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SAFETY PROGRAM FOR

******

MANAGEMENT SAFETY POLICY

****** conducts its operations so that injuries to people, damage to property and adverse impact on the environment will be avoided. This program is being implemented in an effort to prevent accidents.

Our objective is to provide a clean, safe, and healthy working environment for all employees. It is our intention to comply with all safety and health standards that are enforced by local, state, and federal authorities. To that end, we will provide engineering controls, administrative controls, personal protective equipment, and training to abate and reduce exposure to hazards and prevent injury and illness. We have developed policies, rules and procedures, which will contribute to the safety of all employees. We expect all employees to work according to good safe practices as posted, instructed, and discussed.

Employees will contribute to the company safety program by following all safety rules, bringing unsafe conditions to the attention of management, and recommending actions to improve the effectiveness of the program.

Supervisors shall insist that employees observe and obey every rule, regulation, and order necessary for the safe conduct of work, and shall take such action necessary to obtain compliance.

__________________________________________
President/Owner

___________________________
Date
SAFETY PROGRAM FOR

******

SCOPE

This program encompasses all aspects of safety and health for all employees, at all levels, of ******.

ORGANIZATION AND RESPONSIBILITIES

A. Introduction

Assigning responsibility for safety is no different than establishing responsibilities for any of the other operations of our business. However, one of the most common causes of an ineffective safety program is the failure to clearly define responsibilities, resulting with an attitude that the responsibility for the safety program rests completely with upper management.

In order for any program, including safety, to be effective, there must be definite assignments of responsibility. This requires that management determine who will perform certain activities and make them specifically accountable for completion of those activities. Responsibilities must be clearly stated so that the persons to whom they are assigned have a full understanding of what is expected of them.

We have organized our safety program just as we have organized our entire operation. Duties are assigned to certain individuals. Everyone in the organization has responsibilities with regard to safety and must answer to another individual or group to ensure our policies are being implemented. All employees should be aware that safety issues are everyone’s business. If a person feels that a problem has not been addressed, they may go to another member of the managerial/supervisor team. While it is usually best to follow the recognized chain of command, there are times when alternatives must be utilized.

B. Employer Responsibilities

An employer has the responsibility to:

1. Maintain a place of employment that is safe and healthful for the employees.
2. Comply with occupational safety and health standards, rules, regulations and orders.
C. Specific Management Responsibility

While everyone is responsible for Health and Safety, one member of the company has the ultimate responsibility to oversee and implement the policies and procedures of our Injury and Illness Prevention Program. For the purpose of this plan that person will be referred to as the Safety Coordinator. That person is:

Name: Coordinator's Name  
Title: Safety Coordinator

Even though the Safety Coordinator is ultimately responsible for implementation of the Plan, other members of Management share important roles in seeing that the program effectively meets the needs of our company and our personnel.

D. President/Owner

1. Establish safety as the number one priority.
2. Provide for the establishment of appropriate Safety and Health policies.
3. Conduct periodic business; update meetings with all management level personnel to assess safety performance.
5. Continually reaffirm emphasis on safety with subordinates.
7. Provide adequate funding for the safety program.
8. Conduct routine, unannounced audits of company safety records including safety meeting records, safe work procedures, employee training, safety tours, MSDS's, job hazard analysis, corrective actions taken, and employee disciplinary measures for related failures.

E. Safety Coordinator

As director of our safety program, the Safety Coordinator has the following responsibilities:

1. Develop safety methods, procedures, devices, and programs to correct unsafe conditions and practices.
2. Keep all levels of management informed about company safety issues.
3. Participate in periodic update meetings (at least semi-annually) with the entire workforce to assess safety performance.
4. Direct supervisors to develop safe operating procedures using current standards as minimum guidelines, including disciplinary action as necessary.
5. Review all accidents (OSHA Recordable, first aids, property damage, and near misses) with supervisors to insure proper corrective actions have been taken.
7. Review all accident investigation reports and insure all corrective measures have been implemented.
8. Assure that all supervisors demonstrate their ability to administer the safety program effectively.
9. Insure supervisors receive adequate safety training to meet their responsibilities.
10. Identify clear safety objectives with supervisors and hold them accountable in their performance evaluation.
11. Participate in walk-through safety and housekeeping inspections at least monthly.
12. Conduct emergency action and job hazard training with employees including each new hire.
13. Maintain Material Safety Data Sheets for every hazardous material and share the information with users of the materials.
14. Initiate disciplinary action for employees who disregard safety rules and safe work procedures, or who are repeatedly careless and inattentive.

F. Supervisors

1. Discuss safety performance during tool box talks.
2. Provide safe work areas and equipment in accordance with current standards and guidelines, including preventative maintenance for equipment and tools.
3. Review monthly Safety Committee reports and monitor success in meeting safety goals.
4. Conduct weekly safety tours of department.
5. Implement and actively support company safety policy.
6. Investigate accidents that have occurred to determine causes and develop corrective measures.
7. Discuss accidents with the Safety Coordinator within 24 hours of occurrence.
8. Implement measures to correct deficiencies identified by accident investigations and inspections.
9. Maintain premises and equipment in accordance with established safety standards.
10. Determine employee conformance to established safe procedures and enforce safety rules.
11. Implement safety standards, directives, and guidelines from management.
12. Develop safe work procedures and train employees in those procedures as well as specific safety subjects.
14. Respond to all employees' safety suggestions and unsafe physical conditions identified by employees.
15. Establish department safety goals and discuss progress toward meeting the goals.
G. Employee Responsibilities

Although the law places primary responsibility for occupational safety and health on the employer, certain responsibilities are also placed on employees.

These responsibilities include:

1. Obeying all occupational safety and health standards, rules, regulations, and orders issued according to the law.
2. Not removing, displacing, damaging, destroying, tampering with, or carrying off safety devices, safeguards, notices, or warnings.
3. Not interfering with the use of safeguards by others.
4. Using any required personal protective equipment (e.g. eye, ear, and respiratory protection), safety device (e.g. machine guard, safety interlock), method, or process adopted for employee protection.
5. Possessing an understanding of the hazards particular to the assignment and the precautionary measures necessary to perform the assignment safely.
6. Following all work procedures, and maintaining a high level of safety awareness.
7. Working with supervisor to develop new work procedures and further improve existing work procedures to enhance safety.
8. Inspecting tools and equipment prior to use where the failure thereof could result in a hazardous condition.
9. Always using the correct tool for the job and requesting or obtaining the correct tool when it isn't currently in possession.
10. Being familiar with emergency procedures and following those procedures when necessary.
11. Report any unsafe conditions or acts to supervisor to minimize injury to employees and loss or damage to equipment or property.

COMMUNICATION

A. General

Communication is one of the most important parts of any safety and health program. Without a good system for communicating health and safety information, plans such as our Injury and Illness Prevention System would fail. Good communication, on the other hand, allows us to stay in touch with the work force, so that we are constantly aware of health and safety needs throughout our operations. If we are communicating properly, our goals and rules are clearly understood, potential hazards are eliminated before they become harmful problems.
With that in mind we have developed a variety of ways to communicate our Health and Safety Program, the most important of which is maintaining an open door policy, so that ideas and concerns flow freely from management to employees and vice-versa.

In addition to our open door policy we have an organized system to keep all levels of personnel abreast of important safety information.

B. Responsibilities

Supervisors should develop and communicate safe work procedures, conduct job hazard training with their employees, hold monthly and/or weekly toolbox talks with their employees and respond to all employee safety suggestions.

Employees are encouraged to speak freely with supervisors and management about their safety concerns and encourage their fellow employees to follow safety rules and safe work practices.

C. Postings

There are many ways for a work force to communicate effectively. While we feel that direct communication is the best method, we can't overlook other ways in which we can bring the message of safety to our employees, such as the posting of safety related materials like memos, posters, and signs. Safety related materials may be posted in job trailers, equipment rooms or at the facility. The Safety Coordinator will post current information as it becomes available.

D. Memos

Memos also play an important part in our communication system. Memos are one of the quickest means of getting and giving information, and one of the best ways to reach a large number of employees in a short period of time. Memos regarding Safety and Health information generated by the Safety Coordinator will be posted in display areas and circulated to all affected employees. It will be the Supervisors’ responsibility to relay the information contained in the memos to their employees.

E. Employee Communication

It is important for all employees to feel free to bring their concerns to any level of management. While following the usual chain of command is generally most effective, if any individuals feel this method is not getting the necessary results, they should go directly to the Safety Coordinator. Safety concerns may also be submitted anonymously to the Safety Coordinator through our Safety Suggestion boxes, located at each job site.
Any employee who makes a suggestion, points out a hazard or wishes to voice a concern regarding Safety and Health will receive a written or verbal response within five working days.

F. Safety Rules

In order for employees to follow safety rules they must first be informed as to what those safety rules are. Safety rules have been developed based on OSHA/OR-OSHA standards. General safety rules are provided to all employees upon being hired. Operation specific safety rules are provided to affected employees by their supervisors.

G. Work Procedures

Each supervisor should recognize that he is a key figure in the overall success of the safety and health program. The supervisor is more familiar than other levels of management with the hazards associated with each job and the potential effect on the employees. For this reason supervisors must play an important part in developing procedures and work practices to control exposure to those hazards. The supervisor is also in the best position to instruct his employees and make sure they understand and follow standard procedures. As a starting point, the supervisor must insure that all employees know about the materials and equipment they are working with, what known hazards are present, and how they are controlled or what plans exist to eliminate them. Each employee needs to know and understand the following:

1. No employee is expected to undertake a job until he or she has received instructions on how to do it properly and has been authorized to perform the job.
2. No employee should undertake a job that appears to be unsafe or use chemicals without understanding their toxic properties.
3. Safeguards and barriers must be in place and kept in place.
4. Each employee is expected to report all unsafe conditions encountered during work.
5. Any injury or illness suffered by an employee, even a slight one, must be reported at once.

In addition to the above, any safety rules that are a condition of employment, such as the use of personal protection equipment, should be explained clearly and enforced. Particular attention must be given to new employees. If they are properly trained during the initial days of employment, the probability of incurring losses is significantly reduced.

At the same time, we must pay attention to regular employees, including longtime employees. Old habits can be wrong habits. An employee who continues to repeat unsafe procedure is not working safely, even if an accident has not resulted from a particular condition. Some indicators, which might show a need for training or retraining, include:
1. Excessive waste or scrap.
2. High labor turnover.
3. An increase in the number of near misses which could have resulted in injuries or illnesses.
4. A recent upswing in actual accident experience.
5. High injury or illness incidence.
6. Expansion of operations or new employment.
7. A change in process, or a new process with new equipment.
8. Employee requests for ear plugs, respirators or other protective devices.
9. Repeated questioning by employees seeking answers which may seem obvious to the supervisor.

IDENTIFYING, EVALUATING AND CORRECTING WORKPLACE HAZARDS

An important step in establishing any safety program is to develop procedures to identify workplace hazards. Any efforts made to identify and evaluate a hazard are wasted if the hazard is left unabated. Methods to identify hazards will include: inspections, Job Hazard Analysis, accident investigations, Industrial Hygiene Surveys, and employee reporting.

A. Inspections

1. Management Inspections
   Will be conducted on an impromptu basis.

2. Safety Coordinator Inspections
   Once a quarter the safety coordinator will inspect a minimum of one work site to identify workplace hazards and ensure safe working procedures. The Safety Inspection Checklist (see Appendix “A”) may be used as a guide. The checklist is comprehensive and may contain many questions, which may not apply to all operations. For this reason, the Safety Coordinator may modify the checklist, deleting those questions, which do not apply.

   If the checklist is modified, it must be re-evaluated whenever any major changes occur in operations. It should be revised on an annual basis to include changes. It should also be noted that the checklist is a guide, and while every attempt has been made to cover all possible topics the supervisor is free to include any additions deemed appropriate. All findings should be recorded and maintained on file.

   The Safety Coordinator will identify OR-OSHA mandatory inspection requirements and schedule equipment and tool inspections accordingly.
3. **Supervisor Inspections**
Each Supervisor or lead person will be responsible for inspecting his work area on a weekly basis to identify work site hazards. Supervisors should also remain aware of employee work practices on a continuous basis to ensure compliance with safety rules. Supervisors should record all findings and serious infractions of safety rules.

**Corrective Action**
As part of the Supervisors Inspection, a list of corrective actions should be completed when problems or hazards are uncovered. This is for documentation purposes, indicating the conditions found and any corrective action needed. Supervisors should take whatever steps are necessary to correct any unsatisfactory conditions that come within the scope of their authority. Whether the corrective action is employee training, revised work procedures, or equipment related, the supervisor initiates the process and sees it through to completion. This may require the help and support of the Safety Coordinator or Management. A copy of the corrective actions should be given to the Safety Coordinator.

4. **Employee Inspections**
Each employee is responsible for inspecting his own work area each day prior to beginning operations. This inspection is intended to identify unsafe conditions, equipment malfunctions, and tool breakage.

Employees will immediately report any unsafe conditions or tool and equipment problems to his supervisor or the Safety Coordinator if the supervisor is not available. Damaged tools and equipment must be removed from service.

5. **Job Hazard Analysis**
A Job Hazard Analysis (JHA) is a systematic breakdown aimed at defining the basic activities or steps which must be followed to complete the job identify hazards or potential accidents associated with each step, and developing approaches that will eliminate, minimize, or prevent such hazards or accident potentials. A JHA may be used for every accident investigation involving a job with multiple steps. JHA’s are also useful in accident prevention when applied to jobs which pose a higher than normal degree of hazard, (See Appendix).

6. **Industrial Hygiene Surveys**
When and if conditions warrant, Industrial Hygiene (IH) Surveys will be conducted to determine the presence of harmful atmospheres or harmful noise levels. The Safety Coordinator is responsible for seeing that samples are collected and interpreting analysis results. If necessary, samples for chemical stresses will be forwarded to an independent laboratory for analysis. IH surveys will be conducted prior to work in confined spaces and when working in
areas where hazardous atmosphere is suspected. Noise samples will be taken if continuous high levels of noise cannot be avoided.

When an employee feels that the possibility of harmful exposure exists in the immediate work area, the Safety Coordinator will review the operation and the MSDS’s of materials involved, and determine if an IH is necessary.

The Safety Coordinator will maintain results of IH surveys. Employees who wish to obtain results of the tests performed in areas in which they work may do so by making a written request to the Safety Coordinator.

B. Evaluating Workplace Hazards

After the Safety Coordinator has reviewed any inspection report or corrective action sheet, a copy shall be forwarded to the Safety Committee (if applicable) along with a list of comments and possible recommendations. In any case where a Supervisor was not able, or had the authority to correct a hazardous condition, the Safety Coordinator will consult with the supervisor or supervisors of the area(s) in which the hazard(s) exist to determine what corrective actions should be taken. After careful review of all records associated with the evaluation of the hazard a Priority Status will be assigned by the Safety Coordinator.

It is not necessary to wait for the Safety Coordinator to intervene if a hazard which presents an immediate threat to employee health and safety is discovered in a supervisor’s area of responsibility. That supervisor may request an immediate priority status from the president/owner.

If necessary the president/owner will inspect any area in question and become involved with corrective actions where capital expenses are required to eliminate the hazards.

1. Establishing Priority: Hazards of a less immediate nature, especially those which require major procedural, structural, or material alterations, will be reviewed by the Safety Coordinator and Safety Committee (if applicable). Recommendations will be made based upon the nature of the hazard, its potential threat to the welfare of personnel and the ramifications of any changes which may be deemed necessary. If the recommendations are approved, the Safety Coordinator will assign responsibility to ensure that corrective actions are taken.

Priority 1 status represents an immediate threat of injury and requires immediate action. Often this status can be removed simply by placing defective equipment out of service or by removing personnel from a hazardous area until repairs can be made. This is a judgment call by Supervisors. Assistance may be obtained from or offered by the Safety Coordinator.
Priority 2 status represents an unsafe working condition which is not an immediate threat but is a violation of Safety Code and requires corrective action within two weeks. In such cases where the need to procure materials or other factors prevents timely completion, the Safety Coordinator will notify the supervisor so that alternatives may be explored.

Priority 3 status is not a violation of Safety Codes but represents a potential threat. Action is recommended within thirty days.

2. Evaluating New Hazards Introduced Into the Workplace

Substances: The Safety Coordinator will review new MSDS’s and set guidelines for personal protection through the use of engineering controls, administrative policies or personal protective equipment. These guidelines will be reviewed with affected employees during a follow-up Hazard Communication training session.

Procedures or Equipment: New procedures and/or equipment will be evaluated by the immediate supervisor and the Safety Coordinator. Affected employees will be asked for input. Guidelines recommended by the equipment's manufacturer or industry standards will be used to determine the most effective hazard controls. Once the safety rules and operating procedures have been determined, affected employees will receive the necessary training to ensure their safety.

C. Corrective Action

1. Work Orders

An unsafe condition may require equipment repairs or the requisition of new equipment or materials. When a problem cannot be corrected immediately, a work order is required. This can be generated by the responsible supervisor or the affected employee if his supervisor isn't available. Work orders must be submitted to the Safety Coordinator for approval. The Safety Coordinator will set a priority status for the corrective action. If the condition is an immediate safety concern, a Priority 1 status will be issued for prompt action. Conditions of a less hazardous nature may be reviewed by the Safety Committee (if applicable) to determine the necessary corrective action.

In the event of a Priority 1 hazard, which cannot be corrected immediately, the supervisor will take the appropriate actions to protect the health and safety of the affected employees and company property according to the nature of the hazard. This may include shutting down equipment or isolating power sources, evacuating employees, isolating the hazard in the event of a small spill or release, and notifying an emergency response team. In no way should the supervisor or any other employee endanger his or her life in response to a Priority 1 hazard.
When abatement of a hazard requires more than “replacing a guard or a defective piece of equipment,” the supervisor, if qualified, will make an evaluation of the procedures for abatement. When the proper procedures have been established, the corrective action will be performed by qualified personnel or an outside contractor. The Safety Coordinator will be consulted at any time throughout these proceedings as required.

2. Preventative Maintenance Program

Preventative maintenance is generally thought of as care for equipment in an effort to extend the life of the equipment. Other benefits include the reduction of downtime due to breakdowns, and planned downtime as opposed to the unexpected. Preventative maintenance is also an important part of a good Safety Program. Unexpected equipment malfunctions may result in a near miss incident or other, more serious, event.

D. Employee Responsibility

As it relates to safety, preventative maintenance is not limited to certain individuals. Any operator of any piece of equipment must visually inspect the equipment prior to use. The equipment must be observably functional before it can be used. Personal tools must be maintained in good condition. Insulated tools must be routinely inspected and tested. This requires a preventative maintenance schedule at the operator’s level and must be agreed upon by their supervisors.
ACCIDENT REPORTING POLICY

• Each company employee has the responsibility to immediately report all work-related accidents, incidents ("near miss" accidents) or illnesses to his/her supervisor.

• Unsafe acts and conditions observed by any employee should be immediately brought to the attention of his/her supervisor.

• Supervisory personnel are required to document all accidents, incidents, illnesses, unsafe acts and unsafe conditions reported by employees.

• Supervisory personnel are required to take the appropriate corrective action needed to ensure the prevention of future accidents and/or incidents.

__________________________________   _______________
President/Owner     Date

ACCIDENT INVESTIGATION

1. General
An accident is "an undesired event that results in personal injury and/or property damage." That definition can also be expanded to include near misses. Accident investigation is the Supervisor's analysis and account of an accident based on factual information gathered by a thorough and conscientious examination of all factors involved. Accident PREVENTION is the goal of all accident investigations.

While accident investigations are a responsibility of all levels of management and a concern of every employee, the supervisors' unique position gives them special priority and responsibility in this function. As supervisors of the areas where an accident occurs, they have certain advantages other members of management do not have. These advantages include daily contact with the employees, machines, tools and hazardous materials involved and a working knowledge of the standard practices and circumstances in the work area, as well as the associated hazards.

2. Management's Role
The role of other management levels in accident investigation is no less critical than the supervisors. Management has several specific responsibilities in accident investigation, which include demonstrating a positive interest in all aspects of accident investigation by prompt review and analysis of all reports. Prompt and positive assistance, whenever required, should be taken to assure the implementation of
proper preventive measures. Another role of management is constructive, purposeful, and timely feedback on accident investigation reports.

3. When to Investigate
The well-being of our employees will always be our first and immediate concern following any accident. Injuries must be attended to and the possibility of other immediate injuries must also be addressed. The emotional state of employees following any accident and/or injury must also be taken into account. However, because the facts are clearer, more details can be remembered, and the conditions are nearest those at the time of the accident, it is important to conduct the investigation as soon as possible. Unnecessary delays must be avoided.

After considering the well-being of the personnel involved, an accident investigation will be conducted as soon as possible, but not more than 24 hours after receiving knowledge of its occurrence.

4. Methods for accident Investigation
Several methods are available to accomplish accident investigations. An important aspect of any investigation is to follow established procedures to eliminate the possibility of missing important details. For that reason Supervisors will use one of the methods listed below or a combination of those methods to ensure a complete and thorough investigation.

Report of Occupational Injury or Illness
The Report of Occupational Injury or Illness is a standard form available to all Supervisors, (See Appendix “B”). When using this form, be sure to address all sections. Use additional blank pages to provide sufficient details.

Employee Interviews
Except in the cases of fatalities, the employee directly involved in an accident should always be interviewed. It is equally important to ask any witnesses about what they saw. Do not discount statements that may help prevent future accidents.

Job Hazard Analysis
The JHA is an excellent tool to use as part of an accident investigation. It allows the Supervisor to go through an operation that has resulted in an accident and reconstruct the procedure in an attempt to determine where the breakdown in safety occurred. In so doing it may be possible to determine if the accident happened because of an inherent hazard in the process or if it happened because of personnel error. Follow the same steps as described in the above paragraph.
5. **IBEW/NECA Joint Safety Committee**

The Safety Committee will review all accidents, accident investigations, and causes of incidents resulting in injuries, illnesses, or exposure to hazardous substances. Reviews may include: accident reports, job hazard analysis, and accident related interviews. Evaluations, recommendations, and/or procedural changes may result from the Safety Committee reviews.

6. **Multiple Occurrence Program**

Our goal is to have all employees working safely so that they do not injure themselves. However, even after providing a safe working environment and safe work procedures, some employees will still continue to have accidents. The Multiple Occurrence Program is provided as a guideline for managers and supervisors to address employees who have one (1) or more safety related "incident(s).” Safety related incidents include:

- Accidents that result in bodily injury or illness that requires medical treatment outside the facility
- Accidents that result in building, equipment, or material damage
- Failure to follow established safety rules or practices
- Near misses that could have resulted in serious injury or substantial building, equipment, or material damage

Within 24 hours of an incident, the Safety Coordinator and the supervisor of the employee should have a discussion with the individual. The purpose of the discussion is to collect all the facts and to determine what corrective action needs to take place so that future incidents are less likely to occur. Corrective action could include one (1) or more of the following:

- Verbal discussion of the incident
- Safety training/retraining
- Referral to an Employee Assistance Program
- Verbal warning
- Written warning
- Suspension
- Discharge
- Drug/alcohol screening

The supervisor of the employee, in conjunction with the Safety Coordinator, will determine, based upon the FREQUENCY AND SERIOUSNESS of the incidents(s), what corrective action will be appropriate.
TRAINING

****** recognizes the need for a continuing safety training program that addresses the immediate needs of training throughout our workforce; but it must also be adaptable to meet the changes which may occur as new processes, equipment and materials are introduced into our operations.

While many of our training procedures are specified in our various safety programs, such as Hazard Communication and Lock Out/Tag Out, we realized a need to develop a method to organize and integrate our overall approach to safety training. The following section addresses that method.

A. New Employees

Prior to a new employee beginning work, the Safety Coordinator will assess the training requirements of that employee and make a record of those needs. The Safety Coordinator will retain a copy of this record for the employee's file and forward a copy to the new employee's Supervisor. The Supervisor will schedule all training for the employee in conjunction with available resources. It will be the Supervisor's responsibility to ensure that the new employee does not perform any task for which he or she has not been trained.

At the new employee's three-month anniversary, the Supervisor should review the employee's training record to determine what training the employee still needs and forward an updated copy of the record to the Safety Coordinator. If necessary the Safety Coordinator will coordinate any training needs, which remain and place the updated training record in the employee's personnel file. After the new employee has completed all of the required safety training the Supervisor will forward a copy of the finalized record to the Safety Coordinator.

B. Current Employees

Each Supervisor will be responsible for completing a training record for all of his/her employees. The Supervisor will determine what training the employee has received, when it was received and which update requirements must be met. Upon completion of the employee training record, the Supervisor will forward a copy to the Safety Coordinator for the employee's personnel file, and will schedule the necessary training.

C. Training Updates

The Employee Training Record should indicate which training requires periodic updates and how often. It will be the Safety Coordinator's responsibility to review these records at the beginning of each month to determine which employees are due
for training. The Safety Coordinator will notify the Supervisors of the employees who need training that month and what type of training is needed.

D. New Processes, Equipment, and/or Materials

Whenever new processes, equipment, or materials are introduced into the workplace, the Supervisor will assess the potential hazards using a Job Hazard Analysis form and determine what safety precautions and training are required. The Safety Coordinator, together with the Supervisor(s), will develop training programs to meet these new needs. It will be the Supervisors’ responsibility to ensure that all new training requirements are met by their employees. Updated employee training records will be submitted to the Safety Coordinator.

E. Supervisor Safety Training

Generally, Supervisors know everything they need to about their areas of responsibilities, including all the safety procedures required for various procedures and equipment under their control. However, we must assume that there will be instances where the Supervisors need safety training, refresher training or assistance in understanding and meeting their safety training requirements.

F. Safety Training Records

All health and safety training records will be retained for a minimum of three years.
****** strives to create a safe and healthy workplace for all employees. To achieve this objective will require the cooperation of everyone. Supervisors must enforce all company safety policies and procedures. In the event that any employee deliberately fails to follow the prescribed safe work procedure or deliberately fails to use the prescribed safety equipment, the following guidelines regarding disciplinary action may be initiated.

First Violation
Verbal Warning (Notification to be inserted in personnel file)

Second Violation
Written Warning (has the employee sign warning and place a copy in his/her personnel file)

Third Violation
One week off without pay or Termination of Employment if the nature of jeopardy or accident is of a serious nature or potentially serious consequence to the employee and/or his/her co-workers

Fourth Violation
Termination of Employment

THE FOLLOWING WORK VIOLATIONS WILL RESULT IN IMMEDIATE TERMINATION OF EMPLOYMENT

- Provoking or instigating a fight during working hours.
- Insubordination (direct violation of an order).
- Immoral conduct or indecency.
- Engaging in sabotage or espionage.
- Theft or removal from premises, without proper authorization, of any company property or property of another employee
- Unauthorized possession or use of firearms, explosives or any other concealed weapons during assigned working hours.
- Possessing, using, selling or distributing alcoholic beverages or illegal drugs on company premises or in company vehicles or on project sites during working hours.

This list shall not be construed to deny the right of the company to discipline any employee for an act or cause not mentioned.

__________________________________  ______________________
President/Owner     Date
A. Rights and Responsibilities

It is our intention to provide a workplace as free of safety and health hazards as possible for our employees. Doing so will minimize occupational injuries and illness which can have tragic effects on the lives of our employees and also reduce our company's profits.

Current law requires the company to ensure that employees comply with many safety and healthy work practices which may include disciplinary action.

Just as the law requires us to provide a workplace free of safety and health hazards, so does the law require employees to comply with established safe practices, which would include complying with safety rules and using any and all personal protective equipment the company provides.

Our system of ensuring compliance starts with this policy and relies on good management practices and resorts to discipline (in the traditional sense) as a last resort.

There may be many factors involved when an employee fails to follow safety rules. It may be that they "Don't understand what is expected of them," "They can't do the Job," "They Don't Know How to do the Job," or "They don't want to do the Job." Before we take disciplinary action we need to evaluate the situation to determine why and where the failure occurred. If an employee needs additional training, punishing that person with a severe disciplinary measure would be unfair and unproductive.

1. They Don't Understand Our Expectations
   It is the job of the Safety Coordinator and supervisors to make sure employees understand what we expect in the way of safety performance. One of the documents which clearly state these expectations is our "Company Policy" which sets forth expectations for employees and management alike. Others include our "Safety Rules" and the list of "Employee Responsibilities." These must be clearly communicated and understood by all employees.

2. They Can't Do the Job
   Sometimes a job is structured in such a manner that it is impossible (or impractical) for the employee doing the job to do it safely. Lifting and material handling tasks are good examples where the work station might be arranged in such a fashion that an employee would be forced into an unsafe lifting position.
In other cases it may be that the employee is just the wrong person for the job. Whether it is due to physical limitations or a lack of aptitude, attempts should be made to find a position more suitable to that employee's abilities.

3. **They Don't Know How to Do the Job**
   When an employee doesn't know how to do a job safely this is a direct failure of our training program. In this case the Safety Coordinator and Supervisors must evaluate the training method and determine where improvement can be made.

4. **They Don't Want To Do the Job**
   Discipline is not always the best solution to a problem. In fact, it is generally an inadequate method for achieving long range behavioral changes.

   In order to change unsafe behavior, management should start by recognizing safe performance. People respond better to positive suggestion. Therefore it is important that supervisors recognize correct job performance, and compliment employees for it at least as often as they point out and correct unsafe behavior.

   (a) **Discipline**
       One thing that cannot, and will not, be tolerated is the use of any unsafe job procedure. Any member of management who observes such a practice should immediately bring it to the attention of the employee, as well as the employee's supervisor. Supervisors are expected to take steps to correct such behavior.

       ***** will not tolerate any disregard of safety and health rules and regulations. Employees who are in blatant violation will be subject to disciplinary action. When disciplinary measures must be used, the following General Rules **MUST** be followed:

       (1) For most non-serious infractions, a progressive disciplinary procedure will be followed.
       (2) The level of discipline for infractions will depend on the severity and frequency of the event.
       (3) Certain serious infractions will result in immediate termination.

       Written notices will be put on disciplinary reports and retained for 6 months. Hourly employees can file a grievance if in disagreement with the discipline. Salaried employees may submit written responses.

   (b) **Safe Work Practices Recognition**
       Safety is one of our biggest concerns. Safety barriers, guards, and equipment can prevent many accidents when used properly.
However, the employees' personal safety depends upon developing good safety attitudes and obeying safety rules. While we acknowledge the responsibility of providing a safe and healthful environment in which to work, the ultimate responsibility for working safely rests with each and every employee.

****** recognizes the need to provide safety training and to equip our employees with the proper tools. Additionally, we must explain safe operating procedures and be ready to address any questions or concerns our employees might have regarding health and safety issues. But these provisions are meaningless unless our personnel are aware of their responsibility to work in a safe manner. Among other things, this requires each employee to obey all safety rules, perform daily safety inspections of their individual work areas, report defects in equipment as soon as they are discovered, and encourage fellow employees to work in a safe manner.

While we must have and enforce a disciplinary policy like the one above, we feel that encouragement is a better motivator. With this in mind we have established a reward program to recognize individuals, as well as entire groups, for outstanding achievements of safe working records.

RECOGNITION AND REWARD

Once a year those individuals who, by way of having no lost time due to injury, have shown a willingness to comply with all safety rules and regulations, and have demonstrated a commitment to keeping ****** a safe and healthful company for which to work, will be rewarded for their efforts. Awards will be distributed in January for the previous year. At that time the Safety Coordinator will establish awards to be given the following January.

We realize that goals, once achieved, tend to be forgotten. Because we have no desire to see our safety program collecting dust on a shelf, we have designed our recognition plan to improve as the individual and group records improve. Therefore, individuals and groups who reach two, three and four or more years without lost time due to injury will be recognized with higher level awards.

Even though the overall annual achievements are rewarded, there are times when individual performance or suggestions merit special recognition. From time to time the Company may award gift certificates, prizes, or cash to deserving employees who have gone beyond the call of duty to demonstrate safe work practices or make excellent safety suggestions.
RECORD KEEPING

Maintaining records is an important part of our Health and Safety Program. Meticulous RECORD KEEPING not only enables us to track the progress of the program, but it allows us to better serve the individual safety needs of each employee. Knowing when training requirements must be met, or when an individual has achieved a milestone of safety performance for which they should be rewarded, can only be done through a vigorous RECORD KEEPING program.

The Safety Coordinator has the responsibility for maintaining all Health and Safety records, including employee training records, accidents reports, accident investigations, and Health and Safety inspection reports. While the Safety Coordinator must maintain these records, Supervisors should keep their own Health and Safety files as well.

The Safety Coordinator shall retain most Health and Safety records for a minimum of three years. There will be cases, however, when it becomes necessary to retain records for longer periods of time. If employees wish to see their Health and Safety file, they should put in a request with the Safety Coordinator. The Safety Coordinator or the employees' Supervisors will review the documents with the individuals, answering any question they might have concerning the contents of the file.
APPENDIX A

*****

SAFETY PROGRAM
## SAFETY INSPECTION CHECKLIST

<table>
<thead>
<tr>
<th>Conditions &amp; Protection/Awareness Satisfactory</th>
<th>YES</th>
<th>NO</th>
<th>NA</th>
<th>Comments/Suggestions</th>
</tr>
</thead>
</table>

### FIRE

1. Fire Extinguishers accessible, available, checked and properly tagged.  
2. Fire extinguishers are proper for the exposure  
3. Flammable Materials properly stored and labeled  
4. Flammable waste, rubbish are removed or properly stored each day.  

### ELECTRICAL

5. Is there energized electrical work required on this site?  
6. Proper PPE and tools being used  
7. Electrical equipment grounded, marked and guarded  
8. Extension cords and plugs or boxes are in good repair/condition  
9. GFCI’s being used on all temporary power circuits  
10. Damaged tools and equipment are tagged and removed from service for proper repairs or replacement  

### FIRST AID

11. First Aid Cards on appropriate personnel are current  
12. First Aid supplies and equipment available  
13. Trained First Aid/CPR personnel available as needed  
14. If required, is there an emergency medical plan available and understood  

### PERSONAL PROTECTIVE EQUIPMENT

15. Hard Hats needed, available and in use  
16. Eye Protection needed, available and in use  
17. Eye Wash stations required and operational  
18. Hand Protection needed, available and in use  
19. Foot protection - Proper for the site  
20. Hearing Protection  
   - Required  
   - Available  
   - In Use  
21. Respirator, cartridges and prefilters appropriate and in use.  
22. Extra cartridges and prefilters available  
23. If Respirators are required, is there both positive and negative fit checks performed each time the respirators are used.  
24. Is there a requirement to use Fall Protection Equipment?  
25. Is there a Fall Protection plan at the site  
26. Adequate Fall Protection equipment on site and are all users trained in its wearing and use
## Conditions & Protection/Awareness Satisfactory

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## Employee Information

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## Equipment

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## Housekeeping

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## Information Reporting Process

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## General/Other

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<tr>
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<tr>
<td>53 Drinking water available with disposable cups</td>
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<tr>
<td>54 Security on site as required or needed</td>
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<tr>
<td>55 Employee's are all properly trained for all work assignments</td>
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<tr>
<td>56 Other contractors have been brief and trained on the hazards we bring to this site</td>
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<tr>
<td>57 Excavations are properly guarded, barricaded stepped back and or covered.</td>
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</table>
PROJECT HAZARD ANALYSIS

Company: ______________________________ Date: __________________
Completed By: __________________________

1. Project Information

Owner/Project Name: _____________________________________________
Address/Location: _______________________________________________

General Contractor: ______________________________________________
Contact Person: __________________________________________________

Specific Project Considerations
Subcontractors on Project: (List on separate page and attach)

Subcontractors Under Your Control: _________________________________

Description of Work: _____________________________________________

Materials To Be Used: _____________________________________________

Equipment Required: _____________________________________________

2. Safety Considerations

Review the project requirements to identify possible hazards.

Work Site Considerations: (elevations, terrain, footing, enclosed rooms, etc.)

Material Considerations: (flammability, toxicity, corrosivity, etc.)

Equipment Considerations: (ladders, lifts, insulating barriers, etc.)
3. **Hazard Analysis**

Briefly list task. For each task, list the possible hazard that may be encountered. For each hazard, identify the way it will be controlled.

<table>
<thead>
<tr>
<th>Task</th>
<th>Hazards</th>
<th>Hazard Control</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

4. **Subcontractor Information**

While working at the project, will your employees be working in proximity to other subcontractors?

If yes, are your employees going to be subjected to any hazards related to the work of the other subs? (i.e., dust, welding sparks, toxic vapors, falling objects, etc.)

If both answers are yes, take appropriate steps to inform your employees of the hazards and the way to protect themselves.

5. **Hazard Control Management**

Briefly state your plan to assure the use of hazard controls at the project.

_____________________________________________________________________________________

_____________________________________________________________________________________

Name of person responsible for site hazard control: ________________________________
**JOB HAZARD ANALYSIS**

Task: ________________________________

Date: ________________________________

1. Identify the steps required to complete the task.
2. Identify the hazards associated with that step.
3. Next to the hazard, identify existing controls (ex: guards, PPE, ventilation, etc.).
4. List any additional controls or precautionary measures that can be taken.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Hazards</th>
<th>Existing Controls</th>
<th>Recommendations</th>
</tr>
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</tbody>
</table>
NOTICE OF SAFETY VIOLATION

EMPLOYEE NAME: _________________________ SOCIAL SECURITY NO.: ____ - ___ - _____
TODAYS DATE: ____ / ____ / ____   VIOLATION DATE: ____ / ____ / ____
VIOLATION PLACE: _______________________  VIOLATION TIME: ___________

NATURE OF VIOLATION

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

REPORTED BY: __________________________ TITLE: _________________________

EMPLOYEE STATEMENT:

_____ I agree with the company statement.

_____ I do not agree with the company statement. Please explain: _________________________________

________________________________________________________________________

EMPLOYEE SIGNATURE: ________________________________  DATE:  ____ / ____ / ____

We consider the safety of our employees to be very important. Therefore, to prevent accidents, our policy is to strictly enforce company safety rules. Infraction of safety rules will result in the following:

1st Infraction - Verbal Warning
2nd Infraction - Written Warning
3rd Infraction - 1 Week Suspension Without Pay
4th Infraction - Dismissal

This is your ____ 1st   ____ 2nd    ____ 3rd    ____ 4th Infraction

Action taken therefore is: __________________________________________

Supervisor: _____________________________   DATE:  ____ / ____ / ____

Employee: _____________________________   DATE:  ____ / ____ / ____
APPENDIX B

******

SAFETY PROGRAM
**NECA/IBEW**  
**Injury/Illness Report Form**

<table>
<thead>
<tr>
<th>Date of Injury/Illness:</th>
<th>Job Classification of Injured:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General Task:</td>
</tr>
<tr>
<td></td>
<td>Specific Activity:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Department (Check One)</th>
<th>Commercial</th>
<th>High Voltage</th>
<th>Job Classification of Injured:</th>
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<tbody>
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<td>Yes</td>
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<td>Residential</td>
<td>Yes</td>
<td>Yes</td>
<td>Other:</td>
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<tr>
<td>High-Tech</td>
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| Description of Incident: |

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<thead>
<tr>
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<th>Injured Body Part (Check all that apply)</th>
<th>Source (Check one)</th>
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<tbody>
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<td>Abdomen</td>
<td>Air Pressure</td>
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<td>Arm</td>
<td>Hand Tool</td>
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<td>Bodily Motion</td>
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<td>Hearing Loss</td>
<td>Back-Lower</td>
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<td>Brain</td>
<td>Auto</td>
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<td>Elbow</td>
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<td>Thigh</td>
<td>Building/Structure</td>
</tr>
<tr>
<td></td>
<td>Toe</td>
<td>Chemicals</td>
</tr>
<tr>
<td></td>
<td>Wrist</td>
<td>Cumulative Trauma</td>
</tr>
<tr>
<td></td>
<td>Other: None</td>
<td>Electricity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Injury Event Type (check one)</th>
<th>Extent of Injury/Illness (check one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodily Reaction</td>
<td>No Treatment Necessary</td>
</tr>
<tr>
<td>Caught in/Under/Between</td>
<td>On Site, Self-Administered First Aid</td>
</tr>
<tr>
<td>Contact w/Electrical Current</td>
<td>On Site, First Aid Administered by Others</td>
</tr>
<tr>
<td>Contact w/Chemical/Radiation</td>
<td>Off Site Medical Attention – First Aid</td>
</tr>
<tr>
<td>Contact w/Temp Extreme</td>
<td>OSHA Recordable Due to:</td>
</tr>
<tr>
<td>Fall from Elevation</td>
<td>Prescription Medications</td>
</tr>
<tr>
<td>Fall from Same Level</td>
<td>Work Restrictions</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Extent of Injury</td>
</tr>
<tr>
<td>Motor Vehicle Accident</td>
<td>Type of Medical Treatment</td>
</tr>
<tr>
<td></td>
<td>Lost Time</td>
</tr>
<tr>
<td></td>
<td>Fatality</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Was the Appropriate Safety Equipment Provided?</th>
<th>Yes</th>
<th>No</th>
<th>Was it in Use?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

| How Could this Injury/Illness/Incident Been Prevented? |

<table>
<thead>
<tr>
<th>Gender of Injured Worker</th>
<th>Age of Injured Worker</th>
<th>Months of Service in the Trade</th>
<th>Months of Service with Contractor</th>
<th>Time of Day Accident/Incident occurred</th>
<th>Day of Week of the Occurrence</th>
</tr>
</thead>
</table>

Version 4.1  
2003  
When Complete: Fax to: 541/736-1449 Or E-Mail to: dave@orpacneca.org
INCIDENT INVESTIGATION REPORT

(For near-miss accidents also)

1. Date of Incident: _________________ 2. Time: ________ a.m. ________ p.m.
3. Date Reported: __________________
4. Age of individual involved: ___________  Job Classification ______________________________
5. Job Title: ____________________________
6. Experience: (years/months) _________________ 7. Sex  M (   ) F (   )
8. Describe the incident: ______________________________________________________________
   __________________________________________________________________________________
9. Was there a potential for injury or illness? YES _____ NO _____
   Describe the injury or illness that may have occurred: ____________________________________
   __________________________________________________________________________________

10. Was there a potential for property damage? YES _____ NO _____
    Describe the property damage that may have occurred: _________________________________
    __________________________________________________________________________________
11. What were the immediate causes of the incident?: ________________________________
    __________________________________________________________________________________
12. What were the underlying causes of the incident?: ________________________________
    __________________________________________________________________________________
13. What existing controls were in place to prevent the incident?: _______________________
    __________________________________________________________________________________
18. Identify training, written procedures, machine guards, protective equipment, etc.: ______
    __________________________________________________________________________________

SAFETY COMMITTEE COMMENTS/RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>Description of Changes</th>
<th>Responsible for Changes</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Page B-2
When an employee has reported an injury or illness, which requires medical attention, the following actions should be taken.

### INJURY MANAGEMENT CHECKLIST

*This information is confidential and is used by the employer only. This page is supplied to assist the employer and is not required in any way.*

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>DATE/TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial medical treatment:</strong></td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td><strong>Notify claims:</strong></td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>FAX</td>
<td></td>
</tr>
<tr>
<td><strong>Provide information to the physician:</strong></td>
<td></td>
</tr>
<tr>
<td>Duties/tasks of injured employee</td>
<td></td>
</tr>
<tr>
<td>Circumstances of injury occurrence</td>
<td></td>
</tr>
<tr>
<td>Accommodations for return-to-work</td>
<td></td>
</tr>
<tr>
<td><strong>Call the employee within 24 hours:</strong></td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>Express commitment to care and recovery</td>
<td></td>
</tr>
<tr>
<td>Ask about treatment received</td>
<td></td>
</tr>
<tr>
<td>Ask about special needs/concerns</td>
<td></td>
</tr>
<tr>
<td><strong>Follow up with physician within 24 hours:</strong></td>
<td></td>
</tr>
<tr>
<td>Discuss employees job duties and options for accommodating his/her restrictions</td>
<td></td>
</tr>
<tr>
<td>Discuss timetable for employees return-to-work</td>
<td></td>
</tr>
</tbody>
</table>

After taking the initial actions listed above, the activities should be completed regularly and documented.

While the employee remains away from work, continue to monitor progress with the employee and physician at least every two weeks.

Keep your claims handler informed regarding initial treatment and subsequent progress toward return-to-work.
ATTENDING PHYSICIANS REPORT

This information is confidential and is used by the employer only. This page is supplied to assist the employer and is not required in any way.

Employer: _____________________________  Claim No.: _____________________________
Patients Name: ________________________  Social Security No.: _____________________________

Dear Doctor:

Please provide the following information related to this injury/illness. This will assist us in returning our employee to work. Our company has an extensive and comprehensive Return to Work program for the injured/ill employee.

1. ___  Employee may return to normal work duties at once.

2. ___  Employee may return with the following restrictions.

   Hours/Day:  No restrictions  8 hours  6 hours  4 hours  Other
   Days/Week:  No restrictions  5 days  4 days  3 days  Other
   Lifting:  No restrictions  40 lbs  30 lbs  20 lbs  10 lbs  Other
   Movement:  No restrictions  Limited stooping  Limited bending  Limited overhead reaching  Other

   Other (please specify):

   Length of restrictions: Resume regular duties after ____ days, OR employee will be re-evaluated on (date) _______________

3. ___  The employee is totally incapacitated at this time. Employee will be re-evaluated on (date) _______________

4. Notice to physician and employee: This report must be returned to Employees Employer and Claims Department within 24 hours of this office visit.

   I saw the patient on ________________ and have made the following diagnosis.

   Dx: __________________________________________________________

   __________________________________________________________

   __________________________________________________________

5. Comments:

   __________________________________________________________

   __________________________________________________________

   __________________________________________________________

Physicians signature ___________________________________ Date: _____________________________
# TASK FUNCTION EVALUATION

**Date:** __________________

This information is confidential and is used by the employer only. This page is supplied to assist the employer and is not required in any way.

**Company:** ___________________________  **Job Site:** ___________________________

**Employee:** ___________________________  **Job Classification:** ___________________________

## I. Employees Function (provide a basic description of job duties)

---

## II. Work Location

<table>
<thead>
<tr>
<th>Indoors</th>
<th>Heated</th>
<th>Yes</th>
<th>Personal Protective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside</td>
<td>No</td>
<td></td>
<td>Equipment Required</td>
</tr>
<tr>
<td>Below Ground</td>
<td>Temp. Extremes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Elevated areas</td>
<td>Describe:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## III. Work Postures: Work is performed in which posture? Indicate frequency.

<table>
<thead>
<tr>
<th>Posture</th>
<th>Continuous (6-8 Hrs/Day)</th>
<th>Frequent (2-6 Hrs/Day)</th>
<th>Infrequent (0-2 Hrs/Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standing</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Sitting</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Bending</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Reaching</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Walking</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Climbing</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Kneeling</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

## IV. Physical Demands

### Lifting

<table>
<thead>
<tr>
<th>Description of Materials</th>
<th>Weight of Materials</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Frequency of Lifting</th>
<th>Position of Lift</th>
</tr>
</thead>
</table>

### Carrying

<table>
<thead>
<tr>
<th>Description of Materials</th>
<th>Weight</th>
<th>Distance Carried</th>
</tr>
</thead>
</table>

### Tool Usage

<table>
<thead>
<tr>
<th>(Description or list tools)</th>
<th>Forceful grip required?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Frequency of Usage</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Work Hours</th>
<th>Number and length of breaks/rest periods</th>
</tr>
</thead>
</table>

**Misc.:** Indicate any other special or unusual job demands: ____________________________________________________
APPENDIX C

******

SAFETY PROGRAM
MEETING / TRAINING ATTENDANCE ROSTER

COMPANY: ___________________________  □ SAFETY MEETING
JOB SITE: ___________________________  □ SAFETY TRAINING SESSION
DATE: ___________ TIME: ___________

TOPICS ADDRESSED
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

EMPLOYEES’ SIGNATURES
_________________________________________  __________________________________________
_________________________________________  __________________________________________
_________________________________________  __________________________________________
_________________________________________  __________________________________________
_________________________________________  __________________________________________
_________________________________________  __________________________________________
_________________________________________  __________________________________________
_________________________________________  __________________________________________

EMPLOYEE SUGGESTIONS AND RECOMMENDATIONS
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

ACTION TAKEN
__________________________________________________________________________________________
__________________________________________________________________________________________

Supervisor’s Signature: ___________________________  Date: _____ / _____ / _____
Safety Coordinator’s Signature: _______________________  Date: _____ / _____ / _____
# EMPLOYEE SAFETY TRAINING AGENDA

## I. SAFETY ORIENTATION TRAINING

Provide Safety Orientation Training for all new, transferred or reassigned employees.

<table>
<thead>
<tr>
<th>TRAINING TOPICS</th>
<th>COMPLETED TRAINING</th>
<th>UNDERSTAND HOW TO APPLY TO JOB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company Safety Policy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Safety Program</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Supervisor Responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Employee Responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Safety Rules and Procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hazardous Substances</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- HazCom Regulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- MSDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Labeling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Physical Hazards of Chemicals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Health Hazards of Chemicals</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Emergency Action</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Emergency Action Plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Portable Fire Extinguishers</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vehicle and Driving Safety</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Employee Name ________________________________  
Signature
II. ON-THE-JOB TRAINING

Task Training, Toolbox Safety Meetings and Refresher Training should be conducted on-the-job. Provide task training to new or transferred employees or when new equipment or materials are introduced to the workplace.

<table>
<thead>
<tr>
<th>TRAINING TOPICS</th>
<th>COMPLETED TRAINING</th>
<th>UNDERSTAND HOW TO APPLY TO JOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Safety Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Hygiene and Sanitation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Protective Clothing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Eye and Face Protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Lifting Procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Heat Stress/Cold Emergencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Drugs and Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ladders and Scaffolding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ladder Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Scaffolding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Scissor Lifts and Man Lifts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Hand and Power Tools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Hot Sticks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Compressors and Compressed Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Site Hazards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Machine and Tool Safeguards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- General Electrical Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Fire Protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Housekeeping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Security</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

III. SPECIALIZED TRAINING

Specialized Training should be provided to affected employees before they are exposed to the hazard. The training must be a thorough, competency-based program.

Employee Name ________________________________

Signature

Page C-3
<table>
<thead>
<tr>
<th>TRAINING TOPICS</th>
<th>COMPLETED</th>
<th>UNDERSTAND TRAINING</th>
<th>HOW TO APPLY ON JOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Respiratory Protection</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- Asbestos</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- Hearing Protection</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- Confined Space</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- Lockout / Tagout</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- Blood borne Pathogens</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- Injury Response</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- Fall Protection</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>- NFPA 70E Compliance</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>EEW Policy</td>
<td></td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Employee Name ________________________________

Signature
<table>
<thead>
<tr>
<th>SAFETY ORIENTATIONS</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
<th>Employee Name Here</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Insert Date employee completed training)</td>
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<tr>
<td>ACCIDENT PREVENTION</td>
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<tr>
<td>Accident Prevention - Painless &amp; Profitable</td>
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<td>ASBESTOS</td>
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<tr>
<td>Awareness</td>
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<td>Level II</td>
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<tr>
<td>Level III</td>
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<td>Level IV</td>
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<tr>
<td>Competent Person</td>
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<tr>
<td>ASSURED EQUIPMENT GROUNDING</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Employee/User</td>
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<td></td>
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<tr>
<td>BACK CARE</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Lifting Safely</td>
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<tr>
<td>Back Injury Prevention</td>
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<tr>
<td>Back Injury Prevention Tips</td>
<td></td>
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# Employee Training Log

**Safety Orientations**

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**(Insert Date employee completed training)**

- **Elevated/Mobile Equipt.**
- Scissor & Aerial Lifts
- Employee/User
- Competent Person

- **Ergonomics**
- Ergonomics and Tool Use

- **Excavation**
- Excavations & Trenching
- Excavation/Trenching Safety

- **Fall Protection**
- User Awareness/Equipment
- Employee/User
- Competent Person
- Body Harness and Lanyard Inspection
- Don’t Gamble w/Personal Fall Arrest
- 100% Fall Protection
- Falls are caused by Foolish Acts
- Causes & Prevention of Falls
- OSHA 10 Fall Protection
- Falls In General

- **Fire Prevention**
- Don’t Give Fire a Chance
- FIRST AID/CPR

- **Fleet Safety**
- Fleet Safety - Safe Driving

- **Floor Openings**
- Floor, Roof, Wall Openings

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**EMPLOYEE TRAINING LOG**

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APPENDIX D

******

SAFETY PROGRAM
HOW TO CONDUCT A SAFETY MEETING

OBJECTIVES

Safety meetings can be used to provide information and training to employees. In addition, they must provide a forum for employees and supervisors to discuss safety issues that affect employees. Hazards can be identified and procedures developed to abate the hazards and provide protection for the employees.

TIME REQUIREMENTS

Spending about twenty minutes each week will go a long way in improving your safety and health program. It is important to remember it is not the quantity of time spent but the quality of the time that counts the most.

AGENDA

Plan your safety meetings in advance. Each meeting should be scheduled with a specific objective in mind. For example, you may wish to discuss an incident (“near-miss” accident). Involve all employees by phrasing the information to be conveyed in the form of questions. For example, you may ask such things as “Why did the incident take place” or “What action should we take to prevent a reoccurrence.”

DOCUMENTATION

Be sure to document all safety meetings. Include the time and date of the meeting, employees in attendance, subjects addressed and the recommendations for corrective action.

Document all corrective action you take. Provide feedback to the employees on the action that has been taken. Open communication and the follow through on recommendations will provide the necessary credibility needed to make the safety meeting work effectively.
HOW TO CONDUCT A SAFETY TRAINING SESSION

PERFORMANCE OBJECTIVES

All training should be based on specific performance objectives. A specific objective identifies an action or task you expect the learner to accomplish. It lets the learner know exactly what they must learn upon completion of training.

Prepare a performance objective for all training. Make sure that the participants are capable of accomplishing the objective you prepare. Let participants know how you will prepare them to accomplish the objective. Participants should also know what degree of accuracy you expect when their attempts to complete the objective are evaluated.

The following is an example of an objective for a training session on ladders:

“Upon completion of a training session on ladders, participants will be able to climb a ladder safely using the three-point contact and keep their bodies centered on the ladder each time they use a ladder.”

TRAIN TO THE OBJECTIVE

Before beginning your training, review the objective and the material (Toolbox Talks, videotapes, lecture notes, etc.) you will use to accomplish your objective. Select material or outline a presentation that will address the objective. Do not waste time on information that, although it may be interesting, does nothing to assist the participant in accomplishing the objective you have set.

MONITOR AND ADJUST

Regardless of the method, the trainer must monitor or check participants’ understanding of material during training. Observe participants’ behavior. If you notice a puzzled look on participants or they are inattentive, they may not understand. Provide explanations or other information to help them.

If you cannot determine their understanding by body language, ask questions. During lectures, stop to check for understanding. If participants do not understand, adjust the training. Determine the source of the misunderstanding, analyze the material or presentation, and instruct it again.
IDEAS TO IMPROVE TRAINING

Motivation
Training must satisfy a need. Participants will want to learn if they are concerned about the outcome. Employees’ concerns for safety or proper job performance are motivators. If training addresses this need, participants will want to learn. Employers can increase concern and motivation by demanding a specific outcome, proper job performance, or test score. Caution: if concern is too high, participants may give up.

Other motivators include a pleasant feeling, tone and rewards. Training should be a pleasant experience. Colorful posters, videos or slides are pleasant to look at, and they motivate participants to learn about the material. Rewards can be offered for successful completion of training. The success itself is often a reward to individuals and will motivate many to do well in training sessions that are scored. Participants must know the results of their efforts.

Active Participation
The word “participant” identifies the role employees must take in training. Active participation must occur for effective learning. The participation can be internal to the employee, but he must be involved with the learning. For example, if an employee sits through a video without listening, no learning will take place. Ensure participation by identifying what employees must learn, and then ask them to prove it through tests or oral participation.

Anticipatory Set
Participants must be prepared to learn. Anticipatory set focuses participants on the task at hand. Describing the reasons for training or reviewing the objective will focus participants.

Closure
Upon completion of training, participants should be asked to review what they have learned. Tests or a summary provide closure to a training session.

Meaning
Participants must understand in order to learn. Information presented must be at their level of understanding. Participants also must be familiar with the ideas to be presented. The chemical structure of a disc in the back has no meaning to an employee. The design of the back and its relationship to correct lifting does. Review videos or safety talks to ensure that the information is presented at the employee’s level and addresses areas that are of concern to the employee. Information that concerns the participant will have meaning.
**Modeling**
Modeling is an important technique for teaching workplace safety. Employees will learn more by watching supervisors perform their jobs safely. Supervisors must be extremely familiar with safe procedures and model these procedures to employees at all times.

**Practice**
Participants should apply the information they have been taught. Safety procedures described in a safety talk should be used on the job. Activities, which will enable employees to use the information from a video or safety talk, will improve learning a great deal.

**DOCUMENTATION**
It is important that all safety training be documented. Attendance rosters, tests and other training documents that demonstrate your attempt to provide employees with effective safety training should be kept on file.
SECTION 1

WRITTEN HAZARD COMMUNICATION PROGRAM

*******

SAFETY PROGRAM
Revised 2010.12.22
WRITTEN HAZARD COMMUNICATION PROGRAM

I. Purpose

***** has established the following Written Hazard Communication Program to enhance the safety of its employees. This program ensures that each employee is provided with information about hazardous chemicals (including Labels, MSDS’s, and training) that is required by the Hazard Communication Standard, OAR 437, Division 2 Subdivision Z (29 CFR 1910.1200) and OAR 437, Division 3 Subdivision D (29 CFR 1926.59) and necessary for their safety.

It is a requirement of ***** that a written Hazard Communication Supplement to this policy be developed for individual worksites. That supplement shall identify differences and/or changes from this company policy that deal with specific issue unique to the jobsite. As the requirements of the worksite change, the supplement shall be updated and all employees shall receive a written copy of the changes along with appropriate raining.

II. Chemical Inventory

An inventory of chemicals was completed by supervisors. The list of chemicals from each supervisor was added to the list of chemicals identified in this program in Appendix A. The Safety Coordinator must be notified before any new chemical is brought into the workplace. Supervisors will notify the Safety Coordinator who will determine if the chemical is hazardous. A hazardous chemical will be added to Appendix A and all actions necessary for the introduction of a new chemical into the workplace will be completed (refer to the Labeling, MSDS and training section of this program.)

III. Labeling

Containers
The Safety Coordinator has reviewed all hazardous chemical containers and verified the following information:

1. Labels contain the name of the substance as it appears on the inventory list and MSDS.
2. Appropriate hazard warnings are noted.
3. The name and address of the manufacturer are listed.

Supervisors will review all incoming chemicals to verify the information as described above. In addition, they will make sure that a copy of the label is placed on any in-house containers when a hazardous chemical is transferred from a bulk container to an in-house container. All labels shall be in compliance
with state and federal regulations. All labels shall be maintained and protected from damage so that all exposed employees of all contractors are able to clearly review/view and read the label.

IV. **Material Safety Data Sheets (MSDS)**

Each hazardous chemical has an MSDS available in the work area or job site. The appropriate MSDS’s are easily accessible in the following work area at the locations identified:

<table>
<thead>
<tr>
<th>Work Area</th>
<th>MSDS Location</th>
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Copies of all MSDS’s are located in the____________________. No hazardous chemical may be purchased or received as samples without the appropriate MSDS. All purchase orders will be stamped with a request for all necessary MSDS’s. The Safety Coordinator will secure and review all MSDS’s for chemicals in the inventory and for any incoming MSDS as new chemicals are added to the list or an updated version is received. OSHA will be notified, if a manufacturer has supplied an incomplete MSDS or refuses to provide a MSDS.

V. **Information and Training**

Each employee has attended a safety orientation, which covered the following:

- Hazard Communication (Right-to-Know)
- Operations where hazardous chemicals are present
- Location and availability of MSDS’s and Written Program
- The hazards associated with Physical Hazards of Chemicals and Chemical Health Hazards
- Methods to prevent exposure to the physical or health hazards of chemicals
- Actions to take upon exposure to health hazards or release of physical hazards
- How to read a Material Safety Data Sheet (MSDS)
- How to read hazardous chemical labels

The Safety Coordinator will address the special hazards of specific chemicals by reviewing these hazards with the appropriate employees using the MSDS as a reference. The safety coordinator will also review the information above with new hires. Transferred employees will receive site-specific training before
beginning a new assignment. All employees should understand the information provided in the training. Refer to questions to the Safety Coordinator.

VI. **Non-Routine Tasks**

Periodically, employees may need to complete certain tasks involving hazardous chemicals that are not a usual part of their job. All employees will be notified of these non-routine tasks, the hazards and their scope and information and training shall be provided either verbally, through the safety/training meeting program or in another manner deemed appropriate to the specific jobsite.

Any employee required to perform such a task will be trained in the following before proceeding:

- specific hazards
- protective measures
- measures taken to lessen the hazards

VII. **Contractor Information Exchange/ Multi-Employers**

Our job sites include a variety of specialty contractors. The Safety Coordinator will meet with appropriate representatives from the various contractors to ensure that all information (labeling, MSDS’s, etc.) is exchanged and made available at the site for employees. The Safety Coordinator will provide information on the chemicals our company uses to each contractor as needed. The Safety Coordinator will gather all information from the contractor and provide a safety seminar to our employees about the chemicals our employees may be exposed to from other contractors. To insure that the proper exchange has been completed all contractors must complete the Contractor MSDS Receipt Form. MSDS’s for all hazardous chemicals must be available at the work site from each contractor.

This also applies to multi-work areas/sites where employees of other construction firms are or may be present.

If specialty training of other employer’s staff is appropriate, ***** will provide such training.
LIST OF HAZARDOUS SUBSTANCES
Supervisor Chemical Inventory

The following list has been compiled by area. MSDS’s can be found by looking in the appropriate location or books of MSDS’s.

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<th>Work Area/JOB SITE:</th>
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CONTRACTOR MSDS RECEIPT

As a representative of ____________________, I have received the _____________________ Written Hazard Communication Program Binder. I am aware of the hazardous chemicals contained within the areas where _____________________ workers may have potential exposure to hazardous chemicals. I have reviewed and understand all applicable MSDS’s. I have also been provided with all the necessary information I requested in accordance with the Hazard Communication Standard (29 CFR 1910.1200/1926.59).

Our employees while performing the contracted services will use the hazardous chemicals listed below. _____________________ has been provided with their MSDS’s. If additional hazardous chemicals are needed, the Safety Coordinator identified below will be notified and the MSDS for the chemical will be provided without delay.

__________________________________________  __________________________________________
Contractor Representative     Safety Coordinator
MSDS REQUEST

Date___________________

Manufacturer/Distributor:__________________________________________________

To Whom It May Concern:

________________________________________ has completed its chemical inventory in compliance with the Hazard Communications Standard 29 CFR 1926.59. Our inventory has disclosed that we have the following product supplied by your company and an incomplete or inaccurate MSDS.

Product Name or Chemical Name and ID Number ________________

In accordance with the provisions of the Hazard Communication Standard, you must provide a complete and accurate copy of the Material Safety Data Sheet (MSDS) for the product(s) identified, Product Name or Chemical Name and ID Number.

Please send a proper MSDS to the following address:

Attn: Purchasing Manager

Thank you for your prompt attention to our specific needs.

Sincerely,
HAZARDOUS CHEMICAL IDENTIFICATION

All chemicals can be hazardous depending on the method of entry into the body and the amount that enters. Based on this, all items in the workplace might be added to the chemical inventory. However, OSHA has exempted several substances based on their use or regulation by other agencies. The items listed below are exempt. Compare the substances or items in the workplace to the list below. Do not include any items in your chemical inventory that match any of the descriptions below.

CHEMICALS EXEMPT FROM HAZARD COMMUNICATION

**Hazardous wastes** which are subject to regulations by the Environmental Agency (EPA).

**Tobacco or tobacco products** in any form.

**Wood or wood products** that the only hazard is the potential for fire (Wood or wood products which have been treated with a hazardous chemical or which may be sawed or cut, generating dust, are not exempt.)

**Articles** are items other than fluids or particles which:
1) are formed to a specific shape or design during manufacture
2) have a use based on its shape or design (example. a chair)
3) under normal conditions of use do not release hazardous chemicals that pose a hazard.

**Food or alcoholic beverages** which are sold, used, or prepared in a retail establishment (such as a grocery store, restaurant, etc.), and foods intended for personal consumption by employees while in the workplace.

**Drugs** when it is in solid, final form for direct administration to the patient.

**Cosmetics** intended for personal use by employees while in the workplace.

**Consumer products** where they are used in the workplace as they would be used by the average consumer. For example, paint would not be considered a consumer product to
a painter, even if purchased at a retail store, due to their frequency and duration of potential exposure.

<table>
<thead>
<tr>
<th><strong>Nuisance particulates</strong></th>
<th>where the chemical manufacturer or importer can establish that they do not pose any physical or health hazard.</th>
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<tbody>
<tr>
<td><strong>Ionizing/ non-ionizing radiation</strong></td>
<td>are substances or materials which give off radiation.</td>
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<tr>
<td><strong>Biological hazards</strong></td>
<td>are substances which carry organisms which can cause disease such as medical wastes which may carry blood borne pathogens.</td>
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HAZARD COMMUNICATION TRAINING
EMPLOYEE RIGHT-TO-KNOW

Just about every organization uses hazardous chemicals – from mild cleaning products to the most dangerous of materials. Many will cause illness or injury if not treated with respect and handled correctly.

As an employer, you are required to inform your employees about the Right-To-Know program. Sometimes this is called the Hazard Communication, or “HazCom” law. It is a program for educating your employees about the hazards of materials at the job site, so they can take steps to protect themselves from exposure to chemicals.

Training:

Employee HazCom training includes the proper use and the potential hazards of materials. If employees do not understand something about the hazard, they should know that it is O.K. to ask. Training should be done at the time of initial employment or work assignment, as well as whenever there is a new material and hazard introduced into the work place.

It is important that all employees understand the following elements in relation to the hazard communication standard. These items should be covered in all hazard communication training:

- How to detect the presence or release of a hazardous chemical or substance in the workplace.
- The physical or health hazards associated with the chemicals with which you work.
- The measures you take to protect yourself from hazards, including engineering controls, work practices, and personal protective equipment.
- The details of the company hazard communication program, including the location of the written program and the MSDS.

The Different Types of Chemical Hazards:

Chemicals are grouped into two basic types: The first; health hazards, and the second physical hazards.

Chemicals cause health hazards if they are:

- Target organ toxic – they injure specific organs in the body.
- Toxic – they cause serious illness or death.
- Corrosive – they can destroy your eyes or skin.
Chemicals cause physical hazards if they are:

- Explosive – these must be handled with extreme caution.
- Flammable – these catch fire very quickly
- Reactive - these can burn, explode, or release toxic vapors if they come into contact with heat, air, or water.

LABELING

Labels on containers of chemicals are another good source of safety information. They should contain much of the same information as the MSDS, but they are usually less detailed. There are a few rules about labels your employees need to understand:

Do not use materials from unlabeled containers. This also applies to containers on with the label is impossible to read because it has been torn, defaced or damaged. This is true even if you “think” you know what is in the container.

Make sure you understand all the warnings and precautions on the label before using or working with the material. If you are unsure, ask a knowledgeable person, probably your Foreman or Supervisor or check the MSDS.

MSDS

Chemical suppliers send MSDS with the materials you order. MSDS are fact sheet for chemical substances. They contain information on the hazardous substances in the material you use. They also describe whether or not the chemical is toxic, flammable, reactive, or radioactive.

MSDS explain what protective equipment may be needed to protect the user from exposure to the chemical. They also explain how to store the material and how to handle spills that might occur. If the material is flammable or combustible, the MSDS will describe how to extinguish it properly should it catch fire.

HAZCOM GIVES THE EMPLOYER MANY RESPONSIBILITIES.

When it comes to working with chemicals, the employer pays a major role in keeping the workplace safe. The HAZCOM Standard requires the development of a written hazard communication program that:

Tell employees about the Hazard Communication Standard.
Explain how chemicals are used in the workplace.
Provide appropriate training on the hazardous chemicals.

The training should include things like how to:
Recognize, understand, and use labels and Material safety data Sheets (MSDS). Use safe procedures when working with hazardous substances.

EVERYONE HAS RESPONSIBILITIES AS WELL:

Even though the employer is working hard to keep the workplace safe, protecting oneself from chemical hazards is up to each individual. That means learning about the chemical hazards in the workplace and taking part in HAZCOM training.

Here are some general tips to follow:

- Identify hazards before you start the job.
- Respect all precautions – simply put, don’t take chances.
- If in doubt about some hazard, ask a supervisor/foreman or the owner.
- Know in advance what might go wrong and what action to take if it does.
- Know how and where you get help.

OTHER TRADES:

On most of your jobs, there will be employees representing other trades and companies. These people may have to work around or near the hazardous chemicals you have in the work area. These other contractors, trades, and employees have a need and a right to know what you have in the area. The MSDS on any job is shared information and should be available to all persons on the job site; regardless of for whom they work. You as well need to be aware of chemicals brought to your site by others.
SECTION 2

EMERGENCY ACTION AND FIRE PREVENTION PLAN

******

SAFETY PROGRAM

12.23.2010 Version
FI RE P REVENTION AND PROTECTIO N P O LICY

Policy Statement:

Every member of ***** is responsible for preventing and properly handling common fire hazards, and for familiarity with the companies fire prevention and protection plan.

Reason for Policy/Purpose

A fire in a company building and/or a company jobsite can endanger lives and destroy property. The purpose of this policy is to promote the safety of the construction community, prevent damage to OWNED AND NON-OWNED property, and to comply with the Occupational Safety and Health Administration (OSHA) Fire Prevention Plan regulation (29 CFR 1910.39).

***** has developed the Fire Prevention and Protection Plan, and Emergency Action Plan, to promote fire safety and awareness, and aimed at reducing the risk of fire-related incidents and injuries. The plans provide proper handling and storage procedures for potential fire hazards, procedures for regular maintenance of heat-producing equipment, contact information for employees charged with fire prevention and protection, and employee training information. All employees of ***** are responsible for familiarity with the company’s fire prevention and protection plan.

All employees of ***** are to receive proper training for the fire exposures to be encountered in advance of assignment.

Prevention is the most effective tool against fires on campus. The employees should be aware of common fire hazards in their respective places of work. The leading fire hazards in existing buildings and on construction sites include smoking materials, open flames, combustible decorations, flammable liquids, furniture, and trash.

In order to prevent accidental ignition of these combustible materials, regular maintenance of heat-producing equipment must be performed. Heat producing equipment such as burners, space heaters, boilers, generators and gasoline engines must be properly maintained and kept clean of flammable residues. In addition, flammables must not be stored in close proximity to heat producing equipment.
In pursuit of effective fire protection and evacuation procedures, fire alarm and
detection systems (such as smoke and heat detectors, manually-activated pull stations,
sprinkler systems, standpipe systems, fire extinguishers, etc.) are widely used in new
and existing buildings. All employees are responsible to become familiar with the fire
protection systems at each of the company and construction work site.

**EMERGENCY ACTION AND FIRE PREVENTION PLAN**

COMPANY: *****

DATE: _____________________

JOBSITE: __________________________________________

1. Type of potential emergencies: _______________________________________
   _______________________________________
   _______________________________________

2. Actions taken to prevent fire or leak emergencies: _________________________
   _______________________________________
   _______________________________________

3. Emergency escape procedures/emergency escape route assignments: ________
   _______________________________________
   _______________________________________

4. Location of fire blankets, first-aid kits, fire extinguisher and other fire-fighting
   Equipment or protective gear: _________________________________________
   _______________________________________
   _______________________________________

5. Procedures to account for all employees after emergency evacuation has been
   completed.
   _______________________________________
   _______________________________________

6. Procedures for employees who remain to shut down critical operations before
   evacuation.
   _______________________________________
   _______________________________________

7. Rescue or medical duties for employees who are to perform them: ____________
   _______________________________________
   _______________________________________

Section 2 – Page 2
8. Method for reporting fires: ________________________________

9. Contacts for emergency response plan information or explanations: ________________

__________________________________________
**FLOOR PLAN:**

This is a sample floor plan. Please identify the general location of emergency equipment, personal protective equipment, exits and exit routes as well as the location of various operations performed. Place the symbol of the item in the appropriate location. Use the symbols listed in the key below.

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<tbody>
<tr>
<td>[FS] Flammable Storage Area</td>
<td>[+] First Aid Kits</td>
<td>&lt;------- Exit Routes</td>
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<tr>
<td>__<em><strong>/</strong></em> Exits/doorways</td>
<td></td>
<td>_______ Walls</td>
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*****

Section 2 – Page 4
EMERGENCY PHONE NUMBERS

EMERGENCY MEDICAL SERVICE (EMS):

HOSPITAL:

PHYSICIAN:

FIRE DEPARTMENT:

POLICE:

CHEMTREC:

POISON CONTROL CENTER:

INSURANCE CO.:

NOTE: If we are working in an area serviced by a (911) emergency response program, 911 can be used in lieu of individual telephone numbers for each emergency contact telephone number, above.
PORTABLE FIRE EXTINGUISHER INSPECTION REPORT

Type of Extinguisher: ____________________ Serial #:_______________________

Location of Fire Extinguisher: _____________________________________________

Previous Inspection Date: ________________ Present Inspection Date: _____________
(must be within 30 days of previous inspection)

Last Day of Service: _____________________ Next Service Date: ______________
(by trained professional)(must be within 1 year of last service Date)

_____ Located in the designated place

_____ Easily accessible

_____ Easily visible

_____ Operating instructions on the name plate legible and facing outward

_____ Seals and tamper indications NOT broken or missing

_____ Full extinguisher. (weigh or heft)

_____ No obvious physical damage (corrosion, leakage, clogged nozzle)

_____ Pressure gauge reading or indicator in the operable range or position

_____ Inspection record dated and initialed

If the portable fire extinguisher does not pass inspection, take corrective action. This may include removing the extinguisher from service until it can be recharged or maintenance can be performed. Immediately replace the extinguisher with one of the same type and size that meets the inspection criteria.
FIRE PROTECTION:

******* shall be responsible for the development of a proper fire protection program to be followed throughout all phases of construction.

All firefighting equipment shall be available at all times to properly training employees designated as emergency fire response personnel. ******* shall periodically inspect all firefighting equipment and all equipment shall be working properly at all times. Defective equipment shall be removed from service immediately and replaced with equipment in good working order.

Depending on the specific project or job site requirements, ******* shall provide training and properly equipped firefighting staff, such as a fire brigade, to assure adequate protection of all personnel and the general public as applicable.
SECTION 3

LOCKOUT/TAGOUT PROGRAM

******

SAFETY PROGRAM
12.23.2010 edition
Lockout/ Tagout Policy and Procedure

Lockout is the preferred method of controlling personnel exposure to electrical energy hazards. Tagout is an alternative method that is available to employers.

To assist employers in developing a procedure that meets the requirement of 120.2 of NFPA 70E, the following sample procedure is provided for use in lockout or tagout programs. This procedure can be used for an individual employee control, a simple lockout/tagout, or as part of a complex lockout/tagout. Where a job or task is under the control of one person, the individual employee control procedure can be used in lieu of a lockout/tagout procedure. A more comprehensive plan will need to be developed, documented, and utilized for the complex lockout/tagout.

LOCKOUT (TAGOUT) PROCEDURE

1.0 Purpose. This procedure establishes the minimum requirements for lockout (tagout) of electrical energy sources.

It is to be used to ensure that conductors and circuit parts are disconnected from sources of electrical energy, locked (tagged), and tested before work begins where employees could be exposed to dangerous conditions. Sources of stored energy, such as capacitors or springs, shall be relieved of their energy, and a mechanism shall be engaged to prevent the re-accumulation of energy.

2.0 Responsibility. All employees shall be instructed in the safety significance of the lockout (tagout) procedure.

All new or transferred employees and all other persons whose work operations are or might be in the area shall be instructed in the purpose and use of this procedure. [Include the name(s) of person(s) or job title(s) of employees with responsibility] shall ensure that appropriate personnel receive instructions on their roles and responsibilities. All persons installing a lockout (tagout) device shall sign their names and the date on the tag (or state how the name of the individual or person in charge will be available).

3.0 Preparation for Lockout (Tagout).

3.1 Review current diagrammatic drawings (or other equally effective means), tags, labels, and signs to identify and locate all disconnecting means to determine that power is interrupted by a physical break and not de-energized by a circuit interlock. Make a list of disconnecting means to be locked (tagged).
3.2 Review disconnecting means to determine adequacy of their interrupting ability. Determine if it will be possible to verify a visible open point, or if other precautions will be necessary.

3.3 Review other work activity to identify where and how other personnel might be exposed to sources of electrical energy hazards. Review other energy sources in the physical area to determine employee exposure to sources of other types of energy. Establish energy control methods for control of other hazardous energy sources in the area.

3.4 Provide an adequately rated voltage detector to test each phase conductor or circuit part to verify that they are de-energized. (See 12.3.) Provide a method to determine that the voltage detector is operating satisfactorily.

3.5 Where the possibility of induced voltages or stored electrical energy exists, call for grounding the phase conductors or circuit parts before touching them. Where it could be reasonably anticipated that contact with other exposed energized conductors or circuit parts is possible, call for applying ground connecting devices.

4.0 Individual Employee Control Procedure. The individual employee control procedure can be used when equipment with exposed conductors and circuit parts is de-energized for minor maintenance, servicing, adjusting, cleaning, inspection, operating corrections, and the like, and the work shall be permitted to be performed without the placement of lockout/tagout devices on the disconnecting means, provided the disconnecting means is adjacent to the conductor, Circuit parts, and equipment on which the work is performed, the disconnecting means is clearly visible to all employees involved in the work, and the work does not extend beyond the work shift.

5.0 Simple Lockout/Tagout. The simple lockout/tagout procedure will involve paragraphs 1.0 through 3.0, 5.0 through 9.0, and 11.0 through 13.0.

6.0 Sequence of Lockout (Tagout) System Procedures.

6.1 The employees shall be notified that a lockout (tagout) system is going to be implemented and the reason therefore.

The qualified employee implementing the lockout (tagout) shall know the disconnecting means location for all sources of electrical energy and the location of all sources of stored energy. The qualified person shall be knowledgeable of hazards associated with electrical energy.

6.2 If the electrical supply is energized, the qualified person shall de-energize and disconnect the electric supply and relieve all stored energy.
6.3 Lockout (tagout) all disconnecting means with lockout (tagout) devices.

FPN: For tagout, one additional safety measure must be employed, such as opening, blocking, or removing an additional circuit element.

6.4 Attempt to operate the disconnecting means to determine that operation is prohibited.

6.5 A voltage-detecting instrument shall be used. (See 12.3.) Inspect the instrument for visible damage. Do not proceed if there is an indication of damage to the instrument until an undamaged device is available.

6.6 Verify proper instrument operation and then test for absence of voltage.

6.7 Verify proper instrument operation after testing for absence of voltage.

6.8 Where required, install grounding equipment/conductor device on the phase conductors or circuit parts, to eliminate induced voltage or stored energy, before touching them. Where it has been determined that contact with other exposed energized conductors or circuit parts is possible, apply ground connecting devices rated for the available fault duty.

6.9 The equipment and/or electrical source is now locked out (tagged out).

7.0 Restoring the Equipment and/or Electrical Supply to Normal Condition.

7.1 After the job or task is complete, visually verify that the job or task is complete.

7.2 Remove all tools, equipment, and unused materials and perform appropriate housekeeping.

7.3 Remove all grounding equipment/conductor/devices.

7.4 Notify all personnel involved with the job or task that the lockout (tagout) is complete, that the electrical supply is being restored, and to remain clear of the equipment and electrical supply.

7.5 Perform any quality control tests or checks on the repaired or replaced equipment and/or electrical supply.

7.6 Remove lockout (tagout) devices by the person who installed them.

7.7 Notify the equipment and/or electrical supply owner that the equipment and/or electrical supply is ready to be returned to normal operation.
7.8 Return the disconnecting means to their normal condition.

8.0 Procedure Involving More Than One Person. For a simple lockout/tagout and where more than one person is involved in the job or task, each person shall install his or her own personal lockout (tagout) device.

9.0 Procedure Involving More Than One Shift. When the lockout (tagout) extends for more than one day, the lockout (tagout) shall be verified to be still in place at the beginning of the next day. Where the lockout (tagout) is continued on successive shifts, the lockout (tagout) is considered to be a complex lockout (tagout).

For complex lockout (tagout), the person in charge shall identify the method for transfer of the lockout (tagout) and of communication with all employees.

10.0 Complex Lockout (Tagout). A complex lockout/tagout plan is required where one or more of the following exist:

1. Multiple energy sources (more than one)
2. Multiple crews
3. Multiple crafts
4. Multiple locations
5. Multiple employers
6. Unique disconnecting means
7. Complex or particular switching sequences
8. Continues for more than one shift, that is, new workers

10.1 All complex lockout/tagout procedures shall require a written plan of execution. The plan will include the requirements in 1.0 through 3.0, 6.0, 7.0, and 9.0 through 13.0.

10.2 A person in charge shall be involved with a complex lockout/tagout procedure. The person in charge shall be at this location.

10.3 The person in charge shall develop a written plan of execution and communicate that plan to all persons engaged in the job or task. The person in charge shall be held accountable for safe execution of the complex lockout/tagout plan. The complex lockout/tagout plan must address all the concerns of employees who might be exposed, and they must understand how electrical energy is controlled. The person in charge shall ensure that each person understands the hazards to which they are exposed and the safety-related work practices they are to use.
10.4 All complex lockout/tagout plans identify the method to account for all persons who might be exposed to electrical hazards in the course of the lockout/tagout. Select which of the following methods is to be used:

(1) Each individual will install his or her own personal lockout or tagout device.

(2) The person in charge shall lock his/her key in a "lock box."

(3) The person in charge shall maintain a sign in/out log for all personnel entering the area.

(4) Another equally effective methodology.

10.5 The person in charge can install locks/tags, or direct their installation on behalf of other employees.

10.6 The person in charge can remove locks/tags or direct their removal on behalf of other employees, only after all personnel are accounted for and ensured to be clear of potential electrical hazards.

10.7 Where the complex lockout (tagout) is continued on successive shifts, the person in charge shall identify the method for transfer of the lockout and of communication with all employees.

11.0 Discipline.

11.1 Knowingly violating this procedure will result in - (state disciplinary actions that will be taken).

11.2 Knowingly operating a disconnecting means with an installed lockout device (tagout device) will result in (state disciplinary actions to be taken).

12.0 Equipment.

12.1 Locks shall be _____(state type and model of selected locks)_______.

12.2 Tags shall be ____ (state type and model to be used)_______________.

12.3 Voltage detecting device(s) to be used shall be ____ (state type and model)___________________________.

13.0 Review. This procedure was last reviewed on ___(date)___ and is scheduled to be reviewed again on ___(date)___ (not more than one year from the last review).
14.0 Lockout/Tagout Training.
Training can include, but is not limited to, the following:

(1) Recognizing lockout/tagout devices
(2) Installing lockout/tagout devices
(3) Duty of employer in writing procedures
(4) Duty of employee in executing procedures
(5) Duty of person in charge
(6) Authorized and unauthorized removal of locks-tags
(7) Enforcing execution of lockout/tagout procedures
(8) Individual employee control of energy
(9) Simple lockout/tagout
(10) Complex lockout/tagout
(11) Using single line and diagrammatic drawings to identify sources of energy (12)
     Use of tags and warning signs
(13) Release of stored energy
(14) Personnel accounting methods
(15) Grounding needs and requirements
(16) Safe use of voltage detecting instruments
ARTICLE 120
From NFPA 70E - 2009
Establishing an Electrically Safe Work Condition

120.1 Process of Achieving an Electrically Safe Work Condition.
An electrically safe work condition shall be achieved when performed in accordance with the procedures of 120.2 and verified by the following process:

1) Determine all possible sources of electrical supply to the specific equipment. Check applicable up-to-date drawings, diagrams, and identification tags.

2) After properly interrupting the load current, open the disconnecting device(s) for each source.

3) Wherever possible, visually verify that all blades of the disconnecting devices are fully open or that drawout-type circuit breakers are withdrawn to the fully disconnected position.

4) Apply lockout/tagout devices in accordance with a documented and established policy.

5) Use an adequately rated voltage detector to test each phase conductor or circuit part to verify they are deenergized. Test each phase conductor or circuit part both phase-to-phase and phase-to-ground. Before and after each test, determine that the voltage detector is operating satisfactorily.

FPN: See ANSI/ISA-61010-1 (82.02.01)/UL 61010-1, Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements, for rating and design requirements for voltage measurement and test instruments intended for use on electrical systems 1000 V and below.

6) Where the possibility of induced voltages or stored electrical energy exists, ground the phase conductors or circuit parts before touching them. Where it could be reasonably anticipated that the conductors or circuit parts being deenergized could contact other exposed energized conductors or circuit parts, apply ground connecting devices rated for the available fault duty.

120.2 Deenergized Electrical Conductors or Circuit Parts That Have Lockout/Tagout Devices Applied. Each employer shall identify, document, and implement lockout/tagout procedures conforming to Article 120 to safeguard employees from exposure to electrical hazards. The lockout/tagout procedure shall be appropriate for the experience and training of the employees and conditions as they exist in the workplace.
(A) **General.** All electrical circuit conductors and circuit parts shall be considered energized until the source(s) of energy is (are) removed, at which time they shall be considered deenergized. All electrical conductors and circuit parts shall not be considered to be in an electrically safe work condition until all of the applicable requirements of Article 120 have been met.

FPN: See 120.1 for the six-step procedure to verify electrically safe work condition. Electrical conductors and circuit parts that have been disconnected, but not under lockout/tagout, tested, and grounded (where appropriate) shall not be considered to be in an electrically safe work condition, and safe work practices appropriate for the circuit voltage and energy level shall be used. Lockout/tagout requirements shall apply to fixed, permanently installed equipment, to temporarily installed equipment, and to portable equipment.

(B) **Principles of Lockout/Tagout Execution**

(1) **Employee Involvement.** Each person who could be exposed directly or indirectly to a source of electrical energy shall be involved in the lockout/tagout process.

FPN: An example of direct exposure is the qualified electrician who works on the motor starter control, the power circuits, or the motor. An example of indirect exposure is the person who works on the coupling between the motor and compressor.

(2) **Training.** All persons who could be exposed shall be trained to understand the established procedure to control the energy and their responsibility in executing the procedure. New (or reassigned) employees shall be trained (or retrained) to understand the lockout/tagout procedure as related to their new assignment.

(3) **Plan.** A plan shall be developed on the basis of the existing electrical equipment and system and shall utilize up-to-date diagrammatic drawing representation(s).

(4) **Control of Energy.** All sources of electrical energy shall be controlled in such a way as to minimize employee exposure to electrical hazards.

(5) **Identification.** The lockout/tagout device shall be unique and readily identifiable as a lockout/tagout device.

(6) **Voltage.** Voltage shall be removed and absence of voltage verified.

(7) **Coordination.** The established electrical lockout/tagout procedure shall be coordinated with all of the employer's procedures associated with lockout/tagout of other energy sources.
(C) **Responsibility.**

(1) **Procedures.** The employer shall establish lockout/tagout procedures for the organization, provide training to employees, provide equipment necessary to execute the details of the procedure, audit execution of the procedures to ensure employee understanding/compliance, and audit the procedure for improvement opportunity and completeness.

(2) **Form of Control.** Three forms of hazardous electrical energy control shall be permitted: individual employee control, simple lockout/tagout, and complex lockout/tagout. [See l20.2 (D).] For the individual employee control and the simple lockout/tagout, the qualified person shall be in charge. For the complex lockout/tagout, the person in charge shall have overall responsibility.

    **FPN:** For an example of a lockout/tagout procedure, see Annex G.

(3) **Audit Procedures.** An audit shall be conducted at least annually by a qualified person and shall cover at least one lockout/tagout in progress and the procedure details. The audit shall be designed to correct deficiencies in the procedure or in employee understanding.

(D) **Hazardous Electrical Energy Control Procedure.**

(1) **Individual Qualified Employee Control Procedure.**
The individual qualified employee control procedure shall be permitted when equipment with exposed conductors and circuit parts is de-energized for minor maintenance, servicing, adjusting, cleaning, inspection, operating conditions, and the like. The work shall be permitted to be performed without the placement of lockout/tagout devices on the disconnecting means, provided the disconnecting means is adjacent to the conductor, circuit parts, and equipment on which the work is performed, the disconnecting means is clearly visible to the individual qualified employee involved in the work, and the work does not extend beyond one shift.

(2) **Simple Lockout/Tagout Procedure.**
All lockout/tagout procedures that are not under individual qualified employee control according to 120.2(D)(1) or complex lockout/tagout according to 120.2(D)(3) shall be considered to be simple lockout/tagout procedures. All lockout/tagout procedures that involve only a qualified person(s) de-energizing one set of conductors or circuit part source for the sole purpose of performing work within the Limited Approach Boundary electrical equipment shall be considered to be a simple lockout/tagout. Simple lockout/tagout plans shall not be required to be written for each application.

    Each worker shall be responsible for his or her own lockout/tagout.
(3) Complex Lockout/Tagout Procedure.

(a) A complex lockout/tagout plan shall be permitted where one or more of the following exist:

(1) Multiple energy sources
(2) Multiple crews
(3) Multiple crafts
(4) Multiple locations
(5) Multiple employers
(6) Different disconnecting means
(7) Particular sequences
(8) A job or task that continues for more than one work period

(b) All complex lockout/tagout procedures shall require a written plan that identifies the person in charge.

(c) The complex lockout/tagout procedure shall vest primary responsibility in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operation lock). The person in charge shall be held accountable for safe execution of the complex lockout/tagout.

(d) 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 devised when he or she stops working on the machine or equipment being serviced or maintained.

(e) The complex lockout/tagout procedure shall address all the concerns of employees who might be exposed. All complex lockout/tagout plans shall identify the method to account for all persons who might be exposed to electrical hazards in the course of the lockout/tagout.

(4) Coordination.

(a) The established electrical lockout/tagout procedure shall be coordinated with all other employer's procedures for control of exposure to electrical energy sources such that all employer's procedural requirements are adequately addressed on a site basis.

(b) The procedure for control of exposure to electrical hazards shall be coordinated with other procedures for control of other hazardous energy sources such that they are based on similar/identical concepts.
(c) The electrical lockout/tagout procedure shall always include voltage testing requirements where there might be direct exposure to electrical energy hazards.

(d) Electrical lockout/tagout devices shall be permitted to be similar to lockout/tagout devices for control of other hazardous energy sources, such as pneumatic, hydraulic, thermal, and mechanical, provided such devices are used only for control of hazardous energy and for no other purpose.

(5) Training and Retraining. Each employer shall provide training as required to ensure employees' understanding of the lockout/tagout procedure content and their duty in executing such procedures.

(E) Equipment.

(1) Lock Application. Energy isolation devices for machinery or equipment installed after January 2, 1990, shall be capable of accepting a lockout device.

(2) Lockout/Tagout Device. Each employer shall supply, and employees shall use, lockout/tagout devices and equipment necessary to execute the requirements of 120.2(E). Locks and tags used for control of exposure to electrical energy hazards shall be unique, shall be readily identifiable as lockout/tagout devices, and shall be used for no other purpose.

(3) Lockout Device.

(a) A lockout device shall include a lock (either keyed or combination).

(b) The lockout device shall include a method of identifying the individual who installed the lockout device.

(c) A lockout device shall be permitted to be only a lock, provided the lock is readily identifiable as a lockout device, in addition to having a means of identifying the person who installed the lock.

(d) Lockout devices shall be attached to prevent operation of the disconnecting means without resorting to undue force or the use of tools.

(e) Where a tag is used in conjunction with a lockout device, the tag shall contain a statement prohibiting unauthorized operation of the disconnecting means or unauthorized removal of the device.

(f) Lockout devices shall be suitable for the environment and for the duration of the lockout.
(g) Whether keyed or combination locks are used, the key or combination shall remain in the possession of the individual installing the lock or the person in charge, when provided by the established procedure.

(4) Tagout Device.

(a) A tagout device shall include a tag together with an attachment means.

(b) The tagout device shall be readily identifiable as a tagout device and suitable for the environment and duration of the tagout.

(c) A tagout device attachment means shall be capable of withstanding at least 224.4 N (50 lb.) of force exerted at a right angle to the disconnecting means surface. The tag attachment means shall be non-reusable, attachable by hand, self-locking, and non-releasable, equal to an all-environmental tolerant nylon cable tie.

(d) Tags shall contain a statement prohibiting unauthorized operation of the disconnecting means or removal of the tag.

Exception to (a), (b), and (c): A "hold card tagging tool" on an overhead conductor in conjunction with a hotline tool to install the tagout device safely on a disconnect that is isolated from the worker(s).

(5) Electrical Circuit Interlocks. Up-to-date diagrammatic drawings shall be consulted to ensure that no electrical circuit interlock operation can result in reenergizing the circuit being worked on.

(6) Control Devices. Locks/tags shall be installed only on circuit disconnecting means. Control devices, such as pushbuttons or selector switches, shall not be used as the primary isolating device.

(F) Procedures. The employer shall maintain a copy of the procedures required by this section and shall make the procedures available to all employees.

(1) Planning. The procedure shall require planning, including 120.2(F)(1)(a) through 120.2(F)(2)(n).

(a) Locating Sources. Up-to-date single-line drawings shall be considered a primary reference source for such information. When up-to-date drawings are not available, the employer shall be responsible for ensuring that an equally effective means of locating sources of energy is employed.

(b) Exposed Persons. The plan shall identify persons who might be exposed to an electrical hazard and the personal protective equipment required during the execution of the job or task.
(c) Person In Charge. The plan shall identify the person in charge and his or her responsibility in the lockout/tag out.

(d) Individual Qualified Employee Control. Individual qualified employee control shall be in accordance with 120.2(D) (1).

(e) Simple Lockout/Tagout. Simple lockout/tagout procedure shall be in accordance with 120.2(D) (2).

(f) Complex Lockout/Tagout. Complex lockout/tagout procedure shall be in accordance with 120.2(D) (3).

(2) Elements of Control. The procedure shall identify elements of control.

(a) De-energizing Equipment (Shutdown). The procedure shall establish the person who performs the switching and where and how to de-energize the load.

(b) Stored Energy. The procedure shall include requirements for releasing stored electric or mechanical energy that might endanger personnel. All capacitors shall be discharged, and high capacitance elements shall also be short-circuited and grounded before the associated equipment is touched or worked on. Springs shall be released or physical restraint shall be applied when necessary to immobilize mechanical equipment and pneumatic and hydraulic pressure reservoirs. Other sources of stored energy shall be blocked or otherwise relieved.

(c) Disconnecting Means. The procedure shall identify how to verify that the circuit is de-energized (open).

(d) Responsibility. The procedure shall identify the person who is responsible to verify that the lockout/tagout procedure is implemented and who is responsible to ensure that the task is completed prior to removing locks/tags. A mechanism to accomplish lockout/tagout for multiple (complex) jobs/tasks where required, including the person responsible for coordination, shall be included.

(e) Verification. The procedure shall verify that equipment cannot be restarted. The equipment operating controls, such as pushbuttons, selector switches, and electrical interlocks, shall be operated or otherwise it shall be verified that the equipment cannot be restarted.
(f) Testing. The procedure shall establish the following:

(1) What voltage detector will be used, the required personal protective equipment, and who will use it to verify proper operation of the voltage detector before and after use.

(2) A requirement to define the boundary of the work area.

(3) A requirement to test before touching every exposed conductor or circuit part(s) within the defined boundary of the work area.

(4) A requirement to retest for absence of voltage when circuit conditions change or when the job location has been left unattended.

(5) Where there is no accessible exposed point to take voltage measurements, planning considerations shall include methods of verification.

(g) Grounding. Grounding requirements for the circuit shall be established, including whether the grounds shall be installed for the duration of the task or temporarily are established by the procedure. Grounding needs or requirements shall be permitted to be covered in other work rules and might not be part of the lockout/tagout procedure.

(h) Shift Change. A method shall be identified in the procedure to transfer responsibility for lockout/tagout to another person or to the person in charge when the job or task extends beyond one shift.

(i) Coordination. The procedure shall establish how coordination is accomplished with other jobs or tasks in progress, including related jobs or tasks at remote locations, including the person responsible for coordination.

(j) Accountability for Personnel. A method shall be identified in the procedure to account for all persons who could be exposed to hazardous energy during the lockout/tagout.

(k) Lockout/Tagout Application. The procedure shall clearly identify when and where lockout applies, in addition to when and where tagout applies, and shall address the following:

(1) Lockout shall be defined as installing a lockout device on all sources of hazardous energy such that operation of the disconnecting means is prohibited and forcible removal of the lock is required to operate the disconnecting means.
(2) Tagout shall be defined as installing a tagout device on all sources of hazardous energy, such that operation of the disconnecting means is prohibited. The tagout device shall be installed in the same position available for the lockout device.

(3) Where it is not possible to attach a lock to existing disconnecting means, the disconnecting means shall not be used as the only means to put the circuit in an electrically safe work condition.

(4) The use of tagout procedures without a lock shall be permitted only in cases where equipment design precludes the installation of a lock on an energy isolation device(s). When tagout is employed, at least one additional safety measure shall be employed. In such cases, the procedure shall clearly establish responsibilities and accountability for each person who might be exposed to electrical hazards.

FPN: Examples of additional safety measures include the removal of an isolating circuit element such as fuses, blocking of the controlling switch, or opening an extra disconnecting device to reduce the likelihood of inadvertent energization.

(l) Removal of Lockout/Tagout Devices. The procedure shall identify the details for removing locks or tags when the installing individual is unavailable. When locks or tags are removed by someone other than the installer, the employer shall attempt to locate that person prior to removing the lock or tag. When the lock or tag is removed because the installer is unavailable, the installer shall be informed prior to returning to work.

(m) Release for Return to Service. The procedure shall identify steps to be taken when the job or task requiring lockout/tagout is completed. Before electric circuits or equipment are reenergized, appropriate tests and visual inspections shall be conducted to verify that all tools, mechanical restraints and electrical jumpers, shorts, and grounds have been removed, so that the circuits and equipment are in a condition to be safely energized. Where appropriate, the employees responsible for operating the machines or process shall be notified when circuits and equipment are ready to be energized, and such employees shall provide assistance as necessary to safely energize the circuits and equipment. The procedure shall contain a statement requiring the area to be inspected to ensure that nonessential items have been removed. One such step shall ensure that all personnel are clear of exposure to dangerous conditions resulting from reenergizing the service and that blocked mechanical equipment or grounded equipment is cleared and prepared for return to service.

(n) Temporary Release for Testing/Positioning. The procedure shall clearly identify the steps and qualified persons' responsibilities when the job or task requiring lockout/tagout is to be interrupted temporarily for testing or positioning of equipment; then the steps shall be identical to the steps for return to service.

FPN: See 110.9 and 130.4 for requirements when using test instruments and equipment.
120.3 Temporary Protective Grounding Equipment.

(A) Placement. Temporary protective grounds shall be placed at such locations and arranged in such a manner as to prevent each employee from being exposed to hazardous differences in electrical potential.

(B) Capacity. Temporary protective grounds shall be capable of conducting the maximum fault current that could flow at the point of grounding for the time necessary to clear the fault.

(C) Equipment Approval. Temporary protective grounding equipment shall meet the requirements of ASTM F 855, Standard Specification for Temporary Protective Grounds to be Used on De-energized Electric Power Lines and Equipment.

(D) Impedance. Temporary protective grounds shall have an impedance low enough to cause immediate operation of protective devices in case of accidental energizing of the electric conductors or circuit parts.

Adjusting to Changing Energized/ De-energized Work Environment & Retraining: Whenever the work environment changes, as occurs on all construction sites, the re-evaluation of required LOTO is mandatory and as that requirement changes, training and/or retraining is required by a Competent Person on behalf of the project. Additionally as the project develops, if abuse, miss-use (Insufficient skill) or failure to follow this policy occurs, retraining shall be initiated immediately to correct the problem. This training will not only address the basic understanding and use requirement but will insure a complete understanding of all aspects of the Lockout/Tagout program.

All training in this area (LOTO) as well as all training areas shall be documented and available for inspection when required.
SECTION 4

HEARING CONSERVATION PROGRAM

*******

SAFETY PROGRAM

Revised: 2009.02.02
Most of us seem to take our hearing pretty much for granted, that is until we start to lose it and have to start asking, “What did you say?” Human hearing is pretty sensitive to say the least and it can be damaged as we all know. We seem to put our hearing at some level of risk on a regular basis without giving it a second thought. This is probably because we have gotten accustomed to lives that involve noise in almost everything we do. We are exposed to noise in the workplace as well as our homes, our cars and the recreational world in which we are involved.

Noise induced hearing loss or damaged hearing from exposure to excessive noise is all too common. It may take years to be identified but it is safe to say that you start causing damage every time you are exposed to high levels of noise. It is unfortunate but noise induced hearing loss cannot be treated or cured. However, it can be prevented.

Occupational noise induced hearing loss is a significant problem as it falls under the Administrative Rules from OSHA to which we are all subject. The rules say: “...If an employee is exposed to noise levels above an 8-hour time-weighted average of 85 decibels, their employer is required to implement a hearing conservation program. This program must include noise monitoring, audiometric testing, and training, and must accomplish the following: (1) allow employees to observe the monitoring process; (2) inform affected employees about their individual results; (3) Provide appropriate hearing protectors to affected employees; (4) Maintain accurate monitoring, audiometric testing, and training records and; (5) Allow employees to review monitoring, audiometric testing, and training records.”

This “Best Practices” guide provides employers and employees with meaningful information that will ultimately allow for the prevention of hearing loss resulting from work activities and also help keep our contractors in compliance with applicable safety and health regulations.
Controlling Construction Noise

Controlling construction noise can pose special problems for contractors. Unlike general industry, construction activities are not always in one stationary location. Construction activities often take place outside where they can be affected by weather, wind tunnels, topography, atmosphere and landscaping. Construction noise makers, e.g., heavy earth moving equipment, can move from location to location and is likely to vary considerably in its intensity throughout the work day.

High noise levels on construction worksites can be lowered using commonly accepted engineering and administrative controls. This guide contains tips other contractors have used to lower the noise levels on construction worksites.

Normally, earplugs and other types of personal protective equipment (PPE) are used to control a worker's exposure to noisy equipment and work areas. However, as a rule, engineering and administrative controls should always be the preferred method of reducing noise levels on worksites. Only after these controls are proven unfeasible should earplugs be considered.

Major Noise Sources on Construction Sites

On construction worksites there are many different noise sources. These sources exhibit many differing types of noise including; background, idling, blast, impact, rotating, intermittent, howling, screeches and squeals that need to be controlled.

Fortunately, the noise levels of common construction noise sources are well known. For example:

<table>
<thead>
<tr>
<th>Equipment/Tool</th>
<th>Approximate Sound Level at Operator (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder Actuated Nail Gun</td>
<td>90 - 117</td>
</tr>
<tr>
<td>Circular Saw</td>
<td>102 - 113</td>
</tr>
<tr>
<td>Electric Drill</td>
<td>87 - 94</td>
</tr>
<tr>
<td>Screw Gun – Battery</td>
<td>87 - 93</td>
</tr>
<tr>
<td>Roto-Hammer</td>
<td>95 - 119</td>
</tr>
<tr>
<td>Chop Saw Cutting Metal Studs</td>
<td>92 - 125</td>
</tr>
<tr>
<td>Pulling Wire w/ Tugger</td>
<td>95 - 99</td>
</tr>
</tbody>
</table>

Engineering Controls

Engineering controls modify the equipment or the work area to make it quieter. Examples of engineering controls are: substituting existing equipment with quieter equipment; retro-fitting existing equipment with damping materials, mufflers, or enclosures; erecting barriers; and equipment maintenance.
Sometimes a quieter process can be used. For example: Pile driving is very loud; boring
is a much quieter way to do the same work.

Ask equipment manufactures about the noise levels emitted by their equipment and
consider these levels when making your purchase. For example, noise-reducing saw
blades can cut noise levels in half.

Noisy equipment can be placed as far away as possible from workers. Noise levels drop
quickly with distance from the source.

It is important to note that when you double the distance between the worker and the
noise source, the sound pressure level decreases by 6 decibels. For example:

<table>
<thead>
<tr>
<th>Feet From Source</th>
<th>At Source dBA</th>
<th>At The Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>10</td>
<td>96</td>
<td>90</td>
</tr>
<tr>
<td>20</td>
<td>96</td>
<td>84</td>
</tr>
</tbody>
</table>

Temporary barriers/enclosures (e.g. plywood with sound absorbing materials) can be
built around noisy equipment. These barriers significantly reduce noise levels and can
be inexpensive.

**Administrative Controls**

Administrative Controls can help reduce noise exposure. By this we mean scheduling
your people to work when other trades are not on the site or at least not in the direct
work area. This simple step can drastically impact overall site noise levels in the work
environment.

Assigning job tasks that reduce workers' exposure to high noise levels is a typical
management decision that can include: restricting access to high noise areas; rotating
workers performing noisy tasks; and shutting down noisy equipment when not needed.

**Personal Protective Equipment**

Typically, earplugs are the most common PPE given to workers to reduce their exposure
to noise. Earplugs are the control method of last resort and should only be relied upon
when other means of noise controls are infeasible.

While tests show that we are often below the permissible exposure levels prescribed by
OSHA, it is always a good idea to instruct your staff to wear their hearing protection
devices anytime the noise levels prevent a normal conservation. As a general rule,
workers should be using earplugs whenever they are exposed to noise levels of 85 dB (A) or when they have to shout in order to communicate.

Insure that all your employees have hearing protection devices readily available and they receive the appropriate instruction on the proper care and use of that type of PPE.

Workplace noise levels at which engineering or administrative controls are required:

<table>
<thead>
<tr>
<th>8.0 hours of exposure</th>
<th>90 (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0</td>
<td>92</td>
</tr>
<tr>
<td>4.0</td>
<td>95</td>
</tr>
<tr>
<td>3.0</td>
<td>97</td>
</tr>
<tr>
<td>2.0</td>
<td>100</td>
</tr>
<tr>
<td>1.5</td>
<td>102</td>
</tr>
<tr>
<td>1.0</td>
<td>105</td>
</tr>
<tr>
<td>0.5</td>
<td>110</td>
</tr>
<tr>
<td>0.25 or less</td>
<td>115</td>
</tr>
</tbody>
</table>

After considering engineering and administrative controls, the next step is selecting the appropriated hearing protecting devices.

**What about your hearing protectors?**
Here is information that might help you select the best protector.

Hearing Protection Devices, or HPDs are not effective unless you use them properly. Make sure you find and use the best type protector for the task at hand.

There are many different types: earmuffs, moldable earplugs, preformed earplugs, banded/canal caps/semi-aural, and custom earplugs. You should consider seven things when selecting your hearing protection: Convenience, Comfort, Communication needs, Hygiene, Noise Reduction Rating, Hearing Ability/Loss, and the Noise level of the task.

Of the listed items, convenience and comfort are often the highest predictor of usage. Generally speaking, earmuffs and molded earplugs offer the most noise reduction. Preformed or canal caps may be more suitable to most aspects of construction, due to the convenience and lower daily average noise levels.

<table>
<thead>
<tr>
<th>Type of Protection</th>
<th>Noise Reduction</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam Plugs/Moldable</td>
<td>High</td>
<td>Readily Available consuming fit</td>
<td>Hygiene, Time</td>
</tr>
<tr>
<td>Pre-formed plugs</td>
<td>Mild</td>
<td>Quick Fit</td>
<td>Cost to replace if lost</td>
</tr>
<tr>
<td>Type of Protection</td>
<td>Noise Reduction</td>
<td>Advantages</td>
<td>Disadvantages</td>
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<td>-----------------------------------------</td>
</tr>
<tr>
<td>Banded/Canal Caps/</td>
<td>Low</td>
<td>Quick Fit</td>
<td>Uncomfortable</td>
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<tr>
<td>Semi-aural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earmuffs</td>
<td>High</td>
<td>Quick Fit</td>
<td>Hot in heat, difficult Hygiene to fit with safety glasses</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Custom</td>
<td>Low to Mild</td>
<td>Quick Fit</td>
<td>Replace every 3 to 5 years. Costly</td>
</tr>
</tbody>
</table>

Most hearing protectors are labeled with a noise reduction rating (NRR) indicating a protection level in decibels. However these ratings are not always reliable outside of a testing lab, which is where they received their rating. The NRR rating tends to overstate the protection a hearing protector will provide under real-world conditions. One way to estimate the real-world effectiveness is to subtract 7 dB from the manufacturers NRR. Take a look at the example shown below.

- 8-hour exposure level: 95 dBA
- Manufacturers NRR: 25 decibels
- Subtract 7 dB from the NRR: 18 decibels
- Subtract 18 from the exposure level: 95 dBA less 18 NRR = 77 dBA

The worker, while still exposed to a 95 dBA work environment, will only have 77 dBA entering the ear canal which is below the 90 dBA PEL.

Since the winter of 2005, in a statewide joint effort, NECA, NECA Contractors, IBEW Locals 932, 659, 280 and 48 and their members as well as the 4 JATC Training Centers, have engaged in conducting Dosimeter tests.

This statewide joint effort clearly shows the ability of all the parties involved to work towards the best interests of the workers in the electrical industry of the state.

The Dosimeter testing performed on our work sites reveal the following precautions:

- Residential wiring that occurs during the same time as the roofing and/or siding subcontractor is working at the site will expose electrician to higher levels of noise. These times should be eliminated if at all possible.
- Roto-hammer – high noise level, in the 95 to 119 range. Whenever possible stay clear of this activity, when that is not possible mandate the use of PPE.
Chop Saw - Metal Stud cutting – high noise level, in the 92 to 125 range. This is one of the highest noise levels we have found. If you can’t barrier guard your work location from the point of operation, and you can’t administratively negate the exposure. Mandate PPE all the time.

Back-up alarms on mobile construction equipment can emit 120 plus decibels of noise. When working near these pieces of equipment, protect yourself with proper PPE.

Welding generators emit 94 to 110 decibels within 15 to 20 feet of the point of operation. If you can’t barrier guard your work location from the point of operation, and you can’t administratively negate the exposure, mandate PPE all the time.

Air compressors – 90 to 110 dB (A) within 20 to 30 feet of the point of operation. If you can’t barrier guard your work location from the point of operation, and you can’t administratively negate the exposure, mandate PPE all the time.

In addition to these specific tasks, there are certainly other areas that might be a cause of noise level concern. If you believe it to be a problem, be proactive and mandate proper PPE at the onset of the job/task or when entering these work areas.

**Introduction**

This sample Hearing Loss Prevention Program contains the basic framework of an “effective” program required by the OR-OSHA regulations on noise and hearing conservation. While a written hearing conservation is not required by the regulations, this sample program will help you meet the requirements of an “effective” Hearing Loss Prevention Program because it will spell out how you are protecting your employees from the effects of excessive noise exposure.

However it will not be effective unless it includes specific information and policies from your workplace. Further, to be “continuing effective” as is required in the regulations, you will need to actually implement and periodically update this program. OR-OSHA inspectors will not likely consider the program effective if there is no evidence from observation and employee interviews that the activities and policies spelled out in a written program are actually done.
The specific information that you will need to add to this sample program to make it complete include the following:

Noise areas and/or noise levels of areas and equipment at your workplaces.

Where hearing protection is required and who must wear it.

What specific hearing protection is provided.

How audiometric testing is provided.

How training is provided to those employees exposed to excessive noise.

Where noise measurement results and audiometric testing records are kept and how employees will have access to or be provided with these records.
### Purpose

This Hearing Loss Prevention Program is designed to protect employees from the effects of exposure to excessive noise at ***** Jobsites and comply with appropriate regulations.

### Noise Areas and Measurements

Noise measurements were taken of the following areas or equipment at our workplace:

<table>
<thead>
<tr>
<th>Area, equipment or job duties</th>
<th>Noise level in decibels</th>
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</table>

(Date of noise measurements)

Noise level measurements were taken with Quest NoisePro XL dosimeters and spot meters.
Hearing Protection Used at ******

The following hearing protection is provided to employees at ******. (list at least two kinds). Employees will be allowed to select their choice of hearing protection in the size that fits them correctly.

<table>
<thead>
<tr>
<th>Brand name of hearing protection</th>
<th>Sizes available (where applicable)</th>
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Hearing protection is available from the following person(s) or at the following locations:

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</table>

Hearing protection is required in the following locations, job duties or when the following equipment is used:

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</table>
Audiometric Testing at *****

Audiometric testing will be provided at no cost to all employees whose noise exposure equals or exceeds an 8 hour average of 85 decibels who have the following positions or work at the following locations:

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

Optional: (some employers decide or find it easier to cover all employees who might be overexposed to high noise sometime during their employment)

In addition, audiometric testing will also be provided to all employees working in the following areas or in the following job classifications:

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

Audiometric testing will be provided upon first assignment to a high noise area or within 180 days of assignment. These initial test results are the baseline results. Annual testing following these initial tests will be compared to the baseline test results for all employees who continue to work in high noise areas.

***** will schedule audiometric testing for employees

For baseline tests, employees will be instructed to avoid unprotected exposure to high noise levels at least 14 hours before testing is done.
If a standard threshold shift (a drop in hearing ability of at least 10 decibels in three frequencies – 2000, 3000 or 4000 hertz) is found, the employee may be retested within 30 days.

(note: retesting is optional)

Employees will be provided with results of their individual audiometric exams. If a standard threshold shift is found, employees will be notified in writing within 21 days of determination.

If a standard threshold shift if found in any employees, the following will also be done:

The employee not wearing hearing protection will be provided them.
The employee already using hearing protection will be re-fitted and re-trained.
The employee will be referred to audiologist or ear, nose & throat specialist for further evaluation.
The employee will be informed of a need for an ear exam if a medical cause unrelated to noise exposure is suspected.

Audiometric testing will be conducted by a licensed or certified audiologist, ear, nose & throat physician (otolaryngologist) or audiology technician certified by the Council of Accreditation in Occupational Hearing Conservation (CAOHC).

Audiometric testing is conducted by (Enter name of vendor or clinic).
Training

Training will be provided to all employees exposed to noise above an 8-hour average of 85 decibels. Training will cover the following topics:

The effects of noise on hearing
The purpose of hearing protectors, the advantage and disadvantages of various types, and instructions on how to use and care for them,
The purpose of audiometric testing and how it is done,
Employee access to records.

Our training program is described as follows:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

OR

See attached noise training program (can be a summary)

For questions related to noise or audiometric testing, employees can see (Customize by adding the name of person who can provide information).

Access to Records

Noise measurement records can be viewed at the following location(s) or obtained from the following person(s):

____________________________________________________________________________________
____________________________________________________________________________________

Personal audiometric exam results will be given or mailed directly to individual employees tested.
SECTION 5

EXCAVATIONS AND TRENCHING PROGRAM

******

SAFETY PROGRAM
Revised: 2011.10.25
EXCAVATIONS & TRENCHING SAFETY

A. Excavation

An excavation is any human-made cut, cavity, trench or depression in an earth surface, formed by earth removal. All excavations five feet or more in depth are required to have a protective system in place to protect employees from injury unless:

1. The excavation is made entirely in stable rock; or
2. The excavation is less than five feet in depth and a competent person has examined the ground and determined there is no indication of a potential cave-in.
3. Acceptable protective systems include:

   Sloping
   Benching
   Support or shield systems (i.e., timber systems, aluminum hydraulic shoring systems, trench coffins, etc.).

These protective systems must be in accordance with one of the options listed in Rule 1926.652, Requirements for Protective Systems.

B. Competent Person

A competent person is someone 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. This person must have had specific training in and be knowledgeable about soils analysis, the use of protective systems and the requirements of the occupational safety and health rules.

C. Inspections

1. At every excavation where employee exposure can be reasonably anticipated, OSHA requires that the contractor assign a competent person to conduct a daily inspection of the excavation, the adjacent areas and protective systems utilized (i.e., shoring, shielding, benching or sloping) for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions.

2. An inspection must be conducted by the competent person prior to the start of work and as needed throughout the shift.

3. Inspections must also be made after every rainstorm or other hazard-increasing occurrence.
4. The employee shall contact the competent person prior to any exposure to an excavation to determine the level of safety and health at the site. If the attempted contact is not successful or if a competent person does not exist for that site, the employee shall exit the site. The employee shall notify his/her supervisor of the situation.

**GENERAL CONTROLS**

Prior to entry into an excavation, the following controls shall be in place:

1. A competent person shall be present prior to any exposure to an excavation to determine the level of safety and health at the site.

2. To ensure control of hazardous water conditions, one of the following methods have been implemented:
   - Supports or shields have been installed to prevent cave-ins;
   - The water is removed prior to entry and maintained at a safe level;
   - or
   - A safety harness/lifeline are available and used.

3. To ensure control of loose rock or soil, one of the following methods have been implemented:
   - Scaling of the face of the excavation has been done to remove any hazardous loose material;
   - Protective barriers are installed to contain the loose material; or
   - Any other effective control means is in place and there is no danger from loose material.

4. The edge of the excavation must remain clear. Any excavated materials, other materials or equipment must be kept at least two feet from the edge of the excavation or retaining devices must be in place.

5. Walkways or bridges fitted with standard guardrails must be provided for crossing over excavations.

6. All wells, pits, shafts, etc., must be barricaded, covered or constantly attended by a watch person who can keep persons from inadvertently falling into the opening.

7. Employee exposure to vehicles and other moving hazards including vibration generating equipment must be evaluated and training must be conducted based on specific site requirements.

8. Atmospheric testing may be required if a hazard exists. Continual air monitoring may be necessary, especially if mobile equipment is operating in the near area.
LARGE EXCAVATIONS (FOUNDATIONS)

This section applies to excavations where entry is made by ramps or ladders.

1. The design of ramps used solely as a means of access/egress must be designed by a competent person qualified in structural design.

2. Structural ramps used as a means of access/egress from excavations must be designed by a competent person qualified in structural design.

3. Ramps and runways constructed of two or more structural members must be connected together to prevent displacement.

4. Cleats or other appropriate means used to connect ramp or runway structural members must be attached to the bottom of the ramp or runway in a manner to prevent tripping.

5. Structural ramps used in lieu of steps must be provided with cleats or other surface treatments to prevent slipping.

6. Supports or shields have been installed to prevent cave-ins.

7. The water must be removed prior to entry and maintained at a safe level; or a safety harness/lifeline are available and used.

8. To ensure control of loose rock or soil, one of the following methods have been implemented:

[PROVIDE A BRIEF DESCRIPTION]

Examples of Methods

(a) Scaling of the face of the excavation has been done to remove any hazardous loose material;
(b) Protective barriers are installed to contain the loose material;
(c) Or any other effective means is in place and there is no danger from loose materials.

9. Any excavated materials, other materials or equipment must be kept at least two feet from the edge of the excavation or retaining devices must be in place.

10. Walkways or bridges fitted with standard guardrails must be provided for crossing over excavations.
11. All wells, pits, shafts, etc., must be barricaded, covered or constantly attended by a watch person who can keep persons from inadvertently falling into the opening.
SECTION 6

CONFINED SPACE PROGRAM

*****

SAFETY PROGRAM
Revised: 2009.02.02
CONFINED SPACE PROGRAM

I Purpose

****** is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this endeavor, the following written program is in place to first identify any Permit-Required Confined Spaces (PRCS) and to eliminate or control hazards associated with PRCS operations. This program is in accordance with the Occupational Safety and Health Administration’s (OSHA) Permit-Required Confined Spaces Standard, Title 29, Code of Federal Regulations 1910.146.

II Responsibilities

The overall responsibility for the program has been delegated to _________________, the Safety Coordinator. Individuals assigned to work where confined space entry is required, will have the responsibilities related to the work they perform. These responsibilities are identified below.

A. Authorized Entrants

Know the hazards associated with the permit space and their effects
Properly use the equipment required for entry
Maintain a continuous means of communication with the attendant
Alert the attendant in the event of an emergency
Evacuate the space if an emergency occurs

B. Attendants

Know the hazards associated with the permit space and their effects
Maintain an accurate account of the authorized entrants
Remain at their assigned station until relieved by another or until permit space entry is complete
Monitor conditions in and around the permit space
Summon rescue and applicable medical services in the event of an emergency
Perform non-entry rescue procedures
Perform appropriate measures to prevent unauthorized personnel from entering the permit space

C. Entry Supervisors

Know the hazards associated with the permit space and their effects
Verify that the safeguards required by the permit have been implemented
Verify that rescue services are available and that means for summoning them are operable
Cancel the written permit and terminate the permit space entry when required
Remove personnel who are not authorized to enter the permit space during entry operations
Periodically, determine that entry operation is being performed in a manner consistent with requirements of permit-space entry procedures, and that acceptable entry conditions are maintained

III. Permit Space Identification

The Safety Coordinator will review all contract specifications to determine if the potential for confined space situations exists. The host employer will be required to provide information regarding the confined spaces using the Host Work Sheet. A conference will be held to exchange information and to determine the confined space procedures to be used (host or contractor plans).

If confined spaces exist, the spaces will be classified as a Permit-Required Confined Space, Hazardous Atmosphere Only Space, or Reclassified Space. A Hazardous Atmosphere Only Space may be entered without implementing the full Permit-Required Confined Space Program. The Safety Coordinator, however, will ensure that atmosphere testing and continuous ventilation are in place. If hazards can be eliminated before entry into a space, the space is a Reclassified Space. The Safety Coordinator will certify that all hazards are eliminated before entry. All entrants will receive training before entering any classification of confined space.

IV. Permit-Required Confined Space (PRCS)

Notices will be posted at the entrance of all permit-required confined spaces prohibiting entry.

Employees will obtain a permit from the host or Safety Coordinator before entering these spaces. An entry supervisor will be assigned to the space. All equipment required by the permit and procedures described in this program and on the permit will be followed.
TRAINING

All employees will be trained to observe confined space signs; warnings and the purpose of permit entry procedures. All individuals involved in confined space permit entry operations will be trained on the following topics (as needed):

Type of confined space hazards
Components of the written PRCS program and entry permit system
Components of the hot work permit
Need for guarding of entrance opening
Atmospheric testing equipment and protocol (use, calibration, and maintenance)
Oxygen, combustibles, toxics
Pre-entry, frequent or continuous testing
Methods for the control or elimination of any atmospheric hazards
Inerting, draining, rinsing, purging, cleaning
Continuous forced air ventilation
Procedures to follow if a hazard is detected
The evaluation process to be used for reentry if hazards are detected
The use of entry equipment (e.g., ladders, communication devised, etc.)
The use of personal protective equipment required: Full body harness, Respiratory protection, Chemical protective clothing, Eye and face protection
Procedures to coordinate with rescue team, on or off-site rescue plan, practice rescues
Basic first aid and cardiopulmonary resuscitation certification
Procedures for annual review of permits
Any other information needed to ensure safety during permit space entry operation.

The following is a list of employees who have been equipped and trained to serve as authorized entrants.

Trainer: __________________________ Date of Training: ___________

Authorized Entrants:

_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
The following is a list of employees who have been equipped and trained to serve as attendants.

**Trainer:** ____________________  **Date of Training:** ____________________

**Attendants:**

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

The following is a list of employees who have been trained to serve as entry supervisors.

**Trainer:** ____________________  **Date of Training:** ____________________

**Entry Supervisor:**

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
REScue AND EMERGENCY SERVICES

The precautions and procedures outlined in our written PRCS program are designed to ensure that our employees are safe while working in permit spaces. Under no circumstances do we expect our employees to enter a permit space where hazards have not been eliminated or effectively controlled.

Additionally, we recognize that unexpected situations might arise that prevent entrants from self-rescue. In response, the following rescue and emergency action plan has been developed and will be strictly enforced: has decided to utilize (check all that apply):

- ☐ on-site rescue services, which include non-entry, rescue procedures
- ☐ entry rescue procedures
- ☐ off-site entry rescue services.

- ☐ Each member of the firm’s rescue service is appropriately trained.
- ☐ Each member of the rescue service will receive basic first aid and cardiopulmonary resuscitation (CPR). At least one of these members holds a current certification in first aid and CPR.
- ☐ Rescue team members will practice rescue techniques at least annually from the actual or similarly configured space(s).

***** has made arrangements with ______________________ for off-site rescue and emergency services and they have consented to provide this service.

***** has informed ________________________ of the hazards they may encounter if they are summoned. ***** has also provided access to the rescue service so they can evaluate the permit spaces to develop appropriate rescue plans and practice rescue operation. If rescue and emergency services are needed, the following procedures will go into effect.

Name of Rescue Service: _________________________________________________
Location: ______________________________________________________________
Approximate Response Time: _____________________________________________

Name of Emergency Medical Service: ______________________________________
Telephone Number: _____________________________________________________
Location: ______________________________________________________________
Approximate Response Time: _____________________________________________
The specific procedures for summoning rescue and emergency services for our workplace are: (outlined)

_______________________________________________________________________
_______________________________________________________________________
_____________________________________________________________________

PERMIT-REQUIRED CONFINED SPACE PROGRAM REVIEW

Upon completion of each job involving a permit-required confined space, a debriefing conference will be held to inform the host employer of any hazards confronted or created.

Within one year of any entry operation, ***** will conduct a review of the program using the canceled entry permits to identify any deficiencies in or program. A review will be conducted sooner if there is reason to believe that the program does not adequately protect our employees. Any corrective measures will be documented by a revision of the program. Employees will be trained on any changes. Additionally, employees who note any inadequacies with the program can contact *****.

If no permit space entry operations are conducted during the year, no review is needed.
CONFINED SPACE RECOGNITION FORM

Part I
1) Is the space large enough so an employee can enter bodily and perform work?  YES  NO
2) Does the space have limited or restricted means for entry and exit?  YES  NO
3) Was the space designed for a purpose other than human occupancy?  YES  NO

If the answer is yes to all items in Part I, continue to Part II. If the answer is no to any of the above items, the space is not considered a confined space, and no further action is needed.

Part II
1) Does the space contain or potentially contain a hazardous atmosphere?  YES  NO
2) Does the space contain any chemicals or chemical residues?  YES  NO
3) Does the space contain any flammable/combustible substances?  YES  NO
4) Does the space contain or potentially contain any decomposing organic matter?  YES  NO
5) Does the space have any pipes, which bring chemicals into it?  YES  NO
6) Does the space have any materials that can trap or potentially trap, engulf, or drown an entrant?  YES  NO
7) Is vision obscured by dust at 5 feet or less?  YES  NO
8) Does the space contain any mechanical equipment servicing the space?  YES  NO
9) Does the space have converging walls, sloped floors or tapered floor to smaller cross-sections which could trap or asphyxiate an entrant (Entrapment Hazard)?  YES  NO
10) Does the tank or vessel contain rusted interior surfaces?  YES  NO
11) Does the space contain thermal hazards (e.g. extreme hot or cold)?  YES  NO
12) Does the space contain excessive noise levels, which could interfere with communication with an attendant?  YES  NO
13) Does the space present any slip, trip or fall hazards?  YES  NO
14) Are there any operations conducted near the space opening which could present a hazard to entrants?  YES  NO
15) Are there any hazards from falling objects?  YES  NO
16) Are there lines under pressure servicing the space?  YES  NO
17) Are cleaning solvents or paints going to be used in the space?  YES  NO
18) Is welding, cutting, brazing, riveting, scraping, or sanding going to be performed in the space?  YES  NO
19) Is electrical equipment located in or required to be used in the space?  YES  NO
20) Does the space have poor natural ventilation which would allow an atmospheric hazard to develop?  YES  NO
21) Are there any corrosives in the space which could irritate the eyes?  YES  NO
22) Are there conditions which could prevent entrants’ self-rescue from the space?  YES  NO
23) Are there any substances used in the space which have acute hazards?  YES  NO
24) Is mechanical ventilation needed to maintain a safe environment?  YES  NO
25) Is air monitoring necessary to ensure the space is safe for entry because of a potential hazardous atmosphere?  YES  NO
26) Will entry be made into a dike area where the dike is 5 feet or more in height?  YES  NO
27) Are residues going to be scraped off the interior surface of the vessel?  YES  NO
28) Are non-sparking tools required to remove residues?  YES  NO
29) Does the space restrict mobility to the extent that is could trap an entrant?  YES  NO
30) Does the space present a hazard other than those noted above which would make it a permit space?  YES  NO
If you answered yes to any of the questions in Part II, a hazard may exist in the confined space and you must comply with the Permit-Required Confined Space Standard.

**CONTRACTOR WORK SHEET**

In accordance with the OSHA Permit-Required Confined Space (PRCS) Standard (1910.146), ****** is requesting that the _________________ provide any available PRCS hazard information for the space to be entered. Additionally, please notify the safety coordinator in your company’s confined space program and/or entry supervisor, if you plan to have your employees work in or near the PRCS during our entry operation.

The safety coordinator in your company’s confined space program and/or entry supervisor will inform you, the host employer, of the PRCS program our employees will follow during the PRCS operation. Additionally, the safety coordinator in your company’s confined space program and/or entry supervisor will notify you of any hazards confronted or created during our PRCS operation.

The following is a list of the hazard(s) that may be confronted or created by the PRCS operation and the action(s) that will be taken to correct the condition.

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<th>Condition</th>
<th>Corrective Action</th>
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**DEBRIEFING NOTES** (To be completed upon completion of entry operations)

Host Representative: __________________________ Entry Dates: ____________________

Contractor Representative: __________________________ Date of Debriefing: ____________
**CONFINED SPACE TRAINING RECORD**

COMPANY: _______________________________  DATE: ____________________________

JOBSITE: _______________________________  TIME: ____________________________

**CONFINED SPACE LOCATION:**

___________________________________________________________________________

**CONFINED SPACE HAZARDS FOR WHICH EMPLOYEES RECEIVED TRAINING:**

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

**EMPLOYEES’ SIGNATURES**  

<table>
<thead>
<tr>
<th>TYPE OF TRAINING RECEIVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorized Entrant</td>
</tr>
<tr>
<td>Attendant</td>
</tr>
<tr>
<td>Entry Supervisor</td>
</tr>
</tbody>
</table>

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

Trainer’s Signature: _______________________________  Date: ____________________________

Safety Coordinator’s Signature: ______________________  Date: ________________________

*ONSITE RESCUE PERSONNEL TRAINING (if used)*

**EMPLOYEE’S SIGNATURES**

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

Trainer’s Signature: _______________________________  Date: ____________________________

Safety Coordinator’s Signature: ______________________  Date: ________________________
**HOST WORK SHEET**

In accordance with the requirement of the OSHA Permit-Required Confined Space (PRCS) Standard 1910.146, this information is being made available to ***** so they can take appropriate precautions to protect their employees during a PRCS operation. The following is a list of permit space locations, their identified hazards, and any precautions taken by our firm in the previous entry operations.

<table>
<thead>
<tr>
<th>Location</th>
<th>Hazard</th>
<th>Precautions Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other applicable information concerning the permit space, which may be of assistance:

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

During the contractor’s PRCS operation our employees _____ Will _____Will Not be involved in entry into or work near the permit space.

List whose permit space program will be used for entry into the space:

_____Host  _____Contractor

Debriefing conference will be held with__________________________ and________________________ at the completion of the entry operation. At a minimum, the following items must be covered: hazards encountered, actions taken to correct hazards, deficiencies in the program, ventilation or testing equipment failure, unauthorized entry, etc.

**DEBRIEFING NOTES** (To be completed upon completion of entry operations)

Host Representative: _________________________ Entry Dates: _______________________
Contractor Representative: ____________________ Date of Debriefing: _______________
ENTRY PERMIT

_______ CONFINED SPACE  ______ HAZARDOUS AREA

DATE AND TIME ISSUED: ________________________________

DATE AND TIME EXPIRES: ________________________________

SITE LOCATION and DESCRIPTION: ________________________________

PURPOSE OF ENTRY: ________________________________

SUPERVISOR(S) in charge of crews

<table>
<thead>
<tr>
<th>Type of Crew</th>
<th>Phone #</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* A list of the names of crew members who are authorized entrants is attached to this permit.

BOLD DENOTES MINIMUM REQUIREMENTS TO BE COMPLETED AND REVIEWED PRIOR TO ENTRY

<table>
<thead>
<tr>
<th>REQUIREMENTS COMPLETED</th>
<th>DATE</th>
<th>TIME</th>
<th>REQUIREMENTS COMPLETED</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lockout/De-energize Tagout</td>
<td></td>
<td></td>
<td>Full-Body Harness w/&quot;D&quot; ring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line(s) Broken/Capped Blanked</td>
<td></td>
<td></td>
<td>Emergency Escape Retrieval Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purge, Flush and Vent</td>
<td></td>
<td></td>
<td>Lifelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilation</td>
<td></td>
<td></td>
<td>Fire Extinguishers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure Area (Post and Flag)</td>
<td></td>
<td></td>
<td>Lighting (Explosion-Proof)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathing Apparatus</td>
<td></td>
<td></td>
<td>Protective Clothing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resuscitator - Inhalator</td>
<td></td>
<td></td>
<td>Respirator(s) (Air Purifying)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standby Safety Personnel</td>
<td></td>
<td></td>
<td>Communication Equipment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Note: Items that do not apply enter N/A in the blank.)
CONTINUOUS MONITORING (Record continuous monitoring results every two hours)

<table>
<thead>
<tr>
<th>TEST(S) TO BE TAKEN</th>
<th>PERMISSIBLE ENTRY LEVEL</th>
<th>MEASUREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Time/Level/Time/Level/Time/Level/Time/Level/Time/Level</td>
</tr>
<tr>
<td>Percent of Oxygen</td>
<td>19.5 % to 23.5 %</td>
<td></td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Under 10 %</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>+ 35 PPM</td>
<td></td>
</tr>
<tr>
<td>Aromatic Hydrocarbon</td>
<td>+ 1 PPM * 5 PPM</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Cyanide</td>
<td>* 4 PPM</td>
<td></td>
</tr>
<tr>
<td>(Skin)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>+ 10 PPM * 15 PPM</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>+ 2 PPM * 5 PPM</td>
<td></td>
</tr>
<tr>
<td>Ammonia</td>
<td>* 35 PPM</td>
<td></td>
</tr>
</tbody>
</table>

* Short-term exposure limit: Employee can work in area up to 15 minutes

+ 8 hr. Time Weighted Avg.: Employee can work in area 8 hrs. (longer with appropriate respiratory protection.)

REMARKS: __________________________________________________________________________________
____________________________________________________________________________________________

GAS TESTER NAME & CHECK # | INSTRUMENT(S) USED MODEL &/OR TYPE | SERIAL &/OR UNIT #
--------------------------|------------------------------------|------------------

SAFETY STANDBY PERSON IS REQUIRED FOR ALL CONFINED SPACE WORK

NAME OF SAFETY STANDBY PERSON(S) | NAME OF SAFETY STANDBY PERSON(S)
---------------------------------|----------------------------------

SUPERVISOR authorizing entry (all above conditions satisfied): __________________________
Supervisor’s Department / Employer __________________ Phone # ____________________

EMERGENCY NUMBERS: Ambulance __________________ Fire __________________
Gas Coordinator __________________ Safety __________________

Section 6 – Page 12
PERMIT SPACE WORK SHEET

Permit Space Location

1) Are any hazardous atmospheres present or potentially present? YES NO
(Show test results below to confirm your response.)

ATMOSPHERIC TESTING RECORD

<table>
<thead>
<tr>
<th>Substance</th>
<th>Acceptable Level</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>19.5 % to 23.5 %</td>
<td></td>
</tr>
<tr>
<td>Explosive (Gas/Vapor)</td>
<td>&lt; 10% LFL</td>
<td></td>
</tr>
<tr>
<td>Explosive Dust</td>
<td>&lt; LFL 5 ft. Visibility</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>50 PPM</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>10 PPM</td>
<td></td>
</tr>
</tbody>
</table>

2) Is an engulfment hazard present? YES NO
3) Is there an entrapment hazard? YES NO
4) Are there any sources of hazardous energy present? YES NO
5) Are there any other hazards present? YES NO

If you answered yes to any of these questions, the space requires a permit and is subject to the Permit-Required Confined Space Program. However, if the hazards can be eliminated before entry, the space can be reclassified. Identify below procedures used to eliminate the hazards. (If it is necessary to enter space to determine if hazards have been eliminated, then the entry must be performed in accordance with the standard.)

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

I have reviewed the confined space; the questions and procedures described on this form, and determined that no hazards are present in the space. No permit is required to enter this space.

Signature of Certifying Individual ____________________________

Date: __________________________
SECTION 7

FALL PROTECTION

*****

SAFETY PROGRAM
FALL PROTECTION PROGRAM

****** is committed to achieving and maintaining a safe, healthful workplace for all our employees. We base our commitment on a safety-and-health program that involves all employees in an effort to identify and eliminate or control worksite hazards. All employees, including managers, will be held accountable for following this Fall Protection policy.

Protect yourself from falling

Fall protection is what you do to eliminate fall hazards, to prevent falls, and to ensure that you as a worker, if you fall, are not injured. We expect that you will make wise decisions and use good sense when you evaluate your exposure to falls and take reasonable and appropriate steps toward protection. Bottom Line – USE COMMON SENSE!

The law requires Fall Protection at 10’ and higher however we believe that fall protection steps will be taken when using or exposed to:

- Ladders – no hands or some PPE
- Flat roofs over 6 feet high
- Sloped roofs over 6 feet high
- Elevate working surfaces
- Scaffolds
- Aerial lift platforms and booms

You accomplish Fall Protection by doing all of the following:

Make sure you do “Pre-Task Planning” insuring that you know the exposure to fall protection.
Make fall protection part of your daily worksite protection attitude and program
Identify and eliminate fall hazards if possible
Train yourself and your fellow workers to recognize the hazard
Use appropriate fall equipment to prevent falls and protect yourself if you do fall.
Inspect your equipment before and after using it.

****** expects that you will identify hazardous work areas and protect yourself. Some of these areas are:

- Holes in the work surface that you could step into or fall through
- Work surfaces, over 6 feet from the lower level that do not have a guardrail
- Skylights or other roof areas where there are holes over 6 feet to the lower level
- Wall openings such as windows and doors with an outside bottom edge 6 feet or more to a lower level and with an inside bottom edge less than 39 inches above the surface
Trenches or other excavations with edges that are obstructed and have a depth of 6 feet or more
Working surfaces over hazardous equipment regardless of height
All hoist areas where guard rails have been removed
Sides and edges of work surfaces, like floors, mezzanines, balconies and walkways that are 6 feet above a lower level and not protected by guardrails of at least 39 inches in height.
Ramps and runways that are not protected by guardrails over 6 feet.
Leading edges – edges of floors. Roofs and decks that change location as additional sections are added.
Wells, pits or shafts not protected by guardrails, fences, barricades or covers over 6 feet from the lower level

IDENTIFY & REPORT:
Once you have identified the hazardous area, determine what kind of fall protection or fall restraint system properly addresses the exposure. Implement use of the proper system.

****** encourages you to become familiar with the law regarding fall protection. (OR-OSHA Administrative Rules; Sub-division M, 1926.501, 1926-502) and (437-003-1501 and 436-003-0503 – Training Requirements). This is the law in Oregon regarding Fall Protection.

Know and use these Basic Rules of Fall Protection:
The top edge of guardrails must be between 39 and 45 inches high.
Mid rails, screen, mesh or intermediate vertical members must be installed between the top edge of the guardrail and the walking/working surface when there is no wall or parapet wall at least 21 inches high.
Guardrails must be capable of withstanding a force of at least 200 pounds applied within two inches of the top edge in any outward or downward direction.
With 200 pounds of downward force the top edge of the guardrail must not deflect to less than 39 inches
Mid rails, screens, mesh and intermediate vertical members must be capable of withstanding a force of at least 150 pounds applied in any downward or outward direction at any point along the mid rail or other member.
Guardrail must be surfaced in a way that will prevent punctures, lacerations, and snags.
The ends of the top rails and mid rails must not overhang terminal posts unless an overhang would not create a projection hazard.
Steel and plastic banding must not be used on top and mid rails.
Top and mid rails must be at least one quarter inch nominal diameter or thickness.
When guardrails are used in hoisting areas, a chain, gate, or removable guardrail section must be placed across access opening when hoisting operations are not taking place.
When guardrails are used at holes they must be erected on all unprotected sides or edges.
When guardrails are used to protect holes which are used for passage of materials not more than two sides can be protected by movable guardrail.

Safety nets must be installed as close as possible, but not more than 30 feet below the walking/working surface.

Safety nets must extend outward from the outermost projection of the work surface (see regulations for distances).

Drop tests must be performed on safety nets by dropping a 400 pound 30-32 inch diameter bag of sand into the net from the highest walking/working surface (but not less than 42 inches).

When it is unreasonable to perform a drop test on a net, the employer or a designated competent person must certify that the net and net installation is in compliance with this standard.

Nets must be inspected at least once a week and defective nets and parts must be removed from service.

Body belts are not accepted as part of a fall arrest or fall protection system.

Lanyards and vertical life lines must have a minimum breaking strength of 5,000 pounds.

Personal fall arrest systems when stopping a falls must limit the maximum arresting force on the worker to 1,800 pounds when used with a body harness.

****** will provide Personal Protective Equipment (PPE) needed for each worksite.

Personal fall arrest systems must be rigged so that the worker can neither fall more than six feet nor contact any lower level.

Positioning devices must be rigged to prevent free falls more than two feet.

Warning lines must be erected around all sides of a roof work area.

When working in a boom/bucket, a full body harness will be used and the lanyard will be tied off to the appropriate attachment location on the supporting boom arm.

Controlled access zones must be defined by a control line or other means that restrict access.

When using safety monitoring systems a competent person must be used to monitor the safety of workers.

****** will provide training. This training should be provide by a “Qualified Fall Protection” trainer.

****** will keep a written certification record to verify compliance with training requirements.

As your employer we will provide retraining when workers do not have the understanding and skills required by initial training.

**Never implement Fall Protection without establishing a proper Rescue plan.**

**Rescue:** Rescue must come rapidly to minimize the dangers of suspension trauma. The circumstances together with the lanyard attachment point will determine the possibilities of self-rescue. In situations where self-rescue is not likely to be possible, workers must be supervised at all times. Regardless of whether a worker can self-
rescue or must rely upon others, time is of the essence because a worker may lose consciousness in only a few minutes. If a worker is suspended long enough to lose consciousness, rescue personnel must be careful in handling such a person or the rescued worker may die anyway. This post-rescue death is apparently caused by the heart's inability to tolerate the abrupt increase in blood flow to the right heart after removal from the harness. Current recommended procedures are to take from 30 to 40 minutes to move the victim from kneeling to a sitting to a supine position.

**Recommendations:** Safety harnesses save many lives and injuries. However, continual vigilance is needed to train and supervise workers to ensure harnesses are used safely. All phases of fall protection need to be examined for each particular application. Workers and emergency response personnel must be trained to recognize the risks of suspension trauma.

**After a fall:** 1) Workers should be trained to try to move their legs in the harness and try to push against any footholds. 2) Workers hanging in a harness should be trained to try to get their legs as high as possible and their heads as close to horizontal as possible (this is nearly impossible with many commercial harnesses in use today). 3) If the worker is suspended upright, emergency measures must be taken to remove the worker from suspension or move the fallen worker into a horizontal posture, or at least to a sitting position. 4) All personnel should be trained that suspension in an upright condition for longer than five minutes can be fatal.

**For harness rescues:** 1) The victim should not be suspended in a vertical (upright) posture with the legs dangling straight. Victims should be kept as nearly horizontal as possible, or at least in a sitting position. 2) Rescuers should be trained that victims who are suspended vertically before rescue are in a potentially fatal situation. 3) Rescuers must be aware that post-rescue death may occur if victims are moved to a horizontal position too rapidly.

All personnel should be trained that suspension in an upright condition for longer than five minutes can be fatal.

Depending on the harness attachment point and the position of the worker's body at arrest, different harness attachments offer different advantages.

Fall victims can slow the onset of suspension trauma by pushing down vigorously with the legs, by positioning their body in a horizontal or slight leg-high position, or by standing up.
When is Fall Protection Required?

<table>
<thead>
<tr>
<th>Height</th>
<th>Requirement</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 Feet or More</td>
<td>Working from a Ladder and: worker must wear a respirator or worker is using pressure washing equip.</td>
<td>25 Feet or More Working from a Ladder and: worker must wear a respirator or worker is using pressure washing equip.</td>
</tr>
<tr>
<td>24</td>
<td>Fixed ladders by providing these: cage</td>
<td>24 Feet or More Fixed ladders by providing these: cage</td>
</tr>
<tr>
<td>23</td>
<td>or well</td>
<td>23 Feet or More Fixed ladders by providing these: cage or well</td>
</tr>
<tr>
<td>22</td>
<td>or ladder climbing safety device</td>
<td>22 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device</td>
</tr>
<tr>
<td>21</td>
<td>or self-retracting lifeline</td>
<td>21 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>20 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>19 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>18 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>17 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>16 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>15 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>14 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>13 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>12 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>11 Feet or More Fixed ladders by providing these: cage or ladder climbing safety device or self-retracting lifeline</td>
</tr>
<tr>
<td>10</td>
<td>State required written Fall Protection Work Plan</td>
<td>10 Feet or More State required written Fall Protection Work Plan</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>9 Feet or More State required written Fall Protection Work Plan</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>8 Feet or More State required written Fall Protection Work Plan</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>7 Feet or More State required written Fall Protection Work Plan</td>
</tr>
<tr>
<td>6</td>
<td>This policy requires a written Fall Protection Work Plan.</td>
<td>6 Feet or More This policy requires a written Fall Protection Work Plan.</td>
</tr>
<tr>
<td>5</td>
<td>or Working on hazardous slopes or poles</td>
<td>5 Feet or More This policy requires a written Fall Protection Work Plan. or Working on hazardous slopes or poles</td>
</tr>
<tr>
<td>4</td>
<td>or from a boatswains chair</td>
<td>4 Feet or More This policy requires a written Fall Protection Work Plan. or Working on hazardous slopes or poles or from a boatswains chair</td>
</tr>
<tr>
<td>3</td>
<td>or when using suspended scaffold or skips and platforms in shafts</td>
<td>3 Feet or More This policy requires a written Fall Protection Work Plan. or Working on hazardous slopes or poles or from a boatswains chair or when using suspended scaffold or skips and platforms in shafts</td>
</tr>
<tr>
<td>2</td>
<td>Open sided: floors or ramps or runways Wall openings Trenches and excavations</td>
<td>2 Feet or More Open sided: floors or ramps or runways Wall openings Trenches and excavations</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>1 Foot or More Open sided: floors or ramps or runways Wall openings Trenches and excavations</td>
</tr>
<tr>
<td>0</td>
<td>Using aerial work platforms Crane/derrick work platforms Float scaffolds Over any trash/debris chute openings Confined work spaces when fall hazards exist and other protection not provided Over any hazard (e.g., implement hazards or vats or open tanks or dangerous equipment)</td>
<td>0 feet or less Using aerial work platforms Crane/derrick work platforms Float scaffolds Over any trash/debris chute openings Confined work spaces when fall hazards exist and other protection not provided Over any hazard (e.g., implement hazards or vats or open tanks or dangerous equipment)</td>
</tr>
</tbody>
</table>
FALL PROTECTION RULES

CHAPTER I

It shall be the policy of ***** to implement the various requirements of the fall protection regulations as required by OR-OSHA.

Further information is available from management or the Safety Coordinator at *****.

It shall be the policy of ***** to fulfill its obligations under Oregon Administrative Rules Chapter 437 Division 3, Subdivision M Rule 1926.501 to implement its hazard and accident prevention program, and under 29 CFR 1926.505 a training program which addresses all of the hazards present in the workplace. ***** is committed to an effective fall prevention program.

Scope and Application

***** fall protection program applies to all construction work where an employee may be occupationally exposed to fall hazards. All work related to construction, alteration, or repair -- including painting and decorating -- is included. Under our plan, construction includes, but is not limited to, the following:

demolition or salvage of structures,
removal or encapsulation of materials,
new construction, alteration, repair, or renovation of structures, substrates, and maintenance operations associated with construction activities described above.

General Requirements

1. ***** shall be responsible for the fall protection program to be followed throughout all phases of construction and will provide the safety equipment as required.

2. ***** will provide access to all available fall protection and prevention equipment and shall maintain equipment as per the appropriate standard.

3. All fall protection equipment provided by ***** shall be conspicuously located.

4. All fall protection equipment shall be periodically inspected and maintained in operating condition. Defective equipment shall be immediately replaced.
GUARDRAILS, HANDRAILS AND COVERS

General Provisions

****** understands the hazards of employees or materials falling through floor, roof or wall openings, or from stairways or runways, and will implement its fall protection program to address the following topics:

A. Guarding of floor openings and floor holes

****** will guard floor openings with standard railings or toeboards or cover on all exposed sides except at entrances to stairways.

B. ****** will guard all ladder way floor openings with standard railings and standard toeboards.

C. ****** will guard all hatchways and chute floor openings by:

1. Hinged covers of standard strength and construction and standard railing with only one exposed side.
2. A removable standard railing with toeboards on two sides of the opening and fixed standard railings with toeboards on all other exposed sides.
3. Skylight openings shall be guarded by fixed standard railings.
4. Fixed and trap door openings shall be guarded by floor opening covers of standard strength and construction.
5. Manhole openings shall be guarded by standard covers.

****** Motion Stopping Safety System

****** will protect employees from falling from all sides and edges of roofs or elevated areas by one of the three methods described below:

A. By the use of a motion stopping safety system (MSS),

B. By the use of a warning line system, or

C. By the use of a safety monitoring system.

Training

****** will provide a training program for all employees engaged in hazardous areas so that they are able to recognize the hazards of falling while working near a roof or elevated area.
Personal Climbing Equipment

****** will protect its employees working at elevated locations on poles, towers or other structures by the use of body belts and straps meeting the requirements of OAR Chapter 437-03-235 (1) Rule 1926.959. Additionally, ****** will employ approved tool rings for the purpose of holding tools.

****** will inspect all body belts and straps for each use to determine their safe working condition.

All lifelines and lanyards shall comply with provisions of the OSHA OR-OSHA standards, and defective equipment shall be replaced.

CHAPTER II

DEFINITIONS - Chapter 437 Division 2, Subdivision D, Rule 1910.21

(A) As used in 1910.23, unless the context requires otherwise, floor and wall opening, railing and toe board terms shall have the meanings ascribed in this paragraph.

(1) “Floor hole.” An opening measuring less than 12 inches but more than one inch in its least dimension, in any floor,

(2) “Floor opening.” An opening measuring 12 inches or more in its least dimension, in any floor or platform, pavement or yard through which persons may fall; such as a hatchway, stair or ladder opening, pit, or large manhole. Floor openings occupied by elevators, dumb waiters, conveyors, machinery, or containers are excluded from this subpart.

(3) “Handrail.” A single bar or pipe supported on brackets from a wall or partition, as on a stairway or ramp, to furnish persons with a handhold in case of tripping.

(4) “Platform.” A working space for persons, elevated above the surrounding floor or ground; such as a balcony or platform for the operation of machinery and equipment.

(5) “Runway.” A passageway for persons, elevated above the surrounding floor or ground level, such as a foot walk along shafting or a walkway between buildings.

(6) “Standard railing.” A vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, platform, or runway to prevent falls of persons.

(7) “Standard strength and construction.” Any construction of railings, covers, or other guards that meet the requirements of 1910.23.
(8) “Stair railing.” A vertical barrier erected along exposed sides of a stairway to prevent falls of persons.

(9) “Toeboard.” A vertical barrier at floor level erected along exposed edges of a floor opening, wall opening, platform, runway, or ramp to prevent falls of materials.

(10) “Wall hole.” An opening less than 30 inches but more than one inch high, of unrestricted width, in any wall or partition; such as a ventilation hole or drainage scupper.

(11) “Wall opening.” An opening at least 30 inches high and 18 inches wide, in any wall or partition, through which persons may fall; such as a yard-arm doorway or chute opening.

(B) As used in 1910.24, unless the context requires otherwise, fixed industrial stair terms shall have the meaning ascribed in this paragraph.

(1) “Handrail.” A single bar or pipe supported on brackets from a wall or partition, to provide a continuous handhold for persons using a stair.

(2) “Nose, nosing.” That portion of a tread projecting beyond the face of the riser immediately below.

(3) “Open riser.” The air space between the treads of stairways without upright members (risers).

(4) “Platform.” An extended step or landing breaking a continuous run of stairs.

(5) “Railing.” A vertical barrier erected along exposed sides of stairways and platforms to prevent falls of persons. The top member of railing usually serves as a handrail.

(6) “Rise.” The vertical distance from the top of a tread to the top of the next higher tread.

(7) “Riser.” The upright member of a step situated at the back of a lower tread and near the leading edge of the next higher tread.

(8) “Stairs, stairway.” A series of steps leading from one level or floor to another, or leading to platforms, pits, boiler rooms, crossovers, or around machinery, tanks, and other equipment that is used more or less continuously or routinely by employees, or only occasionally by specific individuals. A series of steps and landings having three or more risers constitutes stairs or stairway.
CHAPTER III

SAFETY NETS - CFR 1926.501 and 502

(A) Safety nets shall be provided when workplaces are more than 25 feet above the ground or water surface, or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts is impractical.

(B) Where safety net protection is required by this part, operations shall not be undertaken until the net is in place and has been tested.

(C) Nets:

(1) Nets shall extend 8 feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than 30 feet below such work surface. Nets shall be hung with sufficient clearance to prevent user’s contact with the surfaces or structures below. Such clearances shall be determined by impact load testing.

(2) It is intended that only one level of nets be required for bridge construction.

(D) The mesh size of nets shall not exceed 36 square inches but no longer than 6 inches on any one side. All new nets shall meet accepted performance standards of 17,500 foot-pounds minimum impact resistance as determined and certified by a manufacturer, and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5,000 pounds.

(E) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.

(F) Connections between net panels shall develop the full strength of the net.

CHAPTER IV

GUARDRAILS, HANDRAILS AND COVERS CFR 1926.500 and 502

(A) General Provisions

This subpart shall apply to temporary or emergency conditions where there is danger of employees or materials falling through floor, roof, or wall openings, or from stairways or runways.
(B) Guarding of Floor Openings and Floor Holes

(1) Floor openings shall be guarded by a standard railing and toeboards or cover, as specified in paragraph (f) of this section. In general, the railing shall be provided on all exposed sides, except at entrances to stairways.

(2) Ladder way floor openings or platforms shall be guarded by standard railings with standard toeboards on all exposed sides, except at entrance to opening, with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.

(3) Hatchways and chute floor openings shall be guarded by one of the following:
   (i) Hinged covers of standard strength and construction and a standard railing with only one exposed side. When the opening is not in use, the cover shall be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings;
   (ii) A removable standard railing with toeboard on not more than two sides of the opening and fixed standard railings with toeboards on all other exposed sides. The removable railing shall be kept in place when the opening is not in use and should preferably be hinged or otherwise mounted so as to be conveniently replaceable.

(4) Wherever there is danger of falling through a skylight opening, it shall be guarded by a fixed standard railing on all exposed sides or a cover capable of sustaining the weight of twice the load 502 (i) 2.

(5) Pits and trap-door floor openings shall be guarded by floor opening covers of standard strength and construction. While the cover is not in place, the pit or trap openings shall be protected on all exposed sides by removable standard railings.

(6) Manhole floor openings shall be guarded by standard covers, which need not be hinged in place. While the cover is not in place, the manhole opening shall be protected by standard railings.

(7) Temporary floor openings shall have standard railings.

(8) Floor holes, into which persons can accidentally walk, shall be guarded by either a standard railing with standard toeboard on all exposed sides, or a floor hole cover of standard strength and construction that is secured against accidental displacement. While the cover is not in place, the floor hole shall be protected by a standard railing.

(9) Where doors or gates open directly on a stairway, a platform shall be provided, and the swing of the door shall not reduce the effective width of the platform to less than 20 inches.
(C) Guarding of Wall Openings

(1) Wall openings, from which there is a drop of more than four feet, and the bottom of the opening is less than three (3) feet above the working surface, shall be guarded as follows:
   (i) When the height and placement of the opening in relation to the working surface is such that either a standard rail or intermediate rail will effectively reduce the danger of falling, one or both shall be provided;
   (ii) The bottom of a wall opening, which is less than four (4) inches above the working surface, regardless of width, shall be protected by a standard toeboard or an enclosing screen either of solid construction or as specified in paragraph (f)(7)(ii) of this section.

(2) An extension platform outside a wall opening onto which materials can be hoisted for handling shall have side rails or equivalent guards of standard specifications. One side of an extension platform may have removable railings in order to facilitate handling materials.

(3) When a chute is attached to an opening, the provisions of paragraph (c)(1) of this section shall apply, except that a toeboard is not required.

(D) Guarding of Open-Sided Floors, Platforms and Runways CFR 1926.501 (b) & 502 (b) 14

(1) Every open-sided floor or platform six feet or more above adjacent floor or ground level shall be guarded by a standard railing, or the equivalent, as specified in paragraph (f)(1)(i) of this section, on all open sides, except where there is entrance to a ramp, stairway, or fixed ladder. The railing shall be provided with a standard toeboard wherever, beneath the open sides, persons can pass, or there is moving machinery, or there is equipment with which falling materials could create a hazard.

(2) Runways shall be guarded by a standard railing, or the equivalent, as specified in paragraph (f) of this section, on all open sides, four (4) feet or more above floor or ground level. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard shall also be provided on each exposed side.

(3) Runways used exclusively for special purposes may have the railing on one side omitted where operating conditions necessitate such omission, providing the falling hazard is minimized by using a runway not less than 18 inches wide.

(4) Where employees entering upon runways become thereby exposed to machinery, electrical equipment, or other danger not a falling hazard, additional guarding shall be provided.

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

(E)  Standard Specifications CFR 1926.502 (b) 1 through 15

(1)  A standard railing shall consist of top rail, intermediate rail, toeboard, and posts, and shall have a vertical height of approximately 42 and or minus 3" inches from upper surface of top rail to floor, platform, runway, or ramp level. The top rail shall be smooth-surfaced throughout the length of the railing. The intermediate rail shall be halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts except where such overhang does not constitute a projection hazard. Minimum requirements for standard railings under various types of construction are specified in the following paragraphs:

(i)  For wood railings, the posts shall be of at least 2-inch by 4-inch stock spaced not to exceed 8 feet; the top rail shall be of at least 2-inch by 4-inch stock; the intermediate rail shall be of at least 1-inch by 6-inch stock.

(ii) For pipe railings, posts and top and intermediate railings shall be at least 1½ inches nominal diameter with posts spaced not more than 8 feet on centers.

(iii) For structural steel railings, posts and top and intermediate rails shall be of 2-inch by 2-inch by 3/8-inch angles or other metal shapes of equivalent bending strength, with posts spaced not more than 8 feet on centers.

(iv) The anchoring of posts and framing of members for railings of all types shall be of such construction that the completed structure shall be capable of withstanding a load of at least 200 pounds applied in any direction at any point on the top rail, with a minimum of deflection.

(v) Railings receiving heavy stresses from employees trucking or handling materials shall be provided additional strength by the use of heavier stock, closer spacing of posts, bracing or by other means.

(vi) Other types, sizes, and arrangements of railing construction are acceptable, provided they meet the following conditions:

(a) A smooth-surfaced top rail at a height above floor, platform, runway, or ramp level of approximately 42 inches;

(b) A strength to withstand at least the minimum requirement of 200 pounds top rail pressure with a minimum of deflection;

(c) Protection between top rail and floor, platform, runway, ramp, or stair treads, equivalent at least to that afforded by a standard intermediate rail;
(d) Elimination of overhang of rail ends unless such overhang does not constitute a hazard.

(2) [Removed and reserved by FR page 47687, November 14, 1990]

(3) (i) A standard toeboard shall be 4 inches minimum in vertical height from its top edge to the level of the floor, platform, runway, or ramp. It shall be securely fastened in place and have not more than ¼-inch clearance above floor level. It may be made of any substantial material, either solid, or with openings not over 1-inch in greatest dimension.

(ii) Where material is piled to such height that a standard toeboard does not provide protection, paneling or screening from floor to intermediate rail or to top rail shall be provided.

(4) (i) A standard handrail shall be of construction similar to a standard railing except that it is mounted on a wall or partition, and does not include an intermediate rail. It shall have a smooth surface along the top and both sides of the handrail. The handrail shall have an adequate handhold for any one grasping it to avoid falling. Ends of the handrail shall be constructed so as not to constitute a projection hazard.

(ii) The height of handrails shall be not more than 34 inches nor less than 30 inches from upper surface of handrail to surface of tread, in line with face of riser or to surface of ramp.

(iii) All handrails and railings shall be provided with a clearance of approximately 3 inches between the handrail or railing and any other object.

(5) Floor opening covers shall be of any material that meets the following strength requirements:

(i) Conduits, trenches, and manhole covers and their supports, when located in roadways, and vehicular aisles, shall be designed to carry a truck rear-axle load of at least 2 times the maximum intended load;

(ii) The floor opening cover shall be capable of supporting the maximum intended load and so installed as to prevent accidental displacement.

(6) Skylight openings that create a falling hazard shall be guarded with a standard railing, or covered in accordance with paragraph (f)(5)(ii) of this section.

(7) Wall opening protection shall meet the following requirements:

(i) Barriers shall be of such construction and mounting that, when in place at the opening, the barrier is capable of withstanding a load of at least 200 pounds applied in any direction (except upward), with a minimum of deflection at any point on the top rail or corresponding member.
(ii) Screens shall be of such construction and mounting that they are capable of withstanding a load of at least 200 pounds applied horizontally at any point on the near side of the screen. They may be of solid construction, of grill work with openings not more than 8 inches long, or of slat work with openings not more than 4 inches wide with length unrestricted.

(F) Guarding of Low-Pitched Roof Perimeters During the Performance of Built-up Roofing Work

(1) General provisions. During the performance of built-up roofing work on low-pitched roofs with a ground to eave height greater than 16 feet (4.9 meters), employees engaged in such work shall be protected from falling from all unprotected sides and edges on the roof as follows:
   (i) By the use of a motion-stopping-safety system (MSS system); or
   (ii) By the use of a warning line system erected and maintained as provided in paragraph (g)(3) of this section and supplemented for employees working between the warning line and the roof edge by the use of either an MSS system or, where mechanical equipment is not being used or stored, by the use of a safety monitoring system; or
   (iii) By the use of a safety monitoring system on roofs fifty feet (15.25 meters) or less in width (see Appendix A), where mechanical equipment is not being used or stored.

(2) Exception. The provisions of paragraph (g)(1) of this section do not apply at points of access such as stairways, ladders, and ramps, or when employees are on the roof only to inspect, investigate, or estimate roof level conditions. Roof edge materials handling areas and materials storage areas shall be guarded as provided in paragraph (g)(5) of this section.

(3) Warning lines:
   (i) Warning lines shall be erected around all sides of the work area:
      (a) When mechanical equipment is not being used, the warning line shall be erected not less than six feet (1.8 meters) from the roof edge.
      (b) When mechanical equipment is being used, the warning line shall be erected not less than six feet (1.8 meters) from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet (3.1 meters) from the roof edge which is perpendicular to the direction of mechanical equipment operation.
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(ii) The warning line shall consist of a rope, wire, or chain, and supporting stanchions erected as follows:
   (a) The rope, wire, or chain shall be flagged at not more than six foot (1.8 meters) intervals with high-visibility material;
   (b) The rope, wire, or chain shall be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches (.86 meters) from the roof surface and its highest point is no more than 39 inches (1 meter) from the roof surface;
   (c) After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds (71 Newton’s) applied horizontally against the stanchion, 30 inches (0.76 meters) above the roof surface, perpendicular to the warning line, and in the direction of the roof edge;
   (d) The rope, wire, or chain shall have a minimum tensile strength of 500 pounds (227 kilograms), and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions as prescribed in paragraph (g)(3)(ii)(c) of this section; and
   (e) The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.

(iii) Access paths shall be erected as follows:
   (a) Points of access, material handling areas and storage areas shall be connected to the work area by a clear access path formed by two warning lines.
   (b) When the path to a point of access is not in use, a rope, wire, or chain, equal in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area.

(4) Mechanical equipment. Mechanical equipment may be used or stored only in areas where employees are being protected by either a warning line or an MSS system. Mechanical equipment may not be used or stored between the warning line and the roof edge unless the employees are being protected by an MSS system. Mechanical equipment may not be used or stored where the only protection provided is by a safety monitoring system.

(5) Roof edge materials handling areas and materials storage. Employees working in a roof edge materials handling or materials storage located on a low-pitched roof with a ground to eave height greater than 16 feet (4.9 meters) shall be protected from falling by the use of an MSS system along all unprotected roof sides and edges of the area.
(i) When guardrails are used at hoisting areas, a minimum of four feet of guardrail shall be erected on each side of the access point through which materials are hoisted.

(ii) A chain or gate shall be placed across the opening between the guardrail sections when hoisting operations are not taking place.

(iii) When guardrails are used at bitumen pipe outlets, a minimum of four feet of guardrail shall be erected on each side of the pipe.

(iv) When full body harness systems are used, they shall not be attached to the hoist.

(v) When full body harness systems are used they shall be rigged to allow the movement of employees only as far as the roof edge.

(vi) Materials may not be stored within six feet of the roof edge unless guardrails are erected at the roof edge.

(vii) Materials which are piled, grouped or stacked shall be stable and self-supporting.

(6) Training

(i) The employer shall provide a training program for all employees engaged in built-up roofing work so that they are able to recognize and deal with the hazards of falling associated with working near a roof perimeter. The employees shall also be trained in the safety procedures to be followed in order to prevent such falls.

(ii) The employer shall assure that employees engaged in built-up roofing work have been trained and instructed in the following areas:

(a) The nature of fall hazards in the work area near a roof edge;

(b) The function, use and operation of the MSS system, warning line and safety monitoring systems to be used;

(c) The correct procedures for erecting, maintaining and disassembling the systems to be used;

(d) The role of each employee in the safety monitoring system when this system is used;

(e) The limitations on the use of mechanical equipment; and

(f) The correct procedures for the handling and storage of equipment and materials.

(iii) Training shall be provided for each newly hired employee, and for all other employees as necessary, to assure that employees maintain proficiency in the areas listed in paragraph (g)(6)(ii) of this section.
CHAPTER V

OVERHEAD LINES - 1926.555

(A) Overhead Lines

(1) When working on or with overhead lines the provisions of paragraphs (a)(2) through (8) of this section shall be complied with in addition to other applicable provisions of this subpart.

(2) Prior to climbing poles, ladders, scaffolds, or other elevated structures, an inspection shall be made to determine that the structures are capable of sustaining the additional or unbalanced stresses to which they will be subjected.

(3) Where poles or structures may be unsafe for climbing, they shall not be climbed until made safe by guying, bracing, or other adequate means.

(4) Before installing or removing wire or cable, strains to which poles and structures will be subjected shall be considered and necessary action taken to prevent failure of supporting structures.

(5) (i) When setting, moving, or removing poles using cranes, derricks, gin poles, A-frames, or other mechanized equipment near energized lines or equipment, precautions shall be taken to avoid contact with energized lines or equipment, except in bare-hand live-line work, or where barriers or protective devices are used.

(ii) Equipment and machinery operating adjacent to energized lines or equipment shall comply with 1926.952(c)(2).

(6) (i) Unless using suitable protective equipment for the voltage involved, employees standing on the ground shall avoid contacting equipment or machinery working adjacent to energized lines or equipment.

(ii) Lifting equipment shall be bonded to an effective ground or it shall be considered energized and barricaded when utilized near energized equipment or lines.

(7) Pole holes shall not be left unattended or unguarded in areas where employees are currently working.

(8) Tag lines shall be of a nonconductive type when used near energized lines.

(B) Metal Tower Construction

(1) When working in unstable material the excavation for pad or pile-type footing in excess of 5 feet deep shall be either sloped to the angle of repose as required in 1926.652 or shored if entry is required. Ladders shall be provided for access to pad or pile-type footing excavations in excess of 4 feet.
(2) When working in unstable material provision shall be made for cleaning out auger-type footing without requiring an employee to enter the footing unless shoring is used to protect the employee.

(3) (i) A designated employee shall be used in directing mobile equipment adjacent to footing excavations.
   (ii) No one shall be permitted to remain in the footing while equipment is being spotted for placement.
   (iii) Where necessary to assure the stability of mobile equipment the location of use for such equipment shall be graded and leveled.

(4) (i) Tower assembly shall be carried out with a minimum exposure of employees to falling objects when working at two or more levels on a tower.
   (ii) Guy lines shall be used as necessary to maintain sections or parts of sections in position and to reduce the possibility of tipping.
   (iii) Members and sections being assembled shall be adequately supported.

(5) When assembling and erecting towers the provisions of paragraphs (b) (5) (i), (ii) and (iii) of this section shall be complied with:
   (i) The construction of transmission towers and the erecting of poles, hoisting machinery, site preparation machinery, and other types of construction machinery shall conform to the applicable requirements of this part.
   (ii) No one shall be permitted under a tower, which is in the process of erection or assembly, except as may be required to guide and secure the section being set.
   (iii) When erecting towers using hoisting equipment adjacent to energized transmission lines, the lines shall be deenergized when practical. If the lines are not deenergized, extraordinary caution shall be exercised to maintain the minimum clearance distances required by 1926.950(c), including Table V-1.

(6) (i) Erection cranes shall be set on firm level foundations and when the cranes are so equipped outriggers shall be used.
   (ii) Tag lines shall be utilized to maintain control of tower sections being raised and positioned, except where the use of such lines would create a greater hazard.
   (iii) The loading shall not be detached from a tower section until the section is adequately secured.
   (iv) Except during emergency restoration procedures erection shall be discontinued in the event of high wind or other adverse weather conditions which would make the work hazardous.
   (v) Equipment and rigging shall be regularly inspected and maintained in safe operating condition.
(7) Adequate traffic control shall be maintained when crossing highways and railways with equipment as required by the provisions of 1926.200 (g) (1) and (2).

(8) A designated employee shall be utilized to determine that required clearance is maintained in moving equipment under or near energized lines.

(C) Stringing or Removing Deenergized Conductors

(1) When stringing or removing deenergized conductors, the provisions of paragraphs (c) (2) through (12) of this section shall be complied with.

(2) Prior to stringing operations a briefing shall be held setting forth the plan of operation and specifying the type of equipment to be used, grounding devices and procedures to be followed, crossover methods to be employed, and the clearance authorization required.

(3) Where there is a possibility of the conductor accidentally contacting an energized circuit or receiving a dangerous induced voltage buildup, to further protect the employee from the hazards of the conductor, the conductor being installed or removed shall be grounded or provisions made to insulate or isolate the employee.

(4) (i) If the existing line is deenergized, proper clearance authorization shall be secured and the line grounded on both sides of the crossover or, the line being strung or removed shall be considered and worked as energized.

(ii) When crossing over energized conductors in excess of 600 volts, rope nets or guard structures shall be installed unless provision is made to isolate or insulate the workman or the energized conductor. Where practical the automatic reclosing feature of the circuit interrupting device shall be made inoperative. In addition, the line being strung shall be grounded on either side of the crossover or considered and worked as energized.

(5) Conductors being strung in or removed shall be kept under positive control by the use of adequate tension reels, guard structures, tielines, or other means to prevent accidental contact with energized circuits.

(6) Guard structure members shall be sound and of adequate dimension and strength, and adequately supported.

(7) (i) Catch-off anchors, rigging, and hoists shall be of ample capacity to prevent loss of the lines.

(ii) The manufacturer's load rating shall not be exceeded for stringing lines, pulling lines, sock connections, and all load-bearing hardware and accessories.

(iii) Pulling lines and accessories shall be inspected regularly and replaced or repaired when damaged or when dependability is doubtful. The provisions of 1926.251(c) (4) (ii) (concerning splices) shall not apply.
(8) Conductor grips shall not be used on wire rope unless designed for this application.

(9) While the conductor or pulling line is being pulled (in motion) employees shall not be permitted directly under overhead operations, nor shall any employee be permitted on the cross arm.

(10) A transmission clipping crew shall have a minimum of two structures clipped in between the crew and the conductor being sagged. When working on bare conductors, clipping and tying crews shall work between grounds at all times. The grounds shall remain intact until the conductors are clipped in, except on dead end structures.

(11) (i) Except during emergency restoration procedures, work from structures shall be discontinued when adverse weather (such as high wind or ice on structures) makes the work hazardous.

(ii) Stringing and clipping operations shall be discontinued during the progress of an electrical storm in the immediate vicinity.

(12) (i) Reel handling equipment, including pulling and braking machines, shall have ample capacity, operate smoothly, and be leveled and aligned in accordance with the manufacturer’s operating instructions.

(ii) Reliable communications between the reel tender and pulling rig operator shall be provided.

(iii) Each shall be snubbed or dead-ended at both ends before subsequent pulls.

(D) Stringing Adjacent to Energized Lines

(1) Prior to stringing parallel to an existing energized transmission line a competent determination shall be made to ascertain whether dangerous induced voltage buildups will occur, particularly during switching and ground fault conditions. When there is a possibility that such dangerous induced voltage may exist the employer shall comply with the provisions of paragraphs (d) *2) through (9) of this section in addition to the provisions of paragraph (c) of this 1926.955, unless the line is worked as energized.

(2) When stringing adjacent to energized lines the tension stringing method or other methods which preclude unintentional contact between the lines being pulled and any employee shall be used.

(3) All pulling and tensioning equipment shall be isolated, insulated, or effectively grounded.

(4) A ground shall be installed between the tensioning reel setup and the first structure in order to ground each bare conductor, subconductor, and overhead ground conductor during stringing operations.

(5) During stringing operations, each bare conductor, subconductor, and overhead ground conductor shall be grounded at the first tower adjacent
to both the tensioning and pulling setup and in increments so that no point is more than 2 miles from a ground.

(i) The ground shall be left in place until conductor installation is completed.

(ii) Such ground shall be removed as the last phase of aerial cleanup.

(iii) Except for moving type grounds, the grounds shall be placed and removed with a hot stick.

(6) Conductors, subconductors, and overhead ground conductors shall be grounded at all dead-end or catch-off points.

(7) A ground shall be located at each side and within 10 feet of working areas where conductors, subconductors, or overhead ground conductors are being spliced at ground level. The two ends to be spliced shall be bonded to each other. It is recommended that splicing be carried out on either an insulated platform or on a conductive metallic grounding mat bonded to both grounds. When a grounding mat is used, it is recommended that the grounding mat be roped off and an insulated walkway provided for access to the mat.

(8) (i) All conductors, subconductors, and overhead ground conductors shall be bonded to the tower at any isolated tower where it may be necessary to complete work on the transmission line.

(ii) Work on dead-end towers shall require grounding on all de-energized lines.

(iii) Grounds may be removed as soon as the work is completed provided that the lines is not left open circuited at the isolated tower at which work is being completed.

(9) When performing work from the structures, clipping crews and all others working on conductors, subconductors, or overhead ground conductors shall be protected by individual grounds installed at every work location.

(E) Live-Line Bare-Hand Work

In addition to any other applicable standards contained elsewhere in this subpart all live-line bare-hand work shall be performed in accordance with the following requirements:

(1) Employees shall be instructed and trained in the live-line bare-hand technique and the safety requirements pertinent thereto before being permitted to use the technique on energized circuits.

(2) Before using the live-line bare-hand technique on energized high-voltage conductors or parts, a check shall be made of:

(i) The voltage rating of the circuit on which the work is to be performed;

(ii) The clearances to ground of lines and other energized parts on which the work is to be performed; and
(iii) The voltage limitations of the aerial-lift equipment intended to be used.

(3) Only equipment designed, tested, and intended for live-line bare-hand work shall be used.

(4) All work shall be personally supervised by a person trained and qualified to perform live-line bare-hand work.

(5) The automatic reclosing feature of circuit interrupting devices shall be made inoperative where practical before working on any energized line or equipment.

(6) Work shall not be performed during the progress of an electrical storm in the immediate vicinity.

(7) A conductive bucket liner or other suitable conductive device shall be provided for bonding the insulated aerial device to the energized line or equipment.
   (i) The employee shall be connected to the bucket liner by use of conductive shoes, leg clips, or other suitable means.
   (ii) Where necessary, adequate electrostatic shielding for the voltage being worked or conductive clothing shall be provided.

(8) Only tools and equipment intended for live-line bare-hand work shall be used, and such tools and equipment shall be kept clean and dry.

(9) Before the boom is elevated, the outriggers on the aerial truck shall be extended and adjusted to stabilize the truck and the body of the truck shall be bonded to an effective ground, or barricaded and considered as energized equipment.

(10) Before moving the aerial lift into the work position, all controls (ground level and bucket) shall be checked and tested to determine that they are in proper working condition.

(11) Arm current tests shall be made before starting work each day, each time during the day when higher voltage is going to be worked and when changed conditions indicate a need for additional tests. Aerial buckets used for bare-hand live-line work shall be subjected to an arm current test. This test shall consist of placing the bucket in contact with an energized source equal to the voltage to be worked upon for a minimum time of three (3) minutes. The leakage current shall not exceed 1 microampere per kilo-volt of nominal line-to-line voltage. Work operations shall be suspended immediately upon any indication of a malfunction in the equipment.

(12) All aerial lifts to be used for live-line bare-hand work shall have dual controls (lower and upper) as required by paragraph (e) (12) (i) and (ii) of this section.
   (i) The upper controls shall be within easy reach of the employee in the basket. If a two-basket type lift is used access to the controls shall be within easy reach from either basket.
(ii) The lower set of controls shall be located near base of the boom that will permit over-ride operation of equipment at any time.

(13) Ground level lift control shall not be operated unless permission has been obtained from the employee in lift, except in case of emergency.

(14) Before the employee contacts the energized part to be worked on, the conductive bucket liner shall be bonded to the energized conductor by means of a positive connection, which shall remain attached to the energized conductor until the work on the energized circuit is completed.

(15) The minimum clearance distances for live-line bare-hand work shall be as specified in Table V-2. These minimum clearance distances shall be maintained from all ground objects and from lines and equipment at a different potential than that to which the insulated aerial device is bonded unless such grounded objects or other lines and equipment are covered by insulated guards. These distances shall be maintained when approaching, leaving, and when bonded to the energized circuit.

**TABLE V -2**

MINIMUM CLEARANCE DISTANCES FOR LIVE-LINE BARE-HAND WORK (ALTERNATING CURRENT)

<table>
<thead>
<tr>
<th>Voltage Range (Phase to Phase) Kilovolts</th>
<th>Distance in Feet and Inches for Maximum Voltage Phase to Ground</th>
<th>Phase to Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 to 15</td>
<td>2'0&quot;</td>
<td>2'0&quot;</td>
</tr>
<tr>
<td>15.1 to 35</td>
<td>2'4&quot;</td>
<td>2'4&quot;</td>
</tr>
<tr>
<td>35.1 to 46</td>
<td>2'6&quot;</td>
<td>2'6&quot;</td>
</tr>
<tr>
<td>46.1 to 72.5</td>
<td>3'0&quot;</td>
<td>3'0&quot;</td>
</tr>
<tr>
<td>72.6 to 121</td>
<td>3'4&quot;</td>
<td>4'6&quot;</td>
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<tr>
<td>138 to 145</td>
<td>3'6&quot;</td>
<td>5'0&quot;</td>
</tr>
<tr>
<td>161 to 169</td>
<td>3'8&quot;</td>
<td>5'6&quot;</td>
</tr>
<tr>
<td>230 to 242</td>
<td>5'0&quot;</td>
<td>8'4&quot;</td>
</tr>
<tr>
<td>345 to 362</td>
<td>¹ 7'0&quot;</td>
<td>¹ 13'4&quot;</td>
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<tr>
<td>500 to 552</td>
<td>¹ 11'0&quot;</td>
<td>¹ 20'0&quot;</td>
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<tr>
<td>700 to 765</td>
<td>¹ 15'0&quot;</td>
<td>¹ 13'0&quot;</td>
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</table>

Footnote (¹) For 345-362kv., 500-522kv., and 700-765kv., the minimum clearance distance may be reduced provided the distances are not made less than the shortest distance between the energized part and the grounded surface.
(16) When approaching, leaving, or bonding to an energized circuit the minimum distances in Table V-2 shall be maintained between all parts of the insulated boom assembly and any grounded parts (including the lower arm or portions of the truck).

(17) When positioning the bucket alongside an energized bushing or insulator string, the minimum line-to-ground clearances of Table V-2 must be maintained between all parts of the bucket and the grounded end of the bushing or insulator string.

(18) (i) The use of hand lines between buckets, booms, and the ground is prohibited.

(ii) No conductive materials over 36 inches long shall be placed in the bucket, except for appropriate length jumpers, armor rods, and tools.

(iii) Nonconductive-type hand lines may be used from line to ground when not supported from the bucket.

(19) The bucket and upper insulated boom shall not be overstressed by attempting to lift or support weights in excess of the manufacturer’s rating.

(20) (i) A minimum clearance table (as shown in table V-2) shall be printed on a plate of durable nonconductive material, and mounted in the buckets or its vicinity so as to be visible to the operator of the boom.

(ii) It is recommended that insulated measuring sticks be used to verify clearance distances.
AREAS SURVEYED FOR FALL HAZARDS

The following areas have been surveyed to determine whether any “Fall Hazards” are located within these parts of the facility. The teams assigned to inventory each area are also shown:

<table>
<thead>
<tr>
<th>AREA</th>
<th>INVENTORY TEAM</th>
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</table>
FALL PROTECTION CHECKLIST

□ Does your company have a written fall protection program? ( ) ( )

□ If you have a written fall protection program, does it include:
  a. Slips ( ) ( )
  b. Tripping ( ) ( )
  c. Rough Surfaces ( ) ( )

□ Does your fall protection program start at:
  a. 6 feet ( ) ( )
  b. 10 feet ( ) ( )
  c. Other _____ ( ) ( )

□ Does your fall protection equipment include:
  a. Full body harness ( ) ( )
  b. Shock absorbent lanyards ( ) ( )
  c. Straps ( ) ( )
  d. Ropes ( ) ( )
  e. Devices which lock up ( ) ( )
  f. Climbing devices ( ) ( )

□ Does your program allow for the use of:
  a. Full body harnesses ( ) ( )
  b. Safety belts ( ) ( )

□ Do you apply the above to connectors? ( ) ( )

□ Do you allow multiple part lifts also known as “Christmas treeing?” ( ) ( )

□ Does your program cover maintenance of equipment? ( ) ( )

□ Does your program cover inspection? ( ) ( )

□ Does your program cover training? ( ) ( )

□ Does your program cover rescue methods? ( ) ( )
The following Warning Signs and Entry Barriers (such as guardrails, roping, warning tape, etc.) are available in our facility for use. In addition to the equipment itself, the location within the facility is listed below. After operations have been completed, all equipment must be cleaned and any necessary maintenance performed before it is returned to its original location.

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<thead>
<tr>
<th>SIGNS AND ENTRY BARRIERS</th>
<th>LOCATION</th>
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OTHER EQUIPMENT

The following equipment is available in our facility for use. In addition to the equipment itself, the location within the facility is specified. After entry operations have been completed, all equipment must be cleaned and any necessary maintenance performed before it is returned to its original location.

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<th>EQUIPMENT</th>
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EMERGENCY RESCUE EQUIPMENT

The following Emergency Rescue Equipment is available for use. In addition to the equipment itself, the location (within the facility or “off-site”) is specified. After entry operations have been completed, all equipment must be cleaned and any necessary maintenance performed before it is returned to its original location.

<table>
<thead>
<tr>
<th>ON-SITE EMERGENCY RESCUE EQUIPMENT</th>
<th>LOCATION</th>
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<tr>
<th>OFF-SITE EMERGENCY RESCUE EQUIPMENT</th>
<th>LOCATION</th>
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<tbody>
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</table>
EMERGENCY RESCUE TEAM CURRICULUM

The following education and training courses are given to the employees who will become members of our Safety Team.

<table>
<thead>
<tr>
<th>TYPE OF COURSE</th>
<th>COURSE TITLE/DESCRIPTION</th>
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<tbody>
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</table>
SAFETY TEAM MEMBER
EMPLOYEE TRAINING LOG

Employee: ______________________________ Employee # ________________
Department: ____________________________

<table>
<thead>
<tr>
<th>Date</th>
<th>Type of Training or Course Description</th>
<th>Instructor</th>
<th>Certification of Training and Testing (Instructor’s Signature)</th>
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<tbody>
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</table>
This is to certify that ___________________________ has completed the course
(employee name)

___________________________ to qualify them to become a member
(course name)

of our Safety Team. This training was conducted by ____________________________
(course instructor)

and was completed on _____________________________.
(date)

________________________________________
(Signature of instructor or other certifying authority)

________________________________________
(Date)
<table>
<thead>
<tr>
<th>Date</th>
<th>Time AM/PM</th>
<th>Training Provided</th>
<th>Instructor</th>
<th>Employee</th>
<th>Dept</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A=Annual</td>
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<td>N=New Employee</td>
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</table>

I hereby acknowledge that at the date and time noted next to my signature below I received the training listed and understand the information provided.
ACKNOWLEDGMENT OF RECEIPT

of the

***** FALL PROTECTION PROGRAM

I hereby acknowledge that, on the date and time noted to my signature below, I received the following training or material:

***** FALL PROTECTION PROGRAM

Name (Please Print): __________________________________________________________
Signature: __________________________________________________________________
Date: _____________________________________________________________________ Time: ____________________
FALL PROTECTION WORK PLAN

In accordance with OAR 437, Division 3, 1926.502, the following Fall Protection Work Plan is hereby formulated for ***** job:

Name and Number:

Location:

Supervisor:

A1. Identify all fall hazards likely to be encountered in the work area during construction.

1. Elevations of six (6) feet or greater (Interior):

   (a) Leading Edges      Yes  No
   (b) Perimeter Edges    Yes  No
   (c) Elevator Openings  Yes  No
   (d) Stairway Openings  Yes  No
   (e) Vent/Mechanical Openings Yes  No
   (f) Open sided Floors/Platforms Yes  No
   (g) Articulating Lifts  Yes  No
   (h) Scaffolds          Yes  No
   (i) Stairways          Yes  No
   (j) Other (explain) Scissors Lift, Ladders Yes  No

While working on any existing slab, deck and roof, all employees that have to work within 10’ of a leading edge will wear a full body harness and be tied off 100% of the time.

A2. Identify all fall hazards likely to be encountered in the work area during construction.

1. Elevations of ten (10) feet or greater (Exterior):

   (a) Leading Edges      Yes  No
   (b) Perimeter Edges    Yes  No
   (c) Elevator Openings  Yes  No
   (d) Stairway Openings  Yes  No
   (e) Vent/Mechanical Openings Yes  No
   (f) Open sided Floors/Platforms Yes  No
   (g) Articulating Lifts  Yes  No
   (h) Scaffolds          Yes  No
   (i) Stairways          Yes  No
   (j) Other (explain) Scissors Lift, Ladders Yes  No

While working on any existing slab, deck and roof, all employees that have to work within 10’ of a leading edge will wear a full body harness and be tied off 100% of the time.
B. Methods of Fall Arrest/Restraint provided:

1. Elevations of ten (10) feet or greater (roof, leading edge, etc.)
   (a) Safety Harness/Lanyard  Yes  No
   (b) Ropes with Grabs  Yes  No
   (c) Horizontal Lines  Yes  No
   (d) Standard Guardrails  Yes  No

2. Deck/Floor Openings
   (a) Standard Guardrails  Yes  No
   (b) Other (explain)  

3. Stairways - six feet (6)
   (a) Handrails  Yes  No

4. Articulated Lifts
   (a) Harness/Lanyards  Yes  No

5. Scaffolds
   (a) Guardrails and Toe-boards  Yes  No

C. Employee Training

1. Are employees trained in the proper use of fall protection systems?  Yes  No

2. Is training documentation available?  Yes  No

3. Location of documentation: At the job-site location and in the main ***** office.

D. Fall Protection System Procedures

1. Equipment assembled by (Name/Craft): By the craft employee, under the direction of the competent person.

2. Equipment maintained by (Name/Craft): By the craft employee, under the direction of the competent person.

3. Equipment inspected by (Name/Craft/Title): ***** competent person.
   Equipment or Systems Inspected (explain): All systems and equipment are inspected on a daily basis prior to use.
   Dates of Inspections: Daily, prior to use.
4. Procedures for Handling, Storage and Securing of Tools and Materials

(a) Describe how materials will be moved within the job-site:

<table>
<thead>
<tr>
<th>Cranes:</th>
<th>Forklifts:</th>
<th>Other:</th>
<th>Example (Hand)</th>
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(b) Limit Overhead Hazards: Yes No
(c) Material Secured when placed in Position: Yes No
(d) Equipment secured when not in use: Yes No

5. Methods of Providing Overhead Protection

(a) Barricading (Eliminating Access) Yes No
(b) Warning Signs Posted Yes No
(c) Hard Hats Required Yes No
(d) Toe-boards Installed Yes No
(e) Other (explain)

E. Method for Prompt, Safe Removal of Injured Workers

1. Initiate Emergency Response (Dial 911) Yes No
2. Utilize lift truck with personnel platform Yes No
3. Utilize articulated boom lift basket Yes No
4. Erect ladders Yes No
5. Use drop lines or retraction device Yes No
6. Assist medical, fire, emergency response teams Yes No

F. Other Safety Measures/Systems to be used to insure and establish an adequate Fall Protection Work Program.

Explain: ***** will work to and follow all Company Safety Policies and Procedures, OR-OSHA and OSHA Regulations. Training will be conducted prior to the commencement of any work activities.

G. Signature Block

Fall Protection Work Plan Completed by:

Approved By: __________________________    ______________________________
Job Site Supervisor                      Safety Director
*****
FALL PROTECTION WORK PLAN SIGNOFF LOG

Job Name/Number:

Job Location:

I have received training on, and understand the fall protection work plan for this job.

<table>
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<tr>
<th>Name (Print)</th>
<th>Signature</th>
<th>Date</th>
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SECTION 8

RESPIRATOR PROGRAM

******

SAFETY PROGRAM
Revised: 2011.11.19
NOTICE PAGE

Program Administrator Pages

Two Program Administrator pages are provided with the Written Respirator Program.

Company Program Administrators who will be delegating some responsibilities and retaining some responsibilities of the Written Respirator Program should fill out page Sec. 9-4 Program Administration - A and return it to NECA for completion of final draft of Company Written Respirator Program.

Company Program Administrators who will be responsible for all areas of the Respiratory Program should fill out page Sec. 9-6 Program Administration - B and place it in final draft of the Company’s Written Respirator Program.
Written Respiratory Protection Program

Policy

It is the policy of ************ to provide its employees with a safe and healthful work environment. The guidelines in this program are designed to help reduce employee exposure to occupational air contaminants and oxygen deficiency. The primary objective is to prevent excessive exposure to these contaminants. This is accomplished as far as feasible by accepted engineering and work practice control methods. When engineering controls are not feasible, or while they are being implemented or evaluated, respiratory protection may be required to achieve this goal. In these situations, respiratory protection is provided at no cost to the employees.

Responsibilities

Management

It is management's responsibility to determine what specific applications require the use of respiratory protective equipment. Management must also provide proper respiratory protective equipment to meet the needs of each specific application. Employees must be provided with adequate training and instructions on all equipment.

Management /Supervisory

Superintendents of each area are responsible for ensuring that all personnel under their control are completely knowledgeable of the respiratory protection requirements for the areas in which they work. They are also responsible for ensuring that their subordinates comply with all facets of this respiratory protection program including respirator inspection and maintenance. They are responsible for implementing disciplinary procedures for employees who do not comply with respirator requirements.

Employees

It is the responsibility of the employee to have an awareness of the respiratory protection requirements for their work areas (as explained by management). Employees are also responsible for wearing the appropriate respiratory protective equipment according to proper instructions and for maintaining the equipment in a clean and operable condition.
Program Administration - A

The following individual has total and complete responsibility for the administration of the respiratory protection program.

Name ___________________________ Title ______________________
Department _________________________ Signature __________________

This individual has the authority to act on any and all matters relating to the operation and administration of the respiratory protection program. All employees, operating departments, and service departments will cooperate to the fullest extent. This person is referred to as the Respiratory Protection Program Administrator in this written program.

This individual is responsible for monitoring or conducting an exposure assessment of the respiratory hazard, developing standard operating procedures for this program, maintaining records, and conducting program evaluations.

The following person is responsible for contaminant identification and, measurement including technical support, air sampling, and laboratory analysis.

Name ___________________________ Title ______________________
Department _________________________ Signature __________________

The following individual is responsible for evaluating the health of the company employees via a comprehensive medical and health program.

Name ___________________________ Title ______________________
Department _________________________ Signature __________________

The following individual is responsible for directing and coordinating engineering projects, which are directly related to respiratory protection.

Name ___________________________ Title ______________________
Department _________________________ Signature __________________

The following individual is responsible for selection, issuance, training, and fit testing of all respirators used in this company including record keeping.

Name ___________________________ Title ______________________
Department _________________________ Signature __________________
Program Administration - B

The following individual:

Name ____________________________ Title _______________________
Department _______________________ Signature __________________

has total and complete responsibility for:

the administration of the respiratory protection program. This individual has the authority to act on any and all matters relating to the operation and administration of the respiratory protection program. All employees, operating departments, and service departments will cooperate to the fullest extent. This person is referred to as the Respiratory Protection Program Administrator in this written program.

This individual is responsible for monitoring or conducting an exposure assessment of the respiratory hazard, developing standard operating procedures for this program, maintaining records, and conducting program evaluations.

contaminant identification and, measurement including technical support, air sampling, and laboratory analysis.

evaluating the health of the company employees via a comprehensive medical and health program.

directing and coordinating engineering projects which are directly related to respiratory protection.

selection, issuance, training, and fit testing of all respirators used in this company including record keeping.
**Medical Evaluation**

Every employee who is being considered for inclusion in the Respiratory Protection Program must participate in a medical evaluation. A determination of the employee's ability to wear a respirator while working is made initially before fit testing. Future evaluations are made when there is a change in workplace conditions or information indicating a need for reevaluation.

**Describe procedures for medical evaluation and attach to this program.** A mandatory medical evaluation questionnaire in 1910.134 must be used and reviewed by the company physician or otherwise licensed healthcare professional (PLHCP). If the PLHCP deems it necessary, the employee will receive an examination. The purpose of the medical evaluation is to assure that the employee is physically and psychologically able to perform the assigned work while wearing respiratory protective equipment. If the PLHCP denies approval, the employee will not be able to participate in the Respiratory Protection Program. Copies of the medical evaluation and questionnaire must be kept in the employee's file.

**Respirator Selection**

**Work area monitoring**

Exposure assessment will be done to ensure proper respirator selection. In order to determine the exposure level, air samples of the work place representative of the work period, exposure assessment based on an analogous process, or professional judgment will be used. Personal sampling equipment may be used in accordance with accepted industrial hygiene standards to sample each work area. Results of these samples win pinpoint areas where respiratory protection is required.

The exposure assessment will be performed prior to the task requiring respiratory protection. Periodically, thereafter as required by OSHA substance specific standards or at least every 12 months, a review of the exposure assessment will be made to determine if respiratory protection is still required. If respiratory protection is still necessary, respirator selections will be reviewed to assure continued suitability.

[Attach records of all exposure assessments to this program.]
Procedures for IDLH Atmospheres (Immediately Dangerous To Life or Health):

Employer Responsibilities

****** does not work in IDLA atmosphere areas.

If in an emergency ****** is required to work in an IDLH area, ****** shall ensure that there is one employee or when needed, more than one employee located outside the IDLH atmosphere;

- The employee located outside the IDLH area shall maintain visual, voice or signal line communication with the employee(s) in the IDLH atmosphere.

- The outside employee(s) shall be trained and equipped to provide emergency rescue.

- If rescue is needed, the employee(s) providing rescue services shall notify ******.

- Once ****** is notified of the rescue entry, assistance will be provided which is appropriate to the situation at the entry site.

- All designated employees outside the IDLH area shall be equipped with:
  - Pressure demand or other positive pressure SCBA’s.
  - Appropriate retrieval equipment for removal of the employee(s) who entered the IDLH atmosphere.
  - Individual-appropriate training shall be given to all employees, whether entering or remaining available for rescue of all hazards associated with the individual site.

Respirator Selection

Respirators are selected and approved for use by management. The selection is based upon the physical and chemical properties of the air contaminants and the concentration level likely to be encountered by the employee. The Respiratory Protection Program Administrator will make a respirator available immediately to each employee who is assigned to a job that requires respiratory protection. Replacement respirators /cartridges and filters will be made available as required by end-of-service life indicators or a change out schedule.
The selection of the proper respirator type will be made following the procedures which are attached [Attach selection procedures].

Appendix _____

All respirators will be NIOSH approved. Respirators will be purchased from ______________________________________________________________________

Respirators currently approved for use are _____________________________________________

[Attach documentation of respirator selection to this program.] Forms F1, F2, etc.

**Use of Respirators**

All tight fitting respirators (both negative and positive pressure) shall not be used with beards or other facial hair or any other condition that prevents direct contact between the face and the edge of the respirator or interferes with valve function.

Employees will be required to leave the contaminated area:

A. Upon malfunction of the respirator
B. Upon detection of leakage of contaminant into the respirator
C. If increased breathing resistance of the respirator is noted
D. If severe discomfort in wearing the respirator is detected or upon illness of the respirator wearer, including, sensation of dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, vomiting, fever and chills
F. To wash face to prevent skin irritation
G. To change filter/cartridge elements or replace respirators as mandated by the end-of service life-indicator or the change out schedule.

**Respirator Training and Fitting**

1. **Training**

Employees assigned to jobs requiring respirators will be instructed regarding the respiratory protection program by their supervisor relative to their responsibilities. They will also be instructed in the need, use, limitations, and care of their respirator. Training will take place prior to job assignment and at least every 12 months thereafter. [Attach training documentation to this program].
2. **Fit Testing**

Employees will be properly fitted and tested for a face seal prior to the use of the respirator in a contaminated area. [Attach fit test procedures to this program]

Fit testing will be conducted initially upon employee assignment to an area where respirators are required. Fit testing will be repeated at least every 12 months thereafter. All tight fitting respirators (negative and positive pressure) will be fit tested. Positive pressure tight-fitting respirators will be fit tested in the negative pressure mode. [Attach fit testing records to this program].

Fit testing will not be done on employees with facial hair that passes between the respirator seal and the face or interferes with valve function. Such facial hair includes stubble, beards, and long sideburns.

If it is determined that an individual cannot obtain an adequate fit with any tight fitting respirator, a loose fitting powered air purifying or supplied air respirator may be required instead.

**Respirator Inspection Maintenance and Storage**

Respirators must be properly maintained to retain their original effectiveness. The maintenance program will consist of periodic inspection, repair, cleaning, and proper storage.

1. **Inspection**

The wearer of a respirator will inspect it daily whenever it is in use. ********** will periodically spot respirators for fit, usage, and condition. [Attach inspection procedures Form F-3 for the respirators in use to this program]. The use of defective respirators is not permitted. If a defective respirator is found during inspection, it must be returned to the following.

2. **Repair**

During cleaning and maintenance, respirators that do not pass inspection will be removed from service and will be discarded or repaired. Repair of the respirator must be done with parts designated for the respirator in accordance with the manufacturer's instructions before reuse. No attempt will be made to replace components or make adjustments, modifications, or repairs beyond the manufacturer's recommendation.
3. **Cleaning**

Respirators not discarded after one shift use, except filtering face piece type, will be cleaned on a daily basis or after each use, according to the manufacturer's instructions by the assigned employee or other person designated by the Respiratory Protection Program Administrator. Facilities and supplies for cleaning these respirators will be made available.

[Attach detailed cleaning procedures to this program].

4. **Storage**

Respirators not discarded after one shift use will be stored in a location where they are protected from sunlight, dust, heat, cold, moisture, and damaging chemicals. They shall be stored in a manner to prevent deformation of the face piece and exhalation valve. Whenever feasible, respirators not discarded after one shift use will be marked and stored in such a manner to assure that they will be worn only by the assigned employee. If use by more than one employee is required, the respirator will be cleaned between uses.

5. **Compressed Air Systems**

Special precautions will be taken to assure breathing quality air when an airline respirator or SCBA is to be used. This air will meet the specifications for Grade D Air established by the Compressed Gas Association as stated in Commodity Specification for Air (ANSI/CGA G-7.1), 1989. Cylinders of purchased breathing air must have a certificate of analysis from the supplier that the air meets Grade D requirements. The moisture content in the cylinder must not exceed a dew point of -50°F at 1 atmosphere pressure. For air from compressors, the moisture content must be minimized so that the dew point at 1 atmosphere pressure is at least 10 degrees F below the ambient temperature.

**Escape Only Respirators**

Where escape only respirators are provided due to the potential for an emergency, personnel assigned to the area will be trained in their use. Escape only respirators shall be NIOSH certified for escape from the atmosphere in which they will be used. Personnel not assigned to a work area including visitors, shall be briefed in their use.
Emergency Use Respirators

1. Locations

Self-contained breathing apparatus (SCBA) are found in the following locations:

2. Special Requirements

All potential users will be fully trained in the use of this equipment. They must also be medically qualified to wear the device. When the equipment is used, it will be tested in an uncontaminated atmosphere prior to entering the hazardous area.

An employee will not work with this apparatus in a hazardous atmosphere on an individual basis. At least one additional employee suitably equipped with a similar breathing apparatus must be in contact with the first employee and must be available to render assistance if necessary. Additional requirements are necessary for interior structural firefighting.

This equipment will be inspected before and after each use and at least monthly by trained department or group personnel. Inspection and maintenance information will be recorded. [Specify method of recording information, e.g., inspection tag and/or log book].

[Attach content of the SCBA training program and inspection procedures to this program].

Program Evaluation

The workplace will be reviewed and evaluated at least every 12 months to ensure that the written respiratory protection program is being properly implemented and to consult with employees to ensure that they are using the respirators properly. [Attach audit criteria Form F-5 to this program].

A written report will be made of each evaluation summarizing the findings. For each deficiency identified, corrective action will be noted. Copies of the summary reports shall be attached to this program.
Exposure Assessment Record - Form F-1

Respiratory Protection Administrator ____________________________________________

Job ___________________________ Date __________________

Location ________________________________________________________________

1. Job Description: _____ Routine _____ Emergency

Describe work performed and length of time involved ________________________________

II. Contaminants:

<table>
<thead>
<tr>
<th>Concentration (measured or estimated)</th>
<th>Reference (report, date of survey, sample)</th>
<th>OEL*</th>
<th>Hazard Ratio**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* OEL = Occupational Exposure Limit: PEL, TLV, REL, WEEL or other company specified limit.

** The Hazard Ratio is the quotient of the measured or estimated concentration divided by the appropriate occupational exposure limit. Respiratory protection is required if this value is greater than one and all feasible engineering and work practice controls have been implemented to reduce the concentration to as low as possible.

Note: For those contaminants for which respiratory protection is desired, the information from Part II above must be transferred to the Respiratory Selection Documentation form.
Respirator Selection Documentation - Form F-2

**Step 1. Respiratory Hazard Identification**

Oxygen Concentration ___________________ Contaminant(s) ________________

Physical State(s) ________________________ Concentration_________________

**Step 2. Hazard Analysis**

Permissible Exposure Limit_____________________________________________

Protection Factor Needed ______________________________________________

Skin Absorption/Irritation ____________________ Eye Irritation

Warning Properties: Odor Threshold ____________ Nose/Throat Irritation

IDLH Concentration

Lower Flammable Limit

Service Life Information

Chemical Cartridge Change out Time

**Step 3. Respirator Type Required**

Minimum Acceptable _________________________ Alternative

**Step 4. Specific Selections**

_________________________________________________________________
### Respirator Inspection Record - Form F-3

| User: |  
| Date: |  
| Type: |  
| Number: |  
| Defects found: |  

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face piece</td>
<td></td>
</tr>
<tr>
<td>Inhalation valve</td>
<td></td>
</tr>
<tr>
<td>Exhalation valve</td>
<td></td>
</tr>
<tr>
<td>Headbands</td>
<td></td>
</tr>
<tr>
<td>Cartridge holder</td>
<td></td>
</tr>
<tr>
<td>Cartridge/canister/filter</td>
<td></td>
</tr>
<tr>
<td>Harness assembly</td>
<td></td>
</tr>
<tr>
<td>Hose assembly</td>
<td></td>
</tr>
<tr>
<td>Speaking diaphragm</td>
<td></td>
</tr>
<tr>
<td>Gaskets</td>
<td></td>
</tr>
<tr>
<td>Connections</td>
<td></td>
</tr>
<tr>
<td>Other defects</td>
<td></td>
</tr>
</tbody>
</table>


Qualitative/Quantitative Fit Test Record - Form F-4

Subject’s Name: _______________________________ Date: __________
Department: _______________________________ Employee Number: __
Has the employee received respirator training _____ YES _____ NO
Fit test method used: _______________________________ QLFT QNFT
Respirator manufacturer and model tested:
Size: _____ Small _____ Medium (standard) _____ Large

Test Results:

Facial Characteristic Assessment
Respirators with tight fitting face pieces may not provide a satisfactory seal with individuals having beards, large side burns or other conditions such as missing dentures, etc. that could interfere with the ability of the respirator to attain an adequate seal. Individuals with this condition should not be tested. Do any of the conditions described above exist?

_____ YES - do not continue test. Automatic failure. _____ NO - continue test.

Sensitivity Test (Qualitative): _____ PASS _____ FAIL

Fit Test _____ PASS _____ FAIL

Fit Factor ________________________________.

Spectacle Kit Required? _____ YES _____ NO

_________________________________ __________________________
Test Administrator’s Signature Test Subject’s Signature
Respiratory Protection Program Checklist - Form F-5

Program Administration

_____ 1. Is there a written policy, which assigns program responsibility, accountability and authority?

_____ 2. Is overall program responsibility given to one person (program administrator) who is knowledgeable and can coordinate all aspects of the program?

_____ 3. Can feasible engineering controls or work practices eliminate the need for respirators?

4. Are there written procedures/statements covering the various aspects of the respirator program including:

_____ Designation of authority and responsibility?

_____ Respirator selection?

_____ Purchase of approved equipment?

_____ Medical evaluations for employees required to wear respirators?

_____ Issuance of equipment?

_____ Fit Testing following an OSHA-approved method?

_____ Training for respiratory hazards in routine and emergency situations and proper respirator use and limitations?

_____ Maintenance, storage, repair, and cleaning?

_____ Inspection?

_____ Use under special conditions?

_____ When and where respirators are required?

_____ Regular evaluation of program effectiveness?

Program Operation

1. Respiratory protective equipment selection:

_____ Have work area conditions and worker exposures been properly evaluated?

_____ Are respirators selected on the basis of hazards to which the workers are exposed?
Are selections made by persons knowledgeable of proper selection procedures?

Are only NIOSH approved respirators purchased and used?

Do the respirators provide adequate protection for the specific hazard in the concentration found?

Has a medical evaluation of the prospective user been made to determine physical and psychological fitness to wear the selected respirator?

2. Respiratory protective equipment fitting:

Are the users given the opportunity to try on several respirators to determine the one with the best fit?

Is the wearer fit tested before he/she begins using the respirator in the work area, both on initial assignment, and annually thereafter (or sooner if warranted) with records?

Are users who wear glasses properly fitted?

Is the face piece-to-face seal tested using one of the methods described earlier?

Are workers prohibited from entering contaminated work areas when they have facial hair or other characteristics which prohibit the use of tight-fitting face pieces?

3. Respirator use in the work area:

Are respirators being worn correctly?

Are workers keeping respirators on all the time while in the work area?

4. Maintenance of respiratory protective equipment:

Are respirators cleaned and disinfected after each use (when different people use the same device) or as frequently as necessary (for devices issued to individual users)?

Are respirators stored so as to protect them from dust, sunlight, heat, and chemicals?

Is storage in lockers, tool boxes, or work areas permitted only if the respirator is in a carton, carrying case, or closed container?

Are respirators inspected before and after each use, and after cleanup?

Are individuals instructed in inspection methods?

Are cartridges and filters changed on a regular basis?
_____ Are respirators designated as “Emergency Use” inspected at least monthly (in addition to after each use), and is a record kept of such inspections?

_____ Are replacement parts of the same brand as the respirator?

_____ Are repairs made by manufacturers or manufacturer-trained persons?

5. Special use conditions (if applicable):

_____ Is there a procedure for respirator use in atmospheres immediately dangerous to life and health?

_____ Is there a procedure for confined space entry?

6. Training:

_____ Are users trained in proper respirator use, cleaning, and inspection?

_____ Are employees trained in the health effects of the respiratory hazard(s) present?

_____ Are users evaluated, using competency-based evaluation, before and after training.
SECTION 9

PROCESS SAFETY MANAGEMENT PROGRAM

******

SAFETY PROGRAM

Revised: 2009.02.02
Amended to eliminate C-STOP in lieu of OSHA 10
PROCESS SAFETY MANAGEMENT
OF
HIGHLY HAZARDOUS MATERIAL

GENERAL

****** will comply with all applicable regulations to provide its employees with the training necessary to safely perform their jobs with full knowledge of the hazards and safe work practices associated with petrochemical industry work. Employees will receive initial and refresher training in the following:

- An overview of the facility processes, including the hazards of the chemicals used in the processes and the known potential fire, explosion or toxic release;
- Hazard Communication Training;
- Specific safety and health hazards;
- Procedures and safe work practices applicable to the employee’s job tasks, including personal protective equipment;
- The site specific Emergency Action Plan.

Testing procedures shall be established to ensure competency in job skill levels and safe and healthy work practices.

Employees shall comply with established procedures and safe work practices, be on the alert for changing conditions and quickly report any accidental release or potential release of hazardous chemicals to a supervisor.

****** will promptly investigate every incident that result in, or could have resulted in, a dangerous release of hazardous chemical, accidents, injuries and reported near-misses.

SITE SPECIFIC

To comply with the requirements identified above, all ****** employees shall receive the following site specific training:
OSHA 10 TRAINING

All employees must complete the OSHA 10 training program prior to assignment at any facility requiring such training. This is a ten-hour class covering safety and health hazards, safe work practices and fourteen safety and health related topics including personal protective equipment. Written examinations for all topics ensure competency in safe and healthy work practices.

****** ORIENTATION

All employees must complete ****** New Employee Orientation and Hazard Communication Training. Such training shall be documented on ****** forms.

****** TRAINING CARDS

All employees carry a ****** “Training Card” identifying actual training in safety skills and knowledge appropriate to their level of responsible tasks. Documentation in the form of a written examination for each training category is required.

FACILITY PROCESS SAFETY MANAGEMENT TRAINING

All employees will attend the Facility’s Process Safety Management and Site Orientation Training. This is generally presented by Facility Safety Personnel covering an overview of the facility processes, including the hazards of the chemicals used in the processes and the known potential fire, explosion or toxic release hazards, specific safety and health hazards and the site specific Emergency Action Plan.

PRE-JOB SAFETY MEETINGS

Prior to startup of each project there will be a job specific training meeting at which employees shall be informed of the specific facility process they will be working near, including the hazards of the chemicals used in the process and the known potential fire, explosion or toxic release hazards and a review of the site specific Emergency Action Plan. This meeting shall include a description of ******’s activities, known or potential hazards and safety work practices including personal protective equipment.

WEEKLY SAFETY MEETINGS

All employees will attend an on-site weekly safety meeting. These meetings cover a preselected safety topic and are supplemented with a discussion of possible changes to site-specific safety hazards and appropriate safe work practices.

Documentation of training in the form of meeting minutes, attendance rosters and written examinations shall be maintained on site in ****** job site office trailer.
CHECKOUT & START-UP ACTION ITEMS

Introduction

Checkout and start-up is a complex process that is potentially one of the most hazardous in the construction of a new facility or modifying an existing one. It requires adequate planning and training and involves a wide variety of people with expertise in many different disciplines. OSHA process safety management standard places greater emphasis in this area and should be reviewed prior to any checkout and start-up work taking place.

Checkout

Checkout can be defined as the testing of system components for continuity and ability to withstand operating pressures before the Customer puts feedstocks into the lines. Checkout phase involves the following activities:

- Identification and inspection of facility equipment, piping and other systems prior to testing and cleaning;
- Reworking or otherwise providing improvements, as necessary, to correct substandard or flawed facility system components;
- Pressure testing with water or gas (hydro testing or pneumatic testing);
- Giving motors a rotational check (rotating/bumping);
- Making electrical circuit continuity checks and checking electrical grounds (high potential checking);
- Checking the operability of control valves and validating their control room indicators (stroking);
- Verifying that the facility instruments are correctly installed (interlocked checking);
- Bench testing pump motors under load for short periods of time to check bearings (run/burn-in);
- Removing mill scale and other impurities from piping systems by the use of chemicals (chemical cleaning);
- Blowing debris from lines by the use of steam under pressure (steam blowing);
- Checking for proper operation of lubricating oil systems (circulating testing);
- Performing all remaining modifications, adjustments, calibration, resets, and dry outs as necessary;
- Conducting the necessary safety walkthroughs (inspections).

Commissioning involves testing of the facility’s systems with test medium in the lines.

Following successful completion of commissioning, the facility is ready for the introduction of feedstock’s and other normal operation liquids and gasses into the lines.
**Potential Hazards**

Failure to educate company and subcontractor employees with respect to their roles in supporting the customer’s checkout and start-up group.

Construction workers are exposed to a wide range of confined space work environments under the direct control of operating facility personnel.

Failure of those responsible for facility Lockout/Tagout process to recognize all potential problems and resulting construction worker exposures when one system is energized while connecting system is being worked on.

Exposures of construction workers to toxic liquids and gasses when leaks develop.

Fire hazards worsening because preventive/protective systems may not be completely operational and tested.

Lack of emergency planning that includes construction workers for situations requiring quick reaction time (e.g. power failure, toxic gas release, spills run-away reactions etc.)

Fall hazards, because construction workers are lured into false sense of security now that construction is complete. This is especially true of insulators and painters craft personnel.

Failure of the Customer’s checkout and start-up group to recognize that small problems can accumulate into large problems directly involving construction contractors working near the operating facility unit.

Failure to properly study start-up conditions with respect to controllability, in order to avoid unstable process conditions, excessive temperatures, pressures, and flows.

Lack of appropriate planning for facility shutdown, which can be equally hazardous to construction workers as the Customer’s facility start-up.

**Elimination of Hazards**

Key to hazard elimination is safety planning and training for construction personnel directly and indirectly involved with the Customer’s checkout and start-up group operations. The Site Superintendent shall not assign any company and/or our subcontractor employees to work with the Customer’s checkout and start-up group until assured by the customer’s start-up manager that each of the following safeguards have been addressed by the Customer operating facility personnel:
• Identify all hazardous and toxic exposures that can occur and educate all construction personnel involved prior to their being assigned any work tasks involving check-out or start-up operations.
• Maximize the availability of permanent facility fire prevention and protection systems.
• Thoroughly study start-up conditions for controllability, unstable process conditions, excess temperatures, and pressures or flows.
• Review facility and public utility requirements for start-up conditions.
• Recheck fail-safe functions immediately before start-up.
• Recognize that operations outside of specified limits may occur and provide for rapid analysis of any situation that might develop.
• Make sure that all, including construction workers, are aware of the potential consequences of the accumulation of small problems.
• Encourage safe work practices and discourage individual risk-taking.
• Develop a master checklist and adhere to it.
• Educate everyone with respect to the potential hazards of flammable and/or explosive liquids and gasses.
• Develop a detailed plan for start-up/shutdown.
• Test the construction and operating facility emergency response action plans prior to any checkout and start-up operations.
SECTION 10
ENERGIZED ELECTRICAL PROGRAM

******

SAFETY PROGRAM
Revised 2012.05.09
Scope -
This policy covers electrical safety related work practices and procedures for safeguarding employees during activities such as installation, operation, maintenance and demolition of conductors, equipment and circuit parts rated 600 volts AC and below.

Purpose -
The primary purpose of this policy is to keep our electrical workers safe from hazards associated with energized electrical work tasks. Using this policy will help keep our NECA and IBEW electrical contractors compliant with state and federal requirements for employee safety in the workplace.

OSHA and NFPA 70E standards require that all energized circuit parts and equipment be DE-ENERGIZED before any employee works on or near them. De-energizing must be used as the primary method of worker protection from electrical hazards.

There are very few exceptions to this rule. When it can be justified that energized work must be performed, only qualified individuals, who have received training on the hazards associated with their specific job tasks, shall perform energized work according to this policy.

Responsibility -
The employer shall provide the safety related work practices and shall train the employee who shall then implement them.

OSHA and NFPA 70E -
OSHA requirements are not recommendations. There are a number of OSHA requirements that address the hazards of working on or near exposed energized parts for construction and maintenance work. These requirements are often written in performance language, requiring compliance without necessarily stating how to comply.

The NFPA 70E, Standard for Electrical Safety in the Workplace, is written in prescriptive language and is an important national consensus standard that defines the requirements for an overall electrical safety program.

As such, the procedures found within this policy are taken directly from the NFPA 70E - 2012 edition and will cover the majority of the work locations and tasks our electricians and contractors face.

Certain tasks performed on high hazard electrical systems and equipment, those with large available fault currents and / or long fault clearing times, DC systems, or exposures exceeding 600 volts AC, will require the direct use of the NFPA 70E standard to determine proper PPE and work procedures.
The Facts - Work De-Energized
OSHA and NFPA 70E require that work performed on electrical systems be done DE-ENERGIZED unless justified. An inconvenience is not an acceptable justifiable reason. See later pages of this policy for examples of justifiable.

If justifiable, only qualified persons may perform the energized work AFTER an assessment of electrical hazards has been performed. OSHA requires a written hazard assessment, which can be met by using an Energized Electrical Work Permit – refer to the form in this policy.

The Challenge - Performing an Energized Electrical Hazard Analysis:
To adequately assess shock and arc flash hazards, you must know the workers proximity to live parts, the system voltage and grounding configuration, available fault current(s) at the work location, the type and condition of overcurrent protective devices, their clearing times. This would include frequency, if any, of proper maintenance.

The Process - Knowing Electrical System Characteristics
In some cases, the assessment has already been conducted through an arc flash study and labeling of equipment. Be aware that any changes to the system after the original study date may change label values. Additionally, some facilities do not label every piece of equipment and electricians should exercise caution when working downstream of labeled equipment as the intensity of arc flash energies may be greater than what is found on the upstream label.

Another option, while potentially misapplied, is using NFPA 70E Hazard Risk Category Tables to predict arc related electrical hazards, identify arc flash boundaries and select Personal Protective Equipment (PPE). Additionally, NFPA 70E provides tables to establish shock protection boundaries for qualified and unqualified persons.

Applying This Policy - Calculations or Table Method
Selected information from the 2012 NFPA 70E is provided in this policy as a guide for employers to meet OSHA compliance to protect qualified electricians and technicians who will be performing justifiable energized electrical work. For work activities outside of those covered in this policy, please consult the NFPA 70E directly.

The following tables can be used in lieu of performing calculations to determine shock and arc flash hazards when the parameters of each table note is met. Applying these tables outside of the notes is not allowed and could expose workers to increased levels of incident energy.
Basic Table Use:
- Select the appropriate table based on type and voltage of equipment
- Review system parameter information - Establish arc flash boundary
- If working within system parameters, locate exact work task
- Following that row over, identify the Hazard / Risk Category #
- Determine if voltage rated, insulating gloves and / or insulated tools are required
  - In certain situations, voltage rated insulating gloves / tools may be necessary even if tables indicates otherwise.
  - Establish Shock Protection Boundaries:
    - \(< 600 \text{ Volts} = \text{ Limited } = 42" \quad \text{Restricted } = 12" \quad \text{Prohibited } = 1"
- Using Hazard / Risk Category #, determine minimum arc rated PPE from page

Example - Work on energized conductors and circuit parts in a 240 volt panelboard

Using voltage and electrical equipment type select appropriate table (Table 1)

- Verify system parameters
  2.1 Maximum fault I of 25 KA and 2 cycle (.03 sec) OCPD clearing time
  2.2 Arc flash boundary using above parameter = 19 inches

3-5. Locate work task, identify Hazard / Risk Category & Shock Protection Equipment

<table>
<thead>
<tr>
<th>Hazard Risk Category = 1</th>
<th>Voltage Rated Gloves = Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voltage Rated Tools = Yes</td>
</tr>
</tbody>
</table>

5.2 Establish shock protection boundaries

<table>
<thead>
<tr>
<th>Limited Approach = 42 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted Approach = 12 inches</td>
</tr>
<tr>
<td>Prohibited Approach = 1 inch</td>
</tr>
</tbody>
</table>

6. PPE selection using HRC # 1 from Table 6, page 11.

Minimum 4 calorie/ cm² Arc Rated Clothing and face shield or flash suit hood
Hard hat, safety glasses, hearing protection, heavy duty leather gloves and leather work shoes as needed.

Table 1 Example - Tasks Performed on Energized Equipment

<table>
<thead>
<tr>
<th>TASK &amp; EQUIPMENT</th>
<th>Hazard / Risk Category</th>
<th>Insulating Gloves</th>
<th>Insulated Hand Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panelboards or Other Equipment Rated &lt; 240V</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

System Parameters: Maximum 25KA fault current & 2 cycle (.03 sec) fault clearing time at minimum 18 inch working distance.
Arc Flash boundary using maximum parameters = 19 inches (1 foot, 7 inches)

Work on energized conductors or parts, including voltage testing | 1 | Yes | Yes |
Table 1 - Tasks Performed on Energized Equipment

<table>
<thead>
<tr>
<th>TASK &amp; EQUIPMENT Panelboards or Other Equipment Rated &lt; 240</th>
<th>Hazard / Risk Category</th>
<th>Insulating Gloves</th>
<th>Insulated Hand Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform infrared thermography and other non-contact inspection outside of the restricted approach boundary</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Circuit breaker (CB) or fused switch operation with covers on</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CB or fused switch operation with covers off</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or parts, including voltage testing</td>
<td>1</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Remove / install CBs or fused switches</td>
<td>1</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Removal of bolted covers, exposing worker to energized conductors, parts and equipment</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Opening hinged covers, exposing worker to energized conductors, parts and equipment</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or circuit parts of utilization equipment fed directly by a branch circuit of the panelboard</td>
<td>1</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

System Parameters: Maximum 25KA fault current & 2 cycle (.03 sec) fault clearing time at minimum 18 inch working distance. Arc Flash boundary using maximum parameters = 19 inches (1 foot, 7 inches)
### Table 2 - Tasks Performed on Energized Equipment

<table>
<thead>
<tr>
<th>TASK &amp; EQUIPMENT</th>
<th>Hazard / Risk Category</th>
<th>Insulating Gloves</th>
<th>Insulated Hand Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panelboards or Switchboards Rated &gt; 240V and up to 600V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Parameters: Maximum 25KA fault current &amp; 2 cycle (.03 sec) fault clearing time at minimum 18 inch working distance. Arc Flash boundary using maximum parameters = 30 inches (2 feet, 6 inches)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform infrared thermography and other non-contact inspection outside of the restricted approach boundary</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Circuit breaker (CB) or fused switch operation with covers on</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>CB or fused switch operation with covers off</td>
<td>1</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or parts, including voltage testing</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Remove / install CBs or fused switches</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Removal of bolted covers, exposing worker to energized conductors, parts and equipment</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Opening hinged covers, exposing worker to energized conductors, parts and equipment</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or circuit parts of utilization equipment fed directly by a branch circuit of the panelboard</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 3A - Tasks Performed on Energized Equipment

<table>
<thead>
<tr>
<th>TASK &amp; EQUIPMENT 600 V Class Motor Control Centers (MCCs)</th>
<th>Hazard / Risk Category</th>
<th>Insulating Gloves</th>
<th>Insulated Hand Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform infrared thermography and other non-contact inspection outside of the restricted approach boundary</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Circuit breaker (CB) or fused switch or starter operation with enclosure door closed</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Reading a panel meter while operating a meter switch</td>
<td>0</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Circuit breaker (CB) or fused switch or starter operation with enclosure door open</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or parts, including voltage testing</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Work on control circuits with energized electrical conductors and circuit parts &lt; 120V</td>
<td>0</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Work on control circuits with energized electrical conductors and circuit parts &gt; 120V</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Application of safety grounds, after voltage test</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

System Parameters: Maximum 65KA fault current & 2 cycle (.03 sec) fault clearing time at minimum 18 inch working distance. Arc Flash boundary using maximum parameters = 53 inches (4 feet, 5 inches)

Table 3B - Tasks Performed on Energized Equipment

<table>
<thead>
<tr>
<th>TASK &amp; EQUIPMENT 600 V Class Motor Control Centers (MCCs)</th>
<th>Hazard / Risk Category</th>
<th>Insulating Gloves</th>
<th>Insulated Hand Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion or removal of individual starter buckets</td>
<td>4</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Removal of bolted covers, exposing worker to energized conductors, parts and equipment</td>
<td>4</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Opening hinged covers, exposing worker to energized conductors, parts and equipment</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

System Parameters: Maximum 42KA fault current & 20 cycle (.33 sec) fault clearing time at minimum 18 inch working distance. Arc Flash boundary using maximum parameters = 165 inches (13 feet, 9 inches)
Table 4 - Tasks Performed on Energized Equipment

<table>
<thead>
<tr>
<th>TASK &amp; EQUIPMENT</th>
<th>Hazard / Risk Category</th>
<th>Insulating Gloves</th>
<th>Insulated Hand Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 V Class Switchgear (with power circuit breakers or fused switches) and 600V Switchboards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Parameters: Maximum 35KA fault current &amp; 30 cycle (.5 sec) fault clearing time at minimum 18 inch working distance. Arc Flash boundary using maximum parameters = 233 inches (19 feet, 5 inches)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform infrared thermography and other non-contact inspection outside of the restricted approach boundary</td>
<td>2</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Circuit breaker (CB) or fused switch operation with enclosure door closed</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Reading a panel meter while operating a panel switch</td>
<td>0</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Circuit breaker (CB) or fused switch operation with enclosure door open</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or parts, including voltage testing</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Work on control circuits with energized electrical conductors and circuit parts ≤ 120V</td>
<td>0</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Work on control circuits with energized electrical conductors and circuit parts &gt; 120 volts</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Insertion or removal (racking) of CBs from cubicles, doors open or closed</td>
<td>4</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Application of safety grounds, after voltage test</td>
<td>2</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Removal of bolted covers, exposing worker to energized conductors, parts and equipment</td>
<td>4</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Opening hinged covers, exposing worker to energized conductors, parts and equipment</td>
<td>2</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table 5 - Tasks Performed on Energized Equipment

<table>
<thead>
<tr>
<th>TASK &amp; EQUIPMENT</th>
<th>HAZARD RISK CATEGORY</th>
<th>SHOCK - USE V RATED GLOVES</th>
<th>SHOCK - USE V RATED TOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other 600V Class Equipment (277 through 600V, nominal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Parameters: Maximum 65KA fault current &amp; 2 cycle (.03 sec) fault clearing time at minimum 18 inch working distance. Arc Flash boundary using maximum parameters = 53 inches (4 feet, 5 inches)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lighting or Other Small Power Transformers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Removal of bolted covers, exposing worker to energized conductors, parts and equipment</td>
<td>2</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Opening hinged covers, exposing worker to energized conductors, parts and equipment</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or parts, including voltage testing</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Application of safety grounds, after voltage test</td>
<td>2</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Other Tasks and Equipment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue meter (kW-hour, at primary voltage and current) insertion or removal</td>
<td>2</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cable trough or tray cover removal or installation</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Miscellaneous equipment cover removal or installation</td>
<td>1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Work on energized conductors or parts, including voltage testing</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Application of safety grounds, after voltage test</td>
<td>2</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Insertion or removal of plug-in devices into or from bussways</td>
<td>2</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

The PPE requirements of this section are intended to protect a person from arc flash and shock hazards. While some situations could result in burns to the skin, even with the protection described in the following tables, burn injury should be reduced and survivable.

Due to the explosive effect of some arc events, physical trauma injuries could occur. The PPE requirements of this section do not address protection against physical trauma other than exposure to the thermal effects of an arc flash.
Table 6 - Arc Flash Protection for HRC 0

<table>
<thead>
<tr>
<th>Hazard / Risk Category</th>
<th>Protective Clothing and PPE</th>
<th>Examples</th>
</tr>
</thead>
</table>
| 0                      | Non-melting natural fiber clothing  
                        | Examples  
                        | long sleeve shirt and long pants  
                        | Safety glasses or goggles  
                        | Hearing protection  
                        | Heavy duty gloves as needed | ![Image](image1.png) |

Table 6 - Arc Flash Protection for HRC 1

<table>
<thead>
<tr>
<th>Hazard / Risk Category</th>
<th>Protective Clothing and PPE</th>
<th>Examples</th>
</tr>
</thead>
</table>
| 1                      | Minimum 4 cal/cm² arc rated clothing and other equipment  
                        | Examples  
                        | arc rated long sleeve shirt and pants or coveralls  
                        | arc rated face shield or arc flash suit hood  
                        | arc rated jacket or rainwear as needed  
                        | hard hat  
                        | safety glasses or goggles  
                        | hearing protection  
                        | heavy duty leather gloves as needed for arc or shock protection over rubber insulating gloves  
                        | leather work shoes as needed | ![Image](image2.png) |
Table 6 - Arc Flash Protection for HRC 2

<table>
<thead>
<tr>
<th>Hazard / Risk Category</th>
<th>Protective Clothing and PPE</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Minimum 8 cal/cm² arc rated clothing and other equipment</td>
<td>arc rated long sleeve shirt and pants or coveralls</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
<td>arc rated face shield and balaclava</td>
</tr>
<tr>
<td></td>
<td></td>
<td>arc flash suit hood</td>
</tr>
<tr>
<td></td>
<td></td>
<td>arc rated jacket or rainwear as needed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hard hat and safety glasses or goggles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hearing protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>heavy duty leather gloves as needed for arc or shock protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>over rubber insulating gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>leather work shoes as needed</td>
</tr>
</tbody>
</table>
Table 6 - Arc Flash Protection for HRC 3

<table>
<thead>
<tr>
<th>Hazard / Risk Category</th>
<th>Protective Clothing and PPE</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Minimum 25 cal/cm² arc rated clothing and other equipment</td>
<td>Examples arc rated long sleeve shirt and pants, arc rated coveralls, arc rated flash suit, arc rated gloves, (if arc flash is only hazard) arc rated jacket or rainwear as needed, hard hat, hearing protection, leather work shoes</td>
</tr>
</tbody>
</table>
Table 6 - Arc Flash Protection for HRC 4

<table>
<thead>
<tr>
<th>Hazard / Risk Category</th>
<th>Protective Clothing and PPE</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Minimum 40 cal/cm2 arc rated clothing and other equipment</td>
<td>Examples  arc rated long sleeve shirt and pants  arc rated coveralls  arc rated flash suit arc rated gloves  (if arc flash is only hazard)  arc rated jacket or rainwear as needed  hard hat  hearing protection  leather work shoes</td>
</tr>
</tbody>
</table>
Table 7 - Shock and Other Protective Equipment

<table>
<thead>
<tr>
<th>Rubber Insulating Equipment</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rubber Insulating Gloves</strong></td>
<td></td>
</tr>
<tr>
<td>00 - 500 volt AC rated</td>
<td></td>
</tr>
<tr>
<td>0 - 1000 volt AC rated</td>
<td></td>
</tr>
<tr>
<td>Must be field inspected, including an air test, prior to use. Must be electrically tested prior to service and every 90 days (OR) 180 days (WA) after being put into service. Leather protectors must be used over rubber gloves.</td>
<td></td>
</tr>
</tbody>
</table>

| Rubber Insulating Roll Blankets             |          |
| Must be visually inspected and electrically tested prior to service and once every 12 months after being put into service. |

| Voltage Rated PVC Roll Blankets / Barriers  |          |
| Inspect prior to use                       |          |
| Apply within voltage rating                |          |
| Does not require electrical retesting      |          |

| Insulated Tools                             |          |
| Tools shall be insulated and rated per ASTM F1505-07 (not field insulated) Insulated hand tools shall be inspected prior to use Insulated Hot Sticks shall be inspected prior to use and dielectrically tested on an annual basis |

<p>| Voltage Rated PVC Roll Blankets / Barriers  |          |
| Inspect prior to use                       |          |
| Apply within voltage rating                |          |
| Does not require electrical retesting      |          |</p>
<table>
<thead>
<tr>
<th>Rubber Insulating Equipment</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meters</td>
<td>![Meters Image]</td>
</tr>
</tbody>
</table>
Selection of meters should take into account both system and transient voltages and be properly rated for the application. (CAT ratings) Meters shall be tested on a known source before and after taking measurements.

| Temporary Protective Grounds | ![Grounding Spider Image] |
Temporary Protective Grounds
Grounding spider (cluster) shall be rated for the maximum available fault current at the location to be applied.
Job Address _____________________________ Job # _______ Date __________
City _______________________________ State ________ Zip ______
Customer / General Contractor contact Info __________________________________

Electrical equipment ___________________________________ Voltage _________
Available fault current at work location ___________ OCPD clearing time __________
Description of work __________________________________________________________________

Energized Work Justification & Communication
OSHA recognized justification of why the circuit cannot be de-energized or the work to
be deferred until the next scheduled outage __________________________________________

Client Approval: I deny the request to shut off the equipment and authorize the
energized work to be performed. I also understand that, in the event of an electrical
incident, there could be extensive damage to the electrical system which may cause
disruption of normal operations of this facility. _________________________________________

Contractor Approval: Safety Manager _____________ PM ________________
GF/F _____________________ Qualified Person(s) performing work ________________
____________________________________________ (2 JW required for 480V+ work)

Electrical Hazard Assessment & PPE Selection
Has facility conducted an electrical hazard analysis? _______ If so, when? _______
Is their electrical equipment labeled with detailed hazard levels? __________________

Calculation Method: Incident Energy _____ Arc Flash Protection Boundary _____
Table Method: Hazard Risk Category _____ Arc Flash Protection Boundary _____
Shock Protection Approach Boundaries: Lim _____ Res _____ Pro _____

Methods used to restrict access by Unqualified Persons _____________________________
Required PPE based on analysis ________________________________________________
__________________________________________________________
Job briefing completed ________ First Aid / CPR trained person available ______
Identify
- The hazards
- The voltage levels involved
- Skills required
- Any “foreign” (secondary source)
- Any unusual work conditions
- Number of people needed to do the job
- The shock protection boundaries
- The available incident energy

Ask
- Are backfeeds of the circuits to be worked on possible?
- Is a “standby person” required?

Check
- Job plans
- Single-line diagrams and vendor prints
- Status board
- Information on plant and vendor resources is up to date
- Safety procedures
- Vendor information
- Individuals are familiar with the facility

Know
- What the job is?
- Who is in charge?
- Who else needs to know—Communicate!

Think
- About the unexpected event…What if?
- Lock – Tag - Test - Try
- Test for voltage - FIRST
- Use the right tools and equipment, including PPE
- Install and remove grounds
- Install barriers and barricades
- What else…?

Prepare for an emergency
- Is the standby person CPR trained?
- Is the required emergency equipment available? Where is it?
- Where is the nearest telephone?
- Where is the fire alarm?
- Is confined rescue available?
- What is the exact work location?
- How is the equipment shut off in an emergency?
- Are the emergency telephone numbers known?
- Where is the fire extinguisher?
- Are radio communications available?
**Arc Rating** - The maximum resistance to electric arc discharge demonstrated by a material (or a layered system of materials) prior to break open or at the onset of a second-degree skin burn. Arc rating is normally expressed in calorie / cm².

**Arc Flash Hazard Analysis** - A study investigating a worker's potential exposure to arc-flash energy, conducted for the purpose of injury prevention and the determination of safe work practices, arc flash protection boundary, and the appropriate levels of PPE.

**Boundary, Arc Flash Protection** - An approach limit at a distance from exposed live parts within which a person could receive a second-degree burn if an electrical arc flash were to occur. - Refer to NFPA 70E Article 130.3 (A)

**Boundary, Shock Hazards** - Shock protection boundaries are established to identify safe working distances and appropriate PPE and equipment for qualified and unqualified personnel who are approaching exposed energized electrical conductors and circuit parts. A shock hazard analysis shall determine the voltage to which personnel will be exposed, PPE necessary to minimize possibility of electric shock hazards and the following boundaries:

- **Limited** – An approach limit at a distance from an exposed energized electrical conductor or circuit part within which a shock hazard exists. For the purpose of this document (< 600V) the Limited Approach Boundary is 42 inches.

- **Restricted** – An approach limit at a distance from an exposed energized electrical conductor or circuit part within which there is an increased risk of shock, due to electrical arc over combined with inadvertent movement, for personnel working in close proximity to an energized electrical conductor or circuit part. For the purpose of this document (< 600V) the Limited Approach Boundary is 12 inches.

- **Prohibited** – An approach limit at a distance from an exposed energized electrical conductor or circuit part within which work is considered the same as making contact with the electrical conductor or circuit part. For the purpose of this document (< 600V) the Limited Approach Boundary is 1 inch.

**Calorie per centimeter squared (cal/cm²)** - The unit of measurement used to express the amount of thermal energy released during an arc flash event.

**Electrical Hazard** - A dangerous condition such that contact or equipment failure can result in electrical shock, arc flash burn, thermal burn, or blast.
**Electrically Safe Work Condition** - A state in which an electrical conductor or circuit part has been disconnected from energized parts, locked and tagged in accordance with established standards, tested to ensure the absence of voltage and grounded if determined necessary.

**Energized Electrical Work** - Work performed on or within arc flash and/or shock hazard boundaries to exposed energized parts, circuits and equipment that is not suitably guarded, isolated or insulated. Working on includes diagnostic testing using approved test equipment without making any physical alterations of the equipment, as well as repair or alterations such as removal of covers, installing new conductors and breakers or insertion or removal of MCC buckets or fused switches.

**Incident Energy** - The amount of energy impressed on a surface, a certain distance from the source, generated during an electrical arc event. One of the units used to measure incident energy is cal / cm².

**Qualified Person** - A person who is trained and knowledgeable of the construction and operation of equipment or a specific work method and is trained to recognize and avoid the electrical hazards that might be present with respect to that equipment or work method. (110 D)

Such persons shall also be familiar with the proper use of special precautionary techniques, personal protective equipment, including arc-flash, insulating and shielding materials, and insulated tools and test equipment. A person can be considered qualified with respect to certain equipment and methods but still unqualified for others.

**Un-Qualified Persons / Apprentices** - An employee who is undergoing on-the-job training for the purpose of obtaining the skills and knowledge necessary to be considered a qualified person and who, in the course of such training, has demonstrated an ability to perform specific duties safely at his or her level of training, and who is under the direct supervision of a qualified person, shall be considered to be a qualified person for the performance of those specific duties.
Electrical Safety Program -

Hazard/Risk Evaluation Procedure - An electrical safety program shall identify hazard identification and risk assessment procedures to be used before work is started within the Limited Approach Boundary of energized electrical conductors and circuit parts operating at 50 volts or more or where any electrical hazards exists. This may include identifying when a second person could be required and the training and equipment that person should have. (110.3 F)

Communication -

Host and Contract Employer Responsibilities – There shall be a documented meeting between the host employer (general contractor, customer or owner) and the contract employer(s) to inform each other of existing hazards, personal protective equipment, Arc Rated clothing requirements, safe work practice procedures, and emergency & evacuation procedures applicable to the work to be performed. (110.1 A, B, & C)

Job Briefing - Before starting each job, or if job conditions change, the employee in charge shall conduct a job briefing with the employees involved. The briefing shall cover subjects identified on the Energized Electrical Work Permit such as hazards associated with the job, work procedures involved, special precautions, energy source controls, and personal protective equipment requirements. (110.3 G).

Training –

Electrical Safety - Employees shall be trained in safety-related work practices and procedural requirements as necessary to provide protection from the electrical hazards associated with their respective job or task assignments. The degree of training provided shall be determined by the risk to the employee. (110.2 A, B & D)

Emergency Procedures - Employees exposed to shock hazards shall be trained and regularly instructed in methods of release and resuscitation of victims from contact with exposed energized electrical conductors or circuit parts. They shall be retrained as necessary to stay current in their abilities. (110.2 C)

Test Instruments and Equipment –

Qualified Persons & Ratings – Only Qualified Persons shall use test instruments and equipment on energized systems. Test instruments, equipment, and their accessories shall be designed and rated for circuits and equipment to which they will be connected. They shall be visually inspected and correct operation verified before and after an absence of voltage test is performed. (110.4A)
Electrically Safe Work Condition - Live parts shall be put into an electrically safe work condition before an employee is exposed to electrical hazards. (130.2)

Energized Work - When the employer can demonstrate that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations, energized work may be allowed. (130.2A)

Informational Notes:
Examples of increased or additional hazards:
- Interruption of life support equipment
- Deactivation of emergency alarm systems
- Shutdown of hazardous location ventilation equipment

Examples of infeasibility due to equipment design or operational limitations:
- Diagnostics and testing/troubleshooting
- Circuits that form an integral part of a continuous process that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment

Scheduled vs. Unscheduled Shutdown:
The decision to work energized should take into consideration the level of risk to the worker, the contractor and the possible impact to the customer's process or facility should an energized electrical incident occur.

Less than 50 Volts - For voltages of less than 50 volts, the decision to de-energize should include consideration of the capacity of the source and any overcurrent protection between the energy source and the worker. (130.2 A 3)

Energized Electrical Work Permit - If live parts are not placed in an electrically safe work condition, work by a qualified person shall be performed by written permit only. (130.2 B)

- Exception to work permit: If appropriate safe work practices and personal protective equipment are provided and used, energized work such as diagnostics, testing, troubleshooting, voltage measuring and visual inspections, when performed outside of the restricted approach boundary, shall be permitted to be performed without an EEW permit.
Personal Protective Equipment - Employees working in areas where electrical hazards are present shall be provided with, and shall use, protective equipment that is designed and constructed for the specific part of the body and for the work to be performed. The equipment shall be maintained in a safe, reliable conditioned and shall be visually inspected before each use. (130.7 C)

Electrical Hazard Analysis – Shock & Arc Flash Approach Boundaries
To protect workers from shock and arc flash hazards, employers must perform a shock and arc flash hazard analysis. The primary purpose is to quantify the level of hazard(s), establish work boundaries and select appropriate PPE. Shock and flash protection boundaries are independent of each other and take into account voltage, worker distance and task, type and design of overcurrent protective device and the available fault current of the system.

Shock protection approach boundaries include limited, restricted and prohibited and vary depending on system nominal voltage and whether the conductors are fixed (buss) or moveable (overhead lines). Default distances for this document (600 V and less fixed) are limited 42", restricted 12" and prohibited 1”. Moveable is 10’.

Arc Flash Protection boundaries are established by evaluating electrical system characteristics. These include available fault currents and overcurrent protective device clearing times. As such, these boundaries vary from location to location. The tables listed in this document identify maximum arc flash boundaries based on specific parameters. Additionally, arc flash boundaries can be calculated using formulas found in Annex D of the NFPA 70E.

Working Within Boundaries
Unqualified Persons – Unless escorted and supervised by a qualified person, no unqualified person may approach nearer than the limited approach boundary. (130.4 D)

Apprentices – An employee who is undergoing on-the-job training for the purpose of obtaining the skills and knowledge necessary to be considered a qualified person and who, in the course of such training, has demonstrated an ability to perform specific duties safety at their level of training, and who is under the direct supervision of a qualified person, shall be considered to be a qualified person for the performance of those specific duties. (110.2 D 1 C)
Local 48 CBA - Locals 280, 659 and 932 may have separate verbiage – please review prior to implementation.

(First year apprentices are not allowed to perform any energized work, second – fourth year apprentices are allowed to work on energized systems not exceeding 240 volts, energized work on > 277 volt systems requires 2 qualified journeyman electricians)

**Arc Flash Clothing and PPE Selection** – Arc-rated clothing and other personal protective equipment (PPE) shall be provided by the employer and used by the employee based on the incident energy exposure identified in the arc flash hazard analysis. Methods of PPE selection include performing incident energy calculations using methods found in NFPA 70E Annex D, or using the hazard risk categories tables. (NFPA 70E Table 130.7 C 15)

**Equipment Labeling** – Equipment shall be field marked with a label, as required by the 2011 National Electrical Code, indicating potential existence of both arc flash and shock hazards. Any additional labeling requirements shall be established before the project begins through communication between the host employer and the contracted employer. (130.5 C)
Dear valued customer,

Thank you for choosing our electrical contracting firm to perform work on your property.

As in the past we assure you that we will perform all work in accordance with the current National Electrical Code which in turn will provide you with the required protection of life and property. Our craft workers are all licensed electricians and are also committed to your safety. Please feel free to check our employees for the state licensing requirements; all work will be completed on time and right the first time.

Two of the greatest risks in performing electrical work are electrical shock: and the arc flash hazard. Electrical shock occurs when a person comes into contact with energized electrical components, sending electrical current through the body. Effects of electrical shock range from minor jolts, where no lasting conditions may result, to death. Arc flash occurs when electricity escapes its intended path and creates an arc, consuming anything combustible in its path, including clothing, flesh, and hair. It also vaporizes all metal parts and explodes them at 700 miles per hour into the surrounding workspace. In addition, it creates a "concussion blast" knocking workers from their feet, and possible unconscious. Even when workers are wearing personal protective equipment they will experience such trauma as fractures, vision loss, lung damage, burns, amputations, and death.

With few exceptions OSHA prohibits work being performed on energized circuits. All exceptions involve life safety issues such as life support systems in hospitals where de-energizing would create a greater hazard. In an effort to provide the safest conditions for all and conform to these regulations, we have adopted policies pertaining to working on energized circuits, otherwise known in our industry as "hot work". You may also hear it referred to as EEW or Energized Electrical Work. These policies provide protection, to you, your customers, your employees, our workers and prevent unscheduled interruptions in your business. Additionally these changes should favorably reduce your company liability or exposure to litigation, as it decreases the possibility of a negative incident. The changes we are implementing may be largely undetectable to most, as we have already begun their implementation.

We have adopted procedural checklists, establishing protocol specific to the service being performed, and adding additional personal protective equipment to our inventory. The procedural checklists are intended to help our personnel identify the conditions which present electrical shock and arc flash or blast hazards, and direct personnel to correct protocol to perform the needed service work safely. All of these procedures call for increased barrier distance, keeping non-service personnel out of harm’s way, de-energizing the circuits being serviced, and donning the appropriate personal protective equipment for the given condition. In some situations, we may need to schedule an electrical shutdown or perform the service work after normal business hours.

As your partner, this letter is our method of informing you of the changes we are implementing. Please call with any questions or concerns you may have.

Thank You.
THE BENEFIT

FOR ELECTRICIANS

We all want and EXPECT to go home at the end of the day without injury. Electricians should not have to be exposed to unreasonable risk to make a living. Your families and loved ones want and need you to come home whole at the end of the workday. This policy helps you do just that. Implementation of this policy will significantly reduce your exposure to serious electrical accidents and risk of death. You must have the self-discipline to adjust your work habits to reflect these practices to maximize your safety and wellbeing.

FOR CONTRACTORS

Accidents and injuries impair any contractor’s ability to compete in the marketplace. Accidents are not only costly when they occur but also in the future in the form of higher costs of insurance and bonding. Contractors that hire IBEW electricians that practice this policy will have significantly fewer accidents and less costly ones. This policy insures that contractors are complying with OSHA safety requirements.

FOR CUSTOMERS

Our customers do not accept unnecessary risk of accidents, equipment damage, or interrupted business process when our electricians follow this policy. Customers recognize that when electrical outages are scheduled in order to safely perform electrical work, they will know the time and duration of the electrical outage rather than try to recover from an outage due to an accident.

CONCLUSION

It is in the best long-term interest of ALL parties involved to practice DE-energized electrical work and follow this Energized Electrical Work (EEW) policy. These work procedures are based on information found within the NFPA 70E standard. This "standard for electrical safety in the workplace" provides best-method practices and guidelines to provide protection for our electrical workers, customers and electrical contractors.
SECTION 11

SCAFFOLDING PROGRAM

******

SAFETY PROGRAM
Revised 2009.02.02
Scaffolding Program

INTRODUCTION

****** believes that falls are the leading cause of fatalities in the construction industry and represent a major hazard in all industries. To ensure that our employees are protected from this hazard a basic understanding of employer and employee responsibilities is required. This program establishes those responsibilities and is a basic component of the company's safety and health program.

EMPLOYER RESPONSIBILITIES

****** will ensure that:

- equipment is provided for safe erection, dismantling, and use of scaffolds, including fall protection systems as needed.
- scaffolds are erected in accordance with Subpart L of 29 CFR 1926, OSHA Scaffold Standard.
- scaffold which are beyond the scope of the conditions described in Subpart L of 29 CFR 1926, OSHA Scaffold Standard will be designed by a registered professional engineer.
- a competent person is performs inspections and ensures compliance with Subpart L of 29 CFR 1926, OSHA Scaffold Standard.
- damaged or unsafe scaffolds and/or components will be tagged out "Do not use." and removed from service.
- scaffolds constructed by other trades which employees are instructed to use are inspected and approved by a competent person before employees are allowed to use them.
- employees are trained in the safe erection, dismantling, and use of scaffolds.

EMPLOYEE RESPONSIBILITIES

All employees will:

- Participate in all training programs associated with the erection, dismantling and use of scaffolds.
- obey the rules for the safe erection, dismantling, and use of scaffolds as identified in Subpart L of 29 CFR 1926, OSHA Scaffold Standard.
- check with the company's competent person each day before using a scaffold to ensure it has been inspected and approved.
- DO NOT USE scaffolds erected by other trades unless approved by ****** or the company's designated competent person.
- report all hazards immediately to your supervisor.
Scaffold Construction

Some of the scaffolding construction requirements are identified below. Be aware of these requirements and use that knowledge, when checking scaffolds for unsafe conditions.

Scaffolds must be capable of supporting their own weight and 4 times the maximum intended load. In other words, if you, your tools and materials weigh 500 lbs., and the scaffold weighs 1000 lbs., the structure must be capable of supporting 3000 lbs. \[4(500) + 1000 = 3000\]. Suspension ropes and connecting equipment must be capable of supporting 6 times the maximum intended load for suspension scaffolds.

Scaffold platforms on working levels must be fully planked or decked between the front uprights and the guardrail supports. Platforms must be at least 18" wide. If it is not feasible to use an 18" platform because of space constraints, a narrower platform may be used. Planks need only be 12" wide on ladder jack, top plate bracket, roof bracket and pump jack scaffolds.

Decks or planks must extend at least 6" over the supports unless they are cleated or restrained by hooks. Planks may be overlapped to horizontally extend a scaffold system. When doing so, they must overlap more than 12" on top of a support. Wooden planks should never be painted as this can hide defects. The sides of scaffold planks may be stamped, and the tops and bottoms can be covered with weatherproofing or slip resistant coatings, as long as they do not obscure the surface.

Tubular Welded Frame Scaffold

Scaffold accidents involve falls, structural failures and falling objects. Properly designed and constructed scaffolds should pose no greater hazard than any other work area. However, in 1991, the highest frequency of construction fatalities involved falls while working on scaffolds. Scaffold safety depends primarily on the proper erection and use of the equipment.

Tubular welded frame scaffolds are the most common type used in the commercial building industry. Safe practices for using this type of scaffold include:

- Inspect all equipment prior to use. Only equipment in good repair and safe condition should be used.
- Inspect all to ensure it is sound quality; straight grained, free from knots and is graded for scaffold use.
- Ensure that scaffolds and their components are capable of supporting without failure at least four times the maximum intended load.
- Erect, move or dismantle a scaffold only under the supervision of a competent person.
- Set scaffold legs on adjustable bases or plain bases placed on mudsills or other foundations adequate to support the maximum rated load. Loose brick, boxes, concrete blocks and rocks should not be used to support scaffolds or planks.
- Space panels or frames consistently with the loads imposed.
- Brace scaffolds by cross-bracing or diagonal bracing, or both, for securing vertical members together laterally, and the cross-braces shall be of such length as will automatically square and align vertical members so that the erected scaffold is always plumb, square and rigid. All brace connections shall be made secure.
- Place frames one on top of the other with couplings or stacking pins to provide proper vertical alignment of the legs.
- Where uplift may occur, lock panels together vertically by pins or other equivalent suitable means.
- To prevent movement, secure the scaffold to the building or structure at intervals not to exceed 30 feet horizontal and 26 feet vertically.
- Adhere to OSHA Requirements, 1926.451(a)(10) and (11) for maximum permissible spans for planking should.
- Overlap scaffold planking by 12 inches or more or secured from movement.
- Extend scaffold planks over their end supports by six inches to twelve inches.
- Lay planks close together so that equipment and tools will not fall through.
- Use guardrails made of lumber, not less than 2 x 4 inches (or other material providing equivalent protection), and approximately 42 inches high, with a mid-rail of 1 x 6 inch lumber (or other material providing equivalent protection). Install toe boards at all open sides and ends on all scaffolds more than 10 feet above the ground or floor. Toe boards should be a minimum of 4 inches in height.
- Use an access ladder or equivalent safe access.
- Eliminate slippery conditions or any tripping hazards as soon as possible.
- Do not allow tools, materials and debris to accumulate in quantities to cause a hazard.

**SUPPORTED SCAFFOLDS**

Supported scaffold poles, legs, posts, frames and uprights should be plumb. They should be erected on base plates, mudsills or other firm footing. The footings should be level, sound, rigid, and capable of supporting the structure without settling. Never use unstable objects to support scaffolds or as platforms. Any supported scaffold with a base to height ration of more than 4 to 1 must be restrained from tipping. Guy wires, ties, braces and outriggers may be used for this purpose.
Safe Scaffold Use

Scaffolds may only be erected, moved, dismantled or altered under the direct supervision of a competent person qualified for such activity. Prior to using a scaffold, the maximum intended load that the scaffold is capable of handling should be determined. Just as important as knowing this limit, is knowing how much you, your tools and materials weigh. When others are working on the scaffold, the combined weight should be determined before beginning work. Never overload a scaffold for any reason.

Scaffolds should be inspected by a competent person before the beginning of each shift and after any occurrence, which could weaken a scaffold’s structural integrity. During the inspection, look for visible defects such as improper or shifted planking. Any weakened or defective structural elements should be replaced. If they can’t be replaced, the scaffold should not be used. Check guy wires and other elements intended to support the structure. Make sure that guardrails are in place and that the platform’s surface is free of slipping and tripping hazards. Tools and debris should not be allowed to accumulate on the scaffold. Materials should be neatly stacked and arranged to prevent tripping.

During high winds, employees may not work on scaffolds erected outdoors unless a competent person has determined that it is OK to do so. If it is determined that the work can be continued, the employees using the scaffold must use a Positive Fall Arrest System (PFAS). Windscreens may be used in place of a PFAS, but only if the scaffold is secured against the force of the wind. During electrical storms, work should be stopped and employees should leave the scaffold.

Avoid working with tools or materials, which could damage the scaffold. When working on suspended scaffolds, shield suspension ropes from heat producing processes as well as acids and corrosives. Other things you should never do when working on a scaffold are: standing on boxes, barrels, etc. to extend your reach; climbing outside the guardrail unless you are attached to a PFAS; using a ladder on a scaffold to extend your reach; and climbing the structure to access the scaffold platform, unless it has been designed for such access.

When using mobile scaffolds, be sure to lock the wheels before accessing the platform. A common violation of ***** company policy is committed by mobile scaffold users is propelling the scaffold while on the platform. This greatly increases the chance of toppling the scaffold. Because this can only be done if the wheels aren’t locked, you increase your risk of being injured should the scaffold be jarred from below. Take the time to climb down from the scaffold, move the equipment and relock the wheels. Manual force used to move the scaffold should be applied as close to the base as is practical, but no more than 5 feet above the supporting surface. In most cases,
employees should not ride on the scaffold when it is being propelled from below. It is allowed, however, under the following conditions:

- The surface on which it is being moved is 3 degrees of level;
- The surface is free of pits, holes and obstructions;
- The scaffold's height to base width ratio is 2 to 1 or less;
- Outrigger frames when used, are installed on both sides;
- The employee is not on any part of the scaffold extending beyond the wheels.

If the scaffold is self-propelled, the propelling force must be applied directly to the wheels and cannot produce a speed in excess of 1 foot per second.

Scaffolds should be inspected at the beginning of each shift and after an occurrence, which could affect its structural integrity.

**ACCESS**

If a platform is more than 2 feet above or below a point of access, ladders, stairs or other similar devices must be provided for employees. While some scaffolds are designed with built-in access ladders, others may use attachable ladders. Attachable or hook-on ladders should not be installed so that they might tip the scaffold. The bottom rung of an access ladder (or step of a stairway type ladder) cannot be more than 24" above the supporting level. When access ladders extend more than 35 feet they must have rest platforms.

The platforms should be placed every 35 vertical feet. Stairway type ladder systems need platforms every 12 vertical feet. Rest platforms or landings must be at least 18" wide. If the scaffold utilizes access stairs (scaffold stairway/towers), the stairs should be equipped with guardrails consisting of a top rail and midrail. All stairs, ladders, guardrail systems (including work platform guardrails) and platforms should be surfaced to prevent injury from punctures or lacerations, and to prevent snagging of clothing.

Wooden scaffolds shall never be painted.

**Scaffold Hazards**

While injuries might result from any number of things associated with scaffold use, the most serious problems usually happen because of exposure to three main hazards: falls, being struck by falling objects and electrical shock. It is important to remember that many of the dangers you're exposed to at ground level may also be present on a scaffold. However it is our belief that a great many injuries and deaths can be prevented by constantly guarding against the top three hazards.
**FALLS**

The most common reasons for falls from scaffolds are because of lack of guardrails where required, scaffolds being improperly planked, or employees not using scaffolds properly. Scaffolds over 10' in height must have guardrails. Properly installed, guardrails may prevent employees from accidentally falling from the platform. Improper planking is another contributor to falls. Such accidents occur because unsecured planks become dislodged or spaces on the platform allow a worker to fall through.

If the scaffold is four feet wide, the planking should cover all four feet except for access openings. Working outside of fall protection, or working when conditions are dangerous also leads to falls. Dangerous conditions included high winds, ice and rain. Of course devastating accidents occur when scaffolds collapse because they are not constructed properly.

**STRUCK BY FALLING OBJECTS**

Employees who work or pass beneath scaffolds are the most prone to the hazards of falling objects. Tools, materials, debris and scaffold elements may fall to the surface below. Those working on the scaffold may also be struck if there are others working above them or if the building or work-piece extends above the work level of the scaffold. Anyone exposed to falling objects must wear appropriate head protection. Additional protective measures include barriers, screens, mesh, nets and toeboards.

**ELECTRIC SHOCK**

Electrical shock is especially dangerous because most scaffolds are constructed from metal. The problem is escalated by the fact that the structures are rarely grounded. Scaffolds erected without the supervision of a competent person may be placed too close to live wires. Some workers will choose to work around wires, trying to be careful to avoid contact. This should never be done. When scaffolds must be placed near power lines that can't be moved, protective barriers should be placed on the wires or they should be de-energized.

Remember that the three major hazards of scaffold use are falls, being struck by objects, electric shock. Avoid these hazards.
SCAFFOLDING CHECKLIST

All employees using scaffolds have received training to recognize and take steps to control or minimize scaffold hazards, and to use scaffold safely and properly.

All employees using scaffolds have been trained on the proper procedures for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems.

All employees involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold have had training to recognize hazard associated with such work.

A competent person, knowledgeable in the hazards and protection systems associated with scaffold use and erection, disassembly, moving, etc, performed scaffold training.

All scaffolds are erected under the direct supervision of a qualified, competent person.

All scaffolds over 10' have adequate fall protection.

Scaffolds erected where employees are exposed to falling objects are provided with adequate falling object protection.

Scaffolds are properly planked.

Scaffolds are secured against tipping as required.

Scaffold accesses are properly installed and meet all requirements.

Scaffold supports, uprights, poles, etc. are plumb.

All scaffold components meet intended load capacities.

Scaffolds erected near power lines are in observance of minimum approach distances.

Procedures to protect employees have been enacted where scaffolds are erected inside the minimum approach distances to any power lines.

Suspension ropes are free of defects, which could cause them to fail.

Suspension scaffold components are free of defects, which could cause them to fail, and have been properly installed.
MOBILE SCAFFOLDS

Is the scaffolding no higher than 4 times its smallest base dimension?

Is the scaffold level and plumb?

Are casters provided with positive locking devices?

Are the casters locked when the scaffolding is in use?

Is the scaffolding fully planked, and are the planks secured or overlapped on the supports by 12 inches?

Are guardrails provided on scaffolds higher than 6 feet?

Do guardrails meet minimum requirements of 42 inches nominal for the top rail and approximately 21 inches for the midrail?

Is a ladder provided and is it tied-off to prevent displacement?

Are employees prohibited from riding on mobile scaffolds on non-level ground or when scaffold height exceeds twice its smallest base dimensions?

TUBLAR WELDED FRAME

Is the scaffold level and plumb?

Are adequate sills and footings provided to carry the load without displacement?

Are base plates provided and used?

Are all cross braces and diagonal braces in place?

Is a ladder or equivalent means of safe access available at each working level?

Are guardrails and end rails provided on scaffolds higher than 6 feet?

Are all platforms at least 20 inches wide?

Is the scaffold solidly planked to within 3 inches of the guardrail?

Are there tripping hazards or slippery conditions that need to be eliminated?
Do planks extend over the end bearers at least 6 inches?

Where planks overlap, do they overlap a minimum of 12 inches?

Are planks that are not overlapped secured from movement?

If a mason’s platform is used, is it within 12 inches of the wall?

Are employees working on the mason’s platform protected from falling to the back of the platform?

Are toeboards at least 4 inches high provided if there is a hazard to people below?

Are screens provided between toeboards and the guardrails if people pass under the scaffold?

Are tubular welded framed scaffolds over 125 feet high designed by a registered engineer and are the plans available?

Are scaffold’s tied to the structure according to the manufactures recommendations?

**PUMP JACK**

Is the plank secured to the bracket?

Has a ladder been supplied for access?

Is the footing or foundation of the poles stable and firm?

Is fall protection provided on scaffolds higher than 6 feet?

**Ladder Jack**

Is fall protection provided?

Are ladder jacks no more than 20 feet tall?

Does the jack have at least 10 inches of bearing on the rungs or is it designed so that it bears on the side rungs?

Are the ladders equipped with devices or installed in a manner to prevent them from slipping?
Are ladders heavy-duty?

Are the planks overlapped on the bearing surface by at least 12 inches?

If you are using wooden planks, is the span 8 feet or less?

Are more than 2 employees prohibited on any eight-foot-span of the scaffold?
SECTION 12

FORK LIFT PROGRAM

*******

SAFETY PROGRAM
Revised 2009.02.02
FORKLIFT

****** believes in the safe and professional operation of all types of Forklift Vehicles used by our employees. This section specifies operation, inspection, testing, and maintenance requirements for forklift trucks powered by internal combustion engines or electric motors.

****** believes that adherence to this policy will make us a safer company, help you to protect yourself when working around or with a Lift Truck.

Operator Training/ Qualification

****** requires operators of forklift trucks to be trained and qualified. Retraining as necessary is required or at a minimum every three (3) years.

F/ L Rated Capacity

Rated capacity is the maximum weight the truck can transport and stack at a specified load center and for a specified load elevation. Trucks shall not be used or tested above their rated capacities.

Marking

Every truck shall have appended to it a durable, corrosion-resistant nameplate with the model or serial number and weight legibly inscribed. The serial number shall also be stamped on the frame. The truck must be accepted by a recognized national testing laboratory and the nameplate shall so state.

Warning Devices

Every truck shall be equipped with an operator controlled horn, whistle, gong, or other sound producing devices(s).

The using organization shall determine if operating conditions require the truck to be equipped with additional sound-producing or visual (such as lights or blinkers) devices, and be responsible for providing and maintaining such devices.

NOTE: Backup or motion alarms that sound continuously may be warranted in special cases but are generally less effective than operator-controlled devices.
Attachments

If the forklift truck is equipped with front-end attachments (other than factory-installed attachments), the rated capacity shall be established by the truck manufacturer at a specified load center and for a specified load elevation.

Users shall ensure that the truck is marked to identify the attachments and to show the approximate weight of the truck/attachment combination and the capacity of the truck with attachments at maximum elevation with load centered laterally.

The rated capacity of the front-end attachment/forklift truck combination shall not be exceeded.

Every removable attachment (excluding fork extensions) shall have a durable corrosion-resistant nameplate installed on it with the following information legibly and permanently inscribed:

- Model number.
- Serial number (on hydraulically actuated attachments)
- Maximum hydraulic pressure (on hydraulically actuated attachments).
- Weight of attachment.
- Rated capacity of attachment.
- The following instruction (or equivalent):

  Capacity of forklift truck/front-end attachment combination may be less than the capacity shown on attachment. Consult forklift truck nameplate.

Modifications

Modifications or additions that affect capacity or safe operation shall not be performed without prior written approval from the forklift truck manufacturer. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.

Overhead Guards

Users shall ensure that high lift rider trucks, including order picker trucks, are equipped with an overhead guard manufactured in accordance with ASME B56.1, unless all of the following conditions are met:
1. Vertical movement of the lifting mechanism is restricted to 72 in. (1800 mm) or less from the ground.
2. The truck will be operated only in an area where:
   a. The bottom of the top tiered load is not higher than 72 in. (1800 mm) and the top is not more than 120 in. (3000 mm) from the ground where tiered.
b. Only stable (preferably interlocked, unitized or containerized) loads are handled.
c. There is protection against falling objects from adjacent high stack areas.

3. The truck is marked to identify where it can be operated.

Rough terrain forklift trucks shall be fitted with an overhead guard manufactured in accordance with ASME B56.6.

An overhead guard is intended to offer protection to the operator from falling objects, but it cannot protect against every possible impact. Therefore, it should not be considered a substitute for good judgment and care in load handling.

**Fire Hazard Areas**

Powered forklift trucks for operation in fire hazard areas shall be of the type recommended in ANSI/NFPA 505 ("Powered Industrial Trucks, Type Designation and Areas of Use").

**Work Atmosphere**

The operation of forklift trucks affects the concentrations of carbon monoxide and oxygen in the work location. Concentrations of these materials in the work location must meet the requirements of 29 CFR 1910, Occupational Safety and Health Standards for General Industry.

**Electric-Battery Operated Trucks**

Use of electric-battery-operated trucks is restricted to those trucks that meet the requirements of ANSI/UL 583.

**Internal-Combustion Trucks**

Use of internal-combustion-powered forklift trucks is restricted to those trucks that meet the requirements of ANSI/UL 558.

**Fork Arm**

For forklift trucks purchased after December 1984, each fork arm shall be clearly stamped with its rated capacity in an area readily visible and not subject to wear. For example, the designation 1500 X 24 means 1,500-lb (680-kg) capacity at 24-in. (600-mm) load center.
Design Standards

Structural, mechanical, and electrical components shall meet all requirements of ASME B56.1.

The safety features and operation shall conform, at a minimum, to the provisions of ASME B56.1.

Type Designation

The following system shall be used as a basis to choose appropriate types of powered forklift trucks for operation in nonhazardous and hazardous locations.

Nonhazardous Locations

NOTE: The following units are not suitable for use in hazardous areas since they include only minimum safeguards against inherent fire hazards.

a. Type D Forklifts - diesel-powered units having minimum acceptable safeguards against inherent fire hazards.

b. Type E Forklifts - electrically powered units having minimum acceptable safeguards against inherent fire and electrical shock hazards.

c. Type G Forklifts - gasoline-powered units having minimum acceptable safeguards against inherent fire hazards.

d. Type LP Forklifts - liquefied-petroleum gas-powered units having minimum acceptable safeguards against inherent fire hazards.

e. Type GLP Forklifts - gasoline- or liquefied-petroleum-gas-powered units having minimum acceptable safeguards against inherent fire hazards.
Hazardous Locations

NOTE: The following units are suitable for use in hazardous areas since they are equipped with additional safeguards (i.e., special exhaust, fuel, or electrical systems) or other modifications against inherent fire hazards.

a. **Type DS Forklifts** - diesel-powered units that are provided with all the requirements for the type D units and that have additional safeguards to the exhaust, fuel, and electrical systems.

b. **Type DY Forklifts** - diesel-powered units that have all the safeguards of the type DS units except that they do not have any electrical equipment, including ignition; they are equipped with temperature-limitation features.

c. **Type ES Forklifts** - electrically powered units that are provided with all the requirements for the type E units and that have additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures.

d. **Type EE Forklifts** - electrically powered units that are provided with all the requirements for the type E and ES units, and that also have electric motors and all other electrical equipment completely enclosed.

e. **Type EX Forklifts** - electrically powered units that differ from type E, ES, or EE units in that the electrical fittings and equipment are designed, constructed, and assembled so that the units may be used in atmospheres containing specifically named flammable vapors, dusts, and, under certain conditions, fibers; type EX units are specifically tested and classified for use in Class I, Group D, or for Class II, Group G locations as defined in NFPA 70, the National Electrical Code.

f. **Type GS Forklifts** - gasoline-powered units that, in addition to all the requirements for the type G units, are provided with additional safeguards to the exhaust, fuel, and electrical systems.

g. **Type GSILLPS Forklifts** - gasoline- or liquefied-petroleum-gas-powered units that, in addition to all the requirements for the type G/LP units, are provided with additional safeguards to the exhaust, fuel, and electrical systems.

h. **Type LPS Forklifts** - liquefied-petroleum gas-powered units that, in addition to the requirements for the type LP units, are provided with additional safeguards to the exhaust, fuel, and electrical systems.
Specific Areas of Use

a. ***** shall classify the atmosphere or location where the powered forklift is to be used as being hazardous or nonhazardous. Location classifications are described as follows:

1. **Class I** - locations in which flammable gases or vapors are present or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.
2. **Class II** - locations that are hazardous because of the presence of combustible dust.
3. **Class III** - locations where easily ignitable fibers or filings are present but are not likely to be suspended in quantities sufficient to produce ignitable mixtures.
4. **Unclassified** - locations not possessing atmospheres defined as Class I, II, or III locations.

b. A qualified person shall select forklift trucks for use in hazardous areas in accordance with the requirements of ANSI/NFPA 505.

Forklift Truck Markers

a. The use of proper equipment in hazardous areas is essential for the safety and protection of personnel and property. Trucks approved for use in hazardous areas shall have the manufacturer's label or some other identifying mark indicating approval for the intended use by a recognized national testing laboratory [e.g., Underwriters Laboratories (UL) or Factory Mutual (FM)].

b. Durable markers indicating the designation of the type of truck for use in hazardous areas shall be applied to each side of the vehicle in a visible but protected area. These markers shall be distinctive in shape, as indicated in Figure 13-1.

Hazardous-Area Signs

The entrance to hazardous areas shall be posted with a sign to identify the type of forklift truck permitted. See Figure 13-2.
NOTE: The markers for EE, EX, and DY are 5 in. (12.7 cm) high. The rest are 4 in. (10 cm) square. The signs shall have black borders and lettering on a yellow background.

Figure 13-1. Markers to identify type of industrial truck.
NOTE: The minimum width of the sign is 11 in. (28 cm); the minimum height is 16 in. (40 cm). The sign shall have the word "caution" in yellow letters on a black background. The body of the sign shall have black letters on a yellow background. A marker identical to the one used on the side of the truck as shown in Figure 13-1, shall be installed on the sign.

**Figure 13-2. Building signs for posting at entrance to hazardous areas.**
Daily Pre-operational Check

****** requires that before operating the forklift, the operator shall check for proper condition of the following: horn, lights, battery, tire condition/inflation, brakes, steering mechanism, and operating controls. If at any time a forklift is in need of repair, is defective, or shows any condition that could affect its safety, the condition shall be reported immediately to the designated authority. The unit shall be taken out of service until it has been restored to safe-operating condition.

Periodic Inspection Requirements

a. Prior to initial use, all new, modified, or extensively repaired forklifts shall be inspected by a qualified inspector to ensure compliance with the provisions of this section.

b. A qualified inspector shall inspect forklifts when they are assigned to service and at least once every 6 months thereafter. A qualified inspector shall nondestructively examine the forks at 12-month intervals. Inspection records shall be kept on file and shall be readily available. A sample load test and inspection form is included as Exhibit I, which appears at the end of this section. This form is intended to be a sample only and is not intended to be mandatory.

c. A qualified inspector shall perform the following during periodic inspections:

   1. Inspect brakes, steering mechanisms, control mechanisms, warning devices, lights, governors, lift-overload devices, guards, and safety devices regularly and maintain them in a safe-operating condition.
   2. Carefully inspect all parts of lift and tilt mechanisms and frame members and maintain them in a safe-operating condition.
   3. For special trucks or devices, designed and approved for operation in hazardous areas, ensure that the original, approved safe-operating features are preserved by maintenance.
   4. Check fuel systems for leaks and for the proper condition of the parts. Give special consideration in the case of a fuel system leak. Take action to prevent use of the truck until the leak has been corrected.
   5. Inspect all hydraulic systems and maintain them in conformance with good practice. Check tilt cylinders, valves, and other similar parts to ensure that drift or leakage has not developed to the extent that it would create a hazard.
   6. Maintain capacity, operation safety, and maintenance-instruction plates, tags, or decals in legible condition.
   7. Inspect batteries, motors, controllers, limit switches, protective devices, electrical conductors, and connections and maintain them in conformance with good practice. Pay special attention to the condition of electrical insulation.
TESTING

a. Prior to initial use, all forklifts in which load-sustaining parts have been modified, replaced, or repaired shall be load-tested by a qualified inspector or under the direction of that inspector.

1. Test loads shall not exceed 100 percent of the rated capacity.
2. Test weights shall be accurate to within -5 percent, +0 percent of stipulated values.
3. Load slippage shall not be greater than 3 in. vertically and 1 in. horizontally at the cylinder during a static test period of at least 10 min duration.
4. A written report shall be furnished by the inspector, showing test procedures and confirming the adequacy of repairs or alterations. Test reports shall be kept on file and readily available to appointed personnel.

b. Load tests shall not be conducted above critical items.

OPERATION

The following shall apply to all personnel involved in forklift operations. At the initial stage of the planning process, an appointed person shall classify each lift into one of the DOE-specified categories (ordinary, critical, or pre-engineered production).

Conduct of Operator

a. Do not engage in any practice that will divert your attention while operating the forklift.

b. Do not operate the forklift when you are physically or mentally incapacitated.

c. Keep the operating area free of water, snow, ice, oil, and debris that could cause your hands or feet to slip from the controls.

d. Give special consideration to the proper functioning of tires, horn, lights, battery, brakes, steering mechanisms, and operating controls. If at any time a forklift needs repair, is defective or in any way unsafe, report the matter immediately to the designated authority. The unit shall be taken out of service until it has been restored to safe-operating condition or a determination has been made by ***** that the deficiency will not adversely affect the safe operation of the unit.

e. Ensure that rigging loads from the tines of forklift trucks is performed according to site-specific direction.
f. Forklift truck operators shall do the following:

1. Before operation of electrically powered machines, check location of the battery plug for quick disconnection in case of a short circuit.
2. Avoid sudden stops.
3. Face in the direction of travel, except as follows:
   i. For better vision with large loads, operate the truck in reverse gear.
   ii. When ascending or descending grades in excess of 5 percent, drive loaded rider trucks with the load upgrade.
   iii. Operate unloaded trucks on all grades with the load-engaging means downgrade.
4. Stop and sound the horn at all blind corners and intersections and when going through doorways.
5. Operate at safe speeds: in-plant buildings, 5 mph; in-plant roads, 15 mph maximum.
6. Go around curves slowly.
7. Use low gear or slowest speed when descending ramps.
8. Do not allow riders on forklift trucks unless the truck is built with passenger seating.
9. Know the weight of the load and do not exceed the rated capacity of the truck.
10. Consider both truck and load weight when traveling in areas where there are floor-loading requirements as well as dock plates.
11. Watch overhead clearance; if in doubt, measure.
13. Watch rear-end swing.
14. Before handling them, ensure that stacks and loads are stable; block and lash them if necessary.
15. Always spread the forks to suit the load width.
16. Lower and raise the load slowly; make smooth, gradual stops.
17. Lift and lower loads only while the vehicle is stopped.
18. Use special care when high-tiering; return the lift to a vertical position before lowering the load.
19. Lift, lower, and carry loads with the upright vertical or tilted back-never forward; on all grades, the load and load-engaging means shall be tilted back.
20. To avoid injury, keep arms and legs inside the operator's area of the machine.
21. Never travel with forks raised to unnecessary heights; approximately 4 to 6 in. above floor level is adequate.
22. When loading trucks or trailers, ensure that the wheels are chocked and the brakes set; place loads in front end of the semi-trailer only if the tractor is attached or adequate trailer (railroad) jacks are in place.
23. Inspect floors on trucks, boxcars, unfamiliar ramps, or platforms before starting operation.
24. Be sure bridge plates into trucks or freight cars are sufficiently wide, strong, and sure; portable and powered dock boards shall be conspicuously marked with carrying capacity.

25. Never butt loads with forks or rear end of truck.

26. Remember that forklift trucks should not be used as tow trucks unless a towing hitch approved by the manufacturer is used.

27. Stop engine before refueling.

28. Use only approved explosion-proof lights to check gas-tank and battery-water levels; *smoking is not permitted* during this operation.

29. Place forks flat on the floor when the truck is parked.

30. Turn ignition switch to OFF position when leaving the machine.

31. Always set brakes before leaving the truck.


33. When exiting or leaving the truck, step down-do not jump.

34. Report all accidents promptly to the supervisor.

35. Use guides and signalers as much as possible; if in doubt, check personally before proceeding; the final responsibility for the handling of a truck remains with the driver.

36. Never lift with one fork without an engineering analysis and approval.

**Lifting of Personnel**

Take the following precautions whenever personnel are elevated with a forklift truck:

a. Use a lift platform manufactured for the purpose of lifting personnel with a forklift truck that meets the requirements of ASME B56.1.

b. Ensure that a restraining means (handrails or chains) exists that is capable of withstanding a force of 200 lb in any direction; if no restraining means is provided, personnel on the platform shall wear a body harness with lanyard or deceleration device.

c. When being supported by a forklift, the personnel platform shall be attached in such a manner that it cannot slide or bounce off the forks.

d. The operator shall remain in the control position of the forklift truck or means shall be provided whereby personnel on the platform can shut power off to the forklift truck.

e. Overhead protection, as indicated necessary by operating conditions, shall be provided.
f. Means shall be provided to protect personnel from moving parts of the forklift truck that present a hazard when the personnel platform is in the normal working position.

g. Do not transport personnel from one location to another while they are on the work platform.

h. Ensure that 4-in. (10-cm) toe boards are provided on the work platform.

i. Whenever a truck (except for high-lift order-picker trucks) is equipped with vertical hoisting controls elevatable with the lifting carriage or forks, take the following additional precautions to protect personnel:

1. Means shall be provided whereby personnel on the platform can shut off power to the truck.
2. Means shall be provided to render inoperative all operating controls, other than those on the elevating platform, when the controls on the elevating platform have been selected for use; only one location of controls shall be capable of being operated at one time.
3. Emergency-lowering means available at ground level should be provided; such means shall be protected against misuse.

Standard Hand Signals

a. Standard hand signals for use at DOE locations shall be as specified in the latest edition of the ANSI standards for the particular forklift being used (see Figure 10-3).

b. The operator shall recognize signals only from the designated signaler. Obey a STOP signal no matter who gives it.

Size of Load

a. Since the load rating for forklifts may be based on stability or hydraulic or structural competence, do not exceed the rated capacity in operational application.

b. Do not load forklifts beyond rated capacity.

c. The designated person shall ensure that the weight of a load approaching the rated capacity (combination of weight and location of the center of gravity) has been determined within -10 percent, +0 percent before it is lifted.
RAISE THE TINES. With forearm vertical, forefinger pointing up, move hand in small horizontal circle.

LOWER THE TINES. With arm extended, palm down, lower arm vertically.

TILT MAST BACK. With forearm vertical, thumb extended, jerk thumb over shoulder.

TILT MAST FORWARD. With arm extended, thumb down, lower arm vertically.

MOVE TINES IN DIRECTION FINGER POINTS. With arm extended, palm down, point forefinger in direction of movement.

DOG EVERYTHING. Clasp hands in front of body.

STOP. Extend both arms, palms down.

Figure 10-3. Standard hand signals for controlling forklift operation.
**Moving the Load**

a. The nature of the terrain and the surface on which the truck is to operate are very important factors in the stability of the load-truck system. The designated person shall ensure that a proper truck has been selected to operate on the surface available. In general, small, three-wheeled trucks should operate on smooth, hard surfaces only and are not suitable for outdoor work.

b. The designated person shall ensure that the load is well secured and properly balanced before it is lifted.

c. During hoisting, ensure that:
   1. There is no sudden acceleration of the load.
   2. The load does not contact any obstruction.

**Ordinary Lifts**

a. The requirements of all preceding paragraphs in Section 13.5, "Operation," shall also apply to ordinary lifts.

b. An appointed person shall classify each lift into one of the DOE categories (ordinary, critical or pre-engineered production) before the lift is planned.

c. Hoisting and rigging operations for ordinary lifts require a designated leader who shall be present at the lift site during the entire lifting operation. If the lift is being made by only one person, that person assumes all responsibilities of the designated leader.

d. Leadership designation may be by written instructions, specific verbal instructions for the particular job, or clearly defined responsibilities within the crew's organizational structure.

e. The designated leader's responsibility shall include the following:
   1. Ensure that personnel involved understand how the lift is to be made.
   2. Ensure that the weight of the load is determined, that proper equipment and accessories are selected, and that rated capacity is not exceeded.
   3. Survey the lift site for hazardous/unsafe conditions.
   4. Ensure that equipment is properly set up and positioned.
   5. Ensure that a signaler is assigned, if required, and is identified to the operator.
   6. Direct the lifting operation to ensure that the job is done safely and efficiently.
   7. Stop the job when any potentially unsafe condition is recognized.
   8. Direct operations if an accident or injury occurs.
Exhibit I is located on the following page.

It is intended to be a sample and is not mandatory.

Any other form that accomplishes the purpose is acceptable.
# EXHIBIT I

## FORKLIFT LOAD TEST AND INSPECTION

**INSPECTED BY __________________________**  
**EQUIPMENT NUMBER ________________________**  

**LOCATION ____________________________**  
**DATE _____________________________**

**INSPECTION:** Forklifts shall be inspected when assigned to service and at least every 6 months thereafter. Prior to initial use, all new, modified, or extensively repaired forklifts shall be inspected. Craftsmen shall initial all tests, work, and inspections completed below. Qualified inspector shall verify inspection complete prior to load test.

<table>
<thead>
<tr>
<th>CRAFTSMAN INITIAL</th>
<th>1. Ensure capacity, operation, and maintenance-instruction plates, tags, or decals are legible.</th>
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<tbody>
<tr>
<td></td>
<td>2. Check all hydraulic systems including tilt cylinders, valves, and other similar parts to ensure “drift” has not developed.</td>
</tr>
<tr>
<td></td>
<td>3. Check fuel system for leaks and condition of parts. Special consideration shall be given in the case of a leak in the fuel system. Immediate action shall be taken to take the forklift out of service until the leak is corrected.</td>
</tr>
<tr>
<td></td>
<td>4. Check all parts of lift and tilt mechanisms and frame members to ensure safe operating conditions, such as, but not limited to, hoist chain for damage and excessive wear.</td>
</tr>
<tr>
<td></td>
<td>5. Check for proper tire inflation (where applicable). Check that tires are secured properly and are level with each other.</td>
</tr>
<tr>
<td></td>
<td>6. Check batteries, motors, controllers, limit switches, protective devices, electrical conductors and connections, with special attention paid to the condition of electrical insulation.</td>
</tr>
<tr>
<td></td>
<td>7. Check brakes, steering mechanisms, warning devices, lights, governors, lift overload devices, guards, and safety devices.</td>
</tr>
</tbody>
</table>

Qualified inspector shall use the criteria for Items 8, 9, and 10 to perform visual examination, liquid penetrant examination, or magnetic particle examination. Acceptance: No cracks, linear indications, laps, or seams.

|                   | 8. Check for forks being secured properly and level with each other. |
|                   | 9. Nondestructive examination (NDE) inspector performs nondestructive test (NDT) on the right angle joint of the fork once every 12 months. |
|                   | 10. NDE inspector performs NDT on the load or stress-bearing welds that attach the tines to the forklift once every 12 months. |
LOAD TEST

NOTES:  
1. Read all steps below prior to load test.
2. Forklifts in which load-sustaining parts have been altered, replaced, or repaired shall be load tested prior to initial use.
3. Load test all forklifts at 100% rated capacity.

QUALIFIED INSPECTOR: Shall verify all steps below.

EQUIPMENT NUMBER ____________________  EQUIPMENT OPERATOR ______________________________

Qualified Inspector Verify (Load Test) ______________________  Date _________________________

Weight _________________________

1. Set forklift on solid, level ground.
2. Perform load test using the required weight (see Note 3).

Static Test: Forklift trucks shall demonstrate ability to withstand the appropriate test load for a period of at least 10 min without permanent deformation or apparent damage. Load slippage for this equipment shall not be greater than a maximum of 3 in. vertically and 1 in. horizontally at the cylinder.

3. Check system for leaks while undergoing test.
SECTION 13

BLOODBORNE PATHOGENS PROGRAM

******

SAFETY PROGRAM

Revised: 2009.02.02
Bloodborne Pathogens Exposure Control Plan

Facility name: _______________________________ Date of preparation: _______

We, the management staff of ******, are committed to the prevention of incidents or happenings which result in employee injury and illness and to compliance with the Oregon OSHA Bloodborne pathogens standard, Oregon Administrative Rule 437-02 1910.1030. Through this written exposure control plan, we share assigned responsibility and hereby adopt this exposure control plan as an element of the ****** Safety and Health Program.

A. Purpose

The purposes of this exposure control plan:

1. To eliminate or minimize employee occupational exposure to blood or other body fluids.

2. To identify employees occupationally exposed to blood or other potentially infectious materials (OPIM) in the performance of their regular job duties.

3. To provide employees exposed to blood and OPIM information and training. A copy of this plan is available to all employees during the work shift at (location) ________________________________.


B. Exposure determination

****** has performed an exposure determination for all common job classifications that may be expected to incur occupational exposures to blood or other potentially infectious materials. This exposure determination is made without regard to use of PPE. The following job classifications may be expected to incur occupational exposures to blood or other potentially infectious materials:
(List job classifications meeting the requirements in section (c)(2)).

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

The following is a list of job classifications in which some employees may have occupational exposures to blood or OPIM:

<table>
<thead>
<tr>
<th>Job classification</th>
<th>Task or procedure</th>
</tr>
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C. Compliance methods

1. Universal precautions

This organization embraces "universal precautions," which is a method of infection control that requires the employer and employee to assume that all human blood and specified human body fluids are infected with bloodborne pathogens. Where it's difficult or impossible to identify body fluids, all are to be considered potentially infectious.

2. Engineering controls and work practices

(List engineering controls and work practices meeting requirements of Section (d)(2).)

The following engineering and work practice controls will be used by all employees to eliminate or minimize occupational exposures at this facility:

(List all controls necessary and practical to protect employees.)

Engineering controls

Contaminated disposable sharps will be disposed of – ___________________.

(List all procedures used or required to protect employees.)
Work practice controls

Wash hands with soap and water after...

Eating, drinking and etc. not allowed in

Flush eyes and mucous membranes immediately after

3. Personal protective equipment (PPE)
   (List PPE as required in Section (d)(3).)

   The following PPE will be provided at no cost to employees:

   (List required PPE and when used)

   a. Body protection: (List items and when used)
      Lab coats
      Scrubs
      Gowns

   b. Gloves and masks: (Indicate when and where used)
      ---------------------------------------------------------------
      ---------------------------------------------------------------

   c. Eye protection: (List tasks requiring eye protection)
      ---------------------------------------------------------------
      ---------------------------------------------------------------

   d. Special PPE:
      ---------------------------------------------------------------
      ---------------------------------------------------------------

The ______ (job title) _________ is responsible for ensuring and issuing appropriate, readily accessible PPE, without cost, to employees. Hypoallergenic gloves, glove liners, powder-less gloves, or similar alternatives shall be readily accessible to employees who are allergic to the gloves normally provided.
All PPE will be removed prior to leaving the work area.

All PPE will be cleaned, laundered, and disposed of by the employer at no cost to the employee.

PPE, when removed, will be placed in __________ for storage, washing, decontamination, and disposal.

4. **Housekeeping**

This facility will be cleaned and decontaminated according to the following schedule:

<table>
<thead>
<tr>
<th>Area</th>
<th>Schedule</th>
<th>Cleaner</th>
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</thead>
<tbody>
<tr>
<td>__________</td>
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<td>__________</td>
</tr>
</tbody>
</table>

5. **Contaminated laundry**

(List organization's procedures that comply with Section (c) (4) (iv).)

Contaminated laundry will be cleaned at ________ (location) ________.

6. **Regulated paste**

The following procedures will be followed:

(List organization's procedures that comply with Section (c) (4) (iii).)

7. **Hepatitis B vaccine and post-exposure evaluation and follow-up**

**Hepatitis B vaccination**

***** will offer the hepatitis B vaccine and vaccination series at no cost to exposed employees within 10 working days of initial assignment. The company will offer post-exposure follow-up at no cost to employees.

The ______ (job title) ______ is in charge of the hepatitis B vaccination program.

(List organization's procedures that comply with Section (f) (1 & 2).)
The (list person or persons) will ensure that all medical evaluations and procedures, including the hepatitis B vaccine and vaccination series and post-exposure follow-up, including prophylaxis are made available at no charge to the employee at a reasonable place and time, and performed or supervised by a licensed health-care professional according to the recommendations of the CDC.

**Post-exposure evaluation and follow-up**

When an employee has an exposure incident, it will be reported to (job title).

(List organization's procedures that comply with Section (f) (3).)

Following a reported exposure incident, the exposed employee will immediately receive a confidential medical evaluation including the following elements:

(List medical evaluation elements that comply with Sections (f) (3) (ii) and (f) (e) (iii).)

All employees who incur an exposure incident will be offered post-exposure evaluation and follow-up in accordance with the standard. All post-exposure followups will be performed by (clinic, physician, or department).

**Information provided to the healthcare professional**

The (job title) will ensure that the health-care professional responsible for the employee's hepatitis B vaccination receives the following:

(List information required in Section (f)(4)(ii).)

**Healthcare professional's written opinion**

The (Job title) will obtain and provide the employee with a copy of the evaluating health-care professional's written opinion within 15 days of the completion of the evaluation.

The health-care professional's written opinion for HBV vaccination will be limited to whether HBV is indicated for and has been received by the employee.

The health-care professional's written opinion for post-exposure follow-up will be limited to the following information:

(List information required in (f)(5)(ii).)
8. **Labels and signs**

The ______ (job title) _______ will ensure biohazard labels are on each container of regulated waste.

(List items that require labeling in (g).)

9. **Information and training**

The ______ (job title) _______ will ensure that employees are trained prior to initial assignment to tasks in which occupational exposure may occur, and that training shall be repeated within 12 months. The training program will be tailored to the education level and language of the employees and will be offered during the normal work shift. The training will be interactive and will contain the following information:

(List information required in (g)(2)(ii).)

Additional training will be given to employees when changes of tasks or procedures affect employees' occupational exposure.

10. **Recordkeeping**

The ______ (job title) _______ is responsible for maintaining medical records as indicated below. These records will be kept ______ (location) _______.

(List record information required in Section (h)(1)(ii).)

11. **Training records**

The ______ (job title) _______ is responsible for maintaining the following records. These records will be kept ______ (location) _______.

(List records required in section (h)(2)(i).)

Employee records will be made available to the employee.
D.  Evaluation and review

(This section recommended)

The _____ (Job title or titles)_______ is/are responsible for ____ (annually or as needed)____ reviewing this program and its effectiveness and for updating it as needed.

Adopted ____(date)____, by ____ (highest management official)______.
SECTION 14

FLEET/VEHICLE and DRIVER

******

SAFETY PROGRAM

Revised: 02.02.2009
***** vehicle safety policy

Summary

It is the policy of ***** that our passenger vehicles (including vans and light-duty trucks) will be used only for ***** business and will be operated only by authorized persons who meet the driver criteria in our vehicle safety program.

This policy applies to our *****-owned vehicles and private or rental vehicles authorized for use on ***** business.

All employees must comply with federal, state and local laws and policies and be “job-ready” when they are on ***** business. Job-ready means that employees must be physically and mentally able to do their jobs. Employees must not use intoxicants, drugs or medications that could impair their judgment or ability to drive. Managers and supervisors have the right to determine an employee’s job readiness.

Employees who drive on ***** business must have a valid driver’s license and a satisfactory driving record.

Violations of this policy may result in revocation or restriction of employee authorization to drive a *****-owned or private vehicle on ***** business, reassignment, demotion, suspension or dismissal.

All employees must sign a statement stating that they have read and understand this policy and the consequences for violating it.

Employee responsibilities

Supervisors are responsible for ensuring that employees under their direction comply with all elements of this policy.

The appropriate manager must verify, in writing, that employees have valid drivers’ licenses and are qualified to operate ***** vehicles before they begin driving on ***** business.

Employees who drive on ***** business must follow all parts of this policy. They must do a walk around inspection of any vehicle before driving it and they must not use a ***** vehicle for personal business unless it is approved, in writing by the appropriate manager.

When operating ***** vehicles, employees should remember that their driving habits reflect on all ***** employees. ***** vehicles must be used legally, courteously and safely.
Employees are strongly encouraged to plan mini-breaks every two hours during long periods of driving and to allow for no more than 10 hours driving per day in good driving conditions.

Employees must use and require seat belts to be worn by their passengers.

Smoking is not permitted in ***** vehicles.

Employees are responsible for the care of vehicles assigned to them and may be held liable for improper care and abuse of the vehicle. Misconduct could lead to withdrawal of driving privileges and/or disciplinary actions, up to and including dismissal.

**Safety committee responsibility**

The ***** safety committee must investigate any incident that involves a ***** vehicle. The purpose of the investigation is to identify the cause of an incident and to determine how it could have been prevented – not to assess fault.

**Requirements for new employees**

New employees who drive on ***** business must read and sign an MVR consent form that permits this ***** to complete a motor vehicle background check.

**The appropriate manager** will review this vehicle safety policy with each new employee who drives on ***** business. The employee must watch a vehicle safety video and complete a written test and score at least 80 percent.

**Requirements for drivers under 21**

Drivers under the age of 21 are prohibited from operating vehicles or trucks that transport hazardous materials.

**Licensing**

Employees who drive on ***** business must have a current, valid license for the vehicles they drive. Licenses will be photocopied and kept in employees’ files.

**Use of personal vehicles for ***** business**

**The appropriate manager** must review and approve use of a personal vehicle for ***** business.

Employees who drive personal vehicles on ***** business must provide evidence of automobile liability insurance as required by the state of Oregon. A current certificate or proof of insurance must be kept in the employee’s file.
This ***** does not provide liability insurance for employees who use their own vehicles on ***** business. Employees who use their personal vehicles on ***** business are responsible for all liability resulting from use of their vehicles.

Any employee who drives a personal vehicle on ***** business and who does not maintain insurance coverage on that vehicle will be reassigned to a non-driving position or, if a non-driving position is not available, will be terminated.

### Motor vehicle record (MVR) review

The appropriate manager will review the driver’s MVR annually and score it using the *****-developed point classification system for vehicle incidents and violations.

### Reporting incidents involving motor vehicles

An incident report packet is located in the glove box of each ***** vehicle. The packet contains instructions on what to do in case of an incident. Drivers should become familiar with the instructions before using vehicles.

Employees or their supervisors are responsible for completing and filing all necessary reports within the time periods required by this policy. Failure to file a report may cause the loss of the employee’s license, driving privileges, and liability insurance coverage.

Employees must immediately notify their supervisor of any accident, collision or vandalism.

Employees or their supervisors must immediately report to the appropriate manager all collisions, accidents, or vandalism involving vehicles they use on ***** business.

If the incident results in injuries or fatalities, employees or their supervisors must report them to the appropriate manager immediately after ensuring the injured have or will receive necessary medical treatment.

Employees or their supervisors, must forward copies of all vehicle accident forms to the appropriate manager.

Employees involved in vehicle crashes should discuss details of the incident only with police officers, appropriate state officials, or representative of the ***** insurance carrier. Drivers are prohibited from signing or making any statements regarding responsibility for vehicle crashes.

### Department of Transportation (DOT) regulated vehicles

Any vehicle traveling across state lines with a gross vehicle weight rating over 10,000 lbs (including any towed items or actual weight of vehicle and any tows) is subject to DOT regulations. Each driver must have a DOT compliant Driver File maintained in the Safety Department before being allowed to drive vehicles within this classification.
In addition to a DOT compliant driver file, any driver of a vehicle with a gross vehicle weight rating (including tows) over 26,000 lbs. (or actual weight of vehicle and any tows) must possess a valid commercial driver’s license and be in compliance with DOT regulations.

Any vehicle carrying hazard materials at a level to which placarding is required under DOT regulations (regardless of the vehicle’s gross vehicle weight rating or actual weight) must possess a valid CDL license with hazardous materials endorsement.

The Safety Department will be responsible for evaluating the applicability of DOT regulations to this ******’s operations and ensure compliance with those regulations. All drivers of DOT regulated vehicles will have responsibilities beyond those outlined in this policy and will receive additional training and information.

**Drug testing and MVR checks after incidents involving vehicles**

After each incident, regardless of who is at fault, the appropriate manager will require a drug test within eight hours and obtain the driver’s motor vehicle record (MVR) within three business days.

**Point system for screening employees who have poor driving records**

This ****** uses a point system to screen employees who have poor driving records.

- **3-5 points:** Employee will receive a letter of reprimand.
- **6-8 points:** Employee will receive a letter of reprimand and be suspended without pay for one day and must successfully complete a driver improvement course.
- **9-11 points:** Employee will receive a letter of reprimand and be suspended without pay for two days and must successfully complete a driver improvement course.
- **12 or more points:** Employee will either be reassigned to a non-driving position if available, or, if a non-driving position is not available, the driver will be terminated. Before reinstatement to a driving position, the employee will be required to successfully complete a driver improvement course and follow the procedures as outlined in the Re-qualification section of this policy.

Employees who have 6 or more points in 36 months must successfully complete a driver improvement course within 60 days of notification by the appropriate manager and provide a written certificate of completion to the safety committee.

Points for vehicle incidents and violations are determined from the point classification table below.
### Point classification table

<table>
<thead>
<tr>
<th>Incident</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident was beyond the driver’s control</td>
<td>0</td>
</tr>
<tr>
<td>Driving aggressively or discourteously</td>
<td>1</td>
</tr>
<tr>
<td>Failing to make allowance for adverse light, road, weather, vehicle load or traffic conditions.</td>
<td>1</td>
</tr>
<tr>
<td>Operating a vehicle with defective equipment.</td>
<td>1</td>
</tr>
<tr>
<td>Failing to properly adjust vehicle mirrors, seat, headrest or sun visor.</td>
<td>1</td>
</tr>
<tr>
<td>Failing to secure loose objects inside the vehicle.</td>
<td>1</td>
</tr>
<tr>
<td>Failing to heed warning labels of medications.</td>
<td>1</td>
</tr>
<tr>
<td>Fatigue, falling asleep at the wheel.</td>
<td>2</td>
</tr>
<tr>
<td>Exceeding posted speed limit.</td>
<td>2</td>
</tr>
<tr>
<td>Lack of proper type or valid license, or failing to comply with license restriction.</td>
<td>2</td>
</tr>
<tr>
<td>Failing to maintain sufficient clearance when operating vehicle.</td>
<td>2</td>
</tr>
<tr>
<td>Following too closely (tailgating).</td>
<td>2</td>
</tr>
<tr>
<td>Failing to signal intentions.</td>
<td>2</td>
</tr>
<tr>
<td>Overloading vehicle or not following operating manual.</td>
<td>2</td>
</tr>
<tr>
<td>Operating vehicle in an unsafe manner.</td>
<td>2</td>
</tr>
<tr>
<td>Improperly backing the vehicle.</td>
<td>2</td>
</tr>
<tr>
<td>Disregarding stop signs or signals.</td>
<td>3</td>
</tr>
<tr>
<td>Making an improper turn, lane change or other movement errors.</td>
<td>3</td>
</tr>
<tr>
<td>Driving on the wrong side of the road.</td>
<td>3</td>
</tr>
<tr>
<td>Failing to yield the right-of-way or other failure to yield error.</td>
<td>3</td>
</tr>
<tr>
<td>Committing involuntary manslaughter or criminally negligent homicide.</td>
<td>12</td>
</tr>
<tr>
<td>Attempting to elude a law officer, or hit/run.</td>
<td>12</td>
</tr>
<tr>
<td>Operating a vehicle while operator’s license is suspended or revoked.</td>
<td>12</td>
</tr>
<tr>
<td>Operating vehicles under the influence of alcohol or drugs.</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total points</strong></td>
<td></td>
</tr>
</tbody>
</table>
Re-qualification for employees who have poor driving records

Employees who have been reassigned to non-driving positions for poor driving records may re-qualify after 6 months under the following conditions:

Employees must send a written request to the appropriate manager stating why they should be re-qualified. Re-qualification requires the appropriate manager’s approval.

Employees must also complete a driver improvement class which may include remedial and behind-the-wheel training before resuming their driving duties.

Pre-trip walk-around inspections

Employees are responsible for conducting walk-around inspections of their vehicles before driving each day or shift and note any defects or damage. Employees must also note defects or damage to seats, seat belts, interior lights, engine warning lights, rearview mirrors, and emergency equipment.

Employees must report defects or damage to the appropriate manager immediately. The appropriate manager will evaluate the report and ensure that all hazards are repaired promptly. Vehicles that are unsafe to drive must be placed out of service immediately.

Vehicle service and maintenance intervals

Vehicle service and maintenance intervals are determined by the vehicle manufacturer. Maintenance will be performed by a qualified auto or truck mechanic. A signed and dated record of all maintenance work must be kept in the vehicle file. Vehicles that are unsafe to drive must be placed out of service until repairs are completed.

Records kept on ***** vehicles

This ***** keeps the following records on each *****-owned vehicle:

Monthly vehicle inspection report. Identifies damage or defective equipment.

Vehicle history report. Provides a complete history of the costs of maintenance, parts, and labor associated with the vehicles.

All ***** reports and records are confidential and must not be released to third parties without the consent of the ***** president and the *****’s attorney.

Definitions of terms used in this policy

Accident. An unplanned or unintended incident involving a motor vehicle that results in injury, death, or damage.
Collision. An unplanned or unintended incident in which a motor vehicle contacts another vehicle, person, or object.

Crash. An incident involving one or more vehicles in motion.

Incident. An event that resulted – or could have resulted – in personal harm or property damage.

Injury. Physical harm or damage to a person.

Motor vehicle. Any licensed mechanically or electrically powered device designed to be operated on public roads and streets.

Passenger. Any person in a vehicle other than the driver.

Preventable incident. One in which the driver failed to do everything that could have been done to avoid it.

Remedial training. Training required following an incident to upgrade and renew skills and demonstrate proficiency.

MVR consent form

I have reviewed information in the this ******’s vehicle safety policy, watched the vehicle safety video, and scored at least 80 percent on the written test.

I understand that it is my responsibility to operate ****** vehicles safely and follow the requirements of the ****** vehicle safety policy. I also understand that the ****** will periodically review my motor vehicle record (MVR) and assess my eligibility to drive a motor vehicle on ****** business.

I authorize this ****** to obtain my MVR. This authorization remains valid as long as I am an employee or employee candidate and may only be rescinded in writing.

Employee’s name (printed): _____________________________________________

Driver’s license number and state issued: ________________________________

Employee’s signature and date: ________________________________________

Reviewer’s signature and date: ________________________________________
Mobile phone use agreement

Employees who use a mobile phone in a ***** vehicle should remember that their number one priority is obeying the rules of the road. **This ***** requires that you do the following when you use a mobile phone when you are driving a ***** vehicle:

Find a safe place to pull off of the road and place your call.
If you receive a call while driving, let the call go to the voice mail and answer when it is safe to do so.
Employees who use hands-free devices may accept calls while driving but must find a safe place to pull off of the road to place calls.

I have read and will comply with this mobile phone use agreement.

**Employee’s signature and date:**

Vehicle use agreement

**Employee Name:**

**License number:**

**State issued:**

Using *****-owned vehicles

Employees and passengers must wear seat belts while the vehicle is in motion.

The vehicle must be maintained in accord with **this *****’s maintenance requirements. Employees must report all mechanical problems to their supervisors immediately.

Employees must report any motor vehicle incident that results in damage, injury, or a citation to their supervisors immediately.

Employees must have a valid driver’s license for the vehicles they will operate, must follow all license restrictions, and must have their license in their possession when they are driving. A driver whose license is suspended, revoked or terminated will notify the ***** immediately.

Employees’ spouses and children are not allowed to operate ***** vehicles.

Hitchhikers are not permitted in ***** vehicles.

Employees are responsible for all traffic and parking violations they receive when using ***** vehicles.

Modifying or adding accessories to a ***** vehicle is prohibited.

Radar detectors are prohibited.

Employees are not allowed to operate vehicles at any time while under the influence of alcohol or drugs.
Using personal vehicles for ***** business

Authorization to use a personally owned vehicle for ***** business is permitted under the following conditions:

Employees and passengers must wear seat belts while the vehicle is in motion.

Employees must have the appropriate license to operate their vehicles.

Employees must provide proof of insurance upon hire and each time their policy is renewed or updated.

Employees must provide a copy of their insurance certificates to their supervisors.

Employees must notify this ***** of all vehicle accidents or violations involving vehicles driven on ***** business.

This ***** is authorized to review the driver’s MVR annually as long as the driver is a ***** employee.

The vehicle owner is responsible for mechanical repairs.

Employees are not allowed to operate vehicles while under the influence of alcohol, drugs, or other medications that could impair their ability to drive safely.

Employees must comply with all state and federal laws and regulations at all times.

I have read, understand, and agree to comply with this Vehicle Use agreement.

Employee’s signature and date: ________________________________
Vehicle accident report
This report must be completed by a supervisor or manager.

****** name: ________________________________

Today’s Date: ______________________________

Driver Information

Driver’s name: ________________________________

License number: ________________________________

Date of birth: ________________________________

Length of employment: ________________________________

Address:  
City: __________________ State: __________________ Zip: __________________ County: __________________

Phone: __________________ Cell: __________________

Job title: __________________

Reason vehicle was used: __________________

Used with permission from: __________________

Vehicle 1 Information (Insured Driver)

VIN: __________________ Year: __________________ Make: __________________ Model: __________________

Insurance ******: __________________ Policy number: __________________

Does the vehicle require towing? Yes ☐ No ☐

Description of damage: __________________

Vehicle 2 Information

VIN: __________________ Year: __________________ Make: __________________ Model: __________________

Insurance ******: __________________ Policy number: __________________

Does the vehicle require towing? Yes ☐ No ☐

Description of damage: __________________
**Vehicle 3 Information**
VIN: 
Year: 
Make: 
Model: 
Insurance ******: 
Policy number: 
Does the vehicle require towing? Yes ☐ No ☐ 
Description of damage: 

**Vehicle 4 Information**
VIN: 
Year: 
Make: 
Model: 
Insurance ******: 
Policy number: 
Does the vehicle require towing? Yes ☐ No ☐ 
Description of damage: 

**Accident Information**
Accident Date (MM/DD/YY): 
Time of accident: AM ☐ PM ☐ 
Accident location: 
City: 
State: 
Zip: 
County: 

**Purpose of trip**
Pick-up: ☐ 
Driving to job site: ☐ 
Returning from job site: ☐ 
Delivery: ☐ 
Personal Time: ☐ 
Other, please explain: 

**Condition of road surface**
Wet: ☐ 
Dry: ☐ 
Ice: ☐ 
Concrete: ☐ 

**Weather**
Clear: ☐ 
Cloudy: ☐ 
Rain: ☐ 
Snow: ☐ 
Fog: ☐ 
Asphalt: ☐ 
Gravel: ☐ 
Uneven: ☐ 
Other:
Lanes divided? Yes: ☐  No: ☐

Traffic control device? Yes: ☐  No: ☐

Number of hours on duty at time of accident:

Number of driving hours:

Describe how the accident happened:

Use a separate page if you need to draw a diagram of accident.

Were there any injuries? Yes: ☐  No: ☐

1. Name of first injured party: Telephone Number:

Were injuries fatal? Yes: ☐  No: ☐

Do injuries require treatment away from accident scene? Yes: ☐  No: ☐

Injured party’s address: City: State: Zip: County:

What vehicle was injured person in?

Vehicle 1: ☐
Vehicle 2: ☐
Vehicle 3: ☐
Vehicle 4: ☐
Other: ☐

If other, please explain:

Was injured party taken to the hospital? Yes: ☐  No: ☐

Name of hospital:

Give brief description of injuries:

2. Name of second injured party: Telephone Number:

Were injuries fatal? Yes: ☐  No: ☐

Do injuries require treatment away from accident scene? Yes: ☐  No: ☐

Injured party’s address: City: State: Zip: County:
What vehicle was injured person in?

Vehicle 1: ☐
Vehicle 2: ☐
Vehicle 3: ☐
Vehicle 4: ☐
Other: ☐

If other, please explain:

Was injured party taken to the hospital? Yes: ☐ No: ☐

Name of hospital:

Give brief description of injuries:

3. Name of third injured party: Telephone Number:

Were injuries fatal? Yes: ☐ No: ☐

Do injuries require treatment away from accident scene? Yes: ☐ No: ☐

Injured party’s address: City: State: Zip: County:

What vehicle was injured person in?

Vehicle 1: ☐
Vehicle 2: ☐
Vehicle 3: ☐
Vehicle 4: ☐
Other: ☐

If other, please explain:

Was injured party taken to the hospital? Yes: ☐ No: ☐

Name of hospital:

Give brief description of injuries:

Other Information

Was there any property damage? Yes: ☐ No: ☐ If yes, give brief description:
Property damage address:   City:   State:   Zip:   
County:

Were the police called? Yes:   No:   Did the police respond? Yes:   No:   
Police report #:   Officer:

Was a citation issued? Yes:   No:   If yes, to whom?
Citation Description:

Was drug testing administered? Yes:   No:   Was alcohol testing administered? Yes:   No:   
Chain of Custody No.:

Witness(es)

1. First witness name:
Address:   City:   State:   Zip:   County:
Home Phone:   Work Phone:   Cell Phone:

2. Second witness name:
Address:   City:   State:   Zip:   County:
Home Phone:   Work Phone:   Cell Phone:

3. Third witness name:
Address:   City:   State:   Zip:   County:
Home Phone:   Work Phone:   Cell Phone:

Person completing form
Name:
Date:
SECTION 15

AERIAL & SCISSOR LIFT PROGRAM

*****

SAFETY PROGRAM

Revised: 2009.02.02
AERIAL and SCISSOR LIFT

Safety Policy Statement

***** has a policy that the site superintendent not assigns any employee, or requires any subcontractor employee, to work on an aerial or scissor lift unless:

1) The lift unit delivered to the job location has been inspected by the equipment dealer's representative qualified foreman or mechanic and found to be safe to operate. The manufacturer's equipment inspection requirements are to be followed and the inspection results are to be documented.

2) The responsible foreman has performed a job hazard analysis survey to identify hazardous exposures to the lift operator and other employees assigned to work on lift work platforms.

3) Aerial lift operators and other employees attend task-specific safety training sessions to address hazards found in a foreman's job hazard analysis survey.

4) The operator performs a daily walk-around inspection of the lift before operation (even if the machine has already been put into service under another user earlier that day).

5) The foremen and other employees assigned to the job task are trained on how to use the lift's ground controls in case of an emergency situation.

ROLES & RESPONSIBILITIES

Dealer

ANSI/SIA A92 standards require that each equipment dealer provide customers with an aerial or scissor lift that is best suited for the lift's intended use and work environment.

NOTE: Special attention must be given by the dealer to the scope of construction electrical or telecommunications work to be performed using an insulating aerial lift rated as either a category A, B or C. See ANSI/SIA A92.22001 standard for requirements for aerial lift electrical systems, devices, specifications, testing equipment and procedures, and certification requirements.
Responsibilities include:

1) Dealers provide with each lift rented, leased, or sold, current copies of the equipment manufacturer's operating, maintenance, and safety manuals for use by project foremen and operators. Parts and maintenance manuals should also be provided with each customer delivery.

2) Aerial & scissor platforms be inspected, tested, serviced, and adjusted to manufacturers' requirements by the dealer prior to delivery of each aerial or scissor lift.

3) Before jobsite adjustments or repairs are made on an aerial/scissor lift, the dealer's qualified mechanic is to follow the safety precautions of the A92 standards. These may be:
   
   a. Engine stopped and starting means rendered inoperative.
   
   b. All controls in the "off" position and all operating systems secured from inadvertent motion by brakes, blocks or other means.
   
   c. Elevating assembly and platform lowered down to the full down position, if possible, or otherwise secured by blocking or cribbing to prevent dropping.
   
   d. Hydraulic oil pressure relieved from all hydraulic circuits before loosening or removing related components.
   
   e. Safety props or latches installed, where applicable and prescribed by the manufacturer.

4) Any modification or alteration of an aerial or scissor lift be made only by the dealer with prior written permission of the manufacturer.

5) The dealer complies with safety-related bulletins as received from the manufacturer and provides copies to the company's equipment manager and home office safety coordinator. When parts or components are replaced, assure these are identical or equivalent to original aerial or scissor platform parts or components.

Whenever a dealer's representative or mechanic directs an employee of your company to operate an aerial or scissor lift, the dealer's representative or mechanic is to ensure beforehand that permission is gained from your company's primary project representative and, then, the company's employee has been trained under the direction of a qualified person in accordance with the manufacturer's operating manual and requirements.
6) The manufacturer's operating instructions and required training for the proper use of the aerial or scissor lifts are to be provided to company foremen and operators upon each dealer delivery.

7) When a dealer operates an aerial or scissor lift in sales demonstrations or for other beneficial use, the dealer is to assume the responsibilities of the operator.

8) If a dealer is unable to answer questions relating to rated capacity, intended use, maintenance, repair, inspection, or operation of the aerial or scissor lift, the dealer is to obtain the information from the manufacturer and provide the answers to the company's inquiring personnel.

9) Dealers must maintain (and contractors should request permissive access to) the following records for at least three years:
   a. Name and address of the purchaser of each aerial platform by serial number and date of delivery.
   b. Records of the person(s) trained upon each delivery of an aerial or scissor lift.
   c. Records of the pre-delivery preparation performed prior to each delivery.

Your company's designated equipment manager should also remember to review purchase and lease agreements for any over-broad hold harmless and damage provisions. These written agreements originating from the supplier can be very unfavorable to a contractor.

**Company Equipment Manager**

The company equipment manager's responsibilities are:

1) Providing current copies of the equipment manufacturer's operating and safety manuals for the specific lift to be used by foremen and operators.

2) Assuring that the equipment manufacturer's current parts and maintenance manuals as well as current ANSI/SIA standards are used and complied with by the company's qualified mechanics.

3) Seeing that lift maintenance specified by the manufacturer is properly performed on a timely basis.
4) Establishing an annual budget to operate a preventive maintenance program in keeping with the manufacturer's recommendations and based on the environment and severity of use of the lift.

5) Ensuring that his or her qualified mechanics perform frequent and annual inspections of all company-owned lifts.

6) Having all malfunctions and problems identified by the operator or foreman corrected before the aerial or scissor lift is returned to service.

7) Assuring that lifts are inspected, tested, serviced, and adjusted to manufacturer's requirements prior to each lift being transported to the jobsite.

8) Having frequent inspections performed on each aerial platform that have been:
   a. In-service for three (3) months or 150 hours, whichever comes first.
   b. Out-of-service for a period longer than three months.

9) Ensuring that inspections are conducted by a mechanic on the specific make and model of the lift.

   The inspection should include all items specified by the manufacturer for frequent inspection including, but not be limited to the following:
   a. All functions and their controls for speed(s), smoothness, and limits of motion.
   b. Lower controls, especially, provisions for overriding upper controls.
   c. All chain and cable mechanisms for adjustment and worn or damaged parts.
   d. All emergency and safety devices.
   e. Lubrication of all moving parts, inspection of filter element(s), hydraulic oil, engine oil, and coolant as specified by the manufacturer.
   f. Visual inspection of structural components and other critical components, such as, fasteners, pins, shafts and locking devices.
   g. Placard, warnings and control markings.
   h. Any additional items specified by the manufacturer.
The company's equipment manager or qualified mechanic should not place the lift into service, until all malfunctions and problems have been corrected.

10) Mandating that an annual inspection be performed on each aerial or scissor lift no later than 12 1/2 months from the date of the prior annual inspection. The inspection should be performed by a person qualified as a mechanic on the specific make and model of the lift. The inspection should include all items specified by the manufacturer for an annual inspection.

11) Assuring that before adjustments and repairs are started on an aerial or scissor lift, the following precautions are taken by the qualified mechanic, as applicable

a. Engine is stopped and starting means rendered inoperative.
b. All controls in the "off" position and all operating systems are secured from inadvertent motion by brakes, blocks, or other means.
c. Elevating assembly and platform are lowered to the full down position, if possible, or otherwise secured by blocking or cribbing to prevent dropping.

Hydraulic oil pressure is relieved from all hydraulic circuits before loosening or removing related components.

Safety props or latches installed, where applicable as prescribed by the manufacturer.

12) Ensuring that replacement parts or components are identical or equivalent too original lift parts or components.

13) Training his or her qualified mechanics in the manufacturer's recommendations for inspection, testing, maintenance, and repairs of the aerial or scissor lifts.

14) Obtaining the proper information from the dealer or manufacturer, when unable to answer a foreman, operator, or mechanic's questions) relating to rated capacity, intended use, maintenance, repair, inspection, or operation of the lift and providing that information to the inquirer.

15) Retaining the following records for at least three years:

a. Each lift platform's serial number, model number, and dates of inspection.
b. Records of the qualified mechanics' training sessions.
c. Written records of the frequent and annual inspections performed by the company. The record should include deficiencies found, corrective action, and identification of the qualified mechanic performing the inspection and repairs.

d. Records of the pre-delivery preparation, test, and inspections performed prior to each delivery to the company’s jobsite.

16) Obtaining written permission of the manufacturer prior to allowing any modification or alteration of a lift.

17) Complying with safety-related bulletins as received from the manufacturer or dealer. Current copies of the bulletins are to be provided to each foreman assigned an aerial or scissor lift.

**President or Designee - Owner, CEO, Senior Partner or Other Title**

The President, with the assistance of the site superintendents and site safety coordinators should:

1) Provide an annual budget, personnel and resources to ensure that company-owned aerial & scissor lifts are maintained.

2) Ensure that aerial & scissor lifts that are company-owned, leased, or rented are inspected, maintained, serviced, and operated in accordance with the equipment manufacturer's requirements and applicable OR-OSHA and ANSI/SLA standards.

3) Assure that company-owned, leased, or rented lifts are not operated by any non-company personnel. *NOTE: Any exception to this policy must be approved by the President (or designee).*

4) Mandate that company personnel are not allowed to operate any non-company owned, leased, or rented. *NOTE. Any exception to this policy must be approved by the President (or designee).*

5) Obtain and review with the site superintendent the customer’s request for proposal, project specifications & drawings, project and/or operating facility procedures to determine what portion of the company's or subcontractor's scope of work will require the use of aerial/scissor lifts.

6) Attend customers' pre-bid and pre-job review meetings to address the scope of the job tasks (both routine and non-routine) that will require that company and/or subcontractor employees to use aerial and/or scissor lifts.
7) Request that subcontractors submit their bid documents and cost quotations to the company to show that the subcontractor will provide their own aerial and/or scissor lifts.

8) Delegate to each site superintendent the authority to produce successful task-specific, aerial & scissor lift procedures.

9) Ensure that each site superintendent has established an adequate project budget to provide the appropriate types and number of lifts to safely perform the work.

10) Periodically tour locations and project sites to inspect work being performed by the company's and subcontractors' employees working on aerial and/or scissor lifts.

**Site Superintendent - Project Manager, Site Manager, Department Manager**

The site superintendent reports directly to the President and should:

1) Ensure that all company employees have been instructed, during their site safety orientation session, on the company's policy involving aerial & scissor lifts. Particular attention will be placed on that only qualified foremen and operators will be allowed to operate lifts owned, leased or rented by the company. Non-company personnel must not be allowed to operate a company owned, leased, or rented aerial or scissor lift.

2) Establish an adequate project budget to provide the appropriate types and number of lifts to safely perform the work.

3) Not assign any employee nor require that any subcontractor employee to be assigned to work on a lift unless they have been trained to inspect and safely operate the lift.

4) Ensure that the lift delivered to the job location has been inspected by the equipment dealer's representative, qualified foreman or mechanic following the manufacturer's equipment inspection requirements and the aerial or scissor lift is found to be safe to operate. The inspection results are to be documented.

5) Ensure that each aerial & scissor lift has been provided with the current manufacturer's operating and safety manuals.

6) Have foremen perform a job hazard survey to identify existing and potential exposures to the operator and other employees assigned to work on aerial or scissor lifts.
7) Have lift operators and other employees attend task-specific safety training sessions to address hazards found in a foremen's job hazard analysis survey.

8) Ensure that operators perform daily walk-around inspections of the lifts before operation (even if machines have already been put into service by other users earlier that day).

9) Assure that foremen and other employees assigned to the job task are trained on how to use the lift's ground controls in case of an emergency situation.

**Company Safety Coordinator - Site Safety Manager, Safety Inspector, Safety Representative**

On those small company projects that will not have a site safety coordinator, the site superintendent will either take on these responsibilities or assign one of his or her supervisory staff members to be the company's safety coordinator. The safety coordinator is responsible for assisting the site superintendent in the formulation, implementation, and administration of the company's task-specific, lift platform procedures and should:

1) Obtain and review customer's project or operating facility aerial/scissor lift procedures.

2) Obtain copies of and maintain current knowledge of all applicable Federal or OR-OSHA aerial & scissor lift standards, ANSI/SIA standards, equipment manufacturer's/dealer's safety, operational, and maintenance manuals.

3) Obtain and review subcontractor's task-specific lift procedures.

4) Assist the foremen in the development of the company's task-specific lift procedures.

5) Conduct lift safety training sessions for foremen and subcontractor superintendents.

6) Assist foremen in conducting employee safety training sessions.

7) Develop foremen safety toolbox materials covering the company's task-specific lift procedures.

8) Inspect daily each of the company's and subcontractor's aerial/scissor lift job locations.
9) Immediately stop and have corrected any company or subcontractors' job task that are not in full compliance with the aerial & scissor lift procedures. As appropriate, have foreman or subcontractor representatives take appropriate employee disciplinary action.

10) Maintain records of foremen, employees, and subcontractors' superintendents' attendance at lift safety training sessions.

**Foremen - Craft Superintendent, General Foremen, Crew Foremen, Crew Leaders**

The foreman reports directly to the site superintendent and should:

1) Ensure that the manufacturer's, dealer's, the company's aerial/scissor lift inspection, operational, and safety guidelines are supplemented by use of good job management as well as sound safety, training, inspection, maintenance, application, and operational principles. All actions are to be consistent with the findings of the foreman's job hazard analysis and expected conditions of the work environment.

2) Have direct control over the daily inspections, operation, and safety of each lift being used by crewmembers.

3) Keep and maintain copies of the operating and safety manuals. These manufacturer's manuals should be provided with each delivery of a lift and should be stored in the weather-resistant storage compartment on the lift. The manual is considered an integral part of the lift and is vital to communicate necessary safety information to operators.

4) Inspect and maintain the aerial & scissor lift as required to ensure proper operation. The frequency of inspection and maintenance should be determined by the manufacturer's recommendations and be compatible with operating conditions and environment. The foreman should immediately remove lifts that are not in proper operating condition from service. Repairs should be made by a qualified mechanic and be in conformance with the manufacturer's recommendations to include:

   a. Frequent inspection as required by the manufacturer.

   b. Annual inspection as required by the manufacturer.

   c. Pre-start inspections at the beginning of each shift with the lift given visual checks and functional tests including, but not limited, to the following:
      1. Operating and emergency controls.
2. Safety devices.
3. Personal protective devices.
4. Air, hydraulic and fuel system leaks.
5. Cables and wiring harness.
6. Loose or missing parts.
7. Tires and wheels.
8. Placards, warnings, control markings and operating manual(s).
9. Outriggers, stabilizers, and other structures.
10. Guardrail system.
11. Items specified by the manufacturer.

5) Ensure that before adjustments and repairs are started on a jobsite lift, the qualified mechanic as necessary takes the following maintenance or repair safety precautions:

a. The engine is stopped and starting means rendered inoperative.

b. All controls are in the "off" position and all operating systems are secured from inadvertent motion by brakes, blocks, or other means.

c. The elevating assembly and platform is lowered to the full down position, if possible, or otherwise secured by blocking or cribbing to prevent dropping.

d. Hydraulic oil pressure is relieved from all hydraulic circuits before loosening or removing hydraulic components.

e. Safety props or latches are installed, where applicable and prescribed by the manufacturer.

6) Have parts or components replaced that are identical or equivalent to the original platform parts or components.

7) Assign only an employee to operate a lift, who has been trained in accordance with the manufacturer's Safe Use of Aerial & Scissor Lifts inspection, operating, and safety manuals; the company's lift work platform safety procedures; the applicable standards; and the requirements discussed in the foreman's pre-task safety meeting.

8) Ensure that the operator is trained either on the same model of aerial/scissor lift, or, one having operating characteristics and controls adequately consistent with the one to be used during actual jobsite operations. Under the direction of a qualified person, the trainee should operate the lift for a sufficient period of time to demonstrate proficiency in and knowledge of its actual operation. Care should be taken to ensure the area of such operation has a safe "floor" surface and
training can be done safely. Only qualified and authorized personnel should be permitted to train in the operation of the aerial or scissor platforms. The company should maintain records of the trainees’ instruction for at least 3 years.

9) Assure that the operator has:

a. Been instructed by a qualified person in the intended purpose and function of each control.

b. Read and understood the manufacturer's operating instructions and company's safety rules.

c. Been trained by a qualified person on the contents of the manufacturer’s operating and safety instructions and company's safety rules.

d. Understood by reading or having a qualified person explain all decals, warnings, and instructions displayed on the lift.

e. Been informed that the purpose for which the lift is to be used (within the scope of the intended applications as defined by the manufacturer).

10) Check the area in which the lift is to be operated, before and during use, for possible hazards, such as, but not limited to:

a. Drop-offs or holes.

b. Bumps and floor obstructions.

c. Debris.

d. Overhead obstructions and high voltage conductors

e. Hazardous locations

f. Inadequate surface and support to withstand all load forces imposed by the lift in all operating configurations.

g. Wind greater than 30 mph and adverse weather conditions.

h. Presence of unauthorized persons.

i. Other possible unsafe conditions.
11) Supervise operators to ensure that the following is adhered to prior to each movement and each repositioning of the lift:

a. The aerial or scissor lift is operated on a surface within the limits specified by the manufacturer.

b. The outriggers, stabilizers, extendable axles, or other stability enhancing means are used as required by the manufacturer.

c. The guardrails are installed and access gates/openings closed per manufacturer's instructions.

d. The load and its distribution on the platform and any extension are in accordance with the manufacturer's rated capacity for that specific configuration.

e. There is adequate clearance from overhead obstructions.

f. The minimum safe approach distances (MSAD) to energized power lines and parts are maintained.

g. The appropriate safety precautions are followed during operation of the aerial or scissor lift.

12) Determine the hazardous atmosphere of work locations according to the current ANSI/NFPA 505 standard. Lifts operated in hazardous locations should be in accordance with and of the type required in this standard.

13) Ensure operation of the lift in compliance with the manufacturer's, OR-OSHA’s, and company's safety standards and procedures.

14) When operating a lift, the foreman has the same responsibilities as the operator.

15) When unable to answer an operator's questions relating to the lift's rated capacity, intended use, maintenance, condition, or safety of operation, the foreman should obtain the proper information from the dealer or manufacturer and forward findings to the operator before use.

16) Authorize and direct operating personnel to cease operation of a lift in any case of suspected malfunctions or any hazard or potentially unsafe condition that may be encountered. Personnel are to request further information as to safe operation from the dealer or manufacturer before further operation of the aerial or scissor lift.
17) Retain the following records for at least three years:

a. Records of each operator trained on each model of aerial & scissor lifts.

b. Written records of the frequent and annual inspections. These records should include the dates of inspections, any deficiencies found, the corrective actions recommended, and identification of the person(s) performing the inspections.

c. Written records of all repairs accomplished on lifts, including the dates of any repairs, a description of the work accomplished and the identification of the person(s) doing the repair.

18) Modify or alter lift platforms only with prior written permission of the manufacturer.

19) Comply with safety-related bulletins as received from the manufacturer, dealer or company.

_Aerial or Scissor Lift Operator - Trained & Qualified Foremen, Mechanic, and Other Employees_

1) Each lift operator in addition to complying with the equipment manufacturer and company's safety procedures should also apply good judgment and caution in evaluating each situation. Since the operator is in direct control of the lift, conformance with good safety practices in this area is the responsibility of the operator. The operator should make decisions on the use and operation of the lift with due consideration that his or her own safety and the safety of other personnel are directly impacted by those decisions.

2) The operator should ensure that the manufacturer's operating and safety manuals stating the responsibilities of the operator are stored on the lift in the weather-resistant storage compartment provided. The operator should be familiar with the manuals and consult these, when questions arise with respect to the lift.

3) The operator, at the beginning of each shift, should give the lift, a visual inspection and functional test including, but not limited to, the following:

a. Operating and emergency controls.

b. Safety devices.

c. Personal protective devices.
d. Air, hydraulic, and fuel system leaks.

e. Cables and wiring harness.

f. Loose or missing parts.

g. Tires and wheels.

h. Placards, warnings, control markings, and operating manuals.

i. Outriggers, stabilizers and other structures.

j. Guardrail system.

k. Items specified by the manufacturer.

4) Any problems or malfunctions that affect the safe operation of the lift should be reported by the operator to the foreman and repaired by a qualified mechanic prior to the use.

5) The operator must be trained under the direction of a qualified person either on the same model of lift or one having operating characteristics and controls consistent with the one to be used during actual work. The trainee should operate the lift for a sufficient period of time to demonstrate proficiency and knowledge in its actual operation. Care should be taken to ensure the area of operation has a safe surface and training can be done safely. Only properly trained and authorized personnel should be permitted to operate the lift.

6) Before being authorized to operate the aerial or scissor lift, the operator should have:

   a. Been instructed by a qualified person in the intended purpose and function of all controls.

   b. Read and understood the manufacturer's operating instructions and company's safety rules.

   c. Been trained by a qualified person on the contents of the manufacturer's operating instructions and company's safety rules.

   d. Understood by reading or by having a qualified person explain all decals, warnings, and instructions displayed on the work platform.
7) Before the lift is used and during use, the operator should check the area in which it is operated for possible hazards, such as, but not limited to:

a. Drop-offs or holes.

b. Bumps and floor obstructions.

c. Debris.

d. Overhead obstructions and high voltage conductors.

e. Hazardous locations.

f. Inadequate surface and support to withstand all load forces imposed by the aerial platform (adding weight of personnel, tools, and materials) for all operating configurations.

g. Wind greater than 30 mph and/or adverse weather conditions.

h. Other possible unsafe conditions.

8) The lift should be used in accordance with the manufacturers and company safety standards. Before each elevation of the platform, the operator should ensure:

a. The aerial or scissor lift is operated on a surface within the limits specified by the manufacturer.

b. Outriggers, stabilizers, extendable axles, or other stability enhancing means, are used as required by the manufacturer.

c. Guardrails are installed and access gates or openings are closed per manufacturer's instructions.

d. The load and its distribution on the platform and any platform extensions are in accordance with the manufacturer's rated capacity for that specific configuration.

e. There is adequate clearance from overhead obstructions.

f. The minimum safe approach distances to energized power lines and parts are maintained.

g. All personnel on the platform are wearing personal protective equipment as required at all times.
9) It should be the responsibility of the foreman to determine the hazard classification of any particular atmosphere or location according to ANSI/NFPA 505. Aerial platforms operated in hazardous locations should be approved and of the type required by ANSI/NFPA 505.

10) The operator should ensure the operation of the lift in compliance with the following:

   a. The operator and other personnel on the platform should maintain a firm footing on the floor. Use of planks, ladders, or any other devices for achieving additional height or reach is prohibited.

   b. When other moving equipment and vehicles are present, special precautions should be taken to comply with local ordinances or safety standards established for the workplace. Warnings, such as, but not limited to flags, roped off areas, flashing lights, and barricades should be used.

   c. The operator should immediately report to the foreman any problems or malfunctions that become evident during operation. Any defects that affect the safety of operations is to be repaired prior to continued use.

   d. The operator should immediately report to the foreman any potentially hazardous locations or work environmental conditions that become evident during operations.

   e. Operation of lifts that are not approved and marked for operation in hazardous locations should be prohibited.

   f. Care should be taken to prevent rope, electric cords, and hoses, etc., from becoming entangled in the lift.

   g. Rated capacities are not to be exceeded, when loads are transferred to the platform at any height.

   h. The operator should ensure that the area surrounding the lift is clear of personnel and equipment before lowering the platform.

   i. The engine should be shut down, while fuel tanks are being filled. Fueling should be done in a well-ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.

   j. Batteries should only be charged in a ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.
k. The lift should not be positioned against another object to steady the platform.

l. The lift should not be used as a crane.

m. The lift should not be operated from a position on trucks, trailers, railway cars, floating vessels, scaffolds, or similar equipment unless the application is approved in writing by the manufacturer.

n. Under all travel conditions, the operator should limit travel speed according to conditions of ground surface, congestion, visibility, slope, location of personnel, and other factors causing hazards of collision or injury to personnel.

o. Before and during driving, while the lift platform is elevated, the operator should:
   - Maintain a clear view of the path of travel.
   - Maintain a safe distance from obstacles, debris, drop-offs, holes, depressions, ramps, and other ground hazards.
   - Maintain a safe distance from overhead obstacles.

p. Stunt driving and horseplay are not to be permitted. The operator should use means provided to protect against use by unauthorized person(s).

q. Altering or disabling of interlocks or other safety devices is prohibited.

r. The lift should not be driven on grades, side slopes or ramps exceeding those for which the manufacturer rates the platform.

s. If the platform basket or supporting assembly becomes caught, snagged, or otherwise prevented from normal motion by adjacent structures or other obstacles such that control reversal does not free the platform, all personnel should be removed from the basket before attempts are made to free the platform using chassis controls.

11) If an operator encounters any suspected malfunction of the lift, or any hazard or potentially unsafe condition relating to capacity, intended use, or safe operation, the operator is to cease operation of the lift. The operator is to request further information as to safe operation from his/her foreman, dealer, or manufacturer before further use.
12) Modification or alteration of a lift should be made only with prior written permission of the manufacturer.

Subcontractor Superintendent - Site Manager, General Foreman

Each subcontractor superintendent, through his or her foremen, should be responsible for the effectiveness of their own task-specific, aerial & scissor lift procedures and should:

1) Obtain and become familiar with the company's, customers, OR-OSHA and ANSI/SIA lift standards and project procedures.

2) Attend project pre-bid and pre-job review meetings to address the scope of the job tasks (both routine and non-routine) that will require subcontractor employees to work on lifts.

3) Attend lift-training sessions conducted by representatives of the equipment dealer.

4) Establish an adequate project budget to fund the subcontractor's rental of lifts.

5) Formulate, implement, and administer the subcontractor's task-specific lift procedures and submit to the company's site superintendent for review and comment.

6) Delegate to each foreman the authority to implement the task-specific lift procedures.

7) Assist the foremen in the formulation of task-specific lift procedures.

8) Provide lift safety training to foremen, operators and employees.

9) Establish the disciplinary actions necessary to develop and enforce effective lift procedures.

10) Inspect the site to determine that employees are being safeguarded, while performing work on aerial or scissor lifts.

11) Immediately stop and correct any job task that is not in full compliance with the subcontractor's task-specific lift procedures. Take the appropriate employee disciplinary action.
Company Safety Practices for Aerial & Scissor Lifts

Scope

All company work locations (warehouses, equipment yard, project sites) that assign company employees to operate or work on aerial or scissor lifts should develop, implement, and administer task-specific, procedures as outlined within this section.

Manufacturer's and Dealer's Operating and Safety Manuals

The site superintendent should ensure that the equipment dealer provides the current edition of the manufacturer's operating and safety manuals for each aerial or scissor lift to be operated by company employees.

The company's equipment manager is to provide current copies of the lift equipment manufacturer's operating and safety manuals with each lift to be used by foremen and operators.

Compliance with OR-OSHA Standards

The site superintendent should obtain and have readily available in the company's site office trailer up-to-date copies of the applicable and current OR-OSHA aerial & scissor lift standards. The company's task-specific lift procedures should address compliance with the OR-OSHA standards.

Job Hazard Analysis

The foreman, prior to assigning employees to perform electrical, telecommunication, or utility line work that requires the use of lifts, should conduct a job hazard analysis to identify the following:

1) Safe handling, rigging and general public safety factors involving transportation, off-loading, storing, operation, and reloading of the lift onto transport vehicles.

2) Exposures to project or public vehicles and the associated need for traffic work zones. Also check for pedestrian pathways. Know also the widths and heights of entrance and exit ways.

3) Condition and locations of site roadways, terrain, ramps, trenches, and excavations including recently backfilled areas, possible sinkholes, and manhole openings.

4) Live load capacity of surfaces, e.g., manhole covers, building floors, and edges of excavations to determine ability to support of the aerial or scissor lift's weight.
5) Condition of each floor in the building to include openings, holes, ramps, elevator shaft openings, stairways, drop-offs, loading docks, etc.

6) Exposures to energized power, gas, chemical, communication, and fire water lines; fire sprinkler systems; pipe racks; cranes; hoists; ventilation equipment; structural steel; lighting fixtures; etc.

7) Exposures to other contractor site operations including abrasive blasting, spray painting, cranes, hoists, materials falling from overhead, system testing, welding, burning, chipping, grinding, etc.

8) Exposures to operating plant conditions including hazardous material processing, pressure vessel relief valves, high noise, high temperatures, chemical releases, etc.

9) Required personal protective equipment, rubber insulating equipment, and special tools.

10) Availability of safety harnesses and lanyards for each employee in aerial lifts and/or determination of the adequacy of the scissor lift’s guardrail system.

11) Material safety data sheets (MSDS) for each chemical or hazardous material that employees will or could be exposed to while working on aerial or scissor lifts.

12) Customer’s and company Lockout/Tagout procedures and work permit requirements.

13) Potential for adverse weather conditions - winter storms, thunderstorms, lightning, tornadoes, high winds (30+mph).

14) Availability and capabilities of in-house and off-site emergency rescue teams.

15) Details of the emergency and rescue action plan, rescue and retrieval equipment, and emergency notification procedures.

**Company Task-Specific Aerial & Scissor Lift Procedures**

The foreman, based upon findings of his or her job hazard analysis survey, will prepare a task-specific lift procedure. The foreman should then conduct and document a pre-job planning meeting with the employees assigned to operate and work on the lift(s) addressing the following:

1) Actual or potential hazardous exposures found by the foreman's job safety survey and required safeguards that must be followed by employees to work safely.
2) Customer and/or company material safety data sheets (MSDS).
3) Equipment manufacturer's operating and safety manuals for the lift being used.
4) Company's lift inspection, operating and safety procedures.
5) Task-specific lift procedures.
6) Personal protective equipment, rubber insulating equipment, and special tools.
7) Issuance and use of a safety harnesses and lanyards for each employee using aerial lifts.
8) Customer's and company's Lockout/Tagout procedures and safe work permit requirements, if required.
9) Establishment and maintenance of a traffic control and work zone protection areas.
10) Emergency notification procedures and call numbers.

**Subcontractor Task-Specific Aerial & Scissor Lift Procedures**

Prior to the start of any subcontractor work involving the use of a subcontractor owned, leased, or rented aerial or scissor lifts, the subcontractor's superintendent should be required to submit to the company's site safety coordinator a task-specific lift procedure for review and comment.

Subcontractors should not be allowed to use or borrow a lift from the company, other contractors, and customers to perform any company work on or off the project.

**Pre-Delivery Inspection of Lifts**

Company-owned, leased, or rented lifts should be inspected, serviced and adjusted to manufacturer's requirements by a qualified mechanic prior to delivery to a work location.

A copy of the equipment manufacturer's pre-delivery inspection form should be completed, signed, and dated by the mechanic who has performed the lift inspection. Provide this completed form to the site superintendent or foreman upon delivery of the lift.
Transporting and Off-loading Aerial & Scissor Lifts

All company-owned lifts should be transported to and from the work location in full accordance with the equipment manufacturer's written and illustrated directions for safe transport. This includes securely tying down the machine to the truck or trailer deck.

The company's truck driver should be personally responsible for inspecting the chains, chain hooks, safety devices, and come-a-longs for defects prior to using these restraints to secure the lift to the trailer deck. Defective rigging equipment or devices must be removed and tagged out-of-service.

When the equipment dealer is delivering and removing a leased or rented lift from a company work location, the dealer's representative should be responsible for the safe unloading and loading of the lift.

If a crane or forklift is used to move the lift off or onto the transport vehicle, the weight of the lift must be within the safe lifting capacity of the crane or forklift. The equipment manufacturer's written and illustrated directions must be fully complied with by the crane or forklift operator.

Personal Protective Equipment

Job Hazard Analysis Survey

As part of the job hazard analysis survey for aerial or scissor lift usage, the foreman should determine what type of personal protective equipment (PPE) is required.

The foreman will ensure that company site employees are properly instructed in the use of their personal protective equipment in accordance with written company PPE instructions. Each foreman, prior to assigning employees to a job task involving a lift, should provide the applicable personal protective equipment, such as:

- Head protection.
- Hearing protection.
- Eye and face protection.
- Hand protection.
- Safety harness and lanyard that can be tied-off to a 5,000-pound anchorage point on the lift.
- Respirators.
• Orange vests.
• Any other special equipment/devices required to be worn in their work.
• Rubber insulating gloves.
• Rubber matting for use around electric apparatus.
• Rubber insulating blankets.
• Rubber insulating hoods
• Rubber insulating line hose.
• Rubber insulating sleeves.

PPE that has been worn or used previously should not be reissued to another employee, until the article has been inspected, cleaned and sterilized. PPE, which has been changed in any manner that reduces its effectiveness, should be removed from service, repaired, or destroyed.

Employee Compliance and Enforcement

Foremen should conduct daily field inspections to check employee compliance with use of personal protective equipment. Employees found not to be properly wearing their PPE will be given a written employee warning and reprimand slip. If the employee continues to refuse to properly wear the safety equipment the foreman should consider immediate termination of this employee.

Company subcontractors not providing PPE to their site employees or site visitors, should have their work halted by the site superintendent, until the subcontractor issues and requires the proper wearing of safety equipment or device.

Traffic Control and Work Zone Protection

When completing the aerial or scissor lift, job hazard analysis survey, the foreman should determine what type of internal or external traffic control and work zone protection will be required. Steps are to be taken to safeguard employees working on lifts, and other personnel, mobile equipment operators, and motorists on the floors, ground, or public roadways.

The foreman should daily conduct a safety planning meeting with crewmembers to address the task-specific, traffic control and work zone protection.
Pre Job Safety Inspection of Aerial & Scissor Lifts

It is the operator's responsibility to inspect the lift before the start of each work shift, even if the machine has already been put into service under another operator. The pre-job inspection includes the following:

1) Check the lift for oil, fuel, and hydraulic oil leaks and report any leaks to the foreman.

2) Check decals and placards for cleanliness and legibility. Notify foreman of any missing decals and placards. Ensure all illegible decals and placards are cleaned or replaced.

3) Ensure a copy of lift's safety manual is provided in the platform's storage box.

4) Check that the battery charge level is adequate and recharge battery, as needed.

5) Check fuel level and add proper fuel, as required.

6) Check hydraulic oil level and add correct type of hydraulic oil, as needed.

7) Perform a walk-around inspection on the machine following the manufacturer's inspection guidelines.

8) Perform a functional check of all systems in an area free of overhead and ground level obstructions.

Operating Aerial & Scissor Lifts

The lift operator should comply with the manufacturer's, OR-OSHA's, and company's safety standards as follows:

1) The operator and personnel on the lift should maintain a firm footing on the platform floor. Use of planks, ladders, or any other device for achieving additional height or reach is prohibited.

2) When other moving equipment and vehicles are present, special precautions should be taken to comply with local ordinances or safety standards established for the workplace. Warnings such as, but not limited to, flags, roped-off areas, flashing lights, and barricades should be used.
3) Any problems or malfunctions are to be immediately report to the foreman that become evident during operation prior to continued use. Any problems or malfunctions that affect the operational safety are to be reported by the operator to the foreman.

4) Alteration or disabling of interlocks or other safety devices is prohibited.

5) Care should be taken to prevent rope, electric cords and hoses from becoming entangled in the lift.

6) Rated capacities should not be exceeded, when loads are transferred to the platform at any height.

7) The operator should ensure that the area surrounding the lift is clear of personnel and equipment before lowering the platform or movement.

8) The engine should be shutdown, while fuel tanks are being filled. Fueling should be done in a well-ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.

9) Batteries should be charged in a well-ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.

10) The lift should not be positioned against another object to steady the platform.

11) The lift should not be used as a "crane".

12) The lift should not be operated from a position on trucks, trailers, railway cars, floating vessels, scaffolds, or similar equipment unless the application is approved in writing by the manufacturer.

13) Under all travel conditions, the operator should limit travel speed according to conditions of ground surface, congestion, visibility, slope, location of personnel, and other factors causing hazards of collision or injury to personnel.

14) Before and during driving, while the lift platform is elevated, the operator should:

   a. Maintain a clear view of the path of travel.

   b. Maintain a safe distance from obstacles, debris, drop-offs, holes, depressions, ramps, and other ground hazards.

   c. Maintain a safe distance from overhead obstacles.
15) Stunt driving and horseplay by employee(s) operating or working on lifts are not permitted and will be treated as a serious violation of company safety rules and cause for immediate termination.

16) Means should be used by the foreman and operator to protect against use of a company lift by unauthorized persons.

**Equipment Maintenance, Service and Repairs**

When the aerial or scissor lift becomes disabled or unsafe to operate, the foreman or operator should attach an out-of-service warning tag to the upper control station and lower control station (if so equipped).

The equipment dealer should be called by the site superintendent or foreman to service or repair the lift. If it is a company-owned lift, the site superintendent or foreman should call the company's equipment manager. The equipment manager should (1) have a qualified mechanic sent to the jobsite to service or repair the defective lift, or (2) as appropriate, make arrangements to have another lift delivered and the defective lift transported back for repairs.

Consequently, company personnel (mechanics, foremen, and operators) should follow the listed equipment safety maintenance guidelines:

**Tires & Wheels**

- Check lift's tires for:
  - Correct pressure.
  - Cuts or bulges.
  - Nails or spikes.
  - Uneven or excessive wear.
  - Missing valve caps.

*NOTE:* Have tire cuts or punctures repaired by authorized personnel before adding air. If pneumatic, refer to manufacturer’s manuals for inflation procedures and OR-OSHA requirements for use of a safety tire rack or cage. An over-inflated tire can explode and cause injury or death. An under-inflated tire will reduce the stability of the machine. Be sure to replace tire ballast or sealing compound as per the manufacturer's requirements. Do not substitute pneumatic tires for foam filled or solid tires. When liquid filling is required, always refill per manufacturer's specifications.
• Check wheels for:
  o Damaged rims.
  o Missing or loose wheel nuts, bolts or bearing caps.
  o Proper torque specifications (refer to manufacturer’s manual).
  o Obvious misalignment.

Company Safety Practices for Aerial & Scissor Lifts

Eye Protection

• Safety glasses or goggles are always needed for eye protection from electric arcs from shorts, fluid under pressure, and flying debris or loose material, when the engine is running or tools are used.

• Wear a face-shield, when disassembling spring-loaded components or work around battery acid.

• Wear a welding helmet or goggles with special lenses, when welding or cutting with a torch.

Protective Clothing

Wear all the protective clothing the job requires and:

• Wear gloves and safety shoes, when handling wooden blocks, jacks, or sharp-edged metal.

• Watch out for moving fan blades.

• Keep feet, hands, clothing, and hair away from moving parts.

• Never wear a watch or ring or a necktie around machinery.

Fire & Explosion Hazards

• Shut off the engine and electrical equipment, while filling the fuel tank or changing batteries.

• Use extra caution, when fueling a hot engine.
- Always ground the fuel nozzle against the filler neck to avoid sparks.
- Handle solvents and dry chemicals according to procedures stated on the container's label.
- Work in a well-ventilated area.
- Make sure you know where the fire extinguishers are kept and how to use them.
- Use an approved solvent to clean machine parts. Never use gasoline or diesel fuel.
- Never smoke, while handling fuel or working on the fuel system.
- Never cut or weld on fuel lines, tanks, or containers. The fumes in an empty fuel container are explosive.

Avoid spilling fuel. If a spill occurs, wipe it up immediately.

**Welding Precautions**

Never weld on hydraulic cylinders, boom, elevating assembly, or any structural member without the written approval of the lift's manufacturer. These lift components may be made of unusual metals which might require special welding techniques or have a design which should not have welded repairs.

**Battery Hazards**

- Wear a rubber apron and rubber gloves, when working with battery acids.
- Always wear a face shield to avoid acid in your eyes. If acid contacts eyes, flush immediately with clean water and keep flushing until medical help arrives.
- If acid contacts skin, flush immediately with clean water and keep flushing until medical help arrives.
- Follow manufacturer's directions for jump-starting engines with the aid of an extra battery. Operator must be at a control station when jump-starting engine so that machine will be under control as the engine starts.
- Lead-acid batteries produce flammable and explosive gases. Keep arcs, sparks, flames and lighted tobacco away. Never charge a frozen battery. It can explode.
• Never check the battery by placing a metal object across the posts. Serious burns or an explosion can result.

• Disconnect the battery before working on the lift's electrical system. Remove the ground terminal first. When reconnecting the battery, reconnect the ground terminal last.

Emergency and Rescue Action Plans

According to OR-OSHA’s statistical data on aerial & scissor lift accidents, three out of five events resulted in the operator and other workers on the lift being killed. Those employees, who survive, most often have major injuries.

Plan Development

Whenever work is performed using an aerial or scissor lift, the need for emergency rescue and medical treatment must be anticipated. Planning for these events can be incorporated into an existing rescue plan or can be the beginning of new efforts to aid or retrieve employees needing assistance at heights. There are two approaches to this planning.

Customer Plan - A written emergency medical treatment and rescue action plan based on current customer emergency preparedness efforts. This is a joint measure of the site superintendent and the customer’s project representative in cooperation with on-site or outside emergency medical and rescue agencies.

Company Plan - This is a company-only action plan based upon rescue and medical response information obtained at the pre-bid and pre-job construction meetings. When the company’s aerial or scissor lift job tasks are located in remote locations, the company’s site superintendent will need to be responsible for developing the emergency medical treatment and rescue action plan.

The preparation should take into account all foreseeable contingencies that might occur addressing such items as:

• Procedures for immediately notifying emergency rescue and medical personnel to respond to an aerial or scissor lift accident location.

• Assessment of what rescue, medical, and construction support personnel would be available to help during normal and off-hour work schedules.

• Supplemental training needed for on and offsite, emergency first-aid and medical and rescue teams (for all shifts) to cover the company’s contracted work.
• Foremen and crew training on how to operate the lift's ground level controls to safely lower the platform or basket in order to immediately start emergency lifesaving first-aid and CPR. (Note: Extreme caution must be used by company or rescue personnel in that the lift may still be in direct contact with the energized overhead power lines.)

• Foremen and crew training on how to safely access a lift that is elevated to start emergency lifesaving first-aid and CPR to the injured on the platform or basket. (NOTE: Extra precautions must be used by company or rescue personnel in that most aerial & scissor lifts are only rated for 100 to 250 pounds of side pull force and can very easily be tipped over.)

• Foremen and crew training on how to safely remove the aerial or scissor lift off of injured employees to allow medical personnel to render lifesaving first-aid and CPR.

• Determination of probable availability of rescue equipment (cranes, lifting harnesses, stretchers, backboards, etc.) throughout the project schedule and for all shifts.

In the event of an aerial or scissor lift accident, the site superintendent and safety coordinator will coordinate with emergency rescue and medical personnel. Emergency action plan training should be conducted and documented by the safety coordinator and will encompass all foreseeable contingencies.

Rescue Equipment and Devices

At a minimum, the following equipment and devices should be made readily available for use by rescue team members:

• Mechanical lifting devices and rigging having a mechanical advantage of at least four to one and the capacity to safely elevate and hold the aerial or scissor lift off of injured employees.

• Three 5/8" x 100' long rescue ropes stored in rope bags.

• (Flexible) stretcher and/or backboard with holding straps to secure the injured employee, while being lifted out of the aerial or scissor lift or and mechanical lifting straps to allow rescue from elevation.

Rescue Team Personnel Qualifications

During the pre-bid and pre-job review meetings with the customer’s project manager, the company’s chief project representative should determine the existence of any onsite
emergency first-aid & medical and rescue team operations. Information must also be obtained as to any customer agreements that have been setup with outside emergency teams to cover site contractor operations.

Rescue Teams Hands-On Training Sessions

The site superintendent should ensure that the following training has been provided:

- The site superintendent should only assign those site employees to work on lifts, who are trained and certified in first-aid and CPR. These employ-ees are also to be given hands-on training in the use of rescue devices and in the rigging of a stretcher for lowering any injured to ground level.

- Employees should also be trained in compliance with OR-OSHA’s Bloodborne Pathogen Standard.

- Employees should be trained, during their project new-hire safety orientations and annually thereafter, on the safe procedures to follow, when an electrical accident occurs.

NOTE: Of all the construction site workers, electricians have the most hands-on work experience concerning the hazards associated with installing, upgrading maintaining, checking-out, testing, and startup of electrical systems. As such, they can best respond to an accident involving aerial or scissor lift workers that have contacted electrical power lines.

- Rescue personnel (company, customer and outside service groups) should be given annual hands-on training to perform the assigned lift rescue duties.

Emergency Notification Procedures

The site superintendent is to post at each company site telephone location and in each company vehicle all necessary emergency telephone numbers. This should include consulting physician, hospital, ambulance ser-vice, project security, main gate, local and state police, fire department, and customer's safety department covering both normal work shifts and second & third shifts, weekends, and holidays.

The site superintendent should issue to each foreman a current copy of emergency telephone numbers, street addresses, and names of key personnel and written directions with local street maps for all offsite emergency medical treatment facilities. All site employees should be issued a wallet-size card listing telephone numbers to call to have the emergency medical and rescue team personnel respond to the incident location.
Foremen should be provided with a company cell phone (or radio, as appropriate), whenever job tasks are being performed by crewmembers at locations not readily accessible to "normal" emergency medical and rescue response.

**Rescue Time Frame Guidelines**

If an accident victim's breathing or heart stops, brain damage will usually begin in four to six minutes.

Giving CPR is essential to avoid brain damage. The best hope of saving the victim is to have a fellow crewmember to immediately start CPR until the emergency medical personnel arrive to administer advanced life support.

**Electrical Accident Response Procedures**

In response to a lift accident involving electrical shock, the following procedures should be immediately followed:

- Call in-facility emergency number or 911 or have someone else call 911 for help.

- Don't touch any part of the lift structure, unless sure that the lift is not in contact with the energized electrical lines. If possible, safely turn off the source of the energized line.

- If the power cannot be turned off, make sure personnel and the victim(s) are not in contact with any electrical source and out of reach of any broken wires.

- When it is safe to operate the ground level lift controls, lower the injured employee(s) and immediately start CPR if the victim is not breathing or there is no pulse.

- Give first-aid treatment to the victim for burns, fractures, and bleeding.

- If clothing is on fire, tell the person to drop and roll, or tackle the person, if necessary, to smother the fires.

- Cool any burn with water or saline for a few minutes or until the skin returns to normal temperature. For flash burn victims, safety showers may be the best method due to the possibility of widespread surface burns on the body. Do not attempt to remove clothing that is stuck to a burn. Remove constricting items such as shoes, belts, jewelry, and tight collars from the victim. Elevate burned limbs to reduce swelling.
Handle the victim with care, to avoid further harm to broken bones or spinal injuries.

Treat for shock, maintain body temperature and do not give anything by mouth. Administer high concentrations of oxygen, if available.

Keep the victim warm and comfortable as possible, while awaiting transport to the medical facility. Cover the victim with clean, dry sheets or blankets. Cover burn wounds with sterile dressings or clean sheet

**General Requirements**

The site superintendent with the site safety coordinator, should develop, conduct, and document employee, (foremen, operators, workers) aerial/scissor lift training. The training is to be in compliance with applicable manufacturer, dealer, OR-OSHA, and ANSI/SIA requirements.

As part of the equipment lease or rental agreement, the site superintendent should request that the dealer's representative transport the aerial/scissor lift to the jobsite and conduct operational and safety training for the site safety coordinator, foremen, and operators.

The company's equipment manager should develop, conduct, and document lift training programs for mechanics in compliance with applicable manufacturer, dealer, OR-OSHA, and ANSI/SIA requirements.

Subcontractor superintendents should be required to develop, conduct, and document aerial & scissor lift training for their own company employees (foremen, operators, workers). The training is to be in compliance with applicable manufacturer, dealer, OR-OSHA, and ANSI/SIA requirements.

**Safety Toolbox Meetings**

Company employees assigned to work on aerial & scissor lifts, either as an operator or worker, should attend safety toolbox sessions conducted by their foreman.

**Training of Operators**

Each trainee should be instructed by a qualified aerial or scissor lift operator in the safe and proper function of the lift. The training should use the manufacturer's operators and safety manual and inspection forms, appropriate and current ANSI/SIA A92 and OR-OSHA standards, and the company's lift safety requirements.
Such training should include hands-on use of the same type of lift to be operated. The trainee is to successfully demonstrate proficiency to the satisfaction of the qualified operator providing the training. Care should be taken by the instructor to ensure the area of such hands-on training operation has a safe "floor" surface and that the training can be performed safely.

Operator training materials are essential for conveying important information on the safe and proper operation of a lift. These training materials can be obtained from the equipment dealer or directly from the manufacturer. Training materials can include videos, CDs, handbooks, wallet cards, manuals, product brochures, etc. Manufacturer information is more specific to particular lifts than that from other sources and should be used when possible. A list of manufacturer training materials can be often found on the company’s website.

ELEVATED WORK PLATFORMS AND SCISSOR LIFTS

Over the past few years, elevated work platforms have become one of the most widely used pieces of construction equipment. They have reduced the use of ladders and scaffolds for elevated work. Properly used, they are safer and more efficient than ladders and scaffolds. Use of elevated work platforms is one of the few tasks that have the potential for citations in all four areas of OR-OSHA’s inspection program.

This section is intended to familiarize workers with the hazards related to the use of scissors lifts and suggest controls to reduce accidents.

Hazard Analysis

The most common operational hazards for scissors lifts resulting in an accident or injury:

- Failure of scissors lift components
- Inadequate operator training
- Falls from elevated heights
- Lift overturning
- Lift damage caused by overloading
- Pinch points
- User caught between lift and other obstructions while moving
- Nearby workers struck by lift while moving
- Tools or material falling from lift
- Working near overhead energized lines
- Lift contacting and rupturing piping containing hazardous substances
**Accident Controls**

A proactive method for controlling accidents is training. The following training tips include:

- Only properly trained and authorized persons shall be permitted to operate scissors lifts.
- Only a person competent in scissors lift operation shall perform training.
- Training shall be in accordance to manufacturer’s operating, maintenance, and users instructions.
- Training shall consist of reading and understanding the manufacturer’s instructions and warning labels on safety, operation, maintenance, and inspection of the equipment.
- Operators shall be trained on the same model lift or one, which has characteristics and controls consistent with the one to be used.
- Each trainee shall operate a scissors lift under the direction of a qualified person until proper knowledge is demonstrated.

Safety begins before any operation is started.

Pre-operation and startup guidelines should include the following:

- The manufacturer’s operator’s handbook shall be kept with the equipment at all times while operating.
- Prior to each use, the operator shall make a pre-start inspection of the equipment in accordance with the manufacturer’s instructions. A record should be maintained of all inspections.
- Before use and during use, the operator shall check the area in which the lift will be used for possible hazards that may cause injury while using the lift.
- All operating controls shall be checked for proper operation at least prior use each day.

Fall protection is often overlooked when using scissors lifts.

If workers will be in a on an elevated platform at a height of over 6 feet, the following measures should be followed:

- No part of a scissors lift platform guardrail systems shall be used for fall protection anchorage without manufacturer’s written approval.
- Anchoring fall protection lanyards to an adjacent structure while working from the platform of a scissors lift is prohibited.
- A double lanyard system is recommended when an elevated platform lift is used to gain access to an elevated platform.
Operating tips:

- The platform load limit shall not be exceeded at any time. Load limits are normally intended as uniformly distributed loading.
- Caution must be exercised when using a scissors lift in windy conditions. Consult the manufacturer for maximum heights for wind speeds.
- Do not place materials on work platforms that will create a sail effect.
- A scissors lift shall not be operated or driven on slopes exceeding manufacturer’s rating.
- The elevated platform shall not be used as a crane.
- The elevated platform shall not be used as a jack.
- A scissors lift shall not be used for hoisting materials that exceed the uniform load limits, create point loads, create eccentric loading, or extend outside the platform.
- Piping, conduit, steel, and other similar materials shall not be supported by the guardrail system without specific approval by the manufacturer.
- Using the guardrail system as a cable reel support is not recommended. If this is to be done, extreme caution must be used and the manufacturer should be consulted.
- Good housekeeping on the work platform is important.
- Containers are recommended for all tools and materials being used on the work platform.
- Tools and materials shall not be hung on the platform guardrails.
- Extension cords and welding leads shall not be tied off to the guardrails or platform.
- An elevated platform shall not be used as a “dead man” in performing work that causes excessive horizontal force.
- Use of ladders, scaffolds, planks, or other devices to achieve additional height or reach is prohibited.
- Warning devices, lights, barricades, etc. shall be used around scissors lifts when other equipment is being operated in the immediate area.
- Should the aerial platform become caught enough to prevent normal motion such that control reversal does not free it, workers on the platform shall be removed before attempts are made to free it using ground controls.
- Ground controls are not to be used while workers are on the work platform unless specifically authorized by workers on the platform or in case of emergency.
- Platform access gates shall be in place anytime workers are on the platform.
- The work platform shall be lowered to manufacturer’s specifications or site rules; whichever is lower, before driving the lift.
- Outriggers, stabilizers, extendible axles or other stability enhancing means must be used as required by the manufacturer.
- An elevated platform shall not be positioned against another object to steady the platform.
• Elevated platforms are not normally insulated for use near energized lines and should not be used as such unless specifically labeled as such.
• Consult the owner's manual or ANSI A92.5 -1992 for safe approach distances to energized power lines.
• Use all personal protective equipment required by regulations and site rules while working on a scissors lift.
• A fire extinguisher on the work platform is recommended.
• The propane tank, if so equipped, shutoff valve shall be closed when the lift is not in use.
• A scissors lift shall not be operated from a position on a truck, trailer, floating vessel, scaffold, or similar equipment without specific written approval by the manufacturer.

Maintenance:

• An annual inspection is required of all scissors lifts by a qualified person and a record shall be kept.
• Records shall be kept of all repairs made to scissors lifts.
• No modifications to a lift shall be made without written approval from the manufacturer.
• Scissors lifts shall be locked out and tagged while maintenance is being performed. The minimum requirement shall be removal of the key and a tag placed at the key switch.
• The equipment shall be tagged out of service anytime there is a malfunction or problem that can affect the safety of operation.
• Comply with all requirement of CFR 1926 Subpart F when fueling a powered scissors lift.
• Batteries shall be charged in a well-ventilated area free of flame, sparks, or other hazards which may cause fire or explosion.
• The elevated platform must be raised and be substantially blocked in a safe position any time maintenance is being performing on the hydraulic lifting mechanism or the scissors.
SCISSOR LIFT CHECKLIST

Raise scissors a short distance and
Check scissor-end joints for cracks.
Check hydraulic hoses and fittings for leaks.
Check drive axles/knuckles for slop.

Check wheels for loose nuts/ bolts

Check tires for:
Missing pieces on solid tires.
Proper inflation on air tires.

Check battery for:
Cracks, leaks and corrosion.
Contact of terminal posts.
Frays or broken insulation in cables.

If lift is fuel driven,
Is the propane bottle in working order?
Check fuel lines for signs of cracks or leaks.
Is a fire extinguisher mounted on lift?
(Always check a fuel driven lift outside)

Check outriggers and guardrails for cracks or bad weld joints.

Check ground controls for working order
(you do not want to be stuck in the “up” position).

Make sure that the manufacturer’s packet is on-board.

Controls.
Moveable controls have orientation of switches clearly marked?
All controls return to neutral position when released?

Check load chart.
How many workers allowed?
Weight limitation.

Check surrounding work area for:
Adequate lighting
Drop offs/ditches/trenches
Floor obstacles/bumps
Debris
Overhead obstructions
High voltage lines (must maintain 10' clearance)
SECTION 16

PCB BALLASTS and FLORESCENT TUBES PROGRAM

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SAFETY PROGRAM

Revised: 2009.02.02
PCB BALLASTS and FLORESCENT TUBES PROGRAM

This document provides guidance to companies and individuals that create and/or manage waste lamps and ballasts. Complete management regulations can be found in the Code of Federal Regulations (CFR), Title 40, Part 273 and 261 and the Oregon Administrative Rule (OAR) Chapter 340, Division 113.

12/9/02 By: R. Volpel, State of Oregon DEQ

Environmental Concerns

Fluorescent lamps and High Intensity Discharge (HID) lamps, including mercury vapor, high-pressure sodium, and metal halide lamps from businesses, can contain levels of mercury and lead that make them hazardous waste when disposed. Mercury and lead are toxic metals that can accumulate in living tissue and cause adverse health effects. Businesses and government in Oregon discard several million lamps each year, making these lamps the largest source of mercury in our solid waste-stream.

When a lamp is broken, or placed in a landfill or incinerator, metals are released into the environment that may contaminate the air, surface or groundwater.

Lamp ballasts manufactured prior to 1978 likely contain polychlorinated biphenyls (PCBs). When released into the environment, PCBs persist for many years and bioaccumulate in organisms. Studies have shown that PCBs cause cancer in animals, and repeated exposure to PCBs has shown adverse reproductive and developmental effects in animals. Exposure to PCBs can cause liver damage, nausea, dizziness, eye irritation and bronchitis in humans.

Management of Lamps as Universal Waste

The universal waste rule was designed to encourage the collection of certain hazardous wastes that are generated by a wide variety of businesses and institutions. Depending on your individual situation, other options may be preferred to managing your waste lamps as universal waste.

Advantages of Managing Waste Lamps Under the Universal Waste Rule

- Universal wastes are not counted towards hazardous waste generator status;
- No manifesting required unless the waste lamps are transported through states or treated or disposed in states that do not recognize mercury-containing lamps as a universal waste;
- Increased storage time available; and reduced administrative requirements for record-keeping, training, and emergency preparedness.
**Universal Waste Management Requirements**

Handlers of waste lamps managed under the universal waste rule must:

- Manage lamps in a way that prevents releases of the waste to the environment;
- Contain lamps in containers such as cardboard boxes or fiber drums, which are adequate to prevent breakage;
- Keep containers closed;
- Minimize lamp breakage and immediately clean up any broken or damaged lamps; and,
- Store broken lamps in a closed, structurally sound container.

Universal waste handlers are prohibited from crushing lamps, or diluting lamps with other wastes. Waste lamps must be sent to a universal waste destination facility for recycling or disposal.

**Labeling and Marking**

Each container of waste lamps must be labeled or marked clearly with one of the following phrases: "Universal Waste--Lamps", "Waste Lamps," or "Used Lamps."

**Accumulation Time**

Waste lamps may be accumulated for up to 1 year.

Accumulation of universal waste lamps longer than 1 year is permitted if the handler can demonstrate, if inspected by DEQ, that more time is needed to accumulate the quantities necessary to facilitate proper recovery, treatment or disposal.
CONTRACTOR SAFETY BULLETIN ON PCB BALLASTS

The simple task of removing and replacing light fixture ballasts can also be the one that exposes you to the most liability for potential fines. For many years, lighting retrofit and energy conservation projects in schools and high rise office buildings have exposed you and your electricians to PCB containing ballasts. Polychlorinated Biphenyls or PCBs are classified as hazardous waste and are regulated under the Federal Toxic Substances Control Act (TSCA).

The EPA enforces this act through 40 CFR Part 761 and can levy fines up to $33,000.00 a day for up to 180 days for improper handling, storage, recordkeeping, and disposal of PCB containing items. OSHA can also levy penalties under the HazCom and PPE standards. To complicate matters, there is confusion on proper handling and disposal procedures from our customers, transporters and general contractors. This confusion has led to deficiencies in our work practices and greatly increased our likelihood of monetary penalties from these regulating agencies.

NECA – IBEW Electrical Contractors who engage in lighting maintenance work activities must review the PCB Remediation guidelines to minimize exposure to fines from the EPA and OSHA. These guidelines have been reviewed by the EPA for accuracy and should be used on future projects where exposure to PCBs is known or likely.

The PCB Remediation guidelines include information on:

- EPA Requirements for Generators (our customers) of PCB waste
- EPA Notification of PCB Activity
- EPA ID # Requirements
- EPA PCB Remediation Plan Requirements (sample plan)
- Required PPE for Electrician PCB Exposure and Training Topics
- Proper Ballast Handling and Storage Procedures
- Typical Spill Kit Contents and Clean up Procedures
- Hazardous Waste Transportation and Disposal Procedures
- Manifesting Requirements
- Recordkeeping
ELECTRICAL CONTRACTOR RESPONSIBILITIES

The more you handle PCB contaminated ballasts, the greater the possibility of citations from either the EPA or OSHA. Typical to any other electrical job task, an assessment of potential hazards is necessary to establish training and PPE requirements. Direct hazards associated with PCB ballast removal include electrical shock, chemical exposure and ladder / aerial lift use. Indirect hazards involve DOT exposures, storage and transportation issues.

General training on electrical safety, lockout / tagout, HazCom and ladders should be completed prior to the project. Specific training to PCB exposure and the safe and proper handling of contaminated ballasts, clean up procedures and PPE is a must. This training must include accidental spill and cleanup procedures.

Best Practice guidelines for PCB ballast removal include:

It is extremely important to review bid documents and contract language to identify specific requirements that may hold you accountable for long-term environmental liability.

Inform customer and / or general contractor that a PCB remediation plan must be submitted to the EPA, by the generator, 30 days in advance of work being performed. See PCB Generator Responsibilities.

Ask for a copy of any site assessments to establish where PCB ballasts are to be expected. If the building was built prior to 1979, it is reasonable to expect the ballasts containing PCB’s to be found throughout the facility. (See flowchart – DEQ Schools Doc.)

When removing PCB ballasts, ensure that your electricians are wearing appropriate PPE. Safety glasses and nitrile gloves should be used at a minimum for a standard non-leaking PCB ballast removal. For spill cleanup or leaking PCB ballast removal, PPE should include safety glasses, nitrile gloves and disposable lab coat. Disposable booties, a face shield and a half face respirator with organic vapor cartridges may also be necessary.

For specific procedures for spill cleanup and repair of leaking, smoking or smelling PCB ballasts, refer to the sample PCB Remediation Plan. See Appendix C.

A licensed hazardous waste transporter must establish containment and transportation procedures for PCB ballasts, contaminated PPE and clean up materials. This typically includes DOT approved and labeled containers that can be sealed for transport. Never transport these items back to your shop. Leave with customer if necessary. At a
minimum, double bag these items in zip lock bags and have your customer sign that they received them. Use customer responsibility and release form. See appendix D.

Ballasts manufactured after 1985 can be assumed to be Non-PCB containing ballasts. These ballasts and equipment are not regulated by TCSA. Recycling of these items is recommended. Contractor disposal at a public or private waste disposal site, with prior clearance, is allowed.

Transportation and disposal of PCB ballasts and equipment is regulated by TSCA and requires a generator identification number (issued by EPA) and a uniform hazardous waste manifest. EPA form 8700-22 (Rev. 3-05)

The generator must obtain the identification number from the EPA. ID numbers are site and building specific. DOT / EPA manifesting is required.

Manifesting responsibilities rest with the generator of the hazardous waste. Do not have your employees sign the manifest document. The EPA ID # is the number that is unique to the physical location of the PCB ballasts and is provided by the customer – not the electrical contractor.

NOTE: If you must assume the liabilities of a generator due to business practices, refer to Generator Responsibilities.

**PROCEDURES FOR PERFORMING SERVICE WORK**

EPA does not restrict the disposal of intact, non-leaking ballasts or capacitors. Therefore, there is no TSCA limit on how many small PCB capacitors and fluorescent ballast that may be disposed of as solid waste. It is recommended that the safest method to send all materials to an approved, licensed incineration site.

If you remove one or two ballast that contain PCBs, but it has been determined that they are INTACT AND NON – LEAKING, EPA permits transportation of these ballasts from the worksite to a solid waste disposal facility if the following conditions have been met:

- Intact and Non – Leaking ballasts only.
- Advance notice has been made to the solid waste disposal facility that has indicated acceptance of the intact and non-leaking PCB containing ballasts.
- This is a PCB bulk product waste, which does not require labeling, manifesting or EPA number registration.

Obtain a receipt from the solid waste disposal facility, keep a copy for your records and provide one to the customer.
GENERATOR RESPONSIBILITIES

A generator of hazardous waste by definition is a person who, by virtue of ownership, management, or control, is responsible for causing or allowing to be caused the creation of hazardous waste.

As such, when performing PCB ballast remediation projects, the OWNER of the facility is generally considered to be the generator of the hazardous waste. The OWNER has specific responsibilities that must be met to avoid citations from the EPA. Your actions can also cause you to inherit the definition of co-generator and those responsibilities are now shared between you and the owner.

You do not want these responsibilities and should make every effort to notify the owner and / or general contractor that you are excluding these duties from the scope of work.

The generator has the responsibility to:

- Obtain an EPA identification # that is unique to the location where the PCB ballasts are to be removed. See appendix A. (Notification of PCB Activity)

- Notify the EPA of PCB activity (See appendix A. Notification of PCB Activity) and submit a PCB remediation plan (See appendix C, Sample Remediation Plan) 30 days in advance of work taking place.

A PCB remediation plan may include a site assessment to determine the amount and location of PCB containing ballasts. If an assessment has been performed, secure a copy and retain with your records.

Transportation and disposal of PCB ballasts and equipment is regulated by TSCA and DOT. Records of shipping and handling procedures are documented on a Uniform Hazardous Waste Manifest. See appendix B.

The generator is ultimately responsible to ensure that PCB ballasts and contaminated equipment is properly shipped to the appropriate hazardous waste handling facility. The waste materials must be shipped using a licensed hazardous waste transportation company.

The hazardous waste handling facility will issue a receipt or certificate of destruction. These documents are to be maintained by the generator for a period of three years.
[Insert flow chart here and then remove this page]
CUSTOMER RESPONSIBILITY AND RELEASE FORM

This document is intended to inform you, our customer, about specific handling and disposal requirements for PCB containing light fixture ballasts and equipment.

The EPA, under the Toxic Substances Control Act (TSCA), regulates PCBs and as such, only licensed hazardous waste transportation companies can deliver your defective PCB containing ballasts to an approved disposal facility.

Therefore we have sealed the PCB contaminated ballasts and equipment in double containment bags and are leaving them at this work site. All transportation and disposal arrangements will be left up to you.

For more PCB disposal information, contact Dan Duncan, EPA region X, 206-553-6693 or Bruce Long, 503-326-3686.

I have verified that ________________________ electric has double bagged all PCB containing materials and have received a copy of the customer responsibility and release form.

__________________________________________  ______________
(customer or company representative)    (date)

__________________________________________  ______________
(electrician)       (date)
[INSERT EPA FORM 7710 – 53, NOTIFICATION OF PCB ACTIVITY, AND THEN REMOVE THIS PAGE]
APPENDIX C

SAMPLE RE-MEDIATION PLAN

Poly-Chlorinated Biphenyls (PCB’s) Re-mediation Plan

(Insert Customers Name Here) has a contract with (insert Contractor Name) to retrofit all existing light fixtures. Said contractor has hired (Insert Electrical Contractor Name) to be the sub-contractor for the express purpose of (name scope of work: example; removing all existing fixtures and replace with energy efficient fixtures).

Procedures for correct identification and recycle or disposal of lamps and ballasts:

1. Approach the fixture and examine it for any obvious leaks that may have come from ballasts. This would be a brown tar like or burnt coffee looking substance.
2. If there is evidence of contamination, mark the fixture. This will be a marker so you can find the fixture at a later time.
3. Turn off the power and allow the ballast to cool.
4. After the fixture has cooled remove the tubes.
5. Put the tubes in a container provided by the recycler/disposal company.
6. If using the packing boxes LABEL the boxes: "used fluorescent tubes", "universal waste", "mercury containing tubes."
7. If those boxes are not available use the boxes from the new tubes.
8. Pack the tubes tightly to limit the possibility of damage.
9. Seal the box with tape.
10. Check the ballast. Ballasts made after 1978 do not contain PCB's and should be labeled "no PCB's". If no such label is on the ballast we must assume the ballast is PCB containing.
11. If the ballast contains no PCB's put them in a container with like kind. Always ensure that non-PCB containing ballasts and ballasts containing PCB's are kept segregated and are in two different locations.
12. If the ballast contains PCB's and/or is LEAKING mark the fixture with an identifying mark for ease of identification at a later time.
13. (Insert Customers Name Here) will contact the appropriate disposal-company to pick up the barrel. A manifest or chain of custody will be maintained.
14. Upon proper disposal a disposal certificate will be issued by the disposal-company to the (Insert Customers Name Here).
PCBs (polychlorinated biphenyls) are known animal carcinogens and possible human carcinogens. Exposure must be avoided. Exposure routes include inhalation (lungs), ingestion (eating), and absorption (skin contact).
To avoid exposure, do not inhale the smoke or fumes, or make skin contact with any PCB containing compound, and do not put contaminated tools in your mouth. Properly handle, decontaminate, package, and/or dispose of PCB contaminated articles or clothing. Do not take contaminated clothing home. Personal clothing contaminated with PCBs must be disposed of as regulated waste.

Use of cleaning solvent, especially acetone, require mechanical ventilation and may require the use of a respirator with organic vapor cartridges. Forced air ventilation with fans, and open doors and windows is always preferred to remain within Permissible Exposure Limits (PELs).

A. Specific Procedures for Spill Cleanup and Repair of Leaking, Smoking, or Smelling PCB Ballast.
1. Apply general safety precautions applicable to the electrical industry.
2. Keep unauthorized personnel out of the room until re-mediation is completed.
3. Keep the lights/lamps turned off to prevent additional ballast damage.
4. Secure entrances and label accordingly to prevent unauthorized entry during PCB re-mediation activities.
5. Let leaking or smoking ballast cool at least 20 minutes after lights are shut off. There is a thermal burn hazard when dealing with hot ballast or hot potting (leaking) materials.
6. The room must be ventilated and clear of smoke, otherwise wear a respirator with organic vapor cartridges.
   a. Continue to ventilate the room even if respirators are worn. Closed rooms must be actively ventilated with fans and preferably directly to the outside. Contaminated spaces must be unoccupied and ventilated until the next day.
7. Remediation workers must wear appropriate PPE for the task being completed.
8. Lay down plastic sheeting under each ballast and light fixture to be worked on.
9. Access fluorescent lamps and remove the lamps.
10. Caution: Potential Thermal Burn! When the ballast is cool, remove it. Identify the ballast as "No PCB" or "PCB" type. Wrap the ballast in paper towels and place in a double plastic bag.
11. If the ballast is a "No PCB" type and there is no past contamination from a previous ballast leak then proceed to replace the ballast. PPE is not required and discard cleaning materials and ballast.
12. Clean up PCB contaminated leaks using the following guidelines:
   a. Draw a diagram indicating where contamination is found.
   b. Avoid unnecessary spreading of PCB material during the cleanup.
   c. Leaks unto nonabsorbent surfaces can be initially cleaned with rags or paper towels or, if hardened, by using a putty knife. Remember not to mix contaminated tools with "clean" tools or with clean materials and be sure to decontaminate your tools after the job.
   d. Perform a double wash procedure. Wash contaminated areas and the light fixture cavity with a specified solvent or detergent and then wipe rinse with rubbing alcohol. Our preference is mineral spirits/paint thinner, but acetone can be used on difficult areas but it may remove the paint. Repeat the wash procedure a second time. Washing with a solvent or detergent should be done in a way to minimize any liquid residue. Absorb all liquids in rags or paper towels. Be careful not to contaminate stock containers of solvents or detergents. Pump-sprayers work well for the solvents and help to reduce contamination of stock solvent.
   e. When dry, outline a 10-centimeter (four-inch) square at the original point of contamination. Clean-up sampling is required by EPA regulation, for every leak.
   f. If leaks occur onto highly absorbent materials such as carpet, clothing, etc., the contaminated area must be cut out and disposed of as PCB waste.
   g. Place all contaminated materials in double plastic bags. Separate the ballast from all other contaminated materials (i.e., debris) such as gloved, ground cloths, rags, paper towels, lab coats, etc. Seal with tape and label.

13. Wash hands after cleaning up.
14. Conduct a wipe test. Are your hands washed and all PCB contaminated materials in double plastic bags? Be sure not to contaminate the test kit. Using the test kit, wipe a 10-centimeter by 10-centimeter area (approximately a four inch square) about the center of the contaminated point. Making a 10-cm template/cutout will speed the work. Conduct one wipe test per fixture.
15. Label the test kit with date, time (24 clock), location #, fixture #, and your name.
16. Install "PCB Free" ballast.
17. Install a low mercury (ecologically friendly) lamp, if available, and close up the light fixture. Remember to properly dispose of mercury containing lamps per EPA/DOE guidance.
18. Dispose of the PCB contaminated material in the appropriate PCB waste drums. Ballast and contaminated debris must be separated into different drums.
B. Decontamination and Re-mediation Materials List

1. Gloves; use neoprene, butyl rubber, or nitrile (nitrile is preferred).
2. Goggles, face shield or safety glasses with brow shield.
3. Disposable lab coat.
4. Disposable overshoe/bootie.
5. Disposable hat.
6. Clean rags or clean paper towels.
7. Large plastic trash bags.
8. Tape.
9. Permanent marking pen.
10. Tag and tie.
11. Light weight plastic ground cloths.
12. Cleaning solvents. Use full strength. Options include mineral spirits, turpentine, deodorized kerosene, or rubbing alcohol. Mineral spirits and rubbing alcohol are the preferred stock items. Acetone may be purchased separately but only small quantities should be kept on hand due to its volatility. Be aware that acetone will damage and/or remove paint, even baked on enamel.
13. Cleaning detergents. Detergents that contain "Tri-Sodium Phosphate (TSP)" may be used instead of solvents. TSP detergents may be available at larger grocery stores or at home improvement centers. Use full strength and apply with a damp rag to prevent forming wastewater. Using a detergent has advantages over solvents because they are less flammable, less odorous, and they may be less damaging to certain finishes.
# Notification of PCB Activity

Return To:

Fibers & Organics Branch (7404T)  
Office of Pollution Prevention & Toxics  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., N.W.  
Washington, DC 20460-0001

<table>
<thead>
<tr>
<th>1. Name of Facility</th>
<th>Name of Owner Facility</th>
<th>2. EPA Identification Number (if already assigned under RCRA)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>3. Facility Mailing Address (Street or PO Box, City, State, &amp; Zip Code)</th>
<th>4. Location of Facility (No. Street, City, State, &amp; Zip Code)</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>5. Installation Contact (Name and Title)</th>
<th>6. Type of PCB Activity (Mark ‘X’ in appropriate box. See Instructions.)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>□ A. Generator w/onsite storage facility</td>
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<tr>
<td></td>
<td>□ C. Transporter</td>
</tr>
<tr>
<td></td>
<td>□ E. Approved Disposer</td>
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</table>

7. Certification

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as a company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Signature | Name and Official Title (Type of Print) | Date Signed

---

## Paperwork Reduction Act Notice

The annual public burden for this collection of information is estimated to average 0.57 hours per response. This estimate includes time for reading instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, Collection Strategies Division, U.S. Environmental Protection Agency (mail code 2822), 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460-0001. Include the OMB number identified above in any correspondence. Do not send the completed form to this address. The actual information or form should be submitted in accordance with the instructions accompanying the form, or as specified in the corresponding regulations.
|------------------------|-------------|----------------------------|---------------------------|

5. Generator's Name and Mailing Address
   Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
   U.S. EPA ID Number

7. Transporter 2 Company Name
   U.S. EPA ID Number

8. Designated Facility Name and Site Address
   U.S. EPA ID Number

9a. Facility's Phone:

9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))

10. Containers

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<th>No.</th>
<th>Type</th>
<th>Quantity</th>
<th>Wt./Vol.</th>
<th>Waste Codes</th>
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11. Total

12. Unit

13. Waste Codes

14. Special Handling Instructions and Additional Information

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/packaged, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
   I certify that the waste minimization statement identified in 40 CFR 262.27(b) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

   Generator/Officer's Printed/Typed Name
   Signature
   Month Day Year

16. International Shipments
   Import to U.S.
   Export from U.S.
   Port of entry/exit:
   Date leaving U.S.:  

17. Transporter Acknowledgement of Receipt of Materials

<table>
<thead>
<tr>
<th>Transporter 1 Printed/Typed Name</th>
<th>Signature</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
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<tbody>
<tr>
<td>Transporter 2 Printed/Typed Name</td>
<td>Signature</td>
<td>Month</td>
<td>Day</td>
<td>Year</td>
</tr>
</tbody>
</table>

18. Discrepancy

18a. Discrepancy Indication Space
   Quantity
   Type
   Residue
   Partial Rejection
   Full Rejection

   Manifest Reference Number:

   U.S. EPA ID Number

18b. Alternate Facility (or Generator)

   Facility's Phone:

   Signature of Alternate Facility (or Generator)  Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

<table>
<thead>
<tr>
<th>Method Code</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>1.</td>
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<tr>
<td>2.</td>
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<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
</tbody>
</table>

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

   Printed/Typed Name
   Signature
   Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.
SECTION 17

LADDER SAFETY PROGRAM

*******

SAFETY PROGRAM

Revised: 2009.02.02
LADDER SAFETY POLICY

for

******

Ladders can be one of the most dangerous tools used in construction. According to the National Safety Council, every year 400 to 600 people are killed and another 30,000 to 40,000 are seriously injured on ladders. Many of these accidents can be avoided by following certain basic safety principles.

Choosing a Ladder

The first principle is choosing and buying the right ladder. ****** will make every effort to purchase only professional grade ladders that are correct for the work that we do. When choosing a ladder, look for the manufacturer's name and address on the ladder and the certification label stating that the manufacturer complies with the American National Standards Institute (ANSI) standard A. 14. Ladders can also be listed with Underwriter's Laboratory (UL).

The ladder should have decals pointing out hazards and safe practices. Certain manufacturers may also have these labels in Spanish. Never remove these safety labels and be sure your employees understand the information when you provide them with the ladder.

- Side rails (non-conductive)
- Solid rungs or steps
- Non-slip feet
- Stepladders
- Straight and extension ladders
- Portable ladders (household, commercial, or industrial)

Be sure to choose the right ladder for the job. ****** will only use fiberglass or wood ladders when working on our jobsites and when working on or near electrical equipment.
Pre-Use Safety Inspection

Safe work practices

Awareness of special hazards

Dealing with broken ladders

Before using the ladder, check these areas:

- Joints, fittings and hardware should be tight and secure.
- Steps and rungs should not be broken, loose or missing.
- Side rails should not be split or damaged.
- Rungs should be free of grease, oil, water, or other slippery material.
- All parts should be free from sharp edges and splinters.
- Make sure the ladder does not have corrosion or heat damage,
- Make sure weight capacity is applicable for intended use.

Additionally, check for these defects on the following types of ladders:

**Stepladders**

- Wobbling
- Loose, bent or broken hinge spreaders
- Loose hinges

**Extension ladders**

- Loose, broken or missing extension locks
- Defective locks that do not seat properly when the ladder is extended
- Worn or broken rope

**Fixed ladders**

- Loose, broken or missing cleats
- Anchoring loose or broken away
- Damaged or corroded parts of the cage
- Damaged or corroded handrails or brackets on platforms
- Weakened or damaged rungs on brick or concrete walls
- Clutter obstructing the base of the ladder
Safe Work Practices

Carrying ladders

Be aware of where you want to go.

Grasp the ladder by the midpoint so it is balanced, with the forward end lowered.

Get help when carrying long or heavy ladders.

Use extra caution when approaching doorways or turning corners.

When transporting a ladder in a truck or trailer, place it parallel to the bed. Support the ladder as necessary so it won't sag or bend.

Take extra precaution when transporting ladders. This includes driving slowly over rough terrain and tying down the ladder to eliminate ladder damage.

Raising ladders

Make sure the ground is level, firm and free of debris.

For straight or extension ladders, place the upper end of the ladder against a solid wall or structure that will support the weight of the worker and the ladder. (Do not place the ladder against windows, window frames, unlocked or open door ways, loose stored materials, or any other breakable or movable objects.)

For straight or extension ladders, apply the four-to-one rule: For every four feet of height, extend the base of the ladder one foot out from the structure the ladder is resting against.

For straight or extension ladders, never stand above the third step from the top of the ladder. Extension ladders should extend a minimum of 3 feet past the floor surface or access level.

Be sure step ladders are fully opened to enable the spreader or other devices to lock.

Don't use the bracing on the back legs of a step ladder for climbing.

Do not use the top of a step ladder as a step or work platform.

Do not substitute boxes, barrels, crates, pallets, shelves, chairs or stools for a ladder. If a job calls for a ladder, use one.
**Climbing Ladders**

Be sure all rungs are solid, have flat steps and an abrasive coating.

Be sure soles of shoes are relatively clean and that the ladder rungs are free of grease, mud and oil.

Hold onto the ladder with both hands when climbing up or down.

Carry tools in a pocket or a tool belt or have the tools and heavy objects hoisted up and down with a hand line.

Never slide down a ladder.

**Working from ladders**

Always face forward.

Use a safety belt, as necessary.

When reaching out from a ladder, keep your belt buckle or the midpoint of your body between the rails to prevent overreaching.

Never shift the ladder position while on the ladder.

Never splice two ladders together. Get one long enough to reach the necessary height.

Never use a ladder as a bridge by placing it in a horizontal position.

"Do's" of Ladder Safety

Do tie off or otherwise secure the top of a ladder to add stability and keep from slipping.

Do secure the base of a ladder.

Do use slip-resistant soles on shoes.

Do clean off shoes before climbing ladders.

Do use both hands and face the ladder when climbing up or down.

Do carry tools and materials in a tool holster or shoulder bag.
Do work smoothly and avoid jerky movements.

Do lock or barricade a door if the ladder is placed in front of an entrance.

Do only allow one person at a time on a portable ladder.

"Do Not's" of Ladder Safety

Do not paint ladders (it hides defects).

Do not over reach.

Do not stand or sit on the top two rungs.

Do not load the ladder beyond its weight capacity.

Broken or Damaged Ladders

If a ladder is broken or damaged, take it out of service immediately. Here are steps for taking damaged ladders and equipment out of service.

Remove the ladder from the job site.

Mark the ladder with tape, permanent markers or a sign that indicates the damage, and the date of damage.

Throw the ladder away.

Unless you are the designated person authorized and knowledgeable in the repair of broken or damaged ladders, ***** requires that you mark the ladder as defective and remove it from service.

Many injuries occur each year due to the use of equipment or tools that were broken or damaged and not taken out of service. Additionally, people will knowingly use broken equipment or tools when nothing else is available to them.
SECTION 18

PERSONAL PROTECTIVE EQUIPMENT PROGRAM

*******

SAFETY PROGRAM

Revised: 2010.12.22 w/Hard Hat Policy
PERSONAL PROTECTION EQUIPMENT AND PROFESSIONAL ATTIRE POLICY

requires that whenever your work exposes you to hazards, you will need to wear some type of personal protective equipment (PPE). In many cases, a combination of PPE may be needed to ensure the best protection. PPE used in the construction industry includes respirators, safety glasses or goggles, gloves, hearing protection, hard hats, high visibility vests/garments (when required).

When engineering controls and administrative practices do not successfully reduce your exposure to hazards, personal protective equipment must be provided for your use. PPE is the final barrier between you and the hazards you face. Airborne contaminants and injuries from falling objects are examples of hazards which can be controlled with this equipment.

Understanding hazards and how they affect the body is an equally important part of using PPE. Chemical exposure can come in a variety of forms. Likewise, protective equipment will differ depending on the type of hazardous material and its specific properties. When using certain corrosive materials or solvents, goggles which offer splash protection will be needed instead of regular safety glasses. Certain types of protective gloves will guard against solvent laded chemical while others won’t. In many cases, the use of an organic respirator cartridge may be necessary when using certain welding materials. But if you are working in an area where oxygen levels may be low, you would need a self-contained breathing apparatus.

In order that we are certain we are providing the proper PPE for the exposures of the job, before work is started, a Hazard Assessment will be completed. This assessment shall identify all hazards requiring PPE and shall identify the proper PPE to address these hazards (See Appendix A, page A – 7).

Consider the following at every jobsite and for every exposure to insure that you have taken all precautions to help protect you from injury:

- Identify the hazards by conducting a Job Hazard Analysis.
- Identify the proper PPE for these hazards.
- When is PPE required?
- Are you familiar with the proper fitting, inspecting, cleaning and wearing of your required PPE? Hard Hats, Eye Protection, Respirators shall be properly fitted to each employee. There shall be no sharing of these PPE items
- Do you know the limitations of your PPE?
- Have you been training on all aspects of the PPE you are planning to wear?
- If a medical evaluation is required, as with Respirators, have you had that evaluation?
• All PPE shall be maintained in a sanitary and working condition at all times. Training and retraining shall include maintaining the PPE in a safe, clean and properly adjusted condition. Any item that fails to meet this condition requirement shall be removed from service immediately.

USE OF EMPLOYEE-OWNED PERSONAL PROTECTIVE EQUIPMENT

Generally, all PPE is provided by *****. There may be instances where employee owned PPE (example Eye Protection) may be deemed appropriate and authorized. When this is the case, all employee-owned PPE on the construction site falls under the requirements of this policy and shall be maintained in accordance with all policies and procedures established by *****.

PERSONAL PROTECTIVE CLOTHING

Protective clothing includes hard hats, aprons, gloves and, in some cases, the basic type of clothing you wear may be considered protective in nature if it helps prevent injury. Depending on the type, protective clothing can help reduce the possibility of crushing injuries, chemical, thermal, and electrical burns, and electric shock. At the highest level, protective clothing will create a vapor proof barrier to prevent exposure to extremely toxic substances.

In this industry, workers are exposed to struck-by type injuries when objects fall from higher elevations. Hard hats help protect against these deadly accidents. Because you are usually working on construction sites, a sturdy pair of work boots will offer added protection against foot injuries. Coveralls will not only keep you clothes clean, but they will help reduce chemical contact with the skin. And the right type of gloves will prevent many painful hand injuries such as dermatitis.

Other types of personal protective clothing include reflective vests for working in heavy traffic areas, life-jackets (flotation devices) when working around water, and clothing to protect against extreme cold and heat.

Proper clothing is key. Simple as it may sound, ***** requires that you must dress for the occasion. Wearing stylish clothing can create a bigger hazard or may not provide protection from hazards while you work. Proper clothing that protects is the key. It is not uncommon to hear about tragedies that have taken place when a worker who was wearing loose clothing got too close to an operating machine and was drawn into the machine. Machines are powerful and unforgiving! Loose clothing is never appropriate in an industrial workplace.

Protect your feet. Standard footwear for our industry is sturdy leather footwear. Preferably as good set of work boots and never tennis shoes as they offer little or no protection against worksite hazards. This may be modified by ***** as conditions of
a specific jobsite mandate.

**Hand Protection.** Gloves are inexpensive and easily available protection which guards against many hazards. They can protect hands from exposures ranging from chemical spills and cuts, to heat and cold. Hand protection comes in huge assortment of styles, materials and sizes. All of them are made to protect your hands from specific hazards. It is important to select the proper kind and style of glove to effectively protect hands from the hazards that may be encountered. ****** provides a basic style of glove. There may be occasion to select a different style or type of glove depending on the actual work activity. If that is the case, notify your supervisor, foremen or our Safety Coordinator and voice your thoughts.

How often has a nearby worker cleaned parts or washed the grease from their hands with gasoline or a solvent of some kind. Don't take the unnecessary risk! Select and use the proper hand protection.

Jewelry in the workplace can also be a hazard that is often overlooked. Rings, bracelets, and chains can be the cause of a much more severe hand related accident. Common sense should be considered when wearing your jewelry. The best choice is to keep your jewelry at home.

**Hearing Protection.** Hearing protection must be properly worn whenever there is a noise level that exceeds the levels as set forth by OR-OSHA.

**Head Protection and Eye Protection.** Hard hats and safety glasses should be worn at the work site whenever there is an overhead hazard or potential for an object to enter the eyes. A hard hat can not only protect you from the rain, it can save your life!

**Eye Protection.** The benefits received from eye protection are significant. Safety glasses are a sure way to help save your eyesight! ****** provides you with effective eye protection and you are expected to wear it whenever there is an exposure to eye injury hazards. Many times the general contractors will have a mandate regarding the use of eye protection. You need to be aware of and comply with, all safety rules for every jobsite to which you are assigned.

Anytime we are working with coiled conduit, wire or any other material that can accidentally recoil, hard hats, gloves and eye protection are mandatory for all ****** employees.

When working on energized circuits, refer to our EEW policy which addresses proper eye protection for this activity. If you are in doubt, ask your foreman, supervisor or management what is required for the hazard to which you are exposed.
When working on energized circuits, refer to our EEW policy which addresses proper Fire Resistant (FR) clothing for this activity. If you are in doubt, ask your foreman, supervisor or management what is required for the hazard to which you are exposed.

**Professional Attire:** professional attire includes appropriate shoes/boots and coveralls (where applicable). Dressing for the workplace, by wearing the right kind of clothing helps protect you from injury. It is your first line of defense against worksite hazards. Your choice of clothing says a lot about you as a professional and about us as a company. Carefully choose your work clothing and the personal protective equipment which will best protect you for your job. Improper clothing is an invitation for an accident to occur. Professional attire means: Clean clothes, no open toe shoes, no muscle shirts or shirts cut-off or sleeve-less and no shirts with tasteless sayings/pictures, no cut-offs or other type shorts and no tennis shoes. Jewelry, regardless of its location on the body is not to be worn as it presents an accidental “contact” exposure. In some cases body art (tattoos) do not present the image we are seeking with our customers, therefore you may be asked to cover such art in a tasteful manner of our/your choosing.

**Adjusting PPE to Changing Environment & Retraining:** Whenever the work environment changes, as occurs on all construction sites, the re-evaluation of required PPE is mandatory and as that PPE changes, training and/or retraining is required by a Competent Person on behalf *****. Additionally as the project develops, if abuse, miss-use (Insufficient skill) or failure to use occurs, retraining shall be initiated immediately to correct the problem. This training will not only address the basic understanding the use requirement but will insure a complete understanding of all aspects of the proper, care, use and wearing of the PPE.

All training in this area (PPE) as well as all training areas shall be documented and available for inspection when required.

*Think Safety by choosing your work clothing with the workplace in mind.*
Finally, please note that there are three different classes of hard hats:

**Class A** hard hats provide impact and penetration resistance along with limited voltage protection (up to 2,200 volts).

**Class B** hard hats provide the highest level of protection against electrical hazards, with high-voltage shock and burn protection (up to 20,000 volts). They also provide protection from impact and penetration hazards by flying/falling objects.

**Class C** hard hats provide lightweight comfort and impact protection but offer no protection from electrical hazards.

**PURPOSE**

The purpose of the Hard Hat Policy is to minimize the frequency and severity of head injuries incurred by ***** employees by establishing a policy for wearing hard hats.

**SCOPE**

The ***** Hard Hat Policy applies to all employees who are exposed to the hazards of falling or flying objects, electrical shock or burn, or moving vehicles while working on or adjacent to roads and highways.

**POLICY**

Hard hats must be worn whenever employees are exposed to the hazards of falling or flying objects, electrical shock or burn. Also, orange safety vests must be used in conjunction with the hard hats when working on or adjacent to roads or highways in order to increase visibility.

Specific areas where hard hats must be used include, but are not limited to:

- Construction areas designated as “Hard Hat Areas;”
- Areas where any crane, hoist, or other overhead lifting device is in operation;
- Areas where there is a possibility of falling objects;
- Areas on or adjacent to roads or highways where construction or maintenance activity is being performed; and
- Any area on a tenant’s leased facility where hard hats are required.
Exceptions: Hard hats need not be worn when the hazard created by wearing them offsets the benefits of protection created by their use. Determinations under such circumstances will be left up to the supervisor’s discretion, not the involved employee(s).

RESPONSIBILITY FOR USE AND ENFORCEMENT

Employee

It is the employee’s responsibility to wear a hard hat when required by the ***** Hard Hat Policy.

Although a hard hat may not be required at a particular job site, it is the employee’s responsibility to maintain one at the site (in a vehicle, etc.); so that it will be readily available should it be needed.

Supervisor

It is the supervisor’s responsibility to see that employees have been issued and wear hard hats when required. Disciplinary action, in accordance with the Hard Hat Policy, may be taken against employees who fail to wear hard hats when required.

COLOR OF HARD HATS

All hard hats will be ________________ (color) in color. Personal identification of hard hats may be placed on the inside of the hat.

MAINTENANCE OF HARD HATS

It is the employee’s responsibility to insure the safekeeping, maintenance, and cleanliness of hard hats. Cleansing should be done with a mild soap solution and water.

If hard hats are damaged during use or sustain a blow, they should be returned to the company to be discarded and a new one will be issued by the appropriate ***** supervisor. The shell or suspension of the hard hat should not be altered or modified.
SECTION 19

BUCKET TRUCK SAFETY

******

SAFETY POLICY

Revised: 2009.02.02
In accordance with the SAFETY requirements of ******, the following guidelines have been established to reduce the risk of incident and personal injury when working with or in close proximity to our owned or rented Bucket Trucks.

Only authorized ****** employees shall be able to operate the vehicle and the articulating aerial platform.

Throughout this policy, the following terms will be used and are therefore defined:

- **Authorized** – An employee of ****** who has the education, training and certification to operate the equipment specified within this document.
- **Caution** – A potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It should be used to identify unsafe practices.
- **Danger** – Immediately hazardous situation which, if not avoided, will result in serious injury or death.
- **Warning** – A potentially hazardous situation which, if not avoided, could result in serious injury or death.

In order to become an authorized operator of the bucket truck, the ****** employee must:

1. Have the necessary training, including actual operation of the aerial device. The training must include at least a 30-minute discussion on the contents of this policy, the location and understanding of the controls, decals and manuals found on the vehicle and a practical demonstration of knowledge actually using the lift.

2. Certification will be provided to the authorized employee and shall be kept on their person at all times, when operating the articulating aerial platform.
Danger: Use of the articulating aerial truck by unauthorized personnel could result in serious injury or death.

Understand the attached, written instructions supplied by the manufacturer, regulatory agencies and *****.

**User / Operator Responsibility**

It is the responsibility of the user / operator to read and understand the safety and user's manual for this vehicle before operating the aerial device. Any questions or concerns can be referred to the ***** Safety or management.

Safety policies and procedures protect the individual operator, the company and the people around you.

**User's Manual**

As required, a copy of the user's manual must be kept in the vehicle at all times as a reference guide. The manual shall be placed in the compartment closest to the base controls for the aerial platform, rear compartment at the passenger’s side.

Know and follow the established safety rules and regulations for the work environment
Equipment Required

The articulating aerial truck shall have the following equipment and material on board at all times:

- User’s Manual (1)
- Chock blocks (2)
- Fire Extinguisher (ABC) (1)
- Location must be identified on the exterior of the vehicle
- Traffic cones w/ stripes (4)
- First Aid Kit (1)
- Full Body Harness (1)
- Lanyard (1)
- < 2’ in length

The user / operator of the vehicle shall wear appropriate clothing. Loose fitting clothing, hair and the like must be restrained to prevent accidental introduction into electrical or mechanical equipment.

Safety Check - Daily

As required, the operator of the vehicle for that particular day shall conduct a safety / “circle check” of the vehicle to determine hazards, identify damage and leaks and report same to the vehicle maintenance supervisor.

The “daily check” shall include but is not limited to a visual inspection of the vehicle exterior, including:

- broken, damaged, loose or missing parts
- tire bulges, cuts and pressure
- oil and hydraulic leaks
- weld integrity, such as cracks and rust
- lighting (beam, directional and safety)
- all required decals and stickers on or around the articulating boom they must be in place, legible and understandable

A complete vehicle inspection form is attached to this policy as appendix A.

The inspection form and the identified deficiencies shall be provided to our Vehicle Maintenance Department as soon as possible for corrective action. If no problems have been identified by the user / operator, a copy of the inspection form still should be forwarded to the shop.
Fall Protection

The use of fall protection shall be required when the user / operator enters the bucket truck and begins to elevate, regardless of height. The minimum level of fall protection for the bucket truck is a full body harness and lanyard, which cannot be longer than 2’ in length.

The fall protection device must be properly fastened and comfortably snug.

**Safety Belts are not permitted.**

Additional fall protection and safety requirements include:

- Personnel shall not place any item into the bucket for the purpose of increasing work height. The use of ladders, step stools and similar items is improper.

- When using the articulating aerial boom on a permitted incline, the bucket shall be located on the upgrade side and in a stable position.
  - If the user / operator is working with their hands above their head, or there is a potential for something to fall from above, the use of head protection (hard hats) is required.
  - If the user / operator is working in an area where persons shall pass beneath or in close proximity to the truck, then the user / operator shall adequately guard or restrict the area to prevent personal injury in the following ways:

Caution tape, barricades or rope shall serve the purpose outlined above. Also, traffic cones alone are not permissible.

***** employees working below the articulating boom must be aware of the overhead hazards and shall wear the appropriate head protection, as required.
**Additional Safety Equipment**

Portable Radio: If the user / operator of the bucket truck is operating alone, he/she shall carry a portable radio for emergency situations.

If working off hours, the user / operator must be in direct contact with ***** or any local authority.

Safety Glasses, Goggles or Face Shields may be required.

The Personal Protective Equipment section of the Safety Manual identifies when these devices are necessary.

Head Protection.

Equipment and tools used on the work site must be compatible with the environment.

**Vehicle Placement and Operation**

Prior to starting the vehicle:

- Walk around to verify safe operation
- Remove cone from the front or rear of the vehicle depending on whether you are backing or heading in a forward direction.

Whenever possible (in accordance with vehicle safety policy) a “spotter” shall be used when the vehicle is being set into reverse.

**Work Site Safety**

Identify the most level grade from which to operate; the slope should not exceed 5 degrees.

- If operation of the bucket must be performed on an incline greater than 5 degrees, then the bucket shall only be used on the high side of the vehicle.

Set Emergency Brake: NOTE that the aerial platform will not operate until the brake has been engaged.

Position both wheel chocks by placing on both sides of the tire.

Engage Power Source.
Set barricades and cones around the vehicle.

If the operator will be working in a pedestrian area, then barricades, “Caution” tape or fencing shall be utilized and Cones are not permitted.

Verify proper portable radio operation.

Discuss work with personnel on the ground.

All persons present should be made aware of the potential hazards and the risk of injury caused by falling objects, such as tree limbs.

Put on the required Fall Protection Equipment.

Maintain proper distance from electrical power lines.

Do not operate the articulating aerial boom if wind gusts exceed 30 mph or there is, or could be, an electrical storm

Verify that the area under and around the work site is free of people.

Check out overhead clearances, building design, fixtures and set-up. Be sure to check equipment, lights, sprinkler heads and tree limbs.
Traffic Safety and Cone Placement

Special planning for traffic control is necessary on a case by case basis. Maintenance work that takes place either on or near the roadway creates a potentially hazardous situation, which shall require the use of traffic controls. It is the responsibility of the person in charge or their designee to establish and maintain safe and efficient controls.

All necessary traffic control devices shall be installed before maintenance work begins and must be maintained during the entire work period.

Traffic control devices (i.e. barricades, cones etc.): provide drivers with sufficient advanced warning, provide proper protection for the motorists and our employees, advise motorists of proper travel path

When parked, a cone shall be placed:
- At the rear of the vehicle when the truck will be backed up or out of spot
- At the front of the vehicle when the truck will be driven forward
- A minimum of (2) cones shall be placed behind and in front of the bucket truck when use in the street is required.
- Each cone must be separated by a distance of not less than 10’
Special Hazards

**DANGER** – No aerial platform insulated or not, provides any electrical protection to the occupant of the platform if there is “phase to phase” or “phase to ground” contact. Such contact will cause serious injury or death.

**DANGER** – User / Operators are not permitted to use the lift to gain access to another level. Once in the bucket, you are required to remain until the platform is placed firmly back on the ground.

**WARNING** – Under no circumstances can modifications be made to the articulating aerial boom portion of the vehicle without the expressed written consent of the manufacturer.

**WARNING** – Never attach harnesses or lanyards to an adjacent pole, tree or structure when working in or from an aerial platform.

**WARNING** – Do not lift any equipment or other loads using the aerial platform. The articulating aerial boom truck is a personnel lift.
SECTION 20

POWER & HAND TOOL

******

SAFETY POLICY
Tools are manufactured with safety for the user in mind, but they may pose hazards.

Hand tools are categorized as:

   Non-powered and include adzes, axes, crow bars, pry bars, screw drivers, wrenches.

Power tools are classified by power source: electric, pneumatic, liquid fuel, hydraulic and powder-actuated.

Tools are to be maintained in a manner that insures they are, at all times, in compliance with all State and Federal requirements as set forth in 1926.300 and 1910.242.

**HAND TOOLS**

Hazards

Hazards result from misuse and improper maintenance.

Recommendations

- ***** is responsible for the safe condition of tools and equipment used by employees.
- The employee is responsible for proper use and maintenance of the equipment.
- ***** will train/teach employees that sharps (saw blades, knives) and other tools be directed away from aisles and other employees working nearby.
- Knives and scissors must be sharp; dull tools can be more hazardous than sharp ones.
- Floors should be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools.
- Only spark-resistant tools made from brass, plastic, aluminum, or wood to should be used around flammable substances.

**POWER TOOLS**

Hazards

Power tools can be hazardous when not used properly.

Recommendations

- Never carry a tool by the cord or hose.
- Never yank the cord or hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil and sharp edges.
Disconnect tools from the power source before servicing or changing accessories.
Keep all observers at a safe distance away from the work site.
Use both hands to operate the tool; secure work with clamps or a vise.
Keep finger off the on switch button unless operating the tool.
Follow manufacturer’s instructions for lubrication and changing accessories.
Keep good footing and maintain good balance when using a power tool.
Wear proper clothing; avoid any clothing or accessory that could become caught in moving parts.
Remove all damaged portable electric tools from use and tag “Do Not Use.”

Guards

- Safety guards must never be removed when a power tool is in use.

Safety Switches

- Certain hand-held power tools require either a momentary contact “on-off” control switch, a positive “on-off” control switch, or a constant pressure switch.

Electric Tools

- Tools must either have a 3-wire cord with ground and be grounded or be double insulated, or be powered by a low-voltage isolations transformer.
- Only operate electric tools within their design limitations.
- Wear gloves and safety shoes or boots.
- Store tools in dry place.
- Do not use power tools in damp or wet sites.
- Light work areas well.

Powered Abrasive Wheel Tools

- Grinding, cutting, polishing and wire buffing wheels may throw off fragments.
- Always use eye protection.
- Never stand directly in front of the wheel until it reaches full operating speed.
- Before mounting the wheel, inspect it closely and sound- or ring-test to be sure free from cracks and defects.
- Be sure safety guards are in place.
- Maker certain wheel fits freely on the spindle.
- When not using the tool, turn off the power.
- Never clamp a hand-held grinder in a vise.
Pneumatic Tools

- Such tools as chippers, drills, hammers and sanders are power by compressed air. Users may get hit by one of the tool’s attachments or a fastener.
- Wear eye protection, a face guard and ear protection.
- Check that hose is fastened securely; a short-wire or positive locking device is an added safeguard.
- Install a safety clip or retainer to prevent attachments from being shot from the barrel.
- Set up screens to protect nearby workers from being struck by fragments or fasteners.
- Never point compressed air guns against the user or anyone else.

Powder-Actuated Tools

- Treat powder-actuated tools as loaded guns: extremely dangerous. They must only be operated by specially trained employees.

Hydraulic Tools

- Use only approved fire-resistant fluid that will retain its characteristics at the highest temperatures to which it will be exposed.
- Do not exceed the manufacturer’s recommended operating pressure for any part.

Jacks

- All jacks must have a safety device that stops them from going up too high.
- Manufacturer’s load limit must be permanently marked in a prominent place and not be exceeded.
- Immediately block a lifted load once it reaches the proper height.
- Make sure the base rests on a firm, level surface, the jack is correctly center, the jack heads bears against a level surface, and the lift force is applied evenly.
- Lubricate regularly (with adequate antifreeze liquid if exposed to freezing temperatures).
- Inspect before each use.

Recommendations

- To avoid the hazards associated with using power tools, workers must learn to recognize the hazards associated with each type of tool used and the safety precautions necessary to prevent those hazards.
- Instruct employees in the proper use of all tools. Employees should understand the risks and the safety precautions.
• The trainee should use the power tool in the presence of the qualified instructor, until the instructor is satisfied that the trainee knows how to use the power tool properly.
• Employees should use only tools provided by the employer; the public entity cannot ensure the safety of using tools that it does not maintain.
• Employees who are exposed to falling, flying, abrasive and splashing objects; or to harmful dusts, fumes, mists, vapors or gases must be provided with appropriate personal protective equipment when using hand and power tools.
• Employees and employers are responsible for working together to establish safe working procedures. Hazardous situations should be immediately brought to the attention of the appropriate person.
SECTION 21

ELECTRICAL SAFETY PROGRAM INCLUDING ASSURED EQUIPMENT GROUNDING PROGRAM

******

SAFETY PROGRAM
Revised 12.22.2010
ELECTRICAL SAFETY

COMPANY POLICY

****** conducts its operations so that injuries to people, and damage to the property and/or the environment are avoided by making every effort to prevent accidents. We recognize accidents will happen, but realize that through preventive measures such as education, inspection and timely corrective action, the causes of accident and illness can be greatly reduced. It is our intention to comply with all standards relating to safety and health matters enforced by local, state or federal authorities.

****** schedules periodic safety meetings for all employees and supervisory staff. They are often helpful to explain accident prevention, reinforce our company safety policies, and introduce new safety information. We expect all employees to utilize good safety practices as posted, instructed and discussed, and to be safety conscious off the job as well as on the job.

_______________________________________
President/Owner

_______________________________________
Safety Coordinator
CONTROLLING ELECTRICAL HAZARDS
SAFETY PROGRAM

******

It will be the policy of ****** to carry out the various requirements of the safety regulations set forth by the U.S. Department of Labor, Occupation Safety and Health Administration and the Oregon Occupational Safety & Health Code Division 3 subdivision K, Electrical and Division 2 Subdivision S, Electrical.

Furthermore, it will be the policy of ****** to fulfill its obligations and implement an accident prevention program with regard to electrical hazards. ****** is committed to maintaining an effective Electrical Hazards Safety program.

Additional information on this written program is available from management or the Safety Coordinator at ******.

SCOPE AND APPLICATION

****** Electrical Hazards Safety Program applies to all construction work where an employee may be occupationally exposed to such hazards. All work related to construction, alteration, or repair -- including painting and decorating -- is included. Under our plan, construction includes, but is not limited to, the following:

- demolition or salvage of structures,
- removal or encapsulation of materials,
- new construction, alteration, repair, or renovation of structures, substrates, and
- maintenance operations associated with construction activities described above.

This sample written program applies to electrical operations performed during routine construction work, including alteration, repair and demolition of work sites covered by OSHA’s safety and health standards.
GENERAL REQUIREMENTS

• ****** will provide training for new and inexperienced workers on a priority basis.

• ****** conforms to the principal safety practices, with regard to electrical hazards, will be incorporated into the workplace with an effort to match the employee to the job and to design the work to minimize injury.

• ****** will promptly investigate any report of injuries due to electrical hazards to pinpoint the cause and take corrective action.

• ****** will ensure that proper hand tool safety methods are employed at all times.

• ****** will review tasks involving injuries due to electrical hazards using a job hazard analysis and make improvements or corrections as necessary.

• ****** understands the relationship between work site design and the jobs its employees are expected to perform and will design work methods to ensure the greatest possible harmony between the work method and the worker.

• ****** will review accident statistics to determine priorities for eliminating electrical hazards.

• ****** will design operations for Ground Fault Circuit Interrupter (GFCI) use and application in accordance with provisions of Division 3, Subdivision K and the National Electrical Code.

• ****** will institute appropriate work schedules and will provide training to help recognize problems and identify procedures that improve safety, take allowance for weather conditions, and prevent stress.

• ****** will ensure that its employees have and use appropriate personal protective equipment in accordance with Division 3, Subdivision K & E. PPE may include: gloves, sleeves, hard hats and boots.

• ****** will install electrical hazard protection systems BEFORE employees begin work in which such systems are required.

• ****** will provide refresher safety training on a periodic basis for ALL employees involved in electrical operations.

• ****** will develop and implement a written Lockout/Tagout program.
Administration

1. ******* will be responsible for the electrical hazards program to be followed throughout all phases of construction and will provide the safety equipment as required.

2. ******* will provide access to all available safety equipment. Such equipment will be conspicuously located.

3. All electrical safety equipment provided by ******* will be periodically inspected and maintained in operating condition. Defective equipment will be immediately replaced.

4. ******* will ensure that the construction of all equipment will conform to the provisions of all applicable state or local codes, whichever are more restrictive.
TRAINING REQUIREMENTS

****** will provide a training program for each employee exposed to electrical hazards. The program will enable employees to recognize hazards and to use proper safety methods. The employer will ensure that each employee has been trained by a competent person in the following areas, as applicable:

- The nature and recognition of hazards in the work area;
- Avoiding incidental contact;
- The proper use of personal protective equipment;
- Emergency response procedures;
- The proper construction, use, placement and care of Ground Fault Circuit Interrupters;
- The correct procedures of erecting, maintaining, and disassembling the electrical hazards protection systems to be used;
- The maximum intended load-carrying capacities of circuits; and
- The sections of the standards contained in this subpart.

Administration

****** will provide retraining as necessary to maintain the understanding and knowledge required for safe operations.
**INSPECTION AND MAINTENANCE**

****** Electrical Hazard Maintenance Program will ensure that construction sites are inspected and will set up an inspection program so that equipment is inspected once every three months.

****** will ensure that any GFCI that is weak, improperly repaired, damaged, or appears unsafe will be removed from the site for repair or disposal.

****** will train its employees in recognizing electrical hazards and will ensure that employees consider the special hazards involved with every job.

****** will ensure that its employees observe the following general practices:

- Before using any equipment, they will inspect it for defects.
- Electrical equipment will not be used as guides, braces, or skids.
- Electrical equipment, which is damaged or defective, will be removed from service and tagged for repair or disposal.
- All electrical equipment will be used according to the manufacturers’ recommendations.
- Employees will ensure that routine maintenance is performed on all equipment as required.

**Administration**

1. ****** will ensure that its workers follow the rule of using the right tool for the job.

2. Electrical Hazard Safety will be a part of every activity and proper guidance and instruction in safe tool practices will be provided.

3. All supervisors will be familiar with the individual tool skills of the workers and will provide special training if required.
Insulation

****** will ensure that employees, before starting work involving electrical equipment, will check the insulation prior to making a connection to a power source to be sure there are no exposed wires, especially with flexible cords. ****** will ensure insulation is suitable for the voltage used and attention will be paid to the environment, gas, moisture, oil, etc.

Conductors and cables will be marked by the manufacture to show the maximum voltage and American wire gauge size, the type letter of the insulation, and the manufacturer’s name or trademark.

Guarding

****** will ensure that live parts operating at 50 volts or more are guarded against accidental contact.

****** will accomplish guarding by:

1. Locating equipment in an area accessible to qualified persons;
2. Using permanent partitions to exclude unqualified persons;
3. Locating on a platform to exclude unqualified persons;
4. Elevating 8 feet or more.

****** will place warning signs at entrances to rooms containing live parts forbidding unqualified persons to enter. Indoor electric installations that are more than 600 volts and that are open to unqualified persons will be made with metal-enclosed equipment or shall be enclosed in a vault or in an area whose access is controlled by a lock. ****** will also mark equipment with appropriate caution signs.

Grounding

****** will provide two types of grounds as appropriate. All two and three wire DC systems shall be grounded, as well as AC systems, 50 to 1000 volts according to requirements of 1926.404(f). In ordinary circuits, the white wire is grounded at the transformer and at the service entrance of the building. ****** will use an equipment ground to provide another path for current to ground.
Circuit Protection

****** will utilize fuses, circuit breakers, and ground fault circuit interrupters, to limit the flow of electricity in the event of a ground fault. Fuses and circuit breakers are primarily designed for the protection of equipment, while GFCIs are for personnel. GFCIs as required by OR-OHSA standards will be used in high risk areas such as wet locations or construction sites.

Safe Work Practices

****** will promote the practice of safe work practices including: de-energizing electric equipment before making repairs, using electric tools in good condition, using good judgment working near energized lines and using appropriate protective equipment.

Additional Training - Lockout/ Tagout (LO/ TO)

****** will require employees to be trained in safe work practices as well as any other procedures necessary for safety from electrical hazards.

Before any inspections or repairs are made, the current will be turned off at the switch box and the switch locked and the equipment tagged.

All electricians will be trained in lockout procedures, no two locks will be the same and one key will be issued to each employee.

Overhead Lines - Clearances

****** will ensure that if work is performed near overhead power lines, the lines will be grounded by the operator of the lines. Measures such as guarding the lines will also be employed. All employees and equipment will stay 10 feet from overhead power lines. When equipment is operated near overhead power lines, the required distance will apply to the equipment.

Personal Protective Equipment

****** employees will use rubber insulating gloves, hoods, sleeves, matting, blankets, line hoses, and protective helmets.

Tools

****** will inspect tools before use, after repairs have been made to them, and after they have been subjected to potentially damaging conditions. Defective tools will be removed and tagged for repair or disposal. All tools used to handle energized
conductors will be designed to withstand the voltages and stresses to which they are exposed.

**SAFETY PROCEDURES**

**General Safety Guidelines**

1. No employee will be permitted to work so close to any part of an electrical power circuit that he or she may contact the circuit in the course of their work unless the employee is protected against electric shock by de-energizing the circuit and grounding it, or guarding it by effective insulation. In work areas where the exact location of underground electric power lines is unknown, employees shall be provided with insulated protective gloves.

2. If any electric power circuit, exposed or concealed, is located in such a way that the performance of work may bring any person, tool or machine into physical or electrical contact with it, warning signs shall be posted and maintained in all areas where the circuits exist. The employee must be advised of the location of any such lines, the hazards involved and the protection measures to be taken.

3. Barricades and warning signs must be provided so that work space for electrical equipment is not used as a passageway during periods when energized parts of electrical equipment are exposed.

4. Sufficient space will be provided and maintained in the area of the electrical equipment to permit ready and safe protection and maintenance of such equipment. When parts are exposed, the minimum clearance for the workspace should not be less than 6¼ feet high, nor less than a radius of 3 feet wide and there must be clearance sufficient to permit at least a 90-degree opening of all doors or hinged panels.

5. All electrical equipment will be installed in a neat and workmanlike manner.

6. All electrical equipment must be firmly secured to the surface on which it is mounted.

7. All extension cords shall be of the three-wire type used only in continuous lengths without splice, with the exception of suitable molded or vulcanized splices, as long as they are properly made and the insulation is equal to the cable being spliced.

8. Cords must be kept clear of working spaces and walkways or other locations in which they are readily exposed to damage.

9. Worn or frayed extension cords should never be used.
Pre-job Safety Procedures

1. Examine job drawings and job site conditions to determine what safeguards shall be taken and safety devices required to protect yourself, your employees, other workmen, company property, and the property of others.

2. Requisition accident prevention signs as warning of temporary or permanent hazards, tags to attach on part of a structure or equipment to warn of existing or immediate hazards, and barricades as an obstruction to deter the passage of the persons or vehicles.

3. Contact the general contractor for additional safety regulations that apply to your operations.

4. Inspect all hand tools and equipment for faults and defects before they are used on the job site.

5. Obtain knowledge of fire protection regulations and location of equipment.

6. Identify location of available first-aid facilities.

7. Check proper amounts of personal protective equipment to meet employee requirements.

8. Set up a plan for employee safety education and weekly safety meetings.

Grounding and Bonding

***** recognizes that two means of preventing injury during electrical operations are insulation and grounding. In addition to setting grounds in accordance with 1926.404(f) and other applicable standards and codes, employees will use appropriate protective barriers and devices.

As part of our Electrical Safety Program, ***** will ensure that conductors used as grounding conductors are identifiable and distinguishable from other conductors and that grounding devices are not used for purposes other than grounding.

***** will institute repair procedures and ensure that workers are trained in basic repair and installation of grounds, and make sure that its employees are aware of the dangers of electrical hazards in conjunction with grounds. Additionally, ***** will train its employees in the safe operations that apply to grounding, and will include topics such as placement of grounds, protection factors, posting of warning signs, and the use of equipment according to manufacturer’s recommendations.
will ensure that its employees work under competent supervision. All employees will observe all rules to control hazards and take the necessary precautions, including the following:

1. All circuits shall be grounded to limit excessive voltages from lightning, line surges or unintentional contact with higher voltage lines and to limit the voltage above ground on these materials.

2. All conductive materials enclosing electric conductors or equipment, or forming part of such equipment, shall be grounded for the purpose of preventing a voltage above ground on these materials.

3. Circuits and enclosures shall be grounded to facilitate over current device operation in case of insulation failure or ground faults.

4. The paths from circuits, equipment, structures and conduit or enclosure to ground shall be permanent and continuous, have ample carrying capacity to safely conduct the current liable to be imposed on it, and have the sufficient impedance to limit the potential above ground and result in the operation of the over current devices in the circuit.

5. Driven rod electrodes shall, where practical, have a resistance to ground not to exceed 25 ohms. Otherwise, two or more electrodes connected in parallel shall be used.

6. Grounding shall be checked to ensure that the circuit between the ground and the grounded power conductor has a resistance, which is low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current.

7. The non-current-carrying metal parts of the portable and/or plug connected equipment shall be grounded.

8. Portable tools and appliances protected by an approved system of double insulation, or its equivalent, need not be grounded. Where such an approved system is employed, the equipment shall be distinctively marked.

9. Temporary lights shall be equipped with guards that are grounded to prevent accidental contact with the bulb. Guards, however, are not required when the construction of the grounded reflector is such, that the bulb is deeply recessed.
**Disconnect Switches and Switchboards**

1. Open and close switches completely. Switches left in the partly open position may cause an arc or flash-over with possible serious burns to the operator or damaging results to the switch.

2. Open and close the switch in a firm positive manner using sufficient force to make or break full contact quickly. This will prevent unnecessary heating or arcing.

3. Determine the operating condition of the circuit before opening or closing any switch. This precaution is to ensure your protection in case the circuit is faulty or to protect another workman in case he is exposed.

4. Each disconnecting means for motors, appliances, service feeder or branch circuit, at the point where it originates, shall be legibly marked to indicate its purpose unless located and arranged so the purpose is evident.
GROUND FAULT CIRCUIT INTERRUPTERS

Introduction

Ground fault protection is required on all branch circuits, which are not part of the permanent wiring at a construction site in addition to any other requirements for equipment grounding conductors.

1926.404(b)(1)(ii) - All 120-volt, single phase, 15 and 20 ampere receptacle outlets on construction sites, which are not part of the permanent wiring of the building or structure and which are used by employees, shall have approved ground fault circuit interrupters for personal protection.

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 fixed wiring. Therefore, flexible cords must be connected to devices and fittings in a way that prevents tension at the joints and terminal screws.

Because a cord is exposed, terminals and flexible and unsecured joints become 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, door or window edges, staples or fastenings, abrasion from adjacent materials, or simply by aging. If the electrical conductors become exposed, there is a danger of shocks, burns, or fires. 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 can develop on any wetted portion.

When the leakage current of tools is below one ampere, and the grounding conductor has a low resistance, no shock should be perceived. Should the resistance of the equipment grounding conductor increase, however, the current through the body will also increase. Consequently, if the resistance of the equipment grounding conductor is significantly greater than one ohm, tools with even small leakages become hazardous.
**General Requirements**

***** Ground Fault Circuit Interrupter maintenance program will ensure that GFCIs are inspected properly and will set up an inspection program so that GFCIs are inspected periodically.

***** will ensure that GFCIs which have insufficient load capacity, are improperly repaired, damaged, or generally unsafe will be removed from the site for repair or disposal.

***** will provide an Assured Grounding Program in addition to the use of GFCIs where appropriate.

***** will provide GFCIs for all 120 volts, single phases, 15 and 20 amp outlets that are not part of the permanent wiring. Receptacles on the ends of extension cords must be protected by GFCIs, whether or not they are plugged into the permanent wiring.

***** recognizes that double insulation does not provide protection against defective cords, plugs or heavy moisture and will train employees accordingly and use GFCIs as required.
ASSURED EQUIPMENT GROUNDING CONDUCTOR PROGRAM

Introduction

An Assured Program may be used in addition the required GFCIs for all temporary wiring and circuits. The program must be in writing and must include certain minimum elements, which are noted below.

1926.404(b)(1)(iii) - The employer shall establish and implement an Assured Equipment Grounding Conductor Program on all cord sets, receptacles which are not a part of the building or structure, and equipment connected by cord and plug which are available for use by employees. This Program shall comply with the following minimum requirements.

Assured Program

****** will develop specific procedures for assuring equipment grounds. These written procedures will be kept on the job site and available for review.

****** site supervisors are assigned the responsibility of implementing this program. IF the supervisor is unable to implement the program, ****** will assign a person with a thorough understanding of the regulation, and one who has the ability and authority to administer the program effectively.

****** site supervisors will perform daily inspections for each affected piece of equipment. The supervisor will remove from service any equipment that is found defective or in need of repair.

Prior to the first use, or when equipment has been returned from maintenance service or repair, ****** site supervisor will test the equipment before it is put back into service. This includes all cord sets, receptacles, and cord and plug connected equipment.

Tests will be performed as stated above, and when the equipment has been involved in an incident, which may have caused damage, or at intervals not to exceed 3 months. (Cord sets and receptacles, which are fixed and not exposed to damage, will be tested every 6 months.)

The following tests are mandatory:
- Continuity of equipment grounding conductors, and
- Correct attachment of equipment grounding connectors.

****** will ensure that any equipment which has not met all of the requirements of this rule will not be available for use by an employee.
****** will record all of the data of these required tests. At a minimum, this data will include the identity of equipment tested and the last date it was tested or the interval for which it was tested.

****** will maintain these records utilizing the Assured Equipment Grounding Program form. These records will be maintained until more recent records are available.
REFERENCE GUIDE

Subpart K - Electrical

The following is a list of the electrical standards found in 29 CFR 1926. Because OSHA reserves numbers for future use, the list does not appear to be sequentially complete.

General

1926.400 Introduction

Installation Safety Requirements

1926.402 Applicability
1926.403 General Requirements
1926.404 Wiring Design
1926.405 Wiring Methods, Components, and Equipment for General Use
1926.406 Specific Purpose Equipment and Installations
1926.407 Hazardous Locations
1926.408 Special Systems

Safety Related Work Practices

1926.416 General Requirements
1926.417 Lockout and Tagging Circuits

Safety Related Maintenance and Environmental Controls

1926.431 Maintenance of Equipment
1926.432 Environmental Deterioration of Equipment

Safety Requirements for Special Equipment

1926.441 Battery Locations and Battery Charging

Definitions

1926.449 Definitions Applicable to this Subpart
CONTROLLING ELECTRICAL HAZARDS FORMS
AREAS SURVEYED FOR ELECTRICAL HAZARDS

The following areas have been surveyed to decide whether any electrical hazards are located within these parts of the site or facility. The teams assigned to inventory each area are also shown:

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ELECTRICAL HAZARDS WARNING SIGNS AND OTHER EQUIPMENT

The following equipment is available in our facility for use. In addition to the equipment itself, the location within the facility is specified. After operations have been completed, all equipment must be cleaned and any necessary maintenance performed before it is returned to its original location.

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>LOCATION</th>
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<tbody>
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</table>
## SAFETY TEAM MEMBER
### EMPLOYEE TRAINING LOG

Employee: ______________________________  Employee #____________

Department: ____________________________

<table>
<thead>
<tr>
<th>Date</th>
<th>Type of Training or Course Description</th>
<th>Instructor</th>
<th>Certification of Training and Testing (Instructor’s Signature)</th>
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</table>
This is to certify that ________________________________ has completed the course (employee name)

______________________________________ to qualify them to become a member (course name)

of our Safety Team. This training was conducted by ____________________________ (course instructor)

and was completed on _____________________________ (Date)

________________________________________________ (Signature of instructor or other certifying authority)

____________________________ (Date)
<table>
<thead>
<tr>
<th>Date</th>
<th>Time AM/PM</th>
<th>Training Provided</th>
<th>Instructor</th>
<th>Employee</th>
<th>Dept.</th>
<th>I hereby acknowledge that at the date and time noted next to my signature below I received the training listed and understand the information provided</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>A=Annual</td>
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<td></td>
<td></td>
<td>N=New Employee</td>
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</table>

**EMPLOYEE TRAINING RECORD**
# ELECTRICAL HAZARDS INSPECTION CHECKLIST

Date: ___________________________ Inspector: ___________________________

Job Site: _______________________________________________________________

<table>
<thead>
<tr>
<th>Item</th>
<th>Condition</th>
<th>Recommendation</th>
<th>Repair</th>
<th>Replace</th>
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<tbody>
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</table>
POLICY

On construction sites Ground-Fault Circuit Interrupters will be used at all times. When appropriate, in addition, the following Assured Grounding Program may be implemented. (This program applies to 120 volt, 15 and 20 amp wiring which is not part of a building’s permanent wiring.) All defective equipment will be tagged “Out-of-Service.” If the equipment is repaired, a qualified individual must certify that the equipment may return to service.

TESTING

A competent worker will test extension cords and equipment as follows:

- Receptacle tester - plug in to show if terminals are correctly to ground and if wire is continuous with no breaks.

- Continuity Tester - check if ground is continuous from the metal frame through the cord to ground prong. Also touch tester to the neutral and power prongs to detect possible ground fault.

- Testing will be done before initial use, after any repair work, when damage is suspected and every three months. A record will be made of the test and a color-coded tag attached to the cord. (Use the Color Code Key below for reference.)

INSPECTIONS

Extension cords and equipment shall be inspected before each day of use. All cord-supplied equipment will be visually inspected for ground problems.
<table>
<thead>
<tr>
<th>Code Location</th>
<th>Use</th>
<th>Date Tested</th>
<th>Color Used</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

**COLOR CODE**

**FIRST QUARTER**

<table>
<thead>
<tr>
<th>Month</th>
<th>Color Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>White</td>
</tr>
<tr>
<td>February</td>
<td>White plus yellow</td>
</tr>
<tr>
<td>March</td>
<td>White plus blue</td>
</tr>
</tbody>
</table>

**SECOND QUARTER**

<table>
<thead>
<tr>
<th>Month</th>
<th>Color Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>Green</td>
</tr>
<tr>
<td>May</td>
<td>Green plus yellow</td>
</tr>
<tr>
<td>June</td>
<td>Green plus blue</td>
</tr>
</tbody>
</table>

**THIRD QUARTER**

<table>
<thead>
<tr>
<th>Month</th>
<th>Color Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>Red</td>
</tr>
<tr>
<td>August</td>
<td>Red plus yellow</td>
</tr>
<tr>
<td>September</td>
<td>Red plus blue</td>
</tr>
</tbody>
</table>

**FOURTH QUARTER**

<table>
<thead>
<tr>
<th>Month</th>
<th>Color Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>Orange</td>
</tr>
<tr>
<td>November</td>
<td>Orange plus yellow</td>
</tr>
<tr>
<td>December</td>
<td>Orange plus blue</td>
</tr>
</tbody>
</table>

*Color code recommended by National Electrical Contractors Association*
CODE OF SAFE PRACTICES

CONTRACTORS/ SUBCONTRACTORS/ VENDORS

To be attached to every contract, subcontract and vendor contract in which **** is acting as the managing agent and/or in which **** is the contracting party.

Every contractor, subcontractor and vendor who contractually agrees to provide services or supplies to **** must be in full compliance with the existing OSHA requirements. This includes, but is not limited to: (1) maintaining required OSHA safety programs, including routine inspections for the equipment used in carrying out their contractual duties, and (2) providing adequate safety training programs to their employees.

By signing below, the contractor/subcontractor/vendor represents and warrants that he is in full compliance with OSHA. As such, the contractor/subcontractor/vendor agrees to indemnify and hold **** harmless from any and all penalties, violations, assessments or damages, monetary or non-monetary which results in the failure to comply with the above set forth regulations and representations.

**** reserves the right to cancel the underlying contract if any contractor breaches the above terms and conditions.

The foregoing is agreed to and accepted on: ______________________________ (Date)

CONTRACTOR/ SUBCONTRACTOR/ VENDOR

By: ________________________________

Title: ________________________________

****

By: ________________________________

Title: ________________________________
ACKNOWLEDGMENT OF RECEIPT

of the

*****

ELECTRICAL HAZARDS TRAINING PROGRAM

I hereby acknowledge that, on the date and time noted to my signature below, I received the following training or material:

*****

ELECTRICAL HAZARDS SAFETY TRAINING

Name (Please Print):_____________________________________________________

Signature: _____________________________________________________________

Date: ____________________________  Time: _____________________
SECTION 22

FIRST AID PROGRAM

******

SAFETY PROGRAM
12.23.2010 edition
This policy shall serve as the ***** policy with respect to first-aid and emergency response.

**Preparedness**

Minimum first-aid preparations at any ***** jobsite shall include the following:

A. At least one centrally located, first-aid box containing, at a minimum, the instruments and supplies listed in Fig. 2.A-1.

B. A Red Cross or other medical insignia prominently displayed in the vicinity of the first-aid box.

C. The presence of at least one employee, who holds a currently valid, American Red Cross First-Aid and Emergency Care Certificate, or its equivalent, who works in the vicinity of the box and is responsible for maintaining it.

D. Conspicuously posted addresses and telephone numbers for a clinic.

**Procedures**

In the event of an accident, the following steps should be taken:

A. If the accident is relatively minor, and the employee is agreeable, the designated first-aid person may administer treatment.

B. In the event of serious injury, dial 911 to secure emergency assistance. Do not attempt to move the injury victim or to administer first-aid unless the situation is clearly life-threatening.

C. Non-designated individuals should attempt to administer aid only in cases of severe bleeding or cessation of breathing.

D. Care should be taken by anyone administering first aid to protect him or herself against blood borne pathogens.

The above provisions notwithstanding, all ***** field management personnel are required to hold valid First Aid/Adult CPR certificates. If there is a need for ***** to undertake arranging for a First Aid/CPR class, any employee can and should contact ***** and make that need known.
First aid supplies are required to be easily accessible under paragraph §1926.50(d)(1). An example of the minimal contents of a generic first aid kit is described in American National Standard (ANSI) 2308.1-1978 "Minimum Requirements for Industrial Unit-Type First aid Kits." The contents of the kit listed in the ANSI standard should be adequate for small work sites. When larger operations or multiple operations are being conducted at the same location, employers should determine the need for additional first aid kits at the worksite, additional types of first aid equipment and supplies and additional quantities and types of supplies and equipment in the first aid kits.

In a similar fashion, employers who have unique or changing first aid needs in their workplace, may need to enhance their first aid kits. The employer can use the OSHA 200 log, OSHA 1 01's or other reports to identify these unique problems. Consultation from the local Fire/Rescue Department, appropriate medical professional, or local emergency room may be helpful to employers in these circumstances. By assessing the specific needs of their workplace, employers can ensure that reasonably anticipated supplies are available. Employers should assess the specific needs of their worksite periodically and augment the first aid kit appropriately.

If it is reasonably anticipated employees will be exposed to blood or other potentially infectious materials while using first-aid supplies, employers should provide personal protective equipment (PPE). Appropriate PPE includes gloves, gowns, face shields, masks and eye protection (see "Occupational Exposure to Bloodborne pathogens," 29 CFR 1910.1030(d)(3» (56 FR 64175).

**Recommendations**

First Aid kits need to be easily accessible. First aid kits shall be weatherproof and contain individual sealed packages for each item that must be kept sterile.

There are not actual requirement for the contents. Rather it is important to have a kit that contains the items that you can expect to need given the workplace injury type potential. The contents of the kit should be adequate for the work site.

Per the OR-OSHA recommendations, typical items suggested for the First Aid kit:

1. Gauze roller bandages, 1-inch and 2-inch (25.4 mm and 50.8 mm);
2. Gauze compress bandages, 4-inch (101.6 mm);
3. Adhesive bandages, 1-inch (25.4 mm);
4. Triangular bandage, 40-inch (101.6 cm);
5. Eye Wash station where necessary and dressing;
6. Wire or thin board splints;  
7. Forceps; and  
8. First aid dressing.  
9. Airway breathing protector device.

FIG. 2A-1: FIRST-AID BOX CONTENTS FOR *****

EMERGENCY RESPONSE PROCEDURES

Minimum Recommended First Aid Box Contents  
(Jobsites with 1 to 100 Employees)

1. An up to date, advanced first-aid textbook or manual, such as that of the American Red Cross, or equivalent.

2. Instruments consisting of:
   a. Bandage scissors
   b. Assorted safety pins
   c. Tongue depressors
   d. Cotton-tipped applicators
   e. Tweezers
   f. Enamel basin
   g. Thermometers
   h. Flashlight
   i. Ice packs/heat packs

3. Dressings, in adequate quantities, including:
   a. Adhesive dressings, individually wrapped
   b. Adhesive tape rolls, 1-inch wide
   c. Gauze bandage rolls, 1-inch wide
   d. Sterile gauze pads, 2-inch square
e. Gauze bandage rolls, 2-inch square
f. Sterile gauze pads, 4-inch square
g. Gauze bandage rolls, 4-inch wide
h. Absorbent cotton packages
i. Triangular bandages
j. Splints of assorted sizes plus splint padding
k. Sterile surgical pads, individually wrapped

4. Blood borne pathogen items including:
   a. Rubber gloves
   b. Plastic two-way breathing devices
   c. Antiseptic

5. Additional instruments, drugs, dressings and supplies as recommended by a company-authorized physician.
SECTION 23

CONSTRUCTION ILLUMINATION PROGRAM

******

SAFETY PROGRAM

01.07.2011 edition
Construction Illumination Safety Program

All ***** employees will comply with the Illumination Standards as set for by OSHA, on all ***** jobsites. This applies to all work areas regardless of the task to be performed.

1926.56 Illumination.

(a) General. Construction areas, ramps, runways, corridors, offices, shops, and storage areas shall be lighted to not less than the minimum illumination intensities listed in Table D-3 while any work is in progress:

Table D-3 – Minimum Illumination Intensities in Foot-Candles

<table>
<thead>
<tr>
<th>Footcandles</th>
<th>Area or operation</th>
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<tbody>
<tr>
<td>5</td>
<td>General construction area lighting.</td>
</tr>
<tr>
<td>3</td>
<td>General construction areas, concrete placement, excavation and waste areas, accessways, active storage areas, loading platforms, refueling, and field maintenance areas.</td>
</tr>
<tr>
<td>5</td>
<td>Indoors: warehouses, corridors, hallways, and exitways.</td>
</tr>
<tr>
<td>5</td>
<td>Tunnels, shafts, and general underground work areas: (Exception: minimum of 10 footcandles is required at tunnel and shaft heading during drilling, mucking, and scaling. Bureau of Mines approved cap lights shall be acceptable for use in the tunnel heading.)</td>
</tr>
<tr>
<td>10</td>
<td>General construction plant and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts and active storerooms, barracks or living quarters, locker or dressing rooms, mess halls, and indoor toilets and workrooms).</td>
</tr>
<tr>
<td>30</td>
<td>First aid stations, infirmaries, and offices.</td>
</tr>
</tbody>
</table>

(b) Other areas. For areas or operations not covered above, refer to the American National Standard A11.1-1965, R1970, Practice for Industrial Lighting, for recommended values of illumination.
SECTION 24

RIGGING & MATERIAL HANDLING

******

SAFETY PROGRAM

Revised: 2011.11.19
It is the policy of ****** to use Rigging and the handling of materials on a construction site in the safest possible manner. The ability to safely move materials from one location to another is a vital part of many activities when working for ******.

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.

Roles and Responsibilities

Job Site Foreman

- Identify areas where hoisting and rigging techniques are used.
- Obtain necessary equipment.
- Establish procedures for inspection, care and maintenance of equipment.
- Ensure workers are trained.

Supervisor/ Safety Coordinator

- Know when hoisting and rigging techniques are necessary.
- Ensure equipment is properly maintained.
- Ensure workers use safe lifting techniques.
- Assist in identifying areas where hoisting and rigging techniques are used. Provide worker training.

Individual

- Attend and participate in training.
- Know how to perform necessary equipment inspections.
- Know how to maintain equipment.
- Use safe lifting techniques.

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 should be visually inspected before each use on each shift and as necessary during its use to ensure their effectiveness. 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.

Defective rigging will be immediately removed from service. It shall be marked and/or destroyed as appropriate to insure that it is not used.

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.

Rigging equipment shall not be loaded in excess of its recommended safe working load as prescribed by OSHA Standards. Review of the “working load” tables in 1926.251 (a) (2) tables H-1 through H-20 is required for all effected ***** employees.

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.

**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.

**Fiber Rope**

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**

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. 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.

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.

**Tag Lines**

Tag lines shall be used at all times on all loads unless their use creates an unsafe condition.

**Hooks & Protection of Throat Opening**

Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.

**Equipment Not In Use**

Rigging equipment, when not in use, shall be removed from the immediate work area so as to not present a hazard to all workers.

**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

**Special Safety Note**

All ****** employees shall be kept clear of loads about to be lifted and of suspended loads.
SECTION 25

CONSTRUCTION
ASBESTOS
AWARENESS
PROGRAM

******

SAFETY PROGRAM
(11.19.2011 edition)
ASBESTOS AWARENESS SAFETY POLICY

All employees of ****** who are working, or might work in an Asbestos identified area must have a 2-hour Asbestos Awareness level training. This work is probably considered Class IV work.

Class IV work is work by maintenance persons, such as electricians where employees contact but do not disturb asbestos-containing material (ACM) or presumed asbestos-containing material (PACM). It also covers the clean up of debris from class I, II and III activities. Walking on a floor that contains asbestos at a construction job site would not normally be considered a Class IV activity. If workers are required to clean flooring that contains asbestos, those employees would be required to have the training for housekeeping operations under 1910.1001(j) (7)(iv) of the General Industry Asbestos standard or if the clean up was due to class I, II or III work they would need the class IV training from 1926.1101(k)(9) of the Asbestos in Construction standard.

****** recognizes that Asbestos is a naturally occurring fibrous silicate mineral known for its strength and durability and for its fireproof and insulation properties. It was used widely in construction and other products until 1978. Buildings constructed before 1980 are presumed to contain asbestos materials.

During the twentieth century, some 30 million tons of asbestos have been used in industrial sites, homes, schools, shipyards, and commercial buildings in the United States.

Health Effects

Asbestos is primarily hazardous when it becomes “friable” or easily crumbled by hand pressure. Friable fibers may be released into the air. Once in the air, fibers may be inhaled into the lungs causing asbestosis, mesothelioma, lung cancer, or other lung diseases. Ingestion of asbestos may cause stomach and/or colon cancer. In addition, handling asbestos materials may cause irritation to the skin and eyes.

Asbestosis is caused when fibers become lodged in the lung tissue. The body responds by producing an acid, which scars the lung tissue and limits lung function. Though the acid damages the lung tissue, little damage is done to the corrosive-resistant asbestos fiber. The latency period, or the time it takes for the disease to develop, is often 25-40 years.

Mesothelioma and lung cancer are both malignant or cancerous illnesses. Mesothelioma is cancer of the outer lining of the lung and/or the abdominal wall. It is unique since asbestos is the only known cause of this disease. The latency (time it takes for the
disease to become active) period for mesothelioma is 15-30 years. The latency period for lung cancer is also 15-30 years. Asbestos-related cancers tend to result from substantial long-term exposure. However, the likelihood of lung cancer is increased up to 50 percent by smoking.

**Asbestos Regulations**

Both Federal OSHA and OR-OSHA regulates employee exposure to asbestos. This regulation establishes permissible exposure limits (PEL), safe work practices, communication of hazards to employees, and record-keeping requirements.

The Environmental Protection Agency (EPA) regulates asbestos hazards in schools and more recently in public and commercial buildings under Title 40 CFR 763. The EPA Model Accreditation Plan clarifies the level of training and expertise required of persons who are accredited to inspect and recommend management options for asbestos materials in school, public, and commercial buildings.

All commercial buildings or structures that are to be renovated or demolished must have asbestos surveys completed by an Asbestos Hazard Emergency Response Act (AHERA) accredited inspector to determine the presence of any asbestos containing material. A permit must first be obtained before conducting any renovation or demolition activities.

**Permissible Exposure Limit (PEL)**

No employee may be exposed to an airborne concentration of asbestos in excess of 0.1 fibers per cubic centimeter (f/cc) of air as an eight-hour time weighted average (TWA) or 1.0 fiber per cubic centimeter averaged over a 30 minute time period. An industrial hygienist will conduct sampling and TWA calculations according to regulatory guidance when PLU requires this information.

Prior to any work in an area which might contain possible Asbestos, ***** will provide you with an appropriate Asbestos Awareness training. Without this training you are not expected to work around any site where we might find Asbestos in any form. If you have concerns, notify your supervisor or *****.

All employees of ***** who are working, or might work in an Asbestos identified area must have a 2-hour Asbestos Awareness level training. This work is probably considered Class IV work.

Class IV work is work by maintenance persons, such as electricians where employees contact but do not disturb asbestos-containing material (ACM) or presumed asbestos-containing material (PACM). It also covers the clean up of debris from class I, II and III activities. Walking on a floor that contains asbestos at a construction job site would not
normally be considered a Class IV activity. If workers are required to clean flooring that contains asbestos, those employees would be required to have the training for housekeeping operations under 1910.1001(j) (7)(iv) of the General Industry Asbestos standard or if the clean up was due to class I, II or III work they would need the class IV training from 1926.1101(k)(9) of the Asbestos in Construction standard.

**Some of the More Common Asbestos-Containing Products**


It is your responsibility to be knowledgeable on what to look for and how to respond to suspected Asbestos on the job-site.

If employees do work in a way that they could disturb the asbestos containing material the employees may actually be engaged in class III activities and would require class III training. This is **NOT** to be done.

**25.01.1 Severe damage (significant dust visible)**

In the event that damage occurs to a highly fibrous material (such as lagging) that contains asbestos, all personnel within the area must be leave and a company management must be notified immediately.

Management will assess the situation and arrange for the affected area/s to be evacuated, locked and sealed off using asbestos hazard tape and polythene sheeting (LSE stores) to minimize spread of asbestos fibers into adjoining areas.

At no time should any person enter or re-enter the contaminated area.

Management may/will then contact an approved Asbestos Removal Contractor (ARC) for attendance on site to decontaminate the affected area/s and remove ACM as deemed necessary.

Management will also contact the Owner/GC’s who will contact the approved asbestos consultant / analyst and instruct them to undertake air tests and visual inspections.

The area/s will remain closed until a certificate of reoccupation is issued by the consultant / analyst.
Management of******* will investigate the circumstances of the uncontrolled release of asbestos fibers to ascertain whether there has been adherence to the Asbestos Policy or if a violation of that policy has occurred.

25.01.2 Slight Damage (no visible cloud of dust)

In the event that damage occurs to fiber board or plastic material (such as insulation board, thermoplastic floor tile WC cistern) that contains asbestos, a representative of Management must be notified immediately and all persons within the area must leave.

Management will assess the situation and arrange for the affected area/s to be evacuated, locked and sealed off using asbestos hazard tape to minimize spread of asbestos fibers into adjoining areas.

Management will then contact the Owner/GC who will contact an approved asbestos removal contractor (ARC) for attendance on site to decontaminate the affected area/s, remove and/or encapsulate the damaged asbestos material.

The area/s will remain closed until the remedial works have been completed.

25.02 Record of Exposure and Health Checks

Should it become necessary,******* Management will maintain a health record and medical surveillance/screening program as required.

25.03 Newly Identified Asbestos

It is the responsibility of all******* employees to report any suspected or damaged asbestos containing material.

Where the material is or may have been damaged; see item 25.01.

25.04 Access Into an Asbestos Enclosure

There shall be no******* employees accessing an Asbestos enclosure until the area is deemed clear of all contaminates.

25.05 Building Refurbishment Works or Demolition

All******* employees carrying out project work in commercial buildings or residential buildings are deemed to have similar responsibilities in relation to asbestos as follows:

- At all times adhere to the******* asbestos management policy.
• Halt work and inform all employees if suspected asbestos material is discovered during the course of a project and seek advice from company management.
• Implementing the recommendations of the responsibility party.
• Informing staff and contractors of the location of any known asbestos affecting a project
• Ensuring that all persons/companies have trained their staff in asbestos awareness.

Where recommendation is the removal of the asbestos material, a licensed contractor should be used. The asbestos removal works should be carefully programmed into the project so as to prevent any risk of damaged to the asbestos and exposure.

If suspect material is discovered during the course of the project works the person in charge shall halt the works, inform the Asbestos Manager and take any necessary or recommended action.

On completion of any asbestos remedial works the Asbestos Manager must be provided with a completion document a copy of which should be retained with the project file / Health & Safety File. The completion document must comprise of the following:
• Air Clearance/Monitoring certificates produced by the analyst
• Waste consignment note
• Asbestos Removal Contractor's method statement
• Plans clearly illustrating all asbestos that has been removed and all asbestos that has been retained
• Manual update of removed asbestos on printed asbestos register

25.06 Building Alteration Works Including Services

A copy of the asbestos survey report will be provided by the Asbestos Manager with recommendations for any remedial action for incorporation into the project. This together with the survey report must be made available to the contractor/s undertaking the works. It is strongly recommended this be addressed at project inception as failure to do so could cause substantial delays in commencement.

Where the Asbestos Manager recommends the removal of the asbestos material a licensed contractor should be used. Should air testing be required the Owner/GC’s approved Analyst should be used. The asbestos removal works should be carefully programmed into the project so as to prevent any risk of damaged to the asbestos and exposure.
25.07 Building Re-entry

On completion of any asbestos remedial works, the Asbestos Abatement firm should provide a completion document, a copy of which should be retained with the project file / Health & Safety File. The completion document must comprise the following:

- Air Clearance/Monitoring certificates produced by the analyst
- Waste consignment note
- Asbestos Removal Contractor's method statement
- Plans clearly illustrating all asbestos that has been removed and all asbestos that has been retained
- Manual update of removed asbestos on printed asbestos register
Section 26

LEAD BASED PAINT
SAFETY POLICY

******

SAFETY PROGRAM

(10.26.2011 edition1)
WORKING IN LEAD PAINT AREAS

It is the policy of ****** when working in a potential Lead Paint environment, to follow all Lead Renovators rules at all times. ****** acknowledges that Lead is toxic and can damage the brain, nervous system, blood cells, kidneys, and reproductive organs.

Traditional remodeling and painting practices such as dry scraping and sanding create large amounts of dust — and lead dust is the most common cause of lead poisoning in children.

By learning to work properly with lead-based paint, ****** employees can protect yourself, others, and the environment.

Most of the work the employees of ****** will do, which might expose them to Lead based paint, will be limited to removal of painted wall surfaces or removal of conduit. All employees of ****** who do remodeling type work in Oregon are regulated by the Oregon Department of Human Services (Oregon DHS) Lead-Based Paint Program, the Construction Contractors Board (CCB), the Oregon Department of Environmental Quality (DEQ), and Oregon OSHA.

Oregon DHS and CCB certify, license, and register contractors who work with lead-based paint. Oregon OSHA’s lead standard for the construction industry — 1926.62, Subdivision 3/D — sets the workplace requirements to protect employees. DEQ ensures that paint chips, sludge, and other waste products are disposed of properly.

****** is a Certified Lead Base Paint Renovator under the requirements as set forth by the EPA and DHS/CCB/DEQ. Any variation from the Renovator Rules must receive approval by ****** management.

All employees of ****** will receive appropriate levels of training prior to the beginning of the job. Such training shall be in compliance with the requirements as set forth in the Lead Renovators Rule.

Cover and Contain Work Areas

We acknowledge that Lead dust, chips, and other debris that are not contained in the work area will settle on soil, plants, and furniture. Cleaning or replacing these items can be very expensive. ****** employees will notify next-door neighbors before work begins. This notification will make information available to them which will give them a chance to close windows, move play equipment, and cover exposed plants.
**Interior Work**

1. We will work in one area at a time.
2. Don’t eat, smoke, drink, or apply cosmetics in work areas.
3. Turn off all heating, air conditioning, and ventilation systems. Seal air and heat ducts so lead paint dust will not circulate.
4. Remove belongings or wrap them in plastic sheeting — especially rugs and upholstered furniture. Use duct tape to secure the sheeting. Once lead-paint dust gets into carpet or upholstery, it’s almost impossible to get out.
5. Cover floors, countertops, and carpet with double layers of heavy-duty plastic sheeting (6 millimeters thick) and tape the sheeting to the skirting boards.
6. Seal the area from other rooms with heavy-duty plastic sheeting. Cover and seal windows from the inside to keep lead debris out of window screens. Protect passageways or use plastic runners between work areas and exits.
7. Keep others, especially children and women of child-bearing age, out of the area.
8. Protect yourself. You may need eye protection, a respirator, and coveralls or disposable work suits. Use rubber or coated gloves if you use liquid paint removers or lead cleansers.

**Exterior Work**

1. Keep children, pets, and others away from the area.
2. Spread heavy-duty plastic sheeting at least 10 feet from the foundation; cover the ground and vegetation. Cover areas of bare soil where children play.
3. Protect yourself. You may need eye protection, a respirator, and coveralls or disposable work suits. Use rubber or coated gloves if you use liquid paint removers or lead cleansers.

**Choose an Appropriate Method to Remove Lead-Based Paint**

Some methods create toxic fumes or mists and others may spread lead dust. Cleaning up contaminants can be very expensive. Minimize the amount of lead-based paint you disturb. The following are recommended methods for removing lead-based paint:

**Hand scraping and sanding**

Work wet whenever possible or required. Use a plastic spray bottle, garden sprayer, or backpack sprayer with a fine-spray nozzle to wet surfaces. Use a scraper, wire brush, or
sanding sponge to remove paint. Do not dry scrape or sand because this creates and spreads lead dust.

**Heat guns**

If you use a heat gun, keep the heat below 750 degrees F. Do not use extreme heat or an open-flame torch. Lead based paint heated above 950 degrees F can generate harmful toxic fumes.

**Power sanders, grinders, and saws**

Use powered sanding and grinding equipment fitted with a special shroud and a high-efficiency particulate air (HEPA) vacuum exhaust.

If shrouded HEPA-vacuum tools are not available, use a complete containment system. Always use a complete containment system with abrasive sandblasting equipment.

NOTE: Tasks that require this equipment are called trigger tasks under Oregon OSHA's lead standard for the construction industry.

**Power washers**

**Single-family residences**

Use landscape cloth or heavy plastic sheets to contain splash and paint chips. Place burlap bags filled with bark chips or commercial filtering media over storm drains to minimize contamination from runoff. Inspect the drain when the job is finished and remove remaining paint chips.

**Commercial and multifamily residences**

Contact DEQ to find out if you need a wash-water permit.

**Chemical paint strippers**

Use chemical paint strippers for small tasks only. Have plenty of fresh air moving through the work area; use non-corrosive, nonvolatile strippers; and wear chemical-resistant gloves. Don’t use products that contain methylene chloride, which can be absorbed through the skin and become a health hazard.
Use a respirator

Lead dust can easily get into your bloodstream through your lungs. Use a NIOSH-certified respirator or dust mask and be sure that it fits properly. Don’t use a paper dust mask unless it is NIOSH-certified. Keep plenty of fresh air moving through the work area if you use a chemical stripper.

Clean as you go

Clean up daily. Use a general household cleaner or a special lead cleaner, available at hardware and building-supply stores. Use two buckets: one for cleaning solution and another for clean water. Use one mop or sponge for cleaning and another for rinsing. Change rinse water often to prevent lead dust from contaminating the cleaning solution or the rinse water. When cleaning walls, start at the top and work toward the bottom. When cleaning floors, start at the farthest point and work toward an exit. Remember that cleaning and rinsing water may contain lead debris.

Never pour the water into gutters, street drains, or on the ground. Filter it through a garter-top filter (usually found where paint is sold). Pour the filtered water in a toilet or utility sink. If possible, wait 24 hours and clean again to ensure that you clean up lead dust that may have settled overnight.

You can also use a HEPA vacuum to clean up wet debris. A HEPA vacuum is designed to pick up very small particles (about 1/500 the width of a human hair). Don’t dry sweep or use household or shop vacuums, which will spread dust and debris. Filter waste water and pour it into a toilet or utility sink — not on the ground.

Dispose of waste properly

Contaminated paint chips, sludge, and other debris can harm people and the environment if not handled properly. Put lead-based paint debris in heavy-duty plastic bags or containers and secure them; you can dispose of them as household rubbish. Don’t leave them at the work site. For more information about waste disposal, contact DEQ, 800-452-4011.

Finish up

Shower and change into clean clothes and shoes before you leave the work area. Put the clothes in a heavy-duty plastic bag and wash them separately from other laundry.
Section 27

LEAD SAFETY POLICY

*******

SAFETY PROGRAM

(11.19.2011 edition1)
It is the policy of ****** when working in a potential Lead environment.

This policy applies to all construction work where an employee may be occupationally exposed to lead. All construction includes but is not limited to the following:

- Demolition or salvage of structures where lead or materials containing lead are present;
- Removal or encapsulation of materials containing lead;
- Installation of products containing lead;
- Lead contamination/emergency cleanup;
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed, and
- Maintenance operations associated with the construction activities described in this paragraph.

**Permissible Exposure Limit**

****** shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 ug/m(3)) averaged over an 8-hour period.

If an employee is exposed to lead for more than 8 hours in any work day the employees' allowable exposure, as a time weighted average (TWA) for that day, shall be reduced according to the following formula:

\[
\text{Allowable employee exposure (in ug/m(3))} = \frac{400}{\text{hours worked in the day}}.
\]

When respirators are used to limit employee exposure as required under paragraph (c) of this section and all the requirements of paragraphs (e)(1) and (f) of this section 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.

If a workplace or operation covered by this standard may have exposure, ****** shall initially determine if any employee may be exposed to lead at or above the action level.

Employee exposure is that exposure which would occur if the employee were not using a respirator.

****** shall collect personal samples representative of a full shift including at least one sample for each job classification in each work area either for each shift or for the shift with the highest exposure level.

Full shift personal samples shall be representative of the monitored employee's regular, daily exposure to lead.
Protection of Employees During Assessment of Exposure

Where lead is present, until the ***** performs an employee exposure assessment and documents that the employee performing any of the listed tasks is not exposed above the PEL, the we shall treat the employee as if the employee were exposed above the PEL, and not in excess of ten (10) times the PEL, and shall implement employee protective measures.

Tasks Involving the Use of Protective Measures:

Where lead containing coatings or paint are present: Manual demolition of structures (e.g, dry wall), manual scraping, manual sanding, heat gun applications, and power tool cleaning with dust collection systems;

Spray painting with lead paint

In addition, with regard to tasks not listed here, where the we have any reason to believe that our employee performing the task may be exposed to lead in excess of the PEL, until we perform an employee exposure assessment as required by the OSHA standard and until we document that the employee's lead exposure is not above the PEL we shall treat the employee as if the employee were exposed above the PEL and shall implement employee protective measures.

Employee Protective Measures

Where lead is present, until we perform an employee exposure assessment and document that our employee performing any of the listed tasks is not exposed in excess of 500 ug/m(3), we shall treat the employee as if the employee were exposed to lead in excess of 500 ug/m(3) and shall implement employee protective measures. Where we have established that the employee is exposed to levels of lead below 500 ug/m(3), we will provide the exposed employee with the appropriate respirator prescribed for such use at such lower levels.

The tasks covered by this requirement are:

- Using lead containing mortar
- Lead burning

Where lead-containing coatings or paint are present

- rivet busting
- power tool cleaning without dust collection systems
- cleanup activities where dry expendable abrasives are used
- abrasive blasting enclosure movement and removal.
Where lead is present, until we perform an employee exposure assessment and document that the employee performing any of the listed tasks is not exposed to lead in excess of 2,500 ug/m(3) (50 x PEL), we shall treat the employee as if the employee were exposed to lead in excess of 2,500 ug/m(3) and shall implement employee protective measures. Where we have established that the employee is exposed to levels of lead below 2,500 ug/m(3), we will provide the exposed employee with the appropriate respirator.

Interim protection is required where lead containing coatings or paint are present on structures when performing:
- Abrasive blasting
- Welding
- Cutting
- Torch burning

Until we perform an employee exposure assessment and determine actual employee exposure, we shall provide, to employees performing the above tasks with interim protection as follows:
- Appropriate respiratory protection.
- Appropriate personal protective clothing and equipment.

Change areas in compliance with the OSHA rule, including:
- Hand washing facilities.

Biological monitoring to consist of blood sampling and analysis for lead and zinc protoporphyrin levels, and

Training as required for Hazard Communication; regarding use of respirators; and general Safety training and education

**Basis of Initial Determination**

We will monitor employee exposures and shall base initial determinations on the employee exposure monitoring results and any of the following, relevant considerations:
- Any information, observations, or calculations which would indicate employee exposure to lead;
- Any previous measurements of airborne lead; and
- Any employee complaints of symptoms which may be attributable to exposure to lead.

Monitoring for the initial determination where performed may be limited to a representative sample of the exposed employees who we reasonably believe are exposed to the greatest airborne concentrations of lead in the workplace.
Where 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 operations, we may rely on such earlier monitoring results to satisfy the requirements of the OSHA Standard.

Where we have objective data, demonstrating that 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 will rely upon such data instead of implementing initial monitoring.

Recordkeeping

We will establish and maintain an accurate record documenting the nature and relevancy of objective data as specified in this policy, if used in assessing employee exposure in lieu of exposure monitoring.

Positive Initial Determination and Initial Monitoring

Where a determination conducted under paragraphs above which shows the possibility of any employee exposure at or above the action level, we will conduct monitoring which is representative of the exposure for each employee in the workplace who is exposed to lead.

Where we have previously monitored for lead exposure, 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 the current operations, we may rely on such earlier monitoring results to satisfy the requirements of this policy if the sampling and analytical methods meet the accuracy and confidence levels.

Negative Initial Determination

Where a determination is made that no employee is exposed to airborne concentrations of lead at or above the action level we shall make a written record of such determination. The record shall include at least the information specified in this policy and shall also include the date of determination, location within the worksite, and the name and social security number of each employee monitored.

Frequency

If the initial determination reveals employee exposure to be below the action level further exposure determination need not be repeated except as noted below.
If the initial determination or subsequent determination reveals employee exposure to be at or above the action level but at or below the PEL we will perform monitoring in keeping with this paragraph at least every 6 months. We shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level.

If the initial determination reveals that employee exposure is above the PEL we will perform monitoring quarterly. We shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are at or below the PEL but at or above the action level at which time we shall repeat monitoring for that employee. We shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level.

**Additional Exposure Assessments**

Whenever there has been a change of equipment, process, control, personnel or a new task has been initiated that may result in additional employees being exposed to lead at or above the action level or may result in employees already exposed at or above the action level being exposed above the PEL, we shall conduct additional monitoring as required.

**Employee Notification**

We will, as soon as possible but no later than 5 working days after the receipt of the results of any monitoring performed under this section, notify each affected employee of these results either individually in writing or by posting the results in an appropriate location that is accessible to employees.

Whenever the results indicate that the representative employee exposure, without regard to respirators, is at or above the PEL we will include in the written notice a statement that the employees exposure was at or above that level and a description of the corrective action taken or to be taken to reduce exposure to below that level.

**Accuracy of Measurement**

We shall use a method of monitoring and analysis which has an accuracy (to a confidence level of 95 percent) of not less than plus or minus 25 percent for airborne concentrations of lead equal to or greater than 30 ug/m(3).
Methods of Compliance

Engineering and Work Practice Controls

We shall implement engineering and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead to or below the permissible exposure limit to the extent that such controls are feasible. Wherever all feasible engineering and work practices controls that can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, we shall nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them by the use of respiratory protection.

Compliance Program

Prior to commencement of the job, we will establish and implement a written compliance program to achieve compliance with this Standard.

Written plans for these compliance programs will include at least the following:

- A description of each activity in which lead is emitted; e.g. equipment used, material involved, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices;
- A description of the specific means that will be employed to achieve compliance and, where engineering controls are required engineering plans and studies used to determine methods selected for controlling exposure to lead;
- A report of the technology considered in meeting the PEL;
- Air monitoring data that documents the source of lead emissions;
- A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.;
- A work practice program that includes items required under paragraphs (g), (h) and (i) of this section and incorporates other relevant work practices such as those specified;
- An administrative control schedule, if applicable;
- A description of arrangements made among contractors on multi-contractor sites with respect to informing affected employees of potential exposure to lead.

Compliance Program

The compliance program shall provide for frequent and regular inspections of job sites, materials, and equipment to be made by a competent person.

Written programs shall be submitted upon request to any affected employee or authorized employee representatives, to OSHA.
Written programs must be revised and updated at least annually to reflect the current status of the program.

**Mechanical ventilation**

When ventilation is used to control lead exposure, we will evaluate the mechanical performance of the system in controlling exposure as necessary to maintain its effectiveness.

**Administrative Controls**

If administrative controls are used as a means of reducing employees TWA exposure to lead, we will establish and implement a job rotation schedule which includes:

- Name or identification number of each affected employee
- Duration and exposure levels at each job or work station where each affected employee is located; and
- Any other information which may be useful in assessing the reliability of administrative controls to reduce exposure to lead.

We will ensure that, to the extent relevant, employees follow good work practices.

**Respiratory Protection**

**General.** For employees who use respirators required by this section, we will provide each employee an appropriate respirator. Respirators must be used during:

- Periods when an employee's exposure to lead exceeds the PEL.
- Work operations for which engineering and work-practice controls are not sufficient to reduce employee exposures to or below the PEL.
- Periods when an employee requests a respirator.
- Periods when respirators are required to provide interim protection of employees while they perform the certain operations.

**Respirator Program**

We will follow the provisions of our Respirator Program.

**Protective Work Clothing and Equipment**

**Provision and Use**

Where an employee is exposed to lead above the PEL without regard to the use of respirators, where employees are exposed to lead compounds which may cause skin or eye irritation (e.g. lead arsenate, lead azide), and as interim protection for employees
performing possible exposed tasks, we will provide at no cost to the employee and assure that the employee uses appropriate protective work clothing and equipment that prevents contamination of the employee and the employee's garments such as, but not limited to:

- Coveralls or similar full-body work clothing;
- Gloves, hats, and shoes or disposable shoe coverlets; and
- Face shields, vented goggles, or other appropriate protective equipment which complies with 1910.133 of this chapter.

**Cleaning and Replacement**

We will provide the protective clothing required in a clean and dry condition at least weekly, and daily to employees whose exposure levels without regard to a respirator are over 200 ug/m\(^3\) of lead as an 8-hour TWA.

We will provide for the cleaning, laundering, and disposal of protective clothing and equipment required by paragraph (g)(1) of this section.

We will repair or replace required protective clothing and equipment as needed to maintain their effectiveness.

We will assure that all protective clothing is removed at the completion of a work shift only in change areas provided for that purpose.

We will assure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change area which prevents dispersion of lead outside the container.

We will inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.

We will assure that the containers of contaminated protective clothing and equipment are labeled as follows:

> **Caution:** Clothing contaminated with lead. Do not remove dust by blowing or shaking. Dispose of lead contaminated wash water in accordance with applicable local, state, or federal regulations.

We will prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air.

**Housekeeping**

All surfaces shall be maintained as free as practicable of accumulations of lead.
Clean-up of floors and other surfaces where lead accumulates shall wherever possible, be cleaned by vacuuming or other methods that minimize the likelihood of lead becoming airborne.

Shoveling, dry or wet sweeping, and brushing may be used only where vacuuming or other equally effective methods have been tried and found not to be effective.

Where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters and used and emptied in a manner which minimizes the reentry of lead into the workplace.

Compressed air shall not be used to remove lead from any surface unless the compressed air is used in conjunction with a ventilation system designed to capture the airborne dust created by the compressed air.

**Hygiene Facilities and Practices**

We will assure that in areas where employees are exposed to lead above the PEL without regard to the use of respirators, food or beverage is not present or consumed, tobacco products are not present or used, and cosmetics are not applied.

**Change Areas**

We will provide clean change areas for employees whose airborne exposure to lead is above the PEL, and as interim protection for employees performing tasks, without regard to the use of respirators.

We will assure that change areas are equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross-contamination.

We will assure that employees do not leave the workplace wearing any protective clothing or equipment that is required to be worn during the work shift.

**Showers**

We will provide shower facilities, where feasible, for use by employees whose airborne exposure to lead is above the PEL.

We will assure, where shower facilities are available, that employees shower at the end of the work shift and shall provide an adequate supply of cleansing agents and towels for use by affected employees.
**Eating Facilities**

We will provide lunchroom facilities or eating areas for employees whose airborne exposure to lead is above the PEL, without regard to the use of respirators.

We will assure that lunchroom facilities or eating areas are as free as practicable from lead contamination and are readily accessible to employees.

We will assure that employees whose airborne exposure to lead is above the PEL, without regard to the use of a respirator, wash their hands and face prior to eating, drinking, smoking or applying cosmetics.

We will assure that employees do not enter lunchroom facilities or eating areas with protective work clothing or equipment unless surface lead dust has been removed by vacuuming, downdraft booth, or other cleaning method that limits dispersion of lead dust.

**Hand Washing Facilities**

We will provide adequate hand washing facilities for use by employees exposed to lead.

Where showers are not provided, we will assure that employees wash their hands and face at the end of the work-shift.

**Medical Surveillance**

We will make available initial medical surveillance to employees occupationally exposed on any day to lead at or above the action level. Initial medical surveillance consists of biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels.

We will institute a medical surveillance program for all employees who are or may be exposed at or above the action level for more than 30 days in any consecutive 12 months.

We will assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician.

We will make available the required medical surveillance including multiple physician review without cost to employees and at a reasonable time and place.
Biological Monitoring

Blood Lead and ZPP Level Sampling and Analysis

We will make available biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels to each employee.

- For each employee covered, at least every 2 months for the first 6 months and every 6 months thereafter;
- For each employee whose last blood sampling and analysis indicated a blood lead level at or above 40 ug/dl, at least every two months. This frequency shall continue until two consecutive blood samples and analyses indicate a blood lead level below 40 ug/dl; and
- For each employee who is removed from exposure to lead due to an elevated blood lead level at least monthly during the removal period.

Follow-up blood sampling tests. Whenever the results of a blood lead level test indicate that an employee's blood lead level is at or above the numerical criterion for medical removal, we will provide a second (follow-up) blood sampling test within two weeks after the employer receives the results of the first blood sampling test.

Accuracy of Blood Lead Level Sampling and Analysis

Blood lead level sampling and analysis provided shall have an accuracy (to a confidence level of 95 percent) within plus or minus 15 percent or 6 ug/dl, whichever is greater, and shall be conducted by a laboratory approved by OSHA.

Employee Notification

Within five working days after the receipt of biological monitoring results, We will notify each employee in writing of his or her blood lead level.

We will notify each employee whose blood lead level is at or above 40 [μg]g/dl that the standard requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level exceeds the numerical criterion for medical removal.

Medical Examinations and Consultations

Frequency

We will make available medical examinations and consultations to each employee covered under paragraph (j)(1)(ii) of this section on the following schedule:
- At least annually for each employee for whom a blood sampling test conducted
at any time during the preceding 12 months indicated a blood lead level at or above 40 ug/dl;

- As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms commonly associated with lead intoxication, that the employee desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, that the employee is pregnant, or that the employee has demonstrated difficulty in breathing during a respirator fitting test or during use; and

- As medically appropriate for each employee either removed from exposure to lead due to a risk of sustaining material impairment to health, or otherwise limited pursuant to a final medical determination.

Content

The content of medical examinations made shall be determined by an examining physician and, if requested by an employee, shall include pregnancy testing or laboratory evaluation of male fertility. Medical examinations shall include the following elements:

- A detailed work history and a medical history, with particular attention to past lead exposure (occupational and non-occupational), personal habits (smoking, hygiene), and past gastrointestinal, hematologic, renal, cardiovascular, reproductive and neurological problems;

- A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. Pulmonary status should be evaluated if respiratory protection will be used;

- A blood pressure measurement;

- A blood sample and analysis which determines:
  - Blood lead level;
  - Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;
  - Zinc protoporphyrin;
  - Blood urea nitrogen; and,
  - Serum creatinine;

- A routine urinalysis with microscopic examination; and

- Any laboratory or other test relevant to lead exposure which the examining physician deems necessary by sound medical practice.

Multiple Physician Review Mechanism

If we select the initial physician who conducts any medical examination or consultation provided to an employee under this section, the employee may designate a second physician:

- To review any findings, determinations or recommendations of the initial physician; and
• To conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate this review.

We will promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination or consultation pursuant to this section. We may condition its participation in, and payment for, the multiple physician review mechanism upon the employee doing the following within fifteen (15) days after receipt of the foregoing notification, or receipt of the initial physician's written opinion, whichever is later:
  • The employee informing us that he or she intends to seek a second medical opinion, and
  • The employee initiating steps to make an appointment with a second physician.

If the findings, determinations or recommendations of the second physician differ from those of the initial physician, then ***** and the employee shall assure that efforts are made for the two physicians to resolve any disagreement.

If the two physicians have been unable to quickly resolve their disagreement, then the employer and the employee through their respective physicians shall designate a third physician:
  • To review any findings, determinations or recommendations of the prior physicians; and
  • To conduct such examinations, consultations, laboratory tests and discussions with the prior physicians as the third physician deems necessary to resolve the disagreement of the prior physicians.

We will act consistent with the findings, determinations and recommendations of the third physician, unless the employer and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three physicians.

**Information Provided to Examining and Consulting Physicians**

We will provide an initial physician conducting a medical examination or consultation under this section with the following information:
  • A copy of this regulation for lead including all Appendices;
  • A description of the affected employee's duties as they relate to the employee's exposure;
  • The employee's exposure level or anticipated exposure level to lead and to any other toxic substance (if applicable);
  • A description of any personal protective equipment used or to be used;
  • Prior blood lead determinations; and
  • All prior written medical opinions concerning the employee in our possession or control.
We will provide the foregoing information to a second or third physician conducting a medical examination or consultation under this section upon request either by the second or third physician, or by the employee.

**Written Medical Opinions**

We will obtain and furnish the employee with a copy of a written medical opinion from each examining or consulting physician which contains only the following information:

- The physician's opinion as to whether the employee has any detected medical condition which would place the employee at increased risk of material impairment of the employee's health from exposure to lead;
- Any recommended special protective measures to be provided to the employee, or limitations to be placed upon the employee's exposure to lead;
- Any recommended limitation upon the employee's use of respirators, including a determination of whether the employee can wear a powered air purifying respirator if a physician determines that the employee cannot wear a negative pressure respirator; and
- The results of the blood lead determinations.

We will instruct each examining and consulting physician to:

- Not reveal either in the written opinion or orally, or in any other means of communication with the employer, findings, including laboratory results, or diagnoses unrelated to an employee's occupational exposure to lead; and
- Advise the employee of any medical condition, occupational or non-occupational, which dictates further medical examination or treatment.

**Alternate Physician Determination Mechanisms**

****** and an employee or authorized employee representative may agree upon the use of any alternate physician determination mechanism in lieu of the multiple physician review mechanism so long as the alternate mechanism is as expeditious and protective as the requirements contained in this paragraph.

**Chelation**

We will assure that any person whom he retains, employs, supervises or controls does not engage in prophylactic chelation of any employee at any time.

If therapeutic or diagnostic chelation is to be performed by any person, we will assure that it be done under the supervision of a licensed physician in a clinical setting with thorough and appropriate medical monitoring and that the employee is notified in writing prior to its occurrence.
Medical Removal Protection

Temporary Medical Removal and Return of an Employee

We will remove an employee from work having an exposure to lead at or above the action level on each occasion that a periodic and a follow-up blood sampling test conducted pursuant to this section indicate that the employee's blood lead level is at or above 50 µg/dl; and,

We will remove an employee from work having an exposure to lead at or above the action level on each occasion that a final medical determination results in a medical finding, determination, or opinion that the employee has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.

For the purposes of this section, the phrase "final medical determination" means the written medical opinion on the employees' health status by the examining physician or, where relevant, the outcome of the multiple physician review mechanism or alternate medical determination mechanism used pursuant to the medical surveillance provisions of this section.

Where a final medical determination results in any recommended special protective measures for an employee, or limitations on an employee's exposure to lead, We will implement and act consistent with the recommendation.

Return of the Employee to Former Job Status

We will return an employee to his or her former job status:

- For an employee removed due to a blood lead level at or above 50 [µ]g/dl when two consecutive blood sampling tests indicate that the employee's blood lead level is below 40 µg/dl;
- For an employee removed due to a final medical determination, when a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.

The requirement that we return an employee to his or her former job status is not intended to expand upon or restrict any rights an employee has or would have had, absent temporary medical removal, to a specific job classification or position under the terms of a collective bargaining agreement.
Removal of Other Employee Special Protective Measure or Limitations

We will remove any limitations placed on an employee or end any special protective measures provided to an employee pursuant to a final medical determination when a subsequent final medical determination indicates that the limitations or special protective measures are no longer necessary.

We Have Options Pending a Final Medical Determination

Where the multiple physician review mechanism or alternate medical determination mechanism used pursuant to the medical surveillance provisions of this section, has not yet resulted in a final medical determination with respect to an employee, we will act as follows:

- **Removal:** We may remove the employee from exposure to lead, provide special protective measures to the employee, or place limitations upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status.
- **Return:** We may return the employee to his or her former job status, end any special protective measures provided to the employee, and remove any limitations placed upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status, with two exceptions.

If the initial removal, special protection, or limitation of the employee resulted from a final medical determination that differed from the findings, determinations, or recommendations of the initial physician, or if the employee has been on removal status for the preceding eighteen months due to an elevated blood lead level, then We will await a final medical determination.

Medical Removal Protection Benefits

Provision of Medical Removal Protection Benefits

We will provide an employee up to eighteen (18) months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this section.

Definition of Medical Removal Protection Benefits

For the purposes of this section, the requirement that we provide medical removal protection benefits means that, as long as the job the employee was removed from continues, we will maintain the total normal earnings, seniority and other employment rights and benefits of an employee, including the employee's right to his or her former
job status as though the employee had not been medically removed from the employee's job or otherwise medically limited.

**Follow-up Medical Surveillance During the Period of Employee Removal or Limitation**

During the period of time that an employee is medically removed from his or her job or otherwise medically limited, we may condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance.

**Workers' Compensation Claims**

If a removed employee files a claim for workers' compensation payments for a lead-related disability, then we will continue to provide medical removal protection benefits pending disposition of the claim. To the extent that an award is made to the employee for earnings lost during the period of removal, the employer's medical removal protection obligation shall be reduced by such amount. We will receive no credit for workers' compensation payments received by the employee for treatment-related expenses.

**Other Credits**

Our obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program, or receives income from employment with another employer made possible by virtue of the employee's removal.

**Voluntary Removal or Restriction of an Employee**

When we as an employer, although not required, removes an employee from exposure to lead or otherwise places limitations on an employee due to the effects of lead exposure on the employee's medical condition, We will provide medical removal protection benefits to the employee.

**Employee Information and Training**

We will communicate information concerning lead hazards according to the requirements of OSHA's Hazard Communication Standard for the construction industry, 29 CFR 1926.59, including but not limited to the requirements concerning warning signs and labels, material safety data sheets (MSDS), and employee information and training. In addition, we will comply with the following requirements:

- We will train each employee who is subject to exposure to lead at or above the action level on any day, or who is subject to exposure to lead compounds which
may cause skin or eye irritation (e.g., lead arsenate, lead azide), in accordance with the requirements of this section. We will institute a training program and ensure employee participation in the program.

- We will provide the training program as initial training prior to the time of job assignment or prior to the start up date for this requirement, whichever comes last.
- We will also provide the training program at least annually for each employee who is subject to lead exposure at or above the action level on any day.

**Training Program**

We will assure that each employee is trained in the following:

- The content of this standard;
- The specific nature of the operations which could result in exposure to lead above the action level;
- The purpose, proper selection, fitting, use, and limitations of respirators;
- The purpose and a description of the medical surveillance program, and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant);
- The engineering controls and work practices associated with the employee's job assignment including training of employees to follow relevant good work practices;
- The contents of any compliance plan in effect;
- Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician; and
- The employee's right of access to records under 29 CFR 1910.20.

**Access to Information and Training Materials**

We will make readily available to all affected employees a copy of this standard.

We will provide, upon request, all materials relating to the employee information and training program to affected employees and their designated representatives, and to the OSHA.

**Signs**

The employer may use signs required by other statutes, regulations or ordinances in addition to, or in combination with, signs required by this paragraph.
We will assure that no statement appears on or near any sign required by this paragraph which contradicts or detracts from the meaning of the required sign.

We will post the following warning signs in each work area where an employee's exposure to lead is above the PEL.

**WARNING**
**LEAD WORK AREA**
**POISON**
**NO SMOKING OR EATING**

We will assure that signs are illuminated and cleaned as necessary so that the legend is readily visible.

**Recordkeeping**

We will establish and maintain an accurate record of all monitoring and other data used in conducting employee exposure assessments as required in paragraph (d) of this section.

Exposure monitoring records shall include:

- The date(s), number, duration, location and results of each of the samples taken if any, including a description of the sampling procedure used to determine representative employee exposure where applicable;
- A description of the sampling and analytical methods used and evidence of their accuracy;
- The type of respiratory protective devices worn, if any;
- Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent; and
- The environmental variables that could affect the measurement of employee exposure.

We will maintain monitoring and other exposure assessment records in accordance with the provisions of 29 CFR 1926.33.

**Medical Surveillance**

We will establish and maintain an accurate record for each employee.

This record shall include:

- The name, social security number, and description of the duties of the employee;
- A copy of the physician's written opinions;
• Results of any airborne exposure monitoring done on or for that employee and provided to the physician; and
• Any employee medical complaints related to exposure to lead.

We will keep, or assure that the examining physician keeps, the following medical records:
• A copy of the medical examination results including medical and work history required under paragraph (j) of this section;
• A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;
• A copy of the results of biological monitoring.

We will maintain or assure that the physician maintains medical records in accordance with the provisions of 29 CFR 1926.33.

**Medical Removals**

We will establish and maintain an accurate record for each employee removed from current exposure to lead.

Each record shall include:
• The name and social security number of the employee;
• The date of each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to his or her former job status;
• A brief explanation of how each removal was or is being accomplished; and
• A statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.

We will maintain each medical removal record for at least the duration of an employee's employment.

**Objective Data for Exemption from Requirement for Initial Monitoring**

For purposes of this section, objective data are information demonstrating that a particular product or material containing lead or a specific process, operation, or activity involving lead cannot release dust or fumes in concentrations at or above the action level under any expected conditions of use. Objective data can be obtained from an industry-wide study or from laboratory product test results from manufacturers of lead containing products or materials. The data the employer uses from an industry-wide survey must be obtained under workplace conditions closely resembling the processes, types of material, control methods, work practices and environmental conditions in the employer's current operations. We will maintain the record of the objective data relied upon for at least 30 years.
Availability

We will make available upon request all records required to be maintained by paragraph (n) of this section to affected employees, former employees, and their designated representatives, and to OSHA for examination and copying.

Transfer of Records

Whenever the employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by paragraph (n) of this section.

We will also comply with any additional requirements involving the transfer of records set forth in 29 CFR 1910.1020(h).

Observation of Monitoring

Employee observation. We will provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to lead conducted pursuant to paragraph (d) of this section.

Whenever observation of the monitoring of employee exposure to lead requires entry into an area where the use of respirators, protective clothing or equipment is required, We will provide the observer with and assure the use of such respirators, clothing and equipment, and shall require the observer to comply with all other applicable safety and health procedures.

Without interfering with the monitoring, observers shall be entitled to:

- Receive an explanation of the measurement procedures;
- Observe all steps related to the monitoring of lead performed at the place of exposure; and
- Record the results obtained or receive copies of the results when returned by the laboratory.