of work being done, and provide documentation of such training to this company's designated representative.
2. Train employees on where to obtain first aid and medical services.

General Contractor Requirements - This Company as lead contractor must:

1. Ensure that affected company employees receive training on all hazards to which they will be

introduced by a subcontractor.
2. Emphasize to the subcontractor that it is the subcontractor's responsibility to convey to its employees any safety information provided by the company to the subcontractor.

Recordkeeping Requirements

Subcontractor
1. Keep records of all training done with subcontractor workers and all documentation provided to the head contracting company regarding such training.
2. Keep copies on file of all forms or statements related to the contract that are required by the company to be filled out before or during contract work.
3. Have on file the telephone numbers of the nearest hospital, ambulance service, and fire department.

4. Have copies on-site of all material safety data sheets (MSDSs) or other required information about chemicals relevant to the work on-site.
5. Keep an OSHA recordable injury and illness log for the project, as well as copies of accident reports on all accidents that occur in the course of the project.

General Contractor - The designated representative will:
1. Have a copy of the contract on file and be thoroughly familiar with its contents, and with the safety and health aspects of the work.
2. Keep records of all training done with company workers regarding hazards to be caused by the subcontracting company.
3. Keep copies on file of all forms or statements related to the contract that are required by the company to be filled out before or during contract work.
4. Keep an OSHA recordable injury and illness log for the project, as well as copies of accident reports on all accidents that occur in the course of the project.
5. Keep a daily log regarding pre-work start-up inspection findings.
6. Keep records of all documentation of any sort given to you by the contractor, including records of training done MSDSs, accident reports, etc.
7. Keep records of all documentation of any sort you give to the contractor, including list of hazards to train their employees on, MSDSs, etc.
8. Document all discussions, letters, memos, or other communications made to the contractor regarding safety issues, including place, time, names of people involved.

Contractor/Subcontractor Safety Policy
Employee Sign-Off Sheet

I acknowledge I have been given a copy of the Contractor/Subcontractor Safety Policy, I have read and understood it, and I accept the policy as a working document that I will support in my daily work at JDL Warm

_____
Company Name

_____
Corporate Officer Signature Date

_____
Safety Managers Signature Date

----------(Use the form above and/or below to document employee training/information)----------

I acknowledge I have been trained on and been informed how to get access to a copy of the Contractor/Subcontractor Safety Policy, I have understood this training, and I will support and follow this program in my daily work at JDL Warm

_____
Company Name

_____
Corporate Officer Signature Date

_____
Safety Manager's Signature Date

HOUSEKEEPING

PURPOSE/SCOPE

Construction and industrial sites present many hazards to employees when they are performing work-related activities. Keeping a work site clean of debris can further reduce hazards. The benefits of a good housekeeping program include fewer accidents, lower compensation claims, smaller inventories, and less damage to products and materials.

The purpose of JDL Warm Construction Housekeeping Program is to provide employees with a working environment that is clean and free of obstructions that may cause injuries and/or prevent them from performing their job effectively. Good housekeeping improves overall safety performance due to heightened awareness and attention to details. A cleaner work area directly correlates to a safer work area.

GENERAL REQUIREMENTS

Good housekeeping must be maintained at all times. A weekly clean-up is not sufficient. Follow these general rules for good housekeeping at each job site:

- At a minimum, work areas must be cleaned though out the day as needed and at the end of each work shift. This includes removal of trash, food waste, and construction/demolition debris.
- Job trailers, shops, and other permanent work areas shall be cleaned regularly and supplies neatly organized, away from aisles, stairs and walkways.
- Promptly dispose of food, waste, beverage containers and wrappings in closed containers or trash bags after eating.
- Fire extinguisher and fire-fighting equipment should never be blocked. The same holds true for safety markings, placards, heating equipment, vents, lighting, welders and electrical equipment. Electrical panels and emergency equipment must have a minimum of 3 feet of clearance and be readily accessible.
- Properly labeled containers SHALL be provided for the collection and separation of waste, trash, oily and used rags, and other refuse.
- Combustible scrap and debris shall be removed at regular and frequent intervals during the course of construction.
- Keep walking and working surfaces clean of spilled oil, grease, solvents and water. If you observe a wet or slippery area, report it promptly to your supervisor.
- Properly secure materials so that they do not become a trip hazard later.
- Place all stored materials clear of landings, stairways, walkways, electrical panels and emergency equipment.
- When finished with tools, return them to the proper storage location.
- All materials should be stacked, blocked, and limited in height. This will allow the pile to be stable and safe from collapsing and/or sliding.
- Materials should be stored so that materials of similar sizes and types will be in the same pile. This makes it easier to keep track of material and select it when needed. This also reduces time of looking for something when you need it.
- If possible, make sure there is clearance around a stockpile so workers or equipment will have enough room to maneuver.
- During the course of construction, alteration or repairs, form and scrap lumber with protruding nails and all other debris, including wire, cable and conduit, pipe and materials shall be kept clear from all work areas, passageways, and stairs, in and around buildings and other structures.
- All protruding nails shall be bent over to prevent injury.
- All employees are responsible for keeping their work area clean, including the inside and outside of buildings and work vehicles.
- Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire,

explosion, or pest harborage. Vegetation control will be exercised when necessary.

- Place all stored parts and materials well clear of landings, stairways, walkways, stepladders, electrical panels, and emergency equipment.
- The area immediately surrounding eye wash stations and safety showers SHALL be kept clean and accessible at all times.
- Containers used for garbage and other oily, flammable, or hazardous wastes, such as caustics, acids, harmful dusts, etc., shall be equipped with covers.
- Keep floors clean of spills, oil, grease, solvents and water.
- Job trailers, shops and other permanent work areas SHALL be cleaned regularly and supplies neatly organized, away from aisles and walkways.
- Properly secure materials in an orderly manner so as to prevent their falling or spreading and to eliminate slipping, tripping and stumbling hazards.
- Tools, materials, and equipment subject to displacement shall be adequately secured.
- Use care when working with extension cords and welding leads. They are a major trip and stumbling hazard. Keep them away from doorways, stairs and pathways. Suspend cords with nonconductive material where possible at least 7 feet overhead or run them next to walls. Cords/leads MUST be protected if you have to run them through a doorway. Coil up extension cords, line, welding leads, hoses, etc. when not in use. If any of these items need repaired or replaced, notify your supervisor immediately.
- NEVER leave tools or material such as nuts and bolts on top of ladders or other areas where they may fall.

MEANS OF EGRESS

- Always keep ramps, ladders, runways, stairways, and all paths of travel clear. Avoid running power cords and other tripping hazards across traffic areas.
- All walkways and work areas shall be cleared of debris and obstructions. Fire extinguishers and firefighting equipment must never be blocked.
- Keep traffic lanes and work areas open for safe movement and emergency evacuation.

PROTECTION OF THE PUBLIC

Housekeeping is a priority in areas where members of the public or building occupants are present. In these areas:

- Use barricades, cones, or signs to keep your work area separated from the public.
- Where members of the public must pass through your work area, immediately remove debris as it is generated. Keep tools on carts, or in toolboxes, when not actually in use.
- Pay special attention to tripping hazards caused by coils of cable, conduit, pipe, and other similar materials that must be placed on the ground. These materials must be cordoned off from the public.

SUPERVISORY RESPONSIBLILITIES

- Provide for proper disposal of waste materials.
- Ensure that necessary supplies are available for cleaning such as brooms, dustpans, spill absorbent, etc.
- Perform regular inspections of the work site to ensure compliance with this program.

TRAINING

Employees will be trained to work safely on all job sites by following good housekeeping practices. At a minimum, employees will be trained in:

- The importance of housekeeping.
- The benefits of housekeeping.
- Frequency at which housekeeping will occur.
- Project specific waste segregation methods (separate general trash and metal).
- The contents of this program and are expected to adhere to the provisions contained within.

Heat / Cold Stress

PURPOSE
The purpose of this program is to provide knowledge and use guidelines to aid in the task of controlling or reducing the hazards of heat and cold stress in the workplace for JDL Warm Construction employees.

SCOPE
This document applies to all divisions/departments of JDL Warm Construction.

POLICY
Occupational heat stress disorders, cold stress injuries, and accidents must be prevented. Preventative measures will be introduced in circumstances where a heat or cold stress injury or illness may occur. If preventative measures are not found to be effective, worker monitoring and control measures will be put into effect. Supervisors will be responsible for identifying and aiding in heat and/or cold stress injury and illness prevention. A *Heat Disorders Chart*, *Heat Index Chart*, and *Windchill Index* are included in this program for reference to heat and cold stress environments. Supervisors and affected personnel may use these documents accordingly.

GENERAL
Two or three employees may work at the same job, exposed to the same conditions, and even though one will be affected by the heat or cold, the others may not. Age, weight, physical fitness, metabolism, alcohol or drug abuse, and medical condition are some of the determining factors affecting a person's sensitivity to heat or cold and susceptibility to heat disorders and cold injuries. Heat or cold induced occupational illnesses, injuries and reduced productivity occur in situations where the heat or cold load exceeds the capacities of the body to maintain normal body functions due to excessive strain in the case of heat or slowed body metabolism and even tissue damage in the case of cold. At varying levels of heat or cold stress, the employee's compensatory mechanisms will no longer be capable of maintaining body temperature at the level required for normal body functions. Because of this, the result of heat induced or cold stress illnesses, disorders, and accidents may dramatically increase.

The human body loses heat through radiation losses, convection, and conduction when air moves around the body and by exhalation. These heat removal methods are necessary to keep the core body temperature at a constant rate. As the human body functions, the body chemistry generates heat. The body uses the food and water ingested to generate heat, other chemicals to maintain the biosystems. All of these chemical reactions in the human body are temperature sensitive. If the core temperature of the human body varies more than 4° F, the chemistry begins to fail and the body systems can begin to fail. Part of the heat generated by the body chemistry goes to maintain the body temperature so that the chemical reactions will occur. The remainder of the heat generated is excess and is lost by the mechanisms described above. Cold temperatures create stress on the body by reducing body temperature, causing the body to increase its efforts to produce more heat, reducing body chemical reaction rates, and destroying cells by freezing. The use of protective equipment may give the wearer a false indication of the level of cold exposure. The trunk of the body is warm but the extremities are cold and losing heat faster than expected by the employee.

HEAT STRESS
Heat stress causes reactions from four environmental factors that affect the amount of stress an employee can face in a hot environment to include: area temperature, humidity, radiant heat, and air movement. The body reacts to high external temperature by circulating blood to the skin which increases skin temperature and allows the body to give off excess heat through the skin. Sweating is another means the body removes excess heat. The normal range of oral temperatures for humans is typically 97° F to 100.5° F during working periods. The core temperature of the normal human body is approximately 98.6° F to 100.4° F. If the core

temperature is greater than 105° F brain damage may occur. The skin temperature can range from 72° F to 93° F. If the body's physiological processes fail to maintain a normal body temperature because of excessive heat, a number of physical reactions can occur ranging from mild to fatal. The Heat Index Chart included in this program outlines air temperatures with % relative humidity giving ranges for disorders to occur by the heat index temperatures. Heat-related problems are listed below from mild to fatal:

> ***NOTE:*** Employees who have heart or circulatory diseases or conditions, or those who may be on low salt diets are at high risk for heat stress problems, and should consult their physicians prior to working in hot environments.

Heat Rash may be caused by continuous exposure to heat and humid air aggravated by clothing. It decreases the ability to tolerate heat as well as being a nuisance. It can be prevented by resting in a cool area and allowing the skin to dry.

Heat Cramps, which are painful spasms of the muscles, are caused when employees drink large quantities of water but fail to replace their body's salt loss. Cool, electrolyte replenishing drinks are excellent beverages to prevent heat cramps.

Heat Fatigue or fainting may be a problem for one who is not acclimatized to a hot environment, even though the worker may do nothing but stand still in the heat. Victims usually recover quickly after a brief period of lying down and receiving something cool to drink. Moving around, rather than standing still, will usually reduce the possibility of fainting.

Heat Exhaustion can occur as a result of loss of fluid through sweating when an employee has not drunk enough fluids or ingested enough salt or both. An employee may still sweat, but experience extreme weakness, nausea, or headache. The skin is clammy and moist, the complexion pale or flushed, and the body temperature normal or slightly elevated.

Heat Stroke is the most serious health problem for workers in hot environments and is caused by the failure of the body's internal mechanism to regulate its core temperature. Sweating stops resulting in dry skin and the body can no longer get rid of the excess heat. Signs and symptoms of a heat stroke include the following:

- Mental confusion
- Loss of consciousness
- Convulsions or coma
- A body temperature of 106° F or higher
- Delirium
- Hot dry skin possibly red, mottled, or bluish
- Rapid pulse

Victims of heat stroke will die unless treated promptly and correctly. Even while medical help is being called, the affected employee must be removed immediately to a cool area and his/her clothing soaked with cool water. Prompt first aid can prevent permanent injury to the brain and other vital organs.

IMPLEMENTATION OF HEAT STRESS PROGRAM

The following guidelines contain some of the factors which may require a heat stress program evaluation and/or program implementation:

1. Ambient temperature;
2. Humidity;
3. Type of work required - metabolic heat generated during work activities;
4. Required work clothing - the potential for heat stress increases as the impermeability of the work clothing increases;
5. Employee symptoms and/or complaints; and
6. Employee conditioning and/or acclimatization.

Once the Safety manager has determined that a heat stress environment exists, then heat stress preventative measures must be implemented. If the heat stress preventative measures are not successful, then worker monitoring will begin. Worker monitoring will reduce heat stress related injuries by adjusting the work/rest periods to compensate for the hot environment.

Heat stress can be measured by the Wet Bulb Globe Temperature (WGBT). The WBGT is an expression which uses the environmental temperature, the humidity, and the solar heat load to predict the equivalent heat stress on an employee. The American Conference of Governmental Industrial Hygienist's permissible heat exposure TLVs, based on the WBGT index, are listed in the ACGIH TLV book.

HEAT STRESS PREVENTION

When unacceptable levels of heat stress occur, there are generally six approaches to a solution:

1. Modify the environment;
2. Modify the clothing or equipment;
3. Modify the work practices;
4. Modify the worker by heat acclimatization;
5. Modify production with a work/rest regimen; and
6. Modify the worker's knowledge of working in a hot environment.

One or more, but not limited to the following preventive measures or controls will aid in the reduction of heat stress:

1. Provide or make available liquids for drinking. Employees should be encouraged to drink moderate amounts at each break or as needed. Most employees do not feel thirsty until they have lost 5% of their body weight.
2. Allow sufficient rest periods as needed for employees to cool down and recover from overheating.
3. Provide cooling devices to aid natural body ventilation. These devices may add weight, and their use should be balanced against worker efficiency. Long cotton underwear acts as a wick to help absorb moisture and protect the skin from direct contact with heat-absorbing protective clothing.
4. Ensure that adequate shelter is available to protect personnel against heat which can decrease physical efficiency and increase the probability of an incident.
5. In extremely hot conditions rotate workers.
6. Good hygienic practices are important ranging from frequent change of clothing to daily showering or bathing.
7. Employees need to adapt to new temperatures. This is known as acclimatization. This adaptation period is usually 5 days. New employees and employees returning from an absence of two weeks or more should have a 3-5 day period of acclimatization. This period should begin with 50% of the normal workload the first day and gradually build up to 100% on the last day.

COLD STRESS

Employees working outdoors in temperatures at or below freezing may suffer from cold stress problems. Cold stress problems include the following: frostbite, hypothermia, and even shock. Extreme cold for a short time may cause severe injury to the surface of the body, or result in generalized cooling, potentially causing death. Areas of the body which have high surface-area-to-volume ratio such as fingers, toes, and ears, are the most susceptible.

Two factors influence the development of a cold injury, ambient temperature and the wind velocity. Wind chill is used to describe the chilling effects of moving air in combination with low temperature. For example, 10° F with a wind of 15 miles per hour (mph) is equivalent in chilling effect to still air at -18° F. As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to

10 mph. Additionally, water conducts heat 240 times faster than air. Thus, the body cools suddenly when chemical-protective equipment is removed if the clothing underneath is perspiration soaked.

Frostbite occurs when crystals form either superficially or deeply in the fluids and underlying soft tissues of the skin. There are several degrees of damage from frostbite. Frostbite of the extremities can be categorized into:

Frost nip or ***incipient frostbite*** is characterized by suddenly blanching or whitening of skin.
Superficial frostbite occurs when skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
Deep frostbite occurs when tissues are cold, pale, and solid, extremely serious injury.

Signs and symptoms of frostbite include the following:

- Pale and glossy skin
- Skin color changes to white or grayish yellow
- Mental confusion
- Affected part feels intensely cold and numb
- Failing eyesight
- Unconsciousness
- Shock
- Respiratory failure
- Death

First aid procedures for frostbite include the following:

1. When possible, re-warm the affected area by immersing it in cold water and gradually warming the water between 102° F and 105° F.
2. Note: if a thermometer is not available, test the water by dipping your elbow in it, making sure that it is just above normal body temperature.
3. Re-warming by water will take 20-30 minutes and will be accompanied by increasing pain.
4. If warm water is not available, wrap the affected area with blankets or use body heat to thaw the affected part.
5. Once re-warmed, do not allow the victim to use the affected area until it has been examined by a physician.
6. Protect the affected area to keep it clean and warm.
7. Note: Thawing of superficial frostbite includes a tingling and burning sensation in the affected area, followed by a purplish or mottled color as blood circulation is restored.
8. WARNING! Once a frostbite area has been thawed, do not allow it to refreeze. This causes significant damage and typically results in amputation.
9. Never rub a frostbite area in an attempt to warm it. This action damages the tissue and can result in the formation of gangrene.

Hypothermia is the gradual cooling of the body's inner core to the extent that normal metabolism slows down. Dangerous amounts of body heat can be lost in temperatures as warm as 40° F. Symptoms are usually exhibited in five stages:

1. Shivering;
2. Apathy, lack of feeling, sleepiness, inactive;
3. Unconsciousness, glassy stare, slow pulse, slow respiration;
4. Freezing of the extremities; and
5. Death.

First aid procedures for hypothermia include the following:

1. Provide shelter;
2. Remove any wet clothing and redress in dry clothing or blankets;
3. Provide a source of heat to warm slowly; and
4. Obtain medical assistance immediately.

Shock may occur from either extreme heat or extreme cold stress. Shock results from a depressed state of several vital body functions. During shock, the blood circulation is disturbed or even stopped due to the body's reaction to respiratory failure, profuse bleeding, severe burns, severe cold exposure, poisoning, heart attack, and other serious medical conditions. Immediate medical attention is needed as soon as possible.

ADMINISTRATIVE/ ENGINEERING CONTROLS AND PPE

Administrative controls must be instituted for employee protection when engineering controls are not practical. One example of an administrative control is limiting the work time by defining a period range based on the work, environment, and clothing requirements. Another example may be the alternation of employees in hot or cold areas limiting exposure times or increasing break periods.

A number of engineering controls, including ventilation and spot cooling by local exhaust ventilation at points of high heat activities, can be helpful. Shielding may be necessary as protection from radiant heat sources. Cooling fans can also reduce heat in hot conditions. Mechanical equipment replacing manual labor is also an alternative to heat exposure. Periodic breaks for warming up through the use of heated enclosures or heaters may be necessary in freezing temperatures.

Personal protective equipment used for cooling/warming employees is another method to control heat/cold stress. Cooling systems such as the following may be used: water-cooled garments, air-cooled garments, ice pack vests, and even wetted over-garments with evaporation taking place. Insulated clothing and even multiple layers of clothing can be used in cold conditions. One problem with the multiple layers is the decreased means of mobility.

WORK PRACTICES

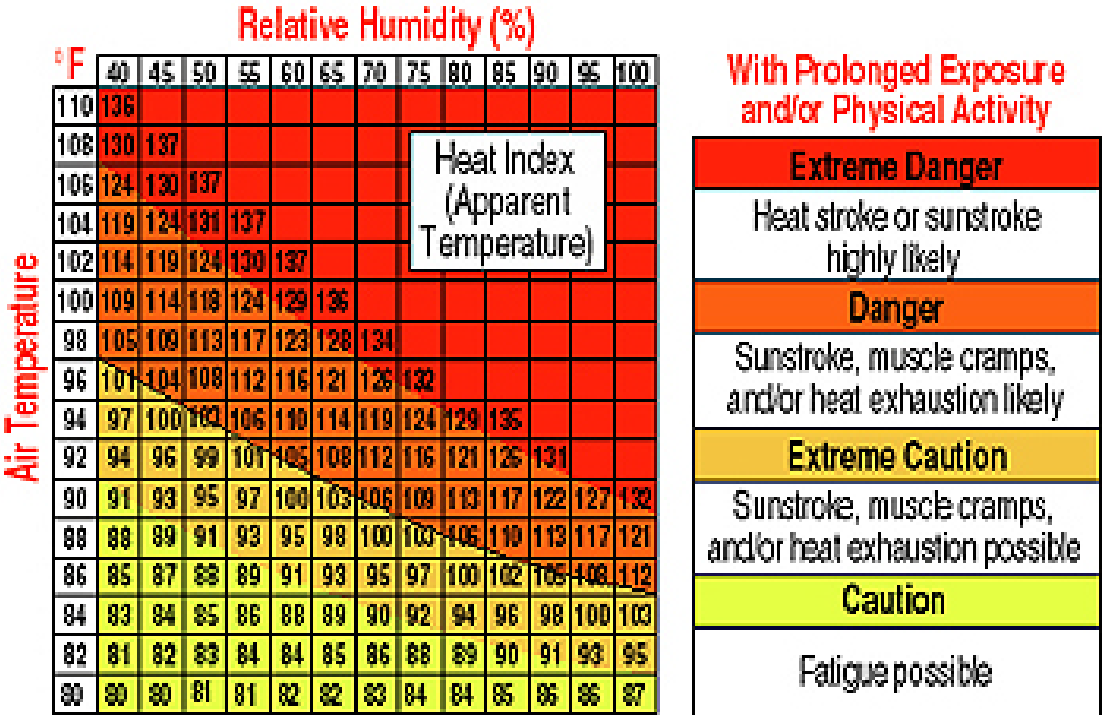
Providing a period of acclimatization for new employees and those returning from other work activities can help reduce the risks of heat/cold stress problems. Acclimatization to the heat/cold through short exposures followed by longer periods of work in the hot/cold areas can also reduce heat/cold stress. The consumption of drinking water is important throughout the hot and cold work activities. In high heat stress areas, an employee can lose as much as one quart of liquid per hour.

Training supervisors to recognize and be able to correctly treat heat/cold stress problems is very important. Employee's physical conditions should be considered when determining their fitness for working in hot/cold areas. Older employees, obese employees, and those taking some type of prescription drug are usually at a greater risk for experiencing a heat/cold related problem.

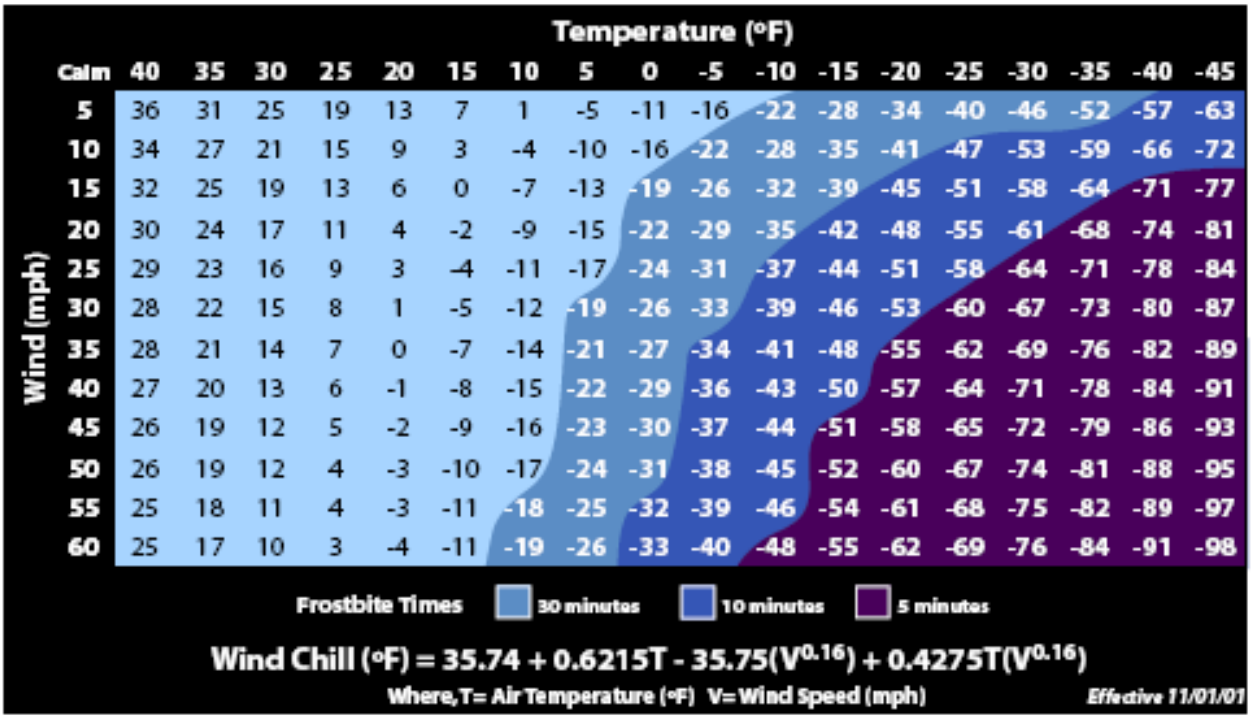
Cold Stress Disorders

Condition	Signs and Symptoms	First Aid
Mild Hypothermia Usually occurs when the core body temperature drops between *98 - 90*°F	• Shivering; • Lack of coordination, stumbling, fumbling hands; • Slurred Speech; • Memory Loss; and/or • Pale, cold skin.	• Move to warm area; • Stay active; • Remove wet clothes and replace with dry clothes or blankets and cover head; and/or • Drink warm (not hot) sugary drink.
Moderate Hypothermia Usually occurs when the core body temperature drops between *90 - 86*°F	• Shivering stops; • Unable to walk to stand; and • Confused and irrational	• All of the above plus: • Call 911 for an ambulance • Cover all extremities; completely; and • Place very warm objects, such as hot packs or water bottles on the victim's head, neck, check and groin.
Severe Hypothermia Usually occurs when the core body temperature drops between *86 - 78*°F	• Severe muscle stiffness; • Very sleepy or unconscious; • Ice cold skin; and • Death.	• Call 911 for an ambulance; • Treat the victim very gently; and • Do not attempt too re-warm. The victim should receive treatment in a hospital.
Frostbite Usually occurs when the skin actually freezes and loses water. Frostbite usually occurs when temperatures are below 30°F. Wind chill factors can allow frostbite to occur in above freezing temperatures.	• Cold, tingling, stinging or aching feeling in the frostbitten area. This is followed by numbness; • Skin color turns red, then purple, then white or very pale. The skin is cold to the touch; and • Blistering in severe cases.	• Call 911 for an ambulance; • Do not rub the area; • Wrap frostbitten area with a soft cloth; • If help is delayed, immerse in warm, not hot, water. Do not pour water on affected area; and • Apply sterile dressings to blisters to prevent breaking.
Trench Foot Usually occurs by having feet immersed in cold water for long periods of time. Similar to frostbite, but less severe	• Tingling, itching or burning sensation; and • Blisters may also be present.	• Soak feet in warm, not hot, water; • Wrap with a dry soft cloth or bandage; and • Drink a warm, sugary drink.

Heat Index Chart



Windchill Index



Wind (mph) \ Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Calm																		
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Driving Safety

1) Objective

We are committed to providing our employees the safest work environment possible and to also contribute to the wellbeing of their families and the community whenever possible. This Driving Safety Policy is intended to provide our employees with knowledge and guidelines to keep them safe while driving, whether traveling to and from work, driving for work, or during personal time. We encourage all employees to utilize the information in this policy even when off the clock. The objectives of this policy are threefold:

- To save lives and to reduce the risk of life-altering injuries to our employees, their families and others in the community;
- To protect our personal and financial resources; and
- To guard against potential liabilities associated with vehicle accidents involving employees while driving on company time.

2) Scope

This policy applies to all employees that must drive for work purposes. Any employee who drives a vehicle (company or personal) while on the clock must follow the rules and regulations stated in this policy and those covered in training sessions.

3) Driver Eligibility

Employees who drive company vehicles or drive personal vehicles for company-related work must have prior authorization. The process to become an authorized driver consists of the following steps:

- Employee must possess a valid driver's license;
- Drivers must be at least 18 years of age;
- Driver Request Form (Appendix A) must be submitted with a photo copy of driver's license;
- Employees must complete the driving safety training program;
- An acceptable driving report must be obtained from the Department of Motor Vehicles (DMV);
- Employees must sign a Driver Contract; and
- Final approval by the Human Resource Department must be obtained.

4) Training

We believe strongly in the value of our employees, their families and the community. Therefore all authorized drivers will receive driving safety training during their new-hire orientation process. Additional training (review) will be provided annually. Authorized drivers are required to attend annual driving safety training session and all other employees are encouraged to attend. This training will be scheduled as needed. Date and location of training sessions will be provided in advance.

5) Driving Record Check

a) All employees needing authorization to drive must submit to a check of their motor vehicle record. The steps to complete this process are:
   - New driver shall fill out Driver Request Form (Appendix A).
   - Area supervisor will check form for complete information and submit to the Human Resource Department.
   - Employee's driving record will be obtained from the DMV.
   - The Human Resource Department will evaluate the record and inform area supervisor if new driver is eligible for authorization.
   - Authorized drivers will have their records reviewed at least annually.

b) The Human Resource Department will review driving records annually on all authorized drivers. New records will be obtained from the DMV and evaluated (Section 5). New records will be requested once a month. Authorized drivers will have their records obtained in the month of their annual performance review. Any change in their record will be noted on the employee's authorization form and their area supervisor will be informed of any change to their authorized driver status.

6) Driver Contracts

All authorized drivers will be required to sign a contract (see Appendix B) acknowledging their awareness and understanding of the driving safety policy regarding driving record checks, driver performance, driving safety rules, vehicle maintenance and procedures for reporting of any traffic violations or accidents. Area supervisors will be responsible for securing signed contracts and maintaining them on file. A copy of the contract must be forwarded to the Human Resource Department.

After employee has met all requirements (Section 3) to become an authorized driver, area supervisor shall request final approval from the Human Resource Department. Area supervisor must submit all necessary forms for approval. Any changes that might affect drivers authorization (driving accident, ticket, etc.) must immediately be made known to area supervisor by the employee and then relayed to the Human Resource Department by the area supervisor. All steps will be taken to determine appropriate action and if a change is necessary to driver's authorization status.

7) Driving Safety Rules

Authorized drivers must follow all rules when driving on company time. Failure to abide by the rules could result in the loss of driving privileges, disciplinary action and/or termination of employment. We take driving very serious and expect all employees to do the same.

a) Driver should familiarize themselves with the vehicle they are going to drive before driving. They should know where all instruments are in the cab and the location of turn signals, lights, wipers, flashers, emergency brake, etc. Seat and mirrors must also be adjusted.

b) Driver should confirm that insurance information is located in the glove box before using vehicle.

c) Statistics show that seat belts are very effective in preventing injuries and death when properly worn. We require all employees to wear seat belts, unless a doctor's excuse is provided in writing, when:

i) Driving or riding as a passenger on company time;
ii) In a company vehicle; and
iii) Driving on company property.

d) Any flaw or defect in the seat belt systems should be reported immediately to the area supervisor. Employees and their families are encouraged to use seat belts and child restraints every time they drive or ride in a motor vehicle.
e) Driver must comply at all times with all traffic safety laws.
f) Drivers should drive at an appropriate speed for the road conditions. This means that in some situations (rain, snow, etc.) drivers should drive slower than the posted speed limit.
g) Drivers should not engage in aggressive driving acts. This would include, but not be limited to, tailgating, excessive speed, failing to signal intentions, running red lights, passing on right and making rude "gestures" to other drivers.
h) Only authorized passengers should be allowed in the vehicle. Driver must ensure that all passengers are properly using seat belts.
i) Driver must not allow any other person to drive the vehicle unless they are authorized to do so.
j) Driver should never leave keys in the vehicle or leave the vehicle unattended while the engine is running.
k) Drivers should park vehicle in such a manner that eliminates backing out whenever possible.
l) Never attempt to push or pull another vehicle.
m) Never transport hazardous (flammable, toxic, etc.) materials unless required by the job and use appropriate vehicle and take all necessary precautions.
n) Smoking is not allowed in company vehicles.
o) Drivers should not eat while driving. Stop for meals whether eating in a restaurant or eating in the vehicle.
p) Drivers should not talk on cell phones while driving or use other personal electronic devices. Make any necessary calls before driving.
q) Drivers should not attempt to perform any type of personal grooming while driving.
r) Alcohol and drugs are not allowed in company vehicles. They are also not allowed in personal vehicles being used for company business. Driving while under the influence of alcohol or drugs is also prohibited.
s) Drivers should not operate a vehicle anytime their ability to drive is impaired or affected by such things as fatigue, illness, injury, medication, etc.
t) Use turn signals to warn other drivers of your intentions.
u) Drivers must drive with headlights on at all times.

8) Personal Vehicle Use

Personal vehicles being used for company business must be legally licensed, insured and all safety features fully operational. Proof of sufficient insurance must be on file in the Human Resource Department before personal vehicle can be used. If driving a personal vehicle, employee's insurance is primary. In some cases, the company's insurance will provide secondary coverage.

9) Condition of Vehicle

a) **Driver Inspection**

Employees should inspect all vehicles before driving. Items to be checked are found on the Safety Inspection List (Appendix C) which is available from area supervisors or in the Human Resource Department. Any needed repairs or problems that could be a potential danger should be reported to the immediate supervisor and the vehicle should not be driven. The supervisor shall forward the information to the appropriate department so maintenance or repairs can then be performed before use of vehicle will be allowed.

b) **Fueling**

Driver is responsible for refueling vehicle before returning it to the parking area. Check with your supervisor for refueling procedures. No personal purchases shall be made on company card.

c) **Regular Maintenance**

Employees, who have company cars or have been assigned specific vehicles to drive, are responsible for normal upkeep and repairs. Needed maintenance should be scheduled with the Service Department.

d) **Cleanliness**

Drivers should keep vehicles clean. Any debris, food, drink cups or other items should be removed and disposed of properly at the end of use.

10) Financial Responsibility

a) Drivers are responsible for any at-fault tickets, accidents and violations incurred while they are driving. This also includes payment of fines or other financial cost (insurance deductible, repairs, etc.) incurred as a result of such tickets, accidents and violations.

b) Drivers are responsible for replacement cost for lost keys, locksmith cost for opening lock doors, replacement cost for lost keyless entry device and any other such cost as a direct result of their actions.

c) Drivers will be financially responsible for cleaning of vehicle beyond normal use.

11) Accidents

If involved in an accident, regardless of severity, call local authorities. Notify your immediate supervisor, as soon as possible. Drivers who are involved in an accident may be placed on temporary suspension. They should not drive again for company business until after an investigation is completed by the company. The driver's supervisor will be notified of the outcome of the investigation and whether the driver's authorization is denied, restored or if additional driver training will be required before authorization is granted. The driver's immediate supervisor will be responsible for determining the corrective/disciplinary action taken if the accident is determined to have been preventable or their fault.

When an accident occurs, the driver should:

a) Get medical attention, if necessary;

b) Provide first aid only when necessary and only to the extent you are trained;

c) Stay calm and don't engage in verbal fights;

d) Do not admit fault or make any accusations of guilt;

e) If possible, take pictures of the accident;

f) Make notes about the accident including as much information as you can. (Other drivers full name, licenses number, plate number, phone number, address and insurance company);

g) Never provide your home address or phone number. Provide only information about the company;
h) Be honest and cooperative with police;
i) Only discuss situation with the police, company officials or representatives of the company's insurance company;
j) If driving personal vehicle, contact your insurance company; and
k) Complete accident report form and provide a copy to your immediate supervisor.

12) Roadside Assistance

If a driver experiences trouble with the vehicle they should pull over and out of traffic. Move as far from danger as possible. They should call their immediate supervisor and inform them of the situation. If unable to contact the supervisor then call the service department. The supervisor/Service Department will make the necessary arraignments to pick the driver up and to have the vehicle repaired or towed.

Appendix A
Request to Add/Remove Driver

The driver requesting authorization and his/her supervisor must complete this application, sign and date and submit to the Human Resource Department for approval. All information must be completely and accurately stated. Any omissions or inaccuracies will cause a delay or denial of authorization.

Check appropriate box: ☐ Add Driver ☐ Remove Driver ☐ Change Driver Information

Driver Information

Employee ID #:_____ Department:_____
Full Name:_____ Date of Birth:____/____/____

Home Address:_____ City:_____ State:_ Zip:_____

Home Phone:_____ Cell Phone:_____

Driver's License#:_____ State Issued: _____ Exp. Date:____/____/___

License Class:_____ License Restrictions:_____ License Endorsements:_____

History
Check all that apply and provide dates, times and any pertinent details. Use back page if needed.

☐ Job contingent upon authorization to drive?_____

_____

☐ Accidents?_____

_____

☐ Tickets?_____

_____

☐ Convictions?_____

_____

I certify that the information provided on this form is correct and accurate. I understand that this information will be used to obtain a record of my driving history from the Department of Motor Vehicles. I further understand the decision to authorize me as a driver will be based on this information. I also acknowledge that I have attended the driver safety training program, have read and understand the company driving manual and agree to abide by all rules and regulations.

_____

Employee Signature Printed Name Date

_____

Supervisor's Signature Printed Name Date

A PHOTOCOPY OF EMPLOYEE'S DRIVER'S LICENSE MUST BE ATTACHED TO THIS FORM.

Appendix B
New Driver Contract

I acknowledge that I have read and understand the driving safety manual, have attended the driver safety training program and passed all required tests. I also understand the correct procedures for reporting any accidents or traffic violations and agree to abide by all rules and regulations. I agree to the statements listed below and understand if I fail to meet any of the requirements or promises, my driving privileges could/will be suspended or revoked. Additional disciplinary action could also be taken, up to and including termination of employment, depending upon the circumstance and severity of my driving actions or failure to meet these promises.

- I will abide by all motor vehicle laws and speed limits.
- I will carry the necessary insurance on my personal vehicle if it is used for company business.
- I agree never to drive under the influence of any drug, including alcohol. I will not allow anyone to consume any drug or alcohol while riding in my car.
- I agree never to let any unauthorized person drive the vehicle while under my care.
- I will always wear my seat-belt and I will require that any passengers in the vehicle wear theirs, at all times.
- I will be responsible for keeping the vehicle clean, for filling the gas tank and for making sure it receives maintenance and repairs as necessary.
- I will not use a cellular telephone while I am driving because it is not safe to do so. If I do need to make a telephone call, I will pull off of the road to a place that is safe to call from.
- I will never pick-up hitchhikers or strangers.
- I will not drive aggressively.
- I will not smoke in the vehicle.
- I will not attempt to perform any personal grooming while driving.

Employee Signature	Printed Name	Date

Supervisor's Signature	Printed Name	Date

A PHOTOCOPY OF EMPLOYEE'S VALID DRIVER'S LICENSE MUST BE ATTACHED TO THIS FORM. COPIES MUST BE FORWARDED TO THE HUMAN RESOURCE DEPARTMENT AND ALSO KEPT ON FILE IN THE AREA SUPERVISOR'S OFFICE.

Appendix C
Safety Inspection List

The safety of all employees who drive this vehicle is dependent upon a safe and reliable vehicle. Drivers should use this checklist every time they drive the vehicle to find needed repairs or potential problems and to report all necessary items to their immediate supervisor.

DO NOT OPERATE THE VEHICLE IF ANY PROBLEM IS FOUND THAT CAUSES THIS VEHICLE TO BE DANGEROUS TO DRIVE! NOTIFY SUPERVISOR IMMEDIATELY.

Driver ID Number

Vehicle-Make and Model ID Number Date

✍	Item	Description
	Check Tire inflation and wear	
	Check for oil or water under vehicle	
	Check oil and water level	
	Check belts for cracks or fraying	
	Check for body damage	
	Check headlights and signals	
	Check brake lights if possible	
	Check mirrors and windows	
	Check brakes	
	Check horn	
	Check gauges	
	Check wipers	
	Check steering	
	Check seat belts	

This form should be returned to your immediate supervisor upon completion of your trip. Use back of sheet if additional space is needed to report problems.

OSHA INSPECTION GUIDELINES

PURPOSE/ SCOPE

The purpose of JDL Warm Construction OSHA Inspection Guidelines Safety Program is to inform our employees that they have the right to a safe workplace and of their duty to perform their work safely in the safest possible working conditions for its employees' work place. It is each employee's responsibility to ensure they are performing their job in the safest most efficient manner possible.

The second purpose is to inform its supervisors, foremen and employees of our rights and cooperation required during an OSHA inspection. Protocols are established and are to be understood by supervisory as well as non- supervisory personnel. All supervisory personnel should be well-versed in our company's policy, be familiar with OSHA regulations and JDL Warm Construction Safety Programs.

It is imperative that all JDL Warm Construction personnel understand the gravity of the situation if OSHA would happen to come to one of our jobsites and issue one or more citations. It is the number one goal of JDL Warm Construction to make sure our employees are able to identify hazards, know how to mitigate them, are trained and equipped to perform their work safely. JDL Warm Construction has several tools to help their employees work safe. P-JHA (Pre-Job Hazard Assessments), permits, safe work procedures, etc. In the event of an OSHA inspector comes to our jobsite immediate notification must be made to the JDL Warm Construction Safety Director.

All JDL Warm Construction employees are encouraged to discuss any safety hazard with their supervisor and/or foreman. If the employee still feels uncomfortable about any situation they must stop and contact the JDL Warm Construction Safety Director. It is JDL Warm Construction's belief that all unsafe hazards, especially in the event of an imminent danger, all work must stop, be addressed, and mitigated before the job moves forward. A JDL Warm Construction employee should never feel like they need to call OSHA for an inspection.

WHAT IS OSHA?

The Occupational Safety and Health Administration (OSHA) is an agency of the United States Department of Labor. Congress established the agency under the Occupational Safety and Health Act, which President Richard M. Nixon signed into law on December 29, 1970. The Occupational Safety and Health Act of 1970 (OSH Act) was passed to prevent workers from being killed or otherwise harmed at work. The law requires employers to provide their employees with working conditions that are free of known dangers. OSHA sets and enforces protective workplace safety and health standards. OSHA also provides information, training and assistance to employers and workers.

HAS OSHA MADE A DIFFERENCE? YES

- When OSHA was formed in 1970, there were over 14,000 fatalities or about 38 worker deaths a day. Currently that amount has been reduced by over two-thirds or 69%, to 13 a day in 2014
- Injuries and illnesses are down-from 10.9 incidents per 100 workers in 1972 to 3.3 per 100 in 2014
- Worked with employers and employees to reduce workplace injuries and illnesses by 40%
- Virtually eliminated brown lung disease in the textile industry
- Reduced trenching and excavation fatalities by 35%
- Injuries alone cost U.S. business over $125 billion

CONSTRUCTION'S "FATAL FOUR"

Out of 4,764 worker fatalities in private industry in calendar year 2020, 1,282 or 26.9% were in construction-that is, one in four worker deaths last year were in construction. The leading causes of private sector worker deaths (excluding highway collisions) in the construction industry were falls, followed by electrocution, struck by object, and caught-in/between. That is why OSHA selected these four major topics for the OSHA Focus Four Outreach Training topics:

- Falls
- Electrocutions
- Struck by Object
- Caught-in/between

WHAT DOES OSHA DO?

- Encourages employers and employees to reduce workplace hazards and implement new or improve existing safety and health programs
- Develops and enforces mandatory job safety and health standards
- Maintains a reporting and recordkeeping system to monitor job-related and recordkeeping system to monitor job-related injuries and illnesses
- Provides assistance, training and other support programs to help employers and workers

WHO IS COVERED BY THE OSHA ACT?

- Most private sector employees.
- State and local and government workers. Employees who work for state and local governments are not covered by Federal OSHA if they have an OSHA-approved state plan.
- Federal government workers. Federal agencies must have a safety and health program that meets the same standards as private employers. Although OSHA does not fine federal agencies, it does monitor federal agencies and responds to worker's complaints.
- Coverage is provided directly by federal OSHA or thorough and OSHA-approved state program
- Does not cover the self-employed or immediate family members of farm employers that do not employ outside workers or workers regulated by another federal agency (for example MSHA (Mine Safety and Health Administration), the Department of Energy or Coast Guard, etc.)

OSHA CITATIONS

There are six specific categories of OSHA violations, each of which carries either a recommended or a mandatory penalty:

- De Minimis Violations - where an employer has implemented a measure different from one specified in a standard, that has no direct or immediate relationship to safety or health. These conditions do not result in citations or penalty.
- Other-than-Serious Violations - where the accident/incident or illness that would be most likely to result from a hazardous condition would probably not cause death or serious physical harm, but would have a direct and immediate relationship to the safety and health of employees.
- Serious Violations - a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment unless the employer did not, and could not with the exercise of reasonable diligence, know of the presence of the violation.
- Willful Violations - employer demonstrates either an intentional disregard for the requirement of the OSH Act or a plain indifference to employee safety and health

- Repeated Violation - employer has been cited previously, within the last five years, for the same or substantially similar condition or hazard and the citation has become a final order of the Occupational Safety and Health Review Commission (OSHRC)
- Failure to Abate Prior Violation - when a previously cited hazardous condition, practice or non-complying equipment has not been brought into compliance since the prior inspection and is discovered at a later inspection. However, if the violation was corrected, but later reoccurs, the subsequent occurrence is a repeated violation.

In November 2015, Congress enacted legislation requiring federal agencies to adjust their civil penalties to account for inflation. The Department of Labor has adjusted penalties for its agencies, including the Occupational Safety and Health Administration (OSHA).
The new penalties took effect August 2, 2016. Any citations issued by OSHA on or after this date will be subject to the new penalties if the related violations occurred after November 2, 2015.

OSHA'S GENERAL DUTY CLAUSE
OSHA develops and enforces standards that employers must follow. Where OSHA does not have standards, employers are responsible for following the OSH Act's "General Duty Clause" 29 U.S.C. § 654 Section 5 (A)(I) of the Act:
- 29 U.S.C. § 654, 5(a)1: Each employer shall furnish to each of his employees' employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."
- 29 U.S.C. § 654, 5(a)2: Each employer shall comply with occupational safety and health standards promulgated under this act.
- 29 U.S.C. § 654, 5(b): Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.
- OSHA does not cite or fine employees for violation of their responsibilities.

TOP 10 MOST FREQUENTLY CITED FEDERAL OSHA STANDARDS VIOLATED IN FY2015:
1. Fall protection, construction
2. Hazard communication standard, general industry
3. Scaffolding, general requirements, construction
4. Respiratory protection, general industry
5. Control of hazardous energy (lockout/tagout), general industry
6. Powered industrial trucks, general industry
7. Ladders, construction
8. Electrical, wiring methods, components and equipment, general industry
9. Machinery and Machine Guarding, general requirements
10. Electrical systems design, general requirements, general industry

Penalty Costs - Old vs New		
Type of Violation	Previous Maximum Penalty	New Current Maximum Penalty
Serious or Other-Than-Serious	$7,000 per violation	$15,625 per violation
Failure to Abate	$7,000 / day beyond abatement date	$15,625 / day beyond abatement
Willful or Repeated	$70,000 per violation	$156,259 per violation

WHAT ARE EMPLOYER'S RIGHTS & RESPONSIBILITIES?

- Prominently display where workers can see them:
  - The official OSHA Job Safety and Health - It's the Law poster. The OSHA poster describes rights and responsibilities under the OSH Act. This poster is free and can be downloaded from www.osha.gov
  - OSHA Recordkeeping 300A Log Summary which shows the company's work-related injuries and illnesses. Summary of records for the previous year must be posted from February 1 through April 30. The OSHA Logs are not required of employers of 10 or less.
  - Recordkeeping forms must be maintained on a calendar year basis. As of January 1, 2015, employers must notify OSHA within 8 hours of a workplace fatality or within 24 hours of any work-related inpatient hospitalization, amputation or loss of an eye. (1-800-321-OSHA [6742]); www.osha.gov/report_online).
  - Any OSHA citations in the workplace
- Determine which standards apply to the workplace.
- Follow all relevant OSHA safety and health standards.
- Find and correct safety and health hazards.
- Inform employees about chemical hazards through training, labels, alarms, color-coded systems, chemical information sheets and other methods.
- Provide required personal protective equipment at no cost to workers.
- Provide training to workers, for the type of work they will perform, in a language and vocabulary they can understand.
- Keep accurate records of work-related injuries and illnesses.
- Perform tests in the workplace, such as air sampling, required by some OSHA standards.
- Provide hearing exams or other medical tests required by OSHA standards.
- Not retaliate against workers for using their rights under the law, including their right to report a work- related injury or illness.
- Temporary workers must be treated like permanent employees. Staffing agencies and host employers share a joint accountability over temporary workers. Both entities are therefore bound to comply with workplace health and safety requirements and to ensure worker safety and health. OSHA could hold both the host and temporary employers responsible for the violation of any condition.
- See JDL Warm Construction Company Safety Policy for other duties.

EMPLOYER'S RIGHTS BY OSHA

Although some of these actions are strongly discouraged, employers need to know their rights during an inspection, including the right to say "no" to an OSHA CSHO (Compliance Safety & Health Officer) when he or she seeks to inspect a work place.

1. Employers have a right under the Fourth Amendment to the U.S. Constitution to be free in their workplaces, just as they are in their homes, from unreasonable searches and seizures, which includes inspections by OSHA. What that means is, OSHA may not inspect a workplace unless the Agency has administrative probable cause (a lower burden than criminal probable cause) to believe that a violative condition exists within.
2. Employers have a right to demand an inspection warrant that establishes OSHA's probable cause to inspect. This is strongly discouraged. This type of action will only promulgate the risk of potential retaliation by OSHA; the risk of signaling to OSHA that the company may have something to hide; the loss of control over the inspection's scope; the benefit of cooperating and good working relationship with OSHA; the benefit of the opportunity to negotiate the scope and conditions of the inspection itself.
3. Another right employers should consider asserting with regard to OSHA inspections is the right to

exclude non-employee third parties (such as a union representative at a non-union workplace) from participating in the inspection process. OSHA recently issued a formal Interpretation Letter of the regulation covering who may participate in OSHA walk-around inspection (29 C.F.R. 1903.8(c) – Representatives of Employers and Employees). Specifically, OSHA expressed its belief that employees at a non-union worksite may authorize a third party affiliated with a union or community organization to act as the employees' representative during an inspection. Notwithstanding OSHA's interpretation letter, the plain language of the standard makes it clear that such involvement by a third-party union representative is not permitted under the law, and employers may exercise their rights to exclude third parties from the inspection by demanding and challenging a warrant under those circumstances. If confronted with such a situation, employers should consult with legal counsel before allowing any non-employee third party to participate. One approach would be to demand and challenge an inspection warrant. If the non-employee is permitted on the premises, employers should be explicit about who bears responsibility for any injury to that person, who is responsible for any PPE, determine whether that person is trained on any hazards that may be present or has any necessary security clearances for sensitive activities that may be in view, and how to protect any proprietary processes from being revealed.

4. Also, before inspections begin, employers have the right to an opening conference. This is one of the most important stages of the inspection because it is the time when employers can:
    - Negotiate to narrow the scope of the inspection;
    - Can ask questions about the purpose of and probable cause justifying the inspection; and
    - Try to establish ground rules with OSHA about how the inspection may proceed, from the collection of documents (through written requests only), to interviews (scheduled in advance), and physical access to the facility (only with a management escort).
5. If the inspection was initiated by an employee or former employee complaint, employers also have a right to access a copy of the complaint before consenting to the inspection.
6. Once an OSHA inspection begins, employers also have many rights, including a right to accompany the CSHO at all times during the walkaround, and to take side-by-side photographs or other physical evidence that OSHA takes during the inspection. Another important right relates to management interviews. Interview statements by management representatives bind the company, and since the OSH Act gives employers the right to be present when binding statements are taken, employers therefore have a right to be present and participate in interviews of management witnesses, regardless of whether the management witness wants the representative there.
7. The employer has the right to accompany the CSHO. This person may be an appointed safety officer of the company or foreman. The statute further provides that, in the absence of an authorized employee representative, the CSHO "shall consult with a reasonable number of employees concerning matters of safety and health in the workplace." This is a very important right. You may be the only spokesman for JDL Warm Construction during the inspection and the eyes and ears of management for any contest proceedings later. If possible, have a management representative and JDL Warm Construction Safety Director on site.
8. The OSHA statute gives the CSHO authority to interview employees, privately if he wishes, and to examine machinery or equipment. The CSHO is also permitted to take photographs, use a video camera, take samples, and to use other reasonable information gathering techniques. You should also take pictures from the same angle and samples as well when you accompany the CSHO to have a record of the proceedings that duplicates the officer's as closely as possible.
9. After inspections, employers have the critical right to contest OSHA's citations, which are nothing more than allegations. OSHA is not the final word, and there is a body of independent ALJ's who hear challenges to OSHA citations.
10. Also, after inspections, third parties (such as plaintiffs' attorneys, union organizers, or competitors) may attempt to obtain OSHA's inspection file from your inspection through requests under the Freedom of Information Act. Employers have a right to protect their trade secrets and business

confidential information from disclosure to third parties. They do need to provide that information to OSHA during the inspection, but if you identify it as confidential business information, OSHA will either refuse to produce the information in response to a third party FOIA request, or will at least notify you that a FOIA request has been made, and likely share who made the request and ask you to justify that claim.

11. Employers have a general right that OSHA's inspection be conducted reasonably. Sec. 8(a) of the OSH Act provides: "OSHA may inspect at reasonable times any workplace during regular working hours and at other reasonable times within such reasonable limits and in a reasonable manner." It is this requirement of reasonableness that gives employers the right to push back on overly burdensome or disruptive inspection requests, such as employee interviews right on the manufacturer floor without notice, or requests for documents and information that would be extremely voluminous. In these cases, based on Sec. 8(a) of the Act, employers can request that inspections be moved to an office and scheduled in advance, or to bargain for more limited document productions.

WHAT ARE WORKER'S RIGHTS AND RESPONSIBILITIES?

The OSH Act gives workers the right to safe and healthful working conditions. It is the duty of employers to provide workplaces that are free of known dangers that could harm their employees. This law also gives workers important rights to participate in activities to ensure their protection from job hazards.

WORKER'S RIGHTS AND RESPONSIBILITIES

- Receive information and training about hazards, methods to prevent harm, and the OSHA standards that apply to their workplace. The training must be done in a language and vocabulary workers can understand.
- Review records of work-related injuries and illnesses that occur in their workplace.
- Receive copies of the results from tests and monitoring done to find and measure hazards in the workplace.
- Get copies of their workplace medical records.
- Work on machines that are safe.
- Be provided required safety gear, such as gloves or a harness and lifeline for falls.
- Be protected from toxic chemicals
- File a confidential complaint with OSHA to have their workplace inspected.
- Participate in an OSHA inspection and speak in private with the inspector.

A job must be safe or it cannot be called a good job. OSHA strives to make sure that every worker in the nation goes home unharmed at the end of the workday, the most important right of all. JDL Warm Construction employees are expected to:

- Read the OSHA poster.
- Follow federal, state, customer and JDL Warm Construction's safety and health rules, policies and procedures.
- Follow safe work practices for your job task, as directed by their supervisor or foreman.
- STOP a co-worker or others in the area if they see an unsafe condition.
- Report hazardous conditions to a supervisor or safety committee.
- Report hazardous conditions to OSHA, if employers do not fix them.
- Cooperate with OSHA inspectors.
- Be receptive when receiving information and training about hazards, methods to prevent harm, and the OSHA standards that apply to their workplace. The training must be done in a language and vocabulary workers can understand.
- Identify and correct problems in their workplaces, working with their employers whenever possible.
- Wear or use all required gear and equipment.

WORKERS' RIGHT TO REFUSE DANGEROUS WORK

Workers may file a complaint with OSHA concerning a hazardous working condition at any time. Workers' right to refuse to do a task is protected if **all** of the following conditions are met:

- Where possible, you have asked the employer to eliminate the danger, and the employer failed to do so; and
- You refused to work in "good faith." This means that you must genuinely believe that an imminent danger exists; and
- A reasonable person would agree that there is a real danger of death or serious injury; and
- There isn't enough time, due to the urgency of the hazard, to get it corrected through regular enforcement channels, such as requesting an OSHA inspection.

YOU SHOULD TAKE THE FOLLOWING STEPS:

- Ask your employer to correct the hazard, or to assign other work;
- Tell your employer that you won't perform the work unless and until the hazard is corrected; and
- Remain at the worksite until ordered to leave by your employer.
- If your employer retaliates against you for refusing to perform the dangerous work, contact OSHA immediately. File a complaint with OSHA if they have been retaliated against by their employer as the result of requesting an inspection or using any of their other rights under the OSH Act for acting as a "whistleblower" under the additional 21 federal statutes for which OSHA has jurisdiction.
- Complaints of retaliation must be made to OSHA within 30 days of the alleged reprisal. To contact OSHA call 1-800-321-OSHA (6742) and ask to be connected to your closest area office. No form is required to file a discrimination complaint, but you must call OSHA.

RIGHT TO REQUEST AN OSHA INSPECTION

If your employer is covered by the Occupational Safety and Health Act, you have the right to request an OSHA inspection. OSHA also may make unrequested inspections. Inspections can cover the entire workplace or just a few operations. Some CSHOs are trained about safety hazards; some are trained about health hazards (industrial hygienists); a few are trained about both.

Deciding to file a request for an OSHA inspection is an important decision. When a specific OSHA standard applies to a clear hazard, it may prove the right decision. However, OSHA does not have standards for every hazard, and some current OSHA standards are not fully protective of workers' health or safety. While it is possible for OSHA to issue a "General Duty Clause" citation for hazards not covered, or not covered sufficiently, by OSHA standards, the requirements for issuing such a citation are very stringent and OSHA may not be able to issue one. Because of this, there are cases in which calling OSHA may not be the best way to get management to fix a problem. In fact, if OSHA inspects and decides not to issue a citation, a workforce may be at more of a disadvantage with management waving their "clean bill of health" inspection report. Unions should consider a range of options, including telling management that they will call for an OSHA inspection if management does not fix the problem. In certain situations, this could get a more effective and quicker response than calling for an actual OSHA inspection.

If a union is involved, it should be involved in all aspects of the inspection. Although employer retaliation against individuals for safety and health activity is illegal under the OSH Act, having their union file the complaint may offer the employee better protection than doing this on their own. If there is a local committee on occupational safety and health, the employee should meet with them before filing a complaint. They can provide additional advice and assistance.

PREPARING FOR AN INSPECTION

Once a complaint is filed, be ready for an inspection. For complaints that OSHA considers "serious," the inspection should occur within thirty days. If it does not, the person that contacted OSHA can call and ask about the delay. That person should tell co-workers and union activists that they filed a complaint, so they have time to prepare their comments to the inspector. Review the completed complaint form and the relevant OSHA standards. Keep notes on new problems or workplace changes.

Often, OSHA prefers to "investigate" complaints by faxing a letter asking about the hazard to the employer, rather than by conducting an on-site inspection. The employer is required to respond back to OSHA within five working days. However, if you give OSHA a written, signed complaint that documents a hazard or an OSHA violation and want OSHA to come to your workplace, OSHA must do an on-site inspection. Sometimes OSHA's fax policy can be helpful when a written inquiry is better than an actual inspection. For example, if there is no OSHA standard that covers the hazard, a letter of inquiry may prompt management action. An actual OSHA inspection — and no citation — may encourage management not to fix the problem. If OSHA decides not to inspect, they must notify you in writing and give reasons. The employee may question this decision with the OSHA area director and regional administrator.

DESIGNATE AN EMPLOYEE REPRESENTATIVE

The law says that a representative authorized by workers has a right to accompany the inspection. This applies whether you requested an inspection or to an OSHA scheduled inspection. Under no circumstances may the employer choose the workers' representative. The OSHA complaint form does not include a line to indicate who this representative is (or who an alternate is for other shifts or days off). Make sure you provide this information with your complaint.

OSHA finds it easier to identify an employee representative in union workplaces, where the union picks the representative. This representative must be an actual employee acting as a Union Steward. In a non-union workplace, the inspection is usually unaccompanied. The inspector is required to talk to a reasonable number of employees. The OSHA inspector can decide disputes about designation of employee representatives and can include others, such as union staff and technical experts.

OSHA must generally issue any citations within six months of the occurrence of any violations. Citations are supposed to be mailed to employee representatives no later than one day after the citation is sent to the employer. Citations can also be mailed to any employee upon request.

OSHA EMERGENCY HOT-LINE 1-800-321-OSHA TO:

- Report workplace safety or health fatalities or the in-patient hospitalization.
- Report a workplace hazards
- File a complaint about a workplace hazard.
- Request information on OSHA
- Request an OSHA publication

OSHA INSPECTIONS

INSPECTION PRIORITIES

OSHA has established a safety hierarchy that protects employees in dangerous situations first and then progresses to lower-risk concerns. In order of priority, those concerns are:

- Imminent danger;
- Catastrophes that result in a fatality or hospitalizations;

- Worker complaints;
- Referrals from other federal, state or local agencies;
- Targeted inspections –
  - Local Emphasis Programs on Falls and Scaffolds.
  - National Emphasis Program on Trench Safety.
  - Programmed Inspections in Construction derived from the random selection of worksites. These inspections are compiled from information provided by FW Dodge.
- Follow-up inspections.

The second, fifth and sixth type is somewhat predictable. The first and third often arise from employee complaints. The targeted inspection priorities also imply that if a representative from OSHA is driving by an operation and they see a situation deemed to be an imminent danger to an employee, they can stop whatever work processes are occurring.

OSHA will give employers advance notice of an inspection only under four conditions:
- In cases of apparent imminent danger, to try to get management to fix the condition immediately.
- When the inspection must be after regular business hours or when special preparations are necessary.
- If management and worker representatives are not likely to be on-site unless they have advance notice.
- In other circumstances where the OSHA Area Director thinks a more complete inspection would result, such as in a fatality investigation.

OSHA rarely gives advance notice. When OSHA does give advance notice of an inspection to management, they must also inform the union. If there is no union and no safety committee with a worker representative, OSHA only has to inform management.

Workers sometimes think that management knows about an OSHA inspection in advance. However, it is a crime for OSHA employees to give unauthorized advance notice of an inspection. Sometimes a delay between the inspector's arrival at the workplace and the beginning of the inspection allows time for employers to change conditions.

WHEN OSHA ARRIVES

On the day of the inspection, the inspector arrives and asks to meet with representatives of management and employees to explain the inspection's purpose. Before starting the inspection, the CSHO will explain the nature and general scope of the inspection as well as outline the records he wants to review and the employees he wishes to question. The inspection includes an opening conference, a "walkaround" of all or part of the workplace, and a closing conference. This may take a few hours or several weeks, depending on the number of hazards, workplace size, and other factors. As a representative for JDL Warm Construction, always remain polite, respectful, and cooperative.

THE OPENING CONFERENCE

The opening conference is required by law and is supposed to be kept as brief as possible. However, make sure that the inspection will cover the hazards in the complaint. If either party objects to a joint opening conference, the inspector will conduct separate opening conferences for labor and management. During the opening conference, the inspector will determine whether employees of other employers are also working at the site. If the inspection affects them, the inspection may include other company employee representatives.

After the opening conference, but before the inspector walks around the facility, the inspector usually

checks the OSHA required Log and Summary of Occupational Injuries and Illnesses, requests to see required labor/law posters and may examine other OSHA required records.

THE WALKAROUND

After the opening conference, the inspector, accompanied by management and employee representatives, will check the safety and/or health hazards in the complaint. The inspector may decide to check for other hazards or even to expand the inspection to cover the entire workplace.

Make sure that the inspector talks to affected employees. Inform co-workers that the inspection is in progress and that they have a right to talk privately and confidentially to the inspector and to make their own verbal or written complaint to OSHA at any time.

The inspector may also conduct private interviews outside the workplace. Workers should be encouraged to point out hazards and to describe past accidents, illnesses, and worker complaints.

The OSHA inspector is supposed to bring "apparent violations" to the attention of employer and employee representatives at the time they are documented. Make sure that conditions are typical and that management has not shut down equipment, opened windows or changed other conditions. The inspector may have to return on another shift or operation. If the inspector does not observe hazards alleged in the complaint, the employee representative should explain how employees were or could be exposed.

The inspector may be using equipment to measure noise, dust, fumes, or other hazardous exposures. Watch these tests. If you do not understand what the inspector is doing, ask. Request summaries of the sampling results, which OSHA must provide to the requesting party as soon as practicable. Take notes.

JDL Warm Construction does not need to wait until the agency gets back with citations before taking proactive steps. Any deficiencies found during the walk thru should be corrected immediately or as soon as possible if it is under our control. Inform the CSHO of any hazards pointed out during inspection have been corrected. Correcting hazards not formally cited does not imply guilt. Not every hazard the inspector points out will lead to a citation, and correcting those hazards sends a positive message to OSHA. Although not a guarantee, the agency may not follow through with issuing a citation if an employer corrects a hazard ahead of time. Identification of a hazard that could lead to a worker injury should be enough to prompt an employer to mitigate the situation.

IMMINENT DANGER

If the CSHO concludes that conditions or practices exist that could reasonably be expected to cause death or serious physical harm before the danger can be eliminated, he shall so inform the employer and the employee as to attempt to get the employer to voluntarily abate the danger. When the danger can be immediately abated without great expense of shutting down the job, do so immediately. However, the CSHO has no authority to shut down the job without a court order. He can often obtain such an order, however, in a matter of a few hours. If it is decided that JDL Warm Construction cannot abate the danger without a court order, the CSHO can only leave and report to his office that he is recommending a civil action to restrain or remove the condition.

If ever it is determined that the danger in question constitutes a violation of the Act, and an employee is killed before the court order forces the removal of the danger, JDL Warm Construction may be liable to a possible penalty of $70,000 for a willful violation for each violation. A county prosecutor could then file criminal charges. A private lawyer retained by the deceased family could file a civil suit.

CLOSING CONFERENCE

The inspector is required to have a closing conference, jointly or separately, with company and employee representatives at the end of the inspection. If management wants separate closing conferences, OSHA will hold the employee representative conference first to allow for any more employee input.

The inspector will also advise the employee representative that:

- The employer must not discriminate against employees for health and safety activity.
- If the employer contests an OSHA citation, the employees have a right to elect "party status" before the Occupational Safety and Health Review Commission (an independent agency).
- They must be notified by the employer if the employer files a notice of contest or a petition for modification of an abatement date.
- They have a right to contest the time OSHA allows the employer for correcting a hazard. (Employees, unlike employers, cannot contest other aspects of the citation before the Review Commission). A contest must be in writing and must be filed within 15 working days after receipt of the citation.

DETERMINATION OF ABATEMENT PERIOD DURING CLOSING CONFERENCE

The inspector is to informally advise the employer of any "apparent violations" and ways to correct hazards, deadlines, and possible fines. A second closing conference may be held if needed information, such as sampling results, was not initially available.

If the inspector believes a violation may have occurred, he may tell you that at this point it is not known whether JDL Warm Construction will be cited for such & such condition. He may then ask how long it will take to correct the conditions in question.

By agreeing to have an *alleged* unsafe condition(s) corrected within a certain time frame, JDL Warm Construction's abatement period is being set, assuming a citation is issued. Remember, the employer has a say in deciding on an abatement date. The inspector does not set it alone. The inspector should ask, "When can JDL Warm Construction have it corrected"?

It is up to the employer to insist on an adequate abatement period. If the condition to be corrected is a very minor one and is not a problem to correct, and if the employer recognizes that it is an unsafe condition, then agree to an early abatement period, (i.e., immediate or one day after receipt of the citation).

If you question the inspector's reasoning and you feel JDL Warm Construction is, in fact, in compliance or know that a certain amount of time would be necessary to correct the alleged unsafe condition, then deny a violation and insist on a longer abatement date, usually 15 to 20 days.

Remember, the abatement date becomes effective upon receipt of the Citation and Notification of Penalty (citation) from OSHA. Even with immediate abatement, JDL Warm Construction has one day after the receipt of the citation in which to correct the alleged unsafe condition. If you wait to see what JDL Warm Construction will be cited on and yet agree to an immediate or one-day abatement, then JDL Warm Construction may not have time to make the correction. Failing to correct within the time allowed may subject JDL Warm Construction to a maximum penalty of $12,471 per day for failure to abate.

On the other hand, to spend money to correct an alleged unsafe condition before the Citation and Notification of Penalty is received may prove to be a waste if, for one reason or another, JDL Warm Construction is not cited on this particular condition. In other words, if it is going to cost JDL Warm Construction money and/or you question the alleged unsafe condition, insist on a long abatement period to allow enough time to be able to assess whether the citation will be contested before spending the money and time to order and install equipment or correct the unsafe condition.

Re-inspections are becoming more prevalent due to federal pressures. If JDL Warm Construction was cited and did not correct the condition, when OSHA came back again they then could be cited for Repeated Violations. The important thing to remember is that all JDL Warm Construction employees must assess the workplace and remove any hazards in the first place, before we start working and exposing ourselves and others.

RECEIPT OF THE CITATION

Employers generally receive a Citation and Notification of Penalty (citation) about ten (10) to thirty (30) days after an inspection. It takes this long for an inspector to write up his report, send it in, and have it go through all the administrative channels. So, until the Citation and Notification of Penalty is actually received, it is not certain that JDL Warm Construction will be cited on a particular item.

Should JDL Warm Construction be cited, they will receive a Citation and Notification of Penalty by certified mail along with a cover letter outlining the posting requirements. If the Citation and Notification of Penalty is sent to the jobsite, forward it immediately to the Safety Director at the main office so that the necessary steps can be taken.

A copy of the Citation must be posted in a prominent location immediately at or near the place of each alleged hazard. The copy must remain posted for three working days or until the hazard is abated, whichever is longer.

HIRING UNSAFE SUBCONTRACTORS

The OSHA (Occupational Safety and Health Administration) Standards Manual section, 1926.16 Safety and Health Regulations for Construction explains the prime contractor is responsible for compliance with all standards whether or not the work is subcontracted.

General Contractors, Remodelers, Sole Proprietors and Construction Managers who hire unsafe subcontractors to work on their jobs run the risk of OSHA inspections and fines. Under the OSHA Multi-Employer Citation Policy, the controlling contractor can be cited and fined if a hired subcontractor creates unsafe work conditions for his workers and others on the job site.

Any time we expose our employees to an unsafe work condition, even if it was caused by others, we ARE responsible. For example, we are working in a customer's location. Either the customer or another contractor has debris and hoses laying all over. Our job is a confined space right in the middle of this area and is a housekeeping/walking hazard nightmare. It doesn't matter whether we made the mess or not. If our employees are exposed to unsafe hazards, then we are at fault for not mitigating the hazard. The hazard is not simply a housekeeping and walking surfaces hazard, it is also an egress issue. What if our employee would need to be rescued or retrieved from the space? How are we going to get to him and care for him properly?

BASIC STEPS FOR SUPERVISORS/FOREMAN TO FOLLOW

- OSHA inspections must be handled by JDL Warm Construction employees that are familiar with JDL Warm Construction's inspection policy and able to make decisions, contact the appropriate supervisor/foreman, JDL Warm Construction Safety Director and allow access to the jobsite.
- Only a JDL Warm Construction officer has the right to grant a CSHO access to our projects. Non-supervisory employees should understand that they have no right to grant OSHA access and should refer any such attempt to management. If there is no authorized representative of the employees

present, the CSHO has the right to question a reasonable number of employees.

- Request to see the officer's credentials. A CSHO will have federal or state issued identification card with a photo and serial number that states they are from OSHA. You can take a photo of their credentials with your smart phone. They will also be driving an official state car.
- Remember to take notes. It is imperative that you take as complete a set of notes as possible, identifying areas visited, equipment and material examined, employees interviewed and a written description of each ALLEGED hazard. There is nothing wrong with taking notes during the investigation.
- If the CSHO has a search warrant they must produce it. We have the right to obtain a copy of any such warrants and any other documents presented.
- Ask the CSHO to wait until top management can be consulted. If you have strong convictions that the request is unreasonable and unnecessary, consult with your supervisor, the safety director, or an officer of JDL Warm Construction before proceeding. The CSHO should wait a reasonable amount of time until management arrives.
- Contact the JDL Warm Construction Safety Director immediately. Notify the appropriate JDL Warm Construction management of the inspection and request their attendance. The appropriate affiliated union must also be contacted. This must be done, especially if the CSHO has a search warrant.
- Ask the CSHO to wait to start the inspection until JDL Warm Construction's safety representative can be notified. Request permission to inform the client, other contractors and subcontractors, your supervisor and safety director that an inspection is underway at the jobsite.
- The next steps will take place once the supervisor and safety director arrive.
- By now the word is out that OSHA has arrived. This is a good time for employees to look around their job site just to make sure everything looks and is safe.
- As you wait for the proper JDL Warm Construction officials to arrive, The CSHO may ask to see required government posters such as the OSHA 300 Log and OSHA Job Safety and Health - It's the Law poster, etc. They also may change clothes/shoes if they are not dressed for the work site. Make sure he has the proper PPE for the hazards he will be exposed to.
- Now we can request the type of inspection sought. Ask to see a copy of the inspector's work assignment for your site. This paper is usually a building permit, Dodge Report, or a copy of a complaint. Remember that JDL Warm Construction may want to contest an alleged violation, so record all pertinent information. The names, business affiliation and addresses of all persons present should be written down.
- Carefully determine the reason for each person's presence. What is their role in this inspection? The best rule to follow is one of reasonableness and common sense. If the person is an equipment expert and an otherwise disinterested party to the investigation, you may choose to let him participate. If, on the other hand, you feel that the person's presence will be of questionable value concerning matters of safety and health in the workplace, then politely ask the outside party to wait until your supervisor, safety director or an officer of JDL Warm Construction can be consulted.
- Ask if this is a regularly scheduled inspection or one prompted by an employee complaint. If the inspection is the result of an employee complaint, ask to be given a copy of the complaint.
- Determine if the party filing the complaint requested that his name be withheld. If no such request was made, the inspector is allowed to disclose the name of the complainant. If the investigation involves a complaint, the CSHO generally may only inspect and interview concerning matters reasonably related to the complaint.
- Determine if the complaint was filed by a present or past employee, by an employee of a customer, subcontractor, or material supplier, or by a person not directly employed around the workplace. The answers to these questions may be extremely important to JDL Warm Construction. In most cases, an inspection can be disallowed if the complaint was filed by someone other than a present employee or his representative, unless the complaint involves an imminent danger.
- OSHA inspections vary and can be a wall-to-wall walk arounds or to partial inspections focused on a

particular operation or location. If the inspection is one of the later, the CSHO will be escorted directly to that particular area and then escorted directly back to the conference location.

- Do not allow OSHA to turn a limited inspection into a comprehensive one. Do not allow OSHA to have access to any part of our work place unescorted. If this is a worker's complaint or an inspection from a catastrophe they will be interested in only that particular area.
- In the event that the CSHO is seeking to inspect without probable cause or to make an unreasonable inspection of the jobsite, JDL Warm Construction has the right to consider requesting that a search warrant be obtained. This is highly un-recommended. Denying access to OSHA will only heighten their speculation of what is the company trying to hide. The company name can then be listed on an OSHA Targeted Inspection List. Depending on the situation JDL Warm Construction can insist on the presence of company legal counsel.
- Three steps during the inspections are required by law; Opening Conference, Inspection Walk Around/Interviews, and a Closing Conference.
- Take photos. Any photos or notes that the CSHO takes should also be noted by our supervisor and/or safety personnel on site. Our personnel need to document the type of camera/cell phone they are using, keep record of the time and date, exact location of where the photo was taken, approximate distance, and if necessary a tape measure or picture with a dollar bill to designate any distance or measurement of small items.
- Notes chronicling the inspection should be taken (avoiding any editorial comments or admissions that could later be subject to discovery in litigation). It is important to ensure that OSHA's record of the inspection is not the only "evidence" available should the matter proceed to litigation.
- Inaccuracies of photos, measurements, depictions of the work site or notes taken by OSHA should be addressed and corrected at this time.
- During the inspection:
  - Do not agree that any alleged violation exists.
  - Do not point out any possible/potential problem areas.
  - Do not indicate that you are aware of any unresolved health or safety issues.
  - Do not argue with the CSHO regarding the validity of a violation.
  - Do not volunteer any information or make any admissions.
  - These items do not buy 'good-will" for the company and can be used against them later on.
- You may show:
  - Copies of minutes of jobsite safety meetings.
  - Copies of Tool Box Safety Talks or other employee training material.
  - Copies of safety warnings to individuals, to subs, and trade contractors.
- Any other material that would help establish good faith compliance efforts.
- Unless it is beyond the scope of any warrant presented, OSHA has the right to interview employees, including privately.
- If the CSHO requests a private interview with an employee, the employee has the right to refuse and/or request that JDL Warm Construction management be present.
- All employees should be advised that they only need to answer the questions asked and need not feel compelled to volunteer information of any type.
- JDL Warm Construction has a right to interview the employees that OSHA met with privately to determine what relevant information they may have.
- Employees are entitled to a copy of any statement they make to OSHA or JDL Warm Construction.
- Remember to always be courteous and behave in a professional manner at all times. Whenever an OSHA official or employee encounters forcible resistance, opposition, interference, etc., or is assaulted or threatened with assault while engaged in the performance of official duties, all investigative activity shall cease. OSHA inspectors are protected by law.
- If the CSHO becomes confrontational or gets out of line, remain calm and call the CSHOs office.
- After the inspection, the CSHO will hold a Closing Conference. During this time the CSHO will

explain any deficiencies or violations found.

- If there is an alleged violation found during the inspection, request the following items:
  - exact nature of the violation,
  - specific location,
  - exact standard violated (if there isn't one they will cite the General Duty Clause),
  - statement on how to correct the issue.
- If there are not violations found, request a letter stating so.
- JDL Warm Construction can ask for an abatement period if any of the deficiencies found were not immediately corrected during the walk-around.
- A CSHO will not issue citations that day. Their duty is to report any findings to their supervisor at their main office. OSHA has six months after the closing conference to file citations which will arrive by certified mail to the main office. The citation must be posted immediately near the noted deficiency for three days.
- The company does not have to wait for a citation to arrive. Immediate preparations should be taken to correct any deficiencies found during the inspection. Most often those corrections can be made while the CSHO is there at the job site so they can take photographs before leaving. Correcting hazards immediately while the CSHO is there sends a positive message to OSHA.
- The project supervisor/foreman will submit a detailed written report of the overall inspection to the JDL Warm Construction Safety Director immediately following the closing conference. This report will be submitted to the JDL Warm Construction Safety Director for review and investigation purposes. This report must provide as much detail as possible such as:
  - The topics discussed with OSHA
  - Who was present
  - Who OSHA spoke with
  - What was said
  - The location of any alleged violation. Where violations are found can preserve necessary evidence for later use in litigation or in negotiation of a settlement.
  - What actually was occurring at the time of inspection relating to the alleged violation
  - What sort of investigation or documentation gathering techniques were used by the inspector?
  - Any other pertinent details including a chronology timeline of the visit
- If necessary, after the investigation by the Safety Director, a record in the form of a memorandum from management to legal counsel should be made. A memorandum in this form provides a basis for insulating the record from discovery under the attorney-client privilege.
- Remember:
  - Decide ahead of time who will escort the officer around
  - Be nice; Don't be rude
  - Follow established procedures when OSHA arrives
  - Verify the identity of the OSHA officer
  - Ensure the CSHO is wearing appropriate PPE
  - Make sure records are easily accessible
  - Take photos and accurate notes during the inspection
  - Provide an area where the inspector can interview employees
  - Correct any hazards immediately as they are pointed out
  - Don't wait to correct hazards until cited
  - Don't avoid answering questions or tell things that aren't true
  - Don't bribe an OSHA inspector
- Any admission to an alleged violation of the OSHA Act can be used against JDL Warm Construction later. Do not express any opinion regarding the alleged violation during the closing conference.

FEDERAL OSHA CITATIONS

AFTER AN INSPECTION

An inspection of your workplace was conducted in accordance with the Occupational Safety and Health Act of 1970, Executive Order 12196, and 29 CFR Part 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters. The compliance safety and health officer (CSHO) who conducted the inspection has found conditions that are in violation of the Act, Executive Order 12196, or 29 CFR Part 1960, and you have been issued a Notice of Unsafe or Unhealthful Working Conditions, OSHA-2H Form (OSHA Notice) that explains in detail the exact nature of the alleged violation(s).

This pamphlet contains important information regarding your rights and responsibilities under the Act, Executive Order 12196, and 29 CFR Part 1960. For each apparent violation found during the inspection, the CSHO discussed the following with you:

- The nature of the violation,
- Possible abatement measures you may take to correct the violative condition, and Possible abatement dates you may be required to meet.

TYPES OF VIOLATIONS

- WILLFUL: A willful violation is defined as a violation in which the employer either knowingly failed to comply with a legal requirement (purposeful disregard) or acted with plain indifference to employee safety.
- SERIOUS: A serious violation exists when the workplace hazard could cause an accident or illness that would most likely result in death or serious physical harm, unless the employer did not know or could not have known of the violation.
- REPEATED: A Federal agency may be cited for a repeated violation if the agency has been cited previously for the same or a substantially similar condition and, for a serious violation, OSHA's regionwide (see last page) inspection history for the agency lists a previous OSHA Notice issued within the past five years; or, for an other-than-serious violation, the establishment being inspected received a previous OSHA Notice issued within the past five years.
- OTHER-THAN-SERIOUS: A violation that has a direct relationship to job safety and health, but is not serious in nature, is classified as "other-than-serious."

POSTING REQUIREMENTS

When you receive an OSHA Notice, you must post it (or a copy of it) at or near the place where each violation occurred to make employees aware of the hazards to which they may be exposed. The OSHA Notice must remain posted for 3 working days or until the hazard is abated, whichever is longer. (Saturdays, Sundays and Federal holidays are not counted as working days).

EMPLOYER OPTIONS

As an employer who has been cited, you may:

- Correct the condition by the date set in the OSHA Notice and/or,
- Request an Informal Conference within 15 working days from the time you received the OSHA Notice with the OSHA Area Director to discuss the violations and/or the abatement dates.

HOW TO COMPLY

For violations cited in the OSHA Notice, you must promptly notify the OSHA Area Director by letter that you have taken the appropriate corrective action within the time set forth in the OSHA Notice. The notification you send the Area Director is generally referred to as a LETTER OF CORRECTIVE ACTION. It must explain the specific action taken with regard to the violation and state the date each corrective action was taken.

If you have abatement questions after the inspection, they should be discussed with the Area Director in the informal conference.

When the OSHA Notice permits an extended period of time for abatement, you must insure that employees are adequately protected during this time. If this is the case, you must provide OSHA with a periodic progress report on your actions taken in the interim.

INFORMAL CONFERENCE

You may request an informal conference with the OSHA Area Director to discuss the violations. You may use this opportunity to do any of the following:

- Obtain a better explanation for the violations cited.
- Obtain a more complete understanding of the specific standards that apply.
- Discuss ways to correct violations.
- Discuss problems concerning the abatement dates.
- Discuss problems concerning employee safety practices.
- Resolve disputed violations.
- Obtain answers to any other questions you may have.

You are encouraged to take advantage of the opportunity to have an informal conference if you foresee any difficulties in complying with any part of the OSHA Notice. Employee representatives have the right to participate in any informal conference or negotiations between the Area Director or Regional Administrator and the employer.

If you agree that the violations do exist, but you have a valid reason for wishing to extend the abatement date(s), you may discuss this with the Area Director during the informal conference. The Area Director may issue an amended OSHA Notice that changes the abatement date prior to the expiration of the 15-working day period.

Every effort will be made to resolve the issues at an informal conference. If, however, an issue is not resolved by the Area Director, a summary of the discussion together with the agency's position on the unresolved issues shall be forwarded to the Federal Agency Program Officer (FAPO) within 5 working days of the informal conference:

- The FAPO/Regional Administrator will confer with the appropriate Regional agency official before making a decision on the unresolved issues.
- If the FAPO/Regional Administrator, in consultation with the Area Director, decides that the item in question should remain unchanged on the OSHA Notice, the appropriate agency officials shall be advised.
- If there is still an unresolved issue after the Regional review, the agency may send a letter of appeal to OSHA's Office of Federal Agency Programs (OFAP).
- OFAP will review the disputed issues and discuss these with top agency officials, as appropriate, to obtain resolution. The decision at the National Office level, in consultation with the Regional Administrator, FAPO, and Area Director, is final.
- Under the OSHA Act, Executive Order 12196 and 29 CFR Part 1960, Federal agencies do not have the right to contest the OSHA Notice.

PETITION FOR MODIFICATION OF ABATEMENT (PMA)

Abatement dates are assigned on the basis of the best information available at the time the OSHA Notice is issued. When you are unable to meet an abatement date because of uncontrollable events or other circumstances, you may file a Petition for Modification of Abatement (PMA) with the OSHA Area Director.

The petition must be in writing and must be submitted no later than one working day after the abatement date. To show clearly that you have made a good-faith effort to comply, the PMA must include all of the following information before it can be considered:

- Steps you have taken in an effort to achieve compliance and dates they were taken;
- Additional time you need to comply;
- Why you need the additional time;
- Interim steps you are taking to safeguard your employees against the cited hazard(s) until the abatement; and
- A certification that the petition has been posted, the date of posting and, when appropriate, a statement that the petition has been furnished to an authorized representative of the affected employees. The petition must remain posted for 10 working days, during which employees may file an objection.
- A PMA may be granted or objected to by the OSHA Area Director. If a PMA is granted, a monitoring inspection may be conducted to ensure that conditions are as they have been described and that adequate progress toward abatement has been made.

When agreement to extend the abatement date cannot be reached at the Area Office, the agency may bring unresolved issues to the Regional Administrator/FAPO for resolution with his counterpart in the agency. Issues not resolved at the regional level shall be forwarded to the Director, OFAP, for resolution with agency headquarters in consultation with the Regional Administrator, the FAPO, and the Area Director. Further information on PMAs may be obtained from any OSHA Area/District office.

ALTERNATE STANDARDS

Agency heads may apply for approval of an alternate standard where deemed necessary and, after consulting with employees or their representatives, including appropriate safety and health committees, notify the Secretary of Labor and request approval of such standards. The Secretary will not approve alternate standards unless it provides affected employees equivalent or greater protection.

The agency head must provide the Secretary with the following:

- A statement of why the agency cannot comply with the OSHA standard or wants to adopt an alternate standard;
- A description of the alternate standard;
- An explanation of how the alternate standard provides equivalent or greater protection for the affected employees;
- A description of interim protective measures afforded employees until a decision is rendered by the Secretary of Labor; and
- A summary of written comments, if any, from interested employees, employee representatives, and occupational safety and health committees.

Employees and other interested groups are encouraged to participate in the alternate standard process.

EMPLOYEE COURSES OF ACTION

Employees or their authorized representatives may object to any or all of the abatement dates set for violations if they believe them to be unreasonable. A written notice of their objections must be filed with the OSHA Area Director within 15 working days after the employer receives the OSHA Notice.
The filing of an employee objection does not suspend the employer's obligation to abate the hazard(s).
Employees also have the right to object to a PMA. Such objections must be in writing and must be sent to the Area Office within 10 days of service or posting.

FOLLOW-UP INSPECTION AND FAILURE TO ABATE

If you receive a Notice of Unsafe or Unhealthful Working Conditions, a follow-up inspection may be conducted to verify that you have done the following:

- Posted the OSHA Notice as required,
- Corrected the violations as required in the OSHA Notice, and/or
- Adequately protected employees and made appropriate progress in correcting the hazards during multi- step or lengthy abatement periods.
- Any new violations discovered during a follow-up inspection will be cited, as well as any hazards which have not been abated by the abatement date so specified on the OSHA Notice. The latter violations will be cited in the form of a Failure to Abate Notice.

EMPLOYER DISCRIMINATION

Executive Order 12196 and 29 CFR Part 1960.46 prohibit Federal agencies from discharging or otherwise discriminating against an employee who has exercised any right under these laws, including the right to make safety and health complaints or to request an OSHA inspection. In addition, Federal employees may have protection for such activity under the Whistleblower Protection Act of 1989.

Complaints from employees who believe they have been discriminated against will be investigated by the Office of Special Counsel except in those agencies not covered by the Whistleblower Act. Agencies exempted from the Whistleblower Act are:

- A government corporation, such as the Tennessee Valley Authority;
- the Central Intelligence Agency, Defense Intelligence Agency, National Security Agency, or certain other intelligence agencies excluded by the President;
- the General Accounting Office;
- the U.S. Postal Service or Postal Rate Commission;
- the Federal Bureau of Investigation; and,
- Federal prisoners.

If the Federal employee's agency is exempted from the Whistleblower Act, the alleged reprisal is forwarded to the agency's Designated Agency Safety and Health Official (DASHO).

There is no time limit for filing a complaint with the Office of Special Counsel. To obtain further information on this matter, employees may contact OSHA and/or the Office of Special Counsel.

PROVIDING FALSE INFORMATION

All information reported to OSHA by employers and employees must be accurate and truthful.

Control of Hazardous Energy (Lockout/Tagout)

Purpose

This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.

Potential energy sources include electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Lockout is the preferred method of isolating machines or equipment from energy sources. To assist employers in developing a procedure that meets the requirements of the standard, however, the following simple procedure is provided for use in both lockout or tagout programs. This procedure may be used when there are limited numbers or types of machines or equipment or there is a single power source. For more complex systems, a more comprehensive procedure will need to be developed, documented, and utilized.

All employees are required to comply with the restrictions and limitations imposed on them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment that is locked out to perform servicing or maintenance, shall not attempt to start, energize, or use that machine or equipment.

Appropriate employees shall be instructed in the safety significance of the lockout procedure. Each new or transferred affected employee and other employees whose work is or may be in the area shall be instructed in the purpose and use of the lockout or tagout procedure.

Training and communication.

JDL Warm Construction will provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. The training shall include the following:

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

When tagout systems are used, employees shall also be trained in the following limitations of tags:

- Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
- When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
- Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
- Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.

- Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
- Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

Employee retraining.
Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.
Additional retraining shall also be conducted whenever a periodic inspection under paragraph (c)(6) of this section reveals, or whenever the employer has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.
The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.
The employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.

Protective materials and hardware.
Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided by the employer for isolating, securing or blocking of machines or equipment from energy sources. Lockout devices and tagout devices shall be singularly identified; shall be the only devices(s) used for controlling energy; shall not be used for other purposes; and shall meet the following requirements:

Durable.
Lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.
Tagout devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.
Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.

Standardized
Lockout and tagout devices shall be standardized within the facility in at least one of the following criteria: Color; shape; or size; and additionally, in the case of tagout devices, print and format shall be standardized.

Lockout devices.
Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

Tagout devices.
Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

Identifiable.

Lockout devices and tagout devices shall indicate the identity of the employee applying the device(s). Tagout devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: **Do Not Start. Do Not Open. Do Not Close. Do Not Energize. Do Not Operate.**

Procedural Steps to Control Hazardous Energy

Make a survey to locate and identify all isolating devices to be certain which switch(s), valve(s) or other energy isolating devices applies to the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, or others) may be involved.

1. Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down prior to lockout to perform the servicing or maintenance.
2. The authorized employee shall refer to this company procedure to identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
   Make a survey to locate and identify all isolating devices to be certain which switch(es), valve(s) or other energy isolating devices applies to the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, or others) may be involved.
3. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.).
4. Deactivate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).
5. Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.

Procedural Steps to Perform Lockout/Tagout

1. Lock out the energy isolating device(s) with assigned individual lock(s), the design, purpose and use of which the employee shall have been trained on prior to use.
2. Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position.
3. Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.
4. Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached.
5. Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

Group lockout or tagout.

When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.
Group lockout or tagout devices shall be used in accordance with these procedures including, but not necessarily limited to, the following specific requirements:

- Primary responsibility is vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock);
- Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment and
- When more than one crew, craft, department, etc. is involved, assignment of overall job-associated lockout or tagout control responsibility to an authorized employee designated to coordinate affected work forces and ensure continuity of protection; and
- Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

Requirements for Testing Lockout/Tagout Effectiveness

1. Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.

   Caution: Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment.

2. The machine or equipment is now locked out, and servicing or maintenance may begin.

Restoring Equipment to Service
When servicing or maintenance is completed, and the machine or equipment is ready to return to the normal operating condition, the following steps shall be taken:

1. Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
2. Check the work area to ensure that all employees have been safely positioned or removed from the area.
3. Verify that the controls are in neutral
4. Remove the lockout devices and reenergize the machine or equipment.

   Note: The removal of some forms of blocking may require reenergization of the machine before safe removal.

5. Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready to use.

Testing or positioning of machines, equipment or components thereof. In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:

- Clear the machine or equipment of tools and materials;
- Remove employees from the machine or equipment area;
- Remove the lockout or tagout devices;
- Energize and proceed with testing or positioning;
- Deenergize all systems and reapply energy control measures to continue the servicing and/or maintenance.

Periodic inspection.
JDL Warm Construction shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed.

Hazard Analysis Form

This form is to be completed for every machine or piece of equipment in this company.

1. Is maintenance or service performed on machines in this work area? Y N
2. Machine/equipment name: _____ No:_____

Type of power/energy sources:	**Does the machine use this type of power/ energy source? Yes or No**
Electrical	
Hydraulic	
Gases	
Mechanical	
Steam	
Heat	
Chemical	
Pneumatic	
Other (Gravitational Effect/Wind Effect etc.)	

Energy Source Type	**Location of Energy Source**	**Number Involved**
Main source		
Source on machine/equipment		

3. Multiple locks-List those processes, equipments, or machines that require multiple locks to secure energy sources by one person.

_____
_____
_____
_____
_____
_____
_____

4. What type of lockout processes are able to be used on this equipment? (check as many as possible to be used)

Keyedlocks		Blocks	
Tags Only		Chains	
Blanks		Cables	
Wedges		Other (List Here)	

5. What machines, equipment or processes do not have lockout, blanking, or tagging capabilities at all? (list below)

_____
_____
_____
_____
_____

6. What steps can be taken to secure these machines from accidental start-up?

_____
_____
_____
_____
_____

7. List the people in your department/jobsite who work on or perform maintenance or service on these machines, and thus would have to be trained in applicable energy control (lockout/tagout) procedures.

_____
_____
_____
_____
_____

Powered Industrial Trucks

It's hard to imagine any tool more important to materials handling than the powered industrial truck-the forklift. Like many companies, JDL Warm Construction relies on these versatile vehicles to load, unload, and move stock and other materials.

This written Forklift Operation Program establishes guidelines to be followed whenever any of our employees work with powered industrial trucks at this company. The rules established are to be followed to:

- Provide a safe working environment,
- Govern operator use of powered industrial trucks, and
- Ensure proper care and maintenance of powered industrial trucks.

The procedures here establish uniform requirements designed to ensure that powered industrial truck safety training, operation, and maintenance practices are communicated to and understood by the affected employees. These requirements also are designed to ensure that procedures are in place to safeguard the health and safety of all employees.

It is our intent to comply with the requirements of OSHA's 29 CFR 1926.600, 1926.602(c), and 1926.441 for construction activities. These regulations have requirements for powered industrial truck operations, including that for battery care and charging. We also comply with applicable requirements of design, construction, stability, inspection, testing, maintenance, and operation of ASME/ANSI B56.1-1969, Safety Standard for Low Lift and High Lift Trucks. However, the powered industrial trucks we operate in our storage and maintenance yards and warehouses comply with 29 CFR 1910.176 and 1910.178.

Administrative Duties

The Safety and Health Manager has overall responsibility for the plan. Copies of this written program may be obtained from the Safety and Health Manager.

Powered Industrial Trucks at Our Workplace

JDL Warm Construction uses these powered industrial trucks as follows:

Make and model:	Class and designation:	Quantity:	Purpose and location:

Training

The Safety and Health Manager will identify all new employees in the employee orientation program and make arrangements to schedule training.

Before we begin training a new employee Safety and Health Manager determines if the potential powered industrial truck operator is capable of performing the duties necessary to be a competent and safe driver.

This is based upon his/her physical and mental abilities to perform job functions that are essential to the operation of the vehicle.

These capabilities include the level at which the operator must:

- See and hear within reasonably acceptable limits, (this includes the ability to see at adistance and peripherally, and in certain instances, it is also necessary for the driver to discern different colors, primarily red, yellow, and green);
- Endure the physical demands of the job; and
- Endure the environmental extremes of the job, such as the ability of the person to work in areas of excessive cold or heat. An operator must be able to climb onto and off of a truck, to sit in the vehicle for extended periods of time, and to turn his/her body to look in the direction of travel when driving in reverse.

Once our Administrator determines that a potential operator is capable of performing powered industrial truck duties he, or a designated representative will conduct initial training and evaluation. The instructor has the necessary knowledge, training, and experience to train new powered industrial truck operators.

Initial Training

During an operator's initial training, the instructor combines both classroom instruction and practical training.

Each type of powered industrial truck has a different "feel" to it, and that makes operating it slightly different from operating other industrial trucks. The work areas where these trucks are being used also present particular hazards. For these reasons, it is impractical to develop a single "generic" training program that fits all of our powered industrial trucks. Accordingly, during training, JDL Warm Construction covers the operational hazards of our powered industrial trucks, including:

- General hazards that apply to the operation of all or most powered industrial trucks;
- Hazards associated with the particular make and model of the truck;
- Hazards of the workplace in general; and
- Hazards of the particular workplace where the vehicle is operated.

If each potential operator has received training in any of the elements of our training program, and is evaluated to be competent, they need not be retrained in those elements before initial assignment in our workplace. The training must be specific for the types of trucks that employee will be authorized to operate and for the type of workplace in which the trucks will be operated.

Training Certification

After an employee has completed the training program, the instructor will determine whether the potential driver can safely perform the job. At this point, the trainee will take a performance test or practical exercise through which the instructor will decide if the training has been adequate. All powered industrial truck trainees are tested on the equipment they will be driving.

The Safety and Health Manager is responsible for keeping records certifying that each employee who has successfully completed operator training and testing. Each certificate includes the name of the driver, the

date(s) of the training, and the name of the person who did the training and evaluation. Training is done in house.

Performance Evaluation

Each certified powered industrial truck operator is evaluated at least once every 3 years to verify that the operator has retained and uses the knowledge and skills needed to drive safely. This evaluation is done by the Safety and Health Manager. If the evaluation shows that the operator is lacking the appropriate skills and knowledge, the operator is retrained by our instructor(s).

Refresher Training

Refresher training is triggered by any of the following situations:

- If the operator is involved in an accident or a near-miss incident;
- If the operator has been observed driving the vehicle in an unsafe manner;
- When the operator is assigned to a different type of truck;
- If it has been determined during an evaluation that the operator needs additional training; or
- When there are changes in the workplace that could affect safe operation of the truck. This could include a different type of paving, reconfiguration of the storage racks, new construction leading to narrower aisles, or restricted visibility.

Current Certified Truck Operators

Under no circumstances shall an employee operate a powered industrial truck until he/she has successfully completed this company's powered industrial truck training program. Regardless of claimed previous experience, all new operators must at least undergo a performance evaluation. The following table lists employees by department who are currently authorized operators of our powered industrial trucks at this company:

Department:	**Employee name:**	**Make and model:**

Inspections

Pre-Operational Inspection Procedures

The company requires operators to perform pre-operational equipment checks on powered industrial trucks prior to the beginning of each shift in which those trucks will be utilized to ensure the safe operating condition of the vehicle. The pre-operational check is performed by completing a daily truck inspection checklist.

No blank spaces are allowed on the form. If an item does not apply, we use the code N/A. We also require that operators fill out the comment section thoroughly and accurately if there are any operational or visual

defects. That way our Maintenance Department can pinpoint and repair the problem before the truck becomes unsafe to operate.

Our pre-operational inspection procedures used by operators include:

If a completed checklist form is not present on the powered industrial truck, then the truck may not be operated until a checklist is completed.

If the powered industrial truck is safe to operate, the operator must:

* Place the completed checklist form in the holder provided on the vehicle. The checklist must remain in the vehicle's holder for the duration of the shift. This serves as a visual notice to all area operators that this piece of equipment was inspected at the beginning of the shift and may be used during the shift without another inspection.

* At the end of the shift, operators must turn the checklist in to the department/area manager or supervisor. The manager or supervisor is responsible for reviewing the checklists for accuracy, completeness, and any noted defects.

If the powered industrial truck is unsafe to operate, the operator is to:

* Remove the key from the powered industrial truck;

* Place a DANGER DO NOT OPERATE tag on the steering wheel or control lever of the powered industrial truck;

* Report the problem to his/her immediate supervisor;

* Not use the truck until the problem has been identified and fixed. No one else may use the truck until the problem has been identified and fixed.

Appropriate disciplinary action will be enforced for anyone violating this policy.

The Safety and Health Manager is responsible for retaining all daily truck inspection checklist forms for each vehicle for 6 months.

Periodic Inspection Procedures

Periodic inspections are in conjunction with the particular powered industrial truck's maintenance or service schedule. Maintenance schedules are normally expressed in days and operating or running hours. Most manufacturers' operator instruction manuals contain the recommended maintenance schedule. Inspections and maintenance or repair beyond the recommended service schedules are done by authorized workshops and/or service technicians.

See an attached sample of our periodic truck inspection checklist. A supply of these forms is provided in each charging and parking area within user departments. The Safety and Health Manager is responsible for retaining all periodic truck inspection checklist forms for each vehicle.

Operating Procedures

Powered industrial trucks can create certain hazards that only safe operation can prevent. That's why we have created sets of operating procedures. Our operating procedures follow.

Driving

Driving a powered industrial truck is fundamentally different than driving a car or other trucks. In fact, powered industrial trucks:

- Are usually steered by the rear wheels,
- Steer more easily loaded than empty,
- Are driven in reverse as often as forward,
- Are often steered with one hand, and
- Have a center of gravity toward the rear, shifting to the front as forks are raised.

Unlike cars, some powered industrial trucks have a greater chance of tipping over when suddenly turned. Because of the design of powered industrial trucks, they have a very short rear wheel swing. This means that, at high speeds, sudden turns can tip them and could result in serious injury and damage. Speed can cause the center of gravity to shift dramatically. Similarly, speeding over rough surfaces can cause tipping.

Although structurally different than cars, powered industrial trucks, like cars, can collide with property and people. Therefore it is our policy for all operators to follow these driving procedures:

* Use only powered industrial trucks approved for the location of use.
* Only start/operate a powered industrial truck from the designated operating location.
* Observe all traffic regulations, including plant speed limits and keeping to the right.
* Yield the right of way to pedestrians and emergency vehicles.
* Maintain safe distances from powered industrial trucks ahead (typically three truck lengths).
* Travel at speeds that will permit vehicles to stop safely at all times, under all road and weather conditions.
* Avoid quick starts/changes of direction.
* Turns must be negotiated by reducing speed and turning the steering wheel with a smooth, sweeping motion.
* Maintain forks in proper position.
* Drive properly in reverse.
* Cross railroad tracks at an angle, never a right angle.
* Do not engage in stunt driving and horseplay.
* Drive slowly over wet or slippery floors.
* When the forks are empty, travel with the forks at a negative pitch as low to the floor as practical. Adjust the height of the forks to a safe level when the operating terrain warrants.
* When operating a narrow aisle reach truck that is unloaded, do not travel until the forks are fully retracted and positioned at a negative pitch as low to the floor as practical.
* Approach elevators slowly and squarely. Once on an elevator, neutralize controls, shut off power, and set the brakes.
* Direct motorized hand trucks into elevators with loads facing forward.
* Do not run over loose objects on roadway surfaces.

* Slow down and sound the horn and look at intersections, corners, and other locations where vision is obstructed.
* Do not pass other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations.
* Maintain a clear view of the direction of travel at all times. Look in direction of travel.
* Keep unauthorized personnel from riding on powered trucks, and provide a safe place to ride where riding on trucks is authorized.
* Keep all body parts within truck.
* Do not allow anyone to place their arms or legs between the uprights of the mast or outside the running lines of the truck.
* Do not drive trucks up to anyone standing in front of a bench or other fixed object.
* A vehicle is considered "unattended" when an operator is 25 feet or more away from a vehicle which remains in view, or whenever an operator leaves a vehicle and it is not in view. Unattended trucks must be secured by:
    - Fully lowering forks or other attachments (when unloaded, tilt the forks forward first and then lower them to the ground until the tips of the forks come in contact with the ground;
    - Neutralizing controls;
    - Shutting off power; and
    - Setting brakes.
* Secure trucks when dismounted operators are within 25 feet of a vehicle still in view by:
    - Fully lowering the load;
    - Neutralizing controls; and
    - Setting brakes.
* Be aware of headroom under overhead installations, lights, pipes, door beams, and sprinkler systems.
* Do not block access to fire or emergency exits, stairways, fire equipment, or electrical panels.
* Sound the horn or other audible warning device at all intersections and corners to warn pedestrians.
* Maintain safe distances from the edges of ramps or platforms while on any elevated dock, platform, or freight car.
* Dockboards and bridgeplates must be secured before vehicles cross over them. Be sure they do not exceed rated weight limits.
* When ascending or descending a grade or incline:
    - Proceed slowly and with caution;
    - Tilt or raise the forks and attachments only as far as necessary to clear the road surface; and
    - Sound the horn before ascending or descending.
* Do not park on inclines, ramps, or dock plates. If you must park on an incline, block the wheels.
* Do not use powered industrial trucks for any purpose other than what they were designed.
* Clean up all fluid leaks (oil, hydraulic, transmission, etc.) from the floor.
* Do not operate a powered industrial truck with a leak in the fuel system until the leak has been corrected.
* If the warning device (like a warning lamp or sound-producing device) comes on, stop the truck as soon as possible.
* Follow manufacturer's recommended emergency procedures for fire or tip over and be familiar with manufacturer's emergency equipment.
* Do not modify a powered industrial truck.
* Report all powered industrial truck accidents involving employees, building structures, and equipment to department management.

Load Lifting and Carrying

Powered industrial trucks can lift only so much. Each truck has its own load capacity, which is indicated on the rating plate. Powered industrial trucks also have three-point suspension that forms an imaginary triangle from the left front wheel to the right front wheel to the point between the two back wheels. The center of gravity for a powered industrial truck must lie somewhere within this triangle or else the truck will tip over. The load and its position on the forks, as well as traveling speed and slopes, all affect the center of gravity. Loads, themselves, have gravity with which to contend. Loads need special care so that they do not fall. In order to prevent tipping and load falling hazards, we have established the following load lifting and carrying procedures:

* Handle loads only within the capacity rating of the truck.
* Use a forking system which suits the load.
* Do not allow anyone to stand or pass under the elevated portion of any truck whether empty or loaded.
* Do not start a powered industrial truck or operate any of its functions or attachments from any position other than from the designated operator's position.
* Keep a clear view of the path of travel and look for other traffic, personnel and safe clearances. If the load being carried obstructs forward view, travel with the load trailing.
* When traveling with a load on the forks, travel with the load as low to the floor as practical with the load tilted back slightly for improved stability.
* When ascending or descending a grade or incline:
    - Drive with the load positioned upgrade or uphill when the truck is loaded.
* When unloading or loading semi-trailers:
    - Engage dock lock mechanism and light before entering the trailer.
    - Check condition of dock leveler plate and trailer floor before entering.
    - Set the brakes of the semi-tractor.
    - Chock the rear wheels of the trailer prior to loading or unloading.
* When unloading or loading the 28 foot trailers:
    - Engage dock lock mechanism and light before entering the trailer.
    - Check condition of dock leveler plate and trailer floor before entering.
    - Be sure the semi-tractor is coupled to the trailer, or the fixed jack on the front of the trailer is lowered to the ground to prevent these two trailers from tipping forward.
    - Set the brakes of the semi-tractor.
    - Chock the rear wheels of the trailer.
* Use the following backup procedure and sequence:
    - Pivot at the waist and inspect the area of operation in the rear of the fork truck, watching for obstructions and pedestrians.
    - Blow the horn to alert any pedestrians that may or may not be visible.
    - Engage the directional lever to the reverse position.
    - Concentrate on the removal of the forks from the load to avoid any load disturbance, as you back the fork truck out of the load.
    - Stop the fork truck 18" to 24" away from the load's resting location and lower the forks to the proper travel height and angle.
* During load placement:
    - Square the fork truck with the load resting location.
    - Stop the fork truck 18" to 24" away from the load resting location.
    - Raise the load to proper entry height.
    - Drive forward with the load and position the load over its resting location.
    - Lower the load to a height of 4" if possible.
    - Tilt the load forward to a level position.

- Lower the load to its resting platform.
- Back up the unit using proper back up procedures and sequence.

* Do not attempt to move loads with broken pallets.
* During load retrieving:
  - Tie together unstable loads.
  - Square the fork truck with the load resting location.
  - Stop the fork truck 18" to 24" away from the load resting location.
  - Raise the forks to eye level and level the forks to a horizontal position.
  - Raise the forks to the proper entry height.
  - Slide the forks into the load and maintain the clearance around the forks to avoid load disturbance. Be sure to place the heaviest part of the load closest to the backrest.
  - Raise the load so it is completely suspended from its resting platform. Be sure to support and center the load so that it will not fall forward or sideways.
  - Tilt the load back.
  - Visually inspect the rear area of the fork truck to ensure no pedestrians are behind or around the unit.
  - Back up the unit using proper back up procedures and sequence.
  - Back up the fork truck 18" to 24" and stop.
* Know the load limits of elevators.
* Whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks for lifting personnel, use these precautions:
  - Use a safety platform that is firmly secured to the lifting carriage and/or forks.
  - Provide a way for the person on the platform to shut off power to the truck.
  - Provide protection from falling objects.

Fuel Handling and Storage

Some of our powered industrial trucks operate with highly flammable and combustible fuels.

The storage and handling of liquid fuels, including gasoline and diesel fuel are done in accordance with NFPA Flammable and Combustible Liquids Code (NFPA 30-1969).

The storage and handling of liquefied petroleum gas fuel is done in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA 58-1969).

All employees who handle or use flammable liquids are instructed by the Safety and Health Manager in their safe handling and use and made aware of the specific OSHA requirements for what they are doing with the liquids. More specifically, employees are instructed in the following procedures:

* The storage and handling of liquid fuels such as gasoline and diesel fuel shall be in accordance with NFPA Flammable and Combustible Liquids Code (NFPA No. 30-1969), which is incorporated by reference as specified in 29 CFR 1910.6.
* The storage and handling of liquefied petroleum gas fuel shall be in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58-1969), which is incorporated by reference as specified in 29 CFR 1910.6. General industry employers may also find more information under 29 CFR 1910.106 and 1910.110.

Construction employers may find more information under 29 CFR 1926.152 and 1926.153.

If your employees are required to handle or use flammable liquids they must be instructed in their safe handling and use and be made aware of the specific OSHA requirements for the tasks they perform with the liquids. Here are some good fuel storage and handling procedures you can use:

* Never smoke in fueling areas.
* Prevent open flames, sparks, or electric arcs while fueling.
* Never fuel a powered industrial truck while the engine is running.
* Keep solvent waste, oily rags, and flammable liquids (liquids having a flashpoint below 140 deg. F and capable of being easily ignited, burning intensely, or having a rapid rate of flame spread) in fire resistant covered containers until removed from the workplace.
* To change a liquid petroleum (LP) gas tank:
    - Put on leather work gloves and goggles.
    - Disconnect powered industrial truck valve from the empty LP cylinder.
    - Replace with full cylinder.

NOTE: The pin on the lift truck must fit into the cut out hole(s) provided on the LP cylinder. This is required by law.

- Strap in the cylinder and re-connect the truck valve securely to the cylinder outlet.
- Open cylinder valve and listen for leaks.
- If leaking, close cylinder valve and slowly uncouple the fuel valve. Try to re-connect. If still leaking, try a different cylinder and notify department management of faulty cylinder.
- If no leaks are present, lift truck may be utilized.

Battery Charging and Changing

Batteries present a hazard because they contain corrosive chemical solutions, either acid or alkali. During recharging, a worker may be exposed not only to the acid solution but also to hydrogen gas that is produced during the recharging process. Because of the hazards involved in battery charging and changing, only personnel who have been trained in the appropriate procedures, understand the dangers involved, and know the appropriate precautions to take may be allowed to perform this work.

We have an area in our facility specifically for charging or changing batteries.

This area is separate from the main aisles.

Good housekeeping procedures are essential. We keep the area clean and free of any combustible materials. We also maintain a moderate temperature range suitable for battery maintenance.

JDL Warm Construction has installed the following safety features:

• An eyewash station for workers.
• A hose and floor drain for flushing and neutralizing spilled electrolyte.
• The charging apparatus is protected to prevent damage from vehicles.
• Because we use on-board chargers, our designated charging area meets the electrical requirements of the charger and facility for fire protection.

Smoking is prohibited in charging areas. Battery charging generates hydrogen gas that may present an explosion hazard. This precaution also applies to open flames, sparks, or electric arcs. An effective means of fire protection must be provided in the area.

With this information in mind, we have established the following battery charging/changing procedures:

* Provide battery charging installations located in areas designated for that purpose.
* Provide fire protection, in the form of a fire extinguisher or standpipe system.
* Provide for quick drenching of the eyes and body within 25 feet of battery handling areas.
* Provide facilities for flushing and neutralizing spilled electrolyte.
* Provide a means of protecting charging apparatus from damage by trucks.
* Ventilate the battery charging area to prevent the build-up of hydrogen gas.
* Treat racks and trays to make them resistant to electrolyte in the battery handling area.
* Provide acid resistant floors in the battery handling area unless protected from acid accumulations.
* Provide a conveyor, overhead hoist, or equivalent material handling equipment for handling batteries.
* Provide appropriate personal protective equipment like eye and face protection, gloves, protective footwear, long-sleeved shirts, and aprons.
* Provide an easily accessible first aid kit in the charging/changing area.

Here are some good battery charging/changing procedures:

* When removing battery covers to add or inspect electrolyte levels, wear proper goggles, faceshield, rubber gloves, and an apron. Protective equipment is not required when filling batteries equipped with an automatic filler.
* Wear appropriate foot protection where there is the risk of foot injury.
* If the powered industrial truck is not put on a charge during off shifts or weekends, disconnect the battery plug from the truck plug. NOTE: During normal production operation, the powered industrial truck may remain plugged into the battery when left unattended.
* Do not smoke in the battery charging area.
* Wear hearing protection in the battery charging area if necessary.
* Prevent open flames, sparks, and electric arcs in the battery charging area.
* Keep tools and other metallic objects away from the tops of uncovered batteries.
* Keep the charging area clean.
* Keep the charging area work surface dry and slip-resistant.
* When batteries are being charged, keep the vent caps in place to avoid electrolyte spray.
* Take care to assure that vent caps are functioning. The battery (or compartment) cover(s) must be open to dissipate heat.
* When charging batteries, acid must be poured into water; water must not be poured into acid.
* Provide carboy tilter or siphon for handling electrolyte.
* Clean up spilled materials or liquids in the charging area immediately.
* Test all non-supervised fire alarm systems near battery charging/changing areas bimonthly.
* Test all supervised fire alarm systems (ones that have a device to indicate a system malfunction) yearly.
* Always use a battery replacement that is within the weight range specified on the nameplate of the truck in order to maintain vehicle stability.
* Properly position and secure reinstalled batteries to the truck.
* Securely position and set the brakes of a truck before attempting to change or charge the battery.
* Ensure that all workers in the immediate area of the changing area stay clear when the battery is moved.
* Know where the eyewash station is located.
* Know where the first aid kit is located.

Carbon Monoxide Awareness

Powered industrial trucks with internal combustion engines produce carbon monoxide (CO), an odorless, colorless, and deadly gas produced by the incomplete burning of any material that contains carbon. These materials include gasoline, natural gas, propane, coal, and wood. The most common source of CO is the internal combustion engine. Trucks, cars, forklifts, floor polishers, pressure washers, or any other machine powered by fossil fuels generates CO.

If inhaled, CO restricts the ability of your blood system to carry oxygen to the body tissues that need it. Overexposure combined with less oxygen results in carbon monoxide poisoning. Mild poisoning can result in headaches, tightness in the chest, dizziness, drowsiness, inattention, fatigue, flushed face, or nausea. If you continue exposure lack of coordination, confusion, weakness, or loss of consciousness may result. A heart condition, smoking, taking drugs or alcohol, and pregnancy can aggravate CO poisoning. Physical activity, too, can make a situation worse. That's because your body needs more oxygen to exert itself. Severe poisoning can kill you within minutes, sometimes without warning symptoms. The more CO there is in the air and the longer the exposure, the greater the danger.

We use these procedures to spread carbon monoxide awareness, reduce CO levels, and prevent CO illness:

WHAT YOUR COMPANY CAN DO ABOUT CO

* Install an effective ventilation system in place if powered industrial trucks are used indoors;
* Purchase trucks which comply with national safety standards;
* Ensure that powered industrial trucks are maintained in good order. Be sure to address the carburetor, air cleaner, and ignition timing;
* Only allow qualified persons to modify powered industrial trucks but only if approved by the manufacturer;
* Use original parts instead of replacement parts when a new part is needed;
* Switch from fossil fuel-powered to battery-powered trucks where possible;
* Use fuels with high octane levels so that fuels will burn slower and more efficiently;
* Try a CO emissions controller to be added to the fuel system to control the mixture of fuel and air. CO controller parts include a computer control box, a warning light, an oxygen sensor, and a solenoid air valve;
* Add a catalytic converter to truck exhaust systems, but only if trucks are used continually during the shift (if converter temperature does not rise above operating temperature, the converter will fail);
* Install CO monitors and regularly test air levels;
* Provides initial and periodic medical exams for exposed workers and instructs workers in the hazards of CO.

WHAT YOUR EMPLOYEES CAN DO ABOUT CO

There are a number of approaches you can take to prevent CO poisoning:

* Inform your safety director of any condition (such as ventilation problems or enclosed areas) that may lead to the formulation or accumulation of carbon monoxide;
* Report complaints immediately;
* Be aware that physical activity can increase the danger of CO poisoning;

* If someone is exposed to CO, take them to fresh air, loosen clothing, give artificial respiration if necessary, contact a doctor, administer oxygen if necessary, and let the victim rest to prevent cardiac or respiratory problems;
* If you become ill, let your doctor know about the possibility of CO poisoning;
* Consider reducing or eliminating any smoking habit (burning tobacco also produces CO resulting in a higher CO level before going to work).

Personal Protective Equipment (PPE)

We have assessed our workplace and determined that the hazards which threaten our operators include:

* Injurious gases, vapors, and liquids;
* Dusts or powders, fumes, and mists;
* Flying objects or particles;
* Foot compression or puncture;
* Slipping;
* Extreme heat or cold;
* Hand cuts, punctures, abrasions, and crushing;
* Electricity;
* Materials handling;
* Falling objects;
* Bumping head or other body part against fixed object;
* Noise;
* Falling from an elevated platform attached to the powered industrial truck;
* Falling out of the powered industrial truck;
* Being crushed by a tipped over powered industrial truck.

For this reason, we require that our powered industrial truck operators wear the following PPE and equipment:

* Safety glasses;
* Goggles;
* Faceshields;
* Safety shoes;
* Metatarsal guards;
* Safety boots;
* Sole puncture resistant footwear;
* Gloves;
* Barrier creams;
* Mitts;
* Finger cots;
* Thimbles;
* Protective helmets;
* Warm clothing or suits;
* Respirators;
* Electrical gloves;
* Rubber insulating sleeves;
* Body harnesses.

NOTE: According to a letter of interpretation dated 1/18/94 about ASME/ANSI B56.1-1988, if a powered industrial truck is equipped with a seat belt or other restraining device, the operator must use these devices. This will reduce the risk of entrapment of the head and torso between the truck and the ground.

All operators required to wear this equipment are trained:

- When PPE is necessary;
- What PPE is necessary;
- How to properly put on, take off, adjust, and wear PPE;
- Limitations of the PPE; and
- Proper care, maintenance, useful life, and disposal of PPE.

See the Written Personal Protective Equipment Program for more details.

Pedestrians

Because powered industrial trucks are typically used near pedestrians, we require both pedestrians and powered industrial truck operators to watch out for each other.

All powered industrial truck operators must:

* Yield the right of way to pedestrians and emergency vehicles.
* Sound the horn or other audible warning device at all intersections and corners to warn pedestrians.
* When backing up pivot at the waist and inspect the area of operation to the rear of the powered industrial truck, watching for obstructions and pedestrians and blow the horn to alert any pedestrians that may or may not be visible.
* When retrieving a load and before backing up, visually inspect the rear area of the powered industrial truck to ensure no pedestrians are behind or around the unit.
* Never allow riders on any powered industrial truck.
* Never engage in horseplay.
* Do not allow pedestrians to walk under loads.
* Do not allow anyone to place their arms or legs between the uprights of the mast or outside the running lines of the truck.
* Do not drive trucks up to anyone standing in front of a bench or other fixed object.

All pedestrians must:

* Use designated pedestrian walkways.
* Look out for powered industrial trucks and give them the right of way.
* Listen for horns and other warning devices.
* Use any provided mirrors to assist with vision around corners.
* Do not walk in front of, behind, or beside a powered industrial truck.
* Never walk or stand under a raised load.
* Do not hitch a ride on a powered industrial truck.

Maintenance

Investing time and effort into the proper upkeep of our equipment results in day-to-day reliability. Keeping up with the manufacturer's recommended maintenance and lubrication schedules, and completing the proper records, will also increase our trucks' longevity and enhance its resale value.

The Safety and Health Manager complete(s) a receiving or delivery inspection whenever our company purchases powered industrial trucks, and he/she/they perform(s) the recommended "breaking in" inspections and maintenance.

Mechanics/operators follow the manufacturer's operator instruction manual for daily or weekly maintenance.

Periodic maintenance (those completed monthly, every 6 months, or annually) is done by a factory-trained expert or a dealer. The Safety and Health Manager retains all maintenance records.

Bloodborne Pathogens Exposure Control

Purpose
The purpose of this Exposure Control Plan (ECP) is to:

1. Eliminate or minimize employee occupational exposure to blood or certain other body fluids;
2. Comply with the OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030.

Exposure Determination
OSHA requires employers to perform an exposure determination concerning which employees may incur occupational exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment (i.e., employees are considered to be exposed even if they wear personal protective equipment). This exposure determination is required to list all job classifications in which all employees may be expected to incur such occupational exposure, regardless of frequency.

In addition, OSHA requires a listing of job classifications in which some employees may have occupational exposure. Since not all the employees in these categories would be expected to incur exposure to blood or other infectious materials, tasks and procedures that would cause these employees to have occupational exposure are also required to be listed in order to clearly understand which employees in these categories are considered to have occupational exposure.

Implementation Schedule and Methodology
OSHA also requires that this plan include a schedule and method of implementation for the various requirements of the standard. The following complies with this requirement:

1. **Compliance Methods**
   Universal precautions will be observed at this company in order to prevent contact with blood or other potentially infectious materials. All blood or other potentially infectious materials will be considered infectious regardless of the perceived status of the source individual.

   Engineering and work practice controls will be utilized to eliminate or minimize exposure to employees at this company. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be utilized.

   The controls will be examined and maintained on a regular schedule.

   Hand washing facilities are also available to the employees who incur exposure to blood or other potentially infectious materials. OSHA requires that these facilities be readily accessible after incurring exposure.

   Supervisors shall ensure that after the removal of personal protective gloves, employees shall wash hands and any other potentially contaminated skin area immediately or as soon as feasible with soap and water.

   Supervisors shall ensure that if employees incur exposure to their skin or mucous membranes then those areas shall be washed or flushed with water as soon as feasible following contact.

2. **Work Area Restrictions**
   In work areas where there is a reasonable likelihood of exposure to blood or other infectious material, employees are not to eat, drink, apply cosmetics or lip balm, smoke, or handle contact

lenses. Food and beverages are not to be kept in refrigerators, freezers shelves cabinets, or on counter tops or bench tops where blood or other potentially infectious materials are present.
Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.
All procedures will be conducted in a manner that will minimize splashing, spraying, splattering, and generation of droplets of blood or other potentially infectious materials.

3. **Contaminated Equipment**
The company's Safety and Health Manager is responsible for ensuring that equipment which has become contaminated with blood or other infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary unless the decontamination of the equipment is not feasible.

4. **Personal Protective Equipment**

PPE Provision

The company Safety and Health Manager is responsible for ensuring that the following provisions are met.
All personal protective equipment at this company will be provided without cost to employees.
Personal protective equipment will be chosen based on the anticipated exposure to blood or other potentially infectious materials. The protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employees' clothing, eyes, skin, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

PPE Use

The company Safety and Health Manager shall ensure that appropriate PPE in the appropriate sizes is readily accessible at the work site or is issued without cost to the employees. Hypoallergenic gloves, glove liners, powerless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

PPE Cleaning, Laundering, and Disposal

All personal protective equipment will be cleaned, laundered, and disposed of by the employer at no cost to the employees. The employer at no cost to the employees will make all repairs and replacements.
All garments that are penetrated by blood shall be removed immediately or as soon as feasible.
All PPE will be removed before leaving the work area.
When PPE is removed, it shall be placed in an appropriate designated area or container for storage, washing, decontamination, or disposal.

Gloves

Gloves shall be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, nonintact skin, and mucous membranes; when performing vascular access procedures and when handling or touching contaminated items or surfaces.
Disposable gloves used at this company are not to be washed or decontaminated for re-use and are to be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. Utility gloves may be decontaminated for re-use provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

Eye and Face Protection
Masks in combination with eye protection devices, such as goggles or glasses with solid side shield, or chin length face shields, are required to be worn whenever splashes, spry splatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose or mouth contamination can reasonably be anticipated.

Additional Protection
Additional protective clothing shall be worn in instances when gross contamination can reasonably be anticipated.

5. Housekeeping
All contaminated work surfaces will be decontaminated after completion of procedures and immediately or as soon as feasible after any spill of blood or other potentially infectious material, as well as the end of the work shift if the surface may have become contaminated since the last cleaning.
All bins, pails, cans, and similar receptacles shall be inspected and decontaminated on a regularly scheduled basis.
Any broken glassware that may be contaminated will not be picked up directly with the hands.
Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

6. Regulated Waste Disposal
Other regulated waste shall be placed in containers which are closable, constructed to contain all contents and prevent leakage of fluids during handling, storage, transport, or shipping.
The waste must be labeled or color-coded and closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

7. Hepatitis B Vaccine and Post Exposure Evaluation and Follow-Up

General
JDL Warm Construction shall make available the Hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post exposure follow-up to employees who have had an exposure incident.
The Safety and Health Manager shall ensure that all medical evaluations and procedures including the Hepatitis B vaccine and vaccination series and post exposure follow-up, including prophylaxis are:

1. Made available at no cost to the employee;
2. Made available to the employee at a reasonable time and place;
3. Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and
4. Provided according to the recommendations of the U. S. Public Health Service.

An accredited laboratory at no cost to the employee shall conduct all laboratory tests.

Hepatitis B Vaccination
The Safety and Health Manager is in charge of the Hepatitis B Vaccination program.
Hepatitis B vaccination shall be made available after the employee has received the training in occupational exposure and within 10 working days of initial assignment to all employees who

have occupational exposure unless the employee has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicate for medical reasons.
Participation in a pre-screening program shall not be a prerequisite for receiving Hepatitis B vaccination.
If the employee initially declines Hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the vaccination shall then be made available.
All employees who decline the Hepatitis B vaccination offered shall sign the OSHA required waiver indicating their refusal.
If a routine booster dose of Hepatitis B vaccine is recommended by the U. S. Public Health Service at a future date, such booster doses shall be made available.

Post Exposure Evaluation and Follow-Up/Procedure for the evaluation of Exposure Incidents
All exposure incidents shall be reported, investigated, and documented. When the employee incurs an exposure incident, it shall be reported to the Safety and Health Manager.
Following the report of an exposure incident, the exposed employee shall immediately receive a confidential medical evaluation and follow-up, including at least the following elements:

1. Documentation of the route of exposure, and the circumstances under which the exposure incident occurred;
2. Identification of the documentation of the source individual, unless it can be established that identification is infeasible or prohibited under state or local law.
3. The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the Safety and Health Manager shall establish that legally required consent cannot be obtained. When law does not require the source individual's consent, the source individual's blood, if available, shall be tested and the results documented.
4. When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.
5. Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Collecting and testing of blood for HBV and HIV serological status will comply with the following:

1. The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained;
2. The employee will be offered the option of having their blood collected for testing of the employee's HBV/HIV serological status. The blood sample will be preserved for up to 90 days to allow the employee to decide if the blood shall be tested for HIV serological status.

All employees who incur an exposure incident will be offered post exposure evaluation and follow-up in accordance with the OSHA standard. All post exposure follow-up will be performed by a Licensed Health Care Professional.

Information provided to the Healthcare Professional

The Safety and Health Manager shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided with the following:

1. A copy of 29 CFR 1910.1030;
2. A written description of the exposed employee's duties as they relate to the exposure incident;
3. Written documentation of the route of exposure and circumstances under which exposure occurred;
4. Results of the source individuals blood testing, if available; and
5. All medical records relevant to the appropriate treatment of the employee including vaccination status.

Healthcare Professionals Written Opinion

The Safety and Health Manager shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

The healthcare professionals written opinion for HBV vaccination shall be limited to whether HBV vaccination is indicated for an employee, and if the employee has received such vaccination.

The healthcare professional's written opinion for post exposure follow-up shall be limited to the following information:

1. A statement that the employee has been informed of the results of the evaluation; and
2. A statement that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

8. Labels and Signs

The Safety and Health Manager shall ensure that biohazard labels shall be affixed to containers of regulated waste, refrigerators, and freezers containing blood or other potentially infectious materials, and other containers used to store, transport or ship blood or other potentially infectious materials.

The universal biohazard symbol shall be used. The label shall be fluorescent orange or orange-red.

Red bags or containers may be substituted for labels. however, regulated waste must be handled in accordance with the rules and regulations of the organization having jurisdiction.

Blood products that have been released for transfusion or other clinical use are exempted from these labeling requirements.

9. Information and Training

The Safety and Health Manager shall ensure that training is provided at the time of initial assignment to tasks where occupational exposure may occur, and that it shall be repeated within twelve months of the previous training. Training shall be tailored to the education and language level of the employee, and offered during the normal work shift. The training will be interactive and cover the following:

1. A copy of the standard and an explanation of its contents;
2. A discussion of the epidemiology and symptoms of bloodborne diseases;

3. An explanation of the modes of transmission of bloodborne pathogens;
4. An explanation of JDL Warm Construction's Bloodborne Pathogen ECP, and a method for obtaining a copy.
5. The recognition of task that may involve exposure
6. An explanation of the use and limitations of methods to reduce exposure, for example engineering controls, work practices, and personal protective equipment (PPE).
7. Information on types, use, location, removal, handling, decontamination, and disposal of PPE.
8. An explanation of the basis of selection of PPE.
9. Information on the Hepatitis B vaccination, including efficacy, safety, method of administration, benefits, and that it will be offered free of charge.
10. Information on the appropriate actions to take and persona to contact in an emergency involving blood or other potentially infectious materials.
11. An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting and medical follow-up.
12. Information on the evaluation and follow-up required after an employee exposure incident.
13. Explanations of the signs, label, and color-coding system.

The person conducting the training shall be knowledgeable in the subject matter.
Employees who have received training on bloodborne pathogens in the 12 months preceding the effective date of this plan shall only receive training in provisions of the plan that were not covered.
Additional training shall be provided to employees when there are any changes of tasks or procedures affecting the employee's occupational exposure.

10. Recordkeeping

Medical Records

The Safety and Health Manager is responsible for maintaining medical records as indicated below. These records will be kept at this company corporate office.
Medical records shall be maintained in accordance with OSHA standard 29 CFR 1910.20
These records shall be kept confidential, and must be maintain for at least the duration of employment plus 30 years. The records shall include the following:
1. The name and social security number of the employee.
2. A copy of the employees HBV vaccination status, including the dates of vaccination.
3. A copy of all results of examinations, medical testing, and follow-up procedures.
4. A copy of the information provided to the healthcare professional, including a description of the employee's duties as they relate to the exposure incident, and documentation of the routes of exposure and circumstances of the exposure.

Training Records

The Safety and Health Manager is responsible for maintaining the following training records. These records will be kept at this company's corporate office.
Training records shall be maintained for three years from the date of training. The following information shall be documented:
1. The dates of the training sessions;
2. An outline describing the material presented;
3. The names and qualifications of persons conducting the training;
4. The names and job titles of all persons attending the training sessions.

Availability
All employee records shall be made available to the employee in accordance with 29 CFR 1910.20.
All employee records shall be made available to the Assistant Secretary of Labor for the Occupational Safety and Health Administration and the Director of the National Institute for Occupational Safety and Health upon Request.

Transfer of Records
If this company is closed or there is no successor employer to receive and retain the records for the prescribed period, the Director of the NIOSH shall be contacted for final disposition.

11. Evaluation and Review

The Safety and Health Manager is responsible for annually reviewing this program, and its effectiveness, and for updating this program as needed.

Confined Spaces in Construction

Purpose

The purpose of this written program is to ensure safe entry methods are utilized prior to and during all work activities in confined spaces. This program is designed to prevent personal injuries and illnesses that may be prevalent in confined spaces and for compliance with OSHA standards on worker safety and health.

This program covers all employees and contractors with whom this company works. The elements contained in this program must be followed in all situations where entry into a hazardous confined space is necessary.

Workplace Analysis and Hazard Evaluation of Permit Spaces

This company performs a work site analysis to determine if any spaces fit the criteria of a hazardous confined space, and thus need a permit. Based on a walk-through analysis of each work site at the initiation of their work there, all confined spaces are identified and their hazards evaluated and identified.

Reclassification of Non-Permit Confined Spaces

It is the responsibility of both the Properties and Production Maintenance Supervisor and/or Coordinator, to notify the Safety and Security Manager when there are changes in the use, or configuration, of the previously identified non-permit confined spaces that might increase the hazards to entrants, or when new equipment or construction takes place that creates new confined spaces. The Safety and Security Manager shall reevaluate the existing space or evaluate the new space and, if necessary, classify it as a permit-required confined space.

Measures to Prevent Unauthorized Entry

The company posts danger signs warning of the existence, location, and danger posed by the permit spaces identified above to prevent unauthorized entry into those spaces. The signs are posted at the entrances to the spaces and read:

DANGER
Permit Required Confined Space
DO NOT ENTER

Safe Confined Space Entry Operations - Means, Procedures, and Practices

Acceptable entry conditions are specified as those in which:

1. All hazards in a permit-required confined space that can be eliminated have been eliminated via engineering controls, ventilation, or some other means;
2. Authorized entrants are protected by the use of PPE against any remaining or potential hazards; and
3. All procedures of this program are being followed.

The permit space shall be appropriately isolated from other work activity by means of signs and barriers as necessary.

The permit space shall be purged, made inert, flushed, or ventilated with appropriate equipment as necessary to eliminate or control atmospheric hazards.

Pedestrians, vehicle, or other barriers shall provide as necessary to protect entrants from external hazards; and

Conditions on the permit space are acceptable for entry throughout the duration of an authorized entry as long as all monitoring, entry procedures, and attending as specified in this program are being followed.

Equipment Provision
The company will provide at no cost to the employee all appropriate, adequate, and necessary personal protective equipment (PPE), testing monitoring equipment, ventilation equipment, communications equipment, lighting equipment, barriers and shields, ladders or other entrance/exit equipment, rescue and emergency equipment and any other equipment necessary for safe entry into and rescue from a permit required confined space. Supervisors of the permit required confined space entry procedures would be responsible for ensuring use of the appropriate equipment by all entrants to the confined space.

Permit Space Condition Evaluation
Conditions in the permit space shall be tested to determine if acceptable entry conditions exist before entry is authorized to begin. If isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in the areas where authorized entrants are working. All affected employees and/or employee representatives shall be given the opportunity to participate and observe in the hazard evaluation and air monitoring procedures throughout all phases of the confined space work.

The permit space shall be tested or monitored as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations; and

When testing for atmospheric hazards, the company shall test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors.

Permit Space Attendant Procedures
The company shall provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations. No authorized attendant shall monitor more than one confined space.

Active Role Designations, Duties, and Training
The company provides training so that all designated employees acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them in permit required confined space entry procedures. This training is provided annually and at the following times:

- ✓ Before assignment to duties.
- ✓ When changes in permit require space hazards occur on which the employee has not been trained.
- ✓ Before changing the employee's duty assignment.
- ✓ When the employer has reason to believe the employee has deviated from a trained-upon procedure or that their knowledge is inadequate.

The following categories of employees are designated employees, whose duties are listed below:

- Authorized Entrants,
- Attendants,
- Entry Supervisors,
- Rescue and Emergency Service Employees.

Authorized Entrants
Authorized entrants of a permit-required confined space are trained to the extent that they know the hazards they may face, are able to recognize signs or symptoms of exposure, and understand the consequences of

exposure to hazards. Entrants know how to use any needed equipment, communicate with attendants as necessary, alert attendants to the warning signs or the existence of a hazardous condition, and exit as quickly as possible whenever ordered or alerted (by alarm, warning sign, or prohibited condition) to do so.

Attendants
Attendants to a confined space know the hazards of confined spaces, are aware of behavioral effects of potential exposure, maintain continuous count and identification of authorized entrants, and remain outside the space until relieved, and communicate with entrants as necessary to monitor entrant status. Attendants also monitor activities inside and outside the permit space and order exit if required, summon rescuers, if necessary, prevent unauthorized entry into the confined space, and perform non-entry rescues if required. They do not perform other duties that interfere with their primary duty to monitor and protect the safety of authorized entrants at the time of the permit-required confined space entry.

Entry Supervisors
Entry supervisors with responsibility for issuing confined space permits know the hazards of confined spaces, verify that all tests have been conducted and all procedures and equipment are in place before endorsing a permit, terminate entry, if necessary, cancel permits, and verify that rescue services are available and the means for summoning them are operable. Supervisors are to remove unauthorized individuals who enter the confined space. They also determine, at least when shifts and entry supervisors change, those acceptable conditions, as specified in the permit continue.

Rescue and Emergency Service Employees
Rescue services are provided by on-site employees or an off-site service if on-site assistance is unavailable. The on-site teams are properly are properly equipped and receive the same training as authorized entrants, plus training in the use personal protective and rescue equipment and in first aid, including CPR. They practice simulated rescues at least once every 12 months.

Outside rescue services are made aware of the hazards of the confined spaces, have access to comparable permit spaces to develop rescue plans, and practice rescues.

Hospitals or treatment facilities are provided with any material safety data sheets (MSDS's) or other information in a permit space hazard exposure situation that may aid in treatment of rescued employees.

Rescue and Emergency Services Procedures
Rescue and emergency services shall be contacted by phone or walkie-talkie and shall be within three minutes response time for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue.

IDLH Rescue Procedures
No employee of JDL Warm Construction shall knowingly enter into any confined space to perform work or rescue operations.

Entry Permit System
Before entry is authorized, the employer shall document the completion of required pre-entry measures by preparing an entry permit.

Before entry begins, the supervisor identified on the permit shall sign the entry permit to authorize entry.

The completed permit is made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations have been completed.

The duration of the permit does not exceed the time required to complete the assigned task or job identified on the permit.

The entry supervisor shall terminate entry and cancel the entry permit when:

1. The entry operations covered by the entry permit have been completed; or
2. A condition that is not allowed under the entry permit arises in or near the permit space

The employer shall retain each canceled entry permit for at least one year to facilitate the required annual review of the permit required confined space program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.

An entry permit that authorizes entry to a permit space must include:

1. Identification of the space;
2. Purpose of the entry;
3. Date and duration of the permit;
4. A list of authorized entrants, by name;
5. Names of current attendants and the entry supervisor;
6. A list of hazards in the permit space;
7. A list of measures to isolate the permit space and eliminate or control the hazards;
8. The acceptable entry conditions;
9. The results of tests initialed by the person(s) performing the tests;
10. The rescue and emergency services available and the means to summon them;
11. Communications procedures for attendants and entrants;
12. Any required equipment (such as respirators, communication, alarms, etc.);
13. Any other necessary information; and
14. Any additional permits (such as for hot work).

See Appendix for the entry permit form used at this company.

Multiple Employer Entry Procedures
If more than one employer's employees will be entering a permit required confined space at the same time, then a pre-entrance meeting will be held with the entry supervisors of all involved employers as well as with this company's Safety and Health Manager. In this meeting, all entry procedures and issues will be agreed upon and written into the permit.

Post Operations Procedures
The company will close off a permit space and cancel the permit after entry operations have been completed.

Review Procedures
The company will review entry operations when we have reason to believe that the measures taken under the permit space program may not protect employees and we will revise the program to correct deficiencies found to exist before subsequent entries are authorized.

Examples of circumstances requiring company review of the permit space program are: 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, and employee complaints about the effectiveness of the program.

The company will review the permit space program, using the retained canceled permits from the past 12 months within 1 year after each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards. The company will perform a single annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review will be performed.

Appendix Confined Space Entry Permit

Date and Time Issued:_____ Date and Time Expires:_____
Job site/Space I.D.:_____ Job Supervisor_____
Equipment to be worked on:_____ Work to be performed:_____
Stand-by personnel_____ _____ _____

1. Atmospheric Checks: Time _____
   Oxygen _____ %
   Explosive_____ % L.F.L.
   Toxic _____ PPM
2. Tester's signature_____
3. Source Isolation (No Entry):

	N/A	Yes	No
Pumps or lines blinded,	( )	( )	( )
disconnected, or blocked	( )	( )	( )

4. Ventilation Modification:

	N/A	Yes	No
Mechanical	( )	( )	( )
Natural Ventilation only	( )	( )	( )

5. Atmospheric check after isolation and ventilation:
   Oxygen _____% > 19.5 %
   Explosive _____% L.F.L. < 10%
   Toxic _____ PPM < 10 PPM H2S
   Time_____
   Tester's signature_____
6. Communication procedures:_____
   _____
7. Rescue procedures:_____
   _____
   _____
   _____
   _____
   _____
8. Entry, standby, and back up persons:

	Yes	No
Successfully completed required training?		
Is it current?	( )	( )

9. Equipment:

	N/A	Yes	No
Direct reading gas monitor tested?	( )	( )	( )
Safety harnesses and life lines for entry and stand by persons?	( )	( )	( )
Hoisting equipment?	( )	( )	( )
Powered communications'?	( )	( )	( )
SCBAs for entry and standby persons?	( )	( )	( )
Protective Clothing?	( )	( )	( )
All electric equipment listed Class I, Division 1, Group D and Non-sparking tools?	( )	( )	( )

10. Periodic atmospheric tests:
    Oxygen_____ % Time_____ Oxygen_____ % Time_____
    Oxygen_____ % Time_____ Oxygen_____ % Time _____
    Explosive____ % Time_____ Explosive____ % Time_____
    Explosive____ % Time_____ Explosive____ % Time_____
    Toxic_____ % Time_____ Toxic_____ %Time_____
    Toxic_____ % Time_____ Toxic_____ %Time_____

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if **any squares are marked** in the "No" column. This permit is not valid unless all appropriate items are completed.

Permit Prepared By: (Supervisor)_____ _____

Approved By: (Unit Supervisor)_____ _____

Reviewed By: (CS Operations Personnel):_____ _____
(printed name) (signature)

This permit to be kept at job site. Return job site copy to Safety Office following job completion.

Employee Emergency Action

Purpose
This Emergency Action Plan (EAP) is in place to ensure employee safety from fire and other emergencies. It provides a written document detailing the actions and procedures to be followed in case of emergency.

At the time of an emergency, employees should know what type of evacuation is necessary and what their role is in carrying out the plan. In some cases where the emergency is very grave, total and immediate evacuation of all employees is necessary. In other emergencies, a partial evacuation of nonessential employees with a delayed evacuation of others may be necessary for continued work site operations. In some cases, only those employees in the immediate area of the fire may be expected to evacuate or move to a safe area such as when a local application fire suppression system discharge employee alarm is sounded. Employees must be sure that they know what is expected of them in all such emergency possibilities that have been planned in order to provide assurance of their safety from fire or other emergency. This plan contains the information they need to know.

Emergency Escape Procedures and Assignments
Procedures in case of Fire, Bomb Threat, and Toxic Chemical Release

1. Employees are to proceed to the nearest available safe area and leave the work site area of danger as quickly as possible in the event of fire or other emergency requiring evacuation to achieve safety.
2. All employees are trained in safe evacuation procedures, and refresher training is conducted whenever the employee's responsibilities or designated actions under the plan change, and whenever the plan itself is changed. In addition, the employer must review with each employee, upon initial assignment, the parts of the plan that the employee must know to protect the employee in the event of an emergency.
3. The training includes the use of work site plans and maps that clearly show the emergency escape routes included in the Emergency Action Plan. These site plans and maps are available and posted at all times in every area of the work site to provide guidance in an emergency.
4. As a matter of general practice, stairwells are the primary means for evacuation. Elevators are used only when authorized by a fire or police officer, or to assist physically handicapped personnel.
5. No employee is permitted to re-enter affected buildings or areas until advised by the Safety Manager (after determination has been made that such re-entry is safe).
6. Staff operating equipment, tools or machinery are to stop the machinery as soon as possible, putting it in as safe a location as possible and go to their assigned locations.
7. Refuge zones for a work site will be designated at the beginning of a project, and all employees will be informed as to the refuge zones available to them in the event of the need for emergency evacuation from the work site.

Critical Site Operations Procedures
The site safety manager, the site manager, and all supervisors are designated employees to remain behind during evacuation to care for critical operations on the site that cannot be left unattended.

The procedures to be taken by those employees who have been selected to remain behind to care for essential site operations until their evacuation becomes absolutely necessary include:

1. The monitoring of site power supplies and water supplies, essential services that may not be able to be shut down for every emergency alarm, and
2. Processes which must be shut down in stages or steps where certain employees must be present to assure that safe shut down procedures are completed will be identified at the start of each project.

Employee Head Count Procedures
Trained evacuation personnel conduct head counts once evacuation has been completed. There is at least one trained evacuation person for each twenty employees at the work site to provide adequate guidance and instruction at the time of a fire emergency. The employees selected are trained in the complete work site layout and the various alternative escape routes from the work site. All trained personnel are made aware of employees with disabilities who may need extra assistance, such as using the buddy system, and of hazardous areas to be avoided during emergencies. Before leaving, these employees check rooms and other enclosed spaces at the work site for employees who may be trapped or otherwise unable to evacuate the area.

Rescue and Medical Duty Assignments
In the event of an emergency, requiring rescue, it will be the policy of this company to await Professional Emergency Services to arrive on site before any attempt at rescue is made and then only under the supervision and instruction of the Professional Emergency Service.

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

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

Fire and Emergency Reporting Procedures
In the event of a fire

When a fire is detected, go to the nearest fire alarm station and activate the alarm by pulling on the lever. The alarms will notify the employees on the rest of the site. Call for the aid of the local Emergency Service and proceed to evacuate the area.

In the event of a tornado

The site safety manager has a weather scanner and access to an alarm system to notify in case of a tornado.

When the National Weather Service has issued a tornado watch, the weather scanner will sound, followed by a weather bulletin with further information.

At the point when the watch becomes a warning, the safety manager or his designee will use the alarm to alert employees to tornadoes.

The Site Safety Manager will use the tornado horn to alert employees to tornadoes.

It is the company policy to cease activity to allow employees to seek emergency shelter in the event of a tornado/hurricane. At the time the tornado alarm sounds, all employees are responsible for evacuating to a safe sheltered area.

Responsible Person List

Critical Site Operations Personnel

The Site Safety Manager, the Site Manager, and all supervisors are designated employees to remain behind during evacuation to care for critical operations.

A sufficient number of employees have been designated by the company and trained to assist in safe and orderly emergency evacuation for all types of emergency situations. The list of people trained includes at least one person from every area for every shift. These employees are to help direct all employees during emergency evacuation, serve as a resource of information about emergency procedures, and conduct head counts once evacuation has been completed.

Site Safety Manager Responsibilities

The Site Safety Manager at this company is responsible for the following activities. He or she must:

1. Develop a written emergency plan for regular and after-hours work conditions.
2. Immediately notify local fire or police departments, and the building/site owner/superintendent in the event of an emergency affecting the site.
3. Integrate the emergency plan with the general emergency plan covering the building occupied, if there is one.
4. Distribute procedures for reporting a fire, bomb threat, or other emergency, the location of fire exits and/or evacuation routes to each employee.
5. Conduct fire drills to acquaint the employees with emergency procedures, and to judge the effectiveness of the plan.
6. Satisfy all local fire codes and regulations as specified.
7. Train designated employees in the use of fire extinguishers and the application of medical and first aid techniques.
8. Keep key management personnel home telephone numbers in a safe place in the site office for immediate use in the event of an emergency. Distribute a copy of the list to key persons to be retained in their homes for use in communicating an emergency occurring during non-work hours.
9. Decide to remain in or evacuate the work site in the event of an emergency.
10. If evacuation is deemed necessary, the safety manager ensures that:

    - All employees are notified and a head count is taken to confirm total evacuation of all employees.
    - The building owner/superintendent is contacted, informed of the action taken, and asked to assist in coordinating security protection.

Types of Emergency Evacuations

At this company the following types of emergency evacuations exists as detailed earlier in this plan:

1. Fire,
2. Tornado, and
3. Other, as necessary.

Cranes and Derricks in Construction

The written Crane & Derrick Operation Procedures establish guidelines to be followed whenever any of our employees work with cranes or derricks at this company. The rules are established to:

- Provide a safe working environment,
- Govern operator use of cranes and derricks, and
- Ensure proper care and maintenance of cranes and derricks.

These procedures establish uniform requirements designed to ensure that crane and derrick safety training, operation, and maintenance practices are communicated to and understood by the affected employees. These requirements are also designed to ensure that procedures are in place to protect the health and safety of all employees.

It is our intent to comply with the requirements of 29 CFR 1926 Subpart CC for construction activities. This regulation has requirements for crane and derrick operations. We also comply with the applicable requirements of:

Standard or Regulation:	**Name:**	**Details:**
ANSI B15.1-1958	*Safety Code for Mechanical Power Transmission Apparatus*	For guarding
ANSI B30.5-1968 or SAE J959-1966	*Mobile and Locomotive Cranes* or *Lifting Crane, Wire-Rope Strength Factors for Rope Safety Factors*	
ANSI B30.6-1969	*Safety Code for Derricks*	For derricks
Power Crane and Shovel Association Mobile Hydraulic Crane Standard No. 2		

SAE J743a-1964	*Pipe Layers and Side Booms—Tractor Mounted-Specifications and Tests*	For sideboom cranes mounted on wheel or crawler tractors
29 CFR 1926.106	*Working Over or Near Water*	For work over water
29 CFR 1926, Subpart M	*Fall Protection*	For fall protection
29 CFR 1926.605	*Marine Operations and Equipment*	For marine vessels
49 CFR 177	*Carriage by Public Highway*	For transporting fuel by vehicles on public highways
49 CFR 393	*Parts and Accessories Necessary for Safe Operation*	For transporting fuel by vehicles on public highways

Administrative Duties
The Safety and Health Manager is responsible for developing and maintaining the written Crane & Derrick Operation Procedures. These procedures are kept in the office of the Safety and Health Manager.

As specified under OSHA 29 CFR 1926 Subpart CC, our Crane & Derrick Operation Procedures are administered under the direction of our competent person(s), someone capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. The Safety and Health Manger and Crane and Derrick operators are considered the competent person for our company.

Training
It is the policy of JDL Warm Construction to permit only trained and authorized personnel to operate cranes and derricks. The Safety and Health Manager will identify all new employees in the employee orientation program and make arrangements with department management to schedule training.

Before we begin training a new employee, our Crane & Derrick Operation Procedures Administrator determines if the potential crane or derrick operator is capable of performing the duties necessary to be a competent and safe operator. This is based upon his/her physical and mental abilities to perform job functions that are essential to the operation of the crane or derrick

These capabilities include the level at which the operator must:

- See and hear within reasonably acceptable limits. This includes the ability to see at distance and peripherally;
- Endure the physical demands of the job; and
- Endure the environmental extremes, such as the ability of the person to work in areas of excessive cold or heat. An operator must be able to climb onto and off of a crane, to sit in the crane for extended periods of time, and to turn his/her body to look in the direction of travel when driving in reverse.

Once our Administrator determines that a potential operator is capable of performing crane and derrick duties, the Safety and Health Manager will conduct initial training and evaluation. The instructor has the necessary knowledge, training, and experience to train new crane and derrick operators.

Initial Training
Each type of crane or derrick has a different "feel" to it, and that makes operating it slightly different from operating other cranes or derricks. The work areas where these cranes or derricks are being used also present particular hazards. For these reasons, it is impractical to develop a single "generic" training program that fits all of our cranes and derricks. Accordingly, during training, JDL Warm Construction covers the operational hazards of our cranes and derricks, including:

- Hazards associated with the particular make and model of the crane and derrick;
- Hazards of the workplace; and
- General hazards that apply to the operation of all or most cranes and derricks.

Each potential operator who has received training in any of the elements of our training program for the types of cranes or derricks which that employee will be authorized to operate and for the type of workplace in which the cranes or derricks will be operated need not be retrained in those elements before initial assignment in our workplace if JDL Warm Construction has written documentation of the training and if the employee is evaluated to be competent. No employee will operate any crane until they have completed the training and been deemed qualified to operate the crane for which they will be assigned.

Training Certification
After an employee has completed the training program, the instructor will administer a performance test or practical exercise to determine whether the potential operator can safely perform the job. At this point the instructor will determine if the training has been adequate. All crane and derrick trainees are tested on the type of equipment they will be operating.

The Safety and Health Manager is responsible for keeping records certifying that each operator has successfully completed training and testing. Each certificate includes the

name of the operator, the date(s) of the training, and the signature of the person who did the training and evaluation.

Performance Evaluation
Each certified crane/derrick operator is evaluated annually to verify that the operator has retained and uses the knowledge and skills needed to operate safely. This evaluation is done by the Safety and Health Manager. If the evaluation shows that the operator is lacking the appropriate skills and knowledge, the operator is retrained by our instructor(s). When an operator has an accident or near miss or some unsafe operating procedure is identified, we do retraining.

Current Crane/Derrick Operators
Under no circumstances shall an employee operate a crane or derrick until he/she has successfully completed this company's crane/derrick training program. This includes all new operators regardless of claimed previous experience.

Inspections
Initial Inspections
Our company inspects and tests all cranes and derricks to ensure they are capable of safe and reliable operation when initially set or placed in service and after any major repairs or design modification. The Competent Person is responsible for these inspections and tests.

Frequent Inspections
The company requires a competent person to perform pre-operational crane and derrick checks prior to beginning each shift. This person walks around the crane or derrick looking for defects or problem areas. Components that have a direct bearing on the safety of the crane or derrick and whose status can change from day to day with use, must be inspected daily, and when possible, observed during operation for any defects that could affect safe operation. There are four frequent inspections: Pre-Operational Site Activity and Inspection, Pre-Operational (Daily) Walk Around Inspection, Pre-Start-Up (In Cab) Inspection, and Crane Operation Checklist.

Operations must not begin unless all of the safety devices are in proper working order. If a safety device stops working properly during operations, the operator must safely stop operations. If any of the safety devices are not in proper working order, the equipment must be taken out of service and operations must not resume until the device is again working properly.

Operating Procedures
Cranes and derricks can create certain hazards that only safe operation can prevent. That’s why we have created a set of operating procedures. Our operating procedures follow:

GENERAL PROCEDURES

- Outriggers will be visible to the operator or a signal person during extension or setting.
- No one except the oiler, instructor, or competent person will be allowed on an operating crane.
- All equipment will comply with the manufacturer's specifications and limitations at all times.
- All attachments used with heavy construction equipment will not exceed the capacity, rating, or scope recommended by the manufacturer.
- The procedures applicable to the operation of the equipment, including rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions, and operator's manual, will be readily available in the cab at all times for use by the operator.
- The equipment will 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.
- The controlling entity will ensure that ground preparations necessary to meet the requirements are provided.
- When assembling or disassembling equipment (or attachments), JDL Warm Construction will comply with all applicable manufacturer prohibitions and procedures applicable to assembly and disassembly.
- Assembly/disassembly will 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").
- Before beginning equipment operations, the JDL Warm Construction will identify the work zone by either 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 define the work zone as the area 360 degrees around the equipment, up to the equipment's maximum working radius.
- JDL Warm Construction will determine if any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet to a power line. If so, one of the following shall apply:
    - *Option (1)--Deenergize and ground*. Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the worksite.
    - *Option (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.
    - *Option (3)--Table A clearance*. Determine the line's voltage and the minimum approach distance permitted under Table A below.

TABLE A—MINIMUM CLEARANCE DISTANCES

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet)
up to 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 by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

- Where there are accessible areas in which the equipment's rotating superstructure (whether permanently or temporarily mounted) poses a reasonably foreseeable risk of striking and injuring an employee or pinching/crushing an employee against another part of the equipment or another object JDL Warm Construction will train each employee assigned to work on or near the equipment ("authorized personnel") in how to recognize struck-by and pinch/crush hazard areas posed by the rotating superstructure and erect and maintain control lines, warning lines, railings or similar barriers to mark the boundaries of the hazard areas.

PROCEDURES FOR OPERATORS

- Whenever there is a concern as to safety, the operator has the authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.
- Do not operate a crane or derrick unless you are qualified and properly designated. A qualified person is one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems relating to the subject matter, the work, or the project. A designated person is an authorized person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the job site.
- Do not hoist, lower, swing, or travel while anyone is on the load or hook. This includes riding a bare hook or a load of material such as beams, girders, or concrete buckets.
- Do not use a crane or derrick to handle materials or loads stored under electric power lines.
- Use nonconductive taglines, rather than direct contact lines, to stabilize the load.
- Use insulating boots and gloves when connecting loads or contacting the crane or derrick while in the vicinity of overhead lines.
- Signal persons must understand the hand signals for the type of crane you are working with. (These hand signals are posted at the job site.)

- When performing duties on the horizontal boom of hammerhead tower cranes that do not protect you with guardrails, protect yourself against falling by wearing safety belts and lanyards attached to lifelines.
- Keep the crane clean and free of clutter.
- Know how to read the load rating chart.
- Do not lift a load without knowing whether it is within the rated capacity of the crane or derrick.
- Stay within the rated load capacity and working radius. Under adverse field conditions, reduce the load capacity until it is determined the crane or derrick can safely handle the lift.
- When working at boom lengths or radii between the figures shown on the load capacity chart, use the next lower capacity rating. It is dangerous to guess the capacity for boom lengths or radii between those listed on the rating plate.
- Do not lift a load when winds create an unsafe or hazardous condition. Even a light wind can blow the load out of control, collapse a boom, or tip the machine.
- Take proper precautions when the velocity of wind exceeds 20 mph. If possible, lower or secure booms under high wind conditions.
- Do not use counterweights heavier than the manufacturer's specified weight.
- When the machine set is not level, understand that the crane capacity and structural integrity can be adversely affected.
- Keep your feet on the pedals while foot pedal brake locks are in use. Brakes could cool allowing the load to fall.
- A signal person will 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.

PROCEDURES FOR ALL EMPLOYEES

- All employees will be kept clear of loads about to be lifted and suspended loads.

PROCEDURES FOR EMPLOYEES WHEN USING THE SUSPENDED PERSONNEL PLATFORM HOIST

Employees can also contribute to safe personnel hoisting operations and help to reduce the number of accidents and injuries associated with personnel hoisting operations. Employees must adhere to the following safe work practices:

- Never ride the load; use only platforms specifically designed for personnel lifting.
- Use tag lines where they are practical and do not create an unsafe condition.
- Keep all body parts inside the platform during raising, lowering, and positioning.
- Make sure the platform is secured before exiting or entering unless it creates an unsafe situation.
- Use fall protection equipment properly. (Refer to appropriate OSHA regulations).
- Do not hoist any load while personnel platforms are in use.

- Perform any movement slowly and cautiously without any sudden jerking of the crane or platform.
- Stay in view of or in direct communication of the signal person. If this is not possible, and use of a signal person would create a greater hazard, direct communication alone, such as by radio, may be used.
- Do not hoist personnel while the crane is traveling except when the employer demonstrates that it is the least hazardous way to accomplish a task or when portal, tower, or locomotive cranes are used. When cranes are moving while hoisting personnel, obey these rules:
    - ✓ Restrict travel to a fixed track or runway.
    - ✓ Limit travel to the radius of the boom during the lift.
    - ✓ Keep the boom parallel to the direction of travel.
    - ✓ Do not allow employees to occupy the platform until a complete trial run has been performed.
    - ✓ Do not hoist personnel until the condition and air pressure of the tires (if made of rubber) is checked and the chart capacity for lifts is applied to remain under the 50 percent limit of the hoist's rated capacity.

Maintenance

Any deficiencies found in our cranes and derricks are repaired, or defective parts replaced, before continued use. However, no modifications or additions that affect the capacity or safe operation of the equipment may be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals, must be changed accordingly. In no case may the original safety factor of the equipment be reduced. The Safety and Health Manager is responsible for ensuring the cranes and derricks are capable of safe and reliable operation after any major repair or design modification.

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

The Safety and Health Manager and Competent Persons complete a receiving or delivery inspection whenever our company purchases cranes or derricks, and they perform the recommended "breaking in" inspections and maintenance.

The operator follows the manufacturer's operator instruction manual for daily maintenance.

Periodic maintenance (those completed monthly or less frequently) is done by a factory-trained-expert, or a dealer.

Posting
In order to aid in the use of consistent hand signals for crane and derrick operations, we post the signals at the job site. We have attached a copy of this poster to these written procedures.

Rated load capacities, recommended operating speeds, special hazard warnings, i.e., electrical power line clearance requirements, or instructions, are posted and visible to the operator while at the control station.

Recordkeeping & Certification
The Safety and Health Manager is responsible for maintaining the following records on file in the office of the Safety and Health Manager:

- The log of all monthly periodic inspections on critical items in use (i.e., brakes, crane hooks, and ropes), and include:
  - The date the crane items were inspected,
  - The signature of the person who inspected the crane items,
  - A serial number, or other identifier, for the crane inspected, and
  - The most recent certification record (maintained on file until a new one is prepared).
- The most recent monthly periodic inspection (certification) record.
- A record of the annual inspection for each hoisting machine and piece of equipment used, including the dates and results of the inspection.
- Inspection reports for the annual magnetic particle or other suitable crack detecting inspection.
- Maintenance records.
- Any results of any equipment specifications and limitations made by a qualified engineer. (If we do not have manufacturer's specifications and limitations for our equipment, determination of those limitations is made by a qualified engineer.)
- Any written approval from the manufacturer of any modifications or additions that affect the capacity or safe operation of our equipment. In no case will the original safety factor of the equipment be reduced.
- Any tests to see that employees are not exposed to unsafe concentrations of toxic gasses or oxygen-deficient atmospheres. (If our crane is going to be operated in an enclosed space, tests will be made.)

Medical Services and First Aid

Purpose

JDL Warm Construction is dedicated to the protection of its employees from on-the-job injuries and illnesses. However, when injuries or illnesses do occur, we are prepared to immediately respond to the needs of the injured or ill.

This written First Aid Program is intended to ensure that JDL Warm Construction meets the requirements of 29 CFR 1926.23, First Aid and Medical Attention, and 29 CFR 1926.50, Medical Services and First Aid.

Administrative Duties

Our safety and health manager is responsible for establishing and implementing the written First Aid Program. This person has full authority to make necessary decisions to ensure the success of this program. Copies of this written program may be obtained from the safety and health manager. If after reading this program, you find that improvements can be made, please contact the safety and health manager. We encourage all suggestions because we are committed to the success of this written program.

First Aid Personnel

The safety and health manager is readily available for advice and consultation on matters of occupational health.

The *National EMS Education and Practice Blueprint* lists the following first aid designations:

- **First aid provider**: Occupationally required to be trained in first aid even though they may not be specifically obligated by law to perform first aid. Responds as a "Good Samaritan." Uses a limited amount of equipment to perform initial assessment and provide immediate life support and care while awaiting arrival of emergency medical services (EMS).
- **First responder**: Uses a limited amount of equipment to perform initial assessment and intervention and is trained to assist other EMS.
- **Emergency Medical Technician (EMT)-Basic**: The 2nd level of professional emergency medical care provider. Qualified to function as the minimum staff for an ambulance.
- **EMT-Intermediate**: The 3rd level of professional emergency medical care provider. Can perform essential advanced techniques and administer a limited number of medications.
- **Paramedic**: The 4th level of professional emergency medical care provider. Can administer additional interventions and medications.

The following person(s) are trained to render first aid at JDL Warm Construction:

Name/Title and first aid designation:

Hazard and Medical Services Assessment
The safety and health manager assessed JDL Warm Construction for hazards to determine whether any pose the risk of a life-threatening or permanently disabling injury or illness. When hazards or locations change, the safety and health manager reassesses our risk and determines whether or not we are required to train an on-site employee in first aid. In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first-aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training will be available at the worksite to render first aid.

First Aid Supplies and Equipment
It is important that our first aid supplies and equipment meet the specific needs of our worksite.

The safety and health manager has ensured that adequate first aid supplies, adequate for the environment, are readily available, including:

- Variety of bandages, compresses, and gauze pads
- Antiseptic swabs
- Burn treatments
- Adhesive tape
- Latex or similar gloves
- Gauze roller bandages
- Eye dressing
- Eyewash solution
- Scissors
- Ammonia inhalants
- Antibiotic cream
- Resuscitation equipment, such as a resuscitation bag, airway, or pocket mask
- Instructions for giving first aid

We provide these supplies in a weatherproof container with individual sealed packages for each type of item located at conspicuous accessible locations on the jobsite.
The safety and health manager checks the first aid supplies. The contents of the first-aid kit shall be checked by the employer before being sent out on each job and at least weekly on each job to ensure that the expended items are replaced.

In addition to first aid supplies, we utilize a communication system for contacting necessary ambulance service.

Because we have injurious corrosive materials, JDL Warm Construction provides drenching and flushing facilities that meet the specifications of ANSI Z358.1, *Emergency Eyewash and Shower Equipment*:

Because it is reasonably anticipated that employees will be exposed to blood or other potentially infectious materials while rendering first aid, we provide the following personal protective equipment:

- Gloves
- Gowns
- Face
- Shields
- Masks
- Eye protection

Posting
To help those responding to a medical emergency, we have posted emergency phone numbers and phone numbers of key management personnel. The Safety and Health Manager is responsible for posting these phone numbers and any other signs that may be needed to assist in first aid procedures.

Medical Transport
Proper equipment for prompt transportation of the injured person to a physician or hospital, or a communication system for contacting necessary ambulance service, will be provided.

Training
Training is the heart of our First Aid Program. Employees should NOT attempt to rescue or treat an injured or ill employee unless they are qualified to do so. Instead, they should contact someone who is qualified.

Employees who are qualified to render first aid have completed JDL Warm Construction' first aid training program. The Safety and Health Manager is responsible for ensuring that qualified employees are trained.

First aid training is done using an outside source. We include classroom lecture and hands-on in our training formats.

Training Certification
After an employee has completed our training program, the trainer will determine whether the employee can safely perform first aid. The Safety and Health Manager is responsible for keeping records verifying certification of each employee who has successfully completed training. Each certificate is a valid certificate in first-aid training, from the American Red Cross or equivalent and includes the name of the employee, the date(s) of the training, and the signature of the person who performed the training and evaluation.

Retraining
Trained employees are retrained every two years or at intervals prescribed by the training agency to keep their knowledge and skills current.

Accident Reporting
After the immediate needs of an injury or illness emergency have been met, we require our employees to report the event to their supervisor. Extremely minor injuries, like a small bruise, do not need to be reported. However, those injuries and illnesses involving professional treatment, time away from work, or a near miss of a more serious accident, must be reported to an employee's supervisor. Even injuries that do not become apparent until after the cause must be reported. For example, back pain that develops over a period of time must be reported.

1. Employees injured on the job are to report the injury to the area manager/supervisor (if possible) as soon as possible after the incident/accident. "Near Miss" accidents or incidents should be reported as well, i.e., when an employee nearly has an accident but is able to avoid it.
2. The supervisor is to complete the company Accident Report Form with the employee, any witnesses, and/or other relevant people as soon as possible after the accident is reported.
3. The supervisor is to immediately notify the Safety Manager, and to send a copy of the written Accident Report Form to the Safety Manager as soon as possible after the accident.
4. Any employee witnessing an accident at work is to call for emergency help or whatever assistance appears to be necessary. In addition, the employee is immediately to report the accident to his or her supervisor and take part in answering questions related to the Accident Report Form and accident investigation.

Recordkeeping
The Safety and Health Manager is responsible for maintaining the following records and documentation relating to first aid, injuries, illnesses, and accidents:

- OSHA No. 300 Forms,
- OSHA No. 300A Forms,
- OSHA No. 301 Forms,
- State-required equivalent forms,
- Employee medical records relating to 29 CFR 1910.1020(c)(6) and (d)(1),

- Accident Report Forms,
- Accident Investigation Forms,
- Insurance and workers' compensation forms

Program Evaluation
By having the Safety and Health Manager thoroughly evaluate and, as necessary, revise our program, we ensure our program's effectiveness and prevent or eliminate any problems. Program evaluation is performed annually. Program evaluation involves the following:

- Evaluating the workplace or worksite to ensure that the program is being effectively implemented,
- Regularly consulting employees to assess their views on program effectiveness and to identify any problems,
- Consulting with first aid personnel immediately after an injury or accident to assess their views on program effectiveness and to identify any problems, and/or
- Checking documentation of first aid activities.

Occupational Noise Exposure

Purpose

It is the policy of JDL Warm Construction to institute an occupational hearing conservation program to prevent any temporary or permanent noise-induced hearing loss to employees, and to comply with Federal OSHA Standard 29 CFR 1926.52.

Monitoring

1. The Safety Office or contracted consultant will monitor and identify workplace noise levels using a calibrated sound level meter on an annual basis, or whenever there is a change in production processes, equipment, or controls. Monitoring is performed to determine which operations expose employees to excessive noise and fall under the hearing conservation program. Whenever employee noise exposure equals or exceeds the levels in the Permissible Noise Exposure Table (Table D-2 in the regulation), the affected employee will be subjected to the hearing conservation program.
2. The Safety Office will be informed of upcoming equipment purchases or modifications that may affect sound levels. When the equipment purchase or modification is nearing its final decision phase, the Safety Office is to be notified. If necessary, on-site visits or vendor contact by the Safety Office will be coordinated to monitor noise levels and also assess any potential safety/ergonomic issues which may affect employees. The Safety and Security Manager will also work with Procurement to obtain necessary technical specifications as well as coordinate any vendor contact on safety issues.
3. Controlling noise at the source utilizing engineering controls must be considered first before any other tactics are implemented.
4. Warning signs will be posted in conspicuous locations at work sites near the high noise level areas to ensure that hearing protection is required when operating machinery.

Hearing Protection

1. The Safety & Security Manager will order and provide adequate hearing protection for employees. All employees subject to work in those areas must be provided with the appropriate hearing protection devices from among the following types listed in the table in 4, below.
2. Employees are required to wear company-provided hearing protection and at no time must an employee tamper with, or modify any hearing protection equipment. Damaged or defective equipment must be discarded and replaced.
3. Supervisors and managers are required to enforce the hearing conservation policy in their area of responsibility.
4. The standard requires the company to provide a variety of hearing protection devices to persons who are required to wear them. The types of protective devices available include:

Type of Hearing Protection	Advantages	Disadvantages
Ear Muffs	One size fits most adults Can easily be seen at a distance Can be put on, adjusted, etc. while wearing gloves Can be warming to the ears in cold environments	Usually have a lower noise reduction rating than ear plugs, but still provide effective protection They are bulky and cannot fit in pockets or stored in tool kits May interfere with and not sit properly when glasses, hearing aids, etc. Because of their size, may not be suitable for the work quarters Excessive heat and sweat accumulation may make uncomfortable to wear in hot locations Are more difficult to clean than ear plugs
Ear Plugs (2 types: pre-formed & expandable)	Have highest noise reduction rating and are very effective in protecting hearing when worn properly Do not interfere with work in close quarters Are easily carried and stored when not in use Compatible with glasses or any other type of head gear without affecting performance Can be easily cleaned	Fitting can be complicated. Ear canals vary in diameter and the left and right ear canals are not necessarily similar in size, shape, or position Can be easily left in other work clothes or fall out of a jacket or shirt pocket and become lost Cannot be seen at a distance which makes it difficult to evaluate if person is wearing them Gloves must be removed and hands washed prior to putting in ear plugs

Training and Information

1. The Safety & Security Manager will ensure that each employee in the hearing conservation program receives training during the first week of employment.
2. Retraining will be conducted on an annual basis. Information provided in the retraining program would be updated to be consistent with changes in work processes and/or protective equipment.

Recordkeeping

1. The Safety & Security Manager will maintain accurate records for all noise level surveys and employee exposures.
2. Employees' baseline/annual audiograms and any other records will be retained in a separate file in Personnel for the duration of employment plus 30 years after termination.
3. Records will be provided to employees, former employees, or designated representatives thereof, upon written request to the Safety & Security Manager.

Hazard Communication

Overview

In accordance with 29 CFR 1910.1200, "The Hazard Communication Standard", the following written Hazard Communication Program has been established at JDL Warm Construction

This program is designed to ensure each employee has the information needed to handle and use chemicals safety. Chemical exposure may cause or contribute to many serious health effects such as heart ailments, kidney and lung damage, sterility, cancer, burns, and rashes. Some chemicals may also cause fires, explosions, and other serious accidents.

This program includes provisions for container labeling, Safety Data Sheets (SDS), an employee training program, a list of the hazardous chemicals in each work area, the means used to inform employees of the hazards of non-routine tasks, hazards associated with chemicals in unlabeled pipes, and the manner in which contractors in the facility will be informed of the hazards to which their employees may be exposed.

Copies of this program shall be available in all jobsite trucks or trailers and in the corporate office for review by all employees, their designated representatives, and the Assistant Secretary for Occupational Safety and Health.

Labels and Other Forms of Warning (reference section (f) of 29 CFR 1910.1200)

A. The company safety and health manager will verify that all containers of hazardous chemicals received for use by the Department are labeled or marked by the manufacturer or distributor with the following information:
   1. Product identifier
   2. Signal word
   3. Hazard statement
   4. Pictogram(s)
   5. Precautionary statement(s)
   6. Name, address, telephone number of the chemical manufacturer, importer, or other responsible party.

B. If containers are not labeled, labels shall be affixed to the container listing the same information as indicated in Section 2.0., A. For more information about labeling see Appendix C, 1910.1200 – Allocation of Label Elements.

C. Alternative labeling methods such as those developed by the National Fire Protection Association (NFPA) and the National Paint & Coatings Association (NPCA) called the Hazardous Material Information System (HMIS) may be used.

   These systems rely on numerical and/or alphabetic codes to convey hazards and are generally non-specific. OSHA has permitted these types of in-plant labeling systems to be used when an employer's overall Hazard Communication Program is proven to be effective. Under these circumstances, this employer has assured -through workplace specific training that its employees are fully aware of the hazards of the chemicals used. Additionally, this employer has ensured that their training program

instructs employees on how to use and understand the alternative labeling systems so that employees are aware of the effects of the hazardous chemicals to which they are potentially exposed.

Safety Data Sheets (ref. section (g) of 29 CFR 1910.1200.)

A. Each work station or area shall have a Safety Data Sheet (SDS) for each hazardous chemical used.

B. SDS's shall be in English and include at the least the following section numbers and headings, and associated information under each heading, in the order listed in Appendix D, 1910.1200 – Safety Data Sheets

C. SDS's will be available for review during each work shift. Copies of the SDSs for all hazardous chemicals will be maintained in the job site trailer or superintendents' truck on site.

D. Hazardous chemicals will not be accepted in the workplace without SDS's being provided or requested. SDS's shall not be developed by the University or by any department. Chemical manufacturers or importers are responsible for developing a SDS for all chemicals they produce.

Employee Training Information (ref. section (h) 29 CFR 1910.1200)

A. The safety and health manager shall ensure employee training is conducted and shall appoint designated trainers.
   1. The designated trainer shall provide employees with information and training on chemical hazards in their work area at the time of their initial assignment and when a new hazard is introduced in the work area.
   2. Training of present employees will begin immediately upon receipt of this Hazard Communication Program
   3. Notices will be posted which provide an explanation of the labeling system, the location of the Written Hazard Communication Program, and the location of the SDS's.

B. Training and information shall be accomplished by:
   1. Computer based training (CBT)
   2. Classroom type instruction with audiovisual aids.
   3. Work station instruction.

      - This training may be satisfied by completing both the CBT module provided by JDL WARM CONSTRUCTION's Occupational Health & Safety and the workplace specific training conducted by the safety and health manager's designated trainer.

C. The CBT training will cover:
    - A background on OSHA's Hazard Communication Standard
    - Required elements of a Hazard Communication Program
    - Hazardous Chemicals
    - Hazard Communication Program responsibilities
    - An overview of container labeling
    - How to interpret Safety Data Sheets4
    - Required elements of workplace specific training
    - Controlling physical and health hazards
    - Chemical release and accident reporting

D. The ***workplace specific training*** must inform employees of:
    - Where to locate a copy of the workplace specific written HCP
    - How to locate the inventory of chemicals in the workplace
    - The location and means to access the SDS for each chemical in inventory, including the order of the information
    - How to use and understand the labels on shipped containers and the workplace labeling system used in the workplace
    - The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified of the chemicals in the work area
    - Special precautions to follow when handling these chemicals
    - How to reduce or prevent overexposure to these chemicals
    - What the department has done to reduce or prevent exposure to these chemicals
    - Methods and observations employees may use to detect the presence of a hazardous chemical they may be exposed to
    - Procedures to follow if they are exposed to these chemicals
    - The health hazards, symptoms, first aid and emergency procedures to follow, in case of overexposure
    - Spill or leak procedures to follow
    - PPE requirements and how to use the equipment PPE Hazard Assessment Tool
    - Procedures implemented to provide outside contractors the information about chemical hazards in the workplace Contractor Safety Handbook
    - The potential hazards of any task performed that is not in the normal course of their job prior to the start of that task. Supervisors must also ensure that employees are informed of the chemical hazards associated with the performance of these tasks and of the appropriate measures that should be taken.

E. Verification of training:
   1. After attending the training class, each employee will sign a verification of training form stating they received and understood the material presented. Refer to appendix A.
   2. The verification of training form should be kept for the employee's duration of employment. It should be maintained along with the certificate (if applicable) associated with the CBT training module.

Chemical Information

A. Hazardous chemical means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified as either a Health Hazard or a Physical Hazard. Further information on each hazardous chemical may be obtained by asking the supervisor or reading the Safety Data Sheet. For more information about physical hazards see Appendix B, 1910.1200 – Physical Criteria. For more information about health hazards see Appendix A, 1910.1200 –Health Hazard Criteria.

PHYSICAL HAZARD	HEALTH HAZARD
Combustible liquid	Carcinogens
Compressed gases	Toxic agents
Explosives	Highly toxic agents
Flammable Aerosols	Reproductive toxins
Flammable gases	Irritants
Flammable liquids	Corrosives
Flammable solids	Sensitizers
Organic peroxides	Hepatotoxins
Oxidizers	Nephrotoxins
Pyrophorics	Hematopoietic system toxins
Unstable reactives	Neurotoxins
Water reactives	Damage lungs
	Damage skin
	Damage eyes
	Damage mucous membranes

B. The following is a list of the hazardous chemicals used in this WORK AREA and contains a synopsis of the Health or Physical Hazards associated with these chemicals. Refer to appendix B.

Hazardous Non-Routine Tasks

Tasks that are not completed during a normal work shift but are periodically a part of the work assignment. These tasks have been identified as the following activities: (If none, so state.)

- _____
- _____
- _____
- _____
- _____

Informing Contractors

It is the responsibility of the DESIGNATED TRAINER to provide contractors with the following information IF REQUESTED by the contractor or his designee.

A. What hazardous chemicals they or their employees may be exposed to while at the job site.
B. What measures the contractor's employees may take to lessen the possibility of exposure to a hazardous chemical and the procedures they should follow if they should follow if they are exposed to a hazardous chemical above the Permissible Exposure Limit. (PEL).
C. What labeling procedures are followed and how the labels convey the hazards.
D. The location of and access to, Safety Data Sheets
E. The contractor shall inform JDL Warm Construction of all hazardous materials they will use during the project and shall provide proper labels and appropriate SDSs. The Contractor shall also provide, upon request, a copy of their Hazard Communication Program.

Appendix A

HAZARD COMMUNICATION PROGRAM

VERIFICATION OF WORKPLACE SPECIFIC TRAINING

I, _____, have received training on and understand all elements indicated in 4.0, D., of my work unit's Hazard Communication Program.

SIGNATURE _____

TRAINER_____

DATE_____

Appendix B

MATERIAL/CHEMICAL HAZARDOUS PROPERTIES EFFECTS

Product Name	Chemical Name	Amount	Location	

SAMPLE LABEL

PRODUCT IDENTIFIER

CODE _____
Product Name _____

SUPPLIER IDENTIFICATION

Company Name_____
Street Address _____
City _____ State _____
Postal Code _____ Country _____
Emergency Phone Number _____

PRECAUTIONARY STATEMENTS

Keep container tightly closed. Store in cool, well ventilated place that is locked.
Keep away from heat/sparks/open flame. No smoking.
Only use non-sparking tools.
Use explosion-proof electrical equipment.
Take precautionary measure against static discharge.
Ground and bond container and receiving equipment.
Do not breathe vapors.
Wear Protective gloves.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Dispose of in accordance with local, regional, national, international regulations as specified.

In Case of Fire: use dry chemical (BC) or Carbon dioxide (CO_2) fire extinguisher to extinguish.

First Aid
If exposed call Poison Center.
If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.

HAZARD PICTOGRAMS

SIGNAL WORD

Danger

HAZARD STATEMENT

Highly flammable liquid and vapor.
May cause liver and kidney damage.

SUPPLEMENTAL INFORMATION

Directions for use

_____
_____
_____

Fill weight: _____ Lot Number _____
Gross weight: _____ Fill Date: _____
Expiration Date: _____

HCS Pictograms and Hazards

Health Hazard	Flame	Exclamation Mark
		
• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	• Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder	**Corrosion**	**Exploding Bomb**
		
• Gases under Pressure	• Skin Corrosion/ burns • Eye Damage • Corrosive to Metals	• Explosives • Self-Reactives • Organic Peroxides
Flame over Circle	**Environment (Non Mandatory)**	**Skull and Crossbones**
		
• Oxidizers	• Aquatic Toxicity	• Acute Toxicity (fatal or toxic)

Appendix C

OSHA HAZARD COMMUNICATION STANDARD

The standard may be downloaded from OSHA's website at OSHA CFR 1910.1200

Lead

The purpose of this program is to inform interested persons, including employees, that JDL Warm is complying with the OSHA Lead Standard, Title 29 Code of Federal Regulations 1926.62 by:

- Ensuring that no employee is exposed to lead at concentrations greater than 50 micrograms per cubic meter of air averaged over an eight-hour period.
- Ensuring that if an employee is exposed to lead for more than eight hours in any work day the employee's allowable exposure, as a time weighted average (TWA) for that day, must be reduced according to the following formula: Allowable employee exposure (in micrograms per cubic meter) = 400 divided by hours worked in the day.
- Knowing that when respirators are used to limit employee exposure as required by paragraph (c) of Section 1926.62, and all the requirements of paragraphs (e)(1) and (f) of Section 1926.62, have been met, employee exposure may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods may be averaged with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.

This program applies to all construction work where one of our employees may be occupationally exposed to lead. All work related to construction, alteration, or repair, including painting and decorating, is included.

Administrative Duties

The Safety and Health Manager is the program coordinator/manager and is responsible for its implementation. Copies of the written program may be obtained from the Safety and Health Manager.

This written safety plan is for the _____ worksite.

Exposure Assessment

Protection of Employees During Exposure Assessment

When tasks are presumed to generate lead exposures greater than the permissible exposure limit (PEL) of 50 micrograms per cubic meter of air averaged over an eight hour period, we treat affected employees as if they were exposed above the PEL and implement procedures to protect workers until we perform an employee exposure assessment and document that an employee's lead exposure is not above the PEL.

Tasks estimated to generate a TWA of 50 micrograms per cubic meter of air include:

- Manual demolition of structures (e.g., dry wall), manual scraping, manual sanding, heat gun applications, and power tool cleaning with dust collection systems where lead containing coatings or paint are present.
- Spray painting with lead paint.
- Tasks estimated to generate a TWA of 500 micrograms per cubic meter of air include:
- Using lead containing mortar or lead burning.
- Rivet busting, power tool cleaning without dust collection systems, cleanup activities where dry expendable abrasives are used, and abrasive blasting enclosure movement and removal where lead containing coatings or paint are present.

* Appropriate respiratory protection (protection factor of 10, 25, or 50, depending on the tasks involved and the estimated exposures).

* Proper personal protective clothing and equipment.

* Change areas.

* Hand washing facilities.

* Biological monitoring.

* Training.

Initial Determination

We assess each new project to determine if employees may be exposed to lead at or above the action level of 30 micrograms per cubic meter of air as an eight-hour TWA. This initial determination can be based on:

- Employee exposure monitoring,
- Objective data demonstrating that under any expected conditions, specific processes, operations, or activities involving lead cannot result in employee exposure to lead at or above the action level.
- Previous monitoring for lead exposures within the past 12 months during work operations conducted under workplace conditions closely resembling the processes, types of materials, control methods, work practices, and environmental conditions used and prevailing in our operations.

We base initial determinations on employee exposure data. Our employee exposure monitoring data includes:

* Information, observations, or calculations that would indicate employee exposure to lead.

* Previous measurements of airborne lead.

* Any employee complaints of symptoms that may be attributable to exposure to lead.

As part of our initial exposure assessment we have historical measurements of airborne lead monitored at other construction sites substantially similar to the current job. This data:

* Was obtained within the past 12 months during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in our operations.

* Has an accuracy (to a confidence level of 95 percent) of not less than plus or minus 25 percent for airborne concentrations of lead greater than or equal to 30 micrograms per cubic meter of air.

* Is recorded and maintained as relevant previous exposure data.

We base our initial determinations on objective data. Our objective data, described below, demonstrates that under any expected conditions of use a particular product or material containing lead or a specific process, operation or activity involving lead cannot result in employee exposure to lead at or above the action level during processing, use, or handling.

We rely on this data to satisfy in part our requirements for initial exposure assessment and show that employees have no exposure to lead at or above the action level.

Positive Initial Determination

After conducting our initial exposure assessment, we have determined that employees are exposed to lead at or above the action level of 30 micrograms per cubic meter of air calculated as an eight hour TWA.)

We have previously monitored for lead exposures, and the data were obtained within the past 12 months during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in our current operation and we are using this data to satisfy part of our initial determination and initial monitoring requirements.

The data we are using to satisfy part of our initial exposure assessment have an accuracy (to a confidence level of 95 percent) of not less than plus or minus 25 percent for airborne concentrations of lead greater than or equal to 30 micrograms per cubic meter of air.

Negative Initial Determination

After conducting our initial exposure assessment, we have determined that employees are not exposed to lead at or above the action level of 30 micrograms per cubic meter of air calculated as an eight hour TWA.)

Initial Monitoring

Our initial determination has revealed employee exposure to be below the action level. Therefore, we: _____

Our initial or subsequent determination has revealed employee exposure to be at or above the action level but at or below the PEL. Therefore we: _____

Our initial determination has revealed that employee exposure is above the PEL. Therefore we: _____

Additional Exposure Assessments

If changes in equipment, process, control, personnel or tasks occur after our initial determination, we reevaluate to determine if employees are exposed to higher concentrations of lead.

Employee Notification

Within five working days of completing an exposure assessment we notify each employee in writing of his or her assessment results.

Methods of Compliance

This lead exposure control program for this worksite is implemented when employee exposure exceeds the permissible exposure limit (PEL).

This program is our written strategy and schedule for protecting our workers from lead exposure. It incorporates all relevant information that relates to this goal, so that we determine whether we appropriately analyzed problems and solutions (including alternatives) relating to lead exposure.

This program is intended to reduce employee exposure to at or below the PEL. When all feasible engineering and work practice controls that can be instituted are not sufficient to reduce employee exposure to acceptable levels, appropriate respiratory protection will be provided to supplement such controls.

The job site, materials, and equipment are regularly inspected. This company reviews this program at least every six months to revise it as necessary.

At this worksite we use mechanical ventilation to control employee exposure to lead.

As part of our lead exposure control program we have evaluated the effectiveness of the ventilation system in controlling exposure.

Our air monitoring data documents the source of lead emissions. The data is attached as Appendix A.

Work practice programs such as Protective Work Clothing and Equipment program, Housekeeping program, and a Hygiene Facilities and Practices program, are required by OSHA and are required to be a part of this document. We do have these work practice programs and they are included in this compliance program under their separate heading.

As an employer we want to keep our employees fully informed of all aspects of this plan. The Safety and Health Manager will make frequent and regular inspections of this jobsite, materials, and equipment, and ensure a copy of this written plan is available at this worksite. We review and update our written plan every six months to reflect the current status of the program.

Respiratory Protection

Our engineering and work practice controls are sufficient to reduce exposures to at or below the PEL without the use of respirators. Therefore, unless an employee specifically requests a respirator, respiratory protection is not used at this worksite.

During our exposure assessment to document that our employees are not exposed above the PEL, we treat employees performing certain operations as if they were exposed above the PEL. This means providing respiratory protection. Our respirator program includes a copy of the requirements of 20 CFR 1926.62(f), 29 CFR 1926.62 App. B, and 29 CFR 1910.134.

We provide respirators, recommended in Table 1 of 29 CFR 1926.62, to employees who request them. Our respirator program includes the requirements of 29 CFR 1926.62(f), 29 CFR 1926.62 App. B, and 29 CFR 1910.134.

We provide powered, air-purifying respirators instead of the respirators recommended in Table 1 of 29 CFR 1926.62 to employees exposed to 1250 micrograms of lead per cubic meters of air or more who request them. Our respirator program includes the requirements of 29 CFR 1926.62(f), 29 CFR 1926.62 App. B, and 29 CFR 1910.134.

We have included a copy of our respirator program.

Protective Work Clothing and Equipment

We provide personal protective equipment as interim protection for employees during exposure assessment, since our employees may be exposed to lead (1) above the PEL without regard to the use of respirators, or (2) to lead compounds which may cause skin or eye irritation. This outline of our Protective Work Clothing and Equipment policy is included as a part of the site plan when required. We provide protective clothing and equipment at no cost to our employees.

The types of employee garments and equipment provided on this worksite include:

- Coveralls or similar full body work clothing
- Gloves
- Hats
- Shoes or disposable shoe coverlets
- Face shields
- Vented goggles

Work conditions (lead exposures over 200 micrograms per meter cubed of air as an eight hour TWA without regard to use of a respirator) require replacement of protective clothing daily.

Our procedure for cleaning, laundering, and disposing of protective clothing and equipment is: Cleaning and laundering will be done by an outside company. Disposal will be in sealed containers. No employee shall leave the worksite with anything that has been contaminated with lead.

Housekeeping

JDL Warm believes that a rigorous housekeeping program is necessary in jobs where there is lead exposure or the potential of lead exposure to keep airborne lead levels below permissible limits. This requires a regular housekeeping schedule adapted to exposure conditions on site.

For this project, our procedure for housekeeping is:

*Keeping surfaces as lead-free as practicable.

*Vacuuming floors and other surfaces where lead accumulates to minimize the likelihood of lead becoming airborne.

*Shoveling or dry or wet sweeping (allowed only where vacuuming or other equally effective methods have been tried and found ineffective).

*Using HEPA filters on vacuums.

*Emptying vacuums so that lead is not reintroduced into the workplace.

Hygiene Facilities and Practices

We provide hygiene facilities for our workers and assure they follow good hygiene practices. We prohibit smoking, eating, applying cosmetics, and the presence of tobacco products, foodstuffs, or cosmetics in all work areas where employees are exposed to lead above the PEL.

Medical Surveillance

JDL Warm supports the practices necessary for early detection of lead exposure. The medical surveillance program supplements the primary goals of the lead exposure control program of preventing disease through elimination or reduction of airborne concentrations of lead, and sources of ingestion. The medical surveillance provisions incorporate both initial and ongoing medical surveillance.

We provide initial medical surveillance to employees who are occupationally exposed to airborne lead levels at or above the PEL. This monitoring consists of sampling blood and analyzing it for lead and zinc protoporphyrin levels. Where this initial biological monitoring indicates that an employee's blood lead level is at or above 40 micrograms per deciliter of whole blood, we provide biological monitoring at least every two months. This frequency continues until two consecutive blood samples and analyses indicate that the employee's blood lead level is below 400 micrograms per deciliter of whole blood.

All medical examinations and procedures are performed by _____.

All blood lead level sampling and analysis are conducted by _____, an OSHA approved laboratory.

Medical Removal Protection

We remove employees from work who have exposures to lead at or above the action level each time a periodic and a follow-up blood sample indicates that the blood lead levels are at or above 50 micrograms per deciliter of whole blood. We also remove employees from work who have exposures to lead at or above the action level when a health care professional determines that they have medical conditions which, when exposed to lead, places them at greater risk health problems.

Employee Information and Training

Employees can do much to protect themselves from the risks of occupational lead exposure if they know about them. In our training program we inform employees of the specific hazards associated with their work environment, protective measures that can be taken, and their rights under the standard.

Signs

Because exposure to lead is a serious health hazard, JDL Warm posts signs that warn employees of lead hazards and of the possible need to use respirators and other protective equipment in the area. Employees are also informed of lead hazards through training.

Recordkeeping

JDL Warm maintains accurate biological and environmental monitoring records of employee exposures to potentially toxic materials, including lead. We allow employees access to their records.

We include the following exposure monitoring records:

* Exposure assessment,

* Medical surveillance results,

* Medical removals,

* Objective data for exemption from requirement for initial monitoring,

* Procedures for making records available, and

* Procedures for transfer of records.

Observation of Monitoring

We provide our employees or their representatives the opportunity to observe exposure monitoring of toxic materials or harmful physical agents. Our procedure for allowing observation includes:

* Explaining the measurement procedure,

* Allowing observation of all steps related to the measurement procedure,

* Disseminating of the results when returned by the laboratory,

* Providing an observer with proper personal protective devices, and

* Assuring that observers comply with all applicable safety and health procedures.

Personal Protective and Life Saving Equipment

Purpose

The purpose of this Personal Protective Equipment Program is to document the measures in place and PPE in use at this company's work sites. PPE devices are not to be relied upon as the only means to provide protection against hazards, but are used in conjunction with guards, engineering controls, and sound construction practices. If possible, hazards will be abated first through engineering controls, with PPE to provide protection against hazards that cannot reasonably be abated otherwise.

PPE Selection Guidelines

The general procedures used by this company for the selection of protective equipment are to:

1. Become familiar with the potential hazards and the type of protective equipment (PPE) that are available, and what they can do;
2. Compare the hazards associated with the environment;
3. Select the PPE which ensures a level of protection greater than the minimum requirement to protect employees from the hazards and fits the ANSI standards specified for that particular type of personal protective equipment; and
4. Fit the user with the proper, comfortable, well-fitting protective device and give instructions on care and use of the PPE. It is very important that the users are aware of all warning labels for and limitations of their PPE. See the Employee Training guidelines outlined in the last section of this program for a more detailed description of training procedures.

It is the responsibility of the Site Safety Officer to reassess the work site hazard situation as necessary, to identify and evaluate new equipment and processes, to review accident records, and reevaluate the suitability of previously selected PPE. This reassessment will take place at least once during the course of the job or as work habits or equipment change.

Elements which should be considered in the reassessment include:

- ✓ Adequacy of PPE program
- ✓ Accident and illness experience
- ✓ Levels of exposure
- ✓ Number of person-hours that workers wear various protective ensembles
- ✓ Adequacy of training/fitting of PPE
- ✓ Program costs
- ✓ The adequacy of program records
- ✓ Recommendation for program improvement and modification
- ✓ Coordination with overall safety and health program

Cleaning and Maintenance

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

If PPE is for general use, the Site Safety Officer has responsibility for cleaning and maintenance. If the piece of PPE is in need of repair or replacement it is the responsibility of the employee to bring it to the immediate attention of his or her supervisor or the Site Safety Officer. It is against work rules to use a piece of PPE equipment that is in disrepair or not able to perform its intended function.

Contaminated PPE which cannot be decontaminated is disposed of in a manner that protects employees from exposure to hazards.

Employee-Owned Equipment
It is company policy that we provide suitable PPE to employees to protect them from all hazards present at company work sites, except for safety footwear, which is to be provided by the employee and deemed adequate by supervisors. However, in situations where employees chose to provide their own PPE in lieu of company-provided PPE, it is the company's responsibility to ensure that such PPE is adequate, properly maintained, and cleaned as necessary to ensure its safety and effectiveness.

To ensure the safety and effectiveness of employee-provided PPE, any employee using his or her own PPE is required to present it to the Site Safety Manager for initial inspection before first using it, then to bring it back to the Site Safety Manager for regular inspection, depending on the type of PPE and level of usage of it at the work site. The frequency of inspection required will be designated by the Site Safety Manager at the initial inspection.

PPE-Specific Information

Foot Protection - Safety Shoes
It is the policy of the company that as a condition of employment, all regular full-time, part-time, and temporary employees working at our company's work sites and/or job assignments are required to wear sturdy, leather work boots or shoes to help prevent foot injuries, ankle injuries, slips, and falls. This company recommends the use of hard-toed safety boots. Such footwear is to be provided by the employee and must meet ANSI standards for protective footwear. Sneakers and sandals are prohibited.
Employees from temporary agencies and subcontractors are required to wear appropriate footwear as well. It is the responsibility of the agency and/or subcontractor to ensure the employee reports to his/her temporary assignment at this company wearing approved footwear.
All supervisors and managers are responsible for ensuring their employees are in compliance with this policy.
All employees who work at company work sites are responsible for purchasing and wearing approved footwear to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.
Personnel are responsible for informing new employees of the safety shoe policy. The new employee is responsible for reporting to his/her first day of work wearing approved footwear.

Head Protection --- Hard Hats
It is the policy of the company that as a condition of employment, all regular full-time, part-time, and temporary employees working at our company's work sites and/or job assignments are required to wear hard hats to help prevent head injuries. HARD HATS ARE MANDATORY 100% OF THE TIME, THROUGHOUT ALL PHASEs OF THE PROJECT FOR ALL EMPLOYEES AND SUBCONTRACTORS.
Employees from temporary work agencies and subcontractors are required to wear hard hats as well. It is the responsibility of the subcontractor and/or agency to ensure the employee reports to his/her temporary assignment at this company wearing approved hard hats.
All supervisors and managers are responsible for ensuring their employees are in compliance with this policy.
All employees who work at company work sites will be assigned hard hats to wear to comply with this policy. Failure to comply (failure to wear such equipment) will result in disciplinary action up to and including discharge.

Hearing Protection
See the hearing protection program this company has developed as a separate safety program.

Eye and Face Protection
All employees are required to use eye and/or face protection provided by the company, including safety glasses, face shields, etc. Other forms of eye and/or face protection may be required for specific tasks. SAFETY GLASSES ARE MANATATORY 100% OF THE TIME THROUGHOUT ALL PHASES OF THE PROJECT FOR ALL EMPLOYEES AND SUBCONTRACTORS.

Apparel
Appropriate work clothing is required to be worn on-site. This includes long pants, Hi-Viz shirts with minimum 4" sleeve length and hard soled work boots. Clothing shall be free of inappropriate logos and offensive symbols and/or logos. Clothing shall be free of loose material or strings that may present a hazard.

Safety Harnesses, Belts, and Nets
Safety harnesses, belts, and nets will be used as necessary according to the requirements given in 1926.104 and .105 of the OSHA regulations, for work conducted at heights or in situations requiring it.

Employee Training

1. The Site Safety Officer provides training for each employee who is required to use personal protective equipment. Training includes:
   - *When* PPE is necessary
   - *What* PPE is necessary
   - *How to wear* assigned PPE
   - *Limitations* of PPE
   - *The proper care*, maintenance, useful life, and disposal of assigned PPE
2. Employees must demonstrate an understanding of the training and the ability to use the PPE properly before they are allowed to perform work requiring the use of the equipment.
3. Employees shall not perform work without donning appropriate PPE to protect them from the hazards they will encounter in the course of that work.
4. If the Site Safety Officer has reason to believe an employee does not have the understanding or skill required, the employer must retrain. Circumstances where retraining may be required include changes in the workplace or changes in the type of PPE to be used which could render previous training obsolete. Also, inadequacies in an effected employee's knowledge or use of the assigned PPE which indicates that the employee has not retained the necessary understanding or skills.
5. The Site Safety Officer certifies in writing that the employee has received and understands the PPE training.

Respiratory Protection

Purpose

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, our primary objective is to prevent atmospheric contamination. This will be accomplished, as far as feasible, by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials).

When effective engineering controls are not feasible, or while they are being instituted, we will use appropriate respirators according to the OSHA regulations in 29 CFR 1910.134.

JDL Warm Construction will provide our employees with respirators when needed to protect their health. We will provide respirators that are applicable and suitable for the purpose intended. We will establish and maintain a respiratory protection program that includes the requirements outlined in paragraph (c) of 1910.134.

Our required written respiratory protection program contains worksite-specific procedures for required respirator use. This program is for all JDL Warm Construction worksites. Our program administrator for this program is the Safety and Health Manager.

This program will be updated as necessary to reflect those changes in workplace conditions that affect respirator use.

Where respirator use is not required, but we either provide respirators at the request of employees or permit employees to use their own respirators, we must determine that such respirator use will not in itself create a hazard. If we determine that any voluntary respirator use is permissible, we will provide the respirator users with the information contained in 1910.134, *Appendix D, Information for Employees Using Respirators When Not Required Under the Standard.*

In addition, JDL Warm Construction will establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respirator voluntarily is medically able to use that respirator. Also, that the respirator is cleaned, stored, and maintained so that its use does not present a health hazard to the user.

We will not include in a written respiratory protection program those employees whose only use of respirators involves the voluntary use of filtering facepieces (dust masks).

Our designated program administrator, who will administer or oversee our program and conduct the required evaluations of program effectiveness, is qualified by appropriate training or experience that is commensurate with the complexity of the program.

We will provide respirators, training, and medical evaluations at no cost to the employee.

Respirator Selection
Prior to respirator use, we will select and provide our employees an appropriate respirator. This selection will be based on:

- Identifying and evaluating the respiratory hazard(s) to which our employee is exposed. The evaluation will include (1) a reasonable estimate of employee exposures to respiratory hazard(s), and (2) an identification of the contaminant's chemical state and physical form.
- Workplace and user factors that affect respirator performance and reliability.

Attachment A to this written safety plan is the hazard analysis for this worksite.

We will select a NIOSH-certified respirator. The respirator will be used in compliance with the conditions of its certification.

We will select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the employee.

Where we cannot identify or reasonably estimate employee exposure, we will consider the atmosphere to be IDLH.

Respirators for IDLH atmospheres
When our employees work in immediately dangerous to life or health (IDLH) atmospheres we will provide one of the following respirators:

- A full facepiece pressure demand self-contained breathing apparatus (SCBA) certified by NIOSH for a minimum service life of thirty minutes.
- A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

When respirators are provided only for escape from IDLH atmospheres they will be NIOSH-certified for escape from the atmosphere in which they will be used.

We will consider all oxygen-deficient atmospheres as IDLH except:

- If we can demonstrate that, under all foreseeable conditions, the oxygen concentration can be maintained within the ranges specified in Table II of §1910.134, for the altitude set out in the table, then any atmosphere-supplying respirator may be used.

Respirators for atmospheres that are not IDLH
Under routine and reasonably foreseeable emergency situations, we will provide a respirator that is adequate to protect the health of our employee, and ensure compliance with all other OSHA statutory and regulatory requirements.
The respirator selected will be appropriate for the chemical state and physical form of the contaminant.

Gases and vapor protection
For protection against gases and vapors, we will provide: (1) an atmosphere-supplying respirator, or (2) an air-purifying respirator, provided it is either:

- Equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or
- If there is no ESLI appropriate for conditions in our workplace, we will implement a change schedule for canisters and cartridges based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. We will describe in our respirator program the information and data relied upon and the basis for the canister and cartridge change schedule and the basis for reliance on the data.

Particulate protection
For protection against particulates, we will provide:

- An atmosphere-supplying respirator; or
- An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air purifying respirator equipped with a filter certified for particulates by NIOSH under 42 CFR part 84; or
- For contaminants consisting primarily of particles with mass median aerodynamic diameters (MALAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.

Medical evaluations
Using a respirator may place a physiological burden on our employees that varies with:

- The type of respirator worn.
- The job and workplace conditions in which the respirator is used.
- The medical status of our employee.

Accordingly, this section of our written safety plan specifies the minimum requirements for medical evaluation that we must implement to determine our employee's ability to use a respirator.

We will provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator.

When our employee is no longer required to use a respirator, we will discontinue our employee's medical evaluations.

Medical evaluation procedures
We will identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using OSHA's medical questionnaire (§1910.134, Appendix Q.

As an alternative we may use an initial medical examination that obtains the same information as the medical questionnaire. The medical evaluation will obtain the information requested by the questionnaire in Sections 1 and 2, Part A.

Follow-up medical examination
We will ensure that a follow-up medical examination is provided for an employee who:

- Gives a positive response to any question among questions 1 through 8 in Section 2, Part A of the questionnaire, or
- Whose initial medical examination demonstrates the need for a follow-up medical examination.

The follow – up medical examination will include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

Administration of the medical questionnaire and examination
The medical questionnaire and examination will be administered confidentially during our employee's normal working hours, or at a time and place convenient to the employee. We will ensure our employee understands the contents of the questionnaire.

We will provide our employee with an opportunity to discuss the questionnaire and examination results with the PLHCR

Supplemental information for the PLHCP
We will provide the following information to our PLHCP before a recommendation is made concerning our employee's ability to use a respirator:

- The type and weight of the employee's respirator.
- The duration and frequency of respirator use including rescue and escape use.
- The expected physical work effort.
- Additional protective clothing and equipment our employee may wear.
- Temperature and humidity extremes that our employee may encounter.

We will provide our PLHCP with a copy of this written respiratory protection program and a copy of the respiratory standard.

If we replace a PLHCP, we will ensure the new PLHCP gets all previous information on an employee, either by: (1) providing the documents directly to the new PLHCP, or (2) having the documents transferred from the former PLHCP to the new PLHCP.

Note: According to the OSHA regulations we do not have to have employees medically reevaluated solely because we selected a new PLHCP.

Medical determination
In determining our employee's ability to use a respirator, we will:

Obtain a written recommendation from the PLHCP. The recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of our employee, or relating to the workplace conditions in which the respirator win be used, including whether or not our employee is medically able to use the respirator.
- The need, if any, for follow-up medical evaluations.
- A statement that the PLHCP has provided our employee with a copy of the written recommendation.

If the respirator is a negative pressure respirator, and the PLHCP finds a medical condition that may place our employee's health at increased risk if the respirator is used, we will provide a PAPR if the PLHCPs medical evaluation finds that our employee can use such a respirator.

If a subsequent medical evaluation finds that our employee is medically able to use a negative pressure respirator, then we are no longer required to provide a powered air-purifying respirator (PAPR).

Additional medical evaluations
At a minimum, we will provide additional medical evaluations that comply with the OSHA requirements if:

- An employee reports medical signs or symptoms that are related to the ability to use a respirator.
- A PLHCP, supervisor, or our program administrator informs us that our employee needs to be reevaluated.
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation.
- A change occurs in workplace conditions such as: physical work effort, protective clothing, or temperature, which may result in a substantial increase in the physiological burden placed on an employee.

Fit testing
Before we require any employee to use a respirator with a negative or positive pressure tight-fitting facepiece, that employee will be fit tested with the same make, model, style, and size of respirator that will be used.

We will ensure that any employee using a tight-fitting facepiece respirator has passed an appropriate qualitative QLFT) or quantitative fit test QNIFT).

We will ensure that an employee using a tight-fitting facepiece respirator is fit tested:
- Prior to initial use of the respirator.
- Whenever a different respirator facepiece (size, style, model or make) is used.
- And at least annually thereafter.

We will conduct an additional fit test whenever:
- Our employee reports physical condition changes that could affect respirator fit, or
- We, the PLHCP, our supervisor, or program administrator, observes changes in our employee's physical condition that could affect respirator fit.

Such conditions could include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

If after passing a QLFT or QNFT, our employee subsequently notifies us, our program administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, our employee will be given a reasonable opportunity to select a different respirator facepiece and be retested.

The fit test will be administered using the OSHA-accepted QLFT or QNFT protocol found in Appendix A of the respiratory rule.

Fit testing of tight-fitting atmosphere-supplying and powered air-purifying respirators will be accomplished by performing quantitative or qualitative testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Any modifications to the respirator facepiece for fit testing will be completely removed, and the facepiece restored to NIOSH-approved configuration, before we use that facepiece in the workplace.

Respirator use
We will establish and implement procedures for the proper use of respirators. The requirements include:
- Prohibiting conditions that may result in facepiece seal leakage.
- Preventing employees from removing respirators in hazardous environments.
- Taking actions to ensure continued effective respirator operation throughout the work shift.
- Establishing procedures for the use of respirators in IDLH atmospheres or in interior structural firefighting situations.

Facepiece seal protection
We will not permit respirators with tight-fitting facepieces to be worn by employees who have:
- Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or
- Any condition that interferes with the face-to-facepiece seal or valve function.

If an employee wears corrective glasses or goggles or other personal protective equipment, we will ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

For all tight-fitting respirators, we will ensure that employees perform a user seal check each time they put on the respirator using procedures:

- In Appendix B-1 of the OSHA respiratory protection rule, or
- Recommended by the respirator manufacturer that we demonstrate are as effective as those in Appendix B-1.

Continuing respirator effectiveness

We will make appropriate surveillance of work area conditions and the degree of employee exposure or stress. When there is a change in work area conditions, or degree of employee exposure or stress that may affect respirator effectiveness, we will reevaluate the continued effectiveness of the respirator.

We will ensure that employees leave the respirator use area:

- To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use, or
- If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, or
- To replace the respirator or the filter, cartridge, or canister elements.

If our employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, we will replace or repair the respirator before allowing our employee to return to the work area.

Procedures for IDLH atmospheres

For all IDLH atmospheres, we will ensure that:

One employee or, when needed, more than one employee is located outside the IDLH atmosphere.

Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere.

The employee(s) located outside the IDLH atmosphere is trained and equipped to provide effective emergency rescue.

JDL Warm Construction, or our designee is notified before our employee(s) located outside the IDLH atmosphere enters the IDLH atmosphere to provide emergency rescue.

JDL Warm Construction, or our designee authorized to do so, once notified, will provide necessary assistance appropriate to the situation.

Our employee(s) located outside the IDLH atmospheres are equipped with:

- Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either
- Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or
- Equivalent means for rescue where retrieval equipment is not required under paragraph 1910.134(g)(3)(vi)(B).

Procedures for interior structural firefighting
If required for our operations our procedures for interior structural firefighting are in accordance with 29 CFR 1910.134(g)(4) and are attached as Attachment B.

Maintenance and care
We will provide for the cleaning and disinfecting, storage, inspection, and repair of respirators used by our employees.

Cleaning and disinfecting
We will provide each respirator user with a respirator that is clean, sanitary, and in good working order.

We will ensure that respirators are cleaned and disinfected using the procedures in Appendix B-2 of the respirator rule, or procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness.

The procedures we use are attached to this plan as Attachment C.

Our respirators will be cleaned and disinfected at the following intervals:

- Respirators issued for the exclusive use of an employee will be cleaned and disinfected as often as necessary to remain sanitary.
- Respirators issued to more than one employee will be cleaned and disinfected before being worn by different individuals.
- Respirators maintained for emergency use will be cleaned and disinfected after each use.
- Respirators used in fit testing and training will be cleaned and disinfected after each use.

Storage
We will ensure that respirators are stored as follows:

- All respirators will be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.
- They will be packed or stored to prevent deformation of the facepiece and exhalation valve.

In addition to the requirements above, emergency respirators will be:

- Kept accessible to the work area.
- Stored in compartments or in covers that are clearly marked as containing emergency respirators.
- Stored in accordance with any applicable manufacturer instructions.

Inspection
We will ensure that respirators are inspected as follows:

- All respirators used in routine situations will be inspected before each use and during cleaning.
- All respirators maintained for use in emergency situations will be inspected at least monthly and in accordance with the manufacturer's recommendations. They will be checked for proper function before and after each use.
- Emergency escape-only respirators will be inspected before being carried into the workplace for use.

We will ensure that respirator inspections include:

- A check of respirator function; tightness of connections; and the condition of the various parts including, but not limited to: the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters.

- A check of elastomeric parts for pliability and signs of deterioration.

In addition to the previous inspection requirements:
- Self-contained breathing apparatus will be inspected monthly.
- Air and oxygen cylinders will be maintained in a fully charged state and will be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. We will determine that the regulator and warning devices function properly.

For respirators maintained for emergency use, we will:
- Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator, and
- Provide this information on a tag or label that is maintained in one of the following ways: (1) attached to the storage compartment for the respirator, (2) is kept with the respirator, or (3) is included in inspection reports stored as paper or electronic files.

This information will be maintained until replaced following a subsequent certification.

Repairs
We will ensure that respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:
- Repairs or adjustments to respirators will be made only by employees appropriately trained to perform such operations and will use only the respirator manufacturer's NIOSH-approved parts designed for the respirator.
- Repairs will be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed.
- Reducing and admission valves, regulators, and alarms will be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

Breathing air, quality and use
We will provide employees using atmosphere-supplying respirators (supplied-air and SCBA) with breathing gases of high purity.

Identification of filters, cartridges, and canisters
We will ensure that all filters, cartridges and canisters used at our worksites are labeled and color coded with the NIOSH approval label and that the label is not removed and remains legible.

Training
We will provide effective training to our employees who are required to use respirators. Our training will be comprehensive, understandable, and recur annually, and more often if necessary. We will provide required training prior to employees using their respirator for work.

If we have employees who wear respirators when not required by the OSHA regulation or by this company to do so, we will provide them with the basic information on respirators in §1910.134; Appendix D. This information is Attachment D to this written plan.

At a minimum, we will ensure that each employee knows:
- Why their respirator is necessary and how improper fit, usage, or maintenance can compromise its protective effect.
- What the limitations and capabilities of the respirator are.

- How to use the respirator effectively in emergency situations, including situations in which it malfunctions.
- How to inspect, put on and remove, use, and check the seals of the respirator.
- What the procedures are for maintenance and storage of their respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of their respirator.
- The general requirements of the OSHA respiratory protection rule.

We will conduct our training in a manner that is understandable to our employees.

If we are able to demonstrate that a new employee has received training within the last 12 months that addresses the elements specified in §1910.134(k)(1)(i) through (vii), that employee will not be required to repeat the training provided that, as required by paragraph (k)(1), we can demonstrate knowledge of those element(s). Any training that is not repeated initially will be provided no later than 12 months from the date of the previous training.

Retraining will be administered annually, and when the following situations occur:
- Changes in the worksite, or the type of respirator, render previous training obsolete.
- Inadequacies in our employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill.
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

Program evaluation
We will conduct evaluations of our worksites to ensure that the written respiratory protection program is being properly implemented and continues to be effective.

We will consult employees to ensure they are using their respirators properly.
We will conduct evaluations of the workplace as necessary to ensure that the provisions of our current written program are being effectively implemented and that it continues to be effective.

We will regularly consult employees required to use respirators to assess their views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:
- Respirator fit including the ability to use the respirator without interfering with effective workplace performance.
- Appropriate respirator selection for the hazards to which our employee is exposed.
- Proper respirator use under the worksite conditions our employee encounters.
- Proper respirator maintenance.

Recordkeeping
We will establish and retain written information regarding medical evaluations, fit testing, and the respirator program. This information will:
- Facilitate employee involvement in the respirator program.
- Assist us in auditing the adequacy of the program.
- Provide a record for compliance determinations by OSHA.

Medical evaluation
Records of medical evaluations required by this section would be retained and made available in accordance with 29 CFR 1910.1020.

Fit testing
We will establish a record of the qualitative and quantitative fit tests given to an employee including:

- The name or identification of the employee tested.
- Type of fit test performed.
- Specific make, model, style, and size of respirator tested.
- Date of test.
- The pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs.

Fit test records will be retained for respirator users until the next fit test is administered.

The employer will retain a written copy of the current respirator program.

Written materials required to be retained under this paragraph will be made available upon request to affected employees and to the Assistant Secretary or designee for examination and copying.

Fire Protection & Prevention

Purpose

This Fire Protection & Prevention Program is in place at JDL Warm Construction to document the fire protection program to be followed throughout all phases of any construction and demolition work done by JDL Warm Construction, and provides for fire protection and prevention as specified in OSHA Part 1926, Subpart F, Fire Protection & Prevention.

This plan lists the following information:

- Basic Fire Protection Elements
- Basic Fire Prevention Elements
- Other Fire Protection & Prevention Elements

Basic Fire Protection Elements

Firefighting Equipment

1. There will be no delay in providing the necessary equipment when fire hazards occur at a worksite.
2. Access to all available firefighting equipment will be maintained at all times.
3. All firefighting equipment will be provided by the company and will be conspicuously located.
4. All firefighting equipment will be periodically inspected and maintained in operating condition. Defective equipment will be immediately replaced.
5. As warranted by the project, we will provide a trained and equipped firefighting organization (Fire Brigade) to assure adequate protection to life.

Water Supply

1. A temporary or permanent water supply, of sufficient volume, duration, and pressure, required to properly operate the firefighting equipment will be made available as soon as combustible materials accumulate.
2. Where underground water mains are to be provided, they will be installed, completed, and made available for use as soon as practicable.

Portable Firefighting Equipment

Fire extinguishers and Small Hose Lines

1. A fire extinguisher, rated not less than 2A, will be provided for each 3,000 square feet of the protected building area, or major fraction thereof. Travel distance from any point of the protected area to the nearest fire extinguisher will not exceed 100 feet. (One 55-gallon open drum of water with two fire pails may be substituted for a fire extinguisher having a 2A rating)
2. A 1/2-inch diameter garden-type hose line, not to exceed 100 feet in length and equipped with a nozzle, may be substituted for a 2A-rated fire extinguisher, providing it is capable of discharging a minimum of 5 gallons per minute with minimum hose stream range of 30 feet horizontally. The garden-type hose lines will be mounted on conventional racks or reels. The number and location of hose racks or reels will be such that at least one hose stream can be applied to all points in the area.
3. One or more fire extinguishers, rated not less than 2A, will be provided on each floor. In multi-story buildings, at least one fire extinguisher will be located adjacent to stairway.
4. Extinguishers and water drums that are subject to freezing will be protected from freezing.
5. A fire extinguisher rated not less than 10B will be provided within 50 feet of wherever more than 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas are being used on the jobsite. This requirement does not apply to the integral fuel tanks of motor vehicles.
6. Carbon tetrachloride and other toxic vaporizing liquid fire extinguishers are prohibited.
7. Portable fire extinguishers will be inspected periodically and maintained in accordance with NFPA standard No. 10A-1970, Maintenance and Use of Portable Fire Extinguishers.
8. Only fire extinguishers that have been listed or approved by a nationally recognized testing laboratory will be used to meet the requirements of this subpart.

9. The company uses Table F-1 from OSHA 1926.150 as a guide for selecting the appropriate portable fire extinguishers. See a copy this table below.

Table F-1 FIRE EXTINGUISHERS DATA

	WATER TYPE				FOAM	CARBON DIOXIDE	DRY CHEMICAL			
							SODIUM OR POTASSIUM BICARBONATE		MULIT-PURPOSE ABC	
	 STORED PRESSURE	 CARTRIDGE OPERATED	 WATER PUMP TANK	 SODA ACID	 FOAM	 CO2	 CARTRIDGE OPERATED	 STORED PRESSURE	 STORED PRESSURE	 CARTRIDGE OPERATED
CLASS A FIRES WOOD, PAPER, TRASH HAVING GLOWING EMBERS	YES	YES	YES	YES	YES	NO (BUT WILL CONTROL SMALL SURFACE FIRES)	NO (BUT WILL CONTROL SMALL SURFACE FIRES)	NO (BUT WILL CONTROL SMALL SURFACE FIRES)	YES	YES
CLASS B FIRES FLAMMABLE LIQUIDS, GASOLINE, OIL, PAINTS, GREASE, ETC.	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
CLASS C FIRES ELECTRICAL EQUIPMENT	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES
CLASS D FIRES COMBUSTIBLE METALS	SPECIAL EXTINGUISHING AGENTS APPROVED BY RECOGNIZED TESTING									
METBOD OF OPERATION	PULL PIN-SQUEEZE HANDLE	TURN UPSIDE DOWN AND BUMP	PUMP HANDLE	TURN UPSIDE DOWN	TURN UPSIDE DOWN	PULL PIN-SQUEEZE LEVER	RUPTURE CARTRIDGE-SQUEEZE LEVER	PULL PIN-SQUEEZE HANDLE	PULL PIN-SQUEEZE HANDLE	RUPTURE CARTRIDGE-SQUEEZE LEVER
RANGE	30' - 40	30' - 40	30' - 40	30' - 40	30' - 40	3' - 8'	5' - 20'	5' - 20'	5' - 20'	5' - 20'
MAINTENANCE	CHECK AIR PRESSURE GAUGE MONTHLY	WEIGH GAS CARTRIDGE ADD WTER IF REQUIRED ANNUALLY	DISCHARGE AND FILL WITH WATER ANNUALLY	DISCHARGE ANNUALLY -RECHARGE	DISCHARGE ANNUALLY -RECHARGE	WEIGH SEMI-ANNUALLY	WEIGH GAS CARTRIDGE-CHECK CONDITION OF DRY CHEMICAL ANNUALLY	CHECK GAS PRESSURE GAUGE AND CONDITION OF DRY CHEMICAL ANNUALLY	CHECK GAS PRESSURE GAUGE AND CONDITION OF DRY CHEMICAL ANNUALLY	WEIGH GAS CARTRIDGE-CHECK CONDITION OF DRY CHEMICAL ANNUALLY

Employment and Training

1. Where the company has provided portable fire extinguishers for employee use in the workplace, we will also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting. The company will provide the education required upon initial employment and at least annually thereafter: This training consists of the following:
   - Basic fire-fighting techniques.
   - Use portable fire extinguishers.
2. JDL Warm Construction will assure that portable fire extinguishers are maintained in a fully charged and operable condition and kept in their designated places at all times except during use.
3. JDL Warm Construction will assure that portable fire extinguishers are subjected to an annual maintenance check. Stored pressure extinguishers do not require an internal examination. We will record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less. The record will be available to OSHA upon request.

Fire Hose and Connections

1. One hundred feet or less of 11/2-inch hose, with a nozzle capable of discharging water at 25 gallons or more per minute, may be substituted for a fire extinguisher rated not more than 2A in the designated area, provided that the hose line can reach all points in the area.
2. If fire hose connections are not compatible with local firefighting equipment the contractor will provide adapters, or equivalent, to permit connections.
3. During demolition involving combustible materials, charged hose lines, supplied by hydrants, water tank trucks with pumps, or equivalent, will be made available.

Fixed Firefighting Equipment

1. Sprinkler protection - If the project includes the installation of automatic sprinkler protection, the installation will closely follow the construction and be placed in service as soon as applicable laws permit following completion of each story. During demolition or alterations, existing automatic sprinkler installations will be retained in service as long as reasonable. The operation of sprinkler control valves will be permitted only by properly authorized persons. Modification of sprinkler systems to permit alterations or additional demolition should be expedited so that the automatic protection may be returned to service as quickly as possible.
2. All types of fixed extinguishing systems will be installed, maintained and operated in accordance with the requirements of OSHA 1926, Subpart F, subsection Fixed Fire Suppression Equipment.

Fire Alarm Devices

1. An alarm system, e.g., telephone system, siren, etc., will be established by the company whereby employees on the site and the local fire department can be alerted for an emergency.
2. The alarm code and reporting instructions will be conspicuously posted at phones and at employee gathering places.
3. Fire detection systems and employer alarm systems will be installed, maintained and operated in accordance with the requirements of OSHA 1926, Subpart F, subsection Other Fire Protection Systems.

Fire Cutoffs

1. Fire walls and exit stairways required for the completed buildings will be given construction priority. Fire doors with automatic closing devices will be hung on openings as soon as practicable.
2. Fire cutoffs will be retained in buildings undergoing alterations or demolition until operations necessitate their removal.

Basic Fire Prevention Elements

Ignition Hazards

1. Electrical wiring and equipment for light, heat, or power purposes will be installed in compliance with the requirements of OSHA Part 1926, Subpart K, Electrical.
2. Internal combustion engine powered requirement will be located so that the exhausts are well away from combustible materials. When the exhausts are piped to outside the building under construction, a clearance of at least 6 inches will be maintained between the piping and combustible material.
3. Smoking is prohibited at or in the vicinity of operations which constitute a fire hazard, and will be conspicuously posted: “No Smoking or Open Flame”.
4. Portable battery powered lighting equipment, used in connection with the storage, handling, or use of flammable gases or liquids, will be of the type approved for the hazardous locations.
5. The nozzle of air, inert gas, and steam lines or hoses, when used in the cleaning or ventilation of tanks and vessels that contain hazardous concentrations of flammable gases or vapors, will be bonded to the tank or vessel shell. Bonding devices will not be attached or detached in hazardous concentrations of flammable gases or vapors.

Temporary Buildings

1. No temporary building will be erected where it will adversely affect any means of exit.
2. Temporary buildings, when located within another building or structure, will be of either noncombustible construction or of combustible construction having a fire resistance of not less than 1 hour.
3. Temporary buildings, located other than inside another building and not used for the storage, handling, or use of flammable or combustible liquids, flammable gases, explosives, or blasting

agents, or similar hazardous occupancies, will be located at a distance of not less than 10 feet from another building or structure. Groups of temporary buildings, not exceeding 2,000 square feet in aggregate, will, for the purposes of this part, be considered a single temporary building.

Open Yard Storage

1. Combustible materials will be piled with due regard to the stability of piles and in no case higher than 20 feet.
2. Driveways between and around combustible storage piles will be at least 14 feet wide and maintained free from accumulation of rubbish, equipment, or other articles or materials. Driveways will be spaced so that a maximum grid system unit of 50 feet by 150 feet is produced.
3. The entire storage site will be kept free from accumulation of unnecessary combustible materials. Weeds and grass will be kept down and a regular procedure provided for the periodic cleanup of the entire area.
4. When there is a danger of an underground fire, that land will not be used for combustible or flammable storage.
5. Method of piling will be solid wherever possible and in orderly and regular piles. No combustible material will be stored outdoors within 10 feet of a building or structure.
6. Portable fire extinguishing equipment, suitable for the fire hazard involved, will be provided at convenient, conspicuously accessible locations in the yard area. Portable fire extinguishers, rated not less than 2A, will be placed so that maximum travel distance to the nearest unit will not exceed 100 feet.

Indoor Storage

1. Storage will not obstruct or adversely affect means of exit.
2. All materials will be stored, handled, and piled with due regard to their fire characteristics.
3. Noncompatible materials that may create a fire hazard will be segregated by a barrier having a fire resistance of at least 1-hour.
4. Material will be piled to minimize the spread of Fire internally and to permit convenient access for firefighting. Stable piling will be maintained at all times. Aisle space will be maintained to safely accommodate the widest vehicle that may be used within the building for firefighting purposes.
5. Clearance of at least 36 inches will be maintained between the top level of the stored material and the sprinkler deflectors.
6. Clearance will be maintained around lights and heating units to prevent ignition of combustible materials.
7. A clearance of 24 inches will be maintained around the path of travel of fire doors unless a barricade is provided, in which case no clearance is needed. Material will not be stored within 36 inches of a fire door opening.

Other Fire Protection & Prevention Elements

1. Flammable and Combustible liquids will be used and handled in a manner at all times consistent with the 1926.152, Flammable & Combustible Liquids regulations and to protect against and prevent the occurrence of fire.
2. Liquefied petroleum gas (LP-Gas) will be used and handled in a manner at all times consistent with the 1926.153,LP-Gas regulations and to protect against and prevent the occurrence of fire.
3. Temporary heating devices will be used and handled in a manner at all times consistent with the 1926.154, Temporary Heating Devices regulations and to protect against and prevent the occurrence of fire

SIGNS, SIGNALS, AND BARRICADES

PURPOSE / SCOPE

All JDL Warm Construction employees are responsible for knowing and adhering to the signs, signals and barricade rules outlined in the Signs, Signals and Barricade Program for JDL Warm Construction

COMPLIANCE

All JDL Warm Construction employees will endeavor to comply with the Signs, Signals and Barricade Program, in order to ensure the safety of themselves and their fellow contractor employees.

When you see warning signs in your work area you should know what they mean and why they are there. Your safety depends on it.

DEFINITIONS

Signs, signals, and barricades are important, if not critical to the safety of all workers. Several important definitions are applicable:

BARRICADES
Means an obstruction to deter the passage of person or vehicles.

SIGNS/PLACARDS
Are the warnings of hazard, temporarily or permanently affixed or placed, at locations where hazards exist.

SIGNALS
Are moving signs, provided by workers, such as flagmen, or by devices, such as flashing lights to warn of possible or existing hazards.

TAGS
Are temporary signs, usually attached to a piece of equipment or part of a structure, to warn of existing or immediate hazards.

REQUIREMENTS FOR ALL SIGNS AND SIGNALS

Signs and symbols required shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.

DANGER SIGNS:
- Danger indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury. This signal word is used in extreme situations.
- Danger signs shall have red as the predominating color for the upper panel; black outline on the borders and a white lower panel for additional sign wording.
- Danger tape should be utilized whenever unique hazards are present. Tape must be tagged and posted on all sides of entry.
- Do not cross danger tape unless you have permission from the person who erected the tape and/or signs.
- Do not remove any danger tape or signs unless you placed them or have permission to do so.
- After work is complete tape and signs must be removed and discarded appropriately.

CAUTION SIGNS:

- Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. This signal word may also be used to alert against unsafe practices or the potential for property damage. CAUTION should be printed in black with a safety yellow background.
- Caution signs shall have yellow as the predominating color, black upper panel and borders yellow lettering of "caution" on the black panel; and
- the lower yellow panel for additional sign wording. Black lettering shall be used for additional wording. Standard color of the background shall be yellow and the panel, black with yellow letters. Any letters used against the yellow background must be black. The colors shall be those of opaque glossy.
- Caution signs should be utilized whenever unique situations arise.
- Caution tape must be tagged and posted on all sides of potential entry. It must identify the following:
  - Company name
  - Supervisor name
  - Company phone number
  - Date
- DO NOT remove any CAUTION signs, locks, tags or flags unless you have placed them or have permission to do so.

WARNING SIGNS: Warning Signs indicates a potential hazardous situation, which, if not avoided, could result in death or serious injury. WARNING should be printed in black with a safety orange background.

EXIT SIGNS: Exit signs point the way to safety. Exit signs when required, shall be lettered in legible red letters, not less than 6 inches high, on a white field and the principal stroke of the letters shall be at least three-fourths inch in width.

SAFETY INSTRUCTION SIGNS: Safety instruction signs, when used, shall be white with green upper panel with white letters to convey the principal message. Any additional wording on the sign shall be black letters on the white background.

DIRECTIONAL SIGNS: Directional signs other than automotive traffic signs shall be white with a black panel and a white directional symbol. Any additional wording to the sign shall be black letters on the white background.

TRAFFIC CONTROL SIGNS: Construction areas shall be posted with legible traffic signs at points of hazard.
All traffic control signs or devices used for protection of construction workmen shall conform to American National Standards Institute ANSI D6.1-1971, Manual of Uniform Traffic Control Devices for Streets and Highways.

ACCIDENT PREVENTION TAGS: Accident prevention tags shall be used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc. They shall not be used in place of, or as a substitute for, accident prevention signs. These tags have a white, red or yellow background with red or black letters. They typically state "DO NOT Operate", "Danger", "Caution", "Out of Order", or "DO NOT Use".

SIGNALING

When signs, signals, and barricades DO NOT provide the necessary protection for operations on highways or streets, flagmen or other appropriate traffic controls must be provided.

- Flagmen – Flagging is a dangerous job because it exposes you to vehicle traffic. If you are a flagman, you should follow these rules:
  - Signaling directions by flagmen shall conform to ANSI D6-1971. Manual on Uniform Traffic Control Devices for Streets & Highways.
  - Hand signaling by flagmen shall be by use of red flags at least 18 inches square or sign paddles during daylight hours and in periods of darkness, red lights.
  - Flagmen shall be provided with and shall wear a red or orange warning garment while flagging.
  - Reflective vests are required at all times.
  - Use red lights when hand signaling at night.
  - Use barricades, cones, etc. to demarcate areas.
  - Coordinate with other flagmen and communicate with radio if you have no visual contact.
  - Be aware of construction equipment around you. Equipment operators, too, should know where you are. Always make eye contact with an equipment operator when they are operating mobile equipment.
- Crane and hoist signals: Regulations for crane and hoist signaling will be found in applicable ANSI standards.

BARRICADES

- Barricades for protection of employees shall conform to the portions of ANSI D6.1971, Manual on Uniform Traffic Control Devices for Street and Highways, relating to barricades.
- Barricades must be visible at all times when work is being performed, and they must be removed when the hazards no longer exist.
- Use barricades, cones, caution/danger tape or signs to keep your work area separated from other workers and/or the public.
- Where other workers or members of the public must pass through your work area, immediately remove debris as it is generated and keep tools on carts or in toolboxes when not actually in use.
- Pay special attention to tripping hazards caused by coils of cable, conduit, pipe, and other similar materials that must be placed on the ground. These materials must be cordoned off from other workers and/or the public.
- All barricaded areas surrounding overhead work are danger zones. No one is permitted in these areas unless their job requires it and permission has been granted by the barricade installer(s), and then, only after adequate protective precautions have been taken.
- Floor openings must be barricaded or covered when floors, gratings, and other structures have been removed. All covers must be secured against accidental displacement, labeled and/or marked “HOLE” or “COVER”. Covers must also be capable of supporting at least twice the weight of employees, equipment, or materials that may be imposed on the cover.

Rigging

Introduction

The ability to safely move materials from one location to another is a vital part of many activities at JDL Warm Construction. Hoists are often used when materials are too heavy or bulky to be safely moved manually. Because hoists rely upon slings to hold their suspended loads, slings are the most commonly used materials-handling apparatus.

In part because of the complex nature of the seemingly simple task of lifting an object, an effective program is necessary to lift and move heavy loads safely.

Scope and Application

The Occupational Safety and Health Administration (OSHA) requirements for hoisting and sling safety are described in this section and apply to all tasks where hoisting techniques are used.

Program Description

Selection, Use and Inspection of Slings

Workers involved in hoisting and rigging must exercise care when selecting and using slings. The selection of slings should be based upon the size and type of the load, and the environmental conditions of the workplace. Slings shall be visually inspected before each use and on each shift to ensure their effectiveness. Defective rigging equipment shall be immediately removed from service and tagged "Do Not Use". Improper use of hoisting equipment, including slings, may result in overloading, excessive speed (e.g., taking up slack with a sudden jerk, shock loading), or sudden acceleration or deceleration of equipment.

There are generally six types of slings: chain, wire rope, metal mesh, natural fiber rope, synthetic fiber rope, or synthetic web. Slings tend to be placed into three groups: chain, wire rope and mesh, and fiber rope web. Each type has its own particular advantages and disadvantages. Factors to consider when choosing the best sling for the job include size, weight, shape, temperature, and sensitivity of the material being moved, and the environmental conditions under which the sling will be used. The following guide may be useful in selecting the appropriate sling:

Chains
Alloy steel chains are strong and able to adapt to the shape of the load. Care should be taken when using chain slings because sudden shocks will damage them. This may result in sling failure and possible injury to workers or damage to the load.

Chain slings must be visually inspected prior to use. During the inspection, pay particular attention to any stretching, nicks, gouges, and wear in excess of the allowances made by the manufacturer. These signs indicate that the sling may be unsafe and must be removed from service immediately. Safety latches on hooks shall be in place and serviceable.

Wire Rope
Wire rope is composed of individual wires that have been twisted to form strands. Strands are then twisted to form a wire rope. When wire rope has a fiber core, it is usually more flexible but less resistant to environmental damage. Conversely, wire rope with a core that is made of a wire rope strand tends to have greater strength and is more resistant to heat damage.

When selecting a wire rope sling to give the best service, there are four characteristics to consider: strength, ability to withstand fatigue (e.g., to bend without distortion), ability to withstand abrasive wear, and ability to withstand abuse.

- **Strength** – Strength of wire rope is a function of its size (e.g., diameter of the rope), grade, and construction, and must be sufficient to accommodate the maximum applied load.
- **Fatigue (Bending without Failure)** – Fatigue failure of wire rope is caused by the development of small cracks during small radius bends. The best means for preventing fatigue failure of wire rope slings is to use blocking or padding to increase the bend radius.
- **Abrasive Wear** – The ability of wire rope to withstand abrasion is determined by the size and number of the individual wires used to make up the rope. Smaller wires bend more readily and offer greater flexibility, but are less able to withstand abrasion. Larger wires are less flexible, but withstand abrasion better.
- **Abuse** – Misuse or abuse of wire rope slings will result in their failure long before any other factor. Abuse can lead to serious structural damage, resulting in kinks or bird caging. (In bird caging, the wire rope strands are forcibly untwisted and become spread outwards.) To prevent injuries to workers and prolong the life of the sling, strictly adhered to safe and proper use of wire rope slings.

Wire rope slings must be visually inspected before use. Slings with excessive broken wires, severe corrosion, localized wear, damage to end-fittings (e.g., hooks, rings, links, or collars), or damage to the rope structure (e.g., kinks, bird caging, distortion) must be removed from service and discarded. Safety latches on hooks shall be in place and serviceable.

Fiber Rope and Synthetic Web
Fiber rope and synthetic web slings are used primarily for temporary work, such as construction or painting, and are the best choice for use on expensive loads, highly finished or fragile parts, and delicate equipment.

Fiber rope slings deteriorate on contact with acids and caustics and, therefore, must not be used around these substances. Fiber rope slings that exhibit cuts, gouges, worn surface areas, brittle or discolored fibers, melting, or charring must be discarded. A buildup of powder-like sawdust on the inside of a fiber rope indicates excessive internal wear and that the sling is unsafe. Finally, if the rope fibers separate easily when scratched with a fingernail, it indicates that the sling has suffered some kind of chemical damage and should be discarded.

Synthetic web slings are commonly made of nylon, polypropylene, or polyester and have the following properties in common:

- **Strength** - Depending upon their size, synthetic web slings can handle loads of up to 300,000 pounds.
- **Convenience and Safety** - Synthetic web slings adjust to the load contour and hold it with a tight, non-slip grip.
- **Load Protection** - Unlike other sling materials, synthetic web is less likely to mar, deface, or scratch highly polished surfaces.
- **Shock Absorbency** - Regardless of the construction material, shock loading (e.g., excessive speed, rapid acceleration or deceleration) of slings should be minimized. However, it should be noted that synthetic web slings can absorb heavy shocks without damage.
- **Temperature Resistance** – The lifting capacity of synthetic web is unaffected by temperatures up to 180 degrees Fahrenheit.
- **Economy and Long Life** – Synthetic web slings have a low initial cost and a long service life. They are unaffected by mildew, rot, or bacteria, resist some chemical action, and have excellent abrasion resistance.

Synthetic web slings must be inspected before use and should be removed from service if found to have acid or caustic burns, melting or charring of any part of the surface, snags, tears, or cuts, broken stitches, distorted fittings, or wear or elongation beyond the manufacturer's specifications.

Safe Lifting Practices

Selection of the sling is only the first step in the rigging process. The next step is learning how to safely use it to hold and move a suspended load. No employee shall be permitted to work under a suspended load. There are four primary factors to consider when lifting a load safely. These are:

- **Load Size, Weight, and Center of Gravity** – The center of gravity of an object is that point at which the entire weight may be considered to be concentrated. To make a level lift, the hoist hook must be located directly above this point. If the hook is too far to either side of the center of gravity, dangerous tilting will result, causing unequal stress in the sling legs. Load imbalances must be corrected immediately. Tag lines shall be used to control the load provided that they do not create a greater hazard.
- **Number of Legs and Angle with the Horizontal** – The smaller the angle between the sling legs and the horizontal, the greater the stress on the individual sling legs. This increased stress effectively decreases the weight that can be safely lifted with any given sling size. Large (heavy) loads can be safely moved by keeping this angle as large as possible and, when necessary, distributing the weight of the load among more sling legs.
- **Rated Capacity of the Sling** – The rated capacity of a sling varies depending upon the type of material the sling is made of, the size of the sling, and the type of hitch. Workers must know the capacity of the sling, and can obtain this information through charts or tables available through the manufacturer. The rated capacity of a sling must not be exceeded, under any circumstances.
- **History of Care and Use** – Mishandling and misuse of slings are the leading causes of sling failure. Following the manufacturer's recommendations for proper care and use are essential for maximum sling service life and safety. In order to

extend the service life of rigging equipment, it shall be removed from the work area and properly stowed when not in use.

Training

Workers involved in hoisting and rigging operations should receive training in the following:

- Sling and hitch types
- Sling capacity determination
- Equipment inspection, care, and maintenance
- Load weight and center of gravity determination
- Safe lifting techniques

MATERIAL HANDLING

PURPOSE / SCOPE

The policy of JDL Warm Construction, is to perform work in the safest possible working conditions for its employees' work place. It is each employee's responsibility to ensure they are performing their job in the safest most efficient manner possible.

The purpose of the JDL Warm Construction Material Handling Program is to inform its employees of the efficient handling and storing of materials. These operations provide a continuous flow of raw materials, parts, and assemblies through the workplace, and ensure that materials are available when needed. Yet, the improper handling and storing of materials can cause costly personal injuries.

Lifting heavy items is one of the leading causes of injury in the workplace. In 2001, the Bureau of Labor Statistics reported that over 36 percent of injuries involving missed workdays were the result of shoulder and back injuries. Overexertion and cumulative trauma were the biggest factors in these injuries.

When employees use smart lifting practices and work in their "power zone," they are less likely to suffer from back sprains, muscle pulls, wrist injuries, elbow injuries, spinal injuries, and other injuries caused by lifting heavy objects.

GENERAL REQUIREMENTS

OSHA applicable standards are found in CFR 1910, Subpart N and CFR 1926, Subpart H – Materials Handling and Storage. Following are the general requirements for JDL Warm Construction employees:

- Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary.
- All materials stored in tiers shall be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling or collapse.
- Scrap material and debris shall be piled neatly in work area and disposed of properly as work progresses. Materials shall not be stored on scaffolds or runways in excess of supplies needed for immediate operations.
- Whenever materials are dropped more than 20 feet to any point lying outside the exterior walls of the building, an enclosed chute of wood, or equivalent material, shall be used.
- Materials stored inside buildings under construction shall not be placed within 6 feet of any hoist-way or inside floor openings, or within 10 feet of an exterior wall which does not extend above the top of the material stored.
- All stacked loads must be correctly piled and cross-tiered, where possible.
- When stacking materials, consider the need for availability of the material. Material that cannot be stacked due to size, shape, or fragility can be safely stored on shelves or in bins.
- Structural steel, bar stock, poles, pipe, and other cylindrical materials, unless in racks, must be stacked and blocked to prevent spreading or tilting.
- Blocking materials and timbers should be large and strong enough to support the load safely.
- Blocking materials with evidence of cracks, rounded corners, splintered pieces, or dry rot should not be used for blocking.
- Follow hoist manufacturer's instructions when using hoist equipment.

POTENTIAL HAZARDS WHEN MOVING MATERIALS

Workers can be injured by falling objects, improperly stacked materials, or by various types of equipment. When manually moving materials, however, workers should be aware of:

- Strains and sprains from improperly lifting loads, or from carrying loads that are either too large or too heavy.
- Fractures and bruises caused by being struck by materials, or by being caught in pinch points.
- Cuts and bruises caused by falling materials that have been improperly stored, or by incorrectly cutting ties or other securing devices.
- Employees should seek help when a load is so bulky it cannot be properly grasped or lifted, when they cannot see around or over it, or when a load cannot be safely handled.
- When an employee is placing blocks under raised loads, the employee should ensure that the load is not released until his or her hands are clearly removed from the load.
- Handles and holders should be attached to loads to reduce the chances of getting fingers pinched or smashed.
- Workers should use appropriate protective equipment.
- For loads with sharp or rough edges, wear gloves or other hand and forearm protection. To avoid injuries to the hands and eyes, use gloves and eye protection.
- When the loads are heavy or bulky, the mover should also be wearing safety-toed work boots with either composite or steel toes, to prevent foot injuries if the worker slips or accidentally drops a load.
- When mechanically moving materials, avoid overloading the equipment by letting the weight, size and shape of the material being moved dictate the type of equipment used for transporting it.
- All materials handling equipment has rated capacities that determine the maximum weight the equipment can safely handle and the conditions under which it can handle those weights.
- The equipment-rated capacities must be displayed on each piece of equipment and must not be exceeded except for load testing.
- When picking up items with a powered industrial truck, the load must be centered on the forks and as close to the mast as possible, to minimize the potential for the truck tipping or the load falls.
- A lift truck must never be overloaded because it would be hard to control and could easily tip over. Extra weight must not be placed on the rear of a counterbalanced forklift to offset an overload.
- The load must be at the lowest position for traveling, and the truck manufacturer's operational requirements must be followed.
- All loads or equipment must be secured to prevent shifting while in transit. Precautions also should be taken when stacking and storing materials.

WEIGHT OF OBJECTS

Some loads, such as large spools of wire, bundles of conduit, or heavy tools and machinery place great stress on muscles, discs, and vertebrae. Lifting loads heavier than about 50 pounds will increase the risk of injury. Here are some possible solutions:

- Use mechanical means such as forklifts or duct lifts to lift heavy spools, transformers, switch gear, service sections, conduit, and machinery.
- Use pallet jacks and hand trucks to transport heavy items. Avoid rolling spools. Once they are in motion, it is difficult to stop them.
- Use suction devices to lift junction boxes and other materials with smooth, flat surfaces. These tools place a temporary handle that makes lifting easier.
- Use ramps or lift gates to load machinery into trucks rather than lifting it.
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- a temporary handle that makes lifting easier.
- Use ramps or lift gates to load machinery into trucks rather than lifting it.
- Materials that must be manually lifted should be placed at "power zone" height, about mid-thigh to mid-chest. Special care should be taken to ensure proper lifting principles are used.
- Maintain neutral and straight spine alignment whenever possible. Usually, bending at the knees, not the waist, helps maintain proper spine alignment.
- Place materials that are to be manually lifted at "power zone" height, about mid-thigh to mid-chest. Maintain neutral and straight spine alignment whenever possible. Usually, bending at the knees, not the waist, helps maintain proper spine alignment. Order supplies in smaller quantities and break down loads off- site. When possible, request that vendors and suppliers break down loads prior to delivery.
- Refabricate items in a central area where mechanical lifts can be used. Only transport smaller, finished products to the site.
- Limit weight you lift to no more than 50 pounds. When lifting loads heavier than 50 pounds, use two or more people to lift the load.
- Work with suppliers to make smaller, lighter containers.

AWKWARD POSTURES

Bending while lifting forces the back to support the weight of the upper body in addition to the weight you are lifting. Bending while lifting places strain on the back even when lifting something as light as a screwdriver. Bending moves the load away from the body and allows leverage to significantly increase the effective load on the back. This increases the stress on the lower spine and fatigues the muscles.

Reaching moves the load away from the back, increases the effective load, and places considerable strain on the shoulders. Carrying loads on one shoulder, under an arm, or in one hand, creates uneven pressure on the spine. Poor housekeeping limits proper access to objects being lifted and forces awkward postures. Here are some possible solutions:

- Move items close to your body and use your legs when lifting an item from a low location.
- Store and place materials that need to be manually lifted and transported at "power zone" height, about mid-thigh to mid-chest.
- Minimize bending and reaching by placing heavy objects on shelves, tables, or racks. For example, stack spools on pallets to raise them into the power zone.
- Avoid twisting, especially when bending forward while lifting. Turn by moving the feet rather than twisting the torso.
- Keep your elbows close to your body and keep the load as close to your body as possible.
- Keep the vertical distance of lifts between mid-thigh and shoulder height. Do not start a lift below mid- thigh height nor end the lift above shoulder height. Lifting from below waist height puts stress on legs, knees, and back. Lifting above shoulder height puts stress on the upper back, shoulders, and arms.
- Break down loads into smaller units and carry one in each hand to equalize loads. Use buckets with handles, or similar devices, to carry loose items.
- Keep the load close to the body. When lifting large, bulky loads, it may be better to bend at the waist instead of at the knees in order to keep the load closer to your body.
- Optimize employee access to heavy items through good housekeeping and preplanning.
- Use roll-out decks installed in truck beds to bring materials closer to the employee and eliminate the

need to crawl into the back of a truck. See the Vehicular Activities section for more information.

HIGH FREQUENCY AND LONG-DURATION LIFTING

Holding items for a long period of time, such as when installing fixtures or j-boxes, even if loads are light, increases risk of back and shoulder injury, since muscles can be starved of nutrients and waste products can build up. Repeatedly exerting, such as when pulling wire, can fatigue muscles by limiting recuperation times. Inadequate rest periods do not allow the body to rest. Here are some possible solutions:

- Use a template made of a lightweight material such as cardboard to mark holes for drilling when mounting heavy items such as junction boxes and service panels. This ensures that the heavier item does not need to be held in place to level and measure for anchor mounts.
- Provide stands, jigs, or mechanical lifting devices such as duct lifts to hold large, awkward materials such as junction boxes and service panels in place for fastening.
- Rotate tasks so employees are not exposed to the same activity for too long.
- Work in teams; one employee lifts and holds items while the other assembles.
- Take regular breaks and break tasks into shorter segments. This will give muscles adequate time to rest. Working through breaks increases the risk of musculoskeletal disorders (MSDs), accidents, and reduces the quality of work because employees are overfatigued.
- Plan work activities so employees can limit the time they spend holding loads.
- Pre-assemble work items such as fixtures or boxes to minimize the time employees spend handling them.

INADEQUATE HANDHOLDS

Inadequate handholds make lifting more difficult, move the load away from the body, lower lift heights, and increase the risk of contact stress and of dropping the load:

- Utilize proper handholds, including handles, slots, or holes, with enough room to accommodate gloved hands.
- Ask suppliers to place their materials in containers with proper handholds.
- Move materials from containers with poor handholds or without handholds into containers with good handholds.
- Wear proper personal protective equipment (PPE) to avoid
- finger injuries and contact stress. Ensure that gloves fit properly and provide adequate grip to reduce the chance of dropping the load.
- Use suction devices to lift junction boxes and other materials with smooth, flat surfaces. These tools place a temporary handle that makes lifting easier.

ENVIRONMENTAL FACTORS

Cold temperatures can cause decreased muscle flexibility, which can result in muscle pulls. Excessively hot temperatures can lead to dehydration, fatigue, and increased
metabolic load. Low visibility or poor lighting increases the chance of trips and falls. Here are some possible solutions:

- Adjust work schedules to minimize exposure to extreme temperatures.
- Wear warm clothing when exposed to cold temperatures.
- Drink lots of water to avoid dehydration in excessive heat.
- Provide proper lighting for areas with low light and perform work during daylight hours.

HAZARDOUS MATERIAL STORAGE & DISPOSAL

- Flammable material is always stored in separate closed containers.
- Store and transport gasoline, when in amounts of 5 gallons or less, in safety cans only. Plastic gas cans are not to be used.
- Incompatible chemical products (which may cause a hazardous reaction if they come in contact) shall not be stored together.
- Flammable liquids are not to be stored near sources of ignition (sparks, electricity, flames, or hot objects). Where more than 25 gallons of flammable liquids are present, they are to be kept in a storage cabinet approved by the Nation Fire Protection Association (NFPA).
- Flammable and combustible scrap, debris, and waste are to be removed promptly from buildings or structures.
- Appropriate cleanup materials are available for leaks or spills of flammables or other hazardous materials. Secure compressed gas cylinders in an upright position. Gauges must be removed and caps must be on when stored. ANSI Z49.1:2005, 8.6.4 & 5 Standard says Cylinder valves should be closed and capped when equipment is unattended for an extended time, such as for several days.
- Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet or by a non-combustible barrier at least 5 feet high having a fire-resistance rating of one-half hour.
- Leftover hazardous products and waste are to be properly stored, labeled, and disposed of according to the instructions on the product's Material Safety Data Sheet (MSDS).

TRAINING

OSHA recommends using a formal training program to reduce materials handling hazards. Instructors should be well-versed in matters that pertain to safety engineering and material handling and storing. The content of the training should emphasize those factors that will contribute to reducing workplace hazards including the following:

- Alerting the employee to the dangers of lifting without proper training. Showing the employee how to avoid unnecessary physical stress and strain.
- Teaching workers to become aware of what they can comfortably handle without undue strain. Reinforce using the proper material handling equipment for heavy and awkward loads.
- Instructing workers on the proper use of equipment.
- Teaching workers to recognize potential hazards and how to prevent or correct them.
- Because of the high potential for back injuries, safe lifting techniques for manual lifting should be demonstrated and practiced at the work site by supervisors as well as by employees.
- A training program to teach proper lifting techniques should cover the following topics: Awareness of the health risks to improper lifting — citing organizational case histories.
- Knowledge of the basic anatomy of the spine, the muscles, and the joints of the trunk, and the contributions of intra-abdominal pressure while lifting.
- Awareness of individual body strengths and weaknesses—determining one's own lifting capacity. Recognition of the physical factors that might contribute to an accident, and how to avoid the unexpected.
- Use of safe lifting postures and timing for smooth, easy lifting and the ability to minimize the load- moment effects.
- Use of handling aids such as stages, platforms, or steps, trestles, shoulder pads, handles, and wheels. Knowledge of body responses—warning signals—to be aware of when lifting.

It is the desired intent to keep our employees aware of the dangers and hazards while at their workplace.

Hand and Power Tools

Purpose
It is the policy of this company to allow only trained and authorized employees to operate machinery and tools at any time. This policy is applicable to both daily operators of machinery and tools and those who only occasionally have cause to use machinery and tools.

List of Machinery and Tools
The machinery and tools used by the employees of this company include the following:

1. Hammers, wrenches, screwdrivers and other common hand tools
2. Power saws, drills staplers and other common power tools

Pre-Operational Procedures

1. Hand tools must be inspected prior to use to ensure that:
   - For tools with jaws, jaws are not sprung to the point of slippage;
   - For impact tools, they are free of mushroom heads;
   - For tools with wooden handles, the handles are free of splinters or cracks and are tight in the tool; and
   - The tool is otherwise safe for use
2. Any machine or power operated tool part, function, or process, which may cause injury, must be guarded. Ensure that all permanent guards are securely attached in good working order and all removable guards are in place on the machine or power tool before starting use. Guards must meet these minimum general requirements:
   - **Prevent Contact** - The guard must prevent hands, arms, or any part of the body or clothing from making contact with dangerous moving parts of the machine or power tool.
   - **Secure** - Guards should not be easy to remove or alter. Guards and safety devices should be made of durable material that will withstand the conditions of normal use. They must be firmly secured to the machine or power tool.
   - **Protect from falling objects** - The guard should ensure that no objects could fall into moving parts of the machine or power tool.
   - **Create no new hazards** - If a guard creates a hazard of its own such as shear point, a jagged edge, or an unfinished surface which can cause a laceration, then do not use the piece of machinery or tool. The edges of guards, for instance, should be rolled or bolted in such a way that they eliminate sharp edges.
3. If a guard is defective, damaged, or in any way does not meet the requirements of these procedures, do not use the machine, but immediately notify your supervisor and/or the Site Safety Manager.
4. Where the operation of a machine or accidental contact with it can injure you or others in the vicinity, the hazard must either be controlled or eliminated.
5. Locate and don appropriate personal protective equipment (PPE) for use with the machinery or tool before beginning use.
6. Ensure the area in which you are working is well lit, dry and clean before beginning work. Sawdust, paper and oily rags are a fire hazard and can damage your machinery and tools.
7. Dress right. Change clothing or take off jewelry that could become entangled in the machinery or tools you are to use.
8. Tools are to be installed or repaired only by qualified personnel. Employees are to notify their supervisor if they think machinery or a tool is in need of any type of repair.
9. If a lock or tag is in place on a piece of machinery, do not remove it and do not use the machinery.

Operating Procedures

1. Do not remove a guard for any reason while operating any piece of machinery or any power tool.
2. Do not remove any necessary piece of personal protective equipment (PPE) while the machinery or tool is in use.
3. Pay constant attention to the work at hand. Do not focus on anything else. If distracted or unable to focus on the work with the machinery or tool, stop work with that machinery or tool.
4. Upon finishing with a tool or machine, do basic maintenance for it. Keep it sharp, oiled and stored properly, as appropriate. Regularly inspect all machinery, tools, cords and accessories. Repair or replace problem tools immediately and report it to your immediate supervisor and the Site Safety Manager.
5. Always use the proper piece of machinery or tools for the job.
6. Keep electrical cables clean and free from kinks. Never carry a power tool by its cord.

Training Program

Under no circumstances shall an employee operate a piece of machinery or tools until he/she has successfully completed this company's machinery and tools training program. This includes all new operators or users of machinery and tools, regardless of claimed previous experience.

The company training program includes classroom instruction and operational training on each specific piece of machinery and tools to be utilized by the employee in his/her work area.

Individuals in the following departments receive training:

1. All skilled craftsmen
2. All general laborers
3. All temporary or seasonal employees
4. Other individuals as determined by the site management and supervisors.

The Site Safety Manager will identify all new employees in the employee Orientation Program and make arrangements with area management to schedule the classroom instruction for those employees previously identified in this policy.

Classroom training consists of:

1. Review of these written procedures by the employee.
2. Review of general safety training video.
3. Successful completion of examination.

Operational training consists of:

1. Pre-operational procedures.
2. Operational review of each piece of machinery or each power tool the employee is expected to operate.

Responsibilities

The Safety Supervisor is responsible for training the designated Operations Trainer in each department/area.

Personnel maintain records in employee safety files of individuals trained and certified for machinery and tools.

Management is responsible for scheduling the employee with the trainer to complete the operational training program after successful completion of the classroom training or retraining segment.

Welding and Cutting

Purpose

A. It is JDL Warm Construction purpose in issuing this plan to further ensure a safe workplace based on the following formal, written procedures for welding and cutting.
B. This plan will be reviewed and updated as needed to comply with new OSHA regulations, new, best practices in welding technology and as business practices demand.

Training

Management shall recognize its responsibility for the safe usage of cutting and welding equipment on its property and insist that cutters or welders and their supervisors are suitably trained in the safe operation of their equipment and the safe use of the process.

Workmen in charge of the oxygen or fuel-gas supply equipment, including generators, and oxygen or fuel-gas distribution piping systems shall be instructed and judged competent by their employers for this important work before being left in charge. Rules and instructions covering the operation and maintenance of oxygen or fuel-gas supply equipment including generators, and oxygen or fuel-gas distribution piping systems shall be readily available.

Workmen designated to operate arc welding equipment shall have been properly instructed and qualified to operate such equipment.

Workmen assigned to operate or maintain arc welding equipment shall be acquainted with the requirements of OSHA 29 CFR 1910.254 and with 29 CFR 1910.252 (a), (b), and (c) of this part.

Procedures

Compressed Gas Cylinders

A. Handling, storage and use of compressed gases around the jobsite represents a number of hazards. Questions should be resolved through supervisors or use of the Compressed Gas Association Pamphlet P-1-1965.
B. Approved practices include:
    1. Keep valve protection cap in place at all times when a cylinder is not in use.
    2. When cylinders are hoisted, secure them on a cradle, slingboard or pallet.
    3. Move cylinders by tilting and rolling on their bottom edges. Care in handling is required.
    4. Secure cylinders in an upright position at all time, especially when moving them by machine.
    5. Use carriers or carts provided for the purpose when cylinders are in use.
    6. When in use, isolate cylinders from welding or cutting or suitably shielding. Care will be taken to prevent them from becoming part of an electrical circuit.
    7. Maintain a distance of at least 20 feet or provide a non-combustible barrier at least five feet high in separating fuel gas cylinders from oxygen cylinders. This applies to indoor and outdoor storage.
    8. The site supervisor will designate:
        - Well-ventilated storage areas for cylinders inside buildings. Care will be taken to keep storage areas out of traffic areas or other situations where they could be knocked over, damaged or be tampered with.
        - Locations for fuel gas and oxygen manifolds in well-ventilated areas.

C. Prohibited Practices include:
   1. Use of valve protection caps for lifting cylinders.
   2. Use of damaged or defective cylinders. The site supervisor will provide appropriate tags and designate an appropriate storage area for these cylinders.
   3. Mixing of gases.
   4. Use of a magnet or choker sling when hoisting cylinders.
   5. Use of a bar to pry cylinders from frozen ground. Warn, not boiling, water is used to thaw cylinders.
   6. Taking oxygen, acetylene or other fuel gas or manifolds with these gases into confined spaces.

Gas Welding and Cutting

A. Safe practices in using compressed gases and torches include:
   1. "Cracking" cylinders and attaching regulators according to industry practice.
   2. Putting caps on header hose connections and manifolds when not in use.
   3. Keeping all hose, regulator, cylinders, valve protection caps, couplings, apparatus and torch connections free of grease and oil, especially those involving oxygen.
   4. Using fuel gas hose and oxygen hose of different colors.
   5. Inspections:
      - all hose before every shift;
      - all torches. Only devices designed for the purpose will be used to clean torch tips.
   6. Use only friction lighters to ignite torches.
   7. Removal of torches and hoses and positive shut-off of gas sources from confined spaces when leaving a confined space project for any substantial period of time.

B. Prohibited practices include:
   1. Interchange of hoses, including use of adapters, between fuel gas and oxygen sources.
   2. Placement of anything on or near a manifold or cylinder top that may interfere with the prompt shut-off in case of an emergency.
   3. Taping more than four inches out of every 12 inches in joining fuel gas and oxygen hoses.
   4. Using defective hose or torches.
   5. Use of oxygen for personal cooling, cleaning off of surfaces, ventilation or blowing dust from clothing.

Arc Welding and Cutting

A. Safe practices in using arc welders include:
   1. Use of holders, cable and other apparatus specifically designed for the purpose, matched to the job and other components and in good repair.
   2. Following Department Of Transportation standards for welding on natural gas pipelines.
   3. When leaving electrode holders unattended, electrodes are removed and holders placed so that accident electrical contact is not made.
   4. Turning off the arc welding or cutting machine when it is to be left unattended for a substantial period of time or when it is being moved.
   5. Immediate reporting of any defective equipment to the site supervisor.
6. Use of non-combustible or flameproof screens to protect employees and passersby from arc rays wherever practicable.
7. Keeping chlorinated solvents at least 200 feet from an inert-gas metal-arc welder or providing adequate shielding. Surfaces prepared with chlorinated solvents will be thoroughly before welding.

B. Prohibited practices include:
   1. Using cables with repairs or splices within 10 feet of the holder that are not equivalent in insulating valued to the original cable.

2. Use of pipelines with flammable gases or liquids or conduits with electrical circuits as ground return.
3. Dipping hot electrode holders into water.

Fire Prevention

A. The site supervisor will use this guide to assess fire hazards at a jobsite.

When	And	Then
The object to be welded, cut or heated can be moved	a fire-resistant, workspace is available	the welding, cutting, brazing or heating must be done in that space.
The object to be welded, cut or heated can be moved	all fire hazards can be moved to a safe distance	the welding, cutting, brazing or heating can be done.
the object to be welded, cut or heated cannot be moved	all the fire hazards cannot be removed	guards shall be used to confine the heat, sparks, and slag, and to protect the immovable fire hazards.
there is a welding, cutting or heating task	concentrations of flammable paints, dusts, or other flammable compounds are present.	welding, cutting, brazing or heating is not allowed.

B. JDL Warm Construction will provide suitable fire extinguishing equipment based on the site supervisor's assessment of hazards. The site supervisor will ensure the equipment is maintained for immediate use.

Fire Watchers

A. When normal fire prevention measures are not sufficient, the company, based on the site supervisor's assessment, assign firewatchers.
B. Firewatchers will provide additional safeguards against fire during and after operations.
C. The company will provide training for firewatchers on the specific fire hazards and equipment available.

Ventilation

A. The site supervisor will determine the number, location and capacity of ventilation devices.
B. Where ventilation is not sufficient to provide clean, respirable air, respirators will be specified according to the provisions in the next section.
C. Ventilation will be sufficient to protect passersby as well as the welder.

Personal Protective Equipment (PPE)

A. Airline respirators will be provided for confined space jobs when sufficient ventilation cannot be provided without blocking the exit.
B. When known or unknown toxic materials are present in a job, respirators will be provided that matches the hazard for all employees. The hazards include zinc or zinc-bearing base or filler metals, lead base metals, cadmium-bearing filler metals, chromium bearing or chromium coated metals, mercury, nitrogen dioxide and beryllium. Due to beryllium's extreme danger, both ventilation and airline respirators will be used.
C. Where screens are not sufficient to protect welders and passersby from arc radiation, the company will provide eye protection with appropriate helmets, filter lens goggles or hand shields. The helmets and shields will be maintained in good repair.
D. When a toxic preservative is detected on a surface in a confined space, airline respirators will be provided (or the toxic coating will be stripped from at least four inches around the heated area).

Confined Spaces

A. Confined spaces, such as manholes, tunnels, trenches and vaults, are particularly hazardous working areas made more dangerous by welding. Ventilation is a primary consideration and will be designated by the site supervisor or other competent employee designated by the company.
B. See the Personal Protective Equipment section for provision of respirators.
C. An employee will be stationed outside the confined space to maintain communication with those entering and ready to render emergency assistance when respirators are used.
D. When confined spaces are entered through a manhole or similar small opening, JDL Warm Construction will provide a mean of quickly removing a worker. An attendant with a rescue procedure will observe the worker at all times and be able to put the rescue plan into effect.

Welding or Cutting Involving Flammable, Toxic or Hazardous Materials

A. JDL Warm Construction will designate a competent person to test the flammability of unknown coatings.
B. When a coating is found to be highly flammable, it will be stripped from the area to prevent fire.

First-aid equipment

First-aid equipment shall be available at all times. All injuries shall be reported as soon as possible for medical attention. First aid shall be rendered until medical attention can be provided.

Electrical

Introduction

Electricity has long been recognized as a serious workplace hazard, exposing employees to such dangers as electric shock, electrocution, fires, and explosions.

Experts in electrical safety have traditionally looked toward the widely–used National Electrical Code (NEC) for help in the practical safeguarding of persons from these hazards. The Occupational Safety and Health Administration (OSHA) recognized the important role of the NEC in defining basic requirements for safety in electrical installations by including the entire 1971 NEC by reference in Subpart K of 29 CFR Part 1926. It is the purpose and intent of JDL Warm Construction to follow these regulations in order to reduce the hazards associated with electricity.

Installation Safety Requirements

Approval

This company shall use only electrical conductors and equipment that is approved.

Examination, Installation, and Use of Equipment

It shall be the responsibility of the Site Safety Manager to ensure that electrical equipment is free from recognized hazards that are likely to cause death or serious physical harm to employees. Safety of equipment must be determined by:

1. Suitability for installation and use in conformity with the provisions of the standard. Suitability of equipment for an identified purpose may be evidenced by listing, labeling, or certification for that identified purpose.
2. Mechanical strength and durability, including, for parts designed to enclose and protect other equipment, the adequacy of the protection thus provided.
3. Electrical insulation.
4. Heating effects under conditions of use.
5. Arcing effects.
6. Classification by type, size, voltage, current capacity, and specific use.
7. Other factors which contribute to the practical safeguarding of employees using or likely to come in contact with the equipment.

Guarding

Live parts of electric equipment operating at 50 volts or more must be guarded against accidental contact. Guarding of live parts must be accomplished by:

1. Location in a cabinet, room, vault, or similar enclosure accessible only to qualified persons.
2. Use of permanent, substantial partitions or screens to exclude unqualified persons.
3. Location on a suitable balcony, gallery, or platform elevated and arranged to exclude unqualified persons.
4. Elevation of eight feet or more above the floor.

Entrance to rooms and other guarded locations containing exposed live parts must be marked with conspicuous warning signs forbidding unqualified persons to enter.

Electric installations that are over 600 volts and that are open to unqualified persons must be made with metal–enclosed equipment or enclosed in a vault or area controlled by a lock. In addition, equipment must be marked with appropriate caution signs.

Overcurrent Protection
The following requirements apply to overcurrent protection of circuits rated 600 volts, nominal, or less.

1. Conductors and equipment must be protected from overcurrent in accordance with their ability to safely conduct current and the conductors must have sufficient current carrying capacity to carry the load.
2. Overcurrent devices must not interrupt the continuity of the grounded conductor unless all conductors of the circuit are opened simultaneously, except for motor–running overload protection.
3. Overcurrent devices must be readily accessible and not located where they could create an employee safety hazard by being exposed to physical damage or located in the vicinity of easily ignitable material.
4. Fuses and circuit breakers must be so located or shielded that employees will not be burned or otherwise injured by their operation, e.g., arcing.

Grounding of Equipment Connected by Cord and Plug
Exposed noncurrent–carrying metal parts of cord– and plug–connected equipment that may become energized must be grounded if:

1. In a hazardous (classified) location.
2. Operated at over 150 volts to ground, except for guarded motors and metal frames of electrically heated appliances if the appliance frames are permanently and effectively insulated from ground.
3. The equipment is one of the types listed below. But see Item six for exemption.

    - Hand held motor–operated tools.
    - Cord– and plug–connected equipment used in damp or wet locations or by employees standing on the ground or on metal floors or working inside metal tanks or boilers.
    - Portable and mobile x–ray and associated equipment.
    - Tools likely to be used in wet and/or conductive locations.
    - Portable hand lamps.
    - (Exemption) Tools likely to be used in wet and/or conductive locations need not be grounded if supplied through an isolating transformer with an ungrounded secondary of not over 50 volts. Listed or labeled portable tools and appliances protected by a system of double insulation, or its equivalent, need not be grounded. If such a system is employed, the equipment must be distinctively marked to indicate that the tool or appliance uses a system of double insulation.

Safety–Related Work Practices

Protection of Employees

No employee shall be permitted to work near any part of an electric power circuit that the employee could contact in the course of work, unless the employee is protected against shock by deenergizing the circuit and grounding it or by guarding it effectively by insulation or other means.

Where the exact location of underground electric powerlines is unknown, employees using jack hammers or hand tools which may contact a line must be provided with insulated protective gloves.

Even before work has begun, it must be determined by inquiry, observation, or instruments where any part of an exposed or concealed energized electric power circuit is located.

This is necessary because a person, tool or machine could come into physical or electrical contact with the electric power circuit.

The company will advise employees of the location of such lines, the hazards involved, and protective measures to be taken as well as to post and maintain proper warning signs.

Passageways and Open Spaces

Barriers or other means of guarding shall be provided to ensure that workspace for electrical equipment will not be used as a passageway during the time when energized parts of electrical equipment are exposed. Walkways and similar working spaces must be kept clear of electric cords.

Other standards cover load ratings, fuses, cords, and cables.

Lockout and Tagging of Circuits

Tags must be placed on controls that are to be deactivated during the course of work on energized or deenergized equipment or circuits. Equipment or circuits that are deenergized must be rendered inoperative and have tags attached at all points where such equipment or circuits can be energized.

Safety–Related Maintenance and Environmental Considerations

Maintenance of Equipment

All wiring components and utilization equipment in hazardous locations shall be maintained in a dust–tight, dust–ignition–proof, or explosion–proof condition without loose or missing screws, gaskets, threaded connections, seals, or other impairments to a tight condition.

Environmental Deterioration of Equipment

Unless identified for use in the operating environment, no conductors or equipment can be located:

1. In damp or wet locations.
2. Where exposed to gases, fumes, vapors, liquids, or other agents having a deteriorating effect on the conductors or equipment.
3. Where exposed to excessive temperatures.

Control equipment, utilization equipment, and busways approved for use in dry locations only must be protected against damage from the weather during building construction.

For protection against corrosion, metal raceways, cable armor, boxes, cable sheathing, cabinets, elbows, couplings, fittings, supports, and support hardware must be of materials appropriate for the environment in which they are installed.

Safety Requirements for Special Equipment

Batteries

Batteries of the unsealed type must be located in enclosures with outside vents or in well–ventilated rooms arranged to prevent the escape of fumes, gases, or electrolyte spray into other areas. Other provisions include:

1. Ventilation—to ensure diffusion of the gases from the battery and to prevent the accumulation of an explosive mixture.
2. Racks and trays—treated to make them resistant to the electrolyte.
3. Floors—acid resistant construction unless protected from acid accumulations.
4. Face shields, aprons, and rubber gloves—for workers handling acids or batteries.
5. Facilities for quick drenching of the eyes and body—within 25 feet (7.62 m) of battery handling areas.
6. Facilities—for flushing and neutralizing spilled electrolytes and for fire protection.

Battery Charging

Battery charging installations must be located in areas designated for that purpose. When batteries are being charged, vent caps must be maintained in functioning condition and kept in place to avoid electrolyte spray. Also, charging apparatus must be protected from damage by trucks.

Ground–Fault Protection on Construction Sites

Insulation and Grounding

Insulation and grounding are two recognized means of preventing injury during electrical equipment operation. Conductor insulation may be provided by placing nonconductive material such as plastic around the conductor. Grounding may be achieved through the use of a direct connection to a known ground such as a metal cold water pipe.

Consider, for example, the metal housing or enclosure around a motor or the metal box in which electrical switches, circuit breakers, and controls are placed. Such enclosures protect the equipment from dirt and moisture and prevent accidental contact with exposed wiring.

However, there is a hazard associated with housings and enclosures. A malfunction within the equipment—such as deteriorated insulation—may create an electrical shock hazard. Many metal enclosures are connected to a ground to eliminate the hazard. If a "hot" wire contacts a grounded enclosure, a ground fault results which normally will trip a circuit breaker or blow a fuse. Metal enclosures and containers are usually grounded by connecting them with a wire going to ground.

This wire is called an equipment-grounding conductor. Most portable electric tools and appliances are grounded by this means. There is one disadvantage to grounding: a break in the grounding system may occur without the user's knowledge.

Insulation may be damaged by hard usage on the job or simply by aging. If this damage causes the conductors to become exposed, the hazards of shocks, burns, and fire will exist. Double insulation

may be used as additional protection on the live parts of a tool, but double insulation does not provide protection against defective cords and plugs or against heavy moisture conditions.

The use of a ground–fault circuit interrupter (GFCI) is one method used to overcome grounding and insulation deficiencies.

What is a GFCI?
The ground–fault circuit interrupter (GFCI) is a fast–acting circuit breaker which senses small imbalances in the circuit caused by current leakage to ground and, in a fraction of a second, shuts off the electricity. The GFCI continually matches the amount of current going to an electrical device against the amount of current returning from the device along the electrical path. Whenever the amount "going" differs from the amount "returning" by approximately five milliamps, the GFCI interrupts the electric power within as little as 1/40 of a second.

However, the GFCI will not protect the employee from line–to–line contact hazards (such as a person holding two "hot" wires or a hot and a neutral wire in each hand). It does provide protection against the most common form of electrical shock hazard—the ground fault. It also provides protection against fires, overheating, and destruction of insulation on wiring.

What Are the Hazards?
With the wide use of portable tools on construction sites, the use of flexible cords often becomes necessary. Hazards are created when cords, cord connectors, receptacles, and cord– and plug–connected equipment are improperly used and maintained.

Generally, flexible cords are more vulnerable to damage than is fixed wiring. Flexible cords must be connected to devices and to fittings so as to prevent tension at joints and terminal screws. Because a cord is exposed, flexible, and unsecured, joints and terminals become more vulnerable. Flexible cord conductors are finely stranded for flexibility, but the strands of one conductor may loosen from under terminal screws and touch another conductor, especially if the cord is subjected to stress or strain.

A flexible cord may be damaged by activities on the job, by door or window edges, by staples or fastenings, by abrasion from adjacent materials, or simply by aging. If the electrical conductors become exposed, there is a danger of shocks, burns, or fire. A frequent hazard on a construction site is a cord assembly with improperly connected terminals.

When a cord connector is wet, hazardous leakage can occur to the equipment-grounding conductor and to humans who pick up that connector if they also provide a path to ground. Such leakage is not limited to the face of the connector but also develops at any wetted portion of it.

When the leakage current of tools is below one ampere, and the grounding conductor has a low resistance, no shock should be perceived. However, should the resistance of the equipment-grounding conductor increase, the current through the body also will increase. Thus, if the resistance of the equipment-grounding conductor is significantly greater than one ohm, tools with even small leakages become hazardous.

Preventing and Eliminating Hazards
GFCIs can be used successfully to reduce electrical hazards on construction sites. Tripping of GFCIs—interruption of current flow—is sometimes caused by wet connectors and tools. It is good practice to limit exposure of connectors and tools to excessive moisture by using watertight or

sealable connectors. Providing more GFCIs or shorter circuits can prevent tripping caused by the cumulative leakage from several tools or by leakage from extremely long circuits.

Employer's Responsibility
OSHA ground–fault protection rules and regulations have been determined necessary and appropriate for employee safety and health. Therefore, it is this company's responsibility to provide either:

1. Ground–fault circuit interrupters on construction sites for receptacle outlets in use and not part of the permanent wiring of the building or structure; or
2. A scheduled and recorded assured equipment grounding conductor program on construction sites, covering all cord sets, receptacles which are 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 employees.

Ground–Fault Circuit Interrupters
This company will provide ground–fault circuit interrupters for all 120–volt, single phase, 15 and 20 ampere receptacle outlets on construction sites which are not a part of the permanent wiring of the building or structure and which are in use by employees. Receptacles on the ends of extension cords are not part of the permanent wiring and, therefore, must be protected by GFCIs whether or not the extension cord is plugged into permanent wiring.

These GFCIs monitor the current–to–the–load for leakage to ground. When this leakage exceeds five mA. ± one mA, the GFCI interrupts the current. They are rated to trip quickly enough to prevent electrocution. This protection is required in addition to, not as a substitute for, the grounding requirements of OSHA safety and health rules and regulations, 29 CFR 1926.

The requirements that the employer must meet, if he or she chooses the GFCI option, are stated in 29 CFR 1926.404(b)(1)(ii) and will be made available to any employee who wishes to review it.

Training
Each employee at this company shall be trained in the content of this program. In addition, they shall be provided comprehensive training that shall cover:

1. Recognition of the hazards associated with electricity;
2. Abatement procedures;
3. Safe work practices;
4. Lockout/Tagout procedures; and
5. Equipment inspection and reporting procedures

No employee shall operate or install any electrical circuit without the training and the approval of the Company's Safety and Health Manager.

Scaffolding

Purpose
It is this company's purpose in issuing these procedures to further ensure a safe workplace based on the following formal, written procedures for scaffold work.

These procedures will be reviewed and updated as needed to comply with the new OSHA regulations, new best practices in scaffolding, and as business practices demand.

Application
This general scaffold plan applies to:

- All employees who perform work while on a scaffold.
- All employees who are involved in erecting, dismantling, moving, operating, repairing, maintaining, or inspecting scaffolds.
- All scaffolds on all sites where this company is doing work.

Specific Procedures

In addition to the general safety procedures in this written plan, there are procedures that apply to specific types of scaffolds. These safety rules for these specific types of scaffolds are found in OSHA 29 CFR 1926.452.

The term that OSHA uses to identify the type of scaffold that we utilize is Fabricated Frame Scaffolds or Tubular Welded Frame Scaffolds. The specific requirements for this scaffold are listed below and can also be found in OSHA 29 CFR 1926.452 section (c).

When moving platforms to the next level, the existing platform shall be left undisturbed until the new end frames have been set in place and braced prior to receiving the new platforms.

Frames and panels shall be braced by cross, horizontal, or diagonal braces, or combination thereof, which secure vertical members together laterally. The cross braces shall be of such length as will automatically square and align vertical members so that the erected scaffold is always plumb, level, and square. All brace connections shall be secured.

Frames and panels shall be joined together vertically by coupling or stacking pins or equivalent means.

Where uplift can occur which would displace scaffold end frames or panels, the frames or panels shall be locked together vertically by pins or equivalent means.

Brackets used to support cantilevered loads shall:

Be seated with side-brackets parallel to the frames and end-brackets at 90 degrees to the frames;

Not be bent or twisted from these positions; and

Be used only to support personnel, unless the scaffold has been designed for other loads by a qualified engineer and built to withstand the tipping forces caused by those other loads being placed on the bracket-supported section of the scaffold.

Scaffolds over 125 feet in height above their base plates shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design.

General Procedures
The following general procedures apply to all scaffold and aerial lift operations for JDL Warm Construction

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

- Each scaffold and scaffold component we use will support, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it.

Platform Construction
This section reflects the procedures and safety requirements we will use to construct our scaffold platforms. Included here is a description of the type(s) of scaffold(s) being erected, planking used, walkways required for each scaffold erected, fall protection used, and other requirements for platform construction.

Type of Scaffold: Tubular welded frame scaffold

Type of Planking: Scaffold grade wood laminate
Planking certification as scaffold grade attached as Attachment "A"

Fall Protection Used: Guardrail System

The following safety rules apply for this scaffold platform erection:

- Each scaffold plank will be installed so that the space between adjacent planks and the space between the platform and the uprights is no more than one inch wide.
  If, in certain situations, we need to make this space wider we will attach our demonstration as Attachment "B"
- The front edge of all platforms will not be more than 14 inches from the face of the work, unless we have a guardrail or personal fall arrest system in place that meets regulations.
- Each scaffold walkway and platform shall be at least 18 inches wide unless it can be demonstrated that the area is so narrow that platforms and walkways cannot be at least 18 inches wide. Such walkways and platforms shall be as wide as feasible.
- Each end of a platform, unless cleated or otherwise restrained by hooks or equivalent means, shall extend over the centerline of its support at least 6 inches.
- Each end of a platform 10 feet or less in length shall not extend over its support more than 12 inches unless the platform is designed and installed so that the cantilevered portion of the platform is able to support employees and/or materials without tipping, or has guardrails which block employee access to the cantilevered end.
- Each platform greater than 10 feet in length shall not extend over its support more than 18 inches, unless it is designed and installed so that the cantilevered portion of the platform is able to support employees without tipping, or has guardrails which block employee access to the cantilevered end.
- On scaffolds where scaffold planks are abutted to create a long platform, each abutted end shall rest on a separate support surface. This provision does not preclude the use of common support members, such as "T" sections, to support abutting planks, or hook-on platforms designed to rest on common supports.

- 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.
- At all points of a scaffold where the platform changes direction, such as turning a corner, any platform that rests on a bearer at an angle other than a right angle shall be laid first, and platforms which rest at right angles over the same bearer shall be laid second, on top of the first platform.
- Wood platforms shall not be covered with opaque finishes, except that platform edges may be covered or marked for identification. Platforms may be coated periodically with wood preservatives, fire-retardant finishes, and slip-resistant finishes; however, the coating may not obscure the top or bottom wood surfaces.

Supported Scaffolds

- Supported scaffolds with a height to base width ratio of more than 4 to one (4:1) must be restrained from tipping by guying, tying, bracing, or equivalent means
- Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet or less thereafter for scaffolds 3 feet wide or less, and every 26 feet or less thereafter for scaffolds greater than 3 feet wide. The top guy, tie or brace of completed scaffolds shall be placed no further than the 4:1 height from the top. Such guys, ties and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (measured from one end [not both] towards the other).
- Ties, guys, braces, or outriggers shall be used to prevent the tipping of supported scaffolds in all circumstances where an eccentric load, such as a cantilevered work platform, is applied or is transmitted to the scaffold.
- Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates and 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.
- Front-end loaders and similar pieces of equipment shall not be used to support scaffold platforms unless the manufacturer for such use has specifically designed them.
- Forklifts shall not be used to support scaffold platforms unless the entire platform is attached to the fork and the forklift is not moved horizontally while the platform is occupied.
- Supported scaffold poles, legs, posts, frames, and uprights shall be plumb and braced to prevent swaying and displacement.

Gaining Access to Scaffolds

We know that getting to the working platform is critical to the safety of our employees. This section outlines the mechanical requirements for gaining access to scaffold platforms such as: (1) ladders, (2) ramps and walkways, (3) stairrails, and (4) direct access from another scaffold.

This section is divided into two parts. The first part is for workers gaining access to scaffold platforms to do work; the second part is for employees erecting and dismantling scaffolds.

Working employees:

- When scaffold platforms are more than 2 feet above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers, stairway-type ladders, ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface shall be used. Cross braces shall not be used as a means of access.
- Portable, hook-on, and attachable ladders shall be positioned so as not to tip the scaffold;
- Hook-on and attachable ladders shall be positioned so that their bottom rung is not more than 24 inches above the scaffold supporting level;
- When hook-on and attachable ladders are used on a supported scaffold more than 35 feet high, they shall have rest platforms at 35-foot maximum vertical intervals.
- Hook-on and attachable ladders shall be specifically designed for use with the type of scaffold used;
- Hook-on and attachable ladders shall have a minimum rung length of 11½ inches; and
- Hook-on and attachable ladders shall have uniformly spaced rungs with a maximum spacing between rungs of 16¾ inches.
- Stairway-type ladders shall:
- Be positioned such that their bottom step is not more than 24 inches above the scaffold supporting level;
- Be provided with rest platforms at 12-foot maximum vertical intervals;
- Have a minimum step width of 16 inches, except that mobile scaffold stairway-type ladders shall have a minimum step width of 11½ inches; and
- Have slip-resistant treads on all steps and landings.
- Stairtowers shall be positioned such that their bottom step is not more than 24 inches above the scaffold supporting level.
- A stairrail consisting of a toprail and a midrail shall be provided on each side of each scaffold stairway.
- The toprail of each stairrail system shall also be capable of serving as a handrail, unless a separate handrail is provided.
- Handrails, and toprails that serve as handrails, shall provide an adequate handhold for employees grasping them to avoid falling.
- Stairrail systems and handrails shall be surfaced to prevent injury to employees from punctures or lacerations, and to prevent snagging of clothing.
- The ends of stairrail systems and handrails shall be constructed so that they do not constitute a projection hazard.
- Handrails and toprails that are used as handrails, shall be at least 3 inches from other objects.
- Stairrails shall be not less than 28 inches or more than 37 inches from the upper surface of the stairrail to the surface of the tread, in line with the face of the riser at the forward edge of the tread.
- A landing platform at least 18 inches wide by at least 18 inches long shall be provided at each level.
- Each scaffold stairway shall be at least 18 inches wide between stairrails.
- Treads and landings shall have slip-resistant surfaces.
- Stairways shall be installed between 40 degrees and 60 degrees from the horizontal.
- Guardrails shall be provided on the open sides and ends of each landing.

- Riser height shall be uniform, within ¼ inch, for each flight of stairs. Greater variations in riser height are allowed for the top and bottom steps of the entire system, not for each flight of stairs.
- Tread depth shall be uniform, within ¼ inch, for each flight of stairs.
- Ramps and walkways 6 feet or more above lower levels shall have guardrail systems which comply with subpart M of OSHA 29 CFR 1926
- No ramp or walkway shall be inclined more than a slope of one vertical to three horizontal.
- If the slope of a ramp or a walkway is steeper than one vertical in eight horizontal, the ramp or walkway shall have cleats not more than fourteen inches apart that are securely fastened to the planks to provide footing.
- Integral prefabricated scaffold access frames shall:
- Be specifically designed and constructed for use as ladder rungs;
- Have a rung length of at least 8 inches;
- Not be used as work platforms when rungs are less than 11½ inches in length, unless each affected employee uses fall protection, or a positioning device, which complies with OSHA 29 CFR 1926.502;
- Be uniformly spaced within each frame section;
- Be provided with rest platforms at 35-foot maximum vertical intervals on all supported scaffolds more than 35 feet high; and
- Have a maximum spacing between rungs of 16¾ inches. Non-uniform rung spacing caused by joining end frames together is allowed, provided the resulting spacing does not exceed 16¾ inches.
- Steps and rungs of ladder and stairway type access shall line up vertically with each other between rest platforms.
- Direct access to or from another surface shall be used only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.

Erectors and Dismantlers

- Effective September 2, 1997, access for employees erecting or dismantling supported scaffolds shall be in accordance with the following:
- This company will provide safe means of access for each employee erecting or dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard.
- Hook-on or attachable ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.
- When erecting or dismantling tubular welded frame scaffolds, (end) frames, with horizontal members that are parallel, level and are not more than 22 inches apart vertically may be used as climbing devices for access, provided they are erected in a manner that creates a usable ladder and provides good hand hold and foot space.
- Cross braces on tubular welded frame scaffolds shall not be used as a means of access or egress.

Fall Protection Plan

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

Working employees

This fall protection plan for our working employees is for the following type(s) of scaffold(s):

- Each employee on a boatswains' chair, catenary scaffold, float scaffold, needle beam scaffold, or ladder jack scaffold shall be protected by a personal fall arrest system;
- Each employee on a crawling board shall be protected by a personal fall arrest system, a guardrail system, or by a three-fourth inch diameter grabline or equivalent handhold securely fastened beside each crawling board;
- Each employee on a self-contained adjustable scaffold shall be protected by a guardrail system when the platform is supported by the frame structure, and by both a personal fall arrest system and a guardrail system when the platform is supported by ropes;
- Each employee on a walkway located within a scaffold shall be protected by a guardrail system installed within 9½ inches of and along at least one side of the walkway.
- Each employee performing overhand bricklaying operations from a supported scaffold shall be protected from falling from all open sides and ends of the scaffold by the use of a personal fall arrest system or guardrail system.
- For all scaffolds not otherwise specified in this section, each employee shall be protected by the use of personal fall arrest systems or guardrail systems.
- Personal fall arrest systems used on scaffolds shall be attached by lanyard to a vertical lifeline, horizontal lifeline, or scaffold structural member.
- When vertical lifelines are used, they shall be fastened to a fixed safe point of anchorage, shall be independent of the scaffold, and shall be protected from sharp edges and abrasion. Safe points of anchorage include structural members of buildings, but do not include standpipes, vents, other piping systems, electrical conduit, outrigger beams, or counterweights.
- Guardrail systems installed to meet the requirements of this section shall comply with the following provisions.
- Guardrail systems shall be installed along all open sides and ends of platforms. Guardrail systems shall be installed before employees other than erection/ dismantling crews release the scaffold for use.
- The top edge height on supported scaffolds shall be between 36 inches and 45 inches. When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria.
- When midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent structural members are used, they shall be installed between the top edge of the guardrail system and the scaffold platform.
- When midrails are used, they shall be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.
- When screens and mesh are used, they shall extend from the top edge of the guardrail system to the scaffold platform, and along the entire opening between the supports.
- When intermediate members are used, they shall not be more than 19 inches apart.
- Each toprail or equivalent member of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along its top edge of at least 100 pounds.
- When the loads specified in this section are applied in a downward direction, the top edge shall not drop below the height above the platform surface that is prescribed in this section.
- Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the midrail or other member of at least 75 pounds for guardrail systems with a minimum 100-pound

toprail capacity, and at least 150 pounds for guardrail systems with a minimum 200-pound toprail capacity.

- Guardrails shall be surfaced to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- The ends of all rails shall not overhang the terminal posts except when such overhang does not constitute a projection hazard to employees.
- Steel or plastic banding shall not be used as a toprail or midrail.
- Cross bracing is acceptable in place of a midrail when the crossing point of two braces is between 20 inches and 30 inches above the work platform or as a toprail when the crossing point of two braces is between 38 inches and 48 inches above the work platform. The end points at each upright shall be no more than 48 inches apart.

Falling Object Protection

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

- Provide additional protection from falling hand tools, debris, and other small objects through the installation of toeboards, screens, or guardrail systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects. When the falling objects are too large, heavy or massive to be contained or deflected by any of the above-listed measures, the employer shall place such potential falling objects away from the edge of the surface from which they could fall and shall secure those materials as necessary to prevent their falling.
- Where there is a danger of tools, materials, or equipment falling from a scaffold and striking employees below, the following provisions apply:
- The area below the scaffold to which objects can fall shall be barricaded, and employees shall not be permitted to enter the hazard area; or
- A toeboard shall be erected along the edge of platforms more than 10 feet above lower levels for a distance sufficient to protect employees below, except on float scaffolds where an edging of ¾ x 1½ inch wood or equivalent may be used in lieu of toeboards;
- Where tools, materials, or equipment are piled to a height higher than the top edge of the toeboard, paneling or screening extending from the toeboard or platform to the top of the guardrail shall be erected for a distance sufficient to protect employees below; or
- A guardrail system shall be installed with openings small enough to prevent passage of potential falling objects; or
- A canopy structure, debris net, or catch platform strong enough to withstand the impact forces of the potential falling objects shall be erected over the employees below.
- Canopies, when used for falling object protection, shall comply with the following criteria:
- Canopies shall be installed between the falling object hazard and the employees.
- Where used, toeboards shall be:
  - Capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or horizontal direction at any point along the toeboard; and
  - At least three and one-half inches high from the top edge of the toeboard to the level of the walking/working surface. Toeboards shall be securely fastened in place at the outermost edge of the platform and have not more than ¼ inch clearance above the walking/working surface. Toeboards shall be solid or with openings not over one inch in the greatest dimension.

Using Scaffolds

Site preparation, scaffold erection, fall protection, and gaining access to the working platform is only part of the requirements for scaffold work. While this all takes concentration and safe work practices, the most dangerous time can be when employees are concentrating on their work and not particularly aware of the hazards of working from scaffolds.

It is critical that employees who use scaffolds be trained, among other things, in the recognition of the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.

Our competent person will inspect all scaffolds and scaffold components for visible defects before each work shift, and after any occurrence which could affect a scaffolds structural integrity. However, in addition to that, all users of scaffolds in this company will know and understand the following safety rules:

- Scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.
- The use of shore or lean-to scaffolds is prohibited.
- Any part of a scaffold damaged or weakened such that its strength is less than that required, shall be immediately repaired or replaced, braced to meet those provisions, or removed from service until repaired.
- Scaffolds shall not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer specifically for such movement or, for mobile scaffolds, where the provisions are followed.
- The clearance between scaffolds and power lines shall be as follows: Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows:

Insulated Lines Voltage	Minimum Distance	Alternatives
Less than 300 volts 300 volts to 50 kV More than 50 kilovolts	3 feet 10 feet 10 feet plus 0.4 inches for each 1kV over 50 kV	 2 times the length of the line insulator, but never less than 10 feet
Uninsulated Lines Voltage	**Minimum Distance**	**Alternatives**
Less than 50 kV More than 50kV	10 feet 10 feet plus 0.4 inches for each 1 kV over 50 kV	 2 times the length of the line insulator, but never less than 10 feet

- Scaffolds and materials may be closer to power lines than specified above where such clearance is necessary for performance of work, and only after the utility company, or electrical system operator, has been notified of the need to work closer and the utility company, or electrical system operator, has deenergized the lines, relocated the lines, or installed protective coverings to prevent accidental contact with the lines.
- Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such materials.
- Where swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads shall be used.
- Work on or from scaffolds is prohibited during storms or high winds.
- Debris shall not be allowed to accumulate on platforms.
- Makeshift devices, such as but not limited to boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of employees.

- Ladders shall not be used on scaffolds to increase the working level height of employees, except on large area scaffolds where employers have satisfied the following criteria:
- When the ladder is placed against a structure which is not a part of the scaffold, the scaffold shall be secured against the sideways thrust exerted by the ladder;
- The platform units shall be secured to the scaffold to prevent their movement;
- The ladder legs shall be on the same platform or other means shall be provided to stabilize the ladder against unequal platform deflection, and
- The ladder legs shall be secured to prevent them from slipping or being pushed off the platform. Platforms shall not deflect more than 1/60 of the span when loaded.

Prohibited Practices

The following practices will never be tolerated at this company:

- Unstable objects will never be used to support scaffolds or platform units. (e.g., masonry units)
- Cross braces will never be used as a means of access.
- No scaffold 10 feet or higher shall be used without the use of a fall protection system. (e.g., guardrails, personal fall arrest)
- Employees on a scaffold, without the use of hardhats, are strictly forbidden.

Duties of Competent and Qualified Persons

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

- Competent person – One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and has the authorization to take prompt corrective measures to eliminate them.
- Qualified person – One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

The following tasks will only be done by the person we have deemed competent or qualified to perform. They are:

Competent Person:

- Scaffold components manufactured by different manufacturers shall not be modified in order to intermix them unless a competent person determines the resulting scaffold is structurally sound.
- Scaffold components made of dissimilar metals shall not be used together unless a competent person has determined that galvanic action will not reduce the strength of any component to a level below that required.
- The employer shall provide safe means of access for each employee erecting or dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard. The employer shall have a competent person determine whether it is feasible or would pose a greater hazard to provide, and have employees use a safe means of access.
- Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity.
- Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or

alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.

- Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens.
- The employer shall have a competent person determine the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds.
- Manila or plastic (or other synthetic) rope being used for toprails or midrails shall be inspected by a competent person as frequently as necessary to ensure that it continues to meet the strength requirements.
- The employer shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question.

Qualified Person

- Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design.
- We will have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.

Training

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

Employees who use scaffolds:

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

- The nature of and the correct procedures for dealing with electrical hazards.
- The nature of and the correct procedures for erecting, dismantling, and maintaining the fall protection and falling object protection systems used.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The maximum intended load and the load-carrying capacities of the scaffolds used.
- Any other pertinent requirements of the OSHA rules.

Employees, who erect, disassemble, move, operate, repair, maintain, or inspect scaffolds:

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

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

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

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

Aerial Lift

Overview
Aerial lifts are commonly used in construction, inspection, athletic events and repair services to lift employees to an elevated work position. Proper operation and use of aerial lifts can make completion of tasks at elevation, safer and more efficient. However, unsafe use, operation and aerial lift work practices can result in serious injury. This program has been developed due to the hazards associated with improper use and the concern for the safety of individuals in and around this type of equipment. In addition, this program outlines general, operating, maintenance, inspection and training requirements governing safe aerial lift use.

Policy
JDL Warm Construction will ensure that supervisors and operators comply with all aspects of this safety program. All company employees must successfully complete a training program, and receive certification prior to the operation of any aerial lift. Subcontractors operating aerial lifts on JDL Warm Construction projects are expected to meet or exceed the requirements found in this program, and comply with all applicable statues and regulations governing the use of powered industrial trucks as listed in this document.

Requirements
- OSHA Standard 29CFR 1910.68 (Powered Platforms, Manlifts, and Vehicle-Mounted Work Platform)
- OSHA Standard 29CFR 1926.453 (Aerial Lifts)
- ANSI/SIA A92.22/A92.24 (Self-Propelled Elevated Work Platforms)

Purpose
This program has been developed to reduce the risk of physical injury or property damage in areas where aerial lifts are in operation. It also brings JDL Warm Construction into compliance with federal, state, and local law.

Scope
This program applies to the operation of all aerial lifts operated by JDL Warm Construction employee's employee.

Aerial Lift Procedures
Pre-Use Inspection
- Prior to the operation of any aerial lift the Pre-Use Inspection Checklist found in Appendix A must be completed. This applies at the beginning of every work period, and whenever a new equipment operator takes control of the aerial lift.
- Any safety defects (such as hydraulic fluid leaks; defective brakes, steering, lights, or horn; and/or missing fire extinguisher, lights, seat belt, or back-up alarm) must be reported for immediate repair. They must also be locked and tagged, and taken out of service.

General Safe Work Practices
- Operators shall not wear any loose clothing or any accessory that can catch in moving parts.
- Before machine is started, the operator must walk completely around the machine to ensure everyone and everything is clear of the machine.
- Articulating boom and extendable boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls. Upper controls shall be in or beside the platform within easy reach of the operator. Lower controls shall provide for overriding the upper controls. Controls shall be plainly marked as to their function. Lower-level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

- Modifications and additions that may affect the capacity or safe operation of an aerial/scissor lift are strictly prohibited without the manufacturer's written approval. Capacity, operation, and maintenance instruction markings will be changed as necessary if the manufacturer approves a modification.
- The insulated portion (if applicable) of an aerial / scissor lift shall not be altered in any manner that might reduce its insulating value.
- Any signs, plates, or decals which are missing or illegible must be replaced.
- If the aerial / scissor lift becomes disabled, an "out of service" tag or equivalent shall be attached to the controls inside the platform in a conspicuous location.
- Aerial/scissor lift devices with noted, reported deficiencies shall not be operated until repairs are made and equipment is authorized for use.
- Operators must report all accidents, regardless of fault and severity, to their Supervisor.

Safe Work Practices Before Operation

- Consideration shall be given to the amount of wind. Follow the manufacturer's instruction regarding operation in windy conditions. As a general rule aerial lifts shall not be operated in winds exceeding 25mph although this can vary depending on the model of equipment
  - At 20mph wind speeds or anticipated gusts, lifts will be lowered to a maximum height of 20 feet.
  - At 25mph wind speeds or anticipated gusts, lifts will be grounded.
  - If at any time, video personnel/staff feels unsafe in lifts, they may make decision to ground the lifts and cease with videotaping games or practices…no questions asked.
- Guardrails must be installed and access gates or openings must be closed before raising the platform.
- Occupants shall be secured with a harness and lanyard to the manufacturer installed anchor point.
- Boom and platform load limits specified by the manufacturer shall not be exceeded.
- Consideration shall be given to the protection of bystanders via barricading, having another employee keep bystanders at a safe distance or by other means.
- Aerial lifts shall not be operated from trucks, scaffolds, or similar equipment.

Safe Operation During Operation

- Attention shall be given towards the direction of travel, clearances above, below and on all sides.
- Employees shall not sit or climb on the guardrails of the aerial lift.
- Planks, ladders or other devices shall not be used on the work platform.
- Aerial lift shall not be placed against another object to steady the elevated platform.
- Aerial lift shall not be used as a crane or other lifting device.
- Aerial lift devices shall not be operated on grades, side slopes or ramps that exceed the manufacturer's recommendations.
- The brakes shall be set and outriggers, when used, shall be positioned on pads or a solid surface.
- Speed of aerial lift devices shall be limited according to the conditions of the ground surface, congestion, visibility, slope, location of personnel and other factors that may cause hazards to other nearby personnel.
- Stunt driving and horseplay shall not be permitted.
- Booms and elevated platform devices shall not be positioned in an attempt to jack the wheels off the ground.
- The area surrounding the elevated platform shall be cleared of personnel and equipment prior to lowering the elevated platform.
- All equipment must be secured on the inside of the aerial lift
- Operators are to call for assistance if the platform or any part of the machine becomes entangled.
- Under no circumstance shall any employee operate an aerial lift closer than 10 feet to any energized power line. Greater clearances are required for voltages over 50kv. Any activity that requires aerial lifts

to be closer than the Minimum Clear Distance will require the power line to be deenergized and visibly grounded or the power line shall be moved to a safe location. Deenergizing and moving of power lines shall only be accomplished by the owner of the line.

Safe Work Practices After Operation

- Safe shutdown shall be achieved by utilizing a suitable parking area, placing the platform in the stowed position, placing controls in neutral, idling engine for gradual cooling, turning off electrical power, and taking the necessary steps to prevent unauthorized use.
- Aerial lifts shall be shut off prior to fueling. Fueling must be completed in well-ventilated areas free of flames, sparks or other hazards which may cause fires or explosions.

Changing and Charging Batteries

- Battery charging installations must be located in areas designated for that purpose
- Facilities must provide for: flushing and neutralizing spilled electrolyte, fire protection, protection of charging apparatus from damage by trucks, adequate ventilation for dispersal of fumes from gassing batteries.
- Precautions must be taken to prevent open flames, sparks, or electric arcs in battery charging areas.
- Employees charging and changing batteries shall be authorized to do the work, trained in the proper handling, and required to wear protective clothing, including face shields, long sleeves, rubber boots, aprons, and gloves.

Maintenance

- Any aerial lift not in safe operating condition must be removed from service. Authorized personnel must make all repairs.
- Repairs to the fuel and ignition systems of aerial lifts that involve fire hazards must be conducted only in locations designated for such repairs.
- Aerial lifts in need of repairs to the electrical system must have the battery disconnected before such repairs.
- Only use replacement parts that are currently recommended by the manufacturer.

Responsibilities

Departments Utilizing Powered Industrial Trucks

- Must implement and administer the Aerial Lift Safety program.
- Review the Aerial Lift Safety program annually for compliance and effectiveness.
- Verify that all employees who operate or work near aerial lifts are properly trained.
- Maintain written records of operator training on each model of aerial lift and the name of the trainer.
- Maintain written records of all inspections performed by the aerial lift owner, including the date any problems found, the date when fixed, and the name of the person performing the repairs.
- Maintain written records of the name and purchaser of each aerial lift.
- Make recommendations for revisions if necessary.
- Establish expected operating conditions for aerial lift and send to OHS to review prior to operation

Supervisors

- Coordinate employee training, and certify that all operators receive training prior to operating an aerial lift.
- Ensure that only trained and qualified individuals use aerial lifts.
- Verify employee compliance with the principles and practices outlined in the Aerial Lift Safety Program.
- Provide specific operational training for each aerial lift.

- Observe the operation of aerial lifts, and correct unsafe practices.

Operators
- Read the Aerial Lift Safety Program.
- Complete the Daily Pre-Use Inspection Checklist before operating any aerial lift.
- Observe the operation of the aerial lift, and report unsafe practices to your supervisor.

Occupational Health and Safety Coordinator
- Annually review and update the Aerial Lift Safety Program as necessary.
- Provide orientation and initial training as required by JDL Warm Construction and/or contractors.
- Provide the general safety training requirements for program.
- Monitor the effectiveness of program by receipt of copies of inspection checklists.
- Evaluate designated areas for aerial lift use.
- Define appropriate eyewash facilities for battery changing/charging areas.
- Observe the operation of aerial lifts, and report unsafe practices to the appropriate supervisor.

Training Requirements
Employees who are authorized to operate aerial lifts must receive training prior to engaging in their duties. The training is to ensure that the Aerial Lift Safety Program is understood. The supervisor will also ensure that authorized aerial lift operators have acquired the necessary practical skills required for safe operation. Training is offered by Occupational Health and Safety, and Rental Company. The department along with the rental company will perform an operational training with each employee to determine if operators have the knowledge, training, and skills necessary to use the aerial lift. Operational training will consist of a combination of general safety instruction, practical/operational training (demonstrations performed by the trainer, and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. All operational training must be conducted under close supervision.

Initial Training
- Receive instruction on the intended purpose and function of each control.
- Prior to operating any Aerial Lift, the trainee will read and understand the manufacturer's operating instruction(s) and aerial lift procedures (Section 6.0), or receive training by a qualified person on the contents of the manufacturer's operating instruction(s) and users' safety rules.
- Be informed of the Aerial Lift operating limitations and restrictions as defined by the manufacturer.
- Understand by reading or having a qualified person explain all decals, warnings, and instructions displayed on the Aerial Lift.
- During operational training, trainees may operate an aerial lift only under the direct supervision of authorized trainers, and where such operation does not endanger the trainee or other employees.
- All training and evaluation must be completed before an operator is permitted to use an aerial lift without continual and close supervision.

Training Records
- JDL Warm Construction will maintain a record of all individual training, including:
  - Subject of training.
  - Date of training.
  - Name of individual trained.
  - Name of supervisor or Occupational Health and Safety person providing the training.
  - Training records must be maintained by the department for a minimum of 3 years.

Program Evaluation

- The aerial lift program shall be evaluated on an annual basis utilizing the protocols set forth by the safety department.

Fall Protection

Purpose

JDL Warm Construction is dedicated to the protection of its employees from on-the-job injuries. All employees of JDL Warm Construction have the responsibility to work safely on the job. The purpose of this plan is to:

- Supplement our standard safety policy by providing safety standards specifically designed to cover fall protection on our jobs.
- Ensure that each employee is trained and made aware of the safety provisions, which are to be implemented by this plan prior to the start of erection.

This plan is based on OSHA 29 CFR 1926, Subpart "M", Fall Protection requirements. See a copy of the regulation for full details on all of its requirements.

This plan is designed to enable employees to recognize fall hazards and to establish procedures that are to be followed to prevent falls to lower levels or through holes and openings in walking/working surfaces. Each employee will be trained in these procedures and strictly adhere to them, except when doing so would expose the employee to a greater hazard. If, in the employee's opinion, this is the case, the employee is to notify the foreman of the concern and the concern is to be addressed before proceeding.

Safety policy and procedure on any one project cannot be administered, implemented, monitored, and enforced by any one individual. The total objective of a safe, accident-free work environment can only be accomplished by a dedicated, concerted effort by every individual involved with the project from management down to the last employee. Employees must understand:

- Their value to the company.
- Costs of accidents (monetary, physical, and emotional).
- Objective of the safety policy and procedures.
- Safety rules that apply to the safety policy and procedures.
- Their individual role in administering, implementing, monitoring, and compliance of their safety policy and procedures.

This allows for a more personal approach to compliance through planning, training, understanding and cooperative effort, rather than by strict enforcement. If for any reason an unsafe act persists, strict enforcement will be implemented.

It is the responsibility of the Safety and Health Manager to implement these Fall Protection Procedures. The Safety and Health Manager is responsible for continual observational safety checks of their work operations and to enforce the safety policy and procedures. The foreman is also responsible for correcting any unsafe acts or conditions immediately. It is the responsibility of the employee to understand and adhere to the procedures of this plan and to follow the instructions of the foreman. It is also the responsibility of the employee to bring to management's attention any unsafe or hazardous conditions or acts that may cause injury to either themselves or any other employees. The Safety and Health Manager must approve any changes to these Fall Protection Procedures.

Workplace Assessment and Fall Protection System Selection

Each jobsite supervisor/manager must assess the workplace to determine if the walking/working surfaces on which employees are to work have the strength and structural integrity to safely support workers. Once the person in charge determines that the surface is safe for employees to work on, then he or she must choose the fall protection for a given work operation if a fall hazard is present. The person in charge must

make a reasonable effort to anticipate the particular hazards to which employees may be exposed in the course of the job. This assessment includes:

- Inspecting the area to determine what hazards exists or may arise during the work in that area. Anticipate the need to work at heights and plan work activities accordingly. Careful planning and preparation lay the necessary groundwork for an accident-free workplace.
- Identifying hazards correctly and selecting appropriate protection measures and equipment (see table 1). This information must be communicated to customers, other contractors, and suppliers.

Anchorage points for personal fall arrest systems should be fabricated or designed into structural members and perimeter lines installed before those members are lifted into position, where possible.

- Giving specific and appropriate instructions to prevent exposure to unsafe conditions.
- Ensuring employees follow procedures given and understand the training provided.
- Discovering what safety procedures/equipment subcontractors have chosen to complete their work. Provide corresponding information to subcontractors.

The following table lists the type of fall protection from which a jobsite manager may choose to protect workers from specific fall hazards.

Type of Fall Hazard (for drop-off of 6 ft. or more)	Type of Fall Protection
Ramps, runways, and other walkways……..	Guardrail system.
Excavations……	Guardrail system when edges are not readily seen
Hoist Areas……	Guardrail system *Personal fall arrest system
Holes…….	Covers must be provided
Formwork and Reinforcing Steel……..	*Personal fall arrest Safety net system Positioning device system
Leading Edge Work……..	Guardrail system Safety net system *Personal fall arrest system
Unprotected sides and edges……..	Guardrail system Safety net system *Personal fall arrest system
Overhand bricklaying and related work……	Guardrail system Safety net system *Personal fall arrest system Controlled access zone
Roofing work – steep slope (greater than 4 in 12)	Guardrail system Safety net system *Personal fall arrest system
Precast concrete erection……..	Guardrail system Safety net system *Personal fall arrest system
Wall openings……	Guardrail system Safety net system *Personal fall arrest system
Residential construction……	Guardrail system Safety net system *Personal fall arrest system
Roofing work – low slope……	Guardrail system Safety net system *Personal fall arrest system Combo warning line/guardrail Combo warning line/safety net Combo warning line/personal fall arrest system Combo warning line/safety monitoring system
Other walking/working surfaces……	Guardrail system Safety net system *Personal fall arrest system
Dangerous equipment……..	Guardrail System Equipment Guards
Protection from falling objects……..	Hardhat plus toeboards, screen, or guardrails to prevent objects from falling from higher levels; or canopy structure and keep objects from edge of higher level so they would not accidentally fall; or Barricade area, to which objects could fall and prohibit employees from entering barricaded area.

* When employees use personal fall arrest systems, prompt rescue services must be available or they must be able to rescue themselves should a fall occur.

If leading edge work, precast concrete erection work, or residential construction work is involved in a project and conventional fall protection is infeasible or creates a greater hazard, a Fall Protection Plan must demonstrate that fact and other measures must be devised.

Work Procedures

1. If any one of the conditions described in the Workplace Assessment is not met for the area or piece of equipment posing a potential fall hazard, then do not perform that work until the condition is met. If you cannot remedy the condition immediately, notify a supervisor of the problem and utilize a different piece of equipment or work in a different area, according to the situation.
2. If the situation calls for the use of fall protection devices such as harnesses or lanyards and belts because the fall hazard cannot be reduced to a safe level, then the employee must don such protective equipment before beginning the work and use it as intended throughout the duration of the work.
3. Only employees trained in such work are expected to perform it.
4. All places of employment, job sites shall be kept clean and orderly and in a sanitary condition.
5. All walking/working surfaces must be kept in a clean and, so far as possible, dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places should be provided where practicable.

Training Program

Under no circumstances shall an employee work in areas where they might be exposed to fall hazards, do work requiring fall protection devices, or use fall protection devices until he/she has successfully completed this company's fall protection training program.

The training program includes classroom instruction and operational training on recognition and avoidance of unsafe conditions and the regulations applicable to their work environment for each specific fall hazard the employee may encounter on the job. The training program will be given by a "competent person" qualified in the following areas and must cover:

- ✓ The nature of fall hazards in the work area.
- ✓ Selection and use of personal fall arrest systems, including application limits, proper anchoring and tie-off techniques, estimation of free fall distance (including determination of deceleration distance and total fall distance to prevent striking a lower level), methods of use, and inspection and storage of the system.
- ✓ The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used.
- ✓ The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used.
- ✓ The role of each employee in the safety monitoring system when this is used.
- ✓ The limitations on the use of mechanical equipment during the performance of roofing work on low sloped roofs.
- ✓ The correct procedures for handling and storage of equipment and materials and the erection of overhead protection.
- ✓ The role of employees in Fall Protection Procedures.
- ✓ The standards contained in Subpart "M" of the construction regulations.

The Safety and Security Supervisor will identify all current and new employees who require training and schedule the classroom instruction for those employees. Training on the above components will occur both in the classroom and on the job site, as appropriate. Classroom training will cover written policy/procedures on fall protection and include a training video on the subject. Job site instruction will include demonstration of and practice in wearing fall protection equipment and any instruction necessary for a specific job site.

A written certification of training is required which must include:

- The name or other identity of the employee trained.
- The date(s) of training.
- The signature of the competent person who conducted the training or the signature of the employer.

Retraining is required when an employee cannot demonstrate the ability to recognize the hazards of falling and the procedures to be followed to minimize fall hazards.

Enforcement
Constant awareness of and respect for fall hazards, and compliance with all safety rules are considered conditions of employment. The job site superintendent, as well as the individuals in the Safety and Personnel Department, reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

Incident Investigation
All accidents that result in injury to workers, regardless of their nature, shall be investigated and reported. It is an integral part of any safety program that documentation take place as soon as possible so that the cause and means of prevention can be identified to prevent a reoccurrence.

In the event that an employee falls or there is some other related, serious incident (e.g., a near miss) occurs, this plan shall be reviewed to determine if additional practices, procedures, or training needs to be implemented to prevent similar types of falls or incidents from occurring.

Changes to Plan
The Safety and Health Manager will approve any changes to the plan. This plan shall be reviewed by a qualified person as the job progresses to determine if additional practices, procedures, or training needs to be implemented by the competent person to improve or to provide additional fall protection. Workers shall be notified and trained, if necessary, in the new procedures. A copy of this plan and all approved changes shall be maintained at the job site.

Motor Vehicles, Mechanized Equipment, and Marine Operations

Purpose
It is the policy of JDL Warm Construction to permit only trained and authorized personnel to operate heavy construction equipment. These procedures are applicable to both daily operators and those who only occasionally use such equipment. This program is under the direction of a competent person, as specified in OSHA 1926, Subpart N for some of the equipment covered here. The 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 authorization to take prompt corrective measures to eliminate them. The Site Safety Manager is the competent person in charge of these Equipment Operation Procedures, with operators of specific pieces of equipment being trained to the level of competence for the pieces of machinery with which they work.

List of Equipment
Heavy construction equipment used at JDL Warm Construction's work sites include the following:

1. Excavator
2. Dozer
3. Loader
4. Back Hoe
5. Skid Steer

All equipment used will comply with the manufacturer's specifications and limitations at all times. All attachments used with heavy construction equipment will not exceed the capacity, rating, or scope recommended by the manufacturer.

Modifications of, or additions to this equipment, which affect the capacity or safe operation, are strictly forbidden without notifying the manufacturer and obtaining written approval. Unauthorized modifications can cause accidents and fatalities. It is policy to notify the manufacturer and obtain written approval from them for any proposed modification. The Site Safety Manager is responsible for obtaining this written approval.

If modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals on the equipment are changed accordingly, to reflect the new specifications to which the equipment can perform. In no case is the original safety factor of the equipment to be reduced.

Pre-Operational Procedures
A thorough inspection program can forecast maintenance needs or potential equipment failures or malfunctions. The lack of such a program could result in serious deterioration of the equipment that might lead to excessive replacement or repair charges as well as increased potential for accidents.

The company requires operators to perform pre-operational equipment inspections on all types of heavy construction equipment prior to the beginning of each shift in which those pieces of equipment will be used. Operators are to complete their daily inspections according to the manufacturer's recommendations. These inspection procedures will vary by piece of equipment, but in no case is a piece of heavy industrial equipment to be used without this pre-operational inspection, taking place.

The operator is trained to the level of "competent person" for the equipment he or she operates. The operator walks around the equipment looking for defects or problem areas. Components that have a direct bearing on the safety of the piece of equipment and whose status can change from day to day with use must be

inspected daily, and when possible, observed during operation for any defects that could affect safe operation.

Pre-operational inspections include, but are not limited to, the following:

- Pre-Operational Site Activity and Inspection - a site inspection to locate site features or activities that may pose a potential hazard during operation of the piece of equipment
- Pre-Operational (Daily) Walk Around Inspection - a walk around the exterior of the piece of heavy equipment, to assess the safety level of attachments, ropes and all other exterior features.
- Pre-Start Up (In Cab) Inspection - Check for necessary paperwork, labeling of all switches and controls as to proper function, working order of all lights and other electronic equipment.
- Initial Equipment Operation - upon start-up use each shift, ascertain that the piece of equipment is operating as it should and functioning properly.

If any defect or problem is encountered during the pre-operational inspection, the piece of equipment is to be posted appropriately as out of service and the Site Safety Manager is to be notified immediately. Remove the key from the piece of equipment and place a ***DANGER DO NOT OPERATE*** tag on its steering wheel or control lever. The defect or problem discovered must be identified thoroughly in writing, so that the Maintenance Department personnel can pinpoint the trouble immediately and repair it promptly.

If the piece of equipment is safe to operate, the operator must make note of that on the monthly log form and then proceed about the job at hand.

The Site Safety Manager must retain all monthly log forms for each vehicle for six months. The file should be updated each month with the latest monthly log, with the log from seven months previous thrown away, so that the company has a constant six-month record retention on these forms.

Operating Procedures

1. Always stay within the rated load capacity and working radius and specifications of the piece of equipment being used. Under adverse field conditions operators must reduce the load capacity until it is determined the piece of equipment can safely handle the load in question.
2. Only qualified and properly designated people shall operate heavy construction equipment, for which they have been trained.
3. All personnel are to be kept clear of moving equipment or parts of the equipment.
4. No one except personnel necessary for operation is allowed on the equipment when it is in operation.
5. Required periodic inspections include a monthly and an annual inspection.
6. The monthly periodic inspection interval can vary depending on equipment use and site conditions.
7. Inspection records (certification records) of the inspected piece of equipment shall be maintained monthly on critical items in use (as applicable) such as:
   - Brakes;
   - Hooks; and
   - Ropes.
8. The monthly inspection records must include:
   - The date of inspection;
   - The signature of the person who performed the inspection; and
   - The serial number, or other identifier of the critical component.

9. The most recent monthly inspection (certification) record must be kept readily available for review and maintained on file until a new one is prepared.
10. The monthly inspection includes those items listed for daily inspections as well as a more detailed and focused inspection of all moving parts and equipment.
11. Equipment is not to be driven up to anyone standing in front of fixed objects.
12. Proper hand signals to be used with the types of heavy equipment in use are posted at the job-site.
13. All body parts (hand, arms, head, feet, legs, etc.) are to be kept inside the operator compartment of the piece of equipment, unless a designated hand signal determined to be safe requires extension of a body part outside of the operator compartment.
14. Operators may not block access to fire or emergency exit ways, fire equipment or electrical panels.
15. Under all travel conditions; operate the piece of equipment at a speed that will permit it to be brought to a stop in a safe manner.
16. Stunt driving and horseplay are prohibited when operating pieces of heavy construction equipment.
17. Operators are required to report ALL equipment accidents involving personnel, building structures and equipment to the Site Safety Manager.
18. The operator shall handle loads only within the capacity rating of the truck.
19. Equipment may not be used for any purpose other than for what it was designed.
20. Heavy construction equipment may not be started or any of its functions or attachments operated from any position other than from the designated operator's position.
21. If the equipment is equipped with seat belts or other restraining devices, the operator must use these devices.
22. The operator shall look 360 before traveling with any heavy construction equipment, especially when backing up.
23. The operator shall observe all traffic regulations and under normal traffic conditions, keep to the right.
24. A safe distance of approximately 3 truck lengths shall be maintained when following another piece of heavy construction equipment and the operator shall keep his/her piece of equipment under control at all times.
25. The operator shall not pass another piece of equipment traveling in the same direction.
26. The operator shall yield the right of way to pedestrians at all times.
27. Operators shall slow down and sound audible warning device (horn) at cross aisles and other locations where vision is obstructed.
28. The operator must keep a clear view of the path of travel and observe for other traffic, personnel and safe clearances.
29. When ascending or descending a grade or incline the operator must proceed slowly and with caution.
30. A piece of equipment is considered to be **ATTENDED** when the operator is less than 25 feet from the equipment that remains in his view and hearing range. Before leaving the operator's position, the operator shall:
    - Bring equipment to a complete stop.
    - Place directional controls in neutral.
    - Apply the parking brake, if applicable.
31. A piece of equipment is considered to be **UNATTENDED** when the operator is more than 25 feet from the equipment which remains in his view, or whenever the operator leaves the truck and it is not in view regardless of distance from the truck. Before leaving the operator's position in this instance, the operator shall:
    - Follow the previous procedures; and

- Stop the engine or turn off the controls.

32. The operator shall use the following backup procedure and sequence:
    - Pivot at the waist and inspect the area of operation in the rear of the equipment, watching for obstructions and pedestrians.
    - Blow the horn to alert any pedestrians that may or may not be visible.
    - Engage the directional lever to the reverse position.

Training Program

Under no circumstances shall an employee operate a piece of heavy construction equipment until he/she has successfully completed this company's equipment operation training program. This includes all new operators regardless of claimed previous experience.

The training program includes classroom instruction and operational training on each specific piece of equipment to be utilized by the employee in his/her work area.

The Site Safety Supervisor will identify all new employees in the employee orientation program and make arrangements with department management to schedule the classroom instruction for those employees previously identified in this procedure.

Classroom training consists of:

1. Review of handbook by employee.
2. Review equipment operation and safety training video.

Operational training consists of:

1. Pre-operational procedures
2. Operational review of each powered industrial truck the employee is expected to operate. This includes:
    - Pre-operational procedures;
    - Proper use of controls;
    - Maneuvering skills;
    - Selecting and picking up loads, if applicable; and
    - Driving, if applicable.

Excavation

PURPOSE

It is the policy of JDL Warm Construction to permit only trained and authorized personnel to create or work in excavations. These procedures are applicable to both daily workers with excavations and those who only work occasionally with excavations. This program is under the direction of a competent person. The 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 authorization to take prompt corrective measures to eliminate them. The Site Safety Manager is the competent person in charge of these Excavation Procedures, with excavators being trained to the level of competence for the types of excavations with which they work.

BEFORE EXCAVATING

Before any one at this company begins excavating, it is standard procedure to:

1. Contact the utility companies or property owners and ask the companies or owners to find the exact location of the underground installations in the area. If the utility companies or the owners do not respond within 24 hours or the period established by law or ordinance, or if they cannot establish the location of the utility lines, the excavation may proceed with caution. In this situation, the employer provides employees with detection equipment or other safe and acceptable means to locate utility installations.
2. Remove or adequately support objects in the excavation area that could create a hazard to employees. These may include trees, rocks, sidewalks, and other objects.
3. Classify the type of soil and rock deposits at the site as either stable rock, Type A, Type B, or Type C soil. The soil classification is based on the results of at least one visual and at least one manual analysis conducted by a competent person. (Note: Soil classification is not necessary if the excavation will be sloped to an angle of one and one-half horizontal to one vertical.) Details of the acceptable visual and manual analysis are to be found in Appendix A of the excavation standard.
4. Have the Site Safety Manager chose the appropriate method for protective support systems, as necessary.

PROTECTIVE SUPPORT SYSTEMS

The company has the following standard operating procedures regarding protective support systems for excavations, in accordance with safe practices and procedures and OSHA excavation regulations.

1. Each employee in an excavation is protected from cave-ins during an excavation by an adequate protective system designed in accordance with OSHA standards. Protective system options include proper sloping or benching of the sides of the excavation; supporting the sides of the excavation with timber shoring or aluminum hydraulic shoring; or placing a shield between the side of the excavation and the work area. The Site Safety Manager chooses the most practical design approach for the particular circumstance. The system approach selected will meet the required performance criteria.
2. No protective system is necessary or used if the excavation is made entirely in stable rock, or the excavation is less than 5 feet (1.52 m) in depth (provided there is no indication of a potential cave-in).
3. Protective systems for use in excavations more than 20 feet in depth are designed by a registered professional engineer.

Sloping and Benching

1. When sloping or benching is used to protect against cave-ins, there are four basic options that can be chosen for designing sloping or benching systems. First, if soil classification is not made, then the sides of the excavation can be sloped to an angle not steeper than one and one-half to one vertical (34°). A slope of this graduation or less is considered safe for any type of soil.
2. The second option for designing a sloping or benching system is to use Appendices A and B of the excavation standard to determine the maximum allowable slope and allowable configurations for sloping and benching systems. These requirements are summarized in Table 1 in the Appendix. The soil type must be determined in order to use this option.
3. Sloping and benching systems can also be designed using other tabulated data approved by a registered professional engineer or by having an engineer design and approve the system to be used.
4. The Site Safety Manager will choose the best option for sloping and benching for the job at hand.
5. There are a number of exceptions or special cases to these general sloping and benching guidelines, which will be utilized by the Site safety Manager if the conditions meet the exceptions requirements. These exceptions and conditions are outlined below:
    - In Type A soil, simple slope excavations which are open 24 hours or less (short term) and which are 12 feet high or less in depth may have a maximum allowable slope of 1/2 horizontal to 1 vertical.
    - In Type A soil, all excavations 8 feet or less in depth which have unsupported vertically sided lower portions must have a maximum vertical side of 3.5 feet.
    - In Type A soil, excavations over 8 feet but less than 12 feet in depth with unsupported vertically sided lower portions must have a maximum allowable slope of 1H:1V and a maximum vertical side of 3.5 feet.
    - In Type A soil, excavations 20 feet or less with vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of 3/4H:1V. The support or shield system must extend at least 18 inches above the top of the vertical side.
    - In Type B soil, all excavations 20 feet or less which have vertically sided lower portions shall be shielded or supported to a height of at least 18 inches above the top of the vertical side. The excavation shall have a maximum allowable slope of 1H:1V.
    - In Type C soil, all excavations 20 feet or less which have vertically sided lower portions shall be shielded or supported to a height of at least 18 inches above the top of the vertical side. The excavation shall have a maximum allowable slope of 1-1/2H:1V.
6. When an excavation contains layers of different types of soils, the general sloping requirements do not apply. The excavation must be sloped according to Table 2 in the Appendix.

Timber Shoring

1. Designs for timber shoring in trenches for company work sites are determined using one of four methods: using the requirements set forth by OSHA in Appendices A and C of the excavation standard; using data provided by the manufacturer of the support system; using other tabulated data approved by an engineer; or having a registered professional engineer design the system. The Site Safety Manager chooses from among these options.
2. The design specifications for timber shoring provided by OSHA may be found in Tables 3, 4, and 5 in the Appendix. These tables refer to the actual dimensions and not nominal dimensions of the timber. If the company chooses to use nominal size shoring, we use the additional tables found in Appendix C of the standard.
3. These OSHA design specifications apply only to trenches that do not exceed 20 feet. The soil type in which the excavation is made must be determined in order to use the OSHA data. The specifications do not apply in every situation experienced in the field; the data was developed to apply to most common trenching situations. If the specifications do not apply to the situation

encountered in the field, the Site Safety Manager will make a determination of what approach to use to allow safe protective support of the excavation.

Aluminum Hydraulic Shoring

1. Designs for aluminum hydraulic shoring are based upon manufacturers tabulated data and are in accordance with the manufacturer's specifications, recommendations, and limitations. Deviations from the manufacturer's specifications, recommendations, and limitations are only allowed upon written approval of the manufacturer, which must be obtained by the Site Safety Manager prior to implementation. The written approval is kept at the job site during construction of the protective system.
2. If the manufacturer's tabulated data cannot be utilized, the aluminum hydraulic shoring is designed using the OSHA specifications found in Appendix D of the excavation standard. Before using the OSHA data, the soil type must be determined. Other options for the design of aluminum hydraulic shoring systems include using other tabulated data approved by an engineer or having a registered professional engineer design the system. Again, the Site Safety Manager determines the best choice for the situation.

GENERAL REQUIREMENTS FOR EXCAVATIONS

The following rules are to be followed at all times by all employees of *JDL WARM CONSTRUCTION* working on, in, or near excavations as applicable:

1. Employees exposed to public vehicular traffic must wear warning vests or other suitable garments made of reflectorized or high visibility material.
2. The Site Safety Manager inspects the excavation and the adjacent areas on a daily basis for possible cave-ins, failure of protective systems and equipment, hazardous atmospheres, or other hazardous conditions. Inspections are also required after the occurrence of any natural (such as rain) or man-made events (such as blasting) that could increase the potential for hazards. Employees may not begin work until after being informed by the Site Safety Manager that these inspections are complete.
3. A warning system is used to alert operators of heavy equipment and other employees at the work site of the edge of an excavation.
4. Adequate protection is provided to protect employees from falling rock, soil, or other materials and equipment. Protection is provided by placing and keeping such materials or equipment at least 2 feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.
5. Employees are not permitted under loads that are handled by lifting or digging equipment. Employees are not allowed to work in the excavation above other employees unless the lower-level employees are adequately protected.
6. While the excavation is open, underground installations are protected, supported, or removed as necessary to safeguard employees. Adjacent structures are supported to prevent possible collapse.
7. Employees are not permitted to work in excavations where water has accumulated or is accumulating unless adequate precautions have been taken. Diversion ditches, dikes, or other means are used to prevent surface water from entering an excavation and to provide drainage to the adjacent area.
8. Before an employee enters an excavation greater than four feet in depth, the Site Safety Manager or other competent person must test the atmosphere where oxygen deficiency or a hazardous atmosphere exists or could reasonably exist. Emergency rescue equipment is readily available and attended when hazardous atmospheric conditions exist or may develop.
9. Sufficient means for exiting excavations 4 feet deep or more are provided and are within 25 feet of lateral travel for employees.

10. Guardrails are provided if there are walkways or bridges crossing over an excavation.

TRAINING

Under no circumstances shall an employee be allowed on or in excavations until he/she has successfully completed this company's excavation training program. This includes all new employees regardless of claimed previous experience.

The training program includes classroom instruction and hands-on training on each specific type protective support system to be implemented by the employee in his/her work area.

Classroom training consists of:

1. Review of handbook by employee.
2. Review of safety training video.

Protective support system training consists of hands-on instruction in design, use of the protective support systems that the employee will be implementing in excavations.

APPENDIX

"Stable rock" refers to natural solid mineral matter which can be excavated with vertical sides and remain intact while exposed.

"Type A soil" is cohesive with an unconfined compressive strength of 1.5 tons per square foot (tsf). Type A soils include clay, silty clay, sandy clay, clay loam, caliche, hard pan, and sometimes silty clay loam. No soil should be classified as Type A soil if it is fissured; subject to vibration from traffic, pile driving, or similar effects; previously disturbed; or part of a sloped, layered system where the slope is four horizontal to one vertical or greater.

"Type B soil" is cohesive soil with an unconfined compressive strength greater than .5 tsf but less than 1.5 tsf. Type B soils include granular cohesionless soils like angular gravel, silt, silt loam, sandy loam, and sometimes silty clay loam and sandy clay loam; previously disturbed soils that are not Type C; fissured soils and soils subject to vibration that would otherwise be classified as Type A; dry rock that is not stable; and material that is part of a sloped, layered system where the layers dip on a slope less steep than four horizontal to one vertical.

"Type C soil" is cohesive soil with an unconfined compressive strength of .5 tsf or less. Type C soils include granular soils such as gravel, sand, and loamy sand; submerged soil; soil from which water is freely seeping; submerged rock that is not stable; or material in a sloped layered system where the layers dip into the excavation at a slope of four horizontal to one vertical or steeper.

Table 1
Maximum Allowable Slopes

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V) FOR EXCAVATIONS LESS THAN 20 FEET DEEP	
STABLE ROCK	VERTICAL	(90°)
TYPE A	3/4 : 1	(53°)
TYPE B	1 : 1	(45°)
TYPE C	1-1/2 : 1	(34°)

Table 2
Sloping Requirements for Layered Soils

Layered Soil Type	Slope Required for Each Layered Soil		
	Type A Layer	Type B Layer	Type C Layer
B over A	**3/4:1**	**1:1**	
C over A	**3/4:1**		**1-1/2:1**
C over B		**1:1**	**1-1/2:1**
A over B	**1:1**	**1:1**	
A over C	**1-1/2:1**		**1-1/2:1**
B over C		**1-1/2:1**	**1-1/2:1**

CONCRETE

PURPOSE / SCOPE

Portland cement is one of the most widely used materials in construction. Applications include concrete floors, walls, and pavement; concrete blocks; and different mixtures of mortar and grout. Thousands of construction workers are exposed to concrete every day without harm.

JDL Warm Construction normally utilizes concrete subcontractors for large projects. This program addresses small projects such as demo of existing concrete for installation of new equipment, pump/motor bases, tying concrete in around structural steel, and other small concrete projects. Anyone who uses or supervises the use of Portland cement must know its health hazards and the safe working procedures necessary to minimize exposure. This safety program outlines those hazards and makes recommendations on how to use cement safely.

HEALTH HAZARDS

Cement can cause ill health by skin contact, eye contact, or inhalation. Risk of injury depends on duration and level of exposure and individual sensitivity. Hazardous materials in wet concrete and mortar include:

- alkaline compounds such as lime (calcium oxide) that are corrosive to human tissue
- trace amounts of crystalline silica which is abrasive to the skin and can damage lungs
- trace amounts of chromium that can cause allergic reactions.

SKIN CONTACT

The hazards of wet cement are due to its caustic, abrasive, and drying properties. Wet concrete contacting the skin for a short period and then thoroughly washed off causes little irritation. But continuous contact between skin and wet concrete allows alkaline compounds to penetrate and burn the skin. When wet concrete or mortar is trapped against the skin—for instance, by falling inside a worker's boots or gloves or by soaking through protective clothing— the result may be first, second, or third degree burns or skin ulcers. These injuries can take several months to heal and may involve hospitalization and skin grafts.

Ironically, severe cases often occur when personal protective clothing or equipment is worn. Wet concrete may get trapped inside rubber boots or gloves or gradually soak through coveralls. Concrete finishers kneeling on fresh concrete have had their knees severely burned. Corrosive bleed water from the concrete is absorbed by the worker's pants and held against the skin for prolonged periods.

WATERPROOF RUBBER BOOTS ARE ESSENTIAL IN WORKING WITH WET CONCRETE

Without waterproof knee pads, kneeling on wet concrete can irritate or burn the skin. Cement dust released during bag dumping or concrete cutting can also irritate the skin. Moisture from sweat or wet clothing reacts with the cement dust to form a caustic solution.

ALLERGIC SKIN REACTION

Some workers become allergic to the hexavalent chromium in cement. A small yet significant percentage of all workers using cement will develop an allergy to chromium, with symptoms ranging from a mild rash to severe skin ulcers. In addition to skin reactions, hexavalent chromium can cause a respiratory allergy called occupational asthma. Symptoms include wheezing and difficulty breathing. Workers may develop both skin and respiratory allergies to hexavalent chromium. It's possible to work with cement for years without any allergic skin reaction and then to suddenly develop such a reaction. The condition gets worse until exposure to even minute quantities trigger a severe reaction. The allergy usually lasts a lifetime and prevents any future work with wet concrete or powder cement.

EYE CONTACT
Exposure to airborne dust may cause immediate or delayed irritation of the eyes. Depending on the level of exposure, effects may range from redness to chemical burns and blindness.

INHALATION
Dry cutting generates high levels of dust. Inhaling high levels of dust may occur when workers empty bags of cement. In the short term, such exposure irritates the nose and throat and causes choking and difficult breathing. Sanding, grinding, or cutting concrete can also release large amounts of dust containing high levels of crystalline silica. Prolonged or repeated exposure can lead to a disabling and often fatal lung disease called *silicosis*. Some studies also indicate a link between crystalline silica exposure and lung cancer.

CONTROLS FOR HEALTH HAZARDS

Concrete is easy to work with, versatile, durable, and economical. By taking a few basic precautions, it is also one of the safest building materials known. Relatively few people involved in mixing, handling, and finishing concrete have experienced injury. Outlined below are some simple suggestions-protection, prevention, common sense precautions-useful to anyone working with Portland cement and concrete. The following are some basic recommendations for handling and using cement safely:

- Work in ways that minimize the amount of cement dust released. If visible dust is observed, the JDL Warm Construction Silica Exposure Program must be followed.
- Where possible, wet-cut rather than dry-cut masonry products.
- Mix dry cement in well-ventilated areas.
- Make sure to work upwind from dust sources.
- Where possible, use ready-mixed concrete instead of mixing on site.
- When kneeling on fresh concrete, use a dry board or waterproof kneepads to protect knees from water that can soak through fabric.
- Remove jewelry such as rings and watches because wet cement can collect under them.

PROTECT YOUR HEAD AND EYES
Construction equipment and tools represent constant potential hazards to busy construction personnel. That's why hard hats are required on all JDL Warm Construction projects.

Proper eye protection is essential when working with cement or concrete. Eyes are particularly vulnerable to blowing dust, splattering concrete, and other foreign objects. On some jobs it may be advisable to wear full-cover goggles or safety glasses with side shields. Sight is precious. Protect the head and eyes by using proper safety equipment and remaining alert.

PROTECT YOUR BACK
All materials used to make concrete—Portland cement, coarse aggregate, sand, and water—are quite heavy even in small quantities. When lifting heavy materials, your back should be straight, legs bent, and the weight between your legs as close to the body as possible. Do not twist at the waist while lifting or carrying these items. Rather than straining your back with a heavy load, get help. Remember to use your head, not your back.

Let mechanical equipment work to your advantage by placing concrete as close as possible to its final position. After the concrete is deposited in the desired area by chute, pump, or wheelbarrow, it should be pushed—not lifted—into final position with a shovel. A short-handled, square-end shovel is an effective tool for spreading concrete, but

special concrete rakes or come-alongs also can be used. Excessive horizontal movement of the concrete not only requires extra effort, but may also lead to segregation of the concrete ingredients.

PROTECT YOUR SKIN

When working with fresh concrete, care shall be taken to avoid skin irritation or chemical burns. Prolonged contact between fresh concrete and skin surfaces, eyes, and clothing may result in burns that are quite severe, including third-degree burns. If irritation persists consult a physician. For deep burns or large affected skin areas, seek medical attention immediately.

THE A-B-C-DS OF FRESH CONCRETE'S EFFECT ON SKIN ARE:

- **A**brasive Sand contained in fresh concrete is abrasive to bare skin.
- **B**asic & Portland cement is alkaline in nature, so wet
- **C**austic concrete and other cement mixtures are strongly basic (pH of 12 to 13). Strong bases-like strong acids- are harmful, or caustic to skin.
- **D**rying Portland cement is hygroscopic-it absorbs water. In fact, Portland cement needs water to harden. It will draw water away from any material it contacts-including skin.
- Clothing worn as protection from fresh concrete should not be allowed to become saturated with moisture from fresh concrete because saturated clothing can transmit alkaline or hygroscopic effects to the skin.
- Waterproof gloves, a long-sleeved shirt, and long pants should be worn. If you must stand in fresh concrete while it is being placed, screeded, or floated, wear rubber boots high enough to prevent concrete from getting into them.
- The best way to avoid skin irritation is to wash frequently with pH neutral soap and clean water.

PLACING AND FINISHING

Waterproof pads shall be used between fresh concrete surfaces and knees, elbows, hands, etc., to protect the body during finishing operations. Eyes and skin that come in contact with fresh concrete should be flushed thoroughly with clean water. Clothing that becomes saturated from contact with fresh concrete should be rinsed out promptly with clear water to prevent continued contact with skin surfaces. For persistent or severe discomfort, consult a physician.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Obtain and wear the appropriate personal protective equipment and ensure its condition is suitable for use. To protect skin from cement and cement mixtures, workers should:

- Wear the appropriate PPE:
  - Type 1, Class E Hardhat.
  - Hearing protection for sound levels that exceed 80 dBA.
  - Suitable eye protection where mixing, pouring, or other activities may endanger eyes (minimum—safety glasses with attached side shields or tight-fitting unvented or indirectly vented goggles. Don’t wear contact lenses when handling cement or cement products as dust can get in between your contacts and eyes and cause greater damage.
  - Faceshield for cutting, grinding, or hole penetrations.
  - Suitable respiratory protective equipment such as a P, N or R 95 respirator or possibly a full-face respirator or Powered Air Purifying Respirator (PAPR) when cement dust cannot be mitigated.
  - If your safety goggles, faceshield, or respirator fogs over, step away into a safe area to clean them off.
  - Suitable alkali-resistant gloves.
  - Coveralls with long sleeves and full-length trousers (pull sleeves down over gloves and tuck pants inside boots and duct-tape at the top to keep mortar and concrete out)

- Waterproof chemical resistant boots high enough to prevent concrete from flowing in when workers must stand in fresh concrete.
- Know how to inspect, use, don and doff PPE correctly.
- Be aware of heat stress potential when wearing PPE. Stay hydrated, take breaks and rotate job tasks between crew members as needed.
- PPE may be removed after the work is complete and has been determined that is safe to do so.
- Provide adequate hygiene facilities on site for workers to wash hands and face at the end of a job and before eating, drinking, smoking, or using the toilet.

FIRST AID

- Clothing contaminated by wet cement should be quickly removed. Once the cement is inside your gloves or boots, it can become very irritating. Skin in contact with wet or dry cement should be washed immediately with large amounts of cool clean water.
- Wash your hands and face and if necessary, your whole body thoroughly, after removing your PPE. Don't wash your hands with water from buckets used for cleaning tools.
- Open sores or cuts should be thoroughly flushed and covered with suitable dressings. Get medical attention if discomfort persists. Contaminated eyes should be washed with cold tap water for at least 15 minutes.
- Contact your foreman and safety team as soon as possible for further assistance.
- If necessary, the affected person will be taken to get medical treatment.

SAFE WORK PROCEDURES

- Before the start of any work, it is critical to communicate with the customer and obtain any applicable permits and Safety Data Sheets (SDS).
- All workers must be trained in the customer's emergency evacuation procedure and emergency response plan. Employee must understand the use of equipment such as scaffolds, ladders, air quality monitors, alarms, fall protection equipment, fire extinguishing devices, aerial lifts, and if necessary, air moving equipment.
- Have all personnel, tools, materials, equipment staged and ready.
- Perform a Pre-Job Hazard Analysis (PJHA) before breaking into any hazardous substance pipeline or vessel. Those developing the PJHA must include a person who understands the process and the hazards involved.
- In the event a worker gets cement in their eyes, test and flush eye wash stations and safety showers in the area before the work begins. Some locations have alarm systems on their eye wash and safety showers. Always follow the customer's safe work procedures at their location.
- If necessary, barricade the area with the correct caution or danger tape and placards. If possible, set the barricades a minimum of 6-feet away from the work location. Maintain the barricade until work is completed. Always remove barricade, bits and pieces, at the end of the job.
- Line of fire, struck by and caught between are hazards on every jobsite. All employees must be aware of their situational awareness for themselves and their co-workers. If you see something unsafe, STOP and reassess the situation. Continue working only after the issue has been addressed satisfactorily and approved by the foreman and crew.
- Good housekeeping is critical to safe work standards for our employees. Keep tools and materials organized to prevent tripping and falling.
- All protruding reinforcing steel, onto and into which employees could fall, shall be guarded with 4" x 4" rebar caps or other acceptable protective devices to eliminate the hazard of impalement.
- ALWAYS pay attention to concrete truck drivers and their movements. Make eye contact with the driver and stay in his line of site in his rearview mirrors. If you can't see him in his rearview mirror,

he can't see you! Use hand signals when backing trucks up to the proper location.

- Concrete buckets shall be equipped with hydraulic or pneumatic gates shall have positive safety latches or similar safety devices installed to prevent premature or accidental dumping.
- No employee shall be permitted to ride or work under concrete buckets while buckets are being elevated or lowered into position. To the extent possible, concrete buckets shall be routed so that no employee is exposed to the hazards associated with falling concrete buckets.
- Sections of tremies and similar concrete conveyances shall be secured with wire rope (or equivalent materials) in addition to the regular couplings or connections.
- 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 to retain blade fragments from injuring a worker.
- 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.
- Employers shall take measures to prevent unrolled wire mesh from recoiling. Such measures may include, but are not limited to, securing each end of the roll or turning over the roll.
- Forms and shores (except those used for slabs on grade and slip forms) shall not be removed until the employer determines that the concrete has gained sufficient strength to support its weight and superimposed loads.
- No employee shall be permitted to perform maintenance or repair activity on equipment (such as compressors, mixers, screens or pumps used for concrete and masonry construction activities) where the inadvertent operation of the equipment could occur and cause injury, unless all potentially hazardous energy sources have been locked out and tagged. Unplug power tools before changing accessories like blades, drill bits, etc.
- Rigging equipment shall be inspected before each use. One Qualified Rigger and Signal Person shall be on each crew. Other crew members will follow their direction.
- Cranes shall have a competent trained operator for the type of crane that is being utilized. All inspections and paperwork must be completed before work begins.
- At the end of the job, clean your work area and leave the job site in a better condition than when you started.
- Whenever conditions change from the original plan you must stop and reassess. If there is *any* doubt, STOP!

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 except those employees required for the erection of those members.

TRAINING

JDL Warm Construction employees shall be trained in safe work procedures while working with cement. Files will be kept at the JDL Warm Construction corporate office in their safety training files.

Steel Erection

POLICY

JDL Warm Construction is dedicated to the safety of its employees. The erection of steel and the activities that go on around the process are extremely hazardous and require everyone to work together safely. All employees involved shall follow all safety requirements and wear all required safety equipment while working on the site.

RESPONSIBILITIES

The competent person along with the controlling contractor will ensure that all equipment meets required specifications for the intended application.

The competent person shall ensure all safety systems are used when required and systems and equipment is inspected as required.

PURPOSE

The purpose of the policy is to prevent injury to JDL Warm Construction employees caused by the erection of steel and the activities that go along with steel erection. The safe and correct implementation and use of the program will help ensure JDL Warm Construction compliance with the Occupational Safety and Health Administration's (OSHA's) Subpart R Steel Erection.

The following parts are an overview of the steel erection requirement, please note you should refer to the proper OSHA standard for detailed requirement of this topic (29CFR 1926.750/762).

SITE LAY OUT OVERVIEW

- Clearly know the duties and responsibilities of the controlling contractor.
- Assure all proper written notifications are on site (i.e., ASTM standard test methods for concrete).
- Assure all requirements for adequate access roads to and from the site are in order, also adequate space for safe storage of materials is identified and used.
- Site specific erection plan.

HOISTING AND RIGGING

- Assure that the pre-planning of overhead hoisting has been performed.
- Assure all hoisting and rigging safety requirement are being met and maintained. (pre-shift inspections record is available and corrective action taken when needed).
- Assure that all safety requirements have been met for working under loads, routes for suspended loads have been pre-planned.

STRUCTURAL STEEL ASSEMBLY

- Assure structural assembly is maintained at all time during the erection process.
- Permanent floors shall be installed as the erection process progresses, (no more than 8 stories between the erection floor and the upper most permanent floor).
- At no time shall there be more than 4 floor of 48 ft. whichever is less of unfinished bolting or welding above the foundation or uppermost permanently secured floor.
- Walking/working surfaces, assure that tripping hazards are addressed (shear connectors).
- Plumbing – up, a competent person shall determine if plumbing – up equipment shall be installed in conjunction with steel erection process.
- Metal decking, assure proper hoisting, landing and placing of metal decking.
- Assure all bundles are secured and placed properly over supports.

COLUMN ANCHORAGE

- All columns shall be anchored by 4 anchor bolts.
- Columns shall be set on level finished floors.
- All columns shall be evaluated by a competent person to determine if guying or bracing is needed.

BEAMS AND COLUMNS

- Do not release structural members from the hoisting lines until at least 2 bolts per connection are wrench tight.
- A competent person shall determine if more than 2 bolts are needed to ensure stability.
- Diagonal bracing, shall be secured by at least 1 bolt per column, wrench tight.

OPEN WEB STEEL JOIST

- Vertical stabilizer plates shall be provided for each column of steel joist.
- Stabilize the bottom chords of steel joists 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.
- During placement of loads the employer placing the load on the steel joist shall ensure that the load is properly distributed.
- When installing joist please refer to table A and B for erecting short and long span joist.

SYSTEM – ENGINEERED METAL BUILDINGS

- Assure structural column shall be anchored by a minimum of 4 bolts.
- Assure rigid frames shall have at least 50% of their bolts installed.
- Do not place construction loads on any structural steel framework unless it is safely bolted.

FALLING OBJECT PROTECTION

- Assure all materials, equipment and tools are secured.
- Assure that the controlling contractor has barred all other construction processes from occurring when hazards may be present overhead, unless overhead protection has been provided.

FALL PROTECTION

- Protect employees from fall hazards in steel erection activities when they are exposed to fall hazards of 15 feet or more by means of guardrails, safety net systems, personal fall arrest systems, positioning device systems or fall restraints systems.
- Connectors shall be protected from fall hazards at heights of 30 feet or two stories above lower level, whichever is less.
- Controlled Decking Zone (CDZ) can be established in areas of the structure over 15 feet and up to 30 feet above lower level where metal decking is initially installed.

TRAINING

- Training must address the following, the recognition and identification of fall hazards. The use and operation of fall protection systems, guardrails, personal fall protection equipment.
- Assure the proper level of additional training is provided for CDZ activity and it is specific to the site where it is being used.

Stairways & Ladders

Purpose
It is this company's purpose in issuing these procedures to further ensure a safe workplace based on the following formal, written procedures for ladder and stairway safety.

These procedures will be reviewed and updated as needed to comply with new OSHA regulations, new best practices in ladders and stairways, and as business practices demand.

Application
This general stairways and ladders plan applies to:

- Requirements for providing ladders and stairways.
- Stairway and ladder use.
- Competent person duties.
- Training requirements.

Note: When ladders are used in conjunction with scaffolds, our safety plan for scaffolds will apply.

General procedures for stairways and ladders
This section specifies where stairways and ladders will be provided so our employees will have safe access between working levels.

The following general procedures apply to all stairway and ladder operations for JDL Warm Construction These procedures are for all JDL Warm Construction worksites.

We provide a stairway or ladder at all places where our employees access different levels of work where the difference in levels is 19 inches or more and no ramp, runway, sloped embankment, or personnel hoist is provided.

Our employees will not use any spiral stairways that will not eventually be a permanent part of the structure. Spiral stairs have an inherent hazard in that the tread depth is not uniform across the whole width of the tread. This makes for hazardous footing, and could lead to injuries due to slipping or missing a tread completely.

When a ladder provides the only means of access for 25 or more employees, or serves simultaneous two-way traffic, either the ladder will be double-cleated or two or more separate ladders will be provided.

Free passage through personnel points of access to stairways and ladders is critical to the safety of our workers. Therefore:

- When we have one point of access between levels, the access-way: (1) will be kept clear for employee passage, or (2) a second point of access will be provided. An example would be erecting a scaffold in a stairway to do finishing work: such a scaffold would block the exit. Therefore, another means of access, such as a ladder, would be provided.
- When a building or structure has two or more points of access between levels, at least one point of access must be kept clear to permit free employee passage.

We will provide and install all required stairway and ladder fall protection systems, and comply with all other pertinent requirements of the stairways and ladders section (Subpart X) of the OSHA regulations, before our employees begin the work that necessitates these systems.

Stairway procedures
This section specifies the requirements for all stairways used by this company.

General

- Stairs that will not be a permanent part of our project will have a landing at least 30 inches long (in direction of travel) and at least 22 inches wide every 12 feet or less of vertical rise.
- Stairs will always be installed between 30 and 50 degrees from the horizontal.
- Riser height and tread depth will be uniform, within ¼", for each night of stairs. This includes any foundation structure that serves as a tread of the stairway.
- We will provide a platform wherever a door or gate opens onto a stairway. The swing of the door or gate will not reduce the effective width of the platform to less than 20 inches.
- When we use metal pan landings and metal pan treads they will be secured in place before filling.
- All parts of our stairways will be free of hazardous projections, such as protruding nails.
- Slippery conditions on stairs will be eliminated before they are used to reach other levels.

Temporary service (treads and landings used on stairways)

- Except during construction, foot traffic is prohibited on stairways with pan stairs that have not received their permanent fillings unless they have been temporarily fitted with wood or other solid material up to the top edge of each pan.
- Temporary treads and landings will be replaced when they are worn below the level of the top edge of the pan.
- Except during construction, and where permanent treads and landings are to be installed at a later date, skeleton metal stairs will be provided with temporary treads and landings prior to any foot traffic.
- Temporary treads and landings will be long enough to cover the entire tread and/or landing area.
- Temporary treads will be made of wood or other solid material, and will be the full width and depth of the stair. Stair pans will be filled in completely.

Stairrails and handrails
The following OSHA rules set forth this company's requirements for stairrails and handrails.

- Stairways having four or more risers or rising more than 30 inches, whichever is less must be equipped with:
  - One stairrail system along each unprotected side or edge.
  - At least one handrail.

On our stairways, the top of the stairrail doubles as the required handrail. Therefore, the height of the top edge will be between 36 and 37 inches from the top of the stairrail to the tread surface. This is measured in line with the face of the riser at the forward edge of the tread.

Winding and spiral stairways will be equipped with a handrail offset to prevent our employees from walking on those portions of the stairways where the treads are less than six inches wide.

The height of our stairrails will be as follows:

- Stairrails will not be less than 36 inches from the top of the stairrail to the surface of the tread. This measurement is taken in line with the face of the riser at the forward edge of the tread.
- We will place midrails, screens, mesh, intermediate vertical members (such as balusters), or equivalent structural members between the stairway steps and the top of the stairrail, with the following additional requirements:

- Midrails will be located midway between the top of the stairrail and the steps.
- Screens or mesh will fill the entire opening between top rails and stairway steps.
- When intermediate vertical members, such as balusters, are used between posts, they will not be more than 19 inches apart.
- Other arrangements of structural members will allow no opening in the system more than 19 inches wide.

- Handrails and the top rails of stairrails will be capable of withstanding, without failure, a force of at least 200 pounds applied within two inches of the top surface, in any downward or outward direction, and at any point along the top edge.
  - Failure means load refusal, breakage, or separation of component parts.
  - Load refusal is the point where the ultimate strength is exceeded.

- The height of all handrails, and when stairrails double as handrails, the top of the stairrail will be between 30 and 37 inches as measured from the top of the handrail to the surface of the tread in line with the face of the riser at the forward edge of the tread.
- All stairrail systems and handrails will be surfaced so as to prevent: (1) an employee's clothes from being snagged, causing the employee to trip, and (2) to prevent employee injuries from contact with splintered rails.
- Handrails will provide an adequate handhold for any employee grasping them to avoid falling.
- The ends of stairrails and handrails will be constructed so as not to be a projection hazard.
- Handrails that will not be a permanent part of the structure being built will be spaced a minimum of three inches away from walls, stairrails, and other objects.
- Unprotected sides and edges of stairway landings will have a guardrail system that complies with 1926, Subpart M-Fall protection.

Ladder procedures
The following requirements apply to all (including job-made) ladders used by employees of this company.

General
This section sets forth the general requirements for constructing and equipping ladders.

- **Self-supporting and non self-supporting ladders** will be capable of supporting the following minimum loads without failure:
  - At least four times the maximum intended load applied or transmitted to the ladder.
  - Except that extra-heavy-duty self-supporting portable metal or reinforced plastic ladders (Type 1A), are required to satisfy a strength factor requirement of 3.3.

- **Fixed ladders** will be capable of supporting the following minimum loads without failure:
  - At least two loads of 260 pounds each, concentrated between any two consecutive points of attachment, plus other anticipated loads such as those caused by ice buildup, winds, rigging, and impact loads resulting from the use of ladder safety devices.
  - Each step or rung-a single concentrated load of a least 250 pounds, applied in the middle of its span.
- Ladder rungs, cleats, and steps will be parallel, level, and uniformly spaced when the ladder is in position for use.
- The following three paragraphs set rung spacing requirements for company ladders. Measurement is taken between centerlines of the rungs, cleats and steps. The rungs, cleats, and steps of-

- Our **portable ladders** (except step stools and wood extension trestle ladders) and fixed ladders (including individual-rung/step ladders) will be spaced not less than 10 nor more than 14 inches apart.
- Our **step stools** will be not less than 8 nor more than 12 inches apart.
- The base section of **extension trestle ladders** will be not less than 8 nor more than 18 inches apart, as measured between center lines of the rungs, cleats, and steps. The rung spacing on the extension section will be not less than 6 nor more than 12 inches.

- The minimum rung/step length (clear distance between side rails) for portable and fixed ladders will be as follows:
  - For fixed ladders and individual-rung/step ladders-16 inches.
  - For portable ladders-111/2 inches.

- Individual-rung/step ladders will be shaped such that employees' feet cannot slide off the rung ends.
- The rungs and steps of our fixed metal ladders (manufactured after March 15, 1991), and portable metal ladders will be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize slipping.
- This company prohibits the tying together of ladder sections to make a longer ladder, unless the sections are designed for such use.
- All stepladders will have metal spreaders or locking devices to keep them in an open position when being used.
- Proper splices are important on all ladders. Therefore, any spliced side rails must be equivalent in strength to a side rail of the same length made of one piece of the same material.
- Except when portable ladders are used to gain access to fixed ladders (such as on utility towers, billboards, and other structures where the bottom of the fixed ladder is elevated to limit access), two or more separate ladders used to reach an elevated work area must be offset with a platform or landing between the ladders.
  When the above provision is used in our company, we will follow the requirements of 29 CFR 1926, Subpart M, to have guardrail systems with toeboards for falling object and overhead protection, on the platform or landing.
- All ladder components will be surfaced so as to prevent injury to our employees from punctures or lacerations, and to prevent snagging of clothing.
- To prohibit covering or painting over any splits or cracks in any wood ladder component that might cause a defect to be undetected by a ladder user, wood ladders will not be coated with any opaque covering, except as necessary for identification or warning labels. Identification or warning labels will be placed on one face only of a side rail.
- For safe foothold purposes, a minimum perpendicular clearance of seven inches (four and one-half inches for elevator pit ladders) will be maintained between a fixed ladder's rungs, cleats, or steps, and any obstruction behind it.
- A minimum perpendicular clearance of 30 inches will be held between a fixed ladder and any obstructions on the climbing side.
  When an unavoidable obstruction is encountered, the minimum perpendicular clearance will be reduced to 24 inches provided that a deflection device is installed to guide our employees around the obstruction.
- Through fixed ladders at their point of access/egress will have a step-across distance of not less than seven inches nor more than 12 inches as measured from the centerline of the steps or rungs to the nearest edge of the landing area. If the normal step-across distance exceeds 12 inches, a landing platform will be provided to reduce the distance to the specified limit.

- Fixed ladders that do not have cages or wells will have a minimum of 15 inches of side clearance (from the ladder centerline to the nearest permanent object).
- Fixed ladders will be provided with cages, wells, ladder safety devices, or self-retracting lifelines where the length of climb is less than 24 feet but the top of the ladder is more than 24 feet above lower levels.
- Where the total length of a climb equals or exceeds 24 feet, fixed ladders will be equipped with either ladder safety devices, self-retracting lifelines together with rest platforms at intervals not to exceed 150 feet, or a cage or well with ladder sections offset and landing platforms provided at maximum intervals of 50 feet.
- Cages for fixed ladders will conform to the 'requirements of §1926.1053(a)(20).
- Wells for fixed ladders will conform to the requirements of §1926.1053(a)(21).
- Ladder safety devices, and related support systems, for fixed ladders will conform to the requirements of §1926.1053(a)(22).
- The mounting of ladder safety devices for fixed ladders will conform to the requirements of §1926.1053(a)(23).
- The side rails of through or side-step fixed ladders will extend 42 inches above the top of the access level or landing platform served by the ladder.
  For a parapet ladder, the access level will be the roof if the parapet is cut to permit passage through the parapet; if the parapet is continuous, the access level will be the top of the parapet.
- For through-fixed-ladder extensions, there will be no steps or rungs. The extension will be flared so the side rails provide between 24 and 30 inches of clearance when ladder safety devices are not provided, and that the extension be flared no more than 36 inches when ladder safety devices are provided.
- For side-step fixed ladder extensions, the side rails and the steps or rungs will be continuous.
- Individual-rung/step ladders, except those covered by manhole covers or hatches, will extend at least 42 inches above access levels or landing platforms or be equipped with either horizontal or vertical grab bars.

Ladder use

This section sets forth the requirements this company follows for safe ladder use by our employees. These rules apply to all ladders, including job-made ladders, except as otherwise indicated.

- When **portable ladders** are used for access to an upper landing surface, the ladder side rails will extend at least three feet above the upper landing surface to which the ladder is used to gain access. When a three-foot extension is not possible because of the ladder's length, it will be secured at the top to a rigid non-deflecting support. Our employees will be provided with a grasping device such as a grabrail to assist them in getting on and off ladders without the three-foot extension.
  In no case will the extension be such that ladder deflection under a load would, by itself, cause the ladder to slip off its support.
- Ladders will be maintained free of oil, grease, and other slipping hazards.
- Ladders will not be loaded beyond their maximum intended load, nor beyond the manufacturer's rated capacity.
- Ladders will only be used for the purpose for which they were designed.
- The following requirements will be met for the angles at which ladders will be positioned so they are stable when climbed.
  - Non-self-supporting ladders will be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately ¼ of the working length of the ladder (the distance along the ladder between the foot and the top support).
  - Wood job-made ladders with spliced side rails will be used at an angle such that the horizontal distance is one-eighth the working length of the ladder.

- Fixed ladders will be used at a pitch no greater than 90 degrees from the horizontal, as measured to the backside of the ladder.

- Ladders will be used only on stable and level surfaces unless secured to prevent accidental movement.
- Ladders will not be used on slippery surfaces unless secured or provided with slip-resistant feet.
- Slip-resistant feet will not be used as a substitute for care in placing, lashing, or holding a ladder that is used on slippery surfaces.
- Ladders placed in any location, such as passageways, doorways, or driveways, where they can be moved by workplace activity or traffic will be secured to prevent accidental movement. Otherwise, we will use a barricade to keep the activities or traffic away from the ladder.
- The area around the top and bottom of ladders will be kept clear.
- The top of a non-self-supporting ladder will be placed such that the two side rails are equally supported, or provided with a single support attachment.
- Ladders will not be moved, shifted, or extended while occupied.
- Ladders will have nonconductive siderails, if they are used where an employee or the ladder could contact exposed energized electrical equipment.
  - Exceptions will only be as provided in 1926.951(c)(1).

- The top or top step of a stepladder will not be used as a step.
- Cross-bracing on the rear support section of stepladders will not be used for climbing unless it is designed and recommended for such use by the manufacturer by providing steps for climbing on both the front and rear.
- Portable ladders with structural defects, such as, but not limited to: broken or missing rungs, cleats, steps, broken or split rails, corroded components, or other faulty or defective components, will be immediately pulled from service and marked or tagged with "Do Not Use" or similar language. They will not be used until repaired.
- Fixed ladders with structural defects, such as, but not limited to: broken or missing rungs, cleats, steps, broken or split rails, or corroded components, will be withdrawn from service until repaired. The requirement to withdraw a defective ladder from service is satisfied if the ladder is either:
  - Immediately tagged with "Do Not Use" or similar language.
  - Marked in a manner that readily identifies it as defective.
  - Or blocked (such as with a plywood attachment that spans several rungs).

- Ladder repairs will restore the ladder to a condition meeting its original design criteria, before the ladder is returned to use.
- Single-rail ladders will not be used.
- When going up or down a ladder our employees will:
  - Face the ladder.
  - Use at least one hand to grasp the ladder.
  - Not carry any object or load that could cause them to lose balance and fall.

Appendix A to Subpart X-Ladders

This appendix serves as a non-mandatory guideline to assist employers in complying with the ladder loading and strength requirements of §1926.1053(a)(1). A ladder designed and built in accordance with the applicable national consensus standards, as set forth below, will be considered to meet the requirements of §1926.1053(a)(1):

- Manufactured portable wood ladders: American National Standards Institute (ANSI) A14.1-1982 - American National Standard for Ladders - Portable Wood - Safety Requirements.

- Manufactured portable metal ladders: ANSI A14.2-1982 - American National Standard for Ladders - Portable Metal - Safety Requirements.
- Manufactured fixed ladders: ANSI A14.3-1984 - American National Standard for Ladders - Fixed - Safety Requirements.
- Job-made ladders: ANSI A14.4-1979 Safety Requirements for Job-Made Ladders.
- Plastic ladders: ANSI A14.5-1982 - American National Standard for Ladders - Portable Reinforced Plastic - Safety Requirements.

Duties of Our Competent Person
Ladders will be periodically inspected by our competent person for visible defects and after any occurrence that could affect their safe use.

This company will ensure that each employee who uses ladders or stairways is trained by a competent person in the areas listed in the training requirements (§1926.1060), as applicable.

Training Requirements
This company understands that it is necessary to, first and foremost, follow the training requirements of §1926.21(b)(2), regarding the hazards addressed in subpart X. That is, to instruct employees in the recognition and avoidance of unsafe conditions and the regulations applicable to their work environment to control or eliminate any hazards or other exposure to illness or injury.

Second of all, we are required to provide a training program for each employee who uses ladders or stairways, as necessary. The training is intended to instruct each employee to recognize and minimize the hazards associated with ladder or stairway use.

- We will ensure that each employee is trained by a competent person in the following areas, as applicable:
  - The nature of fall hazards at the employee's worksite.
  - The correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used.
  - The proper construction, use, placement, and care in handling of all stairways and ladders.
  - The maximum intended load-carrying capacities of ladders used.
  - The standards contained in 29 CFR 1926, Subpart X.

Retraining will be provided for each employee as necessary so that the employee maintains the understanding and knowledge acquired through compliance with 1926.1060.

Asbestos

NOTE: All regulation references are to 29 CFR 1926.1101 unless otherwise stated.

Purpose

The purpose of this program is to inform interested persons, including employees, that this company is complying with OSHA's asbestos standard, Title 29 Code of Federal Regulations 1926.1101 by ensuring that:

- No employee is exposed to an airborne concentration of asbestos in excess of 0.1 f/cc (fibers per cubic centimeter of air) as an eight-hour time-weighted average (TWA).
- No employee is exposed to an airborne concentration of asbestos in excess of 1.0 f/cc (excursion limit) as averaged over a sampling period of 30 minutes.
- We assess all asbestos operations for their potential to generate airborne fibers.
- Our designated competent person conducts an initial exposure assessment immediately before or at the initiation of an operation to document expected exposures, and that the assessment is completed in time to comply with requirements triggered by exposure data or the lack of a "negative exposure assessment."
- We perform periodic monitoring and additional monitoring when required.
- When required, we implement a medical surveillance program for all employees when for a combined total of 30 or more days per year engage in Class I, II, or III work or are exposed at or above the PEL, or when employees are required to wear negative-pressure respirators.
- We maintain objective data, monitoring, medical surveillance, training, and building owner notification records when required and for the time periods indicated in the asbestos rule.
- Our asbestos competent person is qualified, authorized, and has the proper training to ensure worker safety and health as required by 29 CFR1926.20.
- Our respirator program is in place and in accordance with 29 CFR 1910.134(b) through (d) (except (d)(1)(iii)), and (f) through (m).
- Our Class I, II, and III asbestos work, and all other operations where airborne concentrations of asbestos exceed or there is a possibility, they may exceed a PEL, are conducted within regulated areas. Our regulated areas comply with 29 1926.1101(e)(2) - (5).
- We understand that the communication of asbestos hazards is vital to prevent further overexposure and that we have specific duties under the asbestos rule to communicate those hazards through written notifications, signs, labels and employee information and training.
- Our specific methods of compliance with the PEL and STEL are based on the regulation. We understand there are compliance methods that are required for most jobs, required for all jobs when exposure exceeds the PEL, and methods that are prohibited on all jobs. We also understand that most, but not all, asbestos jobs fall into one of the Class I - IV categories. For example, the installation of new asbestos-containing products does not carry a class designation.
- On multi-employer worksites, we will: (1) inform other employers on the site of the nature of our work, (2) relay information of the existence of regulated areas, and take correct measures to ensure employees of other employers are not exposed to asbestos.

This program applies to all construction work where one of our employees may be occupationally exposed to asbestos. All work related to construction, alteration, or repair, including painting and decorating, is included. The safety and health manager, is the program coordinator/manager and is responsible for its implementation. Copies of the written program may be obtained at JDL Warm Construction main office.

Asbestos Recognition
Although asbestos cannot be identified by visual observations it is commonly found in automotive brake and clutch linings, floor and ceiling tiles, plastics, asbestos-cement pipes and sheets, paper products, textile products such as curtains and gloves, and insulation for boilers and pipes. It is also present in sprayed-on materials located on beams, in crawlspaces, and between walls.

Employees will abide by all warning signs and labels and will not disturb the asbestos containing material.

Health Hazards
Exposure to asbestos can cause disabling respiratory diseases and several types of cancer. The main routes of exposure are inhalation and ingestion. Asbestos fibers cannot penetrate the skin. Asbestos has been shown to cause asbestosis, lung cancer, mesothelioma, and cancer of the stomach and colon. The majority of people who died from asbestos exposure were exposed to very high concentrations of asbestos fibers at work and had little or no protection. These employees worked with asbestos regularly and for long periods of time. Examples include workers who held jobs in industries such as shipbuilding, mining, milling, and fabricating. Many of these workers were also smokers.

The most dangerous exposure to asbestos is from inhaling airborne fibers. The body's defenses can trap and expel many of the particles. However, as the level of asbestos fibers increase many fibers bypass these defenses and become embedded in the lungs. The fibers are not broken down by the body and can remain in body tissue indefinitely.

Exposure assessment and monitoring
Initial Exposure Assessment
We understand we are required to evaluate all asbestos operations (some exceptions exist only when we are involved in Class IV work) for the purpose of predicting whether exposure levels during the planned asbestos work can be expected to exceed the PELs, and thus whether additional monitoring, and other precautions are required.

Our competent person (see section below) will conduct all initial exposure assessments.
The initial exposure assessment requirement can be satisfied by two methods:

- A negative exposure assessment demonstrating that the activity involving the asbestos material is unlikely under all foreseeable conditions to result in concentration above the PEL (1926.1101(f)(2)(iii)).
- Initial exposure monitoring determined from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee conducted pursuant to .1101(f)(1)(iii).

Employee Notification
We notify employees in writing, personally or by posting at a central location, the monitoring results as soon as possible following receipt of those results.

Medical Surveillance
We institute a medical surveillance program for all employees who for a combined total of 30 or more days per year are engaged in Class I, II, and III work or are exposed at or above the PEL.

When our employees are required by the standard to wear a negative pressure respirator, we make sure those employees are physically able to perform the work and use the equipment as determined by a physician.

We ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and are provided at no cost to the employee and at a reasonable time and place.
Our medical surveillance program includes the following requirements:

1. Medical examinations and consultations
We make available medical examinations and consultations to each employee as required by and in accordance with 29 CFR 1926.1101(m):

- Prior to assignment of the employee to an area where negative-pressure respirators are worn.
- When our employee is assigned to an area where exposure to asbestos may be at or above the PEL for 30 or more days per year, or engage in Class I, II, or III work for a combined total of 30 or more days per year, a medical examination must be given within 10 working days following the thirtieth day of exposure; and at least annually thereafter.

2. Information provided to the physician

- We provide the following information to the examining physician:
- A copy of the asbestos standard including Appendices D, E, and I.
- A description of affected employees' duties as they relate to their exposure.
- The employees' representative exposure level or anticipated exposure level.
- A description of any personal protective and respiratory equipment used or to be used.
- Information from previous medical examinations that is not otherwise available to the examining physician.

3. Physician's written opinion
The written opinion we receive from the examining physician containing the results of the medical examination includes:

- Whether our employee has any detected medical conditions that would place him or her at an increased risk of material health impairment from exposure to asbestos.
- Recommended limitations on the employee or on the use of personal protective equipment such as respirators.
- A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.
- A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure.
- We instruct the physician not to reveal in the written opinion given to the employer specific findings or diagnoses unrelated to occupational exposure to asbestos.
- We provide a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

Recordkeeping
Objective Data
Where we rely on objective data that demonstrates that products made from or containing asbestos or the activity involving such products or material are not capable of releasing fibers of asbestos in concentrations at or above the permissible exposure limit and/or excursion limit under the expected conditions of processing, use, or handling to satisfy the requirements of 29 CFR 1926.1101(f), we establish and maintain an accurate record of objective data reasonably relied upon in support of the exemption. The record includes at least the following information:

- The product qualifying for exemption.
- The source of the objective data.
- The testing protocol, results of testing, and/or analysis of the material for the release of asbestos.
- A description of the operation exempted and how the data support the exemption.

- Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

We maintain this record for the duration of the employer's reliance upon such objective data.

Exposure Measurements

We keep an accurate record of all measurements taken to monitor employee exposure to asbestos as prescribed at 29 CFR 1926.1101(f).

Note: We may utilize the services of competent organizations such as industry trade associations and employee associations to maintain the records required by this section.

This record includes at least the following information:

- The date of measurement.
- The operation involving exposure to asbestos that is being monitored.
- Sampling and analytical methods used and evidence of their accuracy.
- Number, duration, and results of samples taken.
- Type of protective devices worn, if any.
- Name, social security number, and exposure of the employees whose exposures are represented.

We will maintain this record for at least thirty (30) years, in accordance with 29 CFR 1910.1020.

Medical Surveillance

We have established and do maintain an accurate record for each employee subject to medical surveillance under 29 CFR 1926.1101(m), in accordance with 29 CFR 1910.1020.

- The record includes at least the following information:
- The name and social security number of the employee.
- A copy of the employee's medical examination results, including the medical history, questionnaire responses, results of any tests, and physician's recommendations.
- Physician's written opinions.
- Any employee medical complaints related to exposure to asbestos.
- A copy of the information provided to the physician as required by paragraph (m) of this section.

We make sure that this record is maintained for the duration of employment plus thirty (30) years, in accordance with 29 CFR 1910.1020.

Training Records

We keep all employee training records for one (1) year beyond the last date of employment by this company.

Data to Rebut PACM

Where the building owner and we have relied on data to demonstrate that PACM is not asbestos-containing, we maintain such data for as long as they are relied upon to rebut the presumption.

Records of Required Notifications

Where the building owner has communicated and received information concerning the identification, location and quantity of ACM and PACM, we ensure that written records of such notifications and their content are maintained by the building owner for the duration of ownership and then transferred to successive owners of such buildings/facilities.

Availability

We will, upon written request, make all records required to be maintained by this section available to the Assistant Secretary and the Director for examination and copying.

We will, upon request, make any exposure records required by paragraphs (f) and (n) of the asbestos rule available for examination and copying to affected employees, former employees, designated representatives, and the Assistant Secretary, in accordance with 29 CFR 1910.1020(a) through (e) and (g) through (i).
We will, upon request, make employee medical records required by paragraphs (m) and (n) of this section available for examination and copying to the subject employee, anyone having the specific written consent of the subject employee, and the Assistant Secretary, in accordance with 29 CFR 1910.1020.

Transfer of Records
We comply with the requirements concerning transfer of records set forth in 29 CFR 1910.1020 (h). If we ever cease to do business and there is no successor employer to receive and retain the records for the prescribed period, we shall notify the Director at least 90 days prior to disposal and, upon request, transmit them to the Director.

Competent Person Requirements
At the construction worksite covered by this plan, we have designated the safety and health manager as our competent person, having the qualifications and authorities for ensuring worker safety and health required by Subpart C, General Safety and Health Provisions for Construction (29 CFR 1926.20 through 1926.32).
Required Inspections by the Competent Person
Section 1926.20(b)(2) requires frequent and regular inspections of job sites, materials, and equipment to be made by competent persons. We recognize and follow this requirement. We log these inspections and maintain the logs as records.

Additional Inspections
In addition, our competent person makes frequent and regular inspections of the job sites to perform or supervise the duties listed below.

For Class I jobs, on-site inspections are made at least once during each work shift, and at any time an employee requests one.

For Class II, III, and IV jobs, on-site inspections are made at intervals sufficient to assess whether conditions have changed, and at any reasonable time an employee requests.

On all worksites where our employees are engaged in Class I or II asbestos work, our competent person will perform or supervise the following duties, as applicable:

- Set up the regulated area, enclosure, or other containment.
- Ensure (by on-site inspection) the integrity of the enclosure or containment.
- Set up procedures to control entry to and exit from the enclosure and/or area.
- Supervise all employee exposure monitoring required by this section and ensure that it is conducted as required by paragraph (f) of this section.
- Ensure that employees working within the enclosure and/or using glove bags wear respirators and protective clothing as required by paragraphs (h) and (i) of this section.
- Ensure through on-site supervision, that employees set up, use, and remove engineering controls, use work practices and personal protective equipment in compliance with all requirements.
- Ensure that employees use the hygiene facilities and observe the decontamination procedures specified in 29 CFR 1926.1101(j).
- Ensure that through on-site inspection, engineering controls are functioning properly and employees are using proper work practices.
- Ensure that notification requirements in paragraph 29 CFR 1926.1101(k) of this section are met.

Communication of Hazards
We understand the importance of communicating asbestos hazard information at this job site. Our plan to communicate those hazards follows the requirements of 29 CFR 1926.1101(k) and contains information and procedures for the following elements:

- Duties of building and facility owners.
- Duties of employers whose employees perform work subject to this standard in or adjacent to areas containing ACM and PACM.
- Criteria to rebut the designation of installed material as PACM.
- Warning signs.
- Labels.
- Employee information and training.
- Access to training materials.

Methods of Compliance
Our methods of compliance set operation-specific and exposure-triggered work practices for conducting asbestos work. Each job is specific and the methods of compliance will include the following required and optional procedures.

The following basic engineering controls and work practices are a part of all asbestos operations at this jobsite regardless of the levels of exposure (except as provided in 29 CFR 1926.1101(g)(8)(ii)):

- Vacuum cleaners equipped with HEPA filters to collect all debris and dust containing ACM or PACM.
- Wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where we demonstrate that the use of wet methods is infeasible due to for example, the creation of electrical hazards, equipment malfunction, and, in roofing.
- Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers.
- In addition to the requirements noted above for all asbestos operations we use the following control methods to achieve compliance with the TWA permissible exposure limit and excursion (STEL) limit.
- Local exhaust ventilation equipped with HEPA filter dust collection systems.
- Enclosure or isolation of processes producing asbestos dust.
- Ventilation of the regulated area to move contaminated air away from the breathing zone of employees and toward a filtration or collection device equipped with a HEPA filter.
- Use of other work practices and engineering controls that the Assistant Secretary can show to be feasible.
- Wherever the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the permissible exposure limit and/or excursion limit we will use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection.

Prohibitions
We never use the following work practices and engineering controls for work related to asbestos or for work which disturbs ACM or PACM, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

- High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.

- Compressed air to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.
- Dry sweeping, shoveling, or other dry clean-up of dust and debris containing ACM and PACM.
- Employee rotation as a means of reducing employee exposure to asbestos.

Class I Requirements
In addition to the required provisions of paragraphs (g)(1) and (2) of 29 CFR 1926.1101, we implement all other required engineering controls and work practices as required by 29 CFR 1926.1101(g)(4)-Class I Requirements, (5)-Specific control methods for Class I work, and (6)-Alternative control methods for Class I work.

All Class I work, including the installation and operation of the control system is supervised by our competent person.

Work Practices and Engineering Controls for Class II work
All Class II work, including the installation and operation of the control system is supervised by our competent person. For all indoor Class II jobs, where we have not produced a negative exposure assessment, or where during the job changed conditions indicate there may be exposure above the PEL, or where we do not remove the ACM in a substantially intact state, we will use one of the methods in 29 CFR 1926.1101(g)(7)(ii)(A) - (C), to ensure that airborne asbestos does not migrate from the regulated area. We perform all Class II asbestos work using the work practices and requirements in 29 CFR 1926.1101(g)(1)(i) - (iii).

Additional Controls for Class II Work
When performing the following types of Class II asbestos work, we comply with the work practices and controls designated for each type. We do understand that where more than one control method may be used, we may choose one or a combination of designated control methods. Class II work also may be performed using a method allowed for Class I work, except that glove bags and glove boxes are allowed if they fully enclose the Class II material to be removed. We ensure that the work practices as specified below are followed:

- For removing vinyl and asphalt flooring materials containing ACM or for which in buildings constructed no later than 1980 we have not verified the absence of ACM in accordance with 1926.1101(g)(8)(i), employees comply with the work practices in 1926.1101(g)(8)(i)(A)-(I), and those employees are trained in these practices in accordance with 1926.1101(k)(9).
- For removing roofing material which contains ACM under 1926.1101(g)(8)(ii)(A)-(H).
- When removing cementitious asbestos-containing siding and shingles or transite panels containing ACM on building exteriors (other than roofs, where 1926.1101(g)(8)(ii) applies) under 1926.1101(g)(8)(iii)(A)-(D).
- When removing gaskets containing ACM under 1926.1101(g)(8)(iv)(A)-(D).
- Any other Class II removal of asbestos containing material for which specific controls have not been listed in 29 CFR 1926.1101(g)(8)(iv)(A)-(D) under 1926.1101(g)(8)(v)(A)-(D).

Alternative Work Practices and Controls
Instead of the Class II work practices and controls listed in 1926.1101(g)(8)(i)-(v), we may use different or modified engineering and work practice controls. In those cases, we will follow the provisions found in 1926.1101(g)(8)(vi)(A) & (B).

Work Practices and Engineering Controls for Class III Asbestos Work
We conduct Class III asbestos work using engineering and work practice controls which minimize the exposure to our employees performing the work and to bystander employees. This written plan reflects the procedures in 1926.1101(g)(9)(i)-(v) including:

- Wet methods.
- When feasible, local exhaust ventilation.
- Where the disturbance involves drilling, cutting, abrading, sanding, chipping, breaking, or sawing of thermal system insulation or surfacing material we will use impermeable drop cloths, and will isolate the operation using mini-enclosures or glove bag systems in compliance with 29 CFR 1926.1101(g)(5) or another isolation method.
- Where we do not have a "negative exposure assessment," or where monitoring results show the PEL has been exceeded, we will contain the area using impermeable drop cloths and plastic barriers or their equivalent, or shall isolate the operation using a control system in compliance with 29 CFR 1926.1101(g)(5).
- Our employees performing Class III jobs, involving the disturbance of thermal system insulation or surfacing material, or where we do not produce a "negative exposure assessment" or where monitoring results show a PEL has been exceeded, wear respirators selected, used and fitted in accordance with 29 CFR 1926.1101(h) and our Respiratory Protection Program

Class IV Asbestos Work
Employees trained in our asbestos awareness training program (29 CFR 1926.1101(k)(9)) will be allowed to work Class IV asbestos jobs. In addition, all Class IV jobs will conform to the requirements of 29 CFR 1926.1101(g)(1), mandating wet methods, HEPA vacuums, and prompt clean up of debris containing ACM or PACM. Our employees cleaning up debris and waste in a regulated area where respirators are required will wear respirators selected, used and fitted in accordance with 29 CFR 1926.1101(h) and our Respiratory Protection Program. When we have employees who clean up waste and debris in, or we are in control of areas where friable thermal system insulation or surfacing material is accessible, we will assume that such waste and debris contains asbestos.

Respiratory Protection
We provide respirators and ensure they are used in the following circumstances:

- During all Class I asbestos jobs.
- During all Class II work when the ACM is not removed in a substantially intact state.
- During all Class II and III work not performed using wet methods, except for removal of ACM from sloped roofs when a negative exposure assessment has been made and the ACM is removed in an intact state.
- During all Class II and III asbestos jobs where we do not conduct a negative-exposure assessment.
- During all Class III jobs where TSI or surfacing ACM or PACM is being disturbed.
- During all Class IV work performed within regulated areas where employees performing other work are required to wear respirators.
- During all work covered by this section where employees are exposed above the TWA or excursion limit.
- In emergencies.

Respirator Selection
Where respirators are used, we select and provide, at no cost to out employees, the appropriate respirator. We ensure that the employee uses the respirator provided. We provide a tight fitting powered, air-purifying respirator in lieu of any negative-pressure respirator specified in Table 1 whenever: (a) an employee chooses to use this type of respirator, and (b) this respirator will provide adequate protection

to the employee. In addition, we provide a half-mask air purifying respirator, other than a disposable respirator, equipped with high efficiency filters whenever our employees perform:

- Class II and III asbestos jobs where we do not conduct a negative exposure assessment.
- Class III jobs where TSI or surfacing ACM or PACM is being disturbed.
- Selection criteria when employees are in regulated area where Class I work is being performed, a negative exposure assessment of the area has not been produced, and the exposure assessment of the area indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average, we provide the employees with one of the following respirators:
  (A) A tight-fitting powered air-purifying respirator equipped with high efficiency filters;
  (B) A full facepiece supplied-air respirator operated in the pressure demand mode equipped with HEPA egress cartridges; or
  (C) A full facepiece supplied-air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus. A full facepiece supplied-air respirator operated in the pressure-demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus must be provided under such conditions when the exposure assessment indicates exposure levels above 1 f/cc as an 8-hour time weighted average.

Respirator Program
When we are required to use respiratory protection, the program we institute is in accordance with 29 CFR 1910.134(b) through (d) (except (d)(1)(iii)), and (f) through (m).

Note: See respiratory protection requirements under 29 CFR 1910.134(b) through (d) (except (d)(1)(iii)), and (f) through (m). Other components of our respirator program include prohibiting the assignment of asbestos work that requires respirator use if, based on their most recent medical examination, the examining physician determines that the employee will be unable to function normally while using a respirator, or that the safety or health of the employee or other employees will be impaired by the employee's respirator use.

Those employees will be assigned to another job or given the opportunity to transfer to a different position, the duties of which they are able to perform with the same employer, in the same geographical area, and with the same seniority, status, and rate of pay and other job benefits they had just prior to such transfer, if such a different position is available.

Respirator Fit Testing
We make sure that the respirator issued to each employee exhibits the least possible facepiece leakage and that the respirator is fitted properly. We perform either quantitative or qualitative face fit tests:

- Before any of our employees are required to use any respirator with a negative or positive pressure tight-fitting facepiece;
- Whenever a different respirator facepiece (size, style, model, or make) is used;
- At least annually;
- Whenever the employee reports, or our company, the physician or other licensed health care professional (PLHCP), supervisor, or Program Administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight; and
- When the employee, subsequently after passing a qualitative or quantitative fit test, notifies the company, Program Administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable. That employee will be retested with a different respirator facepiece.
- See the Respiratory Protection Program for Details.

Protective Clothing
We provide and require the use of protective clothing, such as coveralls or similar whole-body clothing, head coverings, gloves, and foot coverings for:

- Any employee exposed to airborne concentrations of asbestos that exceed the TWA and/or STEL.
- This site when a required negative exposure assessment is not produced.
- Any employee performing Class I operations which involve the removal of over 25 linear or 10 square feet of TSI or surfacing ACM and PACM.

Laundering
We ensure that laundering of contaminated clothing is done so as to prevent the release of airborne asbestos in excess of the TWA or STEL. When we give contaminated clothing to another person for laundering, we inform that person of the requirement in 29 CFR 1926.1101(i)(2)(i) to effectively prevent the release of airborne asbestos in excess of the TWA or STEL.

Contaminated Clothing
Contaminated clothing is transported in sealed impermeable bags, or other closed, impermeable containers, and be labeled in accordance with 29 CFR 1926.1101(k).

Inspection of Protective Clothing
Our competent person examines work suits worn by our employees at least once per work shift for rips or tears that may occur during performance of work. When rips or tears are detected while an employee is working, they will be immediately mended, or the work suit shall be immediately replaced.

Housekeeping
Vacuuming
When we select vacuuming methods, we always use HEPA filtered vacuuming equipment. The equipment is used and emptied in a manner that minimizes the reentry of asbestos into the worksite.
Waste Disposal

Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing will be collected and disposed of in sealed, labeled, impermeable bags or other closed, labeled, impermeable containers except in roofing operations. Our roofing operation waste disposal procedures follow the requirements of 29 CFR 1926.1101(g)(8)(ii).

Care of Asbestos-Containing Flooring Material
All vinyl and asphalt flooring material will be cared for in accordance with 29 CFR 1926.1101(g)(8)(l) unless the building/facility owner demonstrates, pursuant to 29 CFR 1926.1101(g)(8)(i)(I) the flooring does not contain asbestos.

Waste and debris and accompanying dust in an area containing accessible thermal system insulation or surfacing ACM/PACM or visibly deteriorated ACM:

- Is not dusted or swept dry, or vacuumed without using a HEPA filter.
- Is promptly cleaned up and disposed of in leak tight containers.

Training
Asbestos awareness training is required and will be provided for employees who work in areas that contain or may contain asbestos.

Training documentation will be maintained at the corporate office.

Respirable Crystalline Silica

Purpose

The purpose of this document is to establish and implement a written exposure control plan that identifies tasks involving silica exposure and methods used to protect employees. All departments, divisions, and personnel are required to implement the components of the plan to ensure compliance with the following applicable state and federal regulations. The following Occupational Safety and Health Administration (OSHA) standards are applicable for respirable crystalline silica.

- General Industry Standard 29 CFR 1910.1053
- Construction Standard 29 CFR 1926.1153

Silica is the second most common mineral on earth, found in the common form as "sand" and "rock". Silica is the compound formed from the elements silicon (Si) and oxygen (O) and has a molecular form of SiO_2. The three main forms or 'polymorphs' of silica are alpha quartz, cristobalite and tridymite. The polymer most abundant and most hazardous to human health is alpha quartz, and is commonly referred to as crystalline silica.

JDL Warm Construction is committed to providing a safe and healthy workplace to our employees, recognizing the right of workers to work in a safe and healthy work environment and ensuring that JDL Warm Construction's activities do not adversely affect the health and safety of any other persons.

This commitment includes ensuring every reasonable precaution is taken to protect our employees (and others) from the adverse health effects associated with exposure to silica.

Scope

The Silica Exposure Control Plan applies to all employees who are expected to be exposed to respirable crystalline silica as outlined in section 4; or through other means, which are determined by Safety Manager or their supervisor.

Health Hazards Associated with Silica Exposure

The health hazards of silica come from breathing in the dust. If crystalline silica becomes airborne through industrial activities, exposures to fine crystalline silica dust can lead to a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but the symptoms of the diseases may not appear for many years. Respirable silica dust is very small, and is not visible to the human eye.

A worker may develop any of three types of silicosis, depending on the concentration of silica dust and the duration of the exposure:

- Chronic Silicosis: Develops after 10 or more years of exposure to crystalline silica and relatively low concentrations.
- Accelerated Silicosis: Develops 5 to 10 years after initial exposure to crystalline silica at high concentrations.
- Acute Silicosis: Develops within weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica.

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, workers may experience:

- Shortness of Breath.
- Severe Cough.
- Weakness.

These symptoms can worsen over time and lead to death. Exposure to silica has also been linked to other diseases, including bronchitis, tuberculosis, and lung cancer.

Silica Exposures at JDL Warm Construction
Many of the activities performed on JDL Warm Construction Projects result in the creation/release of silica dust, thus exposing our employees. These activities include, but are not necessarily limited to:

Examples include:

- Sweeping
- Jack-hammering
- Saw-cutting
- Grinding
- Drilling (of concrete)
- Excavating and Truck Loading activities.

Due to the risk posed by respirable silica, it is critical that all personnel involved in activities that could potentially create silica dust take specific actions to ensure that, as much as practicable, a hazard is not created. In recognition of this, the following responsibilities have been established and must be adhered to:

Safety Committee is responsible for:

- Regularly evaluating new equipment and technologies that become available, as able/appropriate, purchasing the "best available" equipment/technologies. Equipment/technologies with dust suppression and/or capture technologies will generally be given preference over equipment/technologies that lack such.

- Implementing a suitable respirable silica exposure monitoring program, or otherwise ensuring representative exposure monitoring results are available. The purpose of the program will ensure that JDL Warm Construction has quantifiable silica exposure data available for all regularly occurring, as well as reasonably foreseeable, work activities.

- Ensuring project and/or task specific Exposure Control Plans (ECPs) are developed communicated and effectively implemented as appropriate.

- Ensuring that all employees (i.e., Managers, Supervisors and Workers) receive the necessary education and training related to this Policy, as well as project/task specific ECPs.

- Maintaining applicable records (i.e., exposure sampling, inspections, respirator fit tests, training records, etc.) in accordance with JDL Warm Construction's record retention procedures/practices.

Superintendents/Foreman are responsible for:

- Obtaining a copy of the project/task specific ECPs (and/or other similar such information), and ensuring such are made available at each work site.

- Ensuring that all the tools, equipment, PPE and materials (including water) necessary to implement the ECP is available (and in good working order) prior to allowing work activities to commence.

- Ensuring that all workers (under the supervisor's direction and control) have received the necessary education and training. As appropriate, each supervisor must ensure that workers are available to "demonstrate competency" for identified tasks.

- Ensuring that workers adhere to the project/task specific ECP, including PPE and personal hygiene (i.e., including be clean shaven where the respirator seals to the user's face) requirements.

- Coordinating work activities with the Owner/Prime Contractor as required, and/or otherwise implementing the controls necessary to protect others (i.e., erecting of barricades and signage) who could be adversely affected by JDL Warm Construction's acts (or omissions).

Employees (and subcontracted employees) are responsible for:

- Knowing the hazards of silica dust exposure.

- Using the assigned protective equipment in an effective and safe manner.

- Working in accordance with the project/task specific ECP.

- Reporting (immediately) to their supervisor, any hazards (i.e., unsafe conditions, unsafe acts, improperly operating equipment, etc.).

Exposure Limits/Considerations: The Occupational Health & Safety Regulation lists an occupational exposure limit (OEL) for respirable crystalline silica (including quartz) of 0.025 milligrams per cubic meter (mg/m^3). This is a concentration to which nearly all workers could be exposed for eight hours a day, five days a week, without adverse health effects. However, as a suspected carcinogen, crystalline silica is also an ALARA substance, and exposures must be reduced to levels **A**s **L**ow **A**s **R**easonably **A**chievable below the OEL.

Risk Identification: Silica is contained on many of the products used/encountered on JDL Warm Construction's projects and (silica) dust can be readily released through the various tasks performed by JDL Warm Construction.

The health hazards of silica come from breathing in the dust. In addition to identifying the specific activities/areas where personnel could be exposed to silica dust, the "amount" of exposure and "duration" of exposure must also be considered. With consideration to these three factors, activities performed by JDL Warm Construction (or that are otherwise occurring in proximity to JDL Warm Construction's activities) that expose our employees (as well as members of the public and other workers) to the dust include, but are not necessarily limited to:

- Surface preparation activities such as: (1) the use of Blow-Packs, (2) the use of Bobcats with "sweeper" attachments, (3) the use of Sweeper trucks and (4) hand sweeping.
- Jack-hammering (of both asphalt and concrete).
- Saw-cutting (of both asphalt and concrete).
- Drilling (of concrete).
- Granular Surface Preparation activities (i.e., grading and rolling), and
- Operation and use of milling equipment/machinery (i.e., milling and conveyance/discharge of milled materials on conveyor).

Risk Assessment: JDL Warm Construction will use a variety of methods to assist with the "assessment" of silica exposures. These methods will include, but may not necessarily be limited to:

- Reviewing data/reports available in the public domain (i.e. Information available through regulatory agencies and industry associations.

- Regularly consulting with the Safety Resources/Safety Managers from firms who perform similar work.

- Implementing a suitable respirable silica exposure monitoring program. This program will ensure that JDL Warm Construction has quantifiable silica exposure data available that is representative of all regularly occurring, as well as reasonably foreseeable work activities. Exposure monitoring will generally be conducted "in-house", although assistance (i.e., actual monitoring and/or interpretation of results) may be obtained through outside consultants/hygienists.

Control Methods: When determining measures to reduce or eliminate worker exposure to silica dust, JDL Warm Construction will generally select a combination of controls, listed in order of preference:

- Elimination and Substitution.
- Engineering.
- Administrative.
- Personnel Protection Equipment (PPE).

Substitution and Elimination: Whenever possible, JDL Warm Construction will substitute products containing silica with products that do not contain (or contain a lower percentage of) crystalline silica. While there have historically been few "substitution" options available, JDL Warm Construction recognizes the importance of planning work in order to minimize the amount of silica dust generated. During the planning phases of a project, JDL Warm Construction will advocate for the use of methods that reduce the need for cutting, grinding, or drilling of concrete surfaces.

Engineering Controls: Engineering controls are those controls which aim to control or otherwise minimize the release of crystalline silica. Two "common" engineering control options are available to JDL Warm Construction in many circumstances. These include the Local Exhaust Ventilation (LEV) and Wet Dust Suppression (WDS) systems.

LEV Systems: Tools/appliance specific LEV systems are available on some tools/appliances. Such LEV systems are generally comprised of a shroud assembly, a hose attachment, and a vacuum system. Dust-laden air is collected within the shroud, drawn into the hose attachment, and conveyed to the vacuum, where it is filtered and discharged. "Large scale" LEV systems, such those available on some Vacuum Trucks and Mobile Sweepers, may also be employed (at times) on JDL Warm Construction projects.

When/if LEV systems are used, JDL Warm Construction will employ the following systems and safe work practices:

- Vacuum attachment systems that capture and control dust at its source whenever possible.
- Dust control systems will be maintained in optimal working condition.
- Grinding wheels will be operated at the manufacturer's recommended RPM (operating in excess of this can generate significantly higher airborne dust levels).
- HEPA or good quality, multi-stage vacuum units (approved for use with silica dust) will be used in accordance with the manufacturer's instructions.
- Whenever possible, concrete grinding will be completed when the concrete is wet (thus dust release will be significantly reduced).

WDS Systems: Unlike LEV systems, many tools/appliances at JDL Warm Construction are equipped with WDS systems. When WDS Systems are not available, (as a standard or retrofitted part of a tool/appliance), similar effects can also be achieved by manually wetting the surface (i.e., with a mister or with a hose).

When WDS systems are used, JDL Warm Construction will employ the following systems and safe work practices:

- If water is not readily available on the specific JDL Warm Construction project, the project supervisor will arrange to have a water tank delivered to the site for use.
- Pneumatic or fuel (i.e., gasoline) powered equipment will generally be used instead of electrically powered equipment if water is the method of dust control, unless the electrical equipment is specifically designed to be used in such circumstances.
- Pressure and flow rate will be controlled in accordance with the tool manufacturer's specifications.
- When sawing concrete, tools that provide water directly to the blade will be used.
- Wet slurry will be cleaned from work surfaces when the work is complete, if/when necessary.

Specified Exposure Control Methods
For each employee working with materials containing crystalline silica and engaged in a task using the equipment and machines listed below, the employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified.

Stationary Masonry Saws
- **Engineering Control:** Water continuously fed to the blade
- **Respiratory Protection:** None Required

Drivable Saws
- **Engineering Control:** Water continuously fed to the blade
- **Respiratory Protection:**
  - Enclosed Area: Can Not Use Saw in Enclosed Areas
  - Outside Area: None Required

Handheld Power Saws

- **Engineering Control:** Water continuously fed to the blade
- **Respiratory Protection (less than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: None Required
- **Respiratory Protection (more than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: APF 10 Respirator

Walk Behind Saws

- **Engineering Control:** Water continuously fed to the blade
- **Respiratory Protection (less than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: None Required
- **Respiratory Protection (more than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: None Required

Ring Mounted Core Saw or Drill

- **Engineering Control:** Water continuously fed to the cutting surface
- **Respiratory Protection:** None Required

Handheld and Stand-Mounted Drills

- **Engineering Control:** Commercial shroud or cowling with dust collection system
- **Respiratory Protection:** None Required

Dow Drilling Rigs for Concrete

- **Engineering Control:** Commercial shroud or cowling with dust collection system
- **Respiratory Protection (less than 4 hours per shift):**
  - Enclosed Area: Can Not Use Drill in Enclosed Areas
  - Outside Area: APF 10 Respirator
- **Respiratory Protection (more than 4 hours per shift):**
  - Enclosed Area: Can Not Use Drill in Enclosed Areas
  - Outside Area: APF 10 Respirator

Vehicle-Mounted Drilling Rigs

- **Engineering Control:** Use dust collection system with close capture hood. – OR – Shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. – OR – Operate from within an enclosed cab and use water for dust suppression on drill bit.
- **Respiratory Protection:** None Required

Jackhammers and Handheld Power Chipping Tools

- **Engineering Control:** Water continuously fed to the point of impact – OR – Commercial shroud or cowling with dust collection system
- **Respiratory Protection (less than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: None Required
- **Respiratory Protection (more than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: APF 10 Respirator

Walk-Behind Milling Machines and Floor Grinders

- **Engineering Control:** Water continuously fed to the point of impact – OR – Commercial shroud or cowling with dust collection system
- **Respiratory Protection:** None Required

Small Drivable Milling Machines (Less than Half-Lane)

- **Engineering Control:** Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant.
- Respiratory Protection: None Required

Large Drivable Milling Machines (Half-Lane and Larger)

- **Engineering Control:** Use a machine equipped with exhaust ventilation on drum enclosure and supplemental water spray designed to suppress dust. – OR – Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant.
- **Respiratory Protection:** None Required

Crushing Machines

- **Engineering Control:** Use equipment designed to deliver water spray or mist at crusher and other points where dust is generated. – AND – Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote-control station.
- **Respiratory Protection:** None Required

Heavy Equipment (Hoe-Ramming, Rock Ripping, and Demolition)

- **Engineering Control:** Operate equipment from within an enclosed cab. – AND – When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.
- **Respiratory Protection:** None Required

Heavy Equipment (Grading and Excavating)

- **Engineering Control:** Apply water and/or dust suppressants as necessary to minimized dust emissions. – OR – When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.
- **Respiratory Protection:** None Required

Handheld Grinders for Mortar Removal

- **Engineering Control:** Commercial shroud or cowling with dust collection system
- **Respiratory Protection (less than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: APF 10 Respirator
- R**espiratory Protection (more than 4 hours per shift):**
  - Enclosed Area: APF 25 Respirator
  - Outside Area: APF 25 Respirator

Handheld Grinders for Uses Other than Mortar Removal

- **Engineering Control:** Water continuously fed to the grinding surface – OR – Commercial shroud or cowling with dust collection system
- **Respiratory Protection (less than 4 hours per shift):**
  - Enclosed Area: None Required
  - Outside Area: None Required
- **Respiratory Protection (more than 4 hours per shift):**
  - Enclosed Area: APF 10 Respirator
  - Outside Area: None Required

Housekeeping

- The employer shall not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica
  - Use Wet Sweeping
  - Use HEPA-Filtered Vacuuming
- The employer shall not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica.

If you're exposed to respirable crystalline silica and engaged in a task using equipment and machines not identified in the list above, contact the Safety Manager for an exposure assessment to determine the engineering controls, work practices, and respiratory protection requirements to safely do your job.

Administrative Controls: Administrative controls are those that aim to control or otherwise minimize the release of silica through the use of work procedure and work methods, rather than by affecting the actual physical work. Common examples of administrative controls include, but are not limited to:

- Posting of warning signs.
- Rescheduling of work as to avoid the activities of others.
- Relocating unprotected workers away from dusty areas.

When administrative controls are used, JDL Warm Construction will employ the following systems and safe work practices:

- In conjunction with the Owner/Prime Contractor, suitable exposure control strategies (both within and outside JDL Warm Construction 's capabilities/responsibilities) will be discussed and determined. As necessary/appropriate, supplemental project and task specific Exposure Control Plans will be developed.

- Suitable housekeeping, restricted work area, hygiene practices, training and supervision procedures/standards will be determined and implemented on JDL Warm Construction projects.

- As appropriate, barriers will be erected around known silica dust generating activities, and/or warning signs will be posted.
- As able, work activities will be scheduled to minimize the silica related effect on, and from, others.

Personal Protective Equipment Controls: When used in conjunction with the other (i.e., Engineering and Administrative) controls elsewhere identified, personal protective equipment and clothing can help further reduce our employee's exposure to silica dust.

An air purifying respirator fitted with HEPA cartridges is the most common piece of PPE that would be used by JDL Warm Construction to minimize exposure to silica dust. Dependent on the effectiveness of the other (i.e., engineering) control measures employed, either a "full face piece" or "1/2 face piece" respirator would be used by personnel (In the majority of situations a ½ face respirator will be used. When working indoors or in other areas with poor ventilation, a full-face respirator may be required). Both of these respirators are "seal dependent", and thus the users must be "fit tested" and clean shaven where the respirator seals to the face.

In addition to respiratory PPE, protective clothing (i.e., disposable/washable coveralls) may be used and/or required to help prevent the contamination of the worker's personnel clothing.

Education and Training: Prior to performing activities, or working on project sites where personnel could be exposed to silica dust, JDL Warm Construction will ensure that personnel receive suitable education and training. As necessary, personnel will be trained to a level of "demonstrated competency". While not necessarily an exhaustive list, education and training may include:

- The hazards and risks associated with exposure to silica dust.
- The signs and symptoms of silica related diseases.
- General and specific silica exposure reduction methods/strategies (i.e., as detailed in the general/specific exposure control plans).
- The use of specific pieces of equipment and control systems (i.e., LEV and WDS systems).
- The use and care of respiratory (and other) personal protective equipment.
- How to seek first aid (i.e., for respiratory related concerns, including those that may be caused/associated with silica dust exposure), and
- How to report items of the concern (i.e., those related to silica dust).

The education and training detailed will be delivered to JDL Warm Construction employees through a variety of forums, including but not necessarily limited to:

- New Employee Orientations.
- Project/Site Orientations (JSA).

- Equipment/task specific training (in accordance with JDL Warm Construction's Policy, all personnel must be trained to a level of "demonstrated competency" prior to using required tools, equipment and appliances).

- Start of shift "tool box talks".

- Regularly scheduled crew "Tailgate Meetings".

- Notifications and Bulletins (those developed in house and those acquired from other reputable sources).