



## **CONSTRUCTION SAFETY MANUAL**

**Plibrico Company, LLC**

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# **2021 Plibrico Company, LLC**

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## **SECTION #1**

# **SAFETY POLICY OBJECTIVES**

This manual establishes procedures that provide a safe and healthful working environment for all employees. These procedures apply to all work performed at any PLIBRICO COMPANY location that is managed, or operated by PLIBRICO COMPANY

The objectives are as follows:

- To provide guidelines for implementing a safety plan that will direct safety and health programs at PLIBRICO COMPANY and to maintain compliance with federal, state and/or local statutory requirements or regulations.
- To minimize occupational injury and illnesses, reduce equipment and property damage, and eliminate recurrences.
- To establish responsibility and accountability for the safety program at the facility.

This manual is intended to list some of the policies, procedures, and practices of PLIBRICO COMPANY and is subject to change, revision, or revocation at any time without notice. It is not to be construed either as an employment contract or a guaranty of employment.

**SECTION #2**  
**STATEMENT OF POLICY**



## **PLIBRICO SAFETY POLICY STATEMENT**

The well being of all employees working on Plibrico Company jobsites is the highest priority at Plibrico Company. While we must provide quality work at a fair price for our customers to survive as a business, we refuse to accept that anyone must be injured in the process. We believe that productive work habits and safe work habits are one in the same.

Many accidents happen when people are in a hurry to get something done, or when they get into habits and think that it won't happen to them. None of us have the ability to predict when, where, or how an accident will happen. The tragedy is that most accidents would take but a few seconds to avoid. No matter how busy or experienced you feel you are, you **MUST** consistently take that little bit of time to do it safely.....

1. Avoid accidents and other unplanned occurrences that result in injury to employees, interruption of production, or damage to equipment and property.
2. Take all action necessary in engineering, planning, designing, assigning, and supervising work operations to establish and maintain safe and healthful working conditions on all projects.

This booklet outlines the minimum requirements for a safe work environment. Certain jobs will require additional protections. It is extremely important that you understand **HOW** each task is to be done in a safe manner. If you do not know, **STOP**, and **ASK** before you begin to work. Your safety and well being as well as the safety of those around you, can be accomplished only through your constant, sincere effort. Merely talking about safety is not sufficient. It is everyone's responsibility to act, think, and perform safely.

We must work together to maintain a safe work environment. Together we can achieve our goal of accident-free workplace.

Bradley K. Taylor, President



**SECTION #3**  
**APPLICABILITY / SCOPE**

## **APPLICABILITY / SCOPE**

This program applies to all employees, all work places and work projects, and all subcontractors under the direct control of Plibrico Company. Subcontractors must provide all the manpower, supplies, equipment, medical examinations and testing necessary to comply with this program.

This program is used in conjunction with the current copy of the OSHA (General Industry and Construction Standards). Each section of the program summarizes the major requirements of OSHA pertaining to a subject area or work activity. Where appropriate, a brief review of the important items to remember is provided within the section to help the project supervisor or competent person understand the OSHA requirements. If additional information is required or a subject is not addressed, then the OSHA standards should be referenced for more detail.

This program is adapted to meet site or project-specific needs using the appended forms.

Implementation of this program is under the direct control of the safety manager, competent person or supervisor assigned to the project.

**SECTION #4**  
**ACCOUNTABILITY**

## ACCOUNTABILITY

- Plibrico Company provides for a safe and healthful work environment for all its employees and subcontractors.
- Safety provides the best form of quality performance and productivity.
- Every employee has a right to refuse to work due to unsafe conditions, unsafe work practices, or with unsafe equipment, or if directed to perform work that violates the requirements of this policy or applicable OSHA standards.
- Management, at all levels, is responsible and held accountable for implementing the requirements of this policy.
- The President of Plibrico Company shall demonstrate a positive attitude toward the achievement of a strong safety program, with the objective of preventing personal injury and property damage through direct and active support.

Know the safety records of all supervisors and insist on accountability.

Communicate about safety on pre-bid planning and visits to the jobsites, in the same way you communicate about costs and schedules.

Include the discussion of safety programs at staff meetings.

Request status reports (monthly) on safety activities and progress within Plibrico Company

Insist newly hired employees receive training in safe work methods.

Make the necessary appropriations to meet the requirements of an effective safety program.

Continually support and enforce Plibrico Company Safety Program.

Practice safety through good example.

## **ACCOUNTABILITY cont.**

The Project Superintendents are responsible for identifying the hazards of their projects and communicating to contractors on their worksites. Daily toolbox talks will be required of all contractors working under the management of Plibrico Company with documentation on the Supervisors Task Plan Cards.

- Promote full support of the safety program by enthusiastically advocating the program during the project planning stages.
- Ensure that all employees and subcontractors are aware of and are following safety procedures established by Plibrico Company by reviewing jobs safety meeting notes, daily inspection reports, and letters to subcontractor regarding their safety performance during the project.
- Monitor safety records of their jobsites.
- Establish safety procedures with special attention to unusual conditions identified during project planning and hazard assessments.
- Visit the jobsites frequently with special attention to hazard recognition and accident prevention.
- Practice safety through good example.

Field Supervisors are directly responsible for the control and activities of their employees. They play a key role in the implementation and maintenance of an effective safety program. Field Supervisors must plan their safety activity with the same care and effort as they do other portions of their work.

- Provide, and require the use of, other personal protective equipment deemed necessary by the process, equipment, or materials.
- Make their own worksite safety inspections and hazard corrections daily, making notations in the daily log.
- Hold regular safety meetings with their crews. Receive copies of all subcontractor tool box talks.

## **ACCOUNTABILITY cont.**

- Provide all accident reports to the Plibrico Company Office Manager and National Safety Manager the day of the accident.
- Assist with accident investigations to ensure proper reporting and documentation. Follow accidents with prompt corrections to eliminate recurrences.
- Insist on compliance with the Hazard Communication Program.
- Monitor compliance with the confined space program when applicable.
- Ensure prompt first aid is administered to injured employees and that necessary medical treatment is pursued.
- Insist on compliance with established safety regulations.
- Practice safety through good example.

Each employee is responsible to perform his or her job safely.

Good safety practices and accident prevention is the responsibility of every Plibrico Company employee. Each employee is responsible to know and to follow the general provisions of the Plibrico Company Safety Policy, the specific rules of their trade or worksite and the rules enumerated below

**SECTION #5**

**JOB DESCRIPTION**

**TITLE****President****SUMMARY:**

The President of PLIBRICO COMPANY shall demonstrate a positive attitude toward the achievement of a strong safety program, with the objective of preventing personal injury and property damage through direct and active support.

**PRIMARY SAFETY RESPONSIBILITY:**

1. Communicate about safety in the same way you communicate about costs and schedules.
2. Include the discussion of safety programs at staff meetings.
3. Request status reports (monthly) on safety activities and progress within PLIBRICO COMPANY.
4. Insist newly hired employees receive training in safe work methods.
5. Make the necessary appropriations to meet the requirements of an effective safety program.
6. Continually support and enforce the PLIBRICO COMPANY Safety Program.
7. Practice safety through good example.

**TITLE****Safety Manager****SUMMARY:**

The Safety Manager is responsible for identifying the hazards of PLIBRICO Company's Oak Hill Plant and communicating them to the Operations Managers.

**PRIMARY SAFETY RESPONSIBILITY:**

1. Promote full support of the safety program by enthusiastically advocating the program.
2. Monitor safety records of the company.
3. Insist newly hired employees receive orientation and ongoing training in safe work methods.
4. Establish safety rules with special attention to unusual conditions.
5. Perform plant safety inspections frequently with special attention to hazard recognition and accident prevention.
6. Hold scheduled safety meetings with plant supervisors and employees on a regular and as needed basis.
7. Monitor and maintain compliance with all safety policies.
8. Practice safety through good example.



**TITLE**

**Supervisor**

**SUMMARY:**

Supervisors are directly responsible for the control and activities of their employees. They play a key role in the implementation and maintenance of an effective safety program.

Supervisors must plan their safety activity with the same care and effort as they do other portions of their work.

**PRIMARY SAFETY RESPONSIBILITY:**

1. Provide, and require the use of, all personal protective equipment deemed necessary by the process, equipment, or materials.
2. Perform work site safety inspections and hazard corrections daily.
3. Provide all accident reports to the PLIBRICO COMPANY Safety Manager the day of the accident.
6. Assist with accident investigations to ensure proper reporting and documentation. Follow up accidents with prompt corrections to eliminate recurrences.
7. Insist on compliance with all safety programs and compliance regulations.
8. Ensure prompt first aid is administered to injured employees and that necessary medical treatment is pursued.
9. Comply with medical management responsibilities including, but not limited to, communicating with injured employees following their injuries and ensuring that doctors' restrictions are followed.
10. Practice safety through good example.

**TITLE**

**Employee**

Good safety practices and accident prevention is the responsibility of every PLIBRICO COMPANY employee. Each employee is responsible to know and to follow the general provisions of the PLIBRICO COMPANY Safety Policy, the specific rules of their job and the rules enumerated below.

**SECTION #6**  
**DISCIPLINARY ACTION**

## **DISCIPLINE AND ENFORCEMENT OF SAFETY RULES**

This procedure is established to provide a mechanism for the discipline of employees who repeatedly violate safety rules. Safety rules are written and enforced to protect employees from injury and provide a "safe and healthful place of employment."

Safety Managers are responsible for the enforcement of the safety and health program at PLIBRICO COMPANY in order to accomplish this, they must ensure that each employee is properly instructed in the use of safety equipment and safe work practices, warn employees when they violate a safety rule.

When an employee violates a safety rule, the employer will follow the discipline procedure below as the employer may deem appropriate:

1. First offense – verbal warning
2. Second offense - written warning
3. Third offense – one day suspension without pay
4. Fourth offense – three-day suspension without pay or immediate termination

The listing of infractions and penalties above is intended only as a general guideline, and PLIBRICO COMPANY specifically retains the right to modify the penalties and/or impose the appropriate disciplinary action or other forms of discipline, based upon the specific circumstances involved in each individual case, including discipline or termination on the first offense.

Each written warning will advise the employee of the nature of the violation and the correct safe practice and procedure.

A copy of the violation will be maintained in the employee's personnel file; another copy will be provided to the employee.

**NOTE: DOCUMENTATION OF THE ABOVE ACTION IS NECESSARY TO COMPLY WITH GOVERNMENT REGULATIONS AND THE LABOR AGREEMENT.**

# EMPLOYEE WARNING RECORD

Verbal   
Written

Employee's Name \_\_\_\_\_ Clock or Payroll No. \_\_\_\_\_

Date of Warning \_\_\_\_\_ Department \_\_\_\_\_ Shift \_\_\_\_\_

## VIOLATION

Date \_\_\_\_\_

Time \_\_\_\_\_

Place \_\_\_\_\_

## REASON FOR WARNING

Absence  Substandard Work  Disobedience

Tardiness  Carelessness  Safety

Other \_\_\_\_\_

**COMPANY REMARKS** - Explain pertinent facts in detail \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**EMPLOYEE REMARKS** - Absence of statement by EMPLOYEE indicates agreement with this report. \_\_\_\_\_  
\_\_\_\_\_

I have entered my version of the matter above

Employee's Signature \_\_\_\_\_ Date \_\_\_\_\_

**ACTION TO BE TAKEN** \_\_\_\_\_  
\_\_\_\_\_

### PREVIOUS WARNINGS

When and By Whom

#### 1st Warning

Date \_\_\_\_\_

Verbal  Written

By Whom \_\_\_\_\_

#### 2nd Warning

Date \_\_\_\_\_

Verbal  Written

By Whom \_\_\_\_\_

#### 3rd Warning

Date \_\_\_\_\_

Verbal  Written

By Whom \_\_\_\_\_

#### 4th Warning

Date \_\_\_\_\_

Verbal  Written

By Whom \_\_\_\_\_

I have read this "Warning Record" and understand it.

Employee's Signature \_\_\_\_\_ Date \_\_\_\_\_

Signature of person who prepared warning - Title \_\_\_\_\_ Date \_\_\_\_\_

Supervisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Signature of witness if employee refuses to sign \_\_\_\_\_

### DISTRIBUTION

Original - Personnel File

2nd Copy - Employee

3rd Copy - Supervisor

**SECTION #7**

**OFFENSIVE WEAPONS POLICY**

# Plibrico Offensive Weapons Policy

5/13/14

## **Responsibly**

The Office Managers, Superintendents, Supervisors, and Safety Mgr. has the responsibility to monitor and enforce this policy for the protection of all employees.

## **Policy**

Plibrico Company, LLC considers it illegal to carry large knives (other than pocket knives for use at work) or other offensive weapons on Plibrico property or Plibrico projects. Plibrico recognizes that the presents of weapons would not only create a climate of unacceptable risk of bullying, injury, or death, but also create a climate that undermines safety in the workplace. Plibrico expressly forbids the possession, custody and use of weapons by unauthorized employees on Plibrico property or jobsites.

For this policy, a “weapon” is any firearm of any description, including starting pistols, air guns, gun replicas or toy guns. Knives, including hunting, fixed blade or retractable blade knives over 3” in blade length. Explosive, including fireworks of any type. Any laser, tasers or other non-violent devices that could be used for violent use, or the threat of use, as a weapon.

## **Penalty**

Any employee found in violation with this policy shall be subject to disciplinary action, up to and including immediate removal from company property and discharge.

**SECTION #8**  
**NEW HIRE ORIENTATION**

# New Employee Orientation

## CONSTRUCTION EMPLOYEES

All employees hired at Plibrico shall be Safety trained in the following subjects prior to beginning work at Plibrico Company. The training will allow the New Employee to gain pertinent information on the operation and safety procedures at the facility prior to starting work. Also, to facilitate this training, the New Employee shall have a Site-Specific tour to explain the scope of work and given an opportunity to ask any questions about the job at the facility. Safety training will give the New Employee useful knowledge and confidence to perform the required tasks safely.

Task training shall be performed on each new job the New Employee is given. If the employee has the experience and knowledge, refresher training will be given to make sure the New Employee understands any job variations that may exist. Training for job not familiar will be done on the “Buddy System” working along with an experienced employee until the training employee and the Supervisor are satisfied the New Employee has the knowledge and understanding of the new job to perform it safely. The training period may vary depending upon the complexity of the job and the ability of the New Employee, but in no circumstances, shall exceed 10 days. The Supervisor has the right and responsibility to discontinue the training at anytime he / she may think the New Employee may pose a safety risk. Training documentation must be completed by all involved in the training session and placed in the personnel file for future reference.



## **Orientation topics and highlights**

- Successful completion of a pre-employment physical and drug screen
- Substance Abuse / Drug Testing Policy Training
- Jobsite tour
- Break room, Rest room, employee parking locations
- Emergency phone numbers and contacts
- Incident / accident, property damage and near miss reporting
- Host Plant and Safety rules and regulations.
- Plibrico Safety rules and regulations
- Heavy Equip. / vehicle traffic pattern
- Safety orientation video (if applicable)
- Personal Protective Equipment
- Hazard Communication,
- Confine spaces and confined space locations
- Host Companies Emergency Action Plan w/ gathering point and escape way route review
- Fire extinguishers types and locations
- LO/TO awareness
- Fall Prevention & Protection
- Respiration Protection
- Hearing Conservation
- Back Safety / Proper lifting
- Pinch points, rotating shafts and guarding
- Job / task training requirements
- Locations of First Aid Boxes, Fire Extinguishers, and Eye Wash Stations
- Do Not Block zones, such as fire extinguishers, first aid boxes, exits, isles and electric boxes

**SECTION #9**

**NEW SUPERVISORS ORIENTATION**



6/2/09

# New Supervisor Orientation

All Supervisors hired at Plibrico shall be familiar with all current state and federal safety and health standards. The New Supervisor shall also be trained in the safety and health policies of Plibrico Company, as well as a review the safety topics listed below that are most commonly used by Plibrico.

The New Supervisor shall receive a copy, and a review of the Safety & Health Policies from the Regional Office Mgr., Safety Mgr., and Superintendents to help facilitate his / her training. The New Supervisor extent of training shall be determined by the Regional Office Mgr., based upon his / her work experience. However, all New Supervisor shall job shadow Plibrico Supervisors until the Regional Office Mgr., Superintendent and Training Supervisors are confident that the New Supervisor has sufficient knowledge to perform the duties required. Documentation of training is required to follow the training period, and shall be place in the personnel file for future reference.

### **Orientation topics review and highlights**

- Successful completion of a pre-employment physical and drug screen
- Substance Abuse / Drug Testing Policy Training
- Emergency phone numbers and contacts
- Incident / accident, property damage and near miss reporting
- Safety rules and regulations.
- Safety orientation video
- Personal Protective Equipment
- Hazard Communication,
- Confine spaces and confined space locations

## **Orientation topics review and highlights cont.**

- Emergency action plan w/ gathering point and escape way route review
- Fire extinguishers types and uses
- LO/TO
- Fall Prevention & Protection
- Respiration Protection
- Hearing Conservation
- Back Safety / Proper lifting
- Pinch points, rotating shafts and guarding
- Job / task training requirements
- First Aid Boxes, Fire Extinguishers, and Eye Wash Stations
- Do Not Block zones, such as fire extinguishers, first aid boxes, exits, isles and electric boxes
- Fleet Driving Policy

**SECTION #10**

**SITE SPECIFIC SAFETY PLAN**



## **Plibrico Company Site Specific Safety Plan**

### **Purpose**

The purpose of Plibrico Site Specific Safety Plan (SSP) is to ensure every Supervisor and Employee of Plibrico has full knowledge of our host Customer's Operation, Operational Procedures, Safety Procedures and any and all hazards that pertain to our Crew while working at their facility.

### **Procedure**

Plibrico Management, team will inquire and collect all pertinent information about our host Customer's Operation by meeting with key Facility Personnel, or through written information / material. All Facility information shall be obtained prior to stating the project to ensure every aspect of the job/task is considered.

### **Information shall include but not limited to:**

- All physical / health hazards known or suspected at the facility
- Facility Emergency Action Plan
- Facilities Emergency Medical / Fire Protection Plan
- Facility Safety & Health rules and regulations
- Review of Plibrico Rules / Reg. in comparison with facilities (completeness of coverage purposes)
- Facility Supervisory Emergency Contacts
- Facilities PPE Requirements
- All suspected Confined Spaces (within working area)
- Facility Traffic Pattern

Once all information is obtained from the facility, Plibrico General Mgr., Project Supervisor, and Safety Mgr. shall conduct a careful review to determine the course of work. When the plan has been established, the Project Plan shall be discussed with the host Customers Project Team to ensure good communications to reduce the chance of errors.

The Project Supervisor shall discuss all the pertinent information gained about the host Customers Facility with the Crewmembers of Plibrico before work begins. The Supervisors Task Plan Card shall be used daily for documentation purposes.

## **SECTION #11**

### **HAZARD IDENTIFICATION AND RISK MGMT.**

# Hazard Identification & Risk Assessment Policy

## **PURPOSE**

Plibrico Company has established this written safety policy and implemented procedures to ensure that hazard identification and risk assessment will be part of routine safety procedures in the workplace. This includes host employers, subcontractors at all Plibrico work sites.

This program outlines methods for the identification of hazards and the assessment and control of health and safety risks in the Company workplace.

This policy applies to management, supervisors and employees during the course and scope of Company workplace operations.

## **ACTIONS**

Regarding hazard evaluation and risk assessment on Plibrico jobsites and locations, superintendents, supervisors, and managers in charge will:

1. Consult with the Company Safety Mgr. and ensure that a written Job Hazard Analysis (JHA) is conducted prior to beginning work.
2. Complete a jobsite / project survey prior to the start of each project and daily thereafter using “The Supervisors Task Plan for Safety” card as a guide. See Plibrico Safety Manual Polices such as LO/TO, Confined Spaces, ETC to manage worksite hazards.
3. Conduct follow-up or additional evaluation whenever changes are introduced into the work area / project or where work activates, situations or environment has the potential to create or increase hazards or risk.

Generally, through investigation, gathering relevant information, and consultation with affected employees whether the change may reasonably be expected to affect to affect the health and safety of any person.

4. Conduct Job Safety Analysis (JSA) as an ongoing tool for hazard and risk evaluation.
5. JSA’s will be utilized in the manner determined by Plibrico Safety Mgr. as well as the host employers or contractors designated for site safety management.
6. Employees, contractors, and subcontractor personnel will utilize and be actively involved in processes for identifying workplace hazards and evaluating risk in accordance with this program and the procedures specified.
7. JSA and other hazard / risk evaluation processes will be utilized for both routine and non-routine work operations, as well as whenever there is a change or supplement to procedures in place that could impact the safety and health of employees and other persons at the work location.



## **CLASSIFICATIONS AND PRIORITIZING OF HAZARDS**

1. Hazards identified through processes in this program will be classified and corrective actions will be prioritized bases on potential severity and estimated probability. The categories are: High, Medium, and Low
2. All identified hazards will be corrected or mitigated in a timely, appropriate manner. Those that are most severe and / or have the highest likelihood of occurrence will be given priority.
3. These processes will be performed in cooperation with and under Plibrico Safety Mgr. prior to taking any hazard abatement or mitigation action. This prior review may include consultation with persons knowledgeable and experienced with the specific hazard or risk situation to help ensure that proposed actions will not inadvertently create other hazards or risk.
4. Corrective actions to an identified hazard will be tracked, confirmed, and documented by the project superintendent, supervisor, or manager.
5. Plibrico Safety Mgr. will review reports and documents of corrective actions taken. This will be done to help confirm that the hazard has been effectively eliminated or mitigated.

## **DOCUMENTATION AND RECORDKEEPING**

1. All information regarding this program shall be documented
2. Plibrico Safety Mgr. will be responsible for reviewing and maintaining all documents.

## **TRAINING**

1. Plibrico Safety Mgr., with assistance from superintendents, supervisors and managers and other qualified personnel as designated by the Safety Mgr. will be responsible for developing and delivering site-specific training on how to implement this program effectively.
2. Training will include instruction in the proper selection and use of personal protective equipment (PPE), regarding both hazards under evaluation, and as may be required for abatement or mitigation activities.
3. Individual training will be documented in writing with: date, time, and place of training. Also, the employee's names and the instructor.
4. All training documents will be maintained as proof of training.

## **SECTION #12**

### **SUPERVISORS DAILY EMPLOYEE BRIEFING / TOOL BOX SAFETY MEETING**

# **SUPERVISORS DAILY BRIEFING / TOOL BOX SAFETY MEETING PROGRAM**

## **Intent and Purpose:**

By the use of communication, daily changes in our work environment / conditions, as well as the hazards associated with certain projects can be eliminated through awareness and careful planning. The intent and purpose of this policy is to identify and analyze those risk, to better prepare for the challenge that lay ahead.

## **Responsibilities:**

The Supervisor's duty is to conduct daily briefing about the safety requirements and hazards of the project. Also, to regularly inspect the jobsite for any changes that has occurred, such as weather conditions or progressive work advances.

## **Policy:**

The Project Supervisor shall conduct Daily Briefing / Tool Box Safety Meetings at the beginning of each shift (or as needed) with all Employees. The Briefing will point out safety concerns and plans for prevention, pertaining to the project. The Supervisor shall use Plibrico **Forman's Task Plan for Safety** cards for an outline of his / her discussion covering the key information provided on the card. A new card must be completed each day, with each meeting documenting what was covered in the meeting, as well as the names of each crewmember. The **Forman's Task Plan for Safety Cards** must be filed away in each project folder for future reference.

### Items to be discussed, but not limit to:

- PPE
- Weather conditions or changes
- Confined Space Requirements
- Lockout / Tagout
- Material Handling
- Fall protection
- Emergency Procedures
- Hand Tool Safety
- Accident Reporting
- Housekeeping
- Welding / Hot Works
- Changes in Work Procedures or Conditions

**SECTION #13**

**SUPERVISORS / MGRS.  
EMERGENCY PROCEDURES**

## **SUPERVISORS / MGRS. EMERGENCY PROCEDURES**

This is a guide for procedures to be followed in the event of a serious injury to workers or property.

The key points of the PLIBRICO COMPANY Emergency Policy include the following:

- A. These procedures are to be adhered to in the event of:
  - 1. Serious injury to an employee working on at PLIBRICO COMPANY.
  - 2. Serious injury to a non-employee or visitor on at PLIBRICO COMPANY.
  - 3. Serious damage to PLIBRICO COMPANY equipment.
  - 4. Serious damage or structural failure construction premises.
- B. Administering first aid or arranging for medical treatment (911) is the first response.
- C. Notify the appropriate PLIBRICO COMPANY personnel according to the Emergency Policy.
- D. Make no statement to the media other than an accident has occurred.
- E. Investigate the accident as outlined in the Emergency Policy.

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### **EMERGENCY PLAN**

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Emergencies would include:

- A. Any serious injury to a PLIBRICO COMPANY employee (serious = requiring ambulance)
- B. Major loss of any equipment or property located at PLIBRICO COMPANY.

The PLIBRICO COMPANY Policy for reacting to emergencies is as follows:

- A. See that the injured are cared for - THE FIRST CONCERN at an accident scene, regardless of its seriousness, is care of the injured.
- B. Request the necessary emergency response team, Paramedics, and/or Fire Department - Supervisor
- C. Protect other people and property
- D. Notify the PLIBRICO COMPANY Safety Manager, Chris Smith  
  
The Safety Manager will notify the President
- E. Keep the press and news media as far away as possible from the scene.
- F. When the press and television media arrive:
  - 1. Make NO statement, other than an accident has occurred
  - 2. The ONLY person to make a statement for PLIBRICO COMPANY will be the President of the company
- G. After all the injured are cared for, begin your investigation immediately - Supervisor
  - 1. Preserve the scene as it was after the accident
  - 2. Obtain the identity of all people who might have information about the accident
    - a. Record their names
  - 3. Confiscate all materials involved - tools, etc.
  - 4. Take photographs of the incident
    - a. General uses of photographs:
      - 1) Orientation to the scene of the accident
      - 2) Record of the detail of injury and damage
      - 3) Record of relative positions of large numbers of items or damage fragments
      - 4) Evidence of deterioration, abuse, or lack of proper maintenance
      - 5) Location of parts or other evidence overlooked during early stages of investigation

5. Marking photographs

a. Following information:

Date Taken \_\_\_\_\_

Area \_\_\_\_\_

Photo Of \_\_\_\_\_

Taken By \_\_\_\_\_

(Signature)

All photographs will be delivered to the PLIBRICO COMPANY Safety Manager

6. Distribution of photographs

- a. No photographs shall be released to any party, insurance company, vendor, lawyer, subcontractor, or owner without authorization of the PLIBRICO COMPANY legal counsel

H. Fill out the proper accident report and forward to the PLIBRICO COMPANY Safety Manager.

FORM NAME: Employee Information Sheet

TO BE PROCESSED BY: Employee and Personnel

PURPOSE: Provides emergency information for employee. Provides information relative to reason for separation.

SPECIAL DIRECTIONS: Must be filled out by that employee who is employed. It is important that the reason for separation be filled out accurately.

EMPLOYEE INFORMATION SHEET

Name: \_\_\_\_\_

S.S. No.: \_\_\_\_\_

Birth Date: \_\_\_\_\_

Address: \_\_\_\_\_

Pay Rate: \_\_\_\_\_

\_\_\_\_\_

Date of Employment: \_\_\_\_\_

Home Phone No.: (\_\_\_\_\_) \_\_\_\_\_

Medical Alert: (Indicate any condition or illness such as diabetes, heart condition, allergy to specific medication, etc.)

**IN CASE OF EMERGENCY, NOTIFY**

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

**ACKNOWLEDGMENT**

I certify that the above information is correct and that I have read the Work Rules.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**EMPLOYEE SEPARATION NOTICE**

Effective Date of Separation: \_\_\_\_\_

Reason for Separation:

\_\_\_\_\_ Retirement

\_\_\_\_\_ Transfer to New Location

\_\_\_\_\_ Discharged - Violation of Work Rule No. \_\_\_

\_\_\_\_\_ Laid Off - Lack of Work

\_\_\_\_\_ Quit - Reason \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

Superintendent Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**SECTION # 14**

**STOP WORK AUTHORITY PROGRAM**

## **PURPOSE:**

This program establishes the Stop Work Authority (SWA) of all team members and contractors to suspend individual tasks or group operations when the control of Health, Safety or Environmental (HSE) risk is not clearly recognized or understood and/or equipment service is compromised. It is the policy of Plibrico Company, LLC that:

- a. All team members have the authority and responsibility to stop any task or operation where concerns or questions regarding the control of HSE exist.
- b. No work will resume until all stop work issues and concerns have been effectively addressed.
- c. Any form of retribution or intimidation directed at any team member or company for exercising their authority as outlined in this program will not be tolerated.

As with any policy, accountability for non-compliance will follow established company procedures or contract requirements.

## **SCOPE:**

This “stop work” program applies to all Plibrico projects and operations.

## **KEY ROLES and RESPONSIBILITIES**

Managers and Supervisors have a responsibility to accept and support all “stop work” intervention from team members. Management shall resolve issues resulting from a team member’s “stop work” concerns and ensure no actions are taken as retribution against team member(s) who raise safety concerns to stop an activity they believe is unsafe. This action of “stop work” will also include any evidence of potential equipment service interruption due to unsafe or undocumented processes (methods of procedure) when performing equipment installations or maintenance.

Team members have a responsibility and are authorized to “stop work” on any activity or situation they believe danger or a risk is present to them or a coworker without fear of retribution from management. The “stop work” may include discussion with other team members or management or -Safety Coordinator to resolve work related issues, address potential unsafe conditions, and/or clarify work instructions, etc.

The Safety Manager is responsible for monitoring compliance with the requirements of this program, the maintenance of associated documents, processes, training materials, identification of trends, and sharing of lessons learned.

## **STOP WORK AUTHORITY PROCEDURE:**

1. Team members who identify a potentially unsafe condition or act which could result in an undesirable event, a “stop work” intervention shall be immediately initiated for the individual(s) and / or equipment potentially at risk. All potential unsafe condition or acts shall be documented on a Supervisors Task Plan for Safety Cards. The card shall be completed daily at the beginning of every job to identify all potential unsafe condition or issues.
2. The team member who identified the “stop work” incident will notify all affected team members and their Operations Manager of the stop work issue.
3. All team members shall discuss and gain agreement on the “stop work” issue.
4. Resolve any issues that have resulted in the “stop work”. The issue resolution or corrective action must be discussed with all team members, including manager, and be in place before return to work.
5. If team members cannot provide a resolution to the “stop work”, then work shall be suspended until a resolution can be achieved. Supervisors shall make the final determination on the corrective action and provide the go-ahead to continue.
6. All corrective actions on job “stop work” incidence when finalized shall be documented. The team member(s) shall use Plibrico Company, LLC Incident Reporting forms for this process.

## **REPORTING**

All “stop work” concerns shall be documented as a “near miss” report. Team members shall use Plibrico Incident Reporting policy form for reporting purposes. The report shall be reviewed by the Area Manager in order to:

- a. Identify the “stop work” incident
- b. Provide corrective action to job stoppage
- c. Resume work after issues has been resolved and cleared to proceed
- d. Facilitate lessons learned with team members.

The Safety Manager will publish incident details regarding the “stop work” action to all Plibrico Manager and team members outlining the issue, corrective action, and lessons learned.

## **FOLLOW-UP**

Management will review all “stop work” reports within one week in order to identify any additional investigation or follow-up required. The report will be used as part of “lessons learned”. Manager will provide the root cause analysis to the “stop work” action and identify any potential opportunities for improvement, encourage team member’s participation, and share lessons learned.

## **TRAINING**

Training regarding this SWA Policy will be conducted as part of all new team member orientations. Additionally, this policy as as other company safety policies shall be reviewed as part of Plibrico monthly safety meetings.

**SECTION # 15**

**MEDICAL EMERGENCY RESPONSE PLAN**

## **MEDICAL EMERGENCY RESPONSE PLAN**

This section describes the first aid, medical services, and emergency transportation provided for employees who incur occupational injuries or illness arising out of, and in the course of their employment with PLIBRICO COMPANY.

Supervisors in consideration of medical attention must evaluate all job injuries, which restrict work or requires the employee to stop work. **ALL WORK-RELATED INJURIES MUST BE REPORTED TO THE SUPERVISOR IMMEDIATELY, BUT NO LATER THAN THE END OF THE SHIFT!**

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### **MINOR MEDICAL PROCEDURE**

Minor accidents such as cuts, muscle strains, which do not impair the ability to work, must be reported to the supervisor.

- 1 Employees should not be permitted to leave the property without their Supervisor's approval.
- 2 Supervisor shall treat the injured employee with the Plibrico medical first aid kit or accompany the employee to the in-Plant Infirmary or First Aid Station.
- 3 Provide the medical staff with information regarding the injury.
- 4 Complete Plibrico Accident Report and investigate the incident as required. Notify key Supervisor and Managers if necessary, as soon as possible.

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### **MEDICAL TREATMENT REQUIRED PROCEDURE**

#### **MEDICAL TREATMENT MINOR ACCIDENTS**

Minor injuries or illness that require medical attention such as cuts, minor falls, abrasion, or contusions that are clearly non-life threatening can be treated at the facilities Medical Infirmary, Clinic, or other suitable medical care facility. **If an Occupational Medical Facility is located near the jobsite, it is preferred over any other "off Plant site" medical treatment facility. (See Occ Med. Facility's section)**

1. Employees should not be permitted to leave the property without their Supervisor's approval.
2. Supervisor shall accompany the employee to the treating medical facility.
3. Provide the medical staff with information regarding the injury.
4. Complete Plibrico Accident Report and investigate the incident as required and notify key Supervisor and Managers as soon as possible.
5. Provide the treating Physician or Staff with information about working within the employee's restrictions on the jobsite. **(Restrictive Work Program)**

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## **MAJOR EMERGENCY MEDICAL PROCEDURE**

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ALL MAJOR ACCIDENTS INVOLVING **UNCONSCIOUSNESS** OR MAJOR **TRAUMA** REQUIRE PARAMEDICS!!!!

### **MAJOR ACCIDENTS**

1. Secure the injured person: **DO NOT MOVE SERIOUSLY INJURED OR UNCONSCIOUS PERSONS** unless he/she is in further danger.
2. Stop bleeding, assist respirations, and keep warm
3. Send for **HELP**: 'Anyone' available should make a call for help. Send someone to wait at the job entrance to direct the paramedics to the injured employee's location.
4. **KNOW THIS INFORMATION AND TELL THE PARAMEDICS**:
  - a. Location of the injured employee (floor, etc.).
  - b. General nature of the injury: shock, amputation, fall, etc.
  - c. Any unsafe conditions that might be encountered
5. Gather first aid supplies and tend to the injured employee.
6. Supervisors must accompany the injured employee to the treating facility.
7. Give any information to the treating facility about the injuries and accident details.
8. Contact family members of the employee and key Plibrico Managers.
9. Complete Plibrico Accident Report and investigate the incident as required and notify key Supervisor and Managers as soon as possible.

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## **EMERGENCY TRANSPORTATION MEDICAL FACILITIES**

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Employees should not be permitted to leave the property without their Supervisor's approval. The following guidelines should be followed for **emergency transportation**:

1. Supervision within PLIBRICO COMPANY will decide what type of transportation will be used. If medical attention is necessary during transport, the ambulance will be used. If there is any doubt, the ambulance will always be the first choice. Dial 911
2. The hospital emergency room or the emergency clinic must be notified when the transportation vehicle leaves the property. All available information regarding the nature and extent of the injury should be given to the ambulance crew and emergency room staff. If chemicals are involved, Safety Data Sheets (SDS) or other chemical or toxin information shall be provided.
3. The Supervisor or designee must accompany the injured employee to the clinic or hospital.
4. The Supervisor or designee must notify the injured employees nearest relative after first aid has been rendered and he/she is on their way to the hospital.

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## **FIRST AID EQUIPMENT AND SUPPLIES**

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Every project shall be equipped with a fully stocked first aid kit. The kit should be stored where it is always accessible to the Crews. The kit should have the minimum supplies listed below to treat injuries.

### **First Aid Boxes shall include the minimum:**

- 10 4x4 sterile packaged dressings
- 6 rolls of 4" bandages
- 2 rolls of tape
- 2 ice packs
- 8 prs rubber gloves
- 1 box burn gel
- 1 box butterfly wound closers
- 1 disposable blanket
- 1 flashlight
- 1 blood cleanup kit

Personnel of PLIBRICO COMPANY shall not dispense medication.

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## **MEDICAL RELEASE / RETURN TO WORK AUTHORIZATION FORMS**

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When an employee returns from the physician, hospital, or clinic, he/she must present a Medical Release / Return to Work Authorization form.

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## **RESTRICTIVE WORK POLICY**

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Plibrico Company will provide work within each employee restrictions given by the treating physician for work related accidents. The Supervisors must obtain a copy of the employee's restrictions and follow the doctor's orders without exception. If the injured employee's restrictions will allow him to work as a regular member of the Crew, then that would be the best choice for the employee. Fire watch and Confined Space Attendants are a few suggestions of regular duties. Conditions on the jobsite must not interfere with the employee's restrictions or cause danger to others working on the Crew. If no regular positions are available at the jobsite, the employee can be assigned to the Crew Office Trailer to assist with daily documentation / paperwork for the project as long as the employees restrictions are followed. Job restriction employees must be coordinated with the Safety Mgr.

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## **OCCUPATIONAL MEDICAL FACILITY**

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To provide our employees with the best care possible in the event of an industrial accident or illness, Occupational Medical Facilities are key to good care. Occ. Med. Facilities and their Physicians are specialized in the field of industrial accident / illness emergency care. It is Plibrico Company's primary objective to assist the recovery of employees injured on the job so that they may return to work as quickly as possible without suffering financial loss. The only exception is a non-work-related incident or a severe injury where immediate victim care is needed.

Each Office must search for an Occupational Medical Facility prior to the start of each project. A contact must be made to the facility to learn their location, phone number, work hours, doctor on staff and the treatment provided. This information must be given to all Plibrico Supervisors and Superintendents working the project. A posting of this information is required by using the Break Trailers Bulletin Board attachment.

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## **TRANSPORTATION OF EMPLOYEES OCC. MED. MEDICAL FACILITY**

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Injuries and illness that are not considered or does not have the potential of becoming life threatening must be treated at an Occ. Med Facilities. The following guidelines shall be followed for transportation:

1. Employees should not be permitted to leave the property without their Supervisor's approval.
2. Supervisor shall accompany the employee to the nearest Occ. Med. Facility for treatment.
3. Provide the medical staff with information regarding the injury / illness.
4. Provide information for Restrictive Work Program.
5. Complete Plibrico Accident Report and investigate the incident as required and notify key Supervisor and Managers as soon as possible.
6. Provide restrictive work for the employee at the jobsite within their restrictions.
7. Discuss Restrictive Work Assignment with Safety Mgr.





## *Aiming for Zer-0- Accidents!*

Supervisor: \_\_\_\_\_

Cell #: \_\_\_\_\_

Plant Emergency Contact: \_\_\_\_\_

Plant First Aid: \_\_\_\_\_

Local Hospital: \_\_\_\_\_

Occupational Med. \_\_\_\_\_

Evacuation Alarm: \_\_\_\_\_

Evacuation meeting point: \_\_\_\_\_

Any and all accidents must be reported immediately to your Supervisor but no later than the end of the shift.

**SECTION #16**

**BLOODBORNE PATHOGENS**

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## **Purpose**

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The purpose of this program is to eliminate or minimize employee occupational exposure to blood or certain other body fluids and to comply with the OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030.

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## **Applicability/Scope**

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This program applies to all Plibrico Corporation employees who, as a condition of their employment, may be expected to incur occupational exposure to bloodborne pathogens, regardless of frequency (see exposure determination section of this policy, Appendix C)

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## **Accountability**

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The Safety Mgr. responsibility to ensure all aspects of this program are implemented and kept up-to-date.

It is the Safety Mgr. to make sure all first responders training is kept current. It is also the program administrator's responsibility to communicate this program to all employees, so they are aware of who is considered a first responder.

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## **Definitions**

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**Bloodborne Pathogens** – pathogenic microorganisms that re present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

**Decontamination** – the use of physical or chemical means to remove, inactivate or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

**Engineering controls** – controlling (e.g., sharp disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

**Exposure incident** – a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

**Licensed healthcare professional** – a person who is legally permitted to perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up.

**HBV** – hepatitis B virus. Appendix C

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## **Definitions cont.**

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**HIV** – human immunodeficiency virus.

**Occupational exposure** – reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties.

**Work practice controls** – control that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

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## **Procedures**

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### **Exposure Determination**

OSHA requires employers to perform an exposure determination concerning which employees may incur occupational exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment (i.e. employees are exposed even if they wear personal protective equipment).

This exposure determination is required to list all job classifications, in which all employees may be expected to incur such occupational exposure, regardless of frequency. The following job classifications are in this category:

- **Crew members that are exposed to blood from injured employees**

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

- **Employees**

### **Implementation Schedule and Methodology**

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

## **Compliance Methods**

Universal precautions will be observed at this facility to prevent contact with blood or other potentially infectious materials. All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual.

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

- **Use disposable equipment / gloves**

Supervisors shall ensure that after the removal of personal protective gloves, employees shall wash hands and any other potentially contaminated skin area immediately or as soon as feasible with soap and water. Supervisors shall ensure that if employees incur exposure to their skin or mucous membranes then those areas shall be washed or flushed with water as soon as feasible following contact.

## **Contaminated Equipment**

The program administrator is responsible for ensuring that equipment, which has become contaminated with blood or other potentially infectious materials, shall be examined prior to servicing or shipping, and shall be decontaminated as necessary unless the decontamination of the equipment is not feasible.

## **Personal Protective Equipment**

The program administrator is responsible for ensuring that the following provisions are met:

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

The Safety Mgr. is responsible for distribution of clothing and/or procedures, which would require the protective clothing.

### ***PPE Use***

The program administrator shall ensure that the employee uses appropriate PPE, unless the supervisor shows that employee temporarily and briefly declined to use PPE when, under rare and extraordinary circumstance, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of healthcare or posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances shall be investigated and documented to determine whether changes can be instituted to prevent such occurrences in the future.

### ***PPE Accessibility***

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

### ***PPE Cleaning, Laundering and Disposal***

All personal protective equipment will be cleaned, laundered, and disposed of by Plibrico Corporation at no cost to the employees. All repairs and replacements will be made by Plibrico Corporation at no cost to employees.

All garments, which are penetrated by blood, shall be removed immediately or as soon as feasible. All PPE will be removed prior to leaving the treatment or clean up area.

When PPE is removed, it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

### ***Gloves***

Gloves shall be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, non-intact skin, and mucous membranes; when performing vascular access procedures and when handling or touching contaminated items or surfaces.

Disposable gloves used at this facility are not to be washed or decontaminated for re-use and are to be replaced as soon as practical, when they become contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. Utility gloves may be decontaminated for re-use provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

### ***Eye and Face Protection***

Masks in combination with eye protection devices, such as goggles or glasses with solid side shield or chin length face shields, are required to be worn whenever splashes, spray platter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can reasonably be anticipated. Situations at this facility which would require such protection follow:

### **Housekeeping**

Each Plibrico Corporation jobsite and location will be cleaned and decontaminated according to the following schedule and by utilizing the following materials:

All contaminated work surfaces will be decontaminated after completion of procedures and immediately or as soon as feasible after any spill of blood or other potentially infectious materials.

Any broken glassware, which may be contaminated, will not be picked up directly with the hands

### **Regulated Waste Disposal**

The container shall be placed in a secondary container if leakage of the primary container is possible.

The second container shall be closeable, constructed to contain all contents and prevent leakage during handling, storage and transport, or shipping.

The second container shall be labeled or color-coded to identify its contents.

Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner, which would expose employees to the risk of percutaneous injury.

### **Hepatitis B Vaccine and Post-Exposure Evaluation and Follow-Up**

#### ***General***

Plibrico Corporation shall make available the Hepatitis B vaccine and vaccination series to all employees who have occupational exposure and shall post exposure follow-up to employees who have had an exposure incident.

Plibrico Corporation shall ensure that all medical evaluations and procedures including the Hepatitis B vaccine and vaccination series post exposure are:

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

All laboratory tests shall be conducted by an accredited laboratory, at no cost to the employee.

#### ***Hepatitis B Vaccination***

The program administrator oversees the Hepatitis B vaccination program.

Hepatitis B vaccination shall be made available to all employees who have occupational exposure after they have received the training in occupational exposure (see information and training) and within 10 working days of initial assignment unless the employee has previously received the complete Hepatitis B

vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

Participation in a pre-screening program shall not be a prerequisite for receiving Hepatitis B vaccination.

If the employee initially declines Hepatitis B vaccination, but at a later date while still covered under the standard decides to accept the vaccination, the vaccination shall then be made available.

All employees who decline the Hepatitis B vaccination offered shall sign the OSHA required waiver indicating their refusal. See Appendix C.

If a routine booster dose of Hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster doses shall be made available.

### ***Post Exposure Evaluation and Follow-Up***

All exposure incidents shall be reported, investigated, and documented. When the employee incurs an exposure incident, it shall be reported to the program administrator.

Following a report of an exposure incident, the exposed employee shall immediately receive a confidential medical evaluation and follow-up, including at least the following elements:

- Documentation of the route of exposure and the circumstances under which the exposure incident occurred;
- Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by state or local law;

The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the program administrator shall establish that legally required consent cannot be obtained.

When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated. Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

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

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

All employees who incur an exposure incident will be offered post-exposure evaluation and follow-up in accordance with the OSHA standard. All post exposure follow-up will be performed by the designated medical facility.



## **Information Provided To the Healthcare Professional**

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

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

## ***Healthcare Professional's Written Opinion***

The Safety Mgr. shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation. The healthcare professional's written opinion for HBV vaccination shall be limited to whether HBV vaccination is indicated for an employee and if the employee has received such vaccination.

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

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

**Note:** All other findings or diagnosis shall remain confidential and shall not be included in the written report.

## ***Labels and Signs***

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

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

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

## ***Information and Training***

The Supervisor shall ensure that training is provided at the time of initial assignment to tasks where occupational exposure may occur and that it shall be repeated within twelve months of the previous training.

Training shall be tailored to the education and language level of the employee and offered during the normal work shift. The training will be interactive and will cover the following:

- A copy of the standard and an explanation of its contents;
- A discussion of the epidemiology and symptoms of bloodborne diseases;
- An explanation of the modes of transmission of bloodborne pathogens;
- An explanation of the company Bloodborne Pathogen Exposure Control Plan (this program) and a method for obtaining a copy;
- The recognition of tasks that may involve exposure;
- An explanation of the use and limitations of methods to reduce exposure, for example, engineering controls, work practices and personal protective equipment (PPE);
- Information on the types, use, location, removal, handling, decontamination, and disposal of PPE's;
- An explanation of the basis of selection of PPE's;
- Information on the Hepatitis B vaccination, including efficacy, safety, method of administration, benefits, and that it will be offered free of charge;
- Information on the appropriate actions to take and persons to contact in an emergency involving blood and other potentially infectious materials;
- An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting and medical follow-up;
- Information on the evaluation and follow-up required after an employee exposure incident; and
- An explanation of the signs, labels, and color-coding systems

The person conducting the training shall be knowledgeable in the subject matter.

Employees who have received training on bloodborne pathogens in the twelve months preceding the effective date of this policy shall only receive training in provisions of the policy that were not covered.

Additional training shall be provided to employees when there are any changes of tasks or procedures affecting the employee's occupational exposure.

## **Recordkeeping**

### ***Medical Records***

The Safety Mgr. is responsible for maintaining medical records as indicated below. These records will be secured in the Human Resources Office to ensure privacy.

Medical records shall be maintained in accordance with OSHA Standard 29 CFR 1910.20. These records shall be kept confidential and must be maintained for at least the duration of employment plus 30 years.

The records shall include the following:

- The name and social security number of the employee.
- A copy of the employee's HBV vaccination status, including the dates of vaccination.
- A copy of all results of examinations, medical testing, and follow-up procedures.

- A copy of the information provided to the healthcare professional, including a description of the employee's duties as they relate to the exposure incident, and documentation of the routes of exposure and circumstances of the exposure.

### ***Training Records***

The Safety Mgr. is responsible for maintaining the following training records. These records will be kept in the Human Resources Office

### ***Reference Standard***

Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens 29 CFR 1910.1030.

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### **FORMS**

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Revision History Record  
HBV Vaccination Statement  
Sharps Injury Log



# **HBV VACCINATION STATEMENT**

## **DECLINATION STATEMENT**

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring Hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease. If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with Hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Signature \_\_\_\_\_ Date \_\_\_\_\_

## **ACCEPTANCE STATEMENT**

I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring Hepatitis B virus (HBV) infection. I hereby accept the opportunity to be vaccinated with the Hepatitis B vaccine, at no charge to myself.

Employee Signature \_\_\_\_\_ Date \_\_\_\_\_



## **Appendix C**

### **BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN**

Plibrico Corporation is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this endeavor, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens."

The ECP is a key document to assist our company in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:

- Determination of employee exposure
- Implementation of various methods of exposure control, including:
  - Universal precautions
    - Engineering and work practice controls
    - Personal protective equipment
    - Housekeeping
  - Hepatitis B vaccination
  - Post-exposure evaluation and follow-up
  - Communication of hazards to employees and training
  - Recordkeeping
  - Procedures for evaluating circumstances surrounding an exposure incident

The methods of implementation of these elements of the standard are discussed in the subsequent pages of this ECP.

#### **PROGRAM ADMINISTRATION**

- Safety Mgr. responsible for the implementation of the ECP. ECP Leader will maintain, review, and update/review the ECP at least annually, during the month of January, and whenever necessary to include new or modified tasks and procedures.
- Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.
- Department Heads will maintain and provide all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. ECP Leader will ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes.
- Office Manager will be responsible for ensuring that all medical actions required are performed and that appropriate employee health and OSHA records are maintained.
- ECP Leader will be responsible for training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives.

## EMPLOYEE EXPOSURE DETERMINATION

The following is a list of all job classifications at our establishment in which **all** employees have occupational exposure:

<u>JOB TITLE</u>	<u>DEPARTMENT/LOCATION</u>
Employees	Constructions sites

The following is a list of job classifications in which **some** employees at our establishment have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:

<u>JOB TITLE</u>	<u>DEPARTMENT/ LOCATION</u>	<u>TASK/PROCEDURE</u>
Employees	Jobsite	Possible first aid

Part-time, temporary, contract and pool employees are covered by the standard.

## METHODS OF IMPLEMENTATION AND CONTROL

### Universal Precautions

All employees will utilize universal precautions.

### Exposure Control Plan

Employees covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training. All employees have an opportunity to review this plan at any time during their work shifts by contacting ECP Leader. If requested, we will provide an employee with a copy of the ECP free of charge and within 15 days of the request.

The Safety Mgr. is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures, which affect occupational exposure, and to reflect new or revised employee positions with occupational exposure.



## **Engineering Controls and Work Practices**

Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. The specific engineering controls and work practice controls used are listed below:

- This facility identifies the need for changes in engineering control and work practices through review of OSHA records, employee interviews, safety committee activities, etc.
- We evaluate need procedures or new products by vendor training.

### Personal Protective Equipment (PPE)

PPE is provided to our employees at no cost to them. Training is provided by department heads in the use of the appropriate PPE for the tasks or procedures employees will perform.

The types of PPE available to employees are as follows:

- Rubber Gloves

PPE is located within the first aid boxes. All employees using PPE must observe the following precautions:

- Wash hands immediately or as soon as feasible after removal of gloves or other PPE. If hand washing stations are not feasible appropriate antiseptic sanitizing hand cleaner will be provided.
- Remove PPE after it becomes contaminated, and before leaving the work area.
- Used PPE may be disposed of in a biohazardous waste container
- Wear appropriate gloves when it can be reasonably anticipated that their may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured, contaminated, or if their ability to function as a barrier is compromised.
- Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Never wash or decontaminate disposable gloves for reuse.
- Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.
- Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

The procedure for handling used PPE is as follows: All used PPE must be immediately discarded into a biohazardous waste container

## **HEPATITIS B VACCINATION**

Safety Mgr. will provide training to employees on hepatitis B vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability.

The hepatitis B vaccination series is available at no cost after training and within 10 days of initial assignment to employees identified in the exposure determination section of this plan. Vaccination is encouraged unless: 1) documentation exists that the employee has previously received the series, 2) antibody testing reveals that the employee is immune, or 3) medical evaluation shows that vaccination is contraindicated.

However, if an employee chooses to decline vaccination, the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept at the corporate office.

Vaccination will be provided by a local health care provider at a location near the property.

Following hepatitis B vaccinations, the health care professional's Written Opinion will be limited to whether the employee requires the hepatitis vaccine, and whether the vaccine was administered.

## **POST-EXPOSURE EVALUATION AND FOLLOW-UP**

Should an exposure incident occur, contact Safety Manager at the following number: 740 682 7755 ext.26.

An immediately available confidential medical evaluation and follow-up will be conducted by licensed health care professional. Following the initial first aid (clean the wound, flush eyes, or other mucous membrane, etc.), the following activities will be performed:

- Document the routes of exposure and how the exposure occurred.
- Identify and document the source individual (unless the employer can establish that identification is infeasible or prohibited by state or local law).
- Obtain consent and decide to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual's test results were conveyed to the employee's health care provider.
- If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.
- Assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).
- After obtaining consent, collect exposed employee's blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status
- If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

## **ADMINISTRATION OF POST-EXPOSURE EVALUATION AND FOLLOW-UP**

Safety Mgr. ensures that health care professional(s) responsible for employee's hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of OSHA's bloodborne pathogens standard.

Safety Manager ensures that the health care professional evaluating an employee after an exposure incident receives the following:

- a description of the employee's job duties relevant to the exposure incident
- route(s) of exposure
- circumstances of exposure
- if possible, results of the source individual's blood test
- relevant employee medical records, including vaccination status

Safety Manager provides the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

## **PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT**

Safety Mgr. will review the circumstances of all exposure incidents to determine:

- engineering controls in use at the time
- work practices followed
- a description of the device being used
- protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)
- location of the incident
- procedure being performed when the incident occurred
- employee's training

If it is determined that revisions need to be made, the Safety Mgr. will ensure that appropriate changes are made to this ECP. (Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.).

## **EMPLOYEE TRAINING**

All employees who have occupational exposure to bloodborne pathogens receive training conducted by the Safety Manager.

All employees who have occupational exposure to bloodborne pathogens receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program covers, at a minimum, the following elements:

- a copy and explanation of the standard
- an explanation of our ECP and how to obtain a copy
- an explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident
- an explanation of the use and limitations of engineering controls, work practices, and PPE
- an explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
- an explanation of the basis for PPE selection
- information on the hepatitis B vaccine, including information on its efficacy, safety, method of

- administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge
- information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM
  - an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available
  - information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident
  - an explanation of the signs and labels and/or color coding required by the standard and used at this facility
  - an opportunity for interactive questions and answers with the person conducting the training session.

## **RECORDKEEPING**

### Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least **three years** at the Safety Office. The training records include:

- the dates of the training sessions
- the contents or a summary of the training sessions
- the names and qualifications of persons conducting the training
- the names and job titles of all persons attending the training sessions

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to the Safety Manager.

### Medical Records

Medical records are maintained for each employee with occupational exposure in accordance with 29 CFR 1910.20, "Access to Employee Exposure and Medical **Records**."

Safety Manager is responsible for maintenance of the required medical records. These **confidential** records are kept at the Safety Office for at least the **duration of employment plus 30 years**.

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to the Safety Manager.

### Transfer of Records

#### **1910.1030(h)(4)(i)**

The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

#### **1910.1030(h)(4)(ii)**

If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three-month period.

#### OSHA Recordkeeping

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities are done by the Office Manager.

## **SECTION #17**

### **ACCIDENT, INCIDENT, NEAR MISS, AND DAMAGE REPORTING / INVESTIGATING POLICY & FORMS**

# **ACCIDENT, INCIDENT, AND DAMAGE REPORTING / INVESTIGATING POLICY & FORMS**

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## **ACCIDENT, INCIDENT, AND NEAR MISS REPORTING**

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All incidents, however minor, must be reported to the Supervisor as soon after the accident has happened, but no later than the end of the shift. Sometimes minor injuries can develop into serious injuries.

Near Miss Accidents are to be reported and investigated for root cause. Near Miss Incidents may be the pre-cursor to a much larger accident that's to come. All NM incidents reports are to be reviewed for corrective action that may resolve the risk. All NM reporting shall be reported on the Plibrico Incident forms and sent to the Office Mgr. and Safety Mgr. for review.

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## **HOME INJURIES**

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When an employee arrives for work with an injury that occurred outside of work, a "HOME INJURY STATUS REPORT" must be completed. Home injuries can prevent employees from performing the essential functions of their jobs and working with a home injury may result in an aggravation of such an injury.

If such a situation occurs, the employee should be sent home and directed to see a physician who can complete the "HOME INJURY STATUS REPORT." Employees should not be allowed to return to work until they have a full release from their physician based on the essential functions of their job.

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## **INVESTIGATION**

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The Investigation must be completed as soon as possible after the scene is secured and all injured parties are treated. By completing the investigation as soon as possible, you are ensuring that the facts gathered are as accurate as possible.

Incident investigation must be fact-finding, not fault finding. The purpose is to learn the true cause so that similar incidents can be prevented and determine facts bearing on legal liability. Another purpose of the investigation or fact-finding is to prepare accurate documentation in case of possible litigation. From the investigation, a written report will be completed for all serious incidents. The report should be completed by the Supervisor who has investigated the incident. The report should contain the following:

1. Detailed description of the incident, including answers to the following:
  - a. What happened?
  - b. Who (individuals and companies) was involved?
  - c. When did the incident occur?
  - d. What injuries/property damage resulted?
2. Photographs taken.
3. Diagrams drawn of the scene.
4. Statement(s) from witness (es).
5. Conclusions should be developed regarding the physical cause of the incident, but should not deal with the placement of legal liability upon any party.

ONLY SUPERVISORY EMPLOYEES TRAINED IN INCIDENT INVESTIGATION PROCEDURES SHOULD TAKE WITNESS STATEMENTS AS PART OF THE INVESTIGATION.

NO PART OF THE REPORT SHALL BE GIVEN TO ANY PARTY, INCLUDING THE INJURED EMPLOYEE UNLESS AUTHORIZED BY THE PLIBRICO COMPANY MANAGEMENT OR LEGAL COUNSEL.

**KEY POINTS TO REMEMBER**

1. Get medical attention for all injured parties and notify the management office immediately.
2. Protect the scene's physical evidence.
3. Confiscate all faulty equipment or materials.
4. Take photographs of incident scene.
5. Obtain the names, addresses, and phone numbers of all witnesses.
6. Discourage all PLIBRICO COMPANY personnel from making any statements to the media.

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**EMPLOYEE ACCIDENT FORM REQUIREMENTS**

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The employee accident form (Employer's First Report) shall be prepared by the Supervisor or his designee the day of the accident and sent to the Safety Manager of PLIBRICO COMPANY the day of the accident. It is very important that all pertinent information be provided on the accident report. The following information is of the greatest value:

1. The employee's full name
2. The employee's complete address
  - a. Street
  - b. City
  - c. Zip Code
  - d. Telephone Number
3. Whether the accident resulted in lost time from work



# HOME INJURY STATUS REPORT

DATE: \_\_\_\_\_ NAME: \_\_\_\_\_ COMPANY: \_\_\_\_\_

INITIAL VISIT: \_\_\_\_\_ FOLLOW-UP VISIT: \_\_\_\_\_

## WORK STATUS

Return to work - NO  
restriction on \_\_\_\_\_

\_\_\_\_\_ Return to work on  
with the following restriction:

Unable to return to work  
(See below)

\_\_\_\_\_ No frequent lifting, bending, or twisting of  
the trunk.

Lifting restriction of \_\_\_\_\_ lbs.

Keep wound clean and dry.

---

Must use protective device.

---

No repetitive motion of affected area.

---

No prolonged standing or walking limit to \_\_\_\_\_ hours per day.

No overhead work.

---

Other

---

No use of ladders.

---

No kneeling.

---

## ESTIMATED DURATION OF RESTRICTED DUTY

At least until visit when we will reevaluate and notify of changes in restrictions.

Until

\*\*\*\*NOTE: These restrictions are based on medical criteria only. If such restricted duty is not available, the company may at their option send the employee home until the next evaluation at our office.

Physician's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# Plibrico Company, LLC

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## E – 1 Employee's Accident Report

Name: \_\_\_\_\_ SS# \_\_\_\_\_ DOB: \_\_\_\_\_

Address: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Position: \_\_\_\_\_ Duties at time of accident: \_\_\_\_\_

Hire date: \_\_\_\_\_ Date of injury / illness: \_\_\_\_\_ Date reported: \_\_\_\_\_ Today's date: \_\_\_\_\_

Regional Office: \_\_\_\_\_ Supervisor: \_\_\_\_\_

Nature of injury / illness: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What time did this occur? \_\_\_\_\_ Who was notified? \_\_\_\_\_

Explain what you were doing: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Witnesses, Y/N (if yes, give names ) \_\_\_\_\_

Were you offered medical attention, Y/N \_\_\_\_\_

If no, please explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Were you treated for your injury / illness, Y/N \_\_\_\_\_

Name of Treatment Center / Hospital: \_\_\_\_\_

Name of Doctor: \_\_\_\_\_

Phone numbers: \_\_\_\_\_

**E – 1 Employee’s Accident Report, page #2**

**Did you return to work after treatment Y/N** \_\_\_\_\_

**If no, explain** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**How do you feel the accident could have been avoided?** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Please note, in order to complete and process this report, copies of all medical documentation must be submitted to the Supervisor immediately.**

**Person completing form:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Employee’s Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

# Plibrico Company, LLC

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## W – 1 Witness Statement Report

Name: \_\_\_\_\_ Today's date: \_\_\_\_\_

Address: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Position: \_\_\_\_\_ Duties at time of incident / accident: \_\_\_\_\_

Hire date: \_\_\_\_\_ Date of incident / accident: \_\_\_\_\_ Date reported \_\_\_\_\_

Regional Office: \_\_\_\_\_ Supervisor: \_\_\_\_\_

Name of the employee(s) involved: \_\_\_\_\_

Did you actually SEE the incident / accident happen? Y/N \_\_\_\_\_ Time of occurrence? \_\_\_\_\_

Did you report this to anyone? Y/N \_\_\_\_\_ If yes, who? \_\_\_\_\_

What were the damages, injuries or complaints? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Explain what you were doing at the time: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How did it happen? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What could have been done to avoid this? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you feel the employee was following safe work practices? Y/N \_\_\_\_\_

Please explain: \_\_\_\_\_  
\_\_\_\_\_

Do you know the employee(s) on a personal basis? Y/N \_\_\_\_\_ If yes, how? \_\_\_\_\_

Witness Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**S – 1 Supervisor's Report**

Supervisor's Name: \_\_\_\_\_ Regional Office: \_\_\_\_\_

Date: \_\_\_\_\_ Phone / Cell #: \_\_\_\_\_

Name of injured employee(s) \_\_\_\_\_

Date made aware of occurrence? \_\_\_\_\_ By Whom? \_\_\_\_\_ What time? \_\_\_\_\_

Was first aid provided? Y/N \_\_\_\_\_ Transported for Medical treatment? Y/N \_\_\_\_\_

Did you investigate? Y/N \_\_\_\_\_ If yes, what did you discover? , If not, why?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was the employee performing his work duties at the time the incident / accident occurred? Y/N \_\_\_\_\_

If no, explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you feel the employee(s) were following safe work practices? Y/N \_\_\_\_\_

If not, explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Post-accident drug screen given? Y/N \_\_\_\_\_ If not, explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

What was done to see this does not happen again? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

**Plibrico Company, LLC**



**M – 1 Supt. / Office Mgrs. Report**

Supt. / Mgrs. Name: \_\_\_\_\_ Regional Office: \_\_\_\_\_

Date: \_\_\_\_\_ Phone / Cell #: \_\_\_\_\_

Name of injured employee(s) \_\_\_\_\_

Date made aware of occurrence? \_\_\_\_\_ By Whom? \_\_\_\_\_ What time? \_\_\_\_\_

Did you investigate? Y/N \_\_\_\_\_ If yes, what did you discover? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If not, why? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Do you feel the employee(s) were following safe work practices? Y/N \_\_\_\_\_

If not, explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Post-accident drug screen given? Y/N \_\_\_\_\_ If not, explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

How could this been avoided? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

**Plibrico Company, LLC**



**D – 1 Incident / New Miss / Property Damage Report**

Reported by: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Regional Office: \_\_\_\_\_ Date of occurrence: \_\_\_\_\_

Location: \_\_\_\_\_

Was Law Enforcement notified? \_\_\_\_\_

Personal injury involved? Y/N \_\_\_\_\_ (If yes, please complete forms E-1 and S,M-1)

Please provide description and type of incident or damage:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Cause or contributed to incident or damage:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Estimated cost of damage: \_\_\_\_\_

Steps taken to prevent recurrence:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Witnesses:

Name: \_\_\_\_\_ Position: \_\_\_\_\_

Name: \_\_\_\_\_ Position: \_\_\_\_\_

Please provide photos or any other information necessary when filing this report.

Person completing form: \_\_\_\_\_

Date: \_\_\_\_\_

Regional Mgr: \_\_\_\_\_

Date: \_\_\_\_\_



**V-1 Vehicle Accident Report Form**

**Driver Information:**

**Time & Place:**

Date of accident: \_\_\_\_\_ Time: \_\_\_\_\_  
Location: \_\_\_\_\_  
\_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Law Enforcement at the scene: Y/N \_\_\_\_\_ If not, explain \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Vehicle Information:**

Private / Company Owned Y/N \_\_\_\_\_  
Year: \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_ Tag # \_\_\_\_\_  
Extent of damage: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Personal Injury:** Please complete E-1 and S, M-1 Forms

**Damage to other vehicles or property:**

Driver of other vehicle: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_  
Year: \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_ Tag # \_\_\_\_\_  
Extent of damage: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

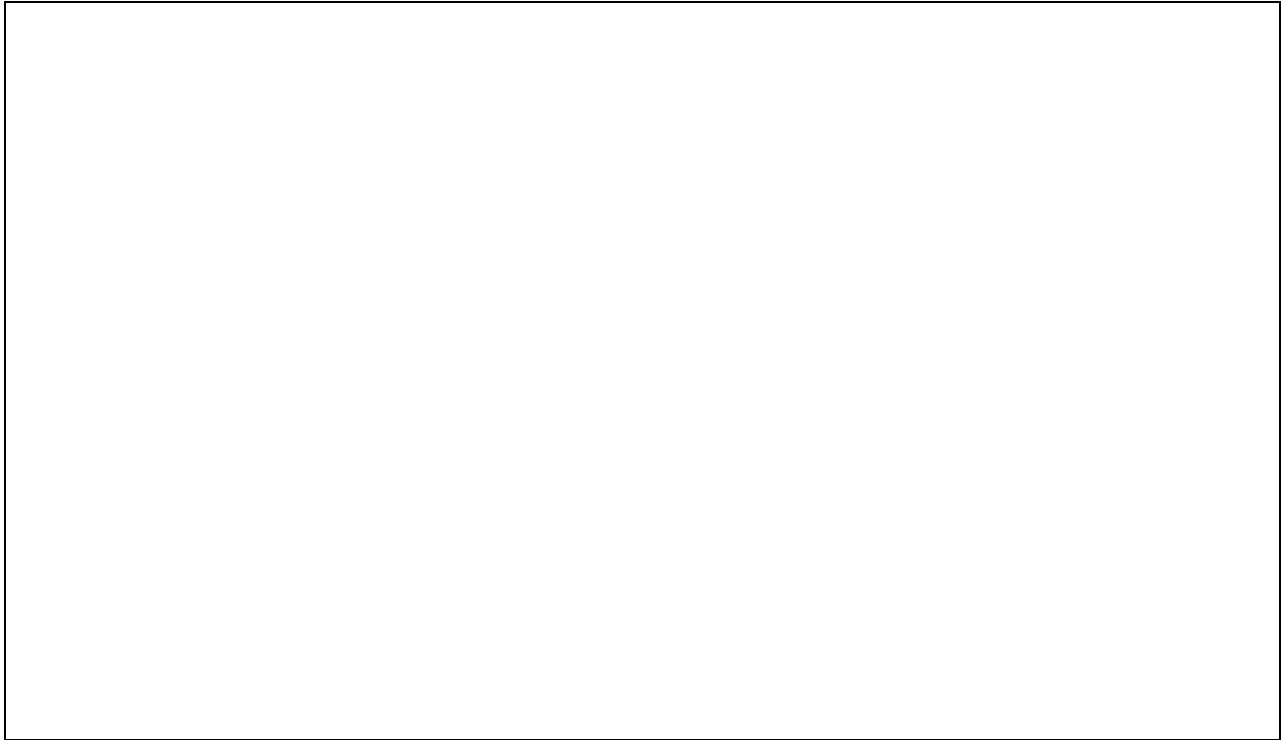
Type of property: \_\_\_\_\_  
Owners Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_  
Extent of damage: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**Explain Accident:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Describe Accident: (draw accident in detail)**



**Witnesses**

Name: \_\_\_\_\_ Phone # \_\_\_\_\_  
Name: \_\_\_\_\_ Phone # \_\_\_\_\_  
Name: \_\_\_\_\_ Phone # \_\_\_\_\_

Name completing the report: \_\_\_\_\_ Date: \_\_\_\_\_

**SECTION #18**

**EMERGENCY ACTION & FIRE PREVENTION PLAN**

# EMERGENCY ACTION & FIRE PREVENTION

## **Purpose**

The purpose of this plan is to protect all employees of the Plibrico Company in the event of an emergency and to be prepared to handle these emergencies in an efficient manner. The responsibilities include providing for the safety of personnel, preserving facilities and equipment, protecting the public from on-site incidents that affect the health and safety of the community, and contributing to overall community emergency preparedness.

## **Organization Functions and Responsibility**

Those designated *Emergency Coordinator* (EC) in the chain of command section of this plan shall determine if there is a need for evacuation; give the order for the alarm to be sounded; direct the evacuation activities; and maintain a list of outside emergency services. When the first person on this list is not available, refer to the chain of command section to determine who is next in command. Management shall screen and approve all press releases with the media.

Employees having questions about the Emergency Action Plan or duties may contact the facility Contractor Coordinator or Plibrico Supervisors for details and instructions.

Each employee shall receive training on the EAP for a safe orderly evacuation while on each host companies job site, along with the assistance of helping others. At any point where the EAP is changed, retraining of employees are necessary for the safety of all involved.

The designated EC shall obtain outside aid when necessary. There may be a need for outside services such as the fire department, hospital ambulance service, or law enforcement.

Management shall direct the care and treatment of the injured until medical assistance arrives.

All telephone receptionists shall maintain the switchboard and refuse incoming calls until directed otherwise by the evacuation supervisor. Emergency calls are to have priority.

The Supervisors shall account for their crews in the event of a facility evacuation.

The Supervisor shall expedite the search for any missing employees.

Employees, upon hearing the evacuation announcement or signal, shall shut down their equipment. Required personal protective equipment is to remain in use. Employees shall proceed quickly to the assigned assembly area, as located on the evacuation maps.

Employees shall remain at their assigned assembly area and shall remain there, pending further instructions from their Supervisor.

## **Facilities / Information Systems**

- Alarms Facility alarms should be sounded in the event of facility fire or tornado and an announcement over the intercom system shall be made concerning the nature of the emergency.
- Evacuation Maps Depending on the complexity of the building, evacuation maps should be developed that identify exits, fire extinguishers, and alarm pull boxes for easy reference.

## **Evacuation Procedures**

The evacuation procedures are specific for each section of each building. Every employee shall be trained in evacuation procedures specific to each location.

Evacuation maps shall be located throughout each location for easy reference. These maps shall contain fire extinguisher locations as well as exit locations.

Emergency shutdown procedures shall also be followed in the event of emergency evacuation. Shutdown procedures are specific for each Plibrico Company operation.

In general, the following procedures will be followed in the event of a facility evacuation:

1. All employees will stop what they are doing.
2. Next, if the employee operates equipment that has the potential to create more harm if it is not properly shut down, then the employee will take the proper steps to shut down the equipment (only if the employee is not in any immediate danger).
3. The employee will then follow the specific route established for the area in which he/she is working to evacuate the facility (included in the training).
4. The employee must then report to their designated supervisor at the assembly area so the supervisors may take a head count.
5. The employee must then remain in the designated assembly area until further instructions have been given by the supervisor.

## **Evacuation Assembly Areas**

All employees shall be trained to go the designated assembly area, which is located at the plant gate.

After employees have reached their assembly areas, their Supervisors shall immediately take a head count to ensure that no one is left in the building.

Employees are to remain in the assembly area, pending instruction from the Supervisor.

## **Fire Safety Procedures**

In the event of a facility fire, the following procedures should be followed:

1. Employees who first notice the fire shall call 9-1-1 and notify a supervisor or member of management.
2. If the Emergency Coordinator determines that the fire is serious, he/she shall make an announcement over the intercom notifying employees to evacuate the facility.
3. After notification has been given over the intercom, all employees shall evacuate the plant; specifically following the instruction given in the training for evacuation.
4. All employees must then congregate to the designated assembly area.
5. After the supervisors have determined where everyone is, they shall then notify the Fire Fighters of any missing personnel.

## **Fire Prevention Procedures**

In order to prevent fires from occurring, some steps must be taken. These steps include everyday activities, such as housekeeping and material storage. These steps will help to reduce the accumulation of flammable material in one area, thus reducing the potential for an uncontrollable fire.

Every employee at the Plibrico Company is responsible for maintaining a clean workspace. Every employee's workspace shall be free from tripping hazards wherever possible.

All employees shall recognize the existence of designated aisle ways. Employees shall not block these aisle ways with materials that may impede travel.

Adequate space must be maintained at every workstation. Aisle ways to these workstations must also be kept clear.

All records and paper storage shall comply with the city Fire Codes as to proper storage and limits to storage.

All flammables stored in excess of 25 gallons shall be stored in a flammable storage cabinet. All other forms of flammables stored in quantities less than 25 gallons must be secured in a safe location and away from stored oxygen cylinders.

When transferring flammable liquids to containers, those containers must be explosion proof with flash resisters in tact.

All flammable gas cylinders shall not be stored next to oxygen cylinders.

Flammable materials may not be stored near any of the welding operations.

Building heat furnaces shall be serviced by the maintenance department. Inspections are performed annually by an outside contractor.

The building's fire system should be checked annually to ensure that it is in proper working order.

## **Fire Extinguishers**

Fire extinguishers are the company's first line of defense against fire. Major fires, resulting in financial, as well as, human losses, usually begin as small, controllable fires. Fire extinguishers can be used to prevent these small fires from becoming major ones.

### Equipment Selection and Distribution

1. Fire extinguishers shall be selected based on the class of anticipated workplace fires and on the size and degree of hazard, which would effect their use (in most cases, an ABC rated fire extinguisher should be used).
2. Fire extinguishers shall be distributed so that the travel distance from the hazard area to any extinguisher is 50 feet or less.

### Fire Extinguisher Identification

1. Every fire extinguisher shall have a non-duplicating identification number clearly marked on it. The number shall also be marked on the wall or location of the fire extinguisher to ensure that the extinguishers remain in their specified positions.
2. The number, type, and general description of location shall be listed for all fire extinguishers on the fire extinguisher inventory list.
3. The location and number of all fire extinguishers shall be clearly marked on the evacuation maps. These maps will assist the inspector to locate all fire extinguishers.

### Inspection

1. Inspection is a "quick check" that an extinguisher is available and will operate. This is accomplished by physically checking that all fire extinguishers are in their designated places, have not been tampered with, and that there is no obvious physical damage or condition to prevent reliable operation.
2. Fire extinguisher inspections shall be conducted when initially placed into service and monthly thereafter. Fire extinguisher inspection data shall be recorded on the back of the fire extinguisher inspection tag.
3. Fire extinguisher inspection shall ensure that:
  - A. The operating instructions, which appear in the name plate, are legible and facing outward.
  - B. The seal and tamper indicator are not broken or missing.
  - C. The pressure gauge reading or indicator is in the operable position.
  - D. There are no obstructions to access or visibility.

## Maintenance

All fire extinguishers shall be subjected to an inspection each year by a licensed agent or a qualified fire extinguisher service contractor. Fire extinguishers, which have been discharged, damaged, or have been identified as needing maintenance will be serviced immediately.

## Record Keeping

Each extinguisher shall have a tag or label securely attached that indicates:

1. A record that maintenance and recharging were performed by a qualified contractor for the current year.
2. Month and year of inspections

## Training

All employees shall receive training on the general principles of fire extinguisher use and the hazards involved with this type of fire fighting. This training shall be provided upon initial employment and at least annually thereafter. Such training shall be documented on the employee training certification form.

\*NOTE: Employees are not designated to fight fires. Any use of fire extinguishers is to be considered voluntary and thus explained in the training session.

## **Tornado Safety Procedures**

When a tornado has been sighted in the area, certain procedures should be followed. In the event of a tornado warning, an announcement should be made over the intercom system to notify employees. After the announcement, employees should be instructed to do the following:

- Move to designated shelter areas (i.e. basements, designated rooms, etc).
- Stay away from windows.
- Take shelter under sturdy benches, tables or desks.
- Move to the lowest level of the building that you occupy.
- Stay away from the corners of the building.

Following a tornado strike, employees shall report to their designated assembly area when it is safe to do so. An announcement shall be made when conditions are safe. The Supervisor must then take attendance to verify the status of his/her employees.

## **Earth Quake Safety Procedures**

When an earth quake has occurred in the area, certain procedures should be followed. In the event of a earth quake, an announcement should be made over the intercom system to notify employees. After the announcement, employees should be instructed to do the following:

- Move to designated shelter areas
- Stay away from windows.
- Take shelter under sturdy benches, tables or desks.
- Stay away from masonry block walls.
- Move to the lowest level of the building that you occupy.
- Stay away from the corners of the building.

After an earth quake strikes, employees shall report to their designated assembly area when it is safe to do so. An announcement shall be made when conditions are safe. The Supervisor must then take attendance to verify the status of his/her employees.

## **Flood Safety Procedures**

When a flood has been sighted in the area, certain procedures should be followed. In the event of a flood warning, an announcement should be made over the intercom system to notify employees. After the announcement, employees should be instructed to do the following:

- Move to designated shelter areas
- Stay away from windows.
- Take shelter under sturdy benches, tables or desks.
- Stay away from masonry block walls.
- Move to the lowest level of the building that you occupy.
- Stay away from the corners of the building.

After a flood strikes, employees shall report to their designated assembly area when it is safe to do so. An announcement shall be made when conditions are safe. The Supervisor must then take attendance to verify the status of his/her employees.

## **Chain of Command**

A chain of command should be established to minimize confusion so that employees will have no doubt who has authority for making decisions. An ***Emergency Coordinator*** (EC) will be designated for each building. Because of the importance of these functions, adequate backup must be arranged so that trained personnel are always available. Those EC's designated in the chain of command list shall be responsible for:

1. Assessing the situation and determining whether an emergency exists that requires activating the emergency procedures.
2. Ensuring that outside emergency service, such as medical aid and local fire departments are called in, when necessary.
3. Directing all efforts in the area, including evacuating personnel and minimizing property loss.



## *Chain of Command*

1. Plant Manager / Site Construction Coordinator
2. Plibrico Supervisors

## **Communications**

A method of communications is needed to alert employees to the evacuation or to take other action as required in the plan. Alarms should be audible or seen by all people in the location. The alarm should be distinctive and recognizable as a signal to evacuate the work area or perform actions designated under the emergency action plan. The employer should explain to each employee the means for reporting emergencies, such as public-address systems, or telephones. Emergency phone numbers (9-1-1) should be posted in or near telephones, on employee's notice boards, or in other conspicuous locations. All employees shall be trained to identify the warning signals for emergency situations. In the event of a power outage, announcements concerning emergency conditions will be personally given to each supervisor working at Plibrico Company by the EC's.

Management shall be notified of the circumstances following an emergency, which threatens a Plibrico Company facility or the lives of employees as soon as possible.

## **Accounting for Personnel**

The person in command will need to know when all personnel have been accounted for. This can be difficult during shift changes or if contractors or customers are on site. All area supervisors are appointed to account for personnel and to inform the person in charge of those personnel believed to be missing.

Each department supervisor is responsible for creating and maintaining list of current employees in his/her department. This list will be copied and given to the EC. In the event of a facility evacuation, these lists will be cross referenced to check for attendance. Those not accounted for will be assumed missing.

In the event of a facility evacuation, all visitors must be accounted and expedite a search for those who are missing.

Each location has evacuation maps with exits indicated, as well as alternate exits. Specific routes should be designated as exit routes in emergencies (included in the training session).

## **Rescue and Medical Duties for Employees**

In the event of a medical emergency, employees are directed to contact emergency medical assistance by dialing 9-1-1 immediately. Employees are not expected to perform any rescue or medical duties.

Therefore, there is no provisions for training employees in these tasks. The municipal emergency medical facility is located at a distance approximately (5 miles) away. The municipal fire and police departments are located at a distance approximately (5 miles) away. Emergency phone numbers are posted at each production area phone. At no time should an employee be directed to perform emergency duties, which may endanger his/her life.

## **Training**

Training is important to the effectiveness of an emergency plan. Before implementing an emergency action plan, a sufficient number of persons must be trained to assist in the safe and orderly evacuation of employees and/or customers. Training for each type of disaster response is necessary so that employees know what actions are required.

All employees should be trained in the following:

1. Evacuation plans
2. Alarm systems
3. Reporting procedures for personnel
4. Shutdown procedures
5. Types of potential emergencies: fire, tornado, flood, etc.

These training programs should be provided as follows:

1. Initially when the plan is developed
2. For all new employees
3. When new equipment, materials, or processes are introduced
4. When procedures have been updated or revised
5. When exercises show that employee's performance must be improved
6. At least annually

A drill should be held for all personnel, at least annually, and an evaluation of performance made immediately by management and employees. When possible, drills should include groups supplying outside services such as fire and police departments. In buildings with several places of employment, the emergency plans should be reviewed periodically and updated to maintain adequate personnel response and program efficiency.





**SECTION #19**

**FIRE PROTECTION & FIRE PREVENTION**

This section describes the requirements for Fire Protection and Prevention.

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## **FIRE PROTECTION**

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1. Fire extinguishers will be provided in various locations at each property pursuant to local fire codes. These fire extinguishers shall be conspicuously posted with signs indicating their location.
2. Fire extinguishers should be updated yearly and inspected monthly to ensure that they are in their designated locations, and not blocked, and are working properly.
3. All employees will be trained in the correct use of fire extinguishers.

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## **FIRE EXTINGUISHER USE**

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### **FIRE (Small and Contained)**

If a small, contained fire is discovered:

1. If you wish to do so, use a fire extinguisher to put it out; remember that you are not required to fight fires.
2. If you do not wish to use an extinguisher, notify your supervisor immediately.

### **FIRE (Uncontrolled/Not Readily Extinguished)**

If a fire cannot be extinguished quickly by a hand extinguisher, the following steps should be followed to ensure your safety:

1. Leave the area immediately
2. Notify your immediate supervisor
3. If alarm is sounded, walk to the designated assembly area outside of the building.
4. Stay in the designated assembly area until further notice from your supervisor.

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## **FIRE PREVENTION**

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1. All electrical wiring and equipment for light, heat or power shall be installed in compliance with applicable codes.
2. Smoking shall be prohibited in the vicinity of operations that constitute a fire hazard and shall be posted "No Smoking or Open Flame"
3. Good housekeeping is critical in fire prevention. Dispose of refuse in appropriate containers. Metal garbage cans are to be used in maintenance areas.
4. Be aware of fire extinguisher locations at all times.
5. Only approved containers and portable tanks shall be used for storage of and handling of flammable and combustible liquids.
6. No more than 25 gallons of flammable or combustible liquids shall be stored in a room outside an approved storage cabinet. No more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one-storage cabinet. No more than three storage cabinets may be located in a single storage area.
7. Inside storage rooms shall be constructed to meet the required fire-resistive rating for their use. Where an automatic extinguishing system is provided, the system shall be designed and installed in an approved manner. Materials, which react with water and create a fire hazard shall not be stored in the same room with flammable or combustible liquids. Electrical wiring and equipment located in inside storage rooms shall be approved for Class 1, Hazardous Locations. Every inside storage room shall be provided with either a gravity or mechanical exhausting system. In every inside room, a clear aisle, at least three feet wide, shall be maintained.
8. Storage of containers (not more than 60 gallons each) shall not exceed 1,100 gallons in any one pile or area. The storage area shall be graded to divert possible spills away from buildings or other exposures, or shall be surrounded by a curb or earth dike. Storage areas shall be free from weeds, debris, and other combustible material not necessary to the storage.
9. Flammable liquids shall be kept in closed containers when not actually in use.

**SECTION #20**

**HOST COMPANY EMERGENCY ACTION PLAN**



## **Purpose**

The purpose of this plan is to protect all employees of the Plibrico Company working in facilities owned by our Customer in the event of an emergency and to be prepared to handle these emergencies in an efficient manner. The responsibilities include providing for the safety of personnel, preserving facilities and equipment, protecting the public from on-site incidents that affect the health and safety of the community, and contributing to overall community emergency preparedness.

## **Organization Functions and Responsibility**

The Supervisor or Designated Facility Personnel shall determine if there is a need for evacuation; give the order for the alarm to be sounded; direct the evacuation activities; and maintain a list of outside emergency services. The Supervisor shall obtain outside aid when necessary only if help from the facility is unavailable. There may be a need for outside services such as the fire department, hospital ambulance service, or law enforcement.

Management shall direct the care and treatment of the injured until medical assistance arrives.

The Supervisors shall account for their crews in the event of a facility evacuation.

The Supervisor shall expedite the search for any missing employees with the assistance of the Emergency Services.

Employees, upon hearing the evacuation announcement or signal, shall shut down their equipment or stop working. Required personal protective equipment is to remain in use. Employees shall proceed quickly to the assigned assembly area that was pre-determined by the facility.

Employees shall remain at their assigned assembly area and shall remain there, pending further instructions from their Supervisor.

## **Facilities / Information Systems**

The following facilities are to be consulted in the event of an emergency:

- Alarms                      Community alarms may be sounded in the event of a weather emergency. Facility alarms should be sounded in the event of facility fire or tornado and an announcement over the intercom system shall be made concerning the nature of the emergency.

## **Evacuation Procedures**

The evacuation procedures are to be followed at our hoist facility for each section of each building. Every employee shall be instructed in evacuation procedures specific to each location.

Evacuation maps shall be reviewed in each location for easy reference. Maps of fire extinguisher locations as well as exit locations shall be reviewed if available as well.

Emergency shutdown procedures shall also be followed in the event of emergency evacuation. Shutdown procedures are specific for each Plibrico Company operation.

In general, the following procedures will be followed in the event of a facility evacuation:

1. All employees will stop what they are doing.
2. Next, if the employee operates equipment that has the potential to create more harm if it is not properly shut down, then the employee will take the proper steps to shut down the equipment (only if the employee is not in any immediate danger).
3. The employee will then follow the specific route established by the facility.
4. The employee must then report to their designated supervisor at the assembly area so the supervisors may take a head count.
5. The employee must then remain in the designated assembly area until further instructions have been given by the supervisor.

## **Evacuation Assembly Areas**

All employees shall report to the designated assembly area.

After employees have reached their assembly areas, their Supervisors shall immediately take a head count to ensure that no one is left in the building.

Employees are to remain in the assembly area, pending instruction from the Supervisor.

## **Fire Safety Procedures**

In the event of a facility fire, the following procedures should be followed:

1. Employees who first notice the fire shall call the Plants Safety Services if available or dial 9-1-1 for outside assistance and notify a supervisor and members of the facilities management.
2. If the Supervisor determines that the fire is serious, he/she shall make an announcement over the intercom notifying or activating the alarm system the employees must evacuate the facility.
3. All employees must then congregate to the designated assembly area.
5. After the Supervisors have determined where everyone is, they shall then notify the Fire Fighters of any missing personnel.

## **Fire Prevention Procedures**

In order to prevent fires from occurring, some steps must be taken. These steps include everyday activities, such as housekeeping and material storage. These steps will help to reduce the accumulation of flammable material in one particular area, thus reducing the potential for an uncontrollable fire.

Every employee at Plibrico is responsible for maintaining a clean workspace. Every employee's workspace shall be free from tripping hazards wherever possible.

All employees shall recognize the existence of designated aisle ways. Employees shall not block these aisle ways with materials that may impede travel.

Adequate space must be maintained at every workstation. Aisle ways to these workstations must also be kept clear.

All flammables stored in excess of 25 gallons shall be stored in a flammable storage cabinet. All other forms of flammables stored in quantities less than 25 gallons must be secured in a safe location and away from stored oxygen cylinders.

When transferring flammable liquids to containers, those containers must be explosion proof with flash resisters in tact.

All flammable gas cylinders shall not be stored next to oxygen cylinders.

Flammable materials may not be stored near any of the welding operations.

## **Fire Extinguishers**

Fire extinguishers are the company's first line of defense against fire. Major fires, resulting in financial, as well as, human losses, usually begin as small, controllable fires. Fire extinguishers can be used to prevent these small fires from becoming major ones.

### Equipment Selection and Distribution

1. Any fire extinguisher that is take to the jobsite shall be selected based on the class of anticipated workplace fires and on the size and degree of hazard, which would affect their use (in most cases, an ABC rated fire extinguisher should be used).
2. The host facility Fire extinguishers shall have located in the work areas so easy quick access can be accomplished.

## Training

All employees shall receive training on the general principles of fire extinguisher use and the hazards involved with this type of fire fighting

\*NOTE: Employees are not designated to fight fires. Any use of fire extinguishers is to be considered voluntary and thus explained in the training session.

## **Tornado Safety Procedures**

When a tornado has been sighted in the area, certain procedures should be followed. In the event of a tornado warning, an announcement should be made over the intercom system to notify employees. After the announcement, employees should be instructed to do the following:

- Move to designated shelter areas (i.e. basements, designated rooms, etc).
- Stay away from windows.
- Take shelter under sturdy benches, tables, or desks.
- Move to the lowest level of the building that you occupy.
- Stay away from the corners of the building.

Following a tornado strike, employees shall report to their designated assembly area when it is safe to do so. An announcement shall be made when conditions are safe. The Supervisor must then take attendance to verify the status of his/her employees.

## **Earth Quake Safety Procedures**

When an earthquake has occurred in the area, certain procedures should be followed. In the event of an earthquake, an announcement should be made over the intercom system to notify employees. After the announcement, employees should be instructed to do the following:

- Move to designated shelter areas
- Stay away from windows.
- Take shelter under sturdy benches, tables, or desks.
- Stay away from masonry block walls.
- Move to the lowest level of the building that you occupy.
- Stay away from the corners of the building.

After an earthquake strikes, employees shall report to their designated assembly area when it is safe to do so. An announcement shall be made when conditions are safe. The Supervisor must then take attendance to verify the status of his/her employees.

## **Flood Safety Procedures**

When a flood has been sighted in the area, certain procedures should be followed. In the event of a flood warning, an announcement should be made over the intercom system to notify employees. After the announcement, employees should be instructed to do the following:

- Move to designated shelter areas
- Stay away from windows.
- Take shelter under sturdy benches, tables, or desks.
- Stay away from masonry block walls.
- Move to the lowest level of the building that you occupy.
- Stay away from the corners of the building.

After a flood strikes, employees shall report to their designated assembly area when it is safe to do so. An announcement shall be made when conditions are safe. The Supervisor must then take attendance to verify the status of his/her employees.

**SECTION # 21**

**HOUSEKEEPING PLAN**

## **Housekeeping Policy, Plibrico Offices / Jobsites**

The purpose of this policy is to provide a safe clean working environment for all employees working at Plibrico. Everyone is responsible for keeping their work area neat and clean and by doing so, it sends a message to others that safety is at the forefront of Plibrico. Good Housekeeping provides a hazard free work area that is free of trash and waste that has the potential of causing fires. Clutter is also a leading cause of accidents from slips, trips, and falls.

### **GENERAL REQUIREMENTS**

Housekeeping hazards produce congestion, disorder, dirt, waste, trash, and other obstacles that lead to slips, trips and falls that can cause strains, sprains, broken bones, contusions, fractured ribs, and fatalities.

Work areas shall be kept sufficiently clean and orderly so that work activities can proceed in an efficient and safe manner in order to maintain safety and quality. These areas will be adequately lit, ventilated, protected and accessible as appropriate for the work being performed. Machinery and equipment will be arranged and stored to permit safe, efficient work activities and to provide ease in cleaning. Tools and accessories will be safely stored in cabinets, racks, or other suitable devices out of the traffic areas.

Sufficient waste containers and receptacles will be provided in appropriate locations and will be emptied regularly. Work areas and floors will be maintained free of debris, obstructions, foreign materials, or slippery substances such as oils, water, and grease.

Aisles, traffic areas and exits will shall be maintained free of materials and debris and shall be adequately lit and properly marked. All flammable and combustible liquids shall be stored in an approved container. All oily waste rags shall be stored in a metal container for removal.

Everyone is responsible for his or her work area, and Plibrico shall allow time each shift to maintain a clean, healthy work environment.

**SECTION #22**

**WALKING & WORKING SURFACES**



## **WALKING & WORKING SURFACES POLICY**

### **General Work Areas**

In order to maintain a safe work areas for our employees and customer. Plibrico has developed this Walking and Working Surfaces Policy to provide a good safe clean work area.

This policy work jointly with Plibrico Housekeeping Policy.

All Plibrico work sites must be maintained in a clean, sanitary, and orderly condition.

All interior work areas are to be kept dry to prevent slips and falls. All spilled materials and liquids must be cleaned up immediately according to proper procedures.

Combustible material such as paper, wood, ETC. must be must be stored away from any fire hazards / sources. All trash must be removed from the area as soon as possible.

No accumulations of dust shall be allowed to collect or accumulate in the work area.

### **Walkways**

All aisles and passageways are to be kept clear at all times. All isles and walkways are also to be marked for safe passages.

Wet surface / spills shall be cleaned immediately to prevent slips and falls.

All tripping hazards in raised platforms grating, holes in sidewalks, ETC must be repaired to prevent slips and falls.

All equipment and material must be stored where not to create a safety hazard.

Signs and paint to warn of tripping hazards shall identify all walkway changes in elevation.

Handrails must be present when the aisles or walkways are elevated more than 30” from the walking surface.

All conveyor belt crossing are to be installed where not to cause a head height hazard and shall be identified of low clearances hazards where height is a concern.

### **Floor and Wall Openings**

All floor openings must be covered with guardrails or coverings on all sides except for entrances to stair openings and ladders

Toe boards are to be installed on all overhead walkways and landings where the potential for falling materials or tools might cause a safety hazard for employees working below.

### **Floor and Wall Openings cont.**

All floor grates, drains or similar coverings must be designed for its intended use such as foot traffic or mobile machinery.

All manholes, service pits, trenches or similar opening must be covered and designed for its intended use of foot traffic or mobile machinery.

All temporary covering must comply with any building code existing fire rating.

### **Stairs and Stairways**

All raised platform stairs and landings must be guarded by handrails according to the requirements of OSHA. All stair risers having four or more steps must have hand rails added.

All stairways must be at least 22" wide.

All stairs with landing platforms not less than 30" in the direction of travel and extends 22" in width at every 12' or less of a vertical rise.

Stairs angles must not be more that 50 degrees and no less than 30 degrees.

Step risers on stairs must be uniform from end to end and must be slip resistant.

Stairway handrails are to be 30" – 34" above the leading edge of the stair treads with at least 3" between the wall surface and the handrail.

Where stairs exit directly into a vehicle traffic pattern, there must be signs or devices that warn of the hazard.

### **Elevated Surfaces**

Signs must be posted of the load capacity if the surface will be in danger of being overloaded.

All surfaces at least 30" from the floor must have handrail protection.

A 4" toe board must be installed when the danger of falling objects will cause a hazard for employees working below.

No material, equipment or tools are permitted to cause an obstruction on any elevated surface.

When transferring material from an elevated surface, the elevated surface must be designed for such operation and dock plates or similar approved equipment must be used.

**SECTION #23**

**NON-QUALIFIED ELECTRICAL POLICY**

# Non-Qualified Electrical Safety Policy

## Policy

Plibrico scope of work **does not** include electrical work or repairs. However, each employee is exposed to the dangers of electrical shock at the worksite and must be trained to recognize hazards that have a potential threat of serious injury or death. **All electrical work shall be handled by a qualified experienced electrician.**

## Responsibilities

### Supervisor

- Ensure all crew members are trained to recognize problem electrical components and who to contact in the event an electrician is needed.
- Supervisor will anticipate all work assignments and take the appropriate actions and safeguards. Determine vehicular hazards that might exist as well as the use of machinery that may involve overhead lines. Explain dangers of conductive material around live energized equipment, material such as pipe, aluminum ladders and jewelry.
- Point out any work that might have the possibility of coming in close contact with electrical workers. All electrical equipment where employees are to be working shall be properly de-energized and locked out.
- Ensure work area is free from hazards while working in an enclosed space and ensures the area is well illuminated.

### Employee

- Follow the instruction of the safety policies and procedures and the instruction of the Supervisor.
- Bring any potential problems to the attention of the Supervisor.
- Do not attempt to work on electrical devices or equipment.
- Know and follow Lockout / Tagout rules for “affected” and “other” in the LO/TO policy.

### Training

- Train employees on the avoidance of electricity and electrical hazards. 1910.332 (a)–(b)-(b)(1)
- Employees shall be trained where electrical work or is performed in the area or near energized components. 1910.333 (a) (b)(1)
- Train employees to recognize and not tamper with a Lock Out / Tag Out procedure.
- Employees shall be trained safe electrical work practices in accordance with their respective job assignments.
- Training must be given to understand the dangers of energized electrical lines or components. A minimum distance of 20’ must be maintained for safety. All ladders shall be non-conductive to avoid electrical shock.

### Procedure

- Plibrico shall not perform any electrical work or repairs and shall relay upon a qualified electrician in the event electrical work is needed. The Supervisor shall conduct a jobsite hazard assessment, which includes a survey of the area that may pose an electrical shock risk. All equipment must be de-energized in accordance with Plibrico LO/TO program if work is to be conducted on a piece of equipment that has an electrical source. Any employees that are near electrical work in progress or where an electrical shock hazards assist must be notified at the pre-shift meeting or when job duties change.

### **1910.331(a)**

Covered work by both qualified and unqualified persons. The provisions of 1910.331 through 1910.335 cover electrical safety work practices for both qualified persons (those who have training in avoiding the electrical hazards of working on or near exposed energized parts) and unqualified persons (those with little or no such training) working on, near, or with the following installations:

### **1910.333(a)**

"General." Safety-related work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, when work is performed near or on equipment or circuits, which are or may be energized. The specific safety-related work practices shall be consistent with the nature and extent of the associated electrical hazards.

### **1910.333(b)(1)**

"Application." This paragraph applies to work on exposed de-energized parts or near enough to them to expose the employee to any electrical hazard they present. Conductors and parts of electric equipment that have been de-energized but have not been locked out or tagged in accordance with paragraph (b) of this section shall be treated as energized parts, and paragraph (c) of this section applies to work on or near them.

### **1910.332(a)**

Scope. The training requirements contained in this section apply to employees who face a risk of electric shock that is not reduced to a safe level by the electrical installation requirements of 1910.303 through 1910.308.

Note: Employees in occupations listed in Table S-4 face such a risk and are required to be trained. Other employees who also may reasonably be expected to face comparable risk of injury due to electric shock or other electrical hazards must also be trained.

### **1910.332(b)**

Content of training.

### **1910.332(b)(1)**

Practices addressed in this standard. Employees shall be trained in and familiar with the safety-related work practices required by 1910.331 through 1910.335 that pertain to their respective job assignments.

1910.332(b)(2)

Additional requirements for unqualified persons. Employees who are covered by paragraph (a) of this section but who are not qualified persons shall also be trained in and familiar with any electrically related safety practices not specifically addressed by 1910.331 through 1910.335 but which are necessary for their safety.

[http://www.osha.gov/pls/oshaweb/owalink.query\\_links?src\\_doc\\_type=STANDARDS&src\\_unique\\_file=1910\\_0333&src\\_anchor\\_name=1910.333\(b\)\(2\)1910.333\(b\)\(2\)](http://www.osha.gov/pls/oshaweb/owalink.query_links?src_doc_type=STANDARDS&src_unique_file=1910_0333&src_anchor_name=1910.333(b)(2)1910.333(b)(2))

"Lockout and Tagging." While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both in accordance with the requirements of this paragraph. The requirements shall be followed in the order in which they are presented (i.e., paragraph (b)(2)(i) first, then paragraph (b)(2)(ii), etc.).

Note 1: As used in this section, fixed equipment refers to equipment fastened in place or connected by permanent wiring methods.

Note 2: Lockout and tagging procedures that comply with paragraphs (c) through (f) of 1910.147 will also be deemed to comply with paragraph (b)(2) of this section provided that:

[1] The procedures address the electrical safety hazards covered by this Subpart; and

[2] The procedures also incorporate the requirements of paragraphs (b)(2)(iii)(D) and (b)(2)(iv)(B) of this section.

1910.333(b)(2)(ii)(C)

Stored electric energy which might endanger personnel shall be released. Capacitors shall be discharged and high capacitance elements shall be short-circuited and grounded, if the stored electric energy might endanger personnel.

Note: If the capacitors or associated equipment are handled in meeting this requirement, they shall be treated as energized.

1910.333(b)(2)(ii)(D)

Stored non-electrical energy in devices that could reenergize electric circuit parts shall be blocked or relieved to the extent that the circuit parts could not be accidentally energized by the device.

1910.333(b)(2)(iii)

"Application of locks and tags."

1910.333(b)(2)(iii)(A)

A lock and a tag shall be placed on each disconnecting means used to deenergize circuits and equipment on which work is to be performed, except as provided in paragraphs (b)(2)(iii)(C) and (b)(2)(iii)(E) of this section. The lock shall be attached so as to prevent persons from operating the disconnecting means unless they resort to undue force or the use of tools.

**..1910.333(b)(2)(iii)(B)**

**1910.333(b)(2)(iii)(B)**

Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.

**1910.333(b)(2)(iii)(C)**

If a lock cannot be applied, or if the employer can demonstrate that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock, a tag may be used without a lock.

**1910.333(b)(2)(iii)(D)**

A tag used without a lock, as permitted by paragraph (b)(2)(iii)(C) of this section, shall be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by use of a lock. Examples of additional safety measures include the removal of an isolating circuit element, blocking of a controlling switch, or opening of an extra disconnecting device.

**1910.333(b)(2)(iii)(E)**

A lock may be placed without a tag only under the following conditions:

**1910.333(b)(2)(iii)(E)(1)**

Only one circuit or piece of equipment is de-energized, and

**1910.333(b)(2)(iii)(E)(2)**

The lockout period does not extend beyond the work shift, and

**1910.333(b)(2)(iii)(E)(3)**

Employees exposed to the hazards associated with reenergizing the circuit or equipment are familiar with this procedure.

**..1910.333(b)(2)(iv)**

**1910.333(b)(2)(iv)**

Verification of deenergized condition. The requirements of this paragraph shall be met before any circuits or equipment can be considered and worked as deenergized.

1910.333(b)(2)(iv)(A)

A qualified person shall operate the equipment operating controls or otherwise verify that the equipment cannot be restarted.

1910.333(b)(2)(iv)(B)

A qualified person shall use test equipment to test the circuit elements and electrical parts of equipment to which employees will be exposed and shall verify that the circuit elements and equipment parts are deenergized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage backfeed even though specific parts of the circuit have been deenergized and presumed to be safe. If the circuit to be tested is over 600 volts, nominal, the test equipment shall be checked for proper operation immediately after this test.

1910.333(b)(2)(v)

"Reenergizing equipment." These requirements shall be met, in the order given, before circuits or equipment are reenergized, even temporarily.

1910.333(b)(2)(v)(A)

A qualified person shall conduct tests and visual inspections, as necessary, to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed, so that the circuits and equipment can be safely energized.

**..1910.333(b)(2)(v)(B)**

1910.333(b)(2)(v)(B)

Employees exposed to the hazards associated with reenergizing the circuit or equipment shall be warned to stay clear of circuits and equipment.

1910.333(b)(2)(v)(C)

Each lock and tag shall be removed by the employee who applied it or under his or her direct supervision. However, if this employee is absent from the workplace, then the lock or tag may be removed by a qualified person designated to perform this task provided that:

1910.333(b)(2)(v)(C)(1)

The employer ensures that the employee who applied the lock or tag is not available at the workplace, and

1910.333(b)(2)(v)(C)(2)

The employer ensures that the employee is aware that the lock or tag has been removed before he or she resumes work at that workplace.

1910.333(b)(2)(v)(D)

There shall be a visual determination that all employees are clear of the circuits and equipment.



1910.333(c)

"Working on or near exposed energized parts."

1910.333(c)(1)

"Application." This paragraph applies to work performed on exposed live parts (involving either direct contact or by means of tools or materials) or near enough to them for employees to be exposed to any hazard they present.

**..1910.333(c)(2)**

[http://www.osha.gov/pls/oshaweb/owalink.query\\_links?src\\_doc\\_type=STANDARDS&src\\_unique\\_file=1910\\_0333&src\\_anchor\\_name=1910.333\(c\)\(2\)1910.333\(c\)\(2\)](http://www.osha.gov/pls/oshaweb/owalink.query_links?src_doc_type=STANDARDS&src_unique_file=1910_0333&src_anchor_name=1910.333(c)(2)1910.333(c)(2))

"Work on energized equipment." Only qualified persons may work on electric circuit parts or equipment that have not been deenergized under the procedures of paragraph (b) of this section. Such persons shall be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.

1910.333(c)(3)

"Overhead lines." if work is to be performed near overhead lines, the lines shall be deenergized and grounded, or other protective measures shall be provided before work is started. If the lines are to be deenergized, arrangements shall be made with the person or organization that operates or controls the electric circuits involved to deenergize and ground them. If protective measures, such as guarding, isolating, or insulating, are provided, these precautions shall prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or equipment.

Note: The work practices used by qualified persons installing insulating devices on overhead power transmission or distribution lines are covered by 1910.269 of this Part, not by 1910.332 through 1910.335 of this Part. Under paragraph (c)(2) of this section, unqualified persons are prohibited from performing this type of work.

1910.333(c)(3)(i)

"Unqualified persons."

1910.333(c)(3)(i)(A)

When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:

1910.333(c)(3)(i)(A)(1)

For voltages to ground 50kV or below - 10 feet (305 cm);

1910.333(c)(3)(i)(A)(2)

For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV.

1910.333(c)(3)(iii)

"Vehicular and mechanical equipment."

1910.333(c)(3)(iii)(A)

Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage. However, under any of the following conditions, the clearance may be reduced:

1910.333(c)(3)(iii)(A)(1)

If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. (122 cm). If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10 kV over that voltage.

"Illumination."

1910.333(c)(4)(i)

Employees may not enter spaces containing exposed energized parts, unless illumination is provided that enables the employees to perform the work safely.

1910.333(c)(4)(ii)

Where lack of illumination or an obstruction precludes observation of the work to be performed, employees may not perform tasks near exposed energized parts. Employees may not reach blindly into areas which may contain energized parts.

*..1910.333(c)(5)*

1910.333(c)(5)

"Confined or enclosed work spaces." When an employee works in a confined or enclosed space (such as a manhole or vault) that contains exposed energized parts, the employer shall provide, and the employee shall use, protective shields, protective barriers, or insulating materials as necessary to avoid inadvertent contact with these parts. Doors, hinged panels, and the like shall be secured to prevent their swinging into an employee and causing the employee to contact exposed energized parts.

1910.333(c)(6)

"Conductive materials and equipment." Conductive materials and equipment that are in contact with any part of an employee's body shall be handled in a manner that will prevent them from contacting exposed energized conductors or circuit parts. If an employee must handle long dimensional conductive objects (such as ducts and pipes) in areas with exposed live parts, the employer shall institute work practices (such as the use of insulation, guarding, and material handling techniques) which will minimize the hazard.

1910.333(c)(7)

"Portable ladders." Portable ladders shall have nonconductive siderails if they are used where the employee or the ladder could contact exposed energized parts.

1910.333(c)(8)

"Conductive apparel." Conductive articles of jewelry and clothing (such as watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, or metal headgear) may not be worn if they might contact exposed energized parts. However, such articles may be worn if they are rendered nonconductive by covering, wrapping, or other insulating means.

**SECTION #24**

**GFI (ground fault interrupter) & EXTENSION CORD  
PROGRAM**

# **GFCI CIRCUIT INTERRUPTERS AND EXTENSION CORDS**

## **ELECTRICAL SAFE WORK PRACTICES**

### **PURPOSE**

The purpose of this policy is to establish safe work practices to eliminate all injuries resulting from possible electrical shock.

All employees and all subcontractors working at Plibrico Company must comply with the requirements in this policy. Plibrico Supervision has the responsibility to enforce all the provisions in this policy.

#### **1. Requirements for GFCI Protection of Personnel**

1. Use ground fault circuit interrupters (GFCI) on 120-volt circuits in damp or wet work areas and outdoors.
2. Use GFCI for all extension cords except where used for extended service with equipment with plug and cord and not likely to be damaged.
3. Test portable GFCIs before each use along with a monthly written inspection. If any damage is evident that might expose people to injury, remove the item from service.
4. Use double insulated tools and equipment when appropriate. Double insulated tools do not require the use of a GFCI.

**Note:** GFCI shall be tested monthly in accordance with manufactures proscribed procedure or underwriters laboratory procedures [Appendix 1](#)

## 2. Requirements for Flexible Cords and Cables

### Extension Cords

Extension cords provide a convenient method of bringing ac power to a device that is not located near a power source. They are used as temporary power sources. Extension cords are probably involved in more electrical-code and safety violations than any other device. They are stepped on, stretched, cut, overloaded, and, in general, used improperly.

Guidelines for the Safe Use of Extension Cords:

1. Extension cords are for temporary use: In general, roll-up the cord at the end of the day.
2. Do not daisy-chain extension cords.
3. Check the cord for damage each time you use it. Any defective cord that is determined un-repairable must be discarded.
4. Use only approved and properly maintained extension cords that have no exposed live parts, exposed ungrounded metal parts, damage, or splices.
5. Use only heavy-duty or extra-heavy-duty rated cable.
6. If possible use extension cords that are protected by a ground fault circuit interrupter (GFCI) around construction sites, in damp areas, or in an area where a person may be in direct contact with a solidly grounded conductive object.
7. The GFCI can consist of a special circuit breaker, a GFCI outlet, or an extension cord with a built-in GFCI.

**Note:** GFCI shall be tested monthly in accordance with manufactures proscribed procedure or underwriters laboratory procedures [Appendix 1](#)

8. Ensure that the extension cord is of sufficient current-carrying capacity to power the device.
9. Use of an undersized cord results in an overheated cord and insufficient voltage delivered to the device, thus causing device or cord failure and a fire hazard.
10. Undersized cords also constitute a serious shock hazard, as it may not allow the breaker feeding it to trip.

Always use three-conductor (grounded) extension cords, even if the device has a two-conductor cord.

## **Avoiding Misuse of Extension Cords:**

1. Observe the following restrictions to avoid misuse of extension cords:
2. Do not use extension cords in place of permanent facility wiring.
3. Avoid running extension cords through doors, ceilings, windows, or holes in the walls. If it is necessary to run a cord through a doorway for short term use, ensure that the cord is:
  - a. Protected from damage.
  - b. Removed immediately when no longer in use.
  - c. Not a tripping hazard.
4. Do not cut off the ground pin of an extension cord or compromise the ground protection in any way.
5. Do not use frayed or damaged extension cords.
6. Never splice extension cords, even for a repair. Only qualified personnel may make repairs of extension cords.

## **Power Strips/Power Taps**

1. A power strip (referred to by OSHA as a Relocatable Power Tap or RPT) is a variation of an extension cord, where the cord terminates in a row or grouping of receptacles.
2. RPT's are commonly used in offices to provide multiple receptacles to office equipment. In general, all rules pertaining to extension cords also apply to power strips.
3. Additional considerations are:
  - a. Power strips are not rated for heaters, refrigerators, toaster ovens or other high-power devices.
  - b. Use only for office equipment such as computers, printers, etc..
  - c. Do not permanently mount power strips to any facility surface. Power strips are classified as temporary devices. It is acceptable to hang them from screws or hooks if they are manufactured with slots or keyholes.

## APPENDIX 1:

### GROUND FAULT CIRCUIT INTERRUPTERS (GFCI's) TESTING PROCEDURES

(Underwriters Laboratories)

GFCIs are designed to protect a person from electric shock when he or she simultaneously contacts a “live” (usually 120V) wire or part and a grounded object. The GFCI works by sensing a difference between the supply and return currents. When the difference exceeds 5mA—indicating that current is flowing to ground (through the person)—the device switches off.

Although the GFCI is an effective safety device, it is not a guarantee against shock in every situation. The GFCI does not protect against a line-to-neutral or a line-to-line shock. Also, if GFCI-protected equipment contains transformers, a ground fault (shock) on the secondary side of the transformer may not trip the GFCI.

GFCIs are normally installed as either circuit breakers or receptacles. In either case, the GFCI may be wired to protect multiple receptacles. Individual GFCI plug-in adapters are also available.

Like all products, GFCIs can be damaged by lightning or electrical surges and may fail to provide adequate protection and GFCIs must be tested at least monthly, using the following procedures as prescribed by Underwriters Laboratories:

- Push the "Reset" button located on the GFCI receptacle, first to assure normal GFCI operation.
- Plug a nightlight (with an "ON/OFF" switch) or other product (such as a lamp) into the GFCI receptacle and turn the product "ON."
- Push the "Test" button located on the GFCI receptacle. The nightlight or other product should go "OFF."
- Push the "Reset" button, again. The light or other product should go "ON" again.

**Note:** If the light or other product remains "ON" when the "Test" button is pushed, the GFCI is not working properly or has been incorrectly installed (miswired). If your GFCI is not working properly, only a qualified person can assess the situation, rewire the GFCI if necessary or replace the device.

**CAUTION:** Testing of a GFCI will disconnect **all** receptacles protected by the GFCI. Before testing, determine which receptacles are protected. Verify that the interruption of power will not adversely affect other activities.



**SECTION #25**

**TEMPORARY LIGHTING**

## **TEMPORARY PROJECT LIGHTING**

### **Intent & purpose:**

The purpose of temporary lighting is to allow the worksite to be adequately illuminated to safely perform work activities, and avoid tripping and falling hazards that might result in injuries.

### **Responsibility:**

It is the responsibility of the Project Mgr. / Supervisor to inspect the worksite for the need of temporary lighting. If additional lights are needed, the lighting must be inspected and installed per all applicable safety regulations.

### **Lighting:**

The temporary lights may consist of either halogen or incandescent lighting. Whichever is used, strict guidance must be adhered to:

1. No temporary lighting inside a Permit Confined Space unless UL approved and in an environment, that has a flammable / combustible potential only explosive rated lighting shall be permitted. In all cases, the host facility must approve all lighting used in a CS.
2. All lighting must be supplied with the correct voltage and plugged into a GFI circuit.
3. All lighting fixtures and electrical cables must be inspected prior to use for damage. Any defective lighting fixtures must be removed from service or repaired.
4. All bulb protectors and guards must be in place and maintained in good condition during the use of the fixtures.
5. Electrical cables and cords must be hung to prevent tripping hazards.
6. No exposed open sockets will be permitted
7. All areas with barricades and danger zones that have no ambient lighting from other sources must be illuminated with temporary lighting.
8. Temporary lights must be installed where not to create an unnecessary glare to employees or operators of machinery working in and around the jobsite.

If generators or welders are used as a source of electricity for temporary lighting, they must not be used in areas of an explosive atmosphere or where exhaust gasses may cause inhalation problems for employees.

**SECTION #26**

**BARRICADING, DANGER  
& CAUTION TAPE**

## Plibrico Company, LLC Barricade Procedure

Areas within the facility which pose a threat to personnel safety and health are marked with barricade tape and signs to increase awareness that the area should not be entered. There are two methods of barricading an area, as follows:

\* **Yellow tape and caution signs** allow individuals to cross the tape when required, in order to perform work after becoming aware of the hazards.

\* **Red tape and danger signs** restrict access to the barricaded area to only those involved in abating the hazard.

### PURPOSE

The purpose of the barricade procedure is to reduce the risks of injury to employees when a potentially hazardous situation is present in an area that could affect employees' safety and health.

### SCOPE

This procedure for barricading is applicable to work within Plibrico Manufacturing Plant and all Plibrico Contractors Construction sites

This procedure is applicable to any hazardous condition by which barricading will reduce the risk to employees' safety and health.

This procedure represents the minimum requirements which must be met or exceeded by anyone involved in barricading any hazardous area.

This policy will not supersede or replace other safety policies with special barricade procedures such as the following:

\* Fall Protection Policy (Requirements for Rigid Barriers)

### APPLICATION

The barricade procedure is applicable to barricading potentially hazardous areas, operations, or pieces of equipment such as:

Working overhead or handling materials overhead which creates a hazard to passersby due to the possibility of falling materials or tools.

Hazardous areas or equipment: Such as spilled chemical, chemical leaks, maintenance work areas where hazards exist.

Hazardous conditions: Such as, open holes, sewers and sewer pits, excavations, and equipment with guards removed. Also, suspected high concentrations of hazardous air contaminants, etc.

### **Caution Barricade:**

Barricading an area where specific potential hazards exist, using standard yellow tape with the word "CAUTION" in black letters and the barricade sign. Employees can enter this area when they are aware of the specific hazard, have taken the necessary precautions to avoid the hazard, and are required to enter the barricade in order to perform work. Persons entering this area should remain in the area no longer than necessary. The caution barricade shall be removed when the hazardous situation has been eliminated.

### **Danger Barricade:**

Barricading an area using the standard red tape with the word "DANGER" in black letters and the barricade sign. This is used to warn employees of imminent danger and that special precautions are necessary. The red tape with the word "DANGER" in black letters shall be used for hazards which are immediately dangerous. No one should enter those areas except those authorized to correct the hazard itself. The danger barricade shall be removed as soon as the imminent danger has been abated.

### **RESPONSIBILITIES**

Those erecting barricade tape shall perform the following:

Inform operating department personnel of the need to erect a barricade if pedestrian or vehicular routes are affected, or if operator access to production equipment is restricted.

Erect barricade tape around all entrances to the area with conspicuous posting of barricade signs.

Minimize the area barricaded to encompass only that required to prevent personnel exposure to the hazard.

Promptly remove barricade tape once the hazard(s) have been abated.

Passersby shall not cross barricade tape, except as allowed in the Application section of this policy.

### **DEFINITIONS**

**Barricade Sign:** The barricade sign communicates important information regarding the safe and hazard sides of the barricade, who set-up the barricade, the nature of the hazard, and the reason for barricading the area.

**Standard Barricade Tape:** The barricade tape identifies either a caution or a danger barricade and the boundary around the hazard area.

**Watchman/Flagman:** An employee whose sole responsibility is to monitor the hazard area in lieu of or in addition to a barricade tape barrier to eliminate or minimize exposure of others to the hazard. Due to the potential transient nature of work activity, instructions from a watchman/flagman supersede that of posted barricade tape/signs.

### **REFERENCES**

OSHA 29CFR 1910.145 "Specifications for Accident Prevention Signs and Tags"

## **PROCEDURES**

Barricading areas where a hazard exists which could threaten the safety and health of employees entering an area shall be accomplished as follows:

Obtain appropriate tape and signs for barricading the area

Barricade signs shall include information on when the barricade is in effect, the employee responsible for barricading the area, the employee's supervisor, and cell phone number, companies name, the reason for barricading the area, and special comments or precautions. Required personal protective equipment should be identified in the comments section of the barricade sign.

Post sufficient barricade signs with the completed information on all sides of the roped off area. There must be 360-degree coverage with the barricade tape, and barricade signs must be posted on all sides and at all normal entrances to the area. The barricade tape and signs must also cover entrances to the barricaded area by stairs or ladders from above or below.

Barricade only the minimum area necessary to protect safety and health. When the barricade will interfere with a regular pedestrian or vehicular thoroughfare, or access to equipment, coordinate the barricading with the operating area supervisor to preserve the thoroughfare or identify an alternate thoroughfare, or means of access.

As soon as the hazard no longer exists, all barricade tape and signs shall be removed.

### **Work Practices inside a Barricade**

Employees must evaluate all potential hazards when working inside a barricade. They must take the necessary precautions to protect themselves from the hazards or eliminate the hazards.

Precautions need to be taken to assure respiratory protection (respiratory equipment), chemical or thermal burn protection (rain suit, faceshield, gloves, boots), and fall protection (safety harness appropriately tied off), as appropriate for the specific hazards inside the barricaded area.

### **Exceptions**

Very short durations of potential exposure to a hazard or a change in the hazards within a barricaded area may require posting a watchman / flagman to warn passersby and other personnel working in the area. An adequate number of watchman / flagman shall be posted to stop pedestrian and vehicular traffic in all access routes to the potentially hazardous area.

While barricading according to this procedure may be used to temporarily identify operating equipment with guards removed, structural, rigid barriers shall be installed as soon as possible.

For repetitive postings, operating departments may elect to install and utilize more durable barricade components such as chain and fiberglass signs in lieu of the standard barricade tape and paper sign. However, the markings of these alternative barricade components shall be consistent with the requirements of this procedure (e.g., yellow chain with a caution sign or red chain with a danger sign).

Barricade tape and barricade signs may also be used for purposes of identifying operational (energized) equipment in the vicinity of personnel working on other equipment under (Lock, Tag, & Try).

Plibrico Company, LLC



# NOTICE!

## BARRICADING INFORMATION

DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

SUPERVISOR: \_\_\_\_\_ CELL # \_\_\_\_\_

**TYPE OF BARRICADE:**      CAUTION      DANGER      FIXED BARRIER  
(CIRCLE ONE)

**REASON FOR BARRICADE:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PERSONAL PROTECTIVE EQUIP. NEEDED:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SPECIAL COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION #27**

**LADDERS & SCAFFOLD POLICY**



# LADDERS

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## **OBJECTIVE**

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The purpose of this plan is to provide guidelines to be followed to protect employees from injuries when using ladders.

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## **APPLICABILITY/ SCOPE**

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This plan applies to all Plibrico Company employees on all jobsites.

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## **ACCOUNTABILITY**

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The supervisor is responsible to see that the guidelines set forth in this plan are followed.

Basic Requirements:

All portable ladders should be equipped with slip-resistant bases.

Ladders shall be inspected for conformity to safety regulations before putting them into service (Form attached)

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## **TRAINING**

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### Use of Ladders (Form attached):

Never place a ladder in front of a door that opens toward the ladder unless the door is locked, blocked, or guarded.

Place a portable ladder so that both side rails have secure footings.

Never lean a ladder against unsecured backing, such as boxes.

Do not place a ladder close to electric wiring or any operational piping (acid, chemical, sprinkler systems, etc.) where damage may be done.

Ladders are for only one person at a time.

Be sure that a stepladder is fully open and the metal spreader is locked before you start to climb it.

Do not climb higher than the third rung from the top on straight or extension ladders.

Do not climb higher than the second tread from the top on stepladders.

When setting up a straight or extension ladder, the base should be one-fourth the ladder length from the vertical plane of the top support.

Keep ladders clean and free from dirt and grease, which can hide defects and cause falls.

Ladders shall never be used in a horizontal position as a runway, ramp, or scaffold.

### **Ascending or Descending Ladders:**

Always maintain a three-point contact when climbing up or down ladders (i.e., 2 feet with one hand/2 hands with 1 foot).

If material must be handled, raise, or lower it with a rope either before going down or after climbing to the desired level.

Tools may be carried on a tool belt.

Always face the ladder when ascending or descending.

## **Inspection of Ladders:**

All ladders should be inspected before every use.

Ladders that are weak, improperly repaired, damaged, have missing rungs, or appear unsafe, shall be removed from the work site for repair or disposal.

If the ladder is to be disposed of, it must be destroyed so that no one can use it.

All ladders should be inspected for:

Loose steps or rungs.

Cracked, split, or broken uprights, braces, steps, or rungs.

Damaged or worn nonslip braces.

Damaged casters.

Stepladders should be inspected for:

Stability.

Loose or bent hinge spreaders.

Broken, split, or worn steps.

Loose hinges.

Ladders found defective or in need of repairs shall be tagged and marked "out of service" until repairs can be made. Defective ladders not repaired, shall be destroyed to prevent use.

## **General Requirements:**

Ladders are to be used for their intended design.

The use of ladders with broken or missing rungs or steps, broken or split side rails, or other faulty or defective construction is prohibited.

The feet of portable ladders shall be placed on a solid base and the area around the top and bottom of the ladder shall be kept clear.

Portable ladders shall be used at such a pitch of 4 to 1.

The side rails of the ladder shall extend at least 36" above the landing or work platform.

Portable ladders in use shall be tied off, blocked, or otherwise secured at the top to prevent being displaced.

No employee is allowed to step higher than the third rung from the top of a straight ladder or higher than the second step from the top of a step ladder.

Always face the ladder when ascending or descending the ladder.

Metal ladders are not allowed to be used by employees of Plibrico Company

All ladders will be inspected periodically and documented.

The ladders manufactured load capacity label shall be clearly visible on each ladder and the recommendation adhered to by all employees.

Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use.

## Ladder Use Checklist

	<u>Yes</u>	<u>No</u>
1. Are ladders being used where other means of access would be safer or more economical?		
2. Are the ladders in use properly suited to the task?		
3. Are bases on firm footing such as compacted soil or mud sills?		
4. Are bases secured against slippage?		
5. Are ladders tied off at the top, blocked, secured or held by a second worker when in use?		
6. Are areas around the top and bottom clear of material, debris, or obstruction?		
7. Are metal ladders being used where electrical contact is possible near electrical equipment or wires?		
8. Are ladders being used horizontally or for some other wrong purpose?		
9. Are workers 3 meters (10 feet) or more off the ground and using both hands for the work tying off with a safety belt and lanyard to a structurally safe means of support?		
10. Are ladders inspected before being used?		
11. Do the side rails of straight ladders extend at least 914 millimeters (3 feet) above the landing level?		
12. Are the job-built wooden ladders properly constructed?		
13. Are the personnel familiar with the ladder safety policies of the company?		
14. Are straight ladders being erected at the proper angle?		
15. Are ladders being used in passageways where they can be affected by adjacent activities?		
16. Unless the ladder is a job-built, double-width ladder, is more than one person on a ladder at a time?		
17. Are ladders being stored and transported by methods that avoid damage?		
18. Are workers carrying tools, equipment or materials in their hands while climbing up or down ladders?		
19. Do workers face the ladder when ascending, descending, or working from it?		
20. Do personnel use fall-arresting devices when climbing up or down long vertical ladders?		
21. Are ladders being supported on their rungs?		
22. Are two or more people used to erect long or heavy ladders?		

## 12.5.2 Ladder Inspection Checklist

	<u>Yes</u>	<u>No</u>
1. Are any wooden parts splintered?		
2. Are there any defects in side rails, rungs, or other similar parts?		
3. Are there any missing or broken rungs?		
4. Are there any broken, split or cracked rails repaired with wire, sheet metal or other makeshift materials?		
5. Are there any worn, damaged, or missing feet?		
6. Are there any worn, damaged, or unworkable extension ladder locks, pulleys, or other similar fittings?		
7. Is the rope on extension ladders worn, broken, or frayed?		
8. Has the rope on extension ladders been replaced by material inferior to the ladder manufacturer's original rope?		
9. Are the spreader arms on step ladders bent, worn, broken, or otherwise rendered partly or ineffective?		

If the answer is "YES" to any of the questions on the Inspection Checklist the ladder should be tagged so that workers will know it is defective and should not be used. It should be taken out of service immediately and placed in a location where it will not be used until repairs are completed. If the ladder is not to be repaired it should be destroyed.

# **SCAFFOLDING**

## **OBJECTIVE**

The purpose of this plan is to provide guidelines to protect employees from injuries from scaffold work.

## **APPLICABILITY / SCOPE**

This plan applies to all Plibrico Company employees on all jobsites and covers all scaffolds. It does not apply to crane or derrick suspended personnel platforms.

## **ACCOUNTABILITY**

The Supervisor or his designee must oversee all scaffolding that is erected or used on the Plibrico Company job sites. The following rules must be followed to maintain a safe work environment.

### **General Rules**

The footings or sills for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, loose bricks, or concrete blocks shall not be used to support scaffolding or planks.

- Guardrails shall be installed on all open sides of scaffolds more than 10 feet above the ground or floor.
  
- Scaffolds 4–10 feet in height, with a minimum horizontal dimension in either direction of less than 45 inches, shall have guardrails installed.
  
- All working platforms must be fully planked.
  
- All planking shall be scaffold grade plank or full dimensional lumber.
  
- All planking must be overlapped at least 12 inches.
  
- All planking must be secured from movement (cleats).
  
- Screw jacks shall be used to level the scaffold.
  
- The height of a scaffold cannot exceed 4 times the minimum base dimension without outriggers or being tied off to a stable part of the building.
  
- Scaffolds shall be capable of supporting without failure at least 4 times the maximum intended load.
  
- Daily inspection of scaffolding on the job site must be made by a competent person. Inspections must be documented.

## Permissible Span

	<u>Light Duty</u>	<u>Medium Duty</u>	<u>Heavy Duty</u>
Working Load (pounds per sq. ft.)	20	50	75
Permissible Span (ft.)	10	8	6

### Suspended Scaffolds (General)

- Each scaffold and scaffold components shall be capable of supporting its own weight and at least 4 times the maximum intended load.
- The connections to a roof or floor and counterweights on a suspension scaffold shall be capable of supporting its own weight and at least 4 times the tipping moment imposed by the scaffold operating at the rated load or 1.5 times the tipping moment operating at the stall load (whichever is greater).
- Each suspension rope and connecting hardware, used on nonadjustable suspension scaffolds shall be capable of supporting at least 6 times the maximum intended load applied to that rope.
- Each suspension rope and connecting hardware, used on adjustable suspension scaffolds shall be capable of supporting at least 6 times the maximum intended load with the scaffold operating at either the rated load or 2 times the stall load (whichever is greater).
- The stall load shall not exceed 3 times its rated load.
- Scaffolds shall be designed by a qualified person and constructed and loaded in accordance with that design.

### Scaffold Platform Construction

- Each working level platform (walkways not included) shall be fully planked or decked between the front uprights and the guardrail supports as follows:
- The space between the adjacent members and uprights shall be no wider than one inch, unless it can be demonstrated that a wider space is necessary (i.e., to fit around uprights when side brackets are used to extend the platform width).
- When a space greater than 1 inch is necessary (the previous example), the space between the platform and the uprights shall be no wider than 9 1/2 inches.



## **Scaffold Platform Construction cont.**

- Each scaffold platform and walkway shall be at least 18 inches wide.
- Each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold shall be at least 12 inches wide.
- Where scaffolds must be used in areas that the employer can demonstrate are so narrow that platforms and walkways cannot be at least 18 inches wide, such platforms and walkways shall be as wide as feasible, with fall protection in place.
- The front edge of all platforms shall not be more than 14 inches from the face of the work, unless guard rail systems are erected along the front edge and/or personal fall arrest systems are used.
- The maximum distance from the face for outrigger scaffolds shall be 3 inches.
- The maximum distance from the face for plastering and lathing operations shall be 18 inches.
- Each end of the platform, unless cleated or restrained by hooks, shall extend over its support at least 6 inches.
- Each end of a platform 10 feet or less in length shall not extend over its support more than 12 inches; each end of a platform greater than 10 feet shall not extend over its support more than 18 inches.
- Where scaffold planks are abutted to create a long platform, each abutted end shall rest on a separate support surface. This does not preclude manufactured systems designed to do so.
- On scaffolds where platforms are overlapped to create a long platform, the overlap shall not be less than 12 inches, unless nailed or restrained. The overlap shall also occur over a support member.
- When a platform must change direction, any platform that rests on a bearer, other than on a right angle, shall be laid first. The overlapping member, set at a right angle to the bearer, shall be laid second.
- Wood platforms shall not be covered with opaque finishes. Platform edges may be covered or marked for identification. Platforms may be coated with wood preservatives, fire-retardants, and slip resistant finishes as long as they do not obscure the top or bottom surfaces.
- Scaffolding components from different manufacturers shall not be intermixed unless they fit together without force and the structural integrity is maintained by the user. Components shall not be modified.
- Scaffolding components made of dissimilar metals shall not be used together unless a competent person has determined it will not reduce the strength of any component below what is required.

## Criteria for Supported Scaffolds

- Supported scaffolds with a base to height ratio of more than 4:1, shall be secured from tipping by bracing, guying, tying, or equivalent as follows:
- Guys, ties, and braces shall be installed at locations where horizontal members support both inner and outer legs.
- Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and repeated vertically every 20 feet for scaffolds 3 feet wide or less; 26 feet for scaffolds greater than 3 feet wide.
- Guys, ties, and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet.
- Guys, ties, and braces shall be used in all circumstances where an eccentric load such as cantilevered work platform, is applied to the scaffold in order to prevent tipping.
- Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates, mud sills, or other adequate firm foundation.
- Footings shall be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
- Unstable objects shall not be used to support scaffolds or platform units.
- Unstable objects shall not be used as working platforms.
- Front-end loaders and similar pieces of equipment shall not be used to support scaffold platforms unless they have been specifically designed to do so.
- Forklifts shall not be used to support scaffold platforms unless the entire platform is attached to the fork and the forklift is not moved horizontally while the platform is occupied.
- Supported scaffold poles, legs, posts, frames, and uprights shall be plumb and braced to prevent swaying and displacement.
- Criteria for Suspension Scaffolds
- All suspension scaffold support devices, such as outrigger beams, cornice hooks, parapet clamps, and similar devices, shall rest on surfaces capable of supporting at least 4 times the load imposed by the rated load or 1.5 times the stall capacity of the hoist, whichever is greater.
- Suspension scaffold outrigger beams shall be made of structural metal, or equivalent strength material, and shall be restrained to prevent movement.

## Criteria for Supported Scaffolds cont.

- The inboard ends of suspension scaffold outrigger beams shall be stabilized by bolts or other direct connections to the floor or roof deck, or should be stabilized by counterweights.
- Exception: masons' multi-point adjustable suspension scaffold outrigger beams shall not be stabilized by counterweights
- Before the scaffold is used, direct connections shall be evaluated by a competent person who shall confirm that they are capable of supporting the required load criteria. In addition, masons' multi-point adjustable suspension scaffold connections shall be designed by an engineer experienced in such scaffold design.
- Counterweights shall be made of nonflowable material. Sand, gravel, and similar materials cannot be used.
- Only those items specifically designed as counterweights shall be used to counterweight scaffold systems.
- Counterweights shall be secured by mechanical means to the outrigger beams to prevent accidental displacement.
- Counterweights shall not be removed from an outrigger beam until the scaffold is disassembled.
- Outrigger beams which are not stabilized by bolts or other direct connections to the floor or roof deck shall be secured by tiebacks.
- Tiebacks shall be equivalent in strength to the suspension ropes.
- Outrigger beams shall be placed perpendicular to its bearing support, except when an employer can demonstrate that this is not possible due to an obstruction that cannot be moved. In this case, it may be placed at some other angle, provided that opposing angle tiebacks are used.
- Tiebacks shall be secured to a structurally sound anchorage on the building structure. Sound anchorages do not include standpipes, vents, or other piping systems or electrical conduit.
- Tiebacks shall be installed perpendicular to the face of the building or structure, or opposing angle tiebacks shall be installed. Single tiebacks installed at an angle are prohibited.

### **Suspension scaffold outrigger beams shall be:**

- Provided with stop bolts or shackles at both ends;
- Securely fastened together with flanges turned out when channel iron beams are used in place of I-beams;
- Installed with all bearing supports perpendicular to the beam center line;
- Set and maintained with the web in a vertical position; and
- When an outrigger beam is used, the shackle or clevis with which the rope is attached to the outrigger beam shall be placed directly over the centerline of the stirrup.
- Suspension scaffold support devices such as cornice hooks, roof hooks, roof irons, parapet clamps, or similar devices, shall be:
  - Made of steel, wrought iron, or materials of equivalent strength;
  - Supported by bearing blocks, and
  - Secured against movement by tiebacks.
  - Tiebacks shall be equivalent in strength to the hoisting rope.
- Winding drum hoists they shall contain not less than four wraps of the suspension rope at the lowest point of scaffold travel. Suspension ropes on other types of hoists shall be long enough to allow the scaffold to be lowered to the level below without the rope end passing through the hoist, or the rope end shall be configured or provided with means to prevent it from passing through the hoist.
- The use of repaired wire rope as suspension rope is prohibited.
- Wire suspension ropes shall not be joined together except through the use of eye splice thimbles connected with shackles or coverplates and bolts.
- The load end of wire suspension ropes shall be equipped with proper size thimbles and secured by eye splicing or equivalent means.
- Ropes shall be inspected for defects by a competent person prior to each workshift and after every occurrence which could affect a rope's integrity. Ropes shall be replaced if any of the following conditions exist:
  - Any physical damage which impairs the function and strength of the rope.

- Kinks that might impair the tracking or wrapping of the rope around the drum(s) or sheave(s).
- Six randomly distributed broken wires in one rope lay or three wires in one strand in one rope lay.
- Abrasion, corrosion, scrubbing, flattening, or peening causing loss of more than one-third of the original diameter of the outside wires.
- Heat damage caused by a torch or any damage caused by contact with electrical wires.
- Evidence that the secondary brake has been activated during an overspeed condition and has engaged the suspension rope.
- Swaged attachments or spliced eyes on wire suspension ropes shall not be used unless they are made by the wire rope manufacturer or a qualified person.

**When rope clips are used on suspension scaffolds:**

- There shall be a minimum of 3 wire rope clips installed, with the clips a minimum of 6 rope diameters apart;
- Clips shall be installed according to the manufacturer's recommendations;
- Clips shall be retightened to the manufacturer's recommendations after initial loading;
- Clips shall be inspected and retightened to the manufacturer's recommendations at the start of each workshift thereafter;
- U-bolt clips shall not be used at the point of suspension for any scaffold hoist;
- When U-bolt clips are used, the U-bolt shall be placed over the dead end of the rope, and the saddle shall be placed over the live end of the rope.
- Suspension scaffold power-operated hoists and manual hoists shall be tested and listed by a qualified testing laboratory.
- Gasoline-powered equipment and hoists shall not be used on suspension scaffolds.
- Gears and brakes of power-operated hoists used on suspension scaffolds shall be enclosed.
- In addition to the normal operating brake, suspension scaffold power-operated hoists and manually operated hoists shall have a braking device that engages when the hoist makes an uncontrolled drop or an accelerated overspeed.

- Manually operated hoists shall require a positive crank force to descend.
- Two-point and multi-point suspension scaffolds shall be tied or otherwise secured to prevent swaying, as necessary based on the competent person's evaluation (window cleaner's anchors cannot be used for this purpose).
- Emergency escape and rescue devices shall not be used as working platforms if it is their sole function.
- Access—This Section Applies to All Employees Who Access A Fully Erect Scaffold
- When scaffold platforms are more than 2 feet above or below a point of access, an approved access (see definitions) must be used to access the scaffold. (Crossbraces are not approved for access).

**Portable, hook-on, and attachable ladders shall:**

- Be positioned so as not to tip the scaffold.
- Be positioned so that their bottom rung is not more than 24 inches above the scaffold supporting level.
- When they are used on a supported scaffold more than 35 feet high, have rest platforms at 35-foot maximum vertical intervals.
- Be specifically designed for use with the type of scaffold used.
- Have a minimum rung length of 11 1/2 inches.
- Have uniformly spaced rungs with a maximum spacing between rungs of 16 3/4 inches.

**Stairway-type ladders shall:**

- Be positioned so that their bottom step is no more than 24 inches above the scaffold supporting level.
- Be provided with rest platforms at 12 foot intervals.
- Have a minimum step width of 16 inches; for mobile scaffold stairway type ladders: 11 1/2 inches.
- Have slip-resistant treads on all steps and landings.

**Stairtowers shall:**

- Be positioned so their bottom step is not more than 24 inches above the scaffold supporting level.
- Have a stair rail with a top rail and mid-rail on each side.
- Have a top rail that serves as a handrail or have a separate handrail that provides an adequate handhold for employees grasping them to avoid falling.
- Have all components surfaced to prevent injury to employees from punctures or lacerations, and to prevent snagging clothing. They should also be constructed to prevent projection hazards.
- Have handrails and top rails used as handrails, positioned at least 3 inches away from other objects.
- Have stair rails that are positioned at least 28 inches and not more than 37 inches above the surface of the stair risers.
- Have a landing platform at least 18 inches wide by at least 18 inches long at each level.
- Be at least 18 inches wide between stair rails.
- Have treads and landings with slip-resistant surfaces.
- Have stairways installed between 40 and 60 degrees from the horizontal.
- Have approved guardrails on open sides and ends of each landing.
- Have uniform riser heights, within 1/4 inch, for each flight of stairs.
- Have uniform tread depths, within 1/4 inch, for each flight of stairs.

**Ramps and walkways:**

- Shall have guardrails when erected at or above 6 feet high.
- Shall not be inclined more than a slope of 1 vertical to 3 horizontal.
- If the slope is steeper than 1 vertical to 8 horizontal, than it shall have cleats not more than 14 inches apart which are securely fastened to the planks to provide footing.

- Integral prefabricated scaffold access frames shall:
- Be specifically designed and constructed for use as ladder rungs.
- Have a rung length of at least 8 inches.
- Not be used as work platforms when rungs are less than 11 1/2 inches in length, unless each affected employee uses a fall protection or a positioning device which complies with 1926.502.
- Be uniformly spaced within each frame section.
- Be provided with rest platforms at 35-foot maximum vertical intervals on all supported scaffolds more than 35 feet high.
- Have a maximum spacing between rungs of 16 3/4 inches. Nonuniform rung spacing caused by joining end frames together is allowed, providing the resulting spacing does not exceed 16 3/4 inches.
- Stairs and rungs of ladder and stairway type access shall line up vertically with each other between rest platforms.
- Direct access to or from another surface shall be used only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.
- Effective September 2, 1997, access for employees erecting or dismantling supported scaffolds shall be in accordance with the following:
- The employer shall provide a safe means of access for employees where it is feasible and does not create a greater hazard as determined by a competent person.
- Hook-on ladders or attachable ladders shall be installed as soon as scaffold erection has progressed to a point to permit safe installation and use.
- When erecting and dismantling tubular welded frame scaffolds (end) frames, with horizontal members that are parallel, level and are not more than 22 inches apart vertically may be used as climbing devices for access, providing that they are erected in a manner that creates a usable ladder with a good hand hold and foot spaces.
- Cross-braces on tubular welded frame scaffolds shall not be used as a means of access or egress.



## Use

- Scaffold and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.
- The use of shore or lean-to scaffold is prohibited.
- Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence, which could affect a scaffold's structural integrity.
- Any part of a scaffold damaged or weakened until its strength is less than that, which is required, shall be immediately repaired or replaced, braced to meet strength requirements, or removed from service until repaired.
- Scaffolds shall not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer specifically for such movement or, for mobile scaffolds, where the provisions of 1926.452(w) are followed.
- The clearance between scaffolds and power lines shall be as follows: Scaffolds shall not be erected, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows:

<b>Insulated Lines Voltage</b>	<b>Minimum Distance</b>	<b>Alternatives</b>
Less than 300 Volts	3 Feet	2 times the length of the line insulator, but not less than 10 feet.
More than 50 kv	10 Feet plus 4 inches for each kv over 50 kv	Same as above

<b>Uninsulated Lines Voltage</b>	<b>Minimum Distance</b>	<b>Alternatives</b>
Less than 50 kv	10 Feet	2 times the length of the line insulator, but not less than 10 feet.
More than 50 kv	10 Feet plus 4 inches for each kv over 50 kv	Same as above

- Scaffolds shall be erected, moved, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.

- Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such materials.
- When swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads shall be used.
- Suspension ropes supporting adjustable suspension scaffolds shall be of a diameter large enough to provide sufficient surface area for the functioning of brake and hoist mechanisms.
- Suspension ropes shall be shielded from heat-producing processes. When acids or other corrosive substances, are used on a scaffold, the ropes shall be shielded, treated to protect against the corrosive substances, or shall be of a material that will not be damaged by the substance being used.
- Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined it safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens. Wind screens shall not be used unless the scaffold is secured against the anticipated wind forces imposed.
- Debris shall not be allowed to accumulate on platforms.
- Makeshift devices, such as but not limited to boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of employees.
- Ladders shall not be used on scaffolds to increase the working level height of employees, except on large area scaffolds where employers have satisfied the following criteria:
  - When the ladder is placed against a structure which is not a part of the scaffold, the scaffold shall be secured against the sideways thrust exerted by the ladder.
  - The platform units shall be secured to the scaffold to prevent their movement.
  - The ladder legs shall be on the same platform or other means shall be provided to stabilize the ladder against unequal platform deflection.
  - The ladder legs shall be secured to prevent them from slipping or being pushed off the platform.
- Platforms shall not deflect more than 1/60 of the span when loaded.
- To reduce the possibility of welding current arcing through the suspension wire rope when performing welding from suspended scaffolds, the following precautions shall be taken, as applicable.

## **FORMS**

Stationary Scaffold Safety Checklist

Rolling Tower Safety Check List

Definitions

## STATIONARY SCAFFOLD SAFETY CHECK LIST

PROJECT:	
ADDRESS:	
CONTRACTOR:	
DATE OF INSPECTION:	
INSPECTOR:	

	YES	NO	ACTION/COMMENTS
1. Are all electrical lines: a) de-energized? locked out? b) isolated by 10' min. for < 50 KV (add 2 feet for each add'l 5 KV) c) insulated by the utility company			
2. Is the frame spacing and sill size capable of carrying intended loadings?			
3. Have competent persons been in charge of erection?			
4. Are sills properly placed and adequate size?			
5. Have screw jacks been used to level and plumb scaffold instead of unstable objects, such as concrete blocks, loose bricks, etc.?			
6. Are base plates and/or screw jacks in firm contact with sills and frame?			
7. Is scaffold level and plumb?			
8. Are all scaffold legs braced with braces properly attached?			
9. Is guard railing in place on all open sides and ends above 10' (4' in height if less than 45")?			
10. Has proper access been provided?			
11. Has overhead protection or wire screening been provided where necessary?			
12A. Has scaffold 3' or less in width been tied vertically, first at the 4:1 (height to base) point, then each 20' segment; when last segment is less than 20'; tie at each 4:1 point. Horizontally, tie at each 30' length.			
12B. Has scaffold greater than 3' in width been tied vertically, first at the 4:1 (height to base) point, then each 26' segment; when last segment is less than 26'; tie at each 4:1 point. Horizontally, tie at each 30' length.			
13. Have free standing towers been guyed or tied every 26' in height?			
14. Have brackets and accessories been properly placed: Brackets?			
Putlogs?			
Tube and Clamp?			
All nuts and bolts tightened?			
15. Is scaffold free of makeshift devices or ladders to increase height?			

16	Are working level platforms fully planked between guard rails?			
17	Does plank have minimum 12" overlap and extend 6" beyond supports?			
18	Are toeboards installed properly?			
19	Have hazardous conditions been provided for:			
	Wind loading?			
	Possible washout of footings?			
	Uplift and overturning moments due to placement of brackets, putlogs, or other causes?			
20	HAVE PERSONNEL BEEN INSTRUCTED IN THE SAFE USE OF THE EQUIPMENT?			
21	Have Fall Arrest Systems been designed to limit all fall exposures to < 6 feet?			

## ROLLING TOWER SAFETY CHECK LIST

PROJECT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

	YES	NO	ACTION/COMMENTS
1. Are all electrical lines: a) de-energized? locked out? b) isolated by 10' min. for < 50 KV (add 2 feet for each add'l 5 KV) c) insulated by the utility company			
2. Have competent persons been in charge of erection?			
3. Is tower level and plumb?			
4. Is tower height less than four times the minimum base width?			
5. Are casters of proper size with effective locking devices?			
6. Are screw jacks extended less than 12"?			
7. Are casters and all frames locked together?			
8. Is tower fully braced on both sides?			
9. Has horizontal diagonal bracing been positioned properly at base and intermediate levels of 20"?			
10. Has proper guard railing been provided?			
11. Has safe access been provided?			
12. Is platform fully planked and are toeboards provided where necessary?			
13. Are planks secured to prevent displacement or uplift?			
14. HAVE PERSONNEL BEEN INSTRUCTED IN THE SAFE USE OF THE EQUIPMENT?			
15. Have Fall Arrest Systems been designed to limit all fall exposures to < 6 feet?			

## Definitions

**Adjustable suspension scaffold:** a scaffold equipped with a hoist(s) that can be operated by an employee on the scaffold.

**Approved access:** portable ladders, hook-on ladders, attachable ladders, scaffold stair towers, stairway-type ladders, ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface.

**Bearer (putlog):** a horizontal transverse scaffold member (that may be supported by ledgers or runners) upon which the scaffold platform rests and which joins scaffold uprights, posts, poles, and similar members.

**Boatswains' chair:** a single point adjustable suspension scaffold consisting of a seat or sling designed to support one employee in a sitting position.

**Brace:** a rigid connection that holds one scaffold member in a fixed position with respect to another member, or to a building or structure.

**Bricklayers' square scaffold:** a supported scaffold composed of framed squares which support a platform.

**Carpenters' bracket scaffold:** a supported scaffold consisting of a platform supported by brackets attached to building or structural walls.

**Catenary scaffold:** a suspension scaffold consisting of a platform supported by two essentially horizontal and parallel ropes attached to structural members of a building or other structure. Additional support may be provided by vertical pickups.

**Chimney hoist:** a multi-point adjustable suspension scaffold used to provide access to work inside chimneys.

**Cleat:** a structural block used at the end of a platform to prevent the platform from slipping off its supports.

**Competent person:** one is who 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.

**Continuous run scaffold:** a two-point or multi-point adjustable suspension scaffold constructed using a series of interconnected braced scaffold members or supporting structures erected to form a continuous scaffold.

**Coupler:** a device for locking together the tubes of a tube and coupler scaffold.

**Crawling board (chicken ladder):** a supported scaffold consisting of a plank with cleats spaced and secured to provide footing, for use on sloped surfaces such as roofs.

**Deceleration device:** any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyard, or automatic self-retracting lifeline lanyard, which dissipates a substantial amount of energy imposed on an employee during fall arrest.

**Double pole (independent pole) scaffold:** a supported scaffold consisting of platform(s) resting on cross beams (bearers) supported by ledgers and a double row of uprights independent of support (except ties, guys, braces) from any structure.

**Eye or eye splice:** a loop with or without a thimble at the end of a wire rope.

**Fabricated decking and planking:** manufactured platforms made of wood (including laminated wood, and solid sawn wood planks), metal or other materials.

**Fabricated frame scaffold (tubular welded frame scaffold):** a scaffold consisting of a platform(s) supported on fabricated end frames with integral posts, horizontal bearers, and intermediate members.

**Float (ship) scaffold:** a suspension scaffold consisting of a braced platform resting on two parallel bearers and hung from overhead supports by ropes of fixed length.

**Form scaffold:** a supported scaffold consisting of a platform supported by brackets attached to formwork.

**Horse scaffold:** a supported scaffold consisting of a platform supported by construction horses (saw horses). Horse scaffolds constructed of metal are sometimes known as trestle scaffolds.

**Interior hung scaffold:** a suspension scaffold consisting of a platform suspended from the ceiling or roof structure by fixed length supports.

**Ladder jack scaffold:** a supported scaffold consisting of a platform resting on brackets attached to ladders.

**Large area scaffold:** a pole scaffold, tube and coupler scaffold, systems scaffold, or fabricated frame scaffold erected over substantially the entire work area. For example, a scaffold erected over the entire floor area of a room.

**Lean-to scaffold:** a supported scaffold which is kept erect by tilting it toward and resting it against a building or structure.

**Masons' multi-point adjustable suspension scaffold:** a continuous run suspension scaffold designed and used for masonry operations.

**Maximum intended load:** the total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonable anticipated to be applied to a scaffold or scaffold component at any one time.

**Mobile scaffold:** a powered or unpowered, portable, caster or wheel-mounted supported scaffold.

**Multi-level supported scaffold:** a two-point or multi-point adjustable suspension scaffold with a series of platforms at various levels resting on common stirrups.

**Multi-point adjustable suspension scaffold:** a suspension scaffold suspended by more than two ropes from overhead supports and equipped with means to raise and lower the platform to desired work level (such scaffolds include chimney hoists).

**Needle beam scaffold:** a platform suspended from needle beams.

**Open sides and ends:** the edges of a platform are more than 14 inches away from an adjacent wall or floor surface (threshold for plastering and lathing is 18 inches).

**Outrigger:** the structural member of a supported scaffold used to increase its base width, provide support, and increase stability of the scaffold.

**Outrigger beam (thrustout):** the structural member of a suspension scaffold or outrigger scaffold which provides support by extending the scaffold point of attachment to a point out and away from the structure or building.

**Outrigger scaffold:** a supported scaffold consisting of a platform resting on outrigger beams (thrustouts) projecting beyond the wall or face of the building or structure, the inboard ends of which are secured inside the building or structure.

**Power operated hoist:** a hoist which is powered by other than human energy.

**Pump jack scaffold:** a supported scaffold consisting of a platform supported by vertical poles and movable support brackets.

**Qualified:** one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

**Rated load:** the manufacturer's specified maximum load to be lifted by a hoist or to be applied to a scaffold or scaffold component:

**Repair bracket scaffold:** a supported scaffold consisting of a platform supported by brackets which are secured in place around the circumference or perimeter of a chimney, stack, tank or other supporting structure by one or more wire ropes placed around the supporting structure.

**Roof bracket scaffold:** a rooftop supported scaffold consisting of a platform resting on angular-shaped supports.

**Runner (ledger or ribbon):** the lengthwise horizontal spacing or bracing member which may support the bearers.

**Scaffold:** any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

**Shore scaffold:** a supported scaffold which is placed against a building or structure and held in place with props.

**Single-point adjustable suspension scaffold:** a suspension scaffold consisting of a platform suspended by one rope from an overhead support and equipped with means to permit the movement of the platform to desired work levels.



**Single-pole scaffold:** a supported scaffold consisting of a platform(s) resting on bearers, the outside ends of which are supported on runners secured to a single row of posts or uprights, and the inner ends of which are supported on or in a structure or building wall.

**Stair tower:** a tower comprised of scaffold component and which contains internal stairway units and rest platforms.

**Stall load:** the load at which the prime-mover of a power-operated hoist stalls or the power to the prime-mover is automatically disconnected.

**Step, platform, and trestle ladder scaffold:** a platform resting directly on the rungs of step ladders or trestle ladders.

**Stonesetters' multi-point adjustable suspension scaffold:** a continuous run suspension scaffold designed and used for stonemasons' operations.

**Supported scaffold:** one or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support.

**Suspension scaffold:** one or more platforms suspended by ropes or other nonrigid means from an overhead structure(s).

**System scaffold:** a scaffold consisting of posts with fixed connection points that accept runners, bearers, and diagonals that can be interconnected at predetermined levels.

**Tank builders' scaffold:** a supported scaffold consisting of a platform resting on brackets that are either directly attached to a cylindrical tank or attached to devices that are attached to such a tank.

**Top plate bracket scaffold:** a scaffold supported by brackets that hook over or are attached to the top of a wall (used in residential construction for setting trusses).

**Tube and coupler scaffold:** a supported or suspended scaffold consisting of a platform(s) supported by tubing, erected with coupling devices connecting uprights, braces, bearers, and runners.

**Two-point suspension scaffold:** a suspension scaffold consisting of a platform supported by hangers (stirrups) suspended by two ropes from overhead supports and equipped with means to permit the raising and lowering of the platform to desired work levels.

**Unstable objects:** items whose strength, configuration, or lack of stability may allow them to become dislocated and shift and therefore may not properly support the loads imposed on them.

**Vertical pickup:** a rope used to support the horizontal rope in catenary scaffolds.

**Walkway:** a portion of a scaffold platform used only for access and not as a work level.

**Window jack scaffold:** a platform resting on a bracket or jack which projects through a window opening.

**SECTION #28**  
**SCAFFOLD “USER” POLICY**

# Scaffold User Policy

It is the policy of Plibrico Company LLC to hire an outside source to erect and dismantle scaffolding. We provide training for scaffold users. We also provide an overview of scaffold use. The following guidelines are to be followed when using scaffolding safely.

## **Working safely with scaffolds really comes down to three things:**

1. Is the scaffold safe?
2. Am I using the appropriate PPE?
3. Am I following safe work practices?

## **IS THE SCAFFOLD SAFE?**

The design and structure of the scaffolding itself is extremely important to the safety of the user. That's also why it's important to inspect your scaffold each and every time you prepare to use it. The scaffold **MUST** be tagged safe for use by the Competent person before use. If the scaffold is found not to be tagged or unsafe Plibrico employees will not use the scaffold. All employees are to be aware and trained of scaffold tagging and use.

## **CHECK THE FOLLOWING**

1. Be sure the footings are secure and capable of holding the weight that will be added.
2. Check the guardrails. They should be two inches by four inches and three to three and a half feet high. Also, OSHA requires that guardrails support are spaced at least every 10 feet apart on all open sides of the scaffold.
3. Toe boards at least 3 ½ inches high and must run along all open sides where objects could fall.
4. Check to see that there are screens between the toe boards if workers are to be passing underneath.
5. Make sure cross braces are secure.
6. Always have a ladder handy to get off and on the scaffold
7. Wooden scaffold planks must extend 6 inches beyond the end supports.
8. Make sure poles and legs are secure.

## **AM I USING THE APPROPRIATE EQUIPMENT?**

1. Hardhats are to be worn while working around or near scaffolding.
2. Non-skid boots are recommended while working on scaffolding
3. Swing scaffolding requires safety belts that's attached to a secure rope or attached to the structure, not the scaffold.
4. Gloves to protect the hands while working around scaffolds

## **AM I FOLLOWING SAFE WORK PRACTICES?**

1. Ensure the scaffold is secure.
2. Never overload the scaffold with materials, personnel or tools
3. When using scaffolding in wet or slippery weather use sand to prevent slips
4. Remove all equipment and debris from the scaffold at the end of your shift.
5. Always, watch out for activity below.

## **HOW DO I SAFELY PROVIDE FALL PROTECTION WHEN ON A SCAFFOLD?**

**You don't always get a second chance when you make a mistake concerning fall protection. Always remember these guidelines:**

1. When working levels above 4' without the required hand rails, mid rails and a fully planked platform, make sure you are a 100% tied off to a 5,000 pound anchorage point.
2. When no appropriate anchorage point exists in the area, tie off to the scaffold may be your only option.
3. Before tying off to the scaffold, make sure that the scaffold itself is securely tied to a structure or is in some other way secure from tipping.
4. Always tie off to the upright supports. Never tie off to a horizontal member of the scaffold.

### **FACTS:**

**When using scaffold, tie-off is not needed when the following criteria is met:**

1. The scaffold platform height is less than 4 feet above the lower and the potential to fall more than 4 feet does not exist.
2. Continuous guardrails and mid-rails are provided around the entire scaffold platform.
3. The scaffold platform is fully planked with a maximum of 1" gap between each plank.

**When the above criteria cannot be met, the following must be followed:**

1. All personnel on the scaffold shall be 100% tied-off to an anchorage point, which is capable of supporting 5,000 pounds and is directly above the workers to avoid a swing effect after a fall.

**If an approved anchorage point is not available, tie-off to the scaffold is possible under the following conditions:**

1. The scaffold is built in such a manor that it will withstand the force upon a fall. (i.e. secured to a structure of the building to prevent tip-over)
2. Only the vertical supports of the scaffold are to used as a anchorage point.
3. Only one person tied-off per vertical post.
4. Tie-off must be approved by the competent person who built the scaffold.

**SECTION #29**  
**FALL PROTECTION**

## FALL PROTECTION

### OBJECTIVE

The fall protection standard covered under 29 CFR part 1926 (OSHA's Code of Federal Regulations for the construction industry) is generally designed to protect those working in areas where the risk of falling is present. This document is to be used as a guide to comply with the standard for easier implementation of fall protection programs.

### APPLICABILITY/ SCOPE

This program applies to all employees on a Plibrico Company jobsite.

#### Definitions

**Anchorage**—a secure point of attachment for lifelines, lanyards or deceleration devices.

**Body belt**—a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

**Body harness**—straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

**Buckle**—any device for holding the body belt or body harness closed around the employee' body.

**Competent Person**—one who has specific training in, and is knowledgeable about fall protection, the use of protective systems, and the requirements set forth in 29 CFR 1926.500-503. In addition, the "competent person" must have the authority to take immediate action if a hazard exists.

**Connector**—a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or dee-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

**Controlled access zone (CAZ)**—an area in which certain work (e.g., overhand bricklaying) may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled.

**Dangerous equipment**—equipment (such as picking or galvanizing tanks, degreasing units, machinery, electric equipment, and other units) which, as a result of form or function, may be hazardous to employees who fall onto or into such equipment.

**Deceleration devices**—any mechanism, such as a rope grab, rip-stitch lanyard, speciallywoven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

**Equivalent**—alternate designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

**Failure**—load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

**Free fall**—the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

**Free fall distance**—the vertical displacement of the fall arrest attachment point on the employee's body belt or a body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

**Guardrail system**—a barrier erected to prevent employees from falling to lower levels.

**Hole**—a gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, roof, or other walking/working surface.

**Infeasible**—impossible to perform the construction work using a conventional fall protection system (i.e., guardrail system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

**Lanyard**—a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline or anchorage.

**Leading edge**—the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an “unprotected side and edge” during periods when it is not actively and continuously under construction.

**Lifeline**—a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to an anchorage at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

**Low-slope roof**—a roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

**Lower levels**—those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations,, pits, tanks, material, water, equipment, structures, or portions thereof.

**Mechanical equipment**—all motor or human propelled wheeled equipment used for roofing work, except wheelbarrows and mop carts.

**Opening**—a gap or void 30 inches or more high and 18 inches or more wide, in a wall or partition, through which employees can fall to a lower level.

**Overhand bricklaying and related work**—the process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. Related work includes mason tending and electrical installation incorporated into the brick wall during the overhand bricklaying process.

**Personal fall arrest system**—a system used to arrest an employee in a fall from a working level. It consisted of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt or fall arrest is prohibited.

**Rope grab**—a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

**Roof**—the exterior surface on the top of a building. This does not include floors or framework which, because a building has not been completed, temporarily become the top surface of a building.

**Roofing work**—the hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, and vapor barrier work, but not including the construction of the roof deck.

**Safety-monitoring system**—a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

**Self-retracting lifeline/lanyard**—a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.



***Snaphook***—a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types:

The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection.

The nonlocking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a nonlocking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

***Step roof***—a roof having a slope greater than 4 in 12 (vertical to horizontal).

***Toeboard***—a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.

***Unprotected sides and edges***—any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches high.

***Walking/working surface***—any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, employees must be located in order to perform their job duties.

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

***Work area***—that portion of a walking/working surface where job duties are being performed.

## **ACCOUNTABILITY**

The Supervisor is responsible to see that this program is followed.

### Requirements

The requirements for employers to provide fall protection systems are covered by this section. This section designates circumstances where fall protection systems are required, such as areas with unprotected sides and edges or areas where employees are exposed to falling objects.

Unprotected Sides and Edges - Each employee on a walking/working surface (horizontal and vertical surfaces) with an unprotected side or edge which is 6 feet or more above a lower level shall be protected from falling by the use of (a) guardrail systems, (b) safety net systems, or (c) personal fall arrest systems. The following are areas with unprotected sides and edges.

- Leading edges
- Hoist areas
- Holes
- Formwork and reinforced steel
- Ramps, runways, and other walkways
- Excavations
- Dangers equipment
- Overhead bricklaying and related work
- Roofing work on low-slope roofs
- Steep roofs
- Precast concrete erection
- Residential construction
- Wall openings
- Walking/working surfaces not otherwise addressed

Protection From Falling Objects - When an employee is exposed to falling objects, the employer shall have each employee wear a hard hat and shall implement one of the following measures:  
Erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels.

Erect a canopy structure and keep potential falling objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced.

Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

#### System Criteria and Practices

The systems' criteria and practices for fall protection are covered in this section. Employers shall provide all fall protection systems required by this standard for an employee, and shall comply with all other pertinent requirements of this standard before that employee begins the work that necessitates the fall protection. The following are requirements for the various systems of fall protection

## **Guardrail system**

### **Top rail**

Must be 42 inches high (plus or minus 3 inches)

When stilts are used, the top edge may exceed the 45 inch height, provided the guardrail system meets all other criteria of this section.

Must withstand a force of at least 200 lbs in any outward or downward direction at any point along the top rail.

When 200 lbs of force is exerted on the top rail during inspection the top rail must not deflect to a height less than 39 inches above the working level.

The ends of all top rails shall not overhang the terminal posts, except where the overhang does not present a projection hazard.

Steel or plastic banding shall not be used as top rails.

Must be at least 1/4 inch nominal diameter or thickness.

If wire rope is used as a top rail, it must be flagged every 6 feet with highly visible material.

Manila, plastic, or synthetic rope being used for top rails shall be inspected as frequently as necessary to ensure that it continues to meet the strength requirements.

### **Mid rail**

Shall be used when there is no wall or parapet wall at least 21 inches high.

Shall be installed at a height midway between the top rail and the walking/working level.

Must withstand, without failure, a force of 150 lbs in any outward or downward direction at any point along the midrail.

The ends of the midrails shall not overhang the terminal posts, except where the overhang does not present a projection hazard.

Steel or plastic banding shall not be used as mid rails.

**NOTE:** Guard rail systems shall be surfaced as to prevent injury to an employee from punctures, lacerations, and to prevent snagging of clothing.

## Safety Net Systems

Shall be installed as close as practicable under the walking/working surface, but no more than 30 feet below such level.

When nets are used on bridges, the area between the net and walking/working surface shall remain free from obstructions.

Safety nets shall extend outward from the outermost projection of the work surface as follows:

*Vertical Distance From the Working Level to the Plan of the Net:*

Up to 5', More than 5' / up to 10', More than 10'

*Minimum Req. Horiz. Distance of Outer Edge of the Net From the Edge of the Working Surfaces:*

8 feet, 10 feet, 13 feet

Shall be installed with sufficient clearance under them to prevent contact with the surface below when subjected to an impact force equal to the drop test specifications.

Defective nets shall not be used. Safety nets shall be inspected at least once a week for wear, damage, and other deterioration. Defective components shall be removed from service. Safety nets shall also be inspected after any occurrence which could affect the integrity of the safety net system.

Anything which falls into the safety net must be removed as quickly as possible or at least before the next work shift begins.

The maximum size of each safety net mesh opening shall not exceed 36 square inches nor be longer than 6 inches on any side. All mesh crossings must be secured to prevent enlargements of mesh openings.

Each safety net shall have a border rope for webbing with a minimum breaking strength of 5,000 lbs.

Connections between safety net panels shall be as strong as integral net components and shall be spaced not more than 6 inches apart.

All nets must be drop tested with a 400 lb bag of sand with a diameter of 28-32 inches. This bag must be dropped into the net from the highest walking/ working surface at which employees are exposed to fall hazards. For exception to drop test, consult 1926.502(c)(4)(ii).

## Personal Fall Arrest Systems

Provisions for component specifications on material make-up, forces applied to the equipment, and strength can be found in the OSHA “final rule” attachment [section 1926.502 (d) (1, 2, 3, 4, 5, 7, 9, 12, 13, 14, 15, 16, 22)].

Unless the snaphook is a locking type and designed for the following connections, snaphooks shall not be engaged:

Directly to webbing, rope or wire rope.

To each other.

To a dee-ring to which another snaphook or other connector is attached.

To a horizontal lifeline

To an object which is incompatibly shaped or dimensioned in relation to the snaphook.

When vertical lifelines are used, each employee shall be attached to a separate lifeline.

Two employees may be attached to same lifeline **only** during the construction of elevator shafts provided the following provisions are taken:

Employees are working atop a false car that is equipped with guardrails.

The strength of the lifeline is 10,000 lbs.

All other criteria specified in this section have been met.

Lifelines shall be protected against being cut or abraded.

The attachment point of the body belt shall be located in the center of the wearer’s back. The attachment point of the body harness shall be located in the center of the wearer’s back near shoulder level, or above the wearer’s head.

Body belts, harnesses, and components shall be used only for employee protection and not to hoist materials.

Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.

The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.

Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.

Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists except as specified in other subparts of this standard.

When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

### **Positioning Device System**

#### **Positioning devices**

Shall be rigged such that an employee cannot free fall more than 2 feet.

Shall be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 lbs, whichever is greater.

Systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.

#### **Connectors**

Shall be drop forged pressed or formed steel, or made of equivalent materials.

Shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of this system.

Assemblies shall have a minimum tensile strength of 5,000 pounds.

#### **Dee-rings and snaphooks**

Shall be proof-tested to a minimum tensile load of 3,600 lbs. without cracking, breaking, or taking permanent deformation.

Snaphooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snaphook by depression of the snaphook keeper or shall be a locking type snaphook.

Unless the snaphook is a locking type and designed for the following connections, snaphooks shall not be engaged:

- Directly to webbing
- To each other
- To a dee-ring to which another snaphook or other connector is attached

## **A horizontal lifeline**

To any object which is incompatibly shaped or dimensioned in relation to the snaphook such that unintentional disengagement could occur by the connected object being able to depress the snaphook keeper and release itself.

Body belts, harnesses, and components shall be used only for employee protection and not to hoist materials.

## **Warning Line Systems**

The warning line shall be erected around all sides of the roof work area.

When mechanical equipment is being used, the warning line shall be erected not less than 6 feet from the roof edge.

When mechanical equipment is being used, the warning line shall be erected not less than 6 feet from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet from the roof edge which is perpendicular to the direction of mechanical equipment operation.

Points of access, materials handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines.

When the path to a point of access is not in use, a rope, wire, chain, or other barricade, equivalent in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area, or the path shall be offset such that a person cannot walk directly into the work area.

Warning lines shall consist of ropes, wires, or chains, and supporting stanchions erected as follows

The rope, wire, or chain shall be flagged at not more than 6-foot intervals with a highly visible material.

The rope, wire, or chain shall be rigged and supported in such a way that its lowest point is no less than 34 inches from the walking/working surface and its highest point is no more than 39 inches from the walking/working surface.

After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 lbs applied horizontally against the stanchion, 30 inches above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof, or platform edge.

The rope, wire, or chain shall have a minimum tensile strength of 500 lbs, and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions as prescribed above (no. 3).

The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.

No employees shall be allowed in the area between a roof edge and a warning line unless the employee is performing roofing work in that area.

Mechanical equipment on roofs shall be used or stored only in areas where employees are protected by a warning line system, guardrail system, or personal fall arrest system.

### **Controlled Access Zones (CAZ)**

When used to control access to areas where leading edge and other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access.

When control lines are used, they shall be erected between 6 and 25 feet from the unprotected or **leading edge**, except when erecting precast concrete members.

When erecting **precast concrete** members, the control line shall be erected not less than 6 feet nor more than 60 feet or half the length of the member being erected, whichever is less, from the leading edge.

The control line shall extend along the entire length of the unprotected or **leading edge** and shall be approximately parallel to the unprotected or leading edge.

The control line shall be connected on each side to a guardrail system or wall.

When used to control access to areas where **overhand bricklaying** and related work are taking place:

The controlled access zone shall be defined by a control line erected not less than 10 feet nor more than 15 feet from the working edge.

The control line shall extend for a distance sufficient for the controlled access zone to enclose all employees performing **overhand bricklaying** and related work at the working edge and shall be approximately parallel to the working edge.

Additional control lines shall be erected at each end to enclose the controlled access zone.

Only employees engaged in **overhand bricklaying** or related work shall be permitted in the controlled access zone.

Control lines shall consist of ropes, wires, tapes, or equivalent materials, and supporting **stanchions** as follows:

Each line shall be flagged or otherwise clearly marked at not more than 6-foot intervals with highly visible material.

Each line shall be rigged and supported in such a way that its lowest point is not less than 39 inches from the walking/working surface and its highest point is not more than 45 inches from the walking/working surface.

Each line shall have a minimum breaking strength of 200 lbs.



On floors and roofs where guardrail systems are not in place prior to the beginning of overhand bricklaying operations, controlled access zones shall be enlarged, as necessary, to enclose all points of access, material handling areas, and storage areas.

On floors and roofs where guardrail systems are in place, but need to be removed to allow overhand bricklaying work or leading edge work to take place, only that portion of the guardrail necessary to accomplish that day's work shall be removed.

NOTE: The controlled access zone provides protection only to those working outside of the control access zone lines. In conjunction with the CAZ, full-time, competent **safety monitors** are needed to protect those working within the zone. These monitors shall be trained according to the requirements for Section VII in this booklet. These **monitors cannot perform any other tasks** besides monitoring while on duty.

### **Safety Monitoring System**

The employer shall designate a **competent person** to monitor the safety of other employees and the employer shall ensure that the safety monitor complies with the following requirements:

#### **Competent in recognizing fall hazards**

Shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner.

Shall be on the same walking/working surface and within visual sighting distance of the employee being monitored.

Shall be close enough to communicate orally with the employee.

Shall not have other responsibilities which could take his/her attention away.

Mechanical equipment shall not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations on low-slope roofs.

No employee, other than an employee engaged in roofing work or an employee covered by a fall protection plan, shall be allowed in an area where an employee is being protected by a safety monitoring system.

Each employee working in a controlled access zone shall be directed to comply promptly with fall hazard warnings from safety monitors.

## **Covers**

Covers located in roadways and vehicular traffic aisles shall be capable of supporting, without failure, twice the maximum axle load of the largest vehicle expected to cross over the cover.

All covers shall be capable of supporting, without failure, twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.

All covers shall be secured when installed to inhibit its accidental movement.

All covers shall be color coded or marked with the words "HOLE" or "COVER" to provide a sufficient warning for the hazard.

## **Protection from Falling Objects**

**Toeboards** Shall be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below.

Shall be able to withstand, without failure, 50 lbs of force applied outward or downward at any point along the toeboard.

Shall be a minimum of 3 1/2 inches vertically from the walking/working surface and shall have no more than 1/4 inch clearance from the walking/working surface.

Shall be solid or have openings no more than 1 inch in size.

## **Paneling/Screening**

Shall be used when tools, equipment, or materials are piled higher than the toeboard.

Shall be erected from the walking/working surface to the midrail or top rail (whichever is sufficient to control the hazard).

Guardrail systems, when used to prevent falling objects shall have openings small enough to stop the smallest of objects from falling

## **During Overhand Bricklaying**

No materials, other than masonry and mortar shall be stored within 4 feet of the working edge.

Excess mortar, broken or scattered masonry units, and all other materials and debris shall be removed at regular intervals.

## **During Roofing Work**

Materials and equipment shall not be stored within 6 feet of a roof edge unless guardrails are erected at the edge.

Piles of materials near the roof edge shall be stable and self-supporting.

Canopies, when used as falling object protection, shall be strong enough to prevent collapse and to prevent penetration by any objects which may fall onto it.

## **Fall Protection Plan**

A fall protection plan may only be used as an option when employees are engaged in leading edge work, precast concrete erection work, or residential construction work. This option can only be used when conventional fall protection is proved infeasible or creates a greater hazard.

Shall be prepared by a qualified person and developed specifically for the site.

Shall be kept up-to-date, with changes approved only by a qualified person.

Shall be kept on the job site at all times.

Shall be implemented under the supervision of a competent person.

Shall contain documented reasons why conventional fall protection is infeasible.

Shall include a written discussion of other measures taken to reduce or eliminate fall hazards.

Shall identify the locations where conventional fall protection cannot be used.

Where no alternative protection has been implemented, a safety monitoring system shall be in place.

Shall identify employees who are designated to work in controlled access zones. No other employees may enter these zones.

In the event an employee falls or some other related, serious incident occurs (i.e., near miss) the employer shall investigate the circumstances of the incident and determine if a change is needed for the plan and shall implement this change to prevent similar occurrences.

## **TRAINING**

The following training provisions are a required part a fall protection program:

### **Training Program**

The employer shall provide a training program for each employee who might be exposed to fall hazards.

The program shall enable employees to identify the hazards of falling.

The program shall train employees in the procedures to be followed in order to minimize these hazards.

The employees shall be trained in the following areas:

The nature of fall hazards in the work area.

Correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection system.

The use and operation of all the systems of fall protection.

The role of each employee in the safety monitoring system, when used.

The limitations on the use of mechanical equipment during roofing on low-sloped roofs.

The correct procedures for handling and storage of equipment and materials and the erection of the overhead projection.

The role of employees in fall protection plans.

### **Certification of Training**

The employer shall provide a written certification record of all employees which completed training in fall protection and it shall include the following:

Employees' names

The date(s) of training

Signature of the person who conducted the training or the employer's signature.

The latest training certification shall be maintained.

## **Retraining**

When the employer has reason to believe that employees no longer possess the necessary understanding and skill required, the employer shall retrain these employees. The following circumstances may be indicators when retraining is needed:

Changes in the workplace render previous training obsolete.

Changes in the types of fall protection systems or equipment to be used render previous training obsolete.

When it is evident that the employee did not retain the knowledge or understanding provided in the training session.

## **FORMS**

Fall Protection Selection Chart

Training Guide for Lanyards

Guide for Selecting Anchorage Points

## Fall Protection Selection Chart

The following chart should be used as a guide for determining the type of fall protection needed in certain working circumstances where there is a 6 foot separation between the employee and the fall hazard.

TYPES OF WORKING SITUATIONS	PROTECTION NEEDED
Leading edges	a, b, c, or l
Hoist Areas	a or c
Holes	a, c, or d
Formwork and Reinforced Steel	a, b, or c
Ramps, Runways, and Other Walkways	A
Excavations	a or f
Edge of a Well, Pit, or Shaft	a, f, or d
Dangerous Equipment (used within 6 feet below walking/working surfaces)	a or g
Dangerous Equipment (used > 6 feet below walking/working surfaces)	a, b, or c
Overhand Bricklaying and Related Work	a, b, c, or h
Overhand Bricklaying and Related Work (reaching > 10 in. below surface)	a, b, or c
Roofing Work on Low-slope Roofs	a, b, c, j, or i
Steep Roof Work	b, c, or k
Precast Concrete Erection	a, b, c, or l
Residential Construction	a, b, c, or l
Wall Openings	a, b, or c
Walking/working Surfaces Not Otherwise Addressed	a, b, or c

- |                                 |                                  |                                    |
|---------------------------------|----------------------------------|------------------------------------|
| a. Guardrail systems            | f. Fences or Barricades          | k. Guardrail systems w/toeboards   |
| b. Safety net systems           | g. Equipment guards              | l. Fall protection plan <b>xxx</b> |
| c. Personal fall arrest systems | h. Control access zones <b>x</b> |                                    |
| d. Hole covers                  | i. Warning line <b>xx</b>        |                                    |
| e. Positioning device systems   | j. Safety monitoring systems     |                                    |

**“x”** in addition to the control access zone system of fall protection, the safety monitoring system must also be used to protect those working inside the CAZ.

**“xx”** this system can only be used when accompanied by one of the other protection systems listed for the type of work.

**“xxx”** this system can only be used when the other systems are proved to be infeasible or create a greater hazard.

## Training Guide for Lanyards

When using different forms of personal fall protection equipment, certain guidelines must be followed in order for that equipment to be effective. Following these guidelines will ensure that your equipment will work properly when needed.

### *Shock Absorbing Lanyards*

When using shock-absorbing lanyards, be sure to connect the shock absorbing end of the lanyard to the D-ring located on the back of your full body harness. If this device is **not** connected in this manner it will not be effective.

### *Manila Rope Lanyards and Body Belts*

When using manila rope lanyards with body belts, you should tie off in a manner that only allows a two-foot fall. OSHA requires that the body cannot be subjected to more than 900 lbs. of force to the body when using belts. If a manila lanyard is connected in a manner that allows more than a two-foot fall, the average 200 lb. person would exceed the limit of 900 lbs. of force to the body during a free fall.

**NOTE:** Employees wearing full body harnesses may not be exposed to over 1800 lbs. of force during a fall.

Body belts may be used for positioning work or tethering work only. When positioning, additional fall protection must be used.

## Guide for Selecting Anchorage Points

### *Tie-Off Points (Anchorage)*

When anchoring any fall protection, the following questions should be asked to see if these anchorage points are reliable. An answer of “NO” to any of these questions signifies a deficiency.

1. Does the anchor-point height reduce free fall distance to the shortest distance possible?
2. Is the anchor point away from possible collisions with the body or the head?
3. Is the anchor point unaffected by local environment or contamination such as overspray?
4. Is swing fall reduced to a reasonably safe minimum to reduce the potential for collision injury and allow for self-recovery?
5. Is the anchorage reachable to permit connection without a hazard?
6. Is the anchorage point compatible with the attachment method of the deceleration device? (Many shapes are not attachable with snaphooks, including certain eyebolt shapes).
7. Will the likely method of attachment cause damage or failure to the deceleration device? (Looping a lanyard around an angle iron could cut the lanyard in a fall).
8. Is the anchorage point tested or permitted for its intended use (multiple or single tie-offs)?
9. Are load bearing suspension line and the life line attached to separate support systems?
10. Are tying knots prohibited to provide an anchor point attachment?

11. Is the practice of attaching lanyards together at their snaphooks prohibited?
12. Is the practice of using snaphooks for attaching loads to the structure or pulling loads prohibited?
13. Is the practice of attaching lanyards to eyebeams with snaphooks prohibited?
14. Are the anchorage points independent?
15. Is the fall protection system, in use, engineered properly?
16. If horizontal lifelines are used, have they been engineered for this purpose?
17. Are anchorage points capable of supporting at least 5,000 lbs. for each employee attached.



**SECTION #30**  
**MATERIAL HANDLING**

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## **GENERAL PRECAUTIONS**

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General precautions that must be followed to prevent injuries while handling materials are:

1. Inspect materials for slivers, jagged, or sharp edges, burns, rough, or slippery surface.
2. Grasp the object with a firm grip.
3. Keep fingers away from pinch and shear points, especially when setting down materials.
4. Wipe off greasy, wet, slippery, or dirty objects before trying to handle them.

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## **MANUAL LIFTING TECHNIQUES**

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### **SQUAT LIFTING**

1. Keep feet parted - one alongside, one behind the object.
2. Keep back straight, nearly vertical
3. Tuck elbows and arms in, and hold load close to body.
4. Grasp the object with the whole hand.
5. Tuck your chin in.
6. Keep body weight directly over feet.

### **ASSISTED ONE-HAND LIFT**

In this method, the worker rests one hand on top of the container, bends over to grasp an object in the container, and then pushes down with the non-lifting hand resting on top of the container to force the upper body back to a vertical position.

The basic techniques are:

1. Place the non-lifting hand on the container top, bend over container and assume lift position.
2. While bending over, back the foot on the same side as the non-lifting hand rearward to provide body balance.
3. Reach and grasp object to be lifted.
4. Push down with the non-lifting hand on the container top, raising the upper body to a vertical position.
5. Be sure to let the non-lifting hand, **not the back**, do the work

## **TEAM LIFTING AND CARRYING**

When two or more people carry one object:

1. They should adjust the load so that it rides level so that each person carries an equal part of the load.
2. Test lifts should be made before proceeding.
3. When carrying long sections of pipe, lumber, or steel they should carry them on the same shoulder.

## **HANDLING SPECIFIC SHAPES**

### **Boxes, Cartons, and Sacks**

1. Grasp the alternate top and bottom corner.
2. Draw a corner between the legs.
3. Sacked materials should be grasped at opposite corners.
4. Upon reaching an erect position:
  - a. Let the sack rest against the hip and belly
  - b. Then swing the sack to one shoulder
5. As the sack reaches the shoulder, the worker should stoop slightly, put a hand on the hip so that the sack rests partly on the shoulder and partly on the arm and back.

### **Barrels and Drums**

1. When handling a drum, one should request assistance or use a drum tilter or other mechanical assistance (two-wheeled dolly equipped for drums).
2. If necessary to roll a barrel or drum, the worker should push against the sides with the hands.

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## **HAND TRUCKS, CARTS, AND DOLLIES**

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### **SAFE PROCEDURES FOR USING TWO-WHEELED TRUCKS OR CARTS**

1. Tip the load to be lifted forward slightly so that the tongue of the truck goes under the load.
2. Push the truck all the way under the load to be moved.
3. Keep the center of gravity of the load as low as possible. Place heavy objects below lighter objects.
4. Place the load well forward so the weight will be carried by the axle, not by the handles.
5. Place the load so it will not slip, shift, or fall.
6. Load only to a height that will allow a clear view ahead.
7. Let the truck carry the load. The operator should only balance and push.
8. Never walk backwards with a hand truck.
9. For extremely bulky items or pressurized items, such as gas cylinders, strap or chain the item to the truck.
10. When going down an incline, keep the truck ahead so that it can be observed at all times.

### **FOUR-WHEEL TRUCKS OR CART**

1. Trucks or carts should be evenly loaded to prevent tipping.
2. Trucks should be pushed rather than pulled.
3. They should be loaded so that the operators can see where they are going.
4. Contents of load should be arranged so that they will not fall.

**SECTION #31**  
**LIFTING AND RIGGING**

# Plibrico Company, LLC

## **Lifting and Rigging Policy**

### **Introduction**

Plibrico recognizes the hazards associated with the operation of hoisting and rigging / crane operations. This policy has been developed to established guidelines to eliminate injuries from those operations.

### **Scope**

Hoisting and rigging refers to the lifting and moving of loads using mechanical devices. The objective of the hoisting and rigging policy is to protect personnel from injury, the environment from harm, and equipment and property from damage; specifically, to protect load operators and others in the work area along with the rigging equipment itself.

Hoisting and rigging is a complicated topic and can have significant safety consequences if not performed correctly. Fundamental to the hoisting and rigging policy, it's Plibrico expectations that everyone working at Plibrico takes the responsibility to understand the hoisting and rigging requirements and apply them to their operations.

### **Responsibilities**

Office Mgrs will:

- Ensure this policy and the equipment training procedures are followed.
- Ensure a Qualified Person is available for hoisting, rigging and crane safety training.
- Provide a resource for training the operators of hoisting, rigging, crewmembers

Supervisors will:

- Enforce this policy along with all rules and equipment training.
- Identify and provide the appropriate training for the Qualified Person to conduct hoisting, rigging and crane training.
- Ensure all operators of hoisting, rigging and cranes are trained, evaluated and given skills needed to perform their duties.

Employees will:

- Follow this policy and other safety rules pertaining to the pre-use inspection of, operation and routine maintenance of hoisting, rigging.
- Perform pre-use inspections on all lifting, rigging equipment.
- Report any defects to the supervisors and do not use equipment.
- Obey all signs and signals from the crane operator.

## General Operating Requirements

- Equipment operators are responsible for keeping their equipment under control at all times.
- No changes or alterations of equipment without permission from manufacturer
- All equipment used within its rating capacity.
- Pre-equipment check is required before each use.
- All defects found in equipment is taken out of service immediately and reported to the supervisor.
- Loads shall not be left hanging unattended
- Personnel shall not place any part of their body between a fixed object and the load
- Swinging loads must be stopped and put under control
- Gloves shall be worn to protect the hands
- Route of travel must have been pre-determined
- Load must be centered so not to swing
- Where visibility is limited, warn others about the lift

## Performing Lifts

- Lift shall be performed as planned.
- Only trained, qualified personnel shall be used to hoist or rig.
- All equipment must be inspected prior to lifting.

## Hoisting, Rigging Requirements

- Only trained personnel are permitted to hoist and rig
- Personnel shall inspect equipment prior to use
- Clear path to where lifts are to be made
- Hazards are present in all loads
- Never stand under suspended loads
- Keep the load as near the ground as possible while traveling
- Never exceed weight limits

## Definitions

- *Attachment point.* Designed lifting point that is part of a load.
- *Crane.* A machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism as an integral part of the machine.
- *Custodian, equipment.* A person assigned responsibility for a piece of hoisting and rigging equipment.
- *Engineer / engineering or organization, qualified.* An engineer or engineering organization whose competence in evaluation of the type of equipment in question has been demonstrated to the satisfaction of the responsible line management.
- *Free rigging.* The direct attachment to or placement of rigging equipment (such as slings, shackles or rings) into the tines (forks) of a powered industrial truck for a below-the-tines lift.
- *Hoist.* A device that applies a force for lifting or lowering.
- *Hoist, lever operated.* A lever-operated manual device used to lift, lower or pull a load and to apply or release tension; commonly referred to as a **come-along**.
- *Hoist, chain operated.* A chain operated manual device used to lift or lower a load and to apply or release tension; commonly referred to as a **chain-fall**.
- *Inspector, crane.* Inspector qualified to inspect cranes, hoist and miscellaneous lifting devices.
- *Inspector, qualified.* Person recognized for competence and whose qualification to perform specific inspections activities has been determined, verified and documented.

- *Lift critical.* A lift for which the application of requirements applicable to ordinary lifts would not adequately eliminate or control the likelihood or severity of the following:
  1. Personal injury or significant adverse health impact (on-site or off-site)
  2. Significant release of hazardous material or other undesirable condition.
  3. Undetectable damage that would jeopardize future operations or the safety of a facility.
  
- *Lift, ordinary.* All lifts that do not meet the requirements of critical or pre-engineered production.
- *Lift, pre-engineered production.* A repetitive, production-type lifting operation, independent of the nature of the load to be lifted, in which the probability of dropping, upset or collision is reduced to a level acceptable to the responsible manager by preliminary engineering evaluation, specialized lifting fixtures, details procedures, operation-specific training, independent review and approval of the entire process.
- *Lifting plan.* Pre-job plan or procedure for the safe executing a lift.
- *Lifting device.* Includes a broad range of equipment used in hoisting and rigging activities.
- *Below-the-hook devices.* Device that, used singularly or in combination, alters or transfers the direction or sequences of loading from the lifting device to the load, such as spreader bars, structural lifters, vacuum lifters and magnetic lifters.
- *Miscellaneous lifting devices.* Portable A frames (portable gantries), truck mounted crane with the capacity of one ton or less not covered by ASME B30.5 and self-contained shop crane as addressed by ASME Portable Automotive Lifting Devices.
- *Slings.* Wire rope, chain, synthetic web, and metal mesh made into forms, with or without fittings, for handling loads.
- *Rigging hardware or accessories.* Such items as shackles, eyebolts, rings, links, swivel hoist rings, turnbuckles, wire rope clips and load-indicating devices.
- *Rigging hooks.* A rigging hardware component typically attached to chain, wire rope or suspension member.
- *Load owner.* Person responsible for the load to be lifted including attachment and lift points.
- *Maint. Supervisor, crane.* Supervisor in the organization designated to maintain cranes and hoists.
  
- *Non-destructive examination.* The development and application of technical methods to examine materials or components in ways that do not impair usefulness and serviceability in order to detect, locate, measure and evaluate discontinuities, defects and other imperfections; assess integrity, properties and composition; measure geometrical characteristics.
- *Non-destructive test.* Testing that does not destroy or damage the item. Examples include magnetic particle, ultrasonic, liquid penetration or radiographic testing.
- *Operator.* Person who operates cranes, hoist and miscellaneous lifting devices.
- *Operator, no-load.* Operators who hoist bridges and trolleys as a personal platform to perform maintenance (example, changing light bulbs).
- *Person, authorized.* A person who has completed required training and is authorized to perform the work.
- *Person, designated.* An individual selected or assigned as being qualified to perform specific work.
- *Person, qualified.* A person who, by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated an ability and competence to solve or resolve problems relating to the subject matter and work.
- *Person-in-charge.* A qualified person responsible for the safe planning performance of a critical lift.



**SECTION #32**

**LOCKOUT-TAGOUT & ABANDONED LOCK POLICY**

## **PURPOSE:**

To provide a systematic method for preventing injury or death to personnel during maintenance, servicing and cleaning activities by disabling machinery or equipment to prevent the unexpected release of potentially hazardous energy (i.e., electrical, hydraulic, thermal, chemical, pneumatic).

## **SCOPE:**

This document outlines the basic requirements that must be met.

## **DEFINITIONS:**

***Affected employee*** – An employee whose job requires him/her to work in the area of machines or equipment that are locked/tagged out. An authorized employee and an affected employee may be the same person when an affected employee's duties involve locking/tagging out machines or equipment in his/her work area.

***Authorized employee*** – An employee who performs a lockout/tagout on machines or equipment in order to perform servicing or maintenance on that machine or equipment.

***Double block & bleed*** – A method used to isolate a single line, duct or pipe by physically closing two main valves on a piping system, and opening a “vented-to-a safe location” valve between them.

***Energized*** – Machines and equipment are energized when (1) they are connected to an energy source or (2) they contain residual or stored energy.

***Energy-isolating device*** – Any mechanical device that physically prevents the release of energy (i.e., manually operated circuit breakers, disconnect switches, line valves, blocks, etc.).

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

***Fail closed valve*** – A valve in which, in the absence of air and/or electricity, will go to the closed position.

***Fail open valve*** – A valve in which, in the absence of air and/or electricity, will go to the open position.

## **LOCKOUT/TAGOUT EQUIPMENT REQUIREMENTS:**

1. Lockout and tagout devices must NOT be used for other purposes.
2. Personal tags must ALWAYS accompany locks. Personal tags must identify the name of the person who applied the tag and the date the tag was applied. All tags must be industrial-quality and be resistant to moisture, grease and chemicals. Tags should be securely attached with nylon tie or equivalent and be able to pass OSHA's 50 lb strength requirement.
3. Blinds used for energy isolation shall be constructed of material compatible with the application and able to withstand 1.5 times the maximum operating pressure.

## **LOCKOUT/TAGOUT GENERAL PROCEDURES:**

### ***Machinery/equipment isolation***

1. The authorized employee or contractor performing the job must understand the energy hazards/controls and ensure all affected employees are notified that the machinery/equipment is being shut down and locked/tagged.
2. The authorized employee must work with the department operator(s) to ensure affected machinery/equipment is stopped using the normal stopping procedures.
3. The authorized employee/contractor must communicate with all affected personnel regarding the machine/equipment being isolated.
4. All energy sources must be identified and isolated and all stored energy dissipated (i.e., steam, air, water pressure, etc.).
  - A. When disengaging an electrical disconnect, the equipment should be first shut down by normal means. Employees must stand to the side when throwing the disconnect to keep the body away from the line of fire from an arc flash/blast. The preferred side to stand on when throwing the electrical disconnect is the hinged side of the door.

5. It is recommended that a multilock hasp be used with every energy isolation lock.
  - A. Each person who has applied a lock and tag will keep their key(s) in their possession. Please refer to the Group Lockout section of this policy for key control requirements during a group lockout.
  - B. Each individual involved in the work must have a lock and tag on the machinery/equipment except where group lockout procedures are utilized.
6. Each tag must display the name of the authorized employee or contractor and the date.
7. Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, and then verifying the isolation of the machinery/equipment by having the department operator go through a normal start up sequence (i.e., local start/stop).
  - A. Ensure machinery/equipment is not being prevented from starting by a programmed interlock.
  - B. **Ensure the operator returns controls to "neutral or off" after verifying the isolation of the machinery/equipment.**
8. When executing a lockout in an MCC (motor control center), a minimum of all natural fiber, long sleeve clothing and leather gloves are required (for additional information refer to the Electrical Safety Program)
9. For lockouts of electrical distribution (high voltage transformers back to the utility), a qualified electrical employee or contractor must be used.

## LOCKOUT/TAGOUT REMOVAL:

1. Ensure machine / equipment is completely reassembled and all tools/materials have been removed from and are clear of the machine/equipment.
2. Ensure all employees and contractors have been safely positioned or removed from the affected area.
3. Remove the locks/tags from the local switch (if applicable). Leave all controls in the "neutral or off" position. Remove the locks/tags and lockout/tagout devices from the MCC and reenergize machinery/equipment.
  - A. Each individual is responsible for removing his/her own locks and tags when the work is completed.
  - B. When engaging an electrical disconnect, if possible, stand to the preferred side of the MCC door (hinged side) to stay out of the line of fire of a potential arc flash/blast.
4. Notify affected employees that the servicing and/or maintenance is completed and the machine/equipment is ready for use.
5. The Lockout Removal Policy is required any time a lockout/tagout lock must be removed by any means other than a key. In addition, if the person removing the lockout device is not the person who applied it, the Abandoned Lock Removal Policy must be executed. This policy will also be used for any non-routine removal of any tag that is used in lieu of a lock for energy isolation. Specific examples requiring Abandoned Lock Removal Policy include employees who have left the facility, employees who have lost their keys, etc.

## **GROUP LOCKOUT:**

1. If more than one person will be working on a piece of equipment, EACH authorized employee/contractor must affix their own personal lock AND tag to a multilock hasp affixed to the machine/equipment or a group lockbox.
2. The primary responsibility for the group lockout will be with an authorized employee (Supervisor) who will direct each individual to affix their lock and tag on the group lock box or multilock hasp.

## **LOCK BOX PROCEDURES:**

1. A lock box Supervisor / Leadman will be designated and be responsible to ensure all energy sources are properly isolated. The lock box Supervisor / Leadman will ensure lockout keys for the affected machinery/equipment are placed in the lock box.
2. All individuals working on the machinery/equipment will place their lock and personal tag on the lock box.
3. The lock box coordinator will maintain control of the key by placing it in the master control room lockbox.
4. When an individual finishes work, he/she is to remove their lock and tag from the lock box. An individual cannot remove or affix a lock and tag to a lock box for any other employee or contractor.
5. The last lock and tag to be removed from the lock box will be the lockbox Supervisor / Leadman. The Supervisor / Leadman will thoroughly check out the machinery/equipment before re-energizing the system. The Supervisor / Leadman will communicate with affected personnel after the removal of the lockout devices.

## **TRANSITION OF LOCKOUT/TAGOUT AT SHIFT OR PERSONNEL CHANGES:**

1. During shift or personnel changes, an energy source must NEVER be left unprotected. Discussions must occur between personnel during shift or personnel changes to ensure the continuity of lockout/tagout protection, including provision for the orderly transfer of lockout or tagout device protection between off going and on coming employees/contractors.
  
2. Individual transfer of locks should be accomplished by the person coming onto shift placing their lock/tag first, followed by the removal of the lock/tag by the person going off of shift.
  
3. During a group lockout transfer, the lock Supervisor / Leadman must:
  - A. Thoroughly review the job hazards/scope of work with oncoming personnel.
  
  - B. Review the lockout procedure and equipment that is locked out.
  
  - C. Maintain control of keys at all times (i.e., master control room lockbox, personnel pocket, etc.). Keys must not be left where there could be potential for an unauthorized person to utilize them.
  
  - D. If a master control room lockbox is used, for consistency within the Business Unit, the following rules will apply to this lockbox:
    - a. It must be labeled: "Master Lockbox"
    - b. It falls under 'group lockout'
    - c. Combination locks will not be used to secure
    - d. The tag can have the person's job title or name of the person
    - e. The Supervisor / Leadman will keep the key on their person
    - f. The key may be transferred to other current LOTO trained without removing the Supervisor / Leadman lock/tag from this lockbox only if the job title is listed on the tag.

## **ADDITIONAL LOCKOUT/TAGOUT REQUIREMENTS:**

### ***For Confined spaces:***

1. All lines leading into permitted confined spaces must have sufficient barrier protection prior to authorized work within the confined space:
  - A. Disconnect, secure piping and control potential discharge
  - B. Double block and controlled bleed on all lines (2 valves and a bleed between those valves BEFORE the confined space)
  - C. Blind installation

The method of isolation shall be determined from a risk assessment and shall be documented in the LOTO procedure.

2. If unable to accomplish one of the methods of isolation listed above:
  - A. On a system that contains a hazardous energy source or process, do not perform the work
  - B. On a system that contains a non-hazardous material a pre job hazard analysis (PJHA) must be completed to evaluate the risks and be approved by the facility manager or BU operations manager. This work may continue only if you are able to isolate the system and verify the isolation, (i.e., close the valve, place a physical lock on it and verify isolation by opening the drain valve, etc.).



***For other lockout applications:***

1. Whenever working on/around large rotating equipment (rotary dryers, drum filters) they are to be blocked, chained, or otherwise properly secured. This includes all maintenance activities.
2. Systems containing steam, chemical, thermal, or potential energy or any other hazardous substances must have sufficient barrier protection prior to authorized work.
3. All locked-out hand valves must be physically secured. A physical lock must be in place on a manual hand valve. Do not rely on a tag only. Locations should review and eliminate scenarios that do not allow the placement of a locking device on all energy sources, including manual valves.

*NOTE - Locations should review all confined spaces or any hazardous materials systems to determine if any additional valves need to be added, or replaced, to allow for compliance with the above requirements. Standard operating procedures should also be reviewed and updated to eliminate the use of tags as the primary control device whenever possible.*

## **TRAINING:**

Employees who have successfully completed

1. LOTO training for authorized employees
2. Been observed successfully performing a LOTO
3. Reviewed written department specific LOTO procedures for a particular piece of equipment are authorized to perform LOTO on that piece of equipment.
4. Completed “Authorized Electrical Safety” training

***Authorized employee*** training must include:

1. The purpose and use of the lockout/tagout program.
2. The recognition of hazardous energy sources.
3. The type and magnitude of the energy present or available in the workplace.

***Affected employee and other employee*** training must include:

1. The purpose and use of the lockout/tagout program.
2. Restrictions on persons attempting to restart equipment which are locked/tagged out.

## **INSPECTIONS:**

1. A documented review of each authorized employee performing a LOTO must take place at least annually. The review must be conducted by an authorized employee other than an employee involved in the lockout, and documented utilizing the Annual Lockout Tagout Observations Form
2. An authorized employee must conduct reviews of all written LOTO procedures on an annual basis utilizing the Lockout Tagout Audit Form. Documentation must include the date of review, and Violations of the LOTO policy and are subject to disciplinary action, up to and including termination.

**FAILURE TO COMPLY WITH THIS POLICY MAY RESULT IN DISCIPLINARY ACTION, UP TO AND INCLUDING TERMINATION**

## **REFERENCES:**

- 29 CFR 1910.147      The control of hazardous energy (lockout/tagout)
- 29 CFR 1926.417      Lockout and tagging of circuits



## **Abandoned Lock Procedures**

### Purpose

In the event an Employee unintentionally leaves their lock on an energy-controlling device, all safety precautions must be taken to protect Employees during the removal. These procedures are set in place to eliminate those risks and form a formal policy for lock removal.

### Responsible Persons

Supervisor, Lead-man, Safety Mgr.

### Required Actions

1. Attempt to contact the lock or tag owner. If the employee is available at the worksite the best method is to summons the employee and have him remove the lock if his work has been completed.

If the employee is not available in person to remove the lock, an attempt must be made to contact him by phone. If phone contact is made and the employee advises that the work is finished, the lock can be removed under the direction of the Supervisor or Safety Mgr.

If no contact is made the equipment or machine must be inspected by the Maint. Dept. to determine if the lock can be removed. The lock removal must be under the direction of the Supervisor or Safety Mgr.

2. After the lock has been removed the equipment or machine must be inspected to determine safe for operation. (if applicable)

**SECTION #33**

**CONFINED SPACE PROGRAM**

# **CONFINED SPACE PROGRAM**

## **Introduction**

This program is used to provide managers and competent persons of Plibrico Company with basic information regarding the safe entry into confined spaces. Its purpose is intended to create an awareness of the hazards associated with confined spaces and to provide managers with basic information necessary for a successful confined space entry program. This program is also intended to ensure that Plibrico Company is in compliance with the General Industry Standard 29 CFR 1910.146.

## **Objectives**

After an employee of Plibrico Company is trained in the following program, they should be able to:

1. Identify confined spaces.
2. Demonstrate knowledge of confined space entry requirements.
3. Identify confined space hazards.

## **Organization**

The Safety Manager, along with other designated employees, shall oversee the development of this program and ensure that it is carried out on an ongoing basis.

Specifically, the General Manager's responsibilities are as follows:

1. Oversee the development of Plibrico Company's "Confined Space Protection Program."
2. Review any confined space entry operations when there is reason to believe that the program did not provide employees with adequate protection.
3. Revise the program to correct any deficiencies that are found to exist.
4. Review the program at least annually and revise it, as necessary, to ensure that employees are adequately protected from confined space hazards. (The dates of these reviews are to be recorded on the following page.)

## **Definitions**

**Acceptable Entry Conditions** - the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into, and work within, the space.

**Attendant** - a trained individual stationed outside a permit space who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.

**Authorized Entrant** - a trained employee who is authorized by the employer to enter a permit space.

**Biological Hazards** - Bacterial and infectious materials exist in many confined spaces. Insects, snakes, and rodents are also a hazard to employees entering a confined space.

**Confined Space** - an enclosed space having the following characteristics:

1. Has a limited or restricted means of entry and exit.
2. Is large enough for a person to enter.
3. Is not designed for continuous employee occupancy.

**Emergency** - any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

**Engulfment** - the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

**Entry** - the action by which a person passes through an opening into a permit-required confined space. Entry is to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

**Entry Permit** - the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in the General Industry Standard 29 CFR 1910.146, paragraph (f).

**Entry Supervisor** - the trained person responsible for determining if acceptable conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry if required.

**Hot Works Permit** - the employer's written authorization to perform operations capable of providing a source of ignition.

**Immediately Dangerous to Life and Health (IDLH)** - any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

**Isolation** - the process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as described in the lockout/tagout program.

**Hazardous Atmosphere** - an atmosphere that may expose employees to the risk of death, incapacitation, impairment or ability to self-rescue, injury, or acute illness from one or more of the following causes:

1. Flammable gas, vapor, or mist in excess of 10 percent of its Lower Flammable Limit (LFL);  
NOTE ( the LFL is the same as the LEL or Lower Explosive Limit).
2. Airborne combustible dust at a concentration that meets or exceeds the LFL.
3. Atmospheric oxygen concentration below 19.5% or above 23.5%.
4. Atmospheric concentration of any substance for which a dose of a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of this part and which could result in employee exposure in excess of its dose of permissible exposure limit.
5. Any other atmospheric condition that is immediately dangerous to life or health.

**Non-Permit Confined Space** - a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

**Oxygen Deficient Atmosphere** - an atmosphere containing less than 19.5% oxygen by volume.

**Oxygen Enriched Atmosphere** - an atmosphere containing more than 23.5% oxygen by volume.

**Permit-Required Confined Space** - a confined space that has one or more of the following characteristics:

1. Contains or has the potential to contain a hazardous atmosphere.
2. Contains a material that has the potential for engulfing an entrant.
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward or tapers to a smaller cross section.
4. Contains any other recognized serious safety or health hazard.

**Permit-Required Confined Space Program** - the employer's overall program for controlling, and, where appropriate, for protecting employees from permit space hazards and for regulating employee entry into permit spaces.

**Permit System** - the employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

**Physical Hazards** - engulfment, falling, tripping, poor visibility, flooding, steam.

**Prohibited Condition** - any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

**Rescue Service** - the personnel designated to rescue employees from permit spaces.

**Retrieval System** - the equipment used for non-entry rescue of persons from permit spaces.

**Testing** - the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.



## **Confined Space Identification Information**

At each facility and work area throughout the company grounds, involving employees of Plibrico Company, a technically qualified professional shall perform a "Work Space Profile" for the purpose of identifying confined spaces and the hazards associated with them. It is the responsibility of the Plant Manager to maintain a current file of all "Profile Sheets" and to notify affected employees of any change in status of a confined space. The "Work Space Profile" shall give an employee pertinent information relative to safe entry into that particular confined space and shall serve as inspection and testing documentation for "Alternate Entry Procedures." The Confined Space Hazard Identification process should include, but not be limited to the following:

1. Past and current uses of the confined space.
2. Physical characteristics, location, and configuration of the confined space.
3. Existing or potential hazards in the confined space.

## **Requirements for Contractor Entrances into Plibrico Confined Spaces**

When Contractors enter into a permit required confined space on the grounds of Plibrico Company, the General Manager / Supervisor must:

1. Inform the contractor of the hazards or potential hazards within the space.
2. Require the contractor to implement an entry permit system.
3. Coordinate entry operations when both Plibrico Company employees and the contractor must enter into the space.
4. Debrief the contractor at the conclusion of entry operations to determine if any new hazards were confronted or introduced into the confined space.

## **Requirements for Plibrico Entrances into Host Customer Confined Spaces**

When working at a host Customers facility, the Mgrs / Supervisors shall:

1. Review the Host Customers Confined Space inventory list, in areas where work will be performed.
2. Review and discuss the Host Customers Confined Space policy in comparison with Plibrico for compliance issues
3. Must obtain any and all information regarding their Permit Confined Space hazards, entry operations and procedures.
4. Must inform the Host Customer about the procedures taken to enter the Permit Confined Space during the performance of work at their facility. And also discuss with the Host Customer, any hazards confronted or created during the entry into the Confined Space

## **Signage Requirements**

Signs must be posted near permit required confined spaces to notify employees what hazards may be present and that only authorized entrants may enter the confined space.

## **Training Requirements**

It is required that the following personnel be trained in the Confined Space Protection Program:

1. Entry Supervisor
2. Attendants
3. Authorized Entrants
4. Atmospheric monitoring personnel
5. Emergency Response Personnel.

The duties of each employee job classification must be identified, and employees must be trained to safely perform their duties. Training requirements for each employee job classification must be established in writing.

All personnel working in or around the confined space area must be instructed that they are forbidden to enter the confined space unless they have been trained and an entry permit has been issued. When a permit is issued, specific procedures for entry must be followed or the permit will be canceled.

All personnel must be aware of the emergency action plan and must not attempt to enter into a confined space to rescue someone unless they have been trained and are properly equipped.

All training should be documented so the person authorizing or in charge of the entry can verify that the workers entering into the confined space have completed appropriate training for the task they will be assigned.

## **Training for Authorized Entrants**

Authorized entrants must be aware of all the provisions of the program that apply to them. Appropriate training should include, but is not limited to, the following:

1. Hazard Recognition - Entrants must understand the nature of hazards they could encounter. They should understand the consequences of exposure to the hazards.
2. Emergency Procedures - Entrants must be aware of the emergency plan and know how to sound the alarm and summon help if someone is in distress. Entrants must also be instructed in self rescue and must be instructed to exit the space immediately when:
  - A. The attendant or entry supervisor orders evacuation.
  - B. The automatic alarm is activated.
  - C. The entrant perceives that he/she is in danger.
  - D. The entrant detects a prohibited condition.

3. Personal Protective Equipment (PPE) - Entrants should be instructed in the need for and use of PPE. They must understand how to inspect, maintain, and utilize the PPE they are expected to use during entry.
4. Special Work Practices - Entrants should be instructed how to communicate with the attendant and how to perform the tasks that they are expected to perform in the confined space. Workers performing tasks that are not routine should be instructed in the special work practices, procedures, hazards, and how the hazards will be controlled (e.g. welding requires instruction and a hot work permit.)
5. Permit Procedure - Entrants should be instructed in the permit system and how to determine if the permit procedures have been followed. If the permit system has not been followed, the entrants should be instructed not to enter the space and to discuss the discrepancy with the person authorizing or in charge of entry. Entry should not begin until the discrepancy is corrected.

Authorized entrants are required to:

1. Comply with all requirements of the permit program.
2. Review the posted entry permit to verify that the space is safe to enter.
3. Evacuate the confined space immediately when ordered by the attendant
4. Be alert for signs of exposure and to exit the space immediately if signs of exposure are identified.

## **Training for Authorized Attendants**

An attendant must be assigned to every confined space entry and must be stationed outside the permit space at all times during entry operations. Training is required before a worker can be assigned as an attendant.

Authorized attendants must be aware of all the provisions of the program that apply to them. Appropriate training should include, but not be limited to, the following:

1. Hazard Recognition - The attendant must know how to recognize hazards and monitor activities inside and outside of the confined space to ensure the safety of the entrants. The attendant should be able to recognize early signs and symptoms of exposure or behavioral signs of intoxication caused by exposure to hazards.
2. Emergency Procedures - Attendants must be aware of the emergency plan and know how to sound the alarm and summon help and not to attempt rescue unless it can be done without entering the permit space (e.g. non-entry rescue using a tripod and winch). It is very important that the attendant remain outside so that he/she can provide the rescue team with information about the confined space, the number of entrants, and the hazards that may exist in the permit space. Only workers trained in confined space rescue procedures will be permitted to attempt rescue.
3. Communication - Communication between the attendant and persons entering into the confined space is necessary. The attendant must know how to maintain communication with entrants and rescuers while they are in the permit space. This includes the operation of communication devices such as intercoms or walkie talkies. Verbal communication is acceptable, provided the attendants and entrants can communicate over surrounding noise.

4. Personal Protective Equipment (PPE) - The attendant should be aware of the need for PPE and should be instructed in its use. Although the attendant will generally not be required to wear PPE, he/she must ensure that all entrants use their equipment when entering into the permit area. The attendant should require employees to exit the space if they do not follow the procedures for using PPE.
5. Special Work Practices - The attendant should be aware of any special work practices that are required for the particular entry and apply them to the procedure.

Authorized Attendants are required to:

1. Comply with all requirements of the permit program.
2. Post the permit at the entrance to the confined space.
3. Prevent unauthorized entry.
4. Remain outside the confined space until relieved.
5. Maintain a record of the names and number of entrants who are in the space.
6. Know the hazards that may be encountered during entry.
7. Be aware of possible behavioral effects of hazard exposures.
8. Maintain continuous communication with the entrants, including rescuers.
9. Order evacuation of the permit space if forbidden conditions exist, unexpected hazards are identified, behavioral changes due to toxic reaction are observed, external hazardous circumstances are identified, or the attendant must leave his/her post for any reason.
10. Summon rescue and other emergency services when necessary.
11. Assist with rescue, to the extent allowed by the emergency plan, without entering.

## **Training for Entry Supervisor**

The Entry Supervisor (person authorizing entry) is considered to be the most knowledgeable person involved in the permit system. Because of the overall responsibilities of the person in-charge, he/she must be thoroughly trained in the confined space entry plan and permit system. This individual should be aware of the training requirements and duties of all workers involved with the entry into a confined space.

The Entry Supervisor may also serve as an authorized entrant or attendant, provided he/she has the proper training.

The Entry Supervisor controls the work and has the authority to authorize entry by signing the permit. He/she is responsible for canceling the permit upon completion of the job or if the entry plan is not followed, a condition that is not allowed is observed, behavioral effects are detected, the automatic alarm is activated, the entrants sense they are in danger, the attendant detects a situation outside the space that will endanger entrants, or any other conditions occur that could endanger the entrants.

Appropriate training should include, but is not limited to the following:

1. Hazard Recognition - The entry supervisor should be aware of the different types of hazards that may be found in a confined space. He/she must understand the nature of the hazards the entrants could encounter. He/she should also understand the consequences of exposure and the signs and symptoms of exposure to the hazards.
2. Emergency - The entry supervisor must be aware of the rescue procedures required of all workers and any specific duties required of the person in charge as described in the emergency action plan.
3. Personal Protective Equipment (PPE) - He/she should be aware of the need for PPE and should be instructed in its use and limitations. It is the responsibility of the person in charge to ensure the proper selection of the PPE and to identify the equipment on the permit. The entry supervisor will generally not be required, unless he/she enters the space, to wear PPE. He/she must ensure that all entrants are provided with and use their equipment when entering into the permit area.

Entry Operations Managers are required to:

1. Comply with all requirements of the permit program.
2. Ensure that preparation of the permit space is completed before authorizing entry.
3. Ensure that all entry permit conditions are met and that all sections of the permit are signed off before authorizing entry.
4. Ensure that rescuers are available and can be contacted quickly.
5. Cancel entry permits upon completion of the work.
6. Terminate entry permits if any prohibited conditions develop.
7. Remove any unauthorized individuals from the permit space or area.

## **Atmosphere Testing and Monitoring Requirements**

Atmosphere testing must be performed prior to entry of a permit space. Hazardous gasses vary in weight, therefore, it is necessary to take air samples from the confined space at different levels (top, middle, and bottom) with properly calibrated equipment. The results of the tests are used to select necessary control measures.

Some environments will have to be tested and ventilated several times before entry may begin. In addition to monitoring prior to entry, it is equally important to monitor the atmosphere during entry and while workers are in the confined space. Continuous monitoring should also be performed by placing monitoring equipment on the entrant's person.

Only direct reading instruments are to be used when testing the atmosphere within a confined space. The atmosphere within a confined space must be tested and must be within an acceptable range before entry into the space may begin. The atmosphere will be tested in the following order:

1. Oxygen Levels
2. Combustibles
3. Toxic Gases (i.e. hydrogen sulfide)

When testing is performed, it must be done for the minimum response time specified by the manufacturer of the equipment used for testing. All other manufacturer's recommendations for calibration and use of the equipment should also be followed.

Inspections should also be performed on all confined space equipment. These inspections should also be recorded in a log in order to make sure that the equipment being used is functional.

## **Permit Required Confined Space Entry Procedures**

1. Determine if the entry is necessary. Avoid permit required confined space entry if possible.
2. The "Work Space Profile" shall be completed by a technically qualified professional performing the evaluation testing on the confined space as well as consulting all information regarding the confined space obtained from Plibrico Company
3. The Entry Supervisor should complete the "Entry Permit" prior to work beginning in the confined space.
4. Set up barriers or take other measures to prevent unauthorized entry as well as to prevent accidental falls into or over the space. This measure also protects against foreign objects accidentally entering the space.
5. Identify and evaluate any hazards existing in the space to assure acceptable entry conditions are met prior to entry into the space. Where possible, hazards should be eliminated through the use of lockout/tagout procedures or other preventative measures.
6. Initially, the atmosphere outside of the confined space shall be tested to determine if any hazards are present. The atmosphere within the confined space shall then be tested, without entering the confined space, using a properly calibrated gas detector, and the results recorded on the confined space entry permit. The atmosphere should be tested at 4 foot intervals in the direction of the entrant travel and side to side for a minimum response time as specified by the manufacturer of the testing equipment. This atmosphere testing is to remain continuous throughout the entry by placing the monitoring equipment directly on the entrant.

7. The confined space entry permit must then be completed by the entry supervisor and reviewed in detail by the authorized entrants and attendants, prior to entry into the space.
8. If the atmosphere inside the space is within acceptable limits, authorized employees may enter the space using the equipment listed on the entry permit and "profile sheet" for the space. If the atmosphere inside the space is not within acceptable limits, the space shall be properly ventilated until acceptable limits exist. This ventilation should then continue throughout the entry as long as there are employees inside the space.
9. Where applicable, a retrieval system shall be used by each employee who enters the space, such as a safety harness attached to a tripod and winch. Where a retrieval system is impractical, employees shall carry 5 minute escape air packs for the purpose of safe egress only.
10. An attendant shall be stationed outside the space while there are workers inside the space. The ratio of 3 entrants to one attendant shall not be exceeded.
11. Constant communication shall be maintained between the entrants inside the space and the attendant.
12. All personal protective equipment required shall be worn at all times while in the confined space.
13. Smoking in or around a confined space is prohibited.
14. Artificial lighting used in the space shall be explosion proof, if the space contains or has the potential to contain an explosive atmosphere.
15. If the gas detector sounds an alarm, workers shall exit the space immediately and may not re-enter until the atmosphere has been determined to be safe.
16. If any prohibited condition is identified, workers shall exit the space immediately and may not re-enter until acceptable entry conditions have been established.
17. All entry permits are to be canceled by the entry supervisor upon completion of assigned duties. The confined space shall then be returned to its working condition and secured to prohibit unauthorized entry.

## **Emergency Procedures**

If an emergency condition is perceived:

1. Do not enter the space; you are not a trained rescuer.
2. If the worker(s) is attached to a rescue/retrieval system, begin retrieval process.
3. Notify the appropriate fire department or emergency services immediately by dialing 911 or the emergency number on the permit or pre-permit checklist being used.
4. The attendant is to monitor the situation until emergency medical systems (EMS) personnel arrive.

Confined Space Equipment Inventory List

Equipment Description	Date Purchased
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	

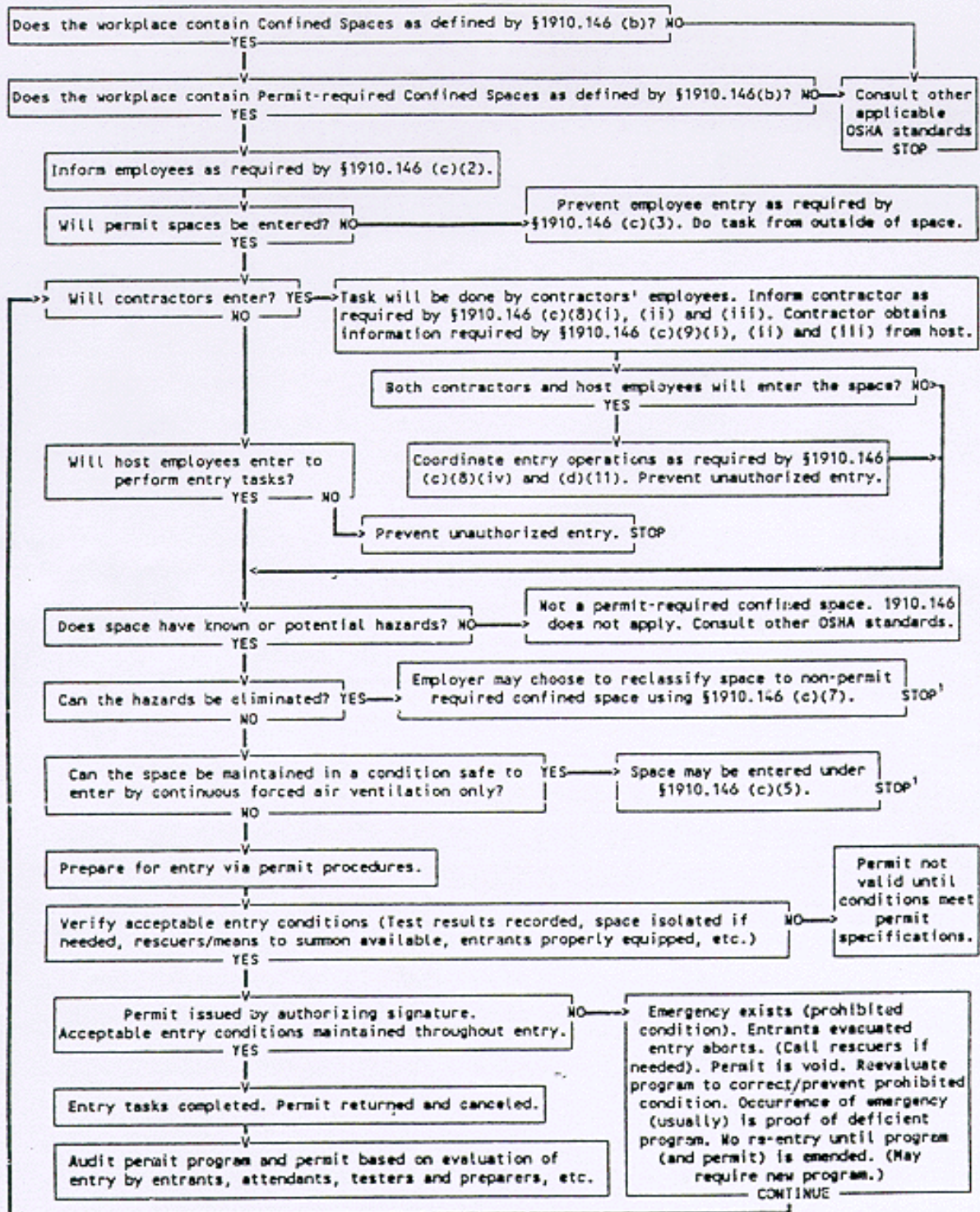


Confined Space Equipment Inspection Log

Equipment Description	Date of Inspection	<i>Pas s</i>	Fail
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			

# Permit – Required Confined Space Decision Flow Chart

## APPENDIX A TO § 1910.146—PERMIT-REQUIRED CONFINED SPACE DECISION FLOW CHART



¹ Spaces may have to be evacuated and re-evaluated if hazards arise during entry

# **Plibrico Company**

## **CONFINED SPACE ENTRY PERMIT**

**\*\*\*GOOD FOR 1 SHIFT ONLY\*\*\***

**\*\*\*POST AT ENTRANCE\*\*\***

Job Location: \_\_\_\_\_ Entry supervisor: \_\_\_\_\_

Work to be Performed: \_\_\_\_\_

Date Permit Issued: \_\_\_\_\_ Time: \_\_\_\_\_ AM/PM

Date Permit Expires: \_\_\_\_\_ Time: \_\_\_\_\_ AM/PM

Authorized Attendant(s): \_\_\_\_\_

Authorized Entrant(s): \_\_\_\_\_

### **Pre-Entry**

Gas Detector (Name, Model, Serial #): \_\_\_\_\_

Tester's Signature: \_\_\_\_\_

### **Atmospheric Testing**

<b>Atmospheric Tests</b>	<b>Permissible Entry Level</b>	<b>Actual Level</b>
Oxygen	19.5-23.5%	%
Flammables/Combustibles	Under 10%	%
Toxic	10 ppm H2S	ppm
	10 ppm CO	ppm

Time: \_\_\_\_\_ AM/PM

### **Source of Isolation:**

<b>Source</b>	<b>N/A</b>	<b>Yes</b>	<b>No</b>
Pumps / Lines Blinded:			
Disconnected/Blocked:			
Other:			

### **Ventilation**

<b>Type of Ventilation</b>	<b>Yes</b>	<b>No</b>
Mechanical		
Natural		

### **Atmospheric Testing (After Isolation & Ventilation)**

Atmospheric Tests	Permissible Entry Level	Actual Level
Oxygen	19.5-23.5%	%
Flammables/Combustibles	Under 10%	%
Toxic	10 ppm H2S	ppm
	10 ppm CO	ppm

Time: \_\_\_\_\_ AM/PM

**Method of Communication:** \_\_\_\_\_

**Continuous Monitoring Results (Recorded Every 2 Hours)**

<i>Trial</i>	Time	Oxygen	Flammables	Toxic
1	am/pm	%	%	ppm
2	am/pm	%	%	ppm
3	am/pm	%	%	ppm
4	am/pm	%	%	ppm

**Entry:**

**Required Equipment:**

The following Equipment is required in all confined spaces. Check to verify equipment is present.

Gas Detector		Barricades and Danger Signs	
Mechanical Ventilation		Hearing Protection (as needed)	
Full Body Harness		Access Ladder (as required)	
Waterproof Battery Lighting (explosion proof)		Emergency Medical / First Aid Kit	
Written Operating and Rescue Procedure		Proper Respiratory Protection (as needed)	

NOTE: All required equipment must be present before entry is permitted.

This permit has been canceled by: \_\_\_\_\_ Time: \_\_\_\_\_ Date: \_\_\_\_\_

# Plibrico Company

## Confined Space Hot Works Permit

**\*\*\*Post at Entrance\*\*\***

Job Location: \_\_\_\_\_ Entry Supervisor: \_\_\_\_\_

Work to be Performed: \_\_\_\_\_

Type of Hot Work:

Cut:	Grind:	Weld:	Repair:	Other:
------	--------	-------	---------	--------

Equipment Used: \_\_\_\_\_

Date Permit Issued: \_\_\_\_\_ Time: \_\_\_\_\_ AM/PM

Date Permit Expires: \_\_\_\_\_ Time: \_\_\_\_\_ AM/PM

### Precautions:

	Y	N
Is an air sampling meter used to monitor the presence of flammables/combustibles?		
Does the confined space contain a flammable/combustible material or substance?		
Does the confined space contain combustible dust or ignitable residue?		
Have welding, cutting, and other flame/spark producing devices been inspected?		
Are they in good condition?		
Have flammable/combustible materials been removed from the confined space?		
Is a fire extinguisher near the confined space and has it been inspected?		
Is a fire watch posted?		
Is electrical equipment (lights, air sampling instruments, blowers) explosion proof?		
Is general ventilation of sufficient capacity being used?		
Is ventilation for welding and cutting arranged to remove fumes and smoke at the source?		
Are respirators, of the proper type, in use when required?		
Have precautions been taken to protect workers from electric shock?		
Is equipment safely located, grounded, and spark controlled?		

### Training:

	Y	N
Have all the workers been trained to work within a confined space?		
Have all the workers completed a pre-entry briefing?		
Have all workers been trained in emergency procedures?		
Have all workers been trained to use a fire extinguisher?		
Have all workers been instructed NOT to bring gas cylinders into the confined space?		
Have all workers been instructed to remove welding hoses and leads from the confined space, when not in use?		

**Name of person performing fire watch (PRINT NAME):** \_\_\_\_\_

**Person(s) performing hot work (PRINT NAME(S)):** \_\_\_\_\_

**Signature of person authorizing entry:** \_\_\_\_\_

**This permit has been canceled by:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**SECTION #34**

**Hazard Communication Program**

# Hazard Communication Program

## Introduction

### Objective:

**Plibrico Company, LLC** is committed to providing a safe workplace for employees and contractors, who have the right to know and understand all potential chemical hazards they may be exposed to in the workplace.

The goals of this program are to assure that employees are fully educated on the hazard communication process and the specific chemical products which they work with or around. The hazard communication process includes:

- Chemical labeling, including pictograms.
- How to read safety data sheets (SDSs).
- How to readily obtain SDSs in the event of a chemical exposure incident.

Employees must also be trained in control measures that prevent or mitigate exposures. This information can be found in SDSs.

This document serves as the written Hazard Communication Program for **[Organization Name]**, fulfilling the requirement of a written hazard communication program under 29 CFR 1910.1200. It is compliant with the Hazard Communication Standard and the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

## Scope and Application

This plan must be used in conjunction with the following:

- The Spill Response Plan
- The Emergency Action Plan

This written Hazard Communication Program applies to all locations or projects where chemicals are used, which are listed below:

Location	Address

# Hazard Communication Program

## 1. Roles and Responsibilities

### Administrator:

It is the over-all responsibility of **Safety Manager** to oversee this program. Area Office Managers are responsible for their each location and must:

- Conduct an annual audit of the program to assure full compliance.
- Monitor the effectiveness of the program.
- Maintain an effective hazard communication training program. Monitor employee training to assure its effectiveness.
- Keep management informed of necessary changes.
- Maintain and update the Chemical Inventory and SDSs as chemical products change.
- Assure that this written program and all SDSs are available to all employees.
- Assure that the SDS for each of these materials is available in the designated department
- Assure that SDSs are readily accessible to all employees on all shifts.
- Assure that SDSs are readily available for emergency medical personnel when treating exposed employees as well as being taken with the injured worker to the hospital or medical clinic when they are involved with a chemical exposure incident.
- Assure that corrective actions are taken in a timely fashion to address any deficiencies identified.
- Monitor facility for proper use, storage, and labeling of chemicals.
- Assure that an effective and compliant system of container labeling for both primary and secondary containers is present at each location.
- Provide specific chemical safety training for assigned employees.
- Assure that only the minimum amount of chemicals necessary are kept at work stations in properly labeled small containers.
- Assure that contracted employers are provided with SDSs for materials used in the areas where they will be working.



# Hazard Communication Program

## **Purchasing:**

Area Managers must:

- Serve as “gatekeepers” to control all incoming and outgoing chemical products utilized on-site.
- Assure that all received containers are properly labeled per GHS and that these labels are not removed or defaced.
- Assure that all shipped containers are properly labeled.
- Assure that received SDSs are properly obtained and distributed.
- Obtain the SDSs from the supplier or manufacturer for all chemicals purchased from retail and all other sources before these chemicals are allowed on site.

## **Supervisors:**

Supervisors are responsible for conducting weekly departmental inspections and training their employees.

## **Employees:**

- Comply with the requirements of this program.
- Report any problems with the storage or use of chemicals.
- Immediately report spills or suspected spills of chemicals.
- Use only those chemicals for which they have been trained.
- Use chemicals only for specific assigned tasks in the proper manner.
- Know the SDSs for the chemicals you work with, be familiar with the Chemical Inventory, and know how to read labels.

# Hazard Communication Program

## The Chemical Inventory

The chemical inventory allows employees to quickly locate individual SDSs, which is particularly important in the event of a chemical exposure incident.

**Area Manager** is responsible to create, review, and update the chemical inventory on an ongoing basis.

### **Inventory location:**

The inventory is located: Office Location

### **Inventory qualifications:**

The inventory must:

- Be comprehensive and include all materials used in operations.
- Be organized alphabetically.
- Have a product identifier for each chemical that corresponds to the SDS and the product label.

## GHS-Compliant Container Labeling

- Each container will have an appropriate GHS-compliant label prominently displayed that includes:
  - A product identifier.
  - A signal word.
  - The applicable hazard statements.
  - Pictograms.
  - Precautionary statements.
  - The contact information of the responsible party, including name, address, and telephone number.
- Secondary containers, which contain chemicals distributed from primary containers, must also be properly labeled unless they are used immediately during that shift and remain at all times with the employee using the product.
- All warning labels, tags, etc., must be maintained in a legible condition and not defaced.
- Department supervisors must conduct facility weekly inspections to check for correct labeling and check incoming chemicals for proper labels.

# Hazard Communication Program

## Safety Data Sheets (SDSs)

SDSs are supplied by the chemical manufacturer to provide additional information concerning the safe use of the product. SDSs are required for all hazardous materials used on site.

**Area Manager** will maintain SDSs. This includes the following tasks:

- For each chemical product, assure that the SDS is obtained and employees are trained on it **before** work begins with or around the product.
- Review each SDS when it is received to assure it is complete. Determine whether the organization's existing protective measures are adequate.
- Replace SDSs when updated sheets are received.
- Communicate any significant changes to those who work with the chemical.

### **SDS availability:**

- The SDSs will be kept in each Office Location.
- SDSs must be readily accessible to all employees on all shifts.
- SDSs may be maintained physically or electronically.
  - If SDSs are maintained physically, SDS binders must be organized by department and continually updated to reflect new chemical products and others that are no longer being used. These binders must be located in locations accessible to all employee during all working hours.
  - If SDSs are maintained electronically, computer and printer access must be available to employees at all times.
- SDSs must be in English; however, other languages are allowed in addition to an English version.

# Hazard Communication Program

## SDS elements:

- SDSs must have a unique product identifier that corresponds to the product label.
- Each SDS includes these sixteen sections in the following order:
  - Section 1. Identification
  - Section 2. Hazard identification
  - Section 3. Composition information on ingredients
  - Section 4. First aid measures
  - Section 5. Firefighting measures
  - Section 6. Accidental release measures
  - Section 7. Handling and storage
  - Section 8. Exposure controls/personal protection
  - Section 9. Physical and chemical properties
  - Section 10. Stability and reactivity
  - Section 11. Toxicological information
  - Section 12. Ecological information
  - Section 13. Disposal considerations
  - Section 14. Transport information
  - Section 15. Regulatory information
  - Section 16. Other information

## Training

**The Area Manager** will oversee the training program. See Appendix B for a training checklist.

### Training on the written Hazard Communication Plan:

- This training must occur at orientation, annually as refresher training, and additionally as needed if the plan changes or if an employee requests additional information or exhibits a lack of understanding of the plan.
- **The Area Manager** will give all employees training covering the elements of the Hazard Communication Plan. This training will include:
  - The location and availability of the written Hazard Communication Program.
  - The location and availability of the chemical inventory listing and SDSs by department (or electronic equivalent).
  - The methods and observation techniques used to detect the presence or release of a hazardous chemical in the workplace.
  - The specific physical and health hazards of all chemicals in the workplace as outlined by GHS.
  - Specific control measures for protection from chemical hazards.
  - An explanation of the chemical labeling system.

# Hazard Communication Program

## **Job-specific training:**

**Supervisors** are responsible for this training at jobsite and customers facilities. In addition to the written Hazard Communication Program, employees will receive job-specific training on the chemical products they work with and around.

This training must also occur for new employees, annually as refresher training, and additionally as needed if a new chemical product is introduced, if information changes, or if an employee requests additional information or exhibits a lack of understanding of the chemical safety requirements.

This training will include:

- The details of your job hazard analysis (JHA).
- The specific hazards you may encounter as part of your job.
- How to detect the presence or release of the specific chemicals you will be working around.
- The contents of the specific SDSs you will need to be familiar with.
- Control methods for the hazards you may encounter, including engineering controls (such as ventilation), administrative controls (such as warning signs), and personal protective equipment (PPE).
- Proper work practices, such as how to handle and store each chemical.

## **Additional training:**

Employees must also complete training on associated programs, including the Emergency Action Plan and the Spill Response Plan.

## **7. Contractors**

- All outside contractors working inside our facilities are required to follow the requirements of this program.
- **The Area Manager** will provide contractors information on:
  - Hazards the contractors may be exposed to in the workplace, including chemicals used in or stored in areas where they will be working.
  - Controls and safe working practices to protect against hazards, including recommended PPE.
  - The written Hazard Communication Program, including the location and availability of SDSs and the labeling system for chemicals.

# Hazard Communication Program

## Non-Routine Tasks

- Hazard communication on chemicals associated with non-routine tasks will be conducted by the **Supervisor**.
- Non-routine tasks are defined as:
  - Tasks which are done on an infrequent basis (e.g., preventive maintenance or activities performed during plant shutdowns).
  - Working on, near, or with unlabeled piping.
  - Working with unlabeled containers of an unknown substance.
  - Confined space entry where a hazardous substance may be present.
  - A one-time task using a hazardous substance differently than intended, i.e., using a solvent to remove stains from tile floors.
  - Off-site use or transportation of chemicals.
- Non-routine tasks require a detailed hazard assessment:
  - Conduct a hazard assessment by conducting a Job Hazard Analysis (JHA).
  - Determine precautions.
  - Implement specific training and documentation.
- All non-routine tasks will be evaluated by the [**Responsible Person**] before the task commences to determine all hazards present.
- Hazard determination will be conducted with quantitative/qualitative analysis, air sampling, substance identification/analysis, etc., as applicable.
- Once the hazard determination is made, **the Supervisor** will determine the necessary exposure controls.
- In addition, the Department Supervisor or Administrator will provide safety training for affected employees and will document the training using the Chemical Safety Training Document (Appendix B of this document), marking it as "Non-Routine Task Training."

## Documentation

- File the following records in the Safety Filing System:
  - Chemical inventory
  - Location of the SDS inventory
  - Training records
  - Contractor/Subcontractor notifications



**Appendix B: Chemical Safety Training Document**

Hazard Communication & Chemical Safety Training is an annual re-training requirement for all employees.

**Employee:** \_\_\_\_\_

**Training type:**

**Trainer:** \_\_\_\_\_

Routine

**Training Date:** \_\_\_\_\_

Non-routine

On the above date, Hazard Communication & Chemical Safety Training was provided. Training consisted of the following topics:

1. Hazard communication requirements
  - a) Written product information
  - b) Labeling of containers
  - c) Understanding and use of SDS
  - d) Safe handling and storage of chemical products
2. How to identify potentially harmful chemicals
3. Location of the written Hazard Communication Program
4. Actions to take on a spill or fire involving chemical products
5. Location and contents of SDSs
6. Uses of PPE:
  - a) When PPE is required
  - b) What PPE is required
  - c) How to don and remove PPE
  - d) Limitations of specific PPE
  - e) Proper care, maintenance, and useful life
  - f) Disposal
7. Walk-through of emergency procedures
8. Specific workplace chemicals and their individual SDSs
9. Specific responsibilities of employee

**Employee Certification:**

*I have received the above training on chemical product safety and am aware of my responsibilities for safe chemical use, storage, handling, and emergency procedures.*

**Employee Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Trainer Signature:** \_\_\_\_\_



## **SECTION #35**

# **PROCESS SAFETY MANAGEMENT**

# Plibrico Company

## Process Safety Management Policy

The Plibrico Process Safety Management Policy applies to manufacturing contracts pertaining to chemicals, transportation equipment, and fabricated metal products performed under the scope of 29 CFR 1910.119. This applies to Plibrico employees and their interaction with host employer programs affecting Plibrico contractual operations at the site of manufacturers covered under other OSHA rules that have special provisions for contractors working in covered facilities.

The key provision of PSM is process hazard analysis (PHA) - a careful review of what could go wrong and what safeguards must be implemented to prevent releases of hazardous chemicals. Covered employers must identify those processes that pose the greatest risks and begin evaluating those first.

The host employer must use one or more of the following methods, as appropriate, to determine and evaluate the hazards of the process being analyzed:

- What-if,
- Checklist,
- What-if/checklist,
- Hazard and operability study (HAZOP),
- Failure mode and effects analysis (FMEA),
- Fault tree analysis, or
- An appropriate equivalent methodology.

### **Contractors and Sub-Contractors**

#### **Application**

Many categories of contract labor may be present at a jobsite; such workers may actually operate the facility or do only a particular aspect of a job because they have specialized knowledge or skill. Others work only for short periods when there is need for increased staff quickly, such as in turnaround operations. PSM includes special provisions for contractors and their employees to emphasize the importance of everyone taking care that they do nothing to endanger those working nearby who may work for another employer.

PSM, therefore, applies to contractors performing maintenance or repair, turnaround, major renovation, or specialty work on or adjacent to a covered process. It does not apply, however, to contractors providing incidental services that do not influence process safety, such as janitorial, food and drink, laundry, delivery, or other supply services.

#### **Host Employer Responsibilities**

Plibrico is pleased to submit Pre-Qualification criteria regarding our company's safety performance and programs. The host employer will assist Plibrico regarding the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process; explain to contract employers the applicable provisions of the emergency action plan; develop and implement safe work practices to control the presence, entrance, and exit of all contract employers and contract employees in covered process areas; we encourage the Host employer to evaluate periodically the performance of all contract employers in fulfilling their obligations; the Host employer with our assistance will maintain a contract employee injury and illness log related to the contractor's work in the process areas.

During the planning stage, the host employer will provide the necessary information to Plibrico to plan, operate, organize and control the contractual requirements. These will include at the minimum:

- Review of the Host Employers Hazard Communication program regarding the contractual operations, including but not limited to the MSDS for all effected operations and the Hazard Labeling System in effect.
- Review of the Host Employers Lock-Out and Tag-Out program regarding contractual operations, including but not limited to the Energy Source evaluation and lock-out steps for affected operations.
- Review of the Host Employers Electrical Work Practices (NFPA 70E) for affected electrical work, including but not limited to arc assessments and related PPE requirements.
- Review of the Host Employers Confined Space Entry program regarding contractual operations, including but not limited to the permit required entry program, the environmental testing program, the prior testing history for the operations to be affected.
- Review of the Emergency Response and evacuation program for both general evacuation and confined space retrieval. Any safety, near miss, and accident reporting procedures will be reviewed in writing. Plibrico will work with the Host Employer and the related insurance programs to maintain open communications regarding incidents which may arise.
- Review of the Host Employers Personal Protective Equipment requirements for general and specific operations.
- Review of the Host employers Powered Industrial Vehicle site program requirements and the requirements for on site use.
- Review of the Host Employers Fall Protection requirements for general and specific operations.
- Review of the Host Employers Scaffolding and elevated work practices policies for general and specific operations.
- Review of the contractual Job Hazard Analysis or written job safety steps (ISO 1400) required by the Host Employer.
- Review of the Host Employers Hot Work Permit program.

### **Contract Employer Responsibilities**

Plibrico will:

- Ensure that contract employees are trained in the work practices necessary to perform their job safely;
- Ensure that contract employees are instructed in the known potential fire, explosion, or toxic release hazards related to their job and the process, and in the applicable provisions of the emergency action plan;
- Document that each contract employee has received and understood the training required by the standard by preparing a record that contains the identity of the contract employee, the date of training, and the means used to verify that the employee understood the training;
- Ensure that each contract employee follows the safety rules of the facility including the required safe work practices required in the operating procedures section of the standard; and
- Advise the employer of any unique hazards presented by the contract employer's work.

## **Pre-Startup Safety Review**

It is important that a safety review takes place before any highly hazardous chemical is introduced into a process. PSM, therefore, requires the employer to perform a pre-startup safety review for new facilities and for modified facilities when the modification is significant enough to require a change in the process safety information. Prior to the introduction of a highly hazardous chemical to a process, the pre-startup safety review must confirm that the following:

- Construction and equipment are in accordance with design specifications;
- Safety, operating, maintenance, and emergency procedures are in place and are adequate;
- A process hazard analysis has been performed for new facilities and recommendations have been resolved or implemented before startup, and modified facilities meet the management of change requirements; and
- Training of each employee involved in operating a process has been completed.

## **Mechanical Integrity**

OSHA believes it is important to maintain the mechanical integrity of critical process equipment to ensure it is designed and installed correctly and operates properly. PSM mechanical integrity requirements apply to the following equipment:

- Pressure vessels and storage tanks;
- Piping systems (including piping components such as valves);
- Relief and vent systems and devices;
- Emergency shutdown systems;
- Controls (including monitoring devices and sensors, alarms, and interlocks); and
- Pumps.

The Host Employer must establish and implement written procedures to maintain the ongoing integrity of process equipment. Employees involved in maintaining the ongoing integrity of process equipment must be trained in an overview of that process and its hazards and trained in the procedures applicable to the employee's job tasks.

Inspection and testing must be performed on process equipment, using procedures that follow recognized and generally accepted good engineering practices. The frequency of inspections and tests of process equipment must conform with manufacturers' recommendations and good engineering practices, or more frequently if determined to be necessary by prior operating experience. Each inspection and test on process equipment must be documented, identifying the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

Equipment deficiencies outside the acceptable limits defined by the process safety information must be corrected before further use. In some cases, it may not be necessary that deficiencies be corrected before further use, as long as deficiencies are corrected in a safe and timely manner, when other necessary steps are taken to ensure safe operation.

In constructing new plants and equipment, the employer must ensure that equipment as it is fabricated is suitable for the process application for which it will be used. Appropriate checks and inspections must be performed to ensure that equipment is installed properly and is consistent with design specifications and the manufacturer's instructions.

Plibrico will assist in the Host Employers review of all contractually affected processes.

## **Hot Work Permit**

A permit must be issued for hot work operations conducted on or near a covered process. The permit must document that the fire prevention and protection requirements in OSHA regulations (1910.252(a)) have been implemented prior to beginning the hot work operations; it must indicate the date(s) authorized for hot work; and identify the object on which hot work is to be performed. The permit must be kept on file until completion of the hot work.

## **Incident Investigation**

A crucial part of the process safety management program is a thorough investigation of incidents to identify the chain of events and causes so that corrective measures can be developed and implemented. Accordingly, PSM requires the investigation of each incident that resulted in, or could reasonably have resulted in, a catastrophic release of a highly hazardous chemical in the workplace.

Such an incident investigation must be initiated as promptly as possible, but no later than 48 hours following the incident. The investigation must be by a team consisting of at least one person knowledgeable in the process involved, including a contract employee if the incident involved the work of a contractor, and other persons with appropriate knowledge and experience to investigate and analyze the incident thoroughly.

An investigation report must be prepared including at least:

- Date of incident,
- Date investigation began,
- Description of the incident,
- Factors that contributed to the incident, and
- Recommendation resulting from the investigation. A system must be established to promptly address and resolve the incident report findings and recommendations. Resolutions and corrective actions must be documented and the report reviewed by all affected personnel whose job tasks are relevant to the incident findings (including contract employees when applicable). The Host Employer must keep these incident investigation reports for 5 years.

## **Emergency Planning and Response**

If, despite the best planning, an incident occurs, it is essential that emergency pre-planning and training make employees aware of, and able to execute, proper actions. For this reason, an emergency action plan for the entire plant must be developed and implemented in accordance with the provision of other OSHA rules (29 CFR 1910.38(a)).

In addition, the emergency action plan must include procedures for handling small releases of hazardous chemicals. Employers covered under PSM also may be subject to the OSHA hazardous waste and emergency response regulation (29 CFR 1910.120(a),(p), and (q)).

The Host and contract employer also must ensure that maintenance materials, spare parts, and equipment are suitable for the process application for which they will be used.

## **Safety & Health Policies**

Plibrico Safety & Health policies will act as companion policies to the umbrella of Process Safety Management policies provided by the Host Employer. These include, but are not limited to:

- Safety & Health Injury and Illness Prevention Plan
- Accountability and Discipline Program
- Emergency Response Procedures
- Incident and Accident Reporting Policy
- Hazard Communication Policy
- Lock-Out/Tag-out Policy
- Confined Space Policy
- Respiratory Protection Policy
- PPE Policy
- Powered Industrial Vehicle Policy
- Competent Person and Employee Training Policy
- Vehicle Safety Policy
- Fall Protection Policy
- Scaffold Policy
- Hot Work Permit Policy

All safety policies are available online for review at the Plibrico Risk Management Website. Written documents can be submitted at your request.

## **Trade Secrets**

Employers shall make all information necessary to comply with the section available to Plibrico persons responsible for compiling the process safety information (required by paragraph (d) of section 1910.119), those assisting in the development of the process hazard analysis (required by paragraph (e) of this section), those responsible for developing the operating procedures (required by paragraph (f) of this section), and those involved in incident investigations (required by paragraph (m) of this section), emergency planning and response (paragraph (n) of this section) and compliance audits (paragraph (o) of this section) without regard to possible trade secret status of such information.

Nothing in this paragraph shall preclude the employer from requiring the persons to whom the information is made available under paragraph (p)(1) of 1910.119 to enter into confidentiality agreements not to disclose the information as set forth in 29 CFR 1910.1200.

Subject to the rules and procedures set forth in 29 CFR 1910.1200(i)(1) through 1910.1200(i)(12), employees and their designated representatives shall have access to trade secret information contained within the process hazard analysis and other documents required to be developed by this standard.

## Appendix

### 1910.119 Process Safety Management of Highly Hazardous Chemicals

Purpose. This section contains requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. These releases may result in toxic, fire or explosion hazards.

#### 1910.119(a)

Application.

#### 1910.119(a)(1)

This section applies to the following:

##### 1910.119(a)(1)(i)

A process which involves a chemical at or above the specified threshold quantities listed in Appendix A to this section;

##### 1910.119(a)(1)(ii)

A process which involves a flammable liquid or gas (as defined in 1910.1200(c) of this part) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more except for:

##### 1910.119(a)(1)(ii)(A)

Hydrocarbon fuels used solely for workplace consumption as a fuel (e.g., propane used for comfort heating, gasoline for vehicle refueling), if such fuels are not a part of a process containing another highly hazardous chemical covered by this standard;

##### 1910.119(a)(1)(ii)(B)

Flammable liquids stored in atmospheric tanks or transferred which are kept below their normal boiling point without benefit of chilling or refrigeration.

##### 1910.119(a)(2)

This section does not apply to:

##### 1910.119(a)(2)(i)

Retail facilities;

##### 1910.119(a)(2)(ii)

##### 1910.119(a)(2)(ii)

Oil or gas well drilling or servicing operations; or,

##### 1910.119(a)(2)(iii)

Normally unoccupied remote facilities.

#### 1910.119(b)

Definitions.

"Atmospheric tank" means a storage tank which has been designed to operate at pressures from atmospheric through 0.5 p.s.i.g. (pounds per square inch gauge, 3.45 Kpa).

"Boiling point" means the boiling point of a liquid at a pressure of 14.7 pounds per square inch absolute (p.s.i.a.) (760 mm.). For the purposes of this section, where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, the 10 percent point of a distillation performed in accordance with the Standard Method of Test for Distillation of Petroleum Products, ASTM D-86-62, which is incorporated by reference as specified in Sec. 1910.6, may be used as the boiling point of the liquid.

"Catastrophic release" means a major uncontrolled emission, fire, or explosion, involving one or more highly hazardous chemicals, that presents serious danger to employees in the workplace.

"Facility" means the buildings, containers or equipment which contain a process.

"Highly hazardous chemical" means a substance possessing toxic, reactive, flammable, or explosive properties and specified by paragraph (a)(1) of this section.

"Hot work" means work involving electric or gas welding, cutting, brazing, or similar flame or spark-producing operations.

"Normally unoccupied remote facility" means a facility which is operated, maintained or serviced by employees who visit the facility only periodically to check its operation and to perform necessary operating or maintenance tasks. No employees are permanently stationed at the facility. Facilities meeting this definition are not contiguous with, and must be geographically remote from all other buildings, processes or persons.

"Process" means any activity involving a highly hazardous chemical including any use, storage, manufacturing, handling, or the on-site movement of such chemicals, or combination of these activities. For purposes of this definition, any group of vessels which are interconnected and separate vessels which are located such that a highly hazardous chemical could be involved in a potential release shall be considered a single process.

"Replacement in kind" means a replacement which satisfies the design specification.

"Trade secret" means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix D contained in 1910.1200 sets out the criteria to be used in evaluating trade secrets.

**1910.119(c)**

Employee participation.

**1910.119(c)(1)**

Employers shall develop a written plan of action regarding the implementation of the employee participation required by this paragraph.

**1910.119(c)(2)**

Employers shall consult with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in this standard.

**1910.119(c)(3)**

Employers shall provide to employees and their representatives access to process hazard analyses and to all other information required to be developed under this standard.

**..1910.119(d)**

**1910.119(d)**

Process safety information. In accordance with the schedule set forth in paragraph (e)(1) of this section, the employer shall complete a compilation of written process safety information before conducting any process hazard analysis required by the standard. The compilation of written process safety information is to enable the employer and the employees involved in operating the process to identify and understand the hazards posed by those processes involving highly hazardous chemicals. This process safety information shall include information pertaining to the hazards of the highly hazardous chemicals used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process.

**1910.119(d)(1)**

Information pertaining to the hazards of the highly hazardous chemicals in the process. This information shall consist of at least the following:

**1910.119(d)(1)(i)**

Toxicity information;

**1910.119(d)(1)(ii)**

Permissible exposure limits;

**1910.119(d)(1)(iii)**

Physical data;

**1910.119(d)(1)(iv)**

Reactivity data:

**1910.119(d)(1)(v)**

Corrosivity data;

**1910.119(d)(1)(vi)**

Thermal and chemical stability data; and



**1910.119(d)(1)(vii)**

Hazardous effects of inadvertent mixing of different materials that could foreseeably occur.

Note: Material Safety Data Sheets meeting the requirements of 29 CFR 1910.1200(g) may be used to comply with this requirement to the extent they contain the information required by this subparagraph.

**1910.119(d)(2)**

Information pertaining to the technology of the process.

**1910.119(d)(2)(i)**

Information concerning the technology of the process shall include at least the following:

**..1910.119(d)(2)(i)(A)**

**1910.119(d)(2)(i)(A)**

A block flow diagram or simplified process flow diagram (see Appendix B to this section);

**1910.119(d)(2)(i)(B)**

Process chemistry;

**1910.119(d)(2)(i)(C)**

Maximum intended inventory;

**1910.119(d)(2)(i)(D)**

Safe upper and lower limits for such items as temperatures, pressures, flows or compositions; and,

**1910.119(d)(2)(i)(E)**

An evaluation of the consequences of deviations, including those affecting the safety and health of employees.

**1910.119(d)(2)(ii)**

Where the original technical information no longer exists, such information may be developed in conjunction with the process hazard analysis in sufficient detail to support the analysis.

**1910.119(d)(3)**

Information pertaining to the equipment in the process.

**1910.119(d)(3)(i)**

Information pertaining to the equipment in the process shall include:

**1910.119(d)(3)(i)(A)**

Materials of construction;

**1910.119(d)(3)(i)(B)**

Piping and instrument diagrams (P&ID's);

**..1910.119(d)(3)(i)(C)**

**1910.119(d)(3)(i)(C)**

Electrical classification;

**1910.119(d)(3)(i)(D)**

Relief system design and design basis;

**1910.119(d)(3)(i)(E)**

Ventilation system design;

**1910.119(d)(3)(i)(F)**

Design codes and standards employed;

**1910.119(d)(3)(i)(G)**

Material and energy balances for processes built after May 26, 1992; and,

**1910.119(d)(3)(i)(H)**

Safety systems (e.g. interlocks, detection or suppression systems).

**1910.119(d)(3)(ii)**

The employer shall document that equipment complies with recognized and generally accepted good engineering practices.

**1910.119(d)(3)(iii)**

For existing equipment designed and constructed in accordance with codes, standards, or practices that are no longer in general use, the employer shall determine and document that the equipment is designed, maintained, inspected, tested, and operating in a safe manner.

**..1910.119(e)**

**1910.119(e)**

Process hazard analysis.

**1910.119(e)(1)**

The employer shall perform an initial process hazard analysis (hazard evaluation) on processes covered by this standard. The process hazard analysis shall be appropriate to the complexity of the process and shall identify, evaluate, and control the hazards involved in the process. Employers shall determine and document the priority order for conducting process hazard analyses based on a rationale which includes such considerations as extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process. The process hazard analysis shall be conducted as soon as possible, but not later than the following schedule:

**1910.119(e)(1)(i)**

No less than 25 percent of the initial process hazards analyses shall be completed by May 26, 1994;

**1910.119(e)(1)(ii)**

No less than 50 percent of the initial process hazards analyses shall be completed by May 26, 1995;

**1910.119(e)(1)(iii)**

No less than 75 percent of the initial process hazards analyses shall be completed by May 26, 1996;

**1910.119(e)(1)(iv)**

All initial process hazards analyses shall be completed by May 26, 1997.

**1910.119(e)(1)(v)**

Process hazards analyses completed after May 26, 1987 which meet the requirements of this paragraph are acceptable as initial process hazards analyses. These process hazard analyses shall be updated and revalidated, based on their completion date, in accordance with paragraph (e)(6) of this standard.

**1910.119(e)(2)**

The employer shall use one or more of the following methodologies that are appropriate to determine and evaluate the hazards of the process being analyzed.

**1910.119(e)(2)(i)**

What-If;

**..1910.119(e)(2)(ii)**

**1910.119(e)(2)(ii)**

Checklist;

**1910.119(e)(2)(iii)**

What-If/Checklist;

**1910.119(e)(2)(iv)**

Hazard and Operability Study (HAZOP);

**1910.119(e)(2)(v)**

Failure Mode and Effects Analysis (FMEA);

**1910.119(e)(2)(vi)**

Fault Tree Analysis; or

**1910.119(e)(2)(vii)**

An appropriate equivalent methodology.

**1910.119(e)(3)**

The process hazard analysis shall address:

**1910.119(e)(3)(i)**

The hazards of the process;

**1910.119(e)(3)(ii)**

The identification of any previous incident which had a likely potential for catastrophic consequences in the workplace;

**1910.119(e)(3)(iii)**

Engineering and administrative controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies to provide early warning of releases. (Acceptable detection methods might include process monitoring and control instrumentation with alarms, and detection hardware such as hydrocarbon sensors.);

***..1910.119(e)(3)(iv)***

**1910.119(e)(3)(iv)**

Consequences of failure of engineering and administrative controls;

**1910.119(e)(3)(v)**

Facility siting;

**1910.119(e)(3)(vi)**

Human factors; and

**1910.119(e)(3)(vii)**

A qualitative evaluation of a range of the possible safety and health effects of failure of controls on employees in the workplace.

**1910.119(e)(4)**

The process hazard analysis shall be performed by a team with expertise in engineering and process operations, and the team shall include at least one employee who has experience and knowledge specific to the process being evaluated. Also, one member of the team must be knowledgeable in the specific process hazard analysis methodology being used.

**1910.119(e)(5)**

The employer shall establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions.

***..1910.119(e)(6)***

**1910.119(e)(6)**

At least every five (5) years after the completion of the initial process hazard analysis, the process hazard analysis shall be updated and revalidated by a team meeting the requirements in paragraph (e)(4) of this section, to assure that the process hazard analysis is consistent with the current process.

**1910.119(e)(7)**

Employers shall retain process hazards analyses and updates or revalidations for each process covered by this section, as well as the documented resolution of recommendations described in paragraph (e)(5) of this section for the life of the process.

**1910.119(f)**

Operating procedures.

**1910.119(f)(1)**

The employer shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.

**1910.119(f)(1)(i)**

Steps for each operating phase:

**1910.119(f)(1)(i)(A)**

Initial startup;

**1910.119(f)(1)(i)(B)**

Normal operations;

**1910.119(f)(1)(i)(C)**

Temporary operations;

***..1910.119(f)(1)(i)(D)***

**1910.119(f)(1)(i)(D)**

Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner.

**1910.119(f)(1)(i)(E)**

Emergency Operations;

**1910.119(f)(1)(i)(F)**

Normal shutdown; and,

**1910.119(f)(1)(i)(G)**

Startup following a turnaround, or after an emergency shutdown.

**1910.119(f)(1)(ii)**

Operating limits:

**1910.119(f)(1)(ii)(A)**

Consequences of deviation; and

**1910.119(f)(1)(ii)(B)**

Steps required to correct or avoid deviation.

**1910.119(f)(1)(iii)**

Safety and health considerations:

**1910.119(f)(1)(iii)(A)**

Properties of, and hazards presented by, the chemicals used in the process;

**1910.119(f)(1)(iii)(B)**

Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment;

**1910.119(f)(1)(iii)(C)**

**1910.119(f)(1)(iii)(C)**

Control measures to be taken if physical contact or airborne exposure occurs;

**1910.119(f)(1)(iii)(D)**

Quality control for raw materials and control of hazardous chemical inventory levels; and,

**1910.119(f)(1)(iii)(E)**

Any special or unique hazards.

**1910.119(f)(1)(iv)**

Safety systems and their functions.

**1910.119(f)(2)**

Operating procedures shall be readily accessible to employees who work in or maintain a process.

**1910.119(f)(3)**

The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to facilities. The employer shall certify annually that these operating procedures are current and accurate.

**1910.119(f)(4)**

**1910.119(f)(4)**

The employer shall develop and implement safe work practices to provide for the control of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a facility by maintenance, contractor, laboratory, or other support personnel. These safe work practices shall apply to employees and contractor employees.

**1910.119(g)**

Training.

**1910.119(g)(1)**

Initial training.

**1910.119(g)(1)(i)**

Each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, shall be trained in an overview of the process and in the operating procedures as specified in paragraph (f) of this section. The training shall include emphasis on the specific safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks.

**1910.119(g)(1)(ii)**

In lieu of initial training for those employees already involved in operating a process on May 26, 1992, an employer may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures.

**1910.119(g)(2)**

Refresher training. Refresher training shall be provided at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. The employer, in consultation with the employees involved in operating the process, shall determine the appropriate frequency of refresher training.

**..1910.119(g)(3)**

**1910.119(g)(3)**

Training documentation. The employer shall ascertain that each employee involved in operating a process has received and understood the training required by this paragraph. The employer shall prepare a record which contains the identity of the employee, the date of training, and the means used to verify that the employee understood the training.

**1910.119(h)**

Contractors.

**1910.119(h)(1)**

Application. This paragraph applies to contractors performing maintenance or repair, turnaround, major renovation, or specialty work on or adjacent to a covered process. It does not apply to contractors providing incidental services which do not influence process safety, such as janitorial work, food and drink services, laundry, delivery or other supply services.

**1910.119(h)(2)**

Employer responsibilities.

**1910.119(h)(2)(i)**

The employer, when selecting a contractor, shall obtain and evaluate information regarding the contract employer's safety performance and programs.

**1910.119(h)(2)(ii)**

The employer shall inform contract employers of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process.

**1910.119(h)(2)(iii)**

The employer shall explain to contract employers the applicable provisions of the emergency action plan required by paragraph (n) of this section.

**..1910.119(h)(2)(iv)**

**1910.119(h)(2)(iv)**

The employer shall develop and implement safe work practices consistent with paragraph (f)(4) of this section, to control the entrance, presence and exit of contract employers and contract employees in covered process areas.

**1910.119(h)(2)(v)**

The employer shall periodically evaluate the performance of contract employers in fulfilling their obligations as specified in paragraph (h)(3) of this section.

**1910.119(h)(2)(vi)**

The employer shall maintain a contract employee injury and illness log related to the contractor's work in process areas.

**1910.119(h)(3)**

Contract employer responsibilities.

**1910.119(h)(3)(i)**

The contract employer shall assure that each contract employee is trained in the work practices necessary to safely perform his/her job.

**1910.119(h)(3)(ii)**

The contract employer shall assure that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan.

**1910.119(h)(3)(iii)**

The contract employer shall document that each contract employee has received and understood the training required by this paragraph. The contract employer shall prepare a record which contains the identity of the contract employee, the date of training, and the means used to verify that the employee understood the training.

**..1910.119(h)(3)(iv)**

**1910.119(h)(3)(iv)**

The contract employer shall assure that each contract employee follows the safety rules of the facility including the safe work practices required by paragraph (f)(4) of this section.

**1910.119(h)(3)(v)**

The contract employer shall advise the employer of any unique hazards presented by the contract employer's work, or of any hazards found by the contract employer's work.

**1910.119(i)**

Pre-startup safety review.

**1910.119(i)(1)**

The employer shall perform a pre-startup safety review for new facilities and for modified facilities when the modification is significant enough to require a change in the process safety information.

**1910.119(i)(2)**

The pre-startup safety review shall confirm that prior to the introduction of highly hazardous chemicals to a process:

**1910.119(i)(2)(i)**

Construction and equipment is in accordance with design specifications;

**1910.119(i)(2)(ii)**

Safety, operating, maintenance, and emergency procedures are in place and are adequate;

**1910.119(i)(2)(iii)**

For new facilities, a process hazard analysis has been performed and recommendations have been resolved or implemented before startup; and modified facilities meet the requirements contained in management of change, paragraph (l).

**..1910.119(i)(2)(iv)**

**1910.119(i)(2)(iv)**

Training of each employee involved in operating a process has been completed.

**1910.119(j)**

Mechanical integrity.

**1910.119(j)(1)**

Application. Paragraphs (j)(2) through (j)(6) of this section apply to the following process equipment:

**1910.119(j)(1)(i)**

Pressure vessels and storage tanks;

**1910.119(j)(1)(ii)**

Piping systems (including piping components such as valves);

**1910.119(j)(1)(iii)**

Relief and vent systems and devices;

**1910.119(j)(1)(iv)**

Emergency shutdown systems;

**1910.119(j)(1)(v)**

Controls (including monitoring devices and sensors, alarms, and interlocks) and,

**1910.119(j)(1)(vi)**

Pumps.

**1910.119(j)(2)**

Written procedures. The employer shall establish and implement written procedures to maintain the on-going integrity of process equipment.

**..1910.119(j)(3)**

**1910.119(j)(3)**

Training for process maintenance activities. The employer shall train each employee involved in maintaining the on-going integrity of process equipment in an overview of that process and its hazards and in the procedures applicable to the employee's job tasks to assure that the employee can perform the job tasks in a safe manner.

**1910.119(j)(4)**

Inspection and testing.

**1910.119(j)(4)(i)**

Inspections and tests shall be performed on process equipment.

**1910.119(j)(4)(ii)**

Inspection and testing procedures shall follow recognized and generally accepted good engineering practices.

**1910.119(j)(4)(iii)**

The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.

**1910.119(j)(4)(iv)**

The employer shall document each inspection and test that has been performed on process equipment. The documentation shall identify the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

**..1910.119(j)(5)**

**1910.119(j)(5)**

Equipment deficiencies. The employer shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in paragraph (d) of this section) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

**1910.119(j)(6)**

Quality assurance.

**1910.119(j)(6)(i)**

In the construction of new plants and equipment, the employer shall assure that equipment as it is fabricated is suitable for the process application for which they will be used.

**1910.119(j)(6)(ii)**

Appropriate checks and inspections shall be performed to assure that equipment is installed properly and consistent with design specifications and the manufacturer's instructions.

**1910.119(j)(6)(iii)**

The employer shall assure that maintenance materials, spare parts and equipment are suitable for the process application for which they will be used.

**1910.119(k)**

Hot work permit.

**1910.119(k)(1)**

The employer shall issue a hot work permit for hot work operations conducted on or near a covered process.

**..1910.119(k)(2)**

**1910.119(k)(2)**

The permit shall document that the fire prevention and protection requirements in 29 CFR 1910.252(a) have been implemented prior to beginning the hot work operations; it shall indicate the date(s) authorized for hot work; and identify the object on which hot work is to be performed. The permit shall be kept on file until completion of the hot work operations.

**1910.119(l)**

Management of change.

**1910.119(l)(1)**

The employer shall establish and implement written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and, changes to facilities that affect a covered process.

**1910.119(l)(2)**

The procedures shall assure that the following considerations are addressed prior to any change:

**1910.119(l)(2)(i)**

The technical basis for the proposed change;

**1910.119(l)(2)(ii)**

Impact of change on safety and health;

**1910.119(l)(2)(iii)**

Modifications to operating procedures;

**1910.119(l)(2)(iv)**

Necessary time period for the change; and,

**1910.119(l)(2)(v)**

Authorization requirements for the proposed change.

**1910.119(l)(3)**

Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process.

**..1910.119(l)(4)**

**1910.119(l)(4)**

If a change covered by this paragraph results in a change in the process safety information required by paragraph (d) of this section, such information shall be updated accordingly.

**1910.119(l)(5)**

If a change covered by this paragraph results in a change in the operating procedures or practices required by paragraph (f) of this section, such procedures or practices shall be updated accordingly.

**1910.119(m)**

Incident investigation.

**1910.119(m)(1)**

The employer shall investigate each incident which resulted in, or could reasonably have resulted in a catastrophic release of highly hazardous chemical in the workplace.

**1910.119(m)(2)**

An incident investigation shall be initiated as promptly as possible, but not later than 48 hours following the incident.

**1910.119(m)(3)**

An incident investigation team shall be established and consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of the contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident.

**1910.119(m)(4)**

A report shall be prepared at the conclusion of the investigation which includes at a minimum:

**1910.119(m)(4)(i)**

Date of incident;

**..1910.119(m)(4)(ii)**

**1910.119(m)(4)(ii)**

Date investigation began;

**1910.119(m)(4)(iii)**

A description of the incident;

**1910.119(m)(4)(iv)**

The factors that contributed to the incident; and,

**1910.119(m)(4)(v)**

Any recommendations resulting from the investigation.

**1910.119(m)(5)**

The employer shall establish a system to promptly address and resolve the incident report findings and recommendations. Resolutions and corrective actions shall be documented.

**1910.119(m)(6)**

The report shall be reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable.

**1910.119(m)(7)**

Incident investigation reports shall be retained for five years.

**..1910.119(n)**

**1910.119(n)**

*Emergency planning and response.* The employer shall establish and implement an emergency action plan for the entire plant in accordance with the provisions of 29 CFR 1910.38. In addition, the emergency action plan shall include procedures for handling small releases. Employers covered under this standard may also be subject to the hazardous waste and emergency response provisions contained in 29 CFR 1910.120 (a), (p) and (q).



**1910.119(o)**

Compliance Audits.

**1910.119(o)(1)**

Employers shall certify that they have evaluated compliance with the provisions of this section at least every three years to verify that the procedures and practices developed under the standard are adequate and are being followed.

**1910.119(o)(2)**

The compliance audit shall be conducted by at least one person knowledgeable in the process.

**1910.119(o)(3)**

A report of the findings of the audit shall be developed.

**1910.119(o)(4)**

The employer shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.

**1910.119(o)(5)**

Employers shall retain the two (2) most recent compliance audit reports.

**..1910.119(p)**

**1910.119(p)**

Trade secrets.

**1910.119(p)(1)**

Employers shall make all information necessary to comply with the section available to those persons responsible for compiling the process safety information (required by paragraph (d) of this section), those assisting in the development of the process hazard analysis (required by paragraph (e) of this section), those responsible for developing the operating procedures (required by paragraph (f) of this section), and those involved in incident investigations (required by paragraph (m) of this section), emergency planning and response (paragraph (n) of this section) and compliance audits (paragraph (o) of this section) without regard to possible trade secret status of such information.

**1910.119(p)(2)**

Nothing in this paragraph shall preclude the employer from requiring the persons to whom the information is made available under paragraph (p)(1) of this section to enter into confidentiality agreements not to disclose the information as set forth in 29 CFR 1910.1200.

**1910.119(p)(3)**

Subject to the rules and procedures set forth in 29 CFR 1910.1200(i)(1) through 1910.1200(i)(12), employees and their designated representatives shall have access to trade secret information contained within the process hazard analysis and other documents required to be developed by this standard.

[57 FR 23060, June 1, 1992; 61 FR 9227, March 7, 1996]

**SECTION # 36**

**RESPIRATORY PROTECTION**

# **RESPIRATORY PROTECTION PROGRAM**

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## **OBJECTIVE**

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The purpose of this program is to ensure that employees of Plibrico Company, Inc. are protected from the hazards associated with atmospheric contaminants and oxygen deficient environments. This program allows the Plibrico Company, Inc. to be in compliance with OSHA's 29 CFR 1926.103. It is the policy of Plibrico Company, Inc. to have as a primary objective, the prevention of exposure to its employees from atmospheric contamination. In the event that effective administration and engineering controls are not feasible, appropriate respirators shall be provided for and used by all city employees as necessary.

A "Grandfather Clause" is in effect for annual respirator training, fit testing, respirator problem evaluations and medical evaluations that have been performed within a 12-month period before the effective date of OSHA 1910.134(n) (4/8/98).

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## **APPLICABILITY/ SCOPE**

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This program applies to all Plibrico Company, Inc. employees who need to wear a respirator to perform assigned duties.

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## **ACCOUNTABILITY**

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Respirator Administrator

Has the overall responsibility for the respiratory program, including monitoring respiratory hazards, maintaining records and conducting program evaluations annually.

Approves respiratory protection programs for each operation that involves the use of respirators.

Approves training programs for employees.

Approves fit test procedures for employees.

Approves respiratory make and models for Plibrico Company, Inc. use.

Supervisors

Initiate the written respiratory protection program for each operation that involves respiratory use.

Ensure that employees are given all the necessary training, fit testing, and medical clearances before authorizing them to wear a respirator.

Monitor employee compliance with the respirator program requirements.

## Employees

Employees are responsible to follow all guidelines set forth in this program.

Report any defects, malfunctions, or other problems with the respirator immediately.

Report any symptoms of illness that may be related to respirator usage.

Report any changes to health status to the physician.

Perform positive and negative fit checks each time a respirator is used.

Clean their respirator at the end of each shift according to training provided.

Store the respirator according to training provided.

## Selection of Respirators

Choosing the right equipment involves several steps: determining what the hazard is and its extent, choosing equipment that is certified for the function, and ensuring that the device is performing the intended function. The proper selection of respirators must be made according to the flow chart diagram and respirator decision logic sequence (Form 18.5.3) provided in this program.

## Respirator Decision Logic Sequence

After all criteria have been identified and evaluated, and after the requirements and restrictions of the respiratory protection program have been met, the following sequence of questions (Form 18.5.4) can be used to identify the class of respirators that should provide adequate respiratory protection:

1. Is the respirator intended for use during fire fighting?
  - a. If Yes, only a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure demand or other positive pressure mode is recommended.
  - b. If no, proceed to step 2.
2. Is the respirator intended for use in an oxygen-deficient atmosphere (less than 19.5% oxygen by volume at sea level)?
  - a. If yes, any type of SCBA or supplied-air respirator (SAR) with an escape pack is recommended. The auxiliary SCBA (escape pack) must be of sufficient duration to permit escape to safety if the air supply is interrupted. If additional contaminants are present, proceed to step 3.
  - b. If no, proceed to step 3
3. Is the respirator intended for use during emergency situations?
  - a. If yes, two types of respirators are recommended: a SCBA with a full facepiece operated in pressure demand or other positive pressure mode or a SAR with a full facepiece operated in pressure demand or other positive pressure mode. Auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted.
  - b. If no, proceed to step 4.
4. Is the containment regulated by the Department of Labor as a potential occupational carcinogen or identified by NIOSH as a potential human carcinogen in the workplace, and is the contaminant detectable in the atmosphere?
  - a. If yes, two types of respirators are recommended: a SCBA with a full facepiece operated in pressure demand or other positive pressure mode or a SAR with a full facepiece operated in pressure demand or other positive pressure mode. Auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted.
  - b. If no, proceed to step 5.
5. Is the exposure concentration of the contaminant, as determined by acceptable industrial hygiene methods, less than the NIOSH PEL or other applicable exposure limit?
  - a. If yes, a respirator would not be required except for an escape situation. Proceed to step 7.
  - b. If no, proceed to step 6.
6. Are conditions such that a worker who is required to wear a respirator can escape from the work area and not suffer loss of life or immediate or delayed irreversible health effects if the respiratory fails? (Are the conditions not immediately dangerous to life and health IDLH?)
  - a. If yes, conditions are not considered to be IDLH. Proceed to step 7.
  - b. If no, conditions are considered to be ISLH. Two types of respirators are recommended: a SCBA with a full facepiece operated in pressure demand or other positive pressure mode or a SAR with a full facepiece operated in pressure demand or other positive pressure mode. The auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted.

7. Is the contaminant an eye irritant, or can the contaminant cause eye damage at the exposure concentration?
  - a. If yes, a respirator equipped with a full facepiece, helmet, or hood is recommended. Proceed to step 8.
  - b. If no, an orinasal respirator may still be an option, depending on the exposure concentration. Proceed to step 8.
  
8. Divide the eight-hour time-weighted average (TWA) exposure concentration for the contaminant (or maximum exposure concentration for a contaminant with a ceiling limit) determined in step 5 by the NIOSH PEL or other applicable exposure limit to determine the maximum protection factor required. For escape respirators, determine the potential for generation of a hazardous condition caused by an accident or equipment failure. If a potentially hazardous condition could occur or a minimum protection factor has been calculated, proceed to step 9.
  
9. If the physical state of the contaminant is a particulate (solid or liquid) during period of respirator use, proceed to step 10; if it is a combination of gas or vapor and particulate, proceed to step 12.

#### 10. Particulate Respirators

- a. Is the particulate respirator intended only for escape purposes?
  - i. If yes, use an “escape only” respirator.
  - ii. If no, the particulate respirator is intended for use during normal work activities. Proceed to step 10B.
- b. A filter medium that will provide protection against exposure to the particulate in question is recommended.

#### 11. Gas/Vapor Respirators

- a. Is the gas/vapor respirator intended for “escape only” purposes?
  - i. If yes, use a respirator rated for “escape only” purposes.
  - ii. If no, the gas/vapor respirator is intended for use during normal work activities. Proceed to step 11B.
- b. Are the warning properties for the gas/vapor contaminant adequate at or below the NIOSH PEL or other applicable exposure limit?
  - i. If yes, proceed to step 11C.
  - ii. If no, an air-purifying respirator equipped with an effective end-of-service-life indicator (ESLI), a supplied air respirator, or a self-contained breathing apparatus is recommended.
- c. An air-purifying chemical cartridge/canister respirator is recommended that has a sorbent suitable for the chemical properties of the anticipated gas/vapor contaminant(s) and for the anticipated exposure levels.

12. Combination Particulate and Gas/Vapor Respirators

- a. Is the combination respirator intended for “escape only” purposes?
  - i. If yes, use respirators rated for “escape only” purposes.
  - ii. If no, the combination respirator is intended for use during normal work activities.
- b. Does the gas/vapor contaminant have adequate warning properties at or below the NIOSH PEL or other applicable exposure limit?
  - i. If yes, proceed to step C.
  - ii. If no, either an air-purifying respirator equipped with an effective ESLI, a supplied-air respirator, or a self-contained respirator is recommended.

## Training

Supervisors and workers must be taught the proper selection, use, and maintenance of respirators.

All employees required to use respiratory equipment must be instructed in the proper use of the equipment and its limitations. Those employees who will be required to use respiratory protective equipment in atmospheres immediately dangerous to life or health must be trained in rescue procedures.

The training, conducted by a competent person, must include instructions on respirator fit and how to check the facepiece-to-face seal. The employee must be given an opportunity to handle the respirator, wear it in normal air for a period of time to become familiar with it and to practice adjusting it, and then wear it in a test atmosphere.

Training must include an explanation of the following:

Nature of the respiratory hazard and what may happen if the respirator is not used properly.

Engineering and administrative controls being used and the need for the respirator as added protection.

Reason(s) for the selection of a particular type of respirator.

Limitations of the selected respirator.

Methods of donning the respirator and checking its fit and operation.

Proper wear of the respirator.

Respirator maintenance and storage.

Proper method for handling emergency situations.

Users should know that improper respirator use or maintenance may cause overexposure. They should know that continued use of poorly fitted and maintained respirators can also cause chronic disease or death from overexposure to air contaminants.



## Fit Testing

Full facepieces, half masks, quarter masks and even the different brands of the same type of respirator marketed, have different fit characteristics. No one respirator will fit everyone.

Corrective glasses worn by employees also present a problem when fitting respirators. Special mountings are available to hold corrective lenses inside full facepieces. If corrective lenses are needed, the facepiece and lenses must be fitted by a qualified individual to provide good vision, comfort, and proper sealing. The user must receive fitting instructions including demonstrations and practice in how to wear the respirator, how to adjust it, and how to determine if it fits properly.

Although respirators are designed for maximum efficiency, they cannot provide protection without a tight seal between the facepiece and the face of the wearer. Consequently, beards and other facial hair can substantially reduce the effectiveness of a facepiece. The absence of dentures can seriously affect the fit of a facepiece. To ensure proper respiratory protection, a facepiece must be checked each time a respirator is worn. This can be accomplished by performing either a positive-pressure or negative-pressure check. Detailed instructions for performing these tests can be found in the ANSI standard.

The effectiveness of the fit of the facepiece can be tested two ways: qualitatively and quantitatively.

Qualitative fit testing involves the introduction of a harmless odorous or irritating substance into the breathing zone around the respirator being worn. If no odor or irritation is detected by the wear, a proper fit is indicated.

Quantitative fit testing offers more accurate, detailed information on respirator fit. It involves the introduction of a harmless aerosol to the wearer while he or she is in the test chamber. While the wearer performs exercises that could induce facepiece leakage, the air inside and outside the facepiece is then measured for the presence of the harmless aerosol to determine any leakage into the respirator.

## Inspection, Cleaning, Maintaining, and Storing

All respirators must be inspected for wear and deterioration or their components before and after each use. Special attention should be given to rubber or plastic parts that can deteriorate. The facepiece, especially the face seal surface, headband, valves, connective tube, fittings, and canister must be in good condition. A respirator inspection must include a check of the tightness of the connections.

SCBA's must be inspected at least monthly. Air and oxygen cylinders must be carefully charged according to the manufacturer's instructions. Regular and warning devices must be checked to ensure their proper function. Records must be kept of inspection dates and findings.

Chemical cartridges and gas mask canisters must be replaced as necessary to provide complete protection. The manufacturer's recommendations must be followed. Mechanical filters must be replaced as necessary to avoid high resistance to breathing.

Repairs must be made only by experience persons using parts specifically designed for the respirator. The manufacturer's instructions should be consulted for any repair, and no attempt should be made to repair or replace components or make adjustments or repairs beyond the manufacturer's recommendations.

A respirator that has been used must be cleaned and disinfected before it is reissued. Emergency-use rescue equipment must be cleaned and disinfected immediately after each use. Respirators must be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. Protection against any mechanical damage also should be provided. Respirators should be stored so that facepieces and exhalation valves will rest in a normal position to prevent the rubber or plastic from reforming into an abnormal shape.

Respirators may be washed in a detergent solution and then disinfected by immersion in a sanitizing solution. Clean-sanitizers that effectively clean the respirator and contain a bactericidal agent are commercially available. The bacterial agent frequently used is a quaternary ammonium compound. Strong cleaning and sanitizing agents and many solvents can damage rubber or elastomeric respirator parts. Such materials must be used with caution or after consultation with the respirator manufacturer.

#### Medical Questionnaire

All employees required to wear a respirator must be issued the medical questionnaire. (Form 18.2.5).

In order to keep the results of this questionnaire confidential, it should be administered by:

The preferred method would be to give the questionnaire to the employee with an envelope. When the questionnaire is filled out, the employee will deliver it to the physician or other licensed health care provider for review.

A second method would be to identify a person within the organization who is not related to Human Resources, is licensed to perform fit tests and is under strict confidentiality.

## Medical Examinations

Persons assigned to tasks that require the use of a respirator must be physically able to perform the work while using the respirator. A physician or other licensed health care provider (PLHCP) must determine if the potential respirator user is capable of using a respirator without any adverse effects. Some of the individuals may have a condition that prohibits them from wearing a respirator (i.e., asthma, lung disease, etc.). The respirator user's medical status must then be reviewed periodically as long as they wear respirators.

When respirators are worn in toxic atmospheres, the individual must be provided with appropriate laboratory tests. These may include urine, blood, or fecal analysis and other techniques to determine the intake and excretion of toxic substances. The findings of these tests, when correlated with other exposure data, such as air sampling data for wearers of such equipment, can serve as an indication of the effectiveness of the program. Positive evidence of exposure must be followed up with appropriate surveillance of work area conditions to determine if there is any relationship to inadequate respiratory protection or a need for additional engineering controls.

## Work Area Surveillance

Surveillance must be maintained of the conditions in the work area and of the degree of worker exposures or stress (combination of work rate, environmental conditions, and physiological burdens of wearing a respirator). Changes in operating procedures, temperature, air movement, humidity, and work practices may influence the concentration of a substance in the work area atmosphere. These factors necessitate periodic monitoring of the air contaminant concentration. Testing must continue to ensure that the contaminant exposure has not risen above the maximum protective capacity of the respirators being used.

Employees using SCBA's, or SAR's with auxiliary SCBA's, in confined spaces where the environment is or may be immediately dangerous to life and health must wear safety harnesses and lifelines. A second person equipped with complete protective gear must be standing by ready to help if the first workers gets into trouble. Communications (visual, voice, or signal line) must be maintained with all persons present. Precautions must be taken so that, in the event of an accident, one person will be unaffected and have the proper rescue equipment to assist the others in an emergency situation.

## Air Quality Standards

Compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration must be of high purity. Oxygen must meet the requirements of the United States Pharmacopoeia for medical or breathable oxygen. Breathable air must meet at least the requirement for Grade D breathable air described in Compressed Gas Association (CGA). Compressed oxygen must not be used in open circuit SCBA's or SAR's that have previously used compressed air. Oxygen must never be used with air-line respirators. Containers of breathable gas must be clearly marked.

The compressor for supplied air must be equipped with the necessary safety devices and alarms. Compressor must be constructed and situated to avoid any entry of contaminated air into the system and must be equipped with suitable in-line, air-purifying sorbent beds and filters installed to ensure air quality. The system also must have a receiver of sufficient capacity to enable the wearer to escape from a contaminated atmosphere in the event of compressor failure and alarm to indicate compressor failure and overheating. If an oil-lubricated compressor is used, it must have a high-temperature or carbon monoxide alarm or both. If only the High-temperature alarm is used, the air from the compressor must be tested frequently for carbon monoxide.

## Approved Respirators

Only NIOSH approved respirators shall be worn. When selecting a respirator for a particular situation, consult the supplemental selection charts (Form 18.2.3) for uses.

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## **FORMS**

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Respirator Fit Testing Procedures

Rainbow Passage

Respirator Selection Chart

NIOSH Respirator Decision Logic Sequence &  
Respirator Protection Training Checklist

Medical Questionnaire

Appendix "D" For Non-mandatory Respirator Use

## **Respirator Fit Testing Procedures**

Each time a respirator is issued to a Plibrico Company, Inc. employee, that employee must perform a fit test to ensure that the respirator will give the proper fit and protection to that employee. A respirator fit test consists of various exercises that are listed in this section.

The fitting of half-mask respirators should be started with those having multiple sizes and a variety of interchangeable cartridges and canisters such as the MSA Comfo II-M, North M. Survivair M, A-O M, or Scott-M. Use the tests outlined below to assure that the facepiece is properly adjusted and a proper fit is obtained.

### **Positive Pressure Test**

With the exhaust port(s) blocked, the positive pressure of slight exhalation should remain constant for several seconds. The test subject should cover the exhaust port(s) and exhale slowly to ensure that a proper seal exists.

### **Negative Pressure Test**

With the intake port(s) blocked, the negative pressure of slight inhalation should remain constant for several seconds. The test subject should cover the inhalation port(s) and inhale slowly to ensure that a proper seal exists.

### **Exercise Regime**

The next part of the fit test will require the use of banana oil (isoamyl acetate) when testing organic vapor cartridges or (Bitrex) when using high efficiency filters. Tents or hoods should only be used with banana oil tests.

If the employee can detect the isoamyl acetate or Bitrex at anytime during the test, the respirator should be checked for faults, adjusted, or replaced with another unit. Once this is done the employee shall be re-tested.

### **Exercise #1**

*Normal Breathing.* In the normal standing position, without talking, the subject shall breathe normally for at least one minute.

### **Exercise #2**

*Deep Breathing.* In the normal standing position the subject shall do deep breathing for at least one minute pausing so as not to hyperventilate.

### **Exercise #3**

*Turning Head Side to Side.* Standing in place the subject shall slowly turn his/her head from side between the extreme positions to each side. The head shall be held at each extreme position for at least 5 seconds. Perform for at least three complete cycles.

### **Exercise #4**

*Moving Head Up and Down.* Standing in place, the subject shall slowly move his/her head up and down between the extreme position straight up and the extreme position straight down. The head shall be held at each extreme position for at least 5 seconds. Perform for at least three complete cycles.

### **Exercise #5**

*Reading.* The test subject (keeping eyes closed) shall repeat after the test conductor the “rainbow passage” located on the next page. The subject shall talk slowly and aloud so as to be heard clearly by the test conductor or monitor.

### **Exercise #6**

*Grimace.* The test subject shall grimace, smile, frown, and generally contort the face using the facial muscles. Continue for at least 15 seconds.

### **Exercise #7**

*Bend Over and Touch Toes.* The test subject shall bend at the waist and touch their toes and return to the upright position. Repeat for at least 30 seconds.

### **Exercise #8**

*Jogging In Place.* The test subject shall jog in place for at least 30 seconds.

### **Exercise #9**

*Normal Breathing.* Same as number 1.

## **Rainbow Passage**

**When the sun strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.**

**Table 1.—Assigned protection factor classifications of respirators for protection against particulate exposures<sup>1</sup>**

Assigned Protection Factor	Type of Respirator
5	Single-use (see definition in Glossary) or quarter mask <sup>2</sup> respirator
10	Any air-purifying half-mask respirator including disposable <sup>3</sup> (see definition in Glossary) equipped with any type of particulate filter except single use <sup>2,4</sup>  Any air-purifying full facepiece respirator equipped with any type of particulate filter <sup>5</sup>  Any supplied-air respirator equipped with a half-mask and operated in a demand (negative pressure) mode <sup>4</sup>
25	Any powered air-purifying respirator equipped with a hood or helmet and any type of particulate filter <sup>4</sup>  Any supplied-air respirator equipped with a hood or helmet and operated in a continuous flow mode <sup>4</sup>
50	Any air-purifying full facepiece respirator equipped with a high efficiency filter <sup>2</sup>  Any powered air-purifying respirator equipped with a tight-fitting facepiece and a high efficiency filter <sup>4</sup>  Any supplied-air respirator equipped with a full facepiece and operated in a demand (negative pressure) mode <sup>2</sup>  Any supplied-air respirator equipped with a tight-fitting facepiece and operated in a continuous flow mode <sup>4</sup>

<sup>1</sup> Only high efficiency filters are permitted for protection against particulates having exposure limits less than 0.05 mg/m<sup>3</sup>.

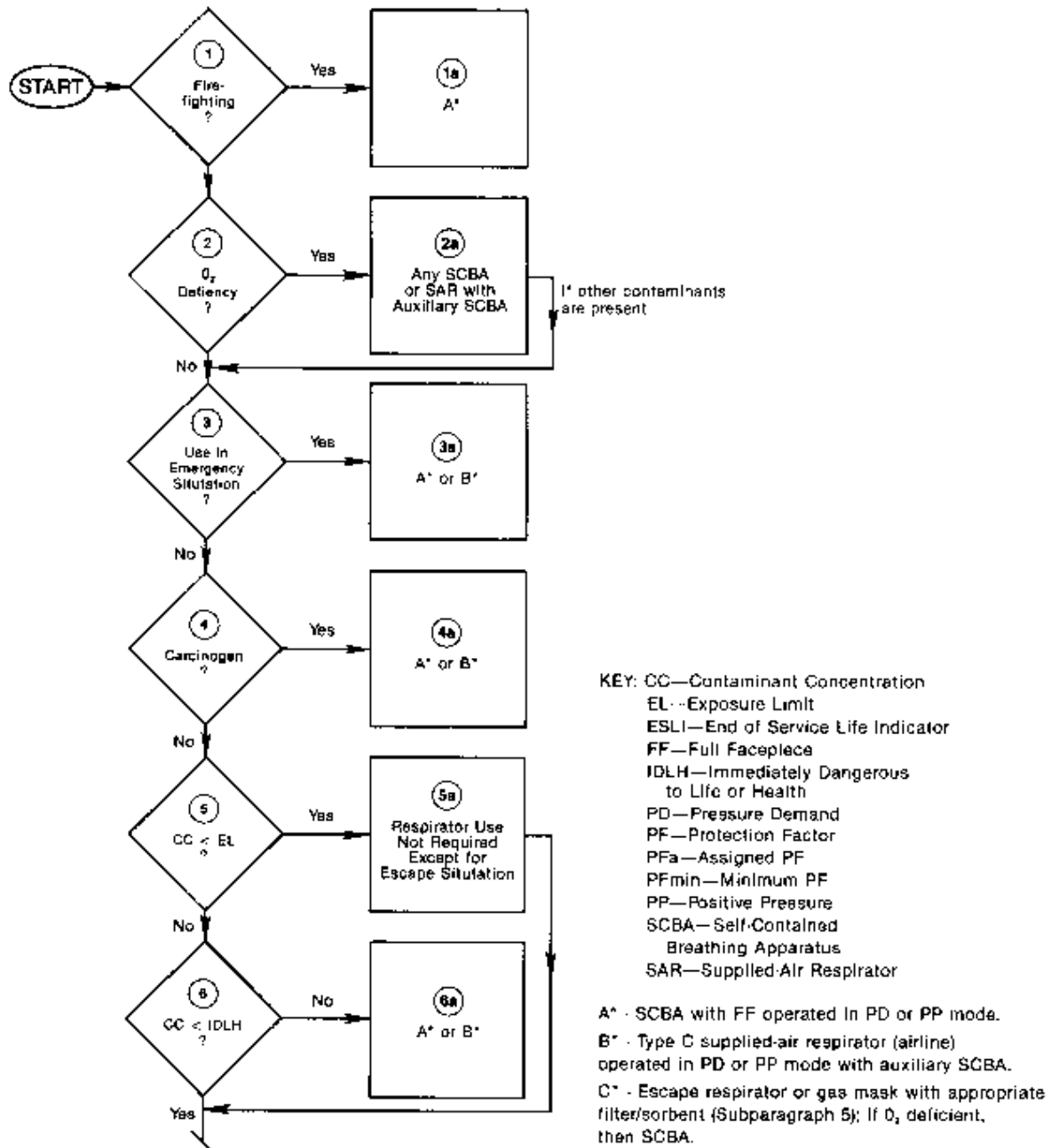
<sup>2</sup> The assigned protection factors (APF's) were determined by Los Alamos National Laboratories (LANL) by conducting quantitative fit testing on a panel of human volunteers [6].

<sup>3</sup> An APF factor of 10 can be assigned to disposable particulate respirators if they have been properly fitted using a quantitative fit test.

<sup>4</sup> APF's were based on workplace protection factor (WPF) data or laboratory data more recently reported than the LANL data [7–11, 14–17].

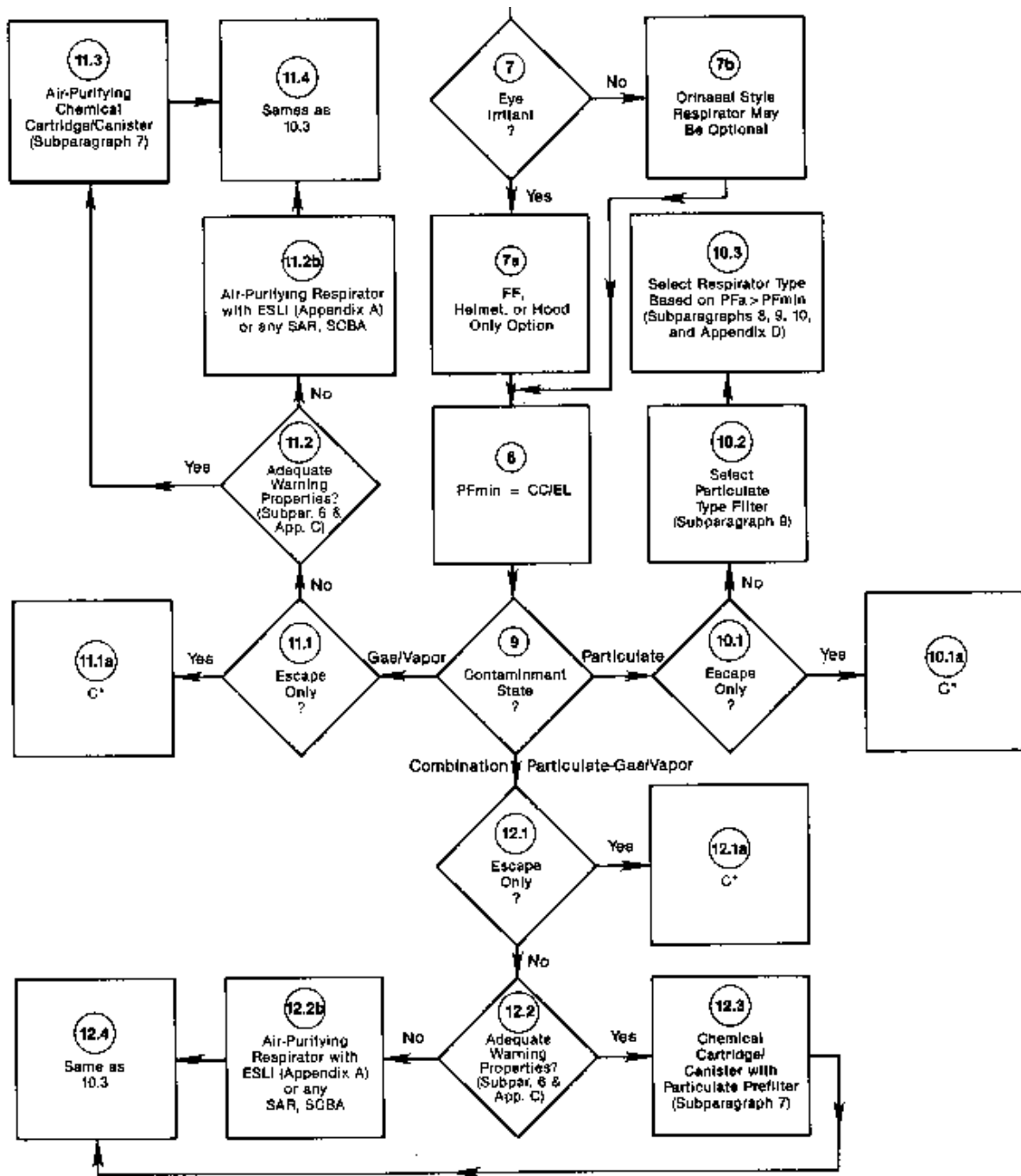
<sup>5</sup> The APF was based on consideration of efficiency of dust, fume, and/or mist filters.

The NIOSH Respirator Decision Logic Sequence (Publication No. 87-108) is presented in Figure 1 in the form of a flow chart. This flow chart can be used to identify suitable classes of respirators for adequate protection against specific environmental conditions. Refer to the corresponding narrative section for additional information pertaining to a specific part of the flow chart.



Flow Chart of Respirator Decision Logic Sequence





Flow Chart of Respirator Decision Logic Sequence *continued*



## **Appendix D for Non-mandatory Respirator Use**

Appendix D to Sec. 1910.134 (Non-mandatory) Information for employees using respirators when not required under the Standard.

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

### **You should do the following:**

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

# Respirator Medical Evaluation

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## Questionnaire

To the employer: Answers to questions in Section 1, and to question 9 in Section 2 or Part A, do not require a medical examination.

To the employee: Can you read? (check one):..... Yes  No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

The following information must be provided by every employee who has been selected to use any type of respirator (please print).

Name \_\_\_\_\_

Job title: \_\_\_\_\_

Age (to nearest year): \_\_\_\_\_

Sex (check one):  Male  Female Date \_\_\_\_\_

Height: \_\_\_\_\_ Feet \_\_\_\_ Inches Weight \_\_\_\_\_ Lbs.

Check the type of respirator you will use (you can check more than one category):

Phone number where you can be reached by the health care person who reviews this (include area code): \_\_\_\_\_

a. N, R, or P disposable respirator (filter-mask, non-cartridge type only).

The best time to call you at this number: \_\_\_\_\_

b. Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

Has your employer told you how to contact the health care

Have you worn a respirator: .....  Yes  No

Person who will review this (check one):  Yes  No

If "yes," what type(s): \_\_\_\_\_

### Part A — Section 2 (Mandatory)

Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please check "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month..... Yes  No

1. Have you ever had any of the following conditions?

a..... .....Sei  
zures (fits): ..... Yes  
.....No

b..... .....All  
ergic reactions that interfere with breathing: ..... Yes  
.....No

c..... .....Cla  
ustrophobia (fear of closed-in places): ..... Yes  
.....No

d..... .....Trd  
uble smelling odors: ..... Yes  
.....No

e..... .....Trd  
uble smelling odors: ..... Yes  
.....No

2. Have you ever had any of the following pulmonary or lung problems?

- a. Asbestosis: .....  Yes   
No
- b. Asthma: .....  Yes   
No
- c. Chronic bronchitis: .....  Yes   
No
- d. Emphysema: .....  Yes   
No
- e. Pneumonia: .....  Yes   
No
- f. Tuberculosis: .....  Yes   
No
- g. Silicosis: .....  Yes   
No
- h. Pneumothorax (collapsed lung): .....  Yes   
No
- i. Lung cancer: .....  Yes   
No
- j. Broken ribs: .....  Yes   
No
- k. Any chest injuries or surgeries: .....  Yes   
No
- l. Any other lung problem that you've been told about: .....  Yes   
No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?

- a. Shortness of breath: .....  Yes   
No
- b. Shortness of breath when walking fast on level ground or working up a slight hill or incline: .....  Yes   
No
- c. Shortness of breath when walking with other people at an ordinary pace on level ground: .....  Yes   
No
- d. Have to stop for breath when walking at your own pace on level ground: .....  Yes   
No
- e. Shortness of breath when washing or dressing yourself: .....  Yes   
No
- f. Shortness of breath that interferes with your job: .....  Yes   
No
- g. Coughing that produces phlegm (thick sputum): .....  Yes   
No
- h. Coughing that wakes you early in the morning: .....  Yes   
No
- i. Coughing that occurs mostly when you are lying down: .....  Yes   
No
- j. Coughing up blood in the last month: .....  Yes   
No
- k. Wheezing: .....  Yes   
No
- l. Wheezing that interferes with your job: .....  Yes   
No

- m. Chest pain when you breathe deeply: .....  Yes   
No
- n. Any other symptoms that you think may be related to lung problems: .....  Yes   
No

5. Have you ever had any of the following cardiovascular or heart problems?

- a. Heart attack: .....  Yes   
No
- b. Stroke: .....  Yes   
No
- c. Angina: .....  Yes   
No
- d. Heart failure: .....  Yes   
No
- e. Swelling in your legs or feet (not caused by walking): .....  Yes   
No
- f. Heart arrhythmia (heart beating irregularly): .....  Yes   
No
- g. High blood pressure: .....  Yes   
No
- h. Any other heart problem that you've been told about: .....  Yes   
No

6. Have you ever had any of the following cardiovascular or heart symptoms?

- a. Frequent pain or tightness in your chest: .....  Yes   
No
- b. Pain or tightness in your chest during physical activity: .....  Yes   
No
- c. Pain or tightness in your chest that interferes with your job: .....  Yes   
No
- d. In the past two years, have you noticed your heart skipping or missing a beat: .....  Yes   
No
- e. Heartburn or indigestion that is not related to eating: .....  Yes   
No
- f. Any other symptoms that you think may be related to heart or circulation problems: .....  Yes   
No

7. Do you currently take medication for any of the following problems?

- a. Breathing or lung problems: .....  Yes   
No
- b. Heart trouble: .....  Yes   
No
- c. Blood pressure: .....  Yes   
No
- d. Seizures (fits): .....  Yes   
No

8. If you've used a respirator, have you ever had any of the following problems?

(If you've never used a respirator go to question 9)

- a. Eye irritation: .....  Yes   
No
- b. Skin allergies or rashes: .....  Yes   
No
- c. Anxiety: .....  Yes   
No
- d. General weakness or fatigue: .....  Yes   
No
- e. Other problem that interferes with your respirator use: .....  Yes   
No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: .....  Yes   
No

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): .....  Yes   
No

11. Do you currently have any of the following vision problems?

- a. Wear contact lenses: .....  Yes   
No
- b. Wear glasses: .....  Yes   
No
- c. Color blind: .....  Yes   
No
- d. Other eye or vision problem: .....  Yes   
No

12. Have you ever had an injury to your ears, including a broken ear drum: .....  Yes   
No

13. Do you currently have any of the following hearing problems?

- a. Difficulty hearing: .....  Yes   
No
- b. Wear a hearing aid: .....  Yes   
No
- c. Any other hearing or ear problem: .....  Yes   
No

14. Have you ever had a back injury: .....  Yes   
No

15. Do you currently have any of the following musculoskeletal problems?

- a. Weakness in any of your arms, hands, legs, or feet: .....  Yes  No
- b. Back pain: .....  Yes  No
- c. Difficulty fully moving your arms and legs: .....  Yes  No
- d. Pain or stiffness when you lean forward or backward at the waist: .....  Yes  No
- e. Difficulty fully moving your head up or down: .....  Yes  No
- f. Difficulty fully moving your head side to side: .....  Yes  No
- g. Difficulty bending at your knees: .....  Yes  No
- h. Difficulty squatting to the ground: .....  Yes  No
- i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: .....  Yes  No
- j. Any other muscle or skeletal problem that interferes with using a respirator: .....  Yes  No

**Part B**

Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

- 1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: .....  Yes  No  
If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: .....  Yes  No
- 2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g. gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: .....  Yes  No  
If "yes," name the chemicals if you know them:  
\_\_\_\_\_  
\_\_\_\_\_
- 3. Have you ever worked with any of the materials, or under any of the conditions, listed below:
  - a. Asbestos: .....  Yes  No
  - b. Silica (e.g. in sandblasting): .....  Yes  No
  - c. Tungsten/cobalt (e.g. grinding or welding this material): .....  Yes  No
  - d. Beryllium: .....  Yes  No
  - e. Aluminum: .....  Yes  No
  - f. Coal (for example, mining): .....  Yes  No
  - g. Iron: .....  Yes  No
  - h. Tin: .....  Yes  No
  - i. Dusty environments: .....  Yes  No
  - j. Other hazardous exposures: .....  Yes  No

If "yes," describe these exposures:  
\_\_\_\_\_  
\_\_\_\_\_



4. List any second jobs or side businesses you have:

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5. List your previous occupations:

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6. List your current and previous hobbies:

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7. Have you been in the military services? .....  Yes  No  
If "yes," were you exposed to biological or chemical agents (either in training or  
combat): .....  Yes  No

8. Have you ever worked on a HAZMAT team? .....  Yes  No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure,  
and seizures mentioned earlier in this questionnaire, are you taking any other  
medications for any reason (including over-the-counter medications): .....  Yes  No  
If "yes," name the medications if you know them

10. Will you be using any of the following items with your respirator(s)?  
a. HEPA Filters: .....  Yes  No  
b. Canisters (for example, gas masks): .....  Yes  No  
c. Cartridges: .....  Yes  No

11. How often are you expected to use the respirator(s)?  
a. Escape only (no rescue): .....  Yes  No  
b. Emergency rescue only: .....  Yes  No  
c. Less than 5 hours per week: .....  Yes  No  
d. Less than 2 hours per day: .....  Yes  No  
e. 2 to 4 hours per day: .....  Yes  No  
f. Over 4 hours per day: .....  Yes  No

12. During the period you are using the respirator(s), is your work effort:  
a. Light (less than 200 kcal per hour): .....  Yes  No  
If "yes," how long does this period last during the average shift: \_\_\_\_\_ hrs  Yes  No  
mins. \_\_\_\_\_ Yes  
No  
Examples of a light work effort are sitting while writing, typing, drafting, or performing  
light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling  
machines.  
b. Moderate (200 to 350 kcal per hour): .....  Yes  No  
If "yes," how long does this period last during the average shift: \_\_\_\_\_ hrs.  Yes  No  
mins. \_\_\_\_\_  
Yes \_\_\_\_\_ No  
Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus  
in urban traffic; standing while drilling, nailing, performing assembly work, or transferring  
a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mpg or  
down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about  
100 lbs.) on a level surface.

c. Heavy (above 350 kcal per hour):.....  Yes  No  
If "yes," how long does this period last during the average shift: \_\_\_\_\_ hrs.  
\_\_\_\_\_ mins.

Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: .....  Yes  No  
If "yes," describe this protective clothing and/or equipment

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14. Will you be working under hot conditions (temperature exceeding 77°F):.....  Yes  No

15. Will you be working under humid conditions: .....  Yes  No

16. Describe the work you'll be doing while you're using your respirator(s):

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17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s)

(for example, confined spaces, life-threatening gases):

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18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

Name of the first toxic substance:

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Estimated maximum exposure level per shift:

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Duration of exposure per shift:

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Name of the second toxic substance:

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Estimated maximum exposure level per shift:

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Duration of exposure per shift:

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Name of the third toxic substance:

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Estimated maximum exposure level per shift:

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Duration of exposure per shift:

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The name of other toxic substances that you'll be exposed to while using your respirator:

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19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):

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**SECTION #37**

**WRITTEN PERSONAL PROTECTION PROGRAM**

The purpose of this program is to protect all employees from the perils associated with hazardous working conditions after it has been determined that all possible engineering controls can not be implemented or are not feasible.

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## **ADMINISTRATION OF RESPONSIBILITIES**

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The Supervisors have the responsibility for the administration of this program. Effective administration includes the following:

1. A complete hazard assessment for every operation to determine the type of PPE that is needed.
2. Employee training in the proper use of PPE
3. PPE maintenance and cleaning procedures
4. Enforcement of Plibrico Company policy regarding the use of PPE.

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## **HAZARD ASSESSMENT AND EQUIPMENT SELECTION**

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All Supervisors shall assess their workplace to determine if hazards are, or are likely to be, present which necessitate personal protective equipment.

If a hazard exists, the contractor shall:

Select and require use of appropriate PPE

Communicate selection decisions to employees

Select PPE that fits and does not create a greater hazard to employees

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## **EYE AND FACE PROTECTION**

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Affected employees shall use appropriate eye and face protection when exposed to:

Flying particles

Molten metal

Liquid chemicals

Acids or caustics

Chemical gases or vapors

Potentially injurious light radiation

Eye protections with side shields are required where the employee is exposed to flying objects.

Employees wearing prescription lenses shall wear eye protection that incorporates the prescription in its design, or can be worn properly over lenses.

All eye and face protection shall be distinctly marked to facilitate identification of the manufacturer and be approved by ANSI with the marking Z87.

Each employee that is exposed to light radiation during the course of his/her workday shall use eye protection with filter lenses having a shade number appropriate for the work being performed. This shade level can be found in the chart for eye protection on the first page of the hazard assessment sheets.

Employees wearing face protection must also wear eye protection underneath.

Splash goggles are required where the employee is exposed to any liquid chemicals, acids, or caustics.



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## **HEAD PROTECTION**

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All employees shall wear protective helmets where there is a potential for injury to the head from falling objects.

Protective helmets designed to reduce electric shock shall be worn near exposed electrical conductors, which could contact the head.

If it is determined that head protection is needed for a particular work process or area, the class of head protection must then be chosen, which would protect against the particular hazard (Class A, B, or C).

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## **FOOT PROTECTION**

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Each affected employee shall wear protective footwear where there is a danger of foot injury due to falling or rolling objects, objects piercing the sole, and where feet are exposed to electrical hazards.

The different types of foot protection available are:

Impact protection

Penetration protection

Metatarsal protection

Puncture protection

Electrical protection

The type of foot protection chosen shall protect the foot from the type of hazard that exists at this particular work process.

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## **HAND PROTECTION**

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All Supervisors shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from:

Skin absorption of harmful substances

Severe cuts or lacerations

Severe abrasions

Punctures

Chemical or thermal burns

Harmful temperature extremes

Selection of PPE should be based on an evaluation of performance characteristics of the hand protection relative to:

Tasks to be performed

Conditions present

Duration of use

Hazard and potential hazards identified

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## **TRAINING**

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All Supervisors shall provide training to employees who are required to use PPE. The personal protective equipment training must cover the following.

When PPE is necessary

What PPE is necessary

How to correctly wear PPE

Limitations of the PPE

Proper care, maintenance, useful life and disposal

**SECTION #38**  
**PPE HAZARD ASSESSMENT PROGRAM**

# Hazard Assessment Guide

Location: \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor: \_\_\_\_\_ Work Process: \_\_\_\_\_

## Hazard Assessment

Source of Hazards to Workers:

Impact _____	Heat _____	Compression _____
Penetration _____	Harmful Dust _____	Chemical _____
Light (optical) radiation _____	Other _____	

### Eye and Face Protection Selection Chart

Source	Assessment of Hazard	Protection
IMPACT - Chipping, grinding, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding.	Flying fragments, objects, large chips, particles sand dirt etc.	Spectacles with side protection, goggles, face shields. See notes (1), (3), (5), (6), (10). For severe exposure, use faceshield.
	Hot sparks	Faceshields, goggles, spectacles with side protection. For severe exposure use faceshield. See notes (1), (2), (3).
HEAT - Furnace operations, pouring, casting, hot dipping, and welding.	Splash from molten metals	Faceshields worn over goggles. See notes (1), (2), (3).
	High temperature exposure	Screen faceshields, reflective faceshields. See notes (1), (2), (3).
	Splash	Goggles, eyecup and cover types. For severe exposure, use faceshield. See notes (3), (11).
	Irritating mist	Special-purpose goggles.
CHEMICALS - Acid and chemicals handling, degreasing plating.	Nuisance dust	Goggles, eyecup and cover types. See notes (8).
	Optical radiation	Welding helmets or welding shields. Typical shades: 10-14. See notes (9), (12).
DUST - Woodworking, buffing, general dusty conditions.	Optical radiation	Welding goggles or welding faceshield. Typical shades: gas welding 4-8, cutting 3-6, brazing 3-4. See note (9).
LIGHT and/or RADIATION - Welding: Electric Arc  Welding: Gas  Cutting, Torch brazing, Torch soldering  Glare	Optical radiation	Spectacles or welding faceshield. Typical shades, 1.5-3. See notes (3), (9).
	Poor vision	Spectacles with shaded or special purpose lenses, as suitable. See notes (9), (10).

## Notes to Eye and Face Protection Selection Chart:

- (1) Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.
- (2) Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.
- (3) Faceshields should only be worn over primary eye protection (spectacles or goggles).
- (4) As required by the standard, filter lenses must meet the requirements for shade designations in 1910.133 (a)(5). Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.
- (5) As required by the standard, persons whose vision requires the use of prescription (Rx) lenses must wear either protective devices fitted with prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eyewear.
- (6) Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.
- (7) Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.
- (8) Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleanings may be necessary.
- (9) Welding helmets or faceshields should be used only over primary eye protection (spectacles or goggles).

Type of eye/face protection needed for this job: \_\_\_\_\_

# Hazard Assessment Guide

## Selection Guidelines for Head Protection

If any of the following scenarios exist, than some form of head protection is needed.  
(mark with an "X" if conditions exist)

Falling object hazards are present.	
Working operations are below others who are using tools and materials which could fall.	
Working operations are around or under conveyor belts which are carrying parts or materials.	
Working operations are below machinery or processes which might cause material or objects to fall.	
Are employees working on exposed energized conductors.	

If any of the following work is being performed, some form of head protection may be needed.  
(mark with an "X" if conditions exist)

Carpentry		Sawyer work	
Electrician work		Welding	
Line work		Laborer work	
Mechanic and Repair work		Freight Handling	
Plumbing and Pipe Fitting		Timber Cutting and Logging	
Assembling		Stock Handling	
Packing		Warehouse Laborer work	
Wrapping			

After determining if head protection is needed, the class of head protection must be selected. The following shows the three classes of head protection and their ratings. This breakdown of classifications should help determine which type of head protection is needed.

### Classes of Head Protection are A, B, and C

*Class A* head protection provides protection from impact, penetration, and electrical low voltage conductors rated at 2,200 volts.

*Class B* head protection provides protection from impact, penetration, and electrical high voltage conductors rated at 20,000 volts.

*Class C* head protection provides protection from impact and penetration only. These helmets are usually made of aluminum and should not be used around electrical hazards.

Type of Head protection needed for this job is:      A      B      C      None      (circle one)

# Hazard Assessment Guide

## Selection Guidelines for Foot Protection

Safety shoes can provide impact, penetration, puncture, metatarsal, and electrical protection. Make sure that the shoes chosen will protect against the hazards which are present for each particular job.

If any of the following conditions exist in a particular situation, shoes or boots with impact protection are needed. (mark with an "X" if conditions exist)

Carrying or handling materials such as packages, objects, parts, or heavy tools, that may be dropped.	
Other activities where objects might fall onto the feet.	

If any of the following conditions exist in a particular situation, shoes or boots with compression protection are needed. (mark with an "X" if conditions exist)

Activities involving skid trucks (manual material handling carts)	
Activities around bulk rolls (such as paper rolls)	
Activities around heavy pipes.	

If any of the following conditions exist, safety shoes or boots with puncture protection would be required. (mark with an "X")

Employees are exposed to objects such as nails, screws or tacks.	
Employees are exposed to objects such as wire, large staples, scrap metal etc.	

If any of the following work is being performed, some form of foot protection may be needed. (mark with an "X")

Shipping and Receiving Clerk duties		Wrapping	
Stock Clerk duties		Crater work	
Carpentry		Punch and Stamping Press operations	
Electrician's work		Sawyer work	
Machinist's work		Welding	
Mechanic and Repairer's work		Laborer's work	
Plumbing and Pipe Fitting		Freight Handling	
Structural Metal work		Gardening and Ground-Keeping	
Assembly work		Timber Cutting and Logging	
Drywall Installation and Lather's work		Stock Handling	
Packing		Warehouse Laborer's work	

Type of foot protection needed for this job: Impact    Compression    Puncture    None    [circle choice(s)]

# Hazard Assessment Guide

## **Selection Guidelines for Hand Protection**

Gloves are often relied upon to prevent cuts, abrasion, burns, and skin contact with chemicals that are capable of causing local or systematic effects following dermal exposure. Therefore, it is important to select the most appropriate glove for a particular application and to determine how long it can be worn, and whether it can be reused.

It is also important to know the performance characteristics of gloves relative to the specific hazard anticipated; e.g., chemical hazards, cut hazards, flame hazards, etc.

Other factors to be considered for glove selection in general include:

- A) As long as the performance characteristics are acceptable, in certain circumstances, it may be more cost effective to regularly change cheaper gloves than to reuse more expensive gloves.
- B) The work activities of the employee should be studied to determine the degree of dexterity required, the duration, frequency, and degree of exposure of the hazard, and the physical stresses that will be applied.

With respect to selection of gloves for protection against chemical hazards:

- A) The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause local effects on the skin and/or to pass through the skin and cause systemic effects.
- B) Generally, any "chemical resistant" glove can be used for dry powders.
- C) For mixtures and formulated products (unless specific test data are available), a glove should be selected on the basis of the chemical component with the shortest breakthrough time, since it is possible for solvents to carry active ingredients through polymeric materials.
- D) Employees must be able to remove the gloves in such a manner as to prevent skin contamination.

Type of hand protection needed for this job: \_\_\_\_\_

## **Guidelines for Cleaning and Maintenance**

It is important that all PPE be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. The PPE should be inspected, cleaned and properly maintained at regular intervals so that the PPE provides the requisite protection.

It is also important to ensure that contaminated PPE, which cannot be decontaminated, is disposed of in a manner that protects employees from employees from exposure to hazards.



**SECTION #39**

**HEARING CONSERVATION**

## **Introduction**

This program was developed in order to recognize excessive noise exposures and to protect employees from these exposures . This can be accomplished through an aggressive program that concentrates on reducing the exposures through sound engineering, periodic monitoring, administrative controls, and education. By implementing this program, Plibrico Company can eliminate the hazards that cause premature hearing loss.

## **Policy**

It is the policy of Plibrico Company to ensure that all aspects of the Hearing Conservation Program (HCP) are followed and enforced. Employees are responsible for wearing hearing protection in areas where it is required. These employees are also responsible for cleaning and maintaining issued hearing protection according to the manufacturer's requirements.

If it is found that any employee is not following the procedures established by this program, than that employee will be dealt with under the guidelines of the enforcement policy. Plibrico Company is responsible for providing the necessary engineering controls, testing, hearing protection, and employee training. This program can only be successful if everyone follows this policy.

## **Training**

An important aspect of the HCP is education. In order for employees to fully understand the effects of overexposure to high noise levels, training must be provided. All Plibrico Company employees who are exposed to time weighted averages of 85 dB and above will be trained on an annual basis. This training will include, but not be limited to:

- The health effects of noise due to overexposure.
- The purpose of the HCP and the control measures taken to reduce the hazard.
- The advantages and disadvantages of various types of hearing protectors.
- The selection, fit, and care of hearing protection.
- The purpose and procedures of audiometric testing.

\*See attachments for training attendance sheet.

## **Sound Surveys**

In order to identify the problem areas, sound surveys must be conducted. Sound surveys are used to measure continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range. These surveys must be taken during typical working situations. Sound surveys include personal monitoring as well as area monitoring.

When a survey shows a time weighted average of 85 dB or above, those employees who are being exposed to these working conditions must receive training and be given proper hearing protection to reduce this exposure. Likewise, if a survey shows a frequency of high impact noises, those employees exposed must receive training and hearing protection also.

Noise level monitoring will be repeated when there are changes in production, processes, or controls, which may increase exposures. All monitoring will be done by an outside source and records of this monitoring will be kept on file indefinitely.

## **Engineering Controls**

Wherever possible, Plibrico Company will try to reduce or eliminate sources of noise coming from machinery and equipment through engineering controls. If a machine or piece of equipment is raising noise levels to 85 dB and above, this machine or piece of equipment will be reviewed by management to determine if it can be replaced or altered to reduce this noise.

Some typical engineering controls (alterations) may involve:

- Reducing noise at the source ( ex. installing a muffler)
- Interrupting the noise path. (ex. erecting acoustical enclosures and barriers)
- Reducing reverberation. (ex. installing sound absorbing material)
- Reducing structure-borne vibration (ex. installing structure mounts and providing proper lubrication)

Engineering controls will be considered under the guidance of the safety committee and consultant recommendations. Appropriate and feasible engineering solutions will then be presented to management by the safety committee. Ultimate selection of engineering controls will also be determined by management.

## **Administrative Controls**

If engineering controls are not feasible or additional controls are needed to reduce exposure to excessive noise, administrative controls will be considered.

Administrative controls consist of the following:

- Changing work schedules (ex. operating noisy machinery on 2nd or 3rd shift to reduce exposure to number of employees)
- Work rotation (ex. alternating employees between quiet and noisy jobs frequently to reduce exposure over an eight hour period)
- Providing quiet areas where employees can gain relief from workplace noise. (ex. sound-proof or well-insulated lunch/break room; locating the lunch room away from source of noise)

Plibrico Company will consider the implementation of administrative controls if the controls selected are feasible. If engineering and administrative controls are not feasible or capable of reducing TWA noise exposures to under 85 dB, then proper hearing protection will be selected for those employees who are exposed to excessive noise levels.

## **Hearing Protection**

The last line of defense in combating high noise levels is hearing protection devices. A hearing protection device is anything that can be worn to reduce the level of sound entering the ear. There are three principal types of devices. These devices are as follows:

- Ear muffs
- "Semi-aural" devices
- Ear plugs

Selection of the type of hearing protection will be determined by the level of protection that is needed and the level of protection provided by the protection device.

Plibrico Company is responsible for supplying the necessary protective equipment. Plibrico Company is also committed to employee satisfaction. If a particular device used is uncomfortable, another device will be considered. However, if an employee does not wear designated hearing protection, than they will be disciplined according to the enforcement policy.

Visitors and those employees who do not regularly work in designated hearing protection areas must wear hearing protection when passing through or visiting.

## **Audiometric Evaluations**

Plibrico Company will test those employees who are subject to excessive noise exposures to help ensure that the HCP is effective. Tests will be conducted and analyzed on at least an annual basis starting with the baseline hearing tests.

In order to maximize protection of the employees of Plibrico Company, audiograms should be performed on the following five occasions:

1. Pre-employment
2. Prior to initial assignment in a noisy work area.
3. Annually as long as the employee is assigned to a noisy job (a TWA average exposure level of 85 to 100 dBA) or twice a year for employees with TWA average exposure over 100 dBA.
4. At the time of reassignment out of a noisy job.
5. At the termination of employment.

In addition to the testing for those employees who are exposed to high noise levels, Plibrico Company may test employees who are not exposed to high noise levels so that audiograms of exposed employees can be compared to those employees that are not exposed to ensure HCP effectiveness.

All audiogram testing will be conducted by an outside source that is qualified to carry out this testing in an efficient manner.

Employees who are or will be exposed to average noise levels above 85 dB must also complete an employee history form to identify off-the-job noise exposures from other jobs or hobbies.

\*See attachments for employee history form.

## **Record Keeping**

One of the most important aspects of this program is record keeping. Records will be used to evaluate the program and monitor the progression of employee exposures. The HCP records include all items for each phase of the program. These phases are as follows:

1. Noise exposure measurements
2. Plans for engineering and administrative controls
3. Audiometric evaluations
4. Provision for purchase of hearing protection devices
5. Employee education and motivation activities
6. Program evaluations.

Each phase of the HCP will generate its own form of records, and the information from the various records will be considered in order to evaluate the effectiveness of the HCP.

## **Designated Hearing Protection Areas**

**To be completed by Plibrico Company**





## AUDIOMETRIC AND IDENTIFICATION INFORMATION

Name: _____	Test Date: _____	Test Time: _____
Soc. Sec. #: _____	Test Type: _____	
Birth Date: _____		Exposure Level _____ dBA
Sex:     Male            Female	Time since last exposure:	
Empl. No.: _____	_____ hours	Hearing Protector Activity
Job Code: _____		Yes _____ No _____
Job Descript: _____	Hearing Protector Used:	Issue _____
Dept. No.: _____	Plugs _____ Muffs _____	Reissue _____
	Both _____ None _____	Training _____
	Unknown _____	Retraining _____

## SELF-REPORTED EMPLOYEE HISTORIES

Medical History (Y/N)	Hobby & Military History (Y/N)	Additional Information (Y/N)
Diabetes _____	Hunting _____	Noisy 2nd Job _____
Ear Surgery _____	Shooting _____	Noisy Past Job _____
Head Injury _____	Racing Cars _____	Difficulty Hearing Right Ear _____
Measles _____	Motorcycles _____	Difficulty Hearing Left Ear _____
Mumps _____	Other Loud Vehicles _____	Hearing Aid Right Ear _____
High Blood Pressure _____	Loud Music/Band _____	Hearing Aid Left Ear _____
Ringing In Ears _____	Power Tools _____	Recent Change in Hearing _____
Ear Infection _____	Military Service _____	See Physician About Ears _____
Other _____	Branch _____	See Prior History _____
	Other _____	Other _____

## AUDIOGRAM

### Test Frequency

	<b>500</b>	<b>1000</b>	<b>2000</b>	<b>3000</b>	<b>4000</b>	<b>6000</b>	<b>8000</b>
<b>Right</b>							
<b>Left</b>							

Audiometer: _____	Serial Number: _____
Exhaustive Calibration Date: _____	Biological Calibration Date: _____
Tester Identification: _____	Test Reliability (Good, Fair, Poor) _____
Reviewer Identification: _____	Audiogram Classification Code: _____

Comments: \_\_\_\_\_

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Sample data sheet for audiogram and related employee histories.

**SECTION #40**

**HEAT AND COLD STRESS**

# Plibrico, Heat and Cold Stress Policy

## **Purpose**

To assist Plibrico, it's workers and all other workplace parties in understanding heat and cold stress. To develop and implement a policy to prevent extreme temperature related illness and overexposure while working in extreme hot or cold environments at Plibrico Company LLC.

## **Legislation**

Under Section 25(2)(h) of the Occupational Health and Safety Act, employers must take every precaution reasonable in the circumstances for the protection of a worker. This includes heat and cold stress and related extreme temperature conditions.

## **Scope And Responsibility**

This policy applies to all employees in all classifications of employment and all contactors working at Plibrico workplaces.

## **Definitions**

### **Heat Stress**

A variety of conditions caused by heat load on the body that results from exposure to external sources and from internal metabolic heat production as the result of work. Heat stress disorders can develop when the body is no longer able to get rid of excess heat and keep its internal temperature below 38 C. Some examples of heat stress are heat rash, heat rash, heat cramps, heat exhaustion, sunburn and heatstroke.

### **Cold Stress**

A variety of physical conditions caused by a reduction in the deep core body temperature below 36 C, or the effect of local cold injuries cause by cold conditions. Symptoms may include intense shivering, slurred speech, mental confusion, erratic behavior, frostbite or pain in the extremities and hypothermia.

### **Heat Rash**

A heat-induced condition that results in a red bumpy rash with sever itching.

### **Sunburn**

Over exposure to the sun that results in red, painful, or blistering and peeling skin.

### **Heat Cramps**

A heat induced condition that causes heavy sweating that drains a person's body of salt. This results in painful cramps in the arms, legs, or stomach, which occur suddenly at work or later at home. Heat cramps are a warning sign of other more serious heat-induced illnesses.

## **Heat Exhaustion**

A heat induced condition that results in heavy sweating, cool moist skin, a body temperature over 38 C, weak pulse, normal or low blood pressure, feeling tired and weak, nausea and extreme thirst. This condition is life threatening.

## **Heatstroke**

A heat-induced condition that results in a high body temperature (over 41 C) and causes any one of the following:

1. Weakness, confusion, emotional upset or strange behavior
2. Hot, dry, red skin
3. Fast pulse
4. Headache or dizziness

In the later stages, a person may pass out or have convulsions. This condition is life threatening.

## **Frostbite**

A condition that is caused by exposure to extreme cold and results in the freezing of bodily tissues. Frostbite often causes burning, numbness, tingling, itching, cold sensations or loss of sensation in the affected. The regions may appear white and frozen, or swollen with blood-filled blisters. In extreme cases, the area may become purple and blue as it rewarms.

## **Hypothermia**

A condition that occurs when more heat escapes from the body than the body can produce. Signs and symptoms of hypothermia may include gradual loss of mental and physical abilities. Severe hypothermia can lead to death.

## **PROCEDURE**

### **Management Responsibilities:**

1. Identify and classify jobs with potential exposure to temperature extremes as a result of the work activities.
2. Control heat/cold at its source through the use of insulating and reflective barriers.
3. Reduced hot temperatures and humidity in enclosed buildings through air-cooling systems.
4. Provide air-conditioned/heated rest areas in enclosed Plibrico facilities.
5. Provide climate controlled work areas, where possible.
6. Reduce the physical demands of work through mechanical assistance (i.e. hoists, lift tables).
7. Schedule strenuous work to cooler times of the day.

8. Make sure everyone is properly acclimatized.
9. Remind workers to drink a cup of water every 20 minutes on hot days.
10. Provide canopies or cabs on vehicles and heavy equipment.
11. Provide all outside workers hard hats or applicable headwear.
12. Train the workers to recognize the signs and symptoms of heat/cold stress.
13. Develop safe work procedures.
14. Ensure that all employees are informed of risk factors, health effects and recommended procedures to reduce the risk of exposure as associated with working in extreme temperatures.
15. Require employees to take personal protective measures to reduce the risk of working in temperature extremes.

### **Worker Responsibilities:**

1. Follow safe work procedures, and use appropriate personal protective measures as needed.
2. Outside Workers exposed to extreme heat should wear light-colored, lightweight summer clothing to allow free air movement and sweat evaporation.
3. Recognized and report any signs or symptoms of heat and/or cold stress to a supervisor.
4. During hot weather, use shaded areas for breaks, when possible.
5. During cold weather, use heated areas for breaks, when possible.
6. Drink enough water to replace fluids lost through sweating. (On hot days, two glasses before starting work and one glass every 20 minutes while working).

### **Action Required:**

#### Heat Cramps

- Rest in a cool area.
- Loosen clothing to allow blood flow to affected areas.
- Drink cool water, sprinkled with salt if possible (1 tsp. salt per gallon of water) or a commercial fluid replacement beverage.
- If the cramps are severe or don't go away, seek medical aid.

#### Prevention:

- Reduce activity levels and/or heat exposure.
- Drink fluids regularly.
- Workers should check on each other to help spot the symptoms that often precede heat stroke.

## Heat Exhaustion and Heatstroke

- Call 911 and obtain medical aid immediately.
- Move worker to cool area where they should lie down.
- Loosen or remove outer clothing.
- Fan and cool worker with cool water via sponges or spray.
- If conscious, give worker cool water, sprinkled with salt if possible.

### Prevention:

- Reduce activity levels and/or heat exposure.
- Drink fluids regularly.
- Workers should check on each other to help spot the symptoms.

## Heat Rash

- Change into dry clothes.
- Avoid hot environments.
- Rinse skin with cool water.

### Prevention:

- Wash regularly to keep skin clean and dry.

## Sunburn

- If the skin blisters, seek medical aid
- Use skin lotions (avoid topical anesthetics) and work in the shade.

### Prevention:

- Work in the shade.
- Cover skin with clothing.
- Apply skin lotions with a sun protection factor (SPF) of at least fifteen.
- People with fair skin should be especially cautious.

## Frostbite

- Remove employee from the precipitating cold environment and warm the affected areas using moist heat.
- When possible, seek medical aid.
- DO NOT thaw the affected area if there is a risk of re-freezing. Re-freezing will only lead to more severe damage.
- Immerse the affected area into circulation hot water that is between 40-42 C (104-108 F) for 15-30 minutes or until thawing is complete. Make sure to test the temperature of the water with a thermometer of a hand that is not frozen in order to avoid burning the injured area

Prevention:

- Avoid prolonged exposure to the cold.
- Wear several thin layers of clothing.
- Wear a weatherproof outer layer to stay dry.
- Wear mittens, rather than gloves, when possible.
- Shield your face against any strong gusts of wind.
- Avoid smoking cigarettes and drinking caffeine as these can prevent your blood from circulation enough to keep your body warm.

Hypothermia

- Seek immediate medical care for any person who has been exposed to cold air or water and is shivering, appears disoriented, shows a lack of coordination, has cold and pale skin, appears tired, and is slurring.
- Keep the person warm and dry, preferably indoors or at least out of the wind, until help arrives.

Prevention:

- Wear loose fitting, layered, lightweight clothing and outer clothing made of tightly woven, water-repellent material.
- Avoid activities that may cause overexertion and sweating.
- Stay as dry as possible. Pay attention to places where snow can enter, such as in loose mittens or snow boots.



**SECTION #41**

**DRUG & ALCOHOL PROGRAM**

## **Policy Statement**

The parties recognize the problems created by drug and alcohol abuse and the need to develop prevention and treatment programs. PLIBRICO COMPANY, and the signatory unions have a commitment to protect people and property, and to provide a safe working environment. The purpose of the following program is to establish and maintain a drug free, alcohol free, safe, healthy work environment for all of its employees.

## **Definitions**

**Company Premises** - all property, facilities, land, buildings, structures, automobiles, trucks and other vehicles owned, leased, or used by the company. Construction job sites for which the company has responsibility are included.

**Prohibited Items and Substances** - Prohibited substances include illegal drugs (including controlled substances, look alike drugs and designer drugs), alcoholic beverages, and drug paraphernalia in the possession of or being used by an employee on the job.

**Employee** - Individuals, who perform work for PLIBRICO COMPANY, including management, supervision, engineering, tradesmen, and clerical personnel.

**Accident** - Any event resulting in injury to a person or property to which an employee, or contractor/contractor's employee, contributed as a direct or indirect cause.

**Incident** - An event which has all the attributes of an accident, except that no harm was caused to person or property.

**Reasonable Cause** - Reasonable cause shall be defined as tardiness, excessive absenteeism, and erratic behavior such as noticeable imbalance, incoherence, and disorientation.

## **Confidentiality**

All parties to this policy and program have only the interests of employees in mind, therefore, we encourage any employee with a substance abuse problem to come forward and voluntarily accept our assistance in dealing with the illness. An employee assistance program will provide guidance and direction for you during your recovery period. If you volunteer for help, the company will make every reasonable effort to return you to work upon your recovery. The company will also take action to assure that your illness is handled in a confidential manner.

All actions taken under this policy and program will be confidential and disclosed only to those with a "need to know."

When a test is required, the specimen will be identified by a code number, not by name, to insure confidentiality of the donor. Each specimen container will be properly labeled and made tamper proof. The donor must witness this procedure.

Unless an initial positive result is confirmed as positive, it shall be deemed negative and reported by the laboratory as such.

The handling and transportation of each specimen will be properly documented through the strict chain of custody procedures.

## **Rules, Disciplinary Actions - Grievance Procedures**

### A. Rules

All employees must report to work in a physical condition that will enable them to perform their jobs in a safe and efficient manner. Employees shall not:

1. Use, possess, dispense or receive prohibited substances on or at the job site;
- or
2. Report to work with any measurable amount of prohibited substances in their system.

### B. Discipline

When the company has reasonable cause to believe an employee is under the influence of a prohibited substance, for reasons of safety, the employee may be suspended until the results are available. If no test results are received after three working days, the employee, if available, shall be returned to work with back pay. If the test results prove negative, the employee shall be reinstated with back pay. In all other cases:

1. Applicants testing positive for drug use will not be hired.
2. Employees who have not voluntarily come forward, and who test positive for a drug use, will be terminated.
3. Employees who refuse to cooperate with testing procedures will be terminated.
4. Employees found in possession of drugs or drug paraphernalia will be terminated.
5. Employees found selling or distributing drugs will be terminated.
6. Employees found under the influence of alcohol while on duty, or while operating a company vehicle, will be subject to termination.

### C. Prescription Drugs

Employees using a prescribed medication, which may impair the performance of job duties, either mental or motor functions, must immediately inform their supervisor of such prescription drug use. For the safety of all employees, the company will consult with you and your physical to determine if a re-assignment of duties is necessary.

The company will attempt to accommodate your needs by making an appropriate re-assignment. However, if a re-assignment is not possible, you will be placed on temporary medical leave until released as fit for duty by the prescribing physician.

### D. Grievances

All aspects of this policy and program shall be subject to the grievance procedure of the applicable collective bargaining agreements.

## **Drug and Alcohol Testing**

The parties to this policy and program agree that under certain circumstances, the company will find it necessary to conduct drug and alcohol testing. While "random" testing is not necessary for the proper operation of this policy and program, it may be necessary to require testing under the following conditions:

1. A **pre-employment** drug and alcohol test may be administered to all applicants for employment.
2. A test may be administered in the event a supervisor has a **reasonable cause** to believe that the employee has reported to work under the influence, or is or has been under the influence while on the job; or has violated this drug policy. During the process of establishing reasonable cause for testing, the employee has the right to request his on-site representative to be present;
3. Testing may be required if an employee is involved in a workplace **accident/incident** or if there is a workplace injury;
4. Testing may be required as a part of a follow-up to counseling or rehabilitation for substance abuse, for up to a 1-year period;
5. Employees may also be tested on a voluntary basis.

Each employee will be required to sign a consent and chain of custody form, assuring proper documentation and accuracy. If an employee refuses to sign a consent form authorizing the test, ongoing employment by the company will be terminated.

Drug testing will be conducted by an independent accredited laboratory (designated by the labor union) and may consist of either blood or urine tests, or both, as required. Blood tests will be utilized for post accident investigation only.

The company will bear the costs of all testing procedures.

## **Rehabilitation and Employee Assistance Program**

Employees are encouraged to seek help for a drug or alcohol problem before it deteriorates into a disciplinary matter. If an employee voluntarily notifies supervision that he or she may have a substance abuse problem, the company will assist in locating a suitable employee assistance program for treatment, and will counsel the employee regarding medical benefits (full time employees) available under the company or union health and welfare/insurance program.

If treatment necessitates time away from work, the company shall provide for the employee an unpaid leave of absence for purposes of participation in an agreed upon treatment program. An employee who successfully completes a rehabilitation program shall be reinstated to his/her former employment status, if work for which he/she is qualified exists.

Employees returning to work after successfully completing the rehabilitation program will be subject to drug tests without prior notice for a period of one year. A positive test will then result in disciplinary action as previously outlined in this policy and program.

**SECTION #42**

**HIGH TEMPATURE GUIDELINES**



## High Temperature Work Area Guidelines

### **Purpose:**

By the nature of Plibrico work assignments, building and repairing all sorts of high temperature vessels, boilers, furnaces, and ovens that encompass all industries, where heat protection is required, it is inevitable that our employees will be exposed to high temperatures and heat during their work duties. These Guidelines are set in place to minimize these hazards, and to aid in the control of these hazardous conditions. Although these Guideline are not meant to control or address all problems associated with high temperatures and heat, in all working areas, on every project, they will certainly be an effective tool to assist our Superintendents / Supervisors while conducting work / repairs in these areas. These Guideline are also meant to be flexible to allow changes from varying jobsite and projects, and can be amended by the Superintendent / Supervisor if the changes are in support of greater safety for our employees.

### **Responsibilities:**

The Area Office Mgr., Superintendent and Supervisor have the responsibility to comply and enforce the Guidelines of this policy. The Superintendent / Supervisor must know the signs and symptoms of heat related illness, and must be familiar with the treatment in the event of an emergency.

### **Procedures:**

All high heat areas that require, or has the potential to require employees to enter must be first inspected by the Superintendent / Supervisor.

1. All required safety precautions such as LO/TO, atmospheric testing and confined space requirements must be first satisfied prior to examining / entering.
2. If excessive heat is present, a reading shall be obtained by instrumentation.
3. An ambient temperature of 151 degrees f. or higher shall not be entered regardless of controls.
4. Also, ambient temperatures and surfaces temperatures are different, and consideration must be given in the event of mechanical ventilation failure where temperatures might suddenly spike.
5. Also, consideration of the access and egress of the space must be entertained in the event of a heat emergency. Evacuation must be easily achieved by either self evacuation or assisted rescue in the event of a heat related emergency. In the event of a difficult entry vessel or furnace, the internal temperature must be within a safe range to allow time for escape / rescue.

6. **Temperatures of 130 – 150 degrees f.** All Crew Members questioned about being physically fit for the task as describes in each of their job descriptions. Volunteers may be requested for initial entry into the High Heat Atmosphere.

- Tool Box Safety Talk at the beginning of the task covering heat related illness and symptoms.
- An observer must be present, preferably outside the space with authority to order evacuation at anytime.
- A plan must be in place to assist in the escape / rescues of employees.
- An emergency responder on call or at the location to provide first aid.
- Cooling vest must be considered, along with other cooling PPE commercially available.
- Employee job rotation shall be put into effect starting from 5–15 minute intervals.
- Water for drinking with an electrolyte solution to provide hydration.
- Designated rest Location outside the work area, away from the heat with suitable fans for personal cooling.
- Sufficient amounts of water for cold compress or drench-cooling (5 gal. min.) must be provided at the rest area to rapidly cool employees in the event of an emergency.
- Employees questioned during rest periods about their condition to determine re-entry into the high heat environment.

7. **Temperatures of 105 – 130 degrees f.:** All Crew Members questioned about being physically fit for the task as describes in each of their job descriptions. Volunteers may be requested for initial entry into the High Heat Atmosphere.

- Tool Box Safety Talk at the beginning of the task covering heat related illness and symptoms.
- An observer may be present, preferably outside the space with authority to order evacuation at anytime.
- A plan must be in place to assist in the escape / rescues of employees.
- An emergency responder on call or at the location to provide first aid.
- Cooling vest may be considered, along with other cooling PPE commercially available.
- Employee job rotation may be put into effect starting from 10–20 minute intervals.
- Designate a rest Location outside the work area, away from the heat with suitable fans for personal cooling.
- Sufficient amounts of water for cold compress or drench-cooling (5 gal. min.) must be provided at the rest area to rapidly cool employees in the event of an emergency.
- Employees questioned during rest periods about their condition to determine re-entry into the high heat environment.

8. **Temperatures of 99 - 104 degrees f.** All Crew Members questioned about being physically fit for the task as describes in each of their job descriptions.

- Tool Box Safety Talk at the beginning of the task covering heat related illness and symptoms.
- An observer may be present with authority to order evacuation at anytime.
- A plan may be set in place to assist in the escape / rescues of employees if conditions dictate.
- Employee job rotation may be put into effect if conditions dictate.
- Water for drinking with an electrolyte solution to provide hydration.
- Suitable fans stationed at outside rest locations.
- Employees questioned during rest periods about their condition to determine re-entry into the high heat environment.



**SECTION #43**  
**MACHINE GUARDING**



## **General Machine Guarding Requirements for Machine**

**Regulatory Statutes:** OSHA 29 CFR 1910.212 - 244

### **Purpose:**

The purpose of this safety policy and procedure is to establish requirements for the safety of Plibrico employees while working with hazardous moving parts.

### **Scope and Applicability:**

A wide variety of mechanical motions and actions on machines may present hazards to Plibrico employees. These can include movement of rotating members, reciprocating arms, moving belts, meshing gears, cutting teeth, and any part that may impact or shear.

This safety policy and procedure provide guidelines for safeguarding and recognizing mechanical hazards due to dangerous moving parts. It includes provisions for training, discussion on where these hazards occur, machine-guarding requirements, machinery maintenance and repair requirements, labels, signs, and marking requirements for machines with hazardous moving parts.

### **Responsibilities:**

It is the responsibility of each Manager, Supervisor, and Employee to ensure implementation of Plibrico safety policy and procedure on Machine Guarding.

Managers and Supervisors are to ensure compliance with this safety policy. Supervisors will ensure that all affected employees are trained in the safe operation of all machines, which will be used in the duty of their job.

Employees shall immediately inform their Supervisor if any guard or shield is damaged or becomes inoperable. The employee shall not operate any machines, which the guard is missing or damaged. The employee shall not tamper or remove any guard used to protect the machines operator under no circumstances.

### **Safety Policy and Procedures:**

This safety policy and procedure also details the areas of responsibility for managers / supervisors, and employees. This policy also affects any employee who is exposed to mechanical hazards due to a machine's moving parts including machine operators and maintenance and repair personnel.

This safety policy and procedure includes but is not limited to the following equipment used at Plibrico.

- Refractory mixing equipment
- Refractory extruding equipment
- Concrete / brick saws
- Refractory bagging / boxing equipment
- Crushing and sizing equipment
- Air compressors
- Refractory Pumps
- Woodworking machines such as circular saws, etc.
- Lawnmowers
- Conveyors
- Metal working machines
- Abrasive wheel grinders
- Pulleys
- Sprockets
- Chains
- Fan belts
- Flywheel
- Hand and portable power tools

### **Policy:**

It is the policy of Plibrico Company, LLC to provide a place of employment free from recognized hazards that cause or are likely to cause death or serious physical harm to employees or the public. Therefore, any machine part, function, or process that may cause injury must be guarded. When mechanical hazards exist that cannot be eliminated, then engineering practices, administrative practices, safe work practices, personal protective (PPE), and proper training regarding machine guarding will be implemented. These measures will be implemented to minimize those hazards to ensure safety of employees and the public.

## **Definitions:**

### **Abrasive Wheels**

A bench grinder or hand-held grinder wheel consisting of various particles bonded together and used for grinding objects to a particular shape or to remove sharp edges.

### **Guard**

An enclosed designed to protect employees from rotating or moving mechanical parts.

### **Kickback Device**

Any device that protects the operator from equipment throwing the work back towards the operator.

### **Portable**

Hand-held operated.

### **Ring Test**

The use of a non-metallic object to tap a grinding wheel a 45 degrees intervals. If the wheel exhibits a dead sound, the wheel is unable to be use.

### **Shield**

An enclosed or barrier designed to protect employees from processes involved the possibility of disintegrating machine parts or parts being ground upon, pressed, or struck.

## **General Provisions:**

### **Training**

Employees who operate machines with hazards due to moving parts shall be trained on how to use the machine guards and why the guards are in place. Employee training should include the following instructions and hands-on training. The employee shall be trained upon initial assignment or when any new guards are put in place.

- Description and identification of the hazards associated with the machine
- How the guards provide protection, and the hazard for which they are intended.
- Precautions to take when machine is unguarded, during maintenance and repair.
- What to do, and who to contact if a guard is missing or damaged / defective.
- Isolation of potential energy sources through Lock-out / tag-out

### **Recognizing where hazards occur**

Dangerous moving parts on machines presents hazards that need guarding. The three basic areas that require machine guarding are:

1. Point of operation

*Where work is performed on the material, such as cutting, shaping, boring, or forming from stock.*

2. Power of transmission apparatus

*Are components of the mechanical system which transmit energy to the part of the machine performing the work. These include flywheels, pulleys, belts, connecting rods, couplings, cams, spindles, chains, cranks and gears.*

3. Other moving parts

*Other moving parts include all parts of the machine, which move while the machine is in operation. These can be reciprocating, rotating and transverse moving parts.*

### **Types of Guards:**

1. Fixed Guards

*Is a permanent part of the machine and is not dependent upon moving parts to perform its intended function.*

2. Interlocked Guards

*Machines operation stops automatically when guards are opened.*

3. Adjustable

*Adjustable guards allow flexibility in accommodating various sizes of stock. Also self-adjusting such as in different types of powered handsaws.*

### **Machine Guarding Requirements:**

Machine guards must protect employees from mechanical hazards. The machine guards must:

- Prevent contact
- Be secured to the machine
- Protect from falling objects
- Not create new hazards
- Not interfere with job performance
- Allow safe maintenance and lubrication

### **Machinery Maintenance and repair**

Machine and machine guarding should be designed to permit adjustment, maintenance and lubrication without the removal of the guard.

If the guard must be removed, the guard must be installed after the completion of the repairs.

**SECTION #44**  
**HAND AND POWER TOOLS**

## **HAND AND POWER TOOLS**

### **Policy**

This policy shall ensure that all hand tools are used properly, safely and in accordance with all manufacturer's guidelines. All Hand and Power Tools shall be maintained in a safe operating condition at all times.

### **Authority and Responsibility**

Supervisors are responsible for:

1. Providing safety awareness training.
2. Inspecting areas to ensure that this policy is being adhered to
3. Anticipating all work hazards;
4. Ensuring that all safeguards are utilized;
5. Replacing all damaged tools;
6. Ensuring that tools are being properly maintained by instituting an inspection program;
7. Ensuring employees are trained to use tools properly and in accordance with the manufacturer's instructions;
8. Taking the appropriate corrective action for employees not complying with this policy.

Employees are responsible for:

1. Anticipating all work hazards;
2. Ensuring that all safeguards are utilized;
3. Conducting routine inspections to ensure that tools are properly maintained;
4. Reporting to their supervisor any tool that needs to be replaced;
5. Following all safety guidelines for the use of hand/power tools and according to manufacturer's instructions;
6. Participating in training

### **General Safety Precautions**

Employees who use hand and power tools and who are exposed to the hazards of falling, flying, abrasive and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases must be provided with the appropriate equipment needed, including Personal Protective Equipment, to protect them from the hazard

All hazards involved in the use of power tools can be prevented by following some basic safety rules:

- Keep all tools in good condition with regular maintenance;
- Use the right tool for the job;
- Examine each tool for damage before use;
- Operate according to the manufacturer's instructions;
- Utilize the proper protective equipment.
- Participating in safety training.
- Any Tool found defective shall be removed from service immediately and tagged "out of service"  
If repairs cannot be conducted, the tool shall be removed permanently from service.

## **Hand Tools**

Hand tools are non-powered. They include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and improper maintenance.

Some examples include the following:

- Using a screwdriver as a chisel may cause the tip of the screwdriver to break and fly, hitting the user or other employees;
- If a wooden handle on a tool such as a hammer or an axe is loose, splintered, or cracked, the head of the tool may fly off and strike the user or another worker;
- A wrench shall not be used if its jaws are sprung, because it might slip;
- Impact tools such as chisels and wedges are unsafe if they have mushroomed heads. The heads might shatter on impact, sending sharp fragments flying;
- Employers shall caution employees that saw blades, knives or other tools be directed away from aisle areas and other employees working in close proximity. Knives and scissors shall be sharp. Dull tools can be more hazardous than sharp ones;
- Appropriate personal protective equipment (e.g., safety goggles, gloves) shall be worn due to hazards that may be encountered while using portable power tools and hand tools;
- Safety requires that floors be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools; and
- Around flammable substances, sparks produced by iron and steel hand tools can be a dangerous ignition source. Where this hazard exists, spark-resistant tools made from brass, plastic, aluminum or wood shall be used.

## **Power Tools**

Power tools can be hazardous when improperly used. There are several types of power tools, based on the power source they use: electric, pneumatic, liquid fuel, hydraulic and powder-actuated.

The following general precautions shall be observed by power tool users:

- Never carry a tool by the cord or hose;
- Never remove prongs from extension cords;
- Never stand in or near water when using tools;
- Never “yank” the cord or the hose to disconnect it from the receptacle;
- Keep cords and hoses away from heat, oil and sharp edges;
- Replace all frayed and/or damaged extension cords. Do not try to tape cords;
- Disconnect tools when not in use, before servicing and when changing accessories such as blades, bits and cutters;
- All observers shall be kept at a safe distance away from the work area;
- Secure work with clamps or a vise, freeing both hands to operate the tool;
- Avoid accidental starting. The worker shall not hold a finger on the switch button while carrying a plugged-in tool;
- Tools shall be maintained with care. They shall be kept sharp and clean for the best performance. Follow instructions in the user's manual for maintenance, lubricating and changing accessories;
- Maintain good footing and balance;
- The proper apparel shall be worn. Loose fitting clothes, ties or jewelry such as bracelets, watches or rings, which can become caught in moving parts; and
- All portable electric tools that are damaged shall be removed from use and tagged "Do Not Use". This shall be done by supervisors and/or employees.



## **Guards**

Hazardous moving parts of a power tool need to be safeguarded. For example, belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts of equipment shall be guarded if such parts are exposed to contact by employees.

Guards, as necessary, shall be provided to protect the operator and others from the following:

- Point of operation;
- Nip points;
- Rotating parts;
- Flying chips; and Sparks.

Safety guards shall never be removed when a tool is being used. For example, portable circular saws shall be equipped with guards. An upper guard shall cover the entire blade of the saw. A retractable lower guard shall cover the teeth of the saw, except when it makes contact with the work material. The lower guard shall automatically return to the covering position when the tool is withdrawn from the work. All guards shall comply with ANSI B15.1. standards.

## **Safety Switches**

The following hand-held power tools shall be equipped with a momentary contact "on-off" control switch: drills, tappers, fastener drivers, horizontal, vertical and angle grinders with wheels larger than two inches in diameter, disc and belt sanders, reciprocating saws, saber saws and other similar tools.

These tools also may be equipped with a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.

The following hand-held powered tools may be equipped with only a positive "on-off" control switch: platen sanders, disc sanders with discs two inches or less in diameter; grinders with wheels two inches or less in diameter; routers, planers, laminate trimmers, nibblers, shears, scroll saws and jigsaws with blade shanks quarter inch wide or less.

Other hand-held powered tools such as circular saws having a blade diameter greater than two inches, chain saws and percussion tools without positive accessory holding means shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

## **Electric Tools**

Employees using electric tools shall be aware of several dangers with the most serious being the possibility of electrocution.

Among the chief hazards of electric-powered, tools are burns and slight shocks, which can lead to injuries or even heart failure.

To protect the user from shock, tools shall either have a three-wire cord with ground and be grounded, be double insulated or be powered by a low-voltage isolation transformer. Anytime an adapter is used to accommodate a two-hole receptacle, the adapter wire shall be attached to a known ground. The third prong shall never be removed from the plug.

Tools shall be shut down before cleaning, repairing or oiling. Disconnect or use Lockout/Tagout Procedures. These general practices shall be followed when using electric tools:

- Electric tools shall be operated within their design limitations;
- Gloves and safety footwear are recommended during use of electric tools;
- When not in use, tools shall be stored in a dry place;
- Electric tools shall not be used in damp or wet locations; and
- Work areas shall be well lit, even if this means the operators has to augment the work surface illumination by other appropriate means.

### **Powered Abrasive Wheel Tools**

Powered abrasive grinding, cutting, polishing and wire buffing wheels create special safety problems because they may throw off flying fragments.

Before an abrasive wheel is mounted, it shall be inspected closely and sound- or ring-tested to ensure that it is free from cracks or defects. To test, wheels shall be tapped gently with a light non-metallic instrument. If the wheel sounds cracked or dead, they could fly apart in operation and shall not be used.

A sound and undamaged wheel will give a clear metallic tone or "ring." To prevent the wheel from cracking, the user shall be sure it fits freely on the spindle. The spindle nut shall be tightened enough to hold the wheel in place, without distorting the flange. Follow the manufacturer's recommendations. Care shall be taken to ensure that the spindle wheel does not exceed the abrasive wheel specifications.

Due to the possibility of a wheel disintegrating (exploding) during start-up, the employee shall never stand directly in front of the wheel as it accelerates to full operating speed.

Portable grinding tools need to be equipped with safety guards to protect workers not only from the moving wheel surface, but also from flying fragments in case of breakage.

In addition, when using a power grinder:

- Always use eye protection;
- Turn off the power when not in use; and
- Never clamp a hand-held grinder in a vise.

### **Pneumatic Tools**

Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders.

There are several dangers encountered in the use of pneumatic tools. The main one is the danger of getting hit by one of the tool's attachments or by some kind of fastener the worker is using with the tool. Eye protection is required and face protection is recommended for employees working with pneumatic tools.

Noise is another hazard. Working with noisy tools (e.g. jackhammers) requires proper, effective use of hearing protection.

When using pneumatic tools, employees shall ensure they are fastened securely to the hose to prevent them from becoming disconnected. A short wire or positive locking device attaching the air hose to the tool will serve as an added safeguard.

A safety clip or retainer shall be installed to prevent attachments, such as chisels on a chipping hammer, from being unintentionally shot from the barrel.

Screens shall be set up to protect nearby workers from being struck by flying fragments around chippers, riveting guns, staplers or air drills.

Compressed air guns shall never be pointed toward anyone. Users shall never "dead-end" it against themselves or anyone else.

### **Powder-Actuated Tools**

Powder-actuated tools operate like a loaded gun and shall be treated with the same respect and precautions. The use of powder-actuated tools is prohibited until approved by Safety and Environmental Affairs.

Safety precautions to remember include the following:

- These tools shall not be used in an explosive or flammable atmosphere;
- Before using the tool, the worker shall inspect it to determine that it is clean, all moving parts operate freely, and the barrel is free from obstructions;
- Employees shall not modify tools;
- The tool shall never be pointed at anybody;
- The tool shall not be loaded unless it is to be used immediately. A loaded tool shall not be left unattended, especially where it could be available to unauthorized persons;
- Hands shall be kept clear of the barrel end;
- To prevent the tool from firing accidentally, two separate motions are required for firing: one to bring the tool into position and another to pull the trigger;
- The tools shall not be able to operate until they are pressed against the work surface with a force of at least five pounds greater than the total weight of the tool;
- If a powder-actuated tool misfires, the employee shall wait at least 30 seconds, then try firing it again;
- If it still will not fire, the user shall wait another 30 seconds so that the faulty cartridge is less likely to explode then carefully remove the load. The bad cartridge shall be put in water;
- Suitable eye and face protection are essential when using a powder-actuated tool;
- The muzzle end of the tool shall have a protective shield or guard centered perpendicularly on the barrel to confine any flying fragments or particles that might otherwise create a hazard when the tool is fired. The tool shall be designed so that it will not fire unless it has this kind of safety device;
- All powder-actuated tools shall be designed for varying powder charges so that the user can select a powder level necessary to do the work without excessive force; and
- If the tool develops a defect during use, it shall be tagged and taken out of service immediately until it is properly repaired.

### **Hydraulic Power Tools**

The fluid used in hydraulic power tools shall be an approved fire-resistant fluid and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed. The manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters and other fittings shall not be exceeded.

**SECTION #45**

**COMPRESSES GAS CYLINDERS SAFETY**

# **COMPRESSED GAS CYLINDERS HANDLING POLICY**

## **PURPOSE**

The purpose of this policy is to establish guidelines which ensure that proper storage, handling, and use of compressed gas cylinders are practiced and maintained at Plibrico or Customers jobsite . This policy will encompass all compressed gas cylinders to include, oxygen, liquid oxygen, nitrogen, argon, helium, carbon dioxide, liquid carbon dioxide, hydrogen, acetylene, Linde FG-2, ethylene oxide, sterilant mixtures, liquefied petroleum gas, (L.P. gas) ammonia, and specialty gases.

## **AUTHORITY & REFERENCE**

Occupational Safety and Health (OSHA)

- 29 CFR 1910.101 & .252 (General requirements)
- .102 (Acetylene)
- .103 (Hydrogen) .
- 104 (Oxygen)
- .105 (Nitrous Oxide)

Compressed Gas Association (CGA) Safety Publications

## **APPLICATION**

This policy applies to the storage, the handling and the use of compress gas cylinders.

## **RESPONSIBILITY FOR COMPLIANCE**

The Supervisor will ensure that compressed gas cylinders are properly stored and comply with the required guidelines in this policy.

The Supervisor will ensure that employees who use compressed gas cylinders are properly trained and understand safe work practices required by the guidelines in this policy.

The Supervisor will ensure that employees using compressed gas cylinders are provided the proper personal protective equipment (PPE) when needed.

The Supervisor shall inspect all compressed gas cylinders twice a year to ensure that they are working properly and not damaged.

The Supervisor will ensure that all compressed gas cylinders are properly labeled and have current Material Safety Data Sheet (MSDS) for each cylinder in accordance with the Hazard Communication Standard and the State Employees Write To-Know-Law.

All employees using compressed gas cylinders must follow all safe work practices and use proper precautions required by the guidelines in this policy

## **DEFINITION OF COMPRESSED GAS CYLINDER**

A compressed gas cylinder is any cylinder specifically designed to contain gases under pressure of greater than one atmosphere, and having the capability of dispensing the gas by the means of a control valve mechanism to assure the safe and proper use of the gas at a point of operation.

## **TYPES OF GASES COMPRESSED INTO CYLINDERS**

- A. Oxygen is a colorless, odorless, and tasteless gas. Oxygen will not burn, but it supports and can greatly accelerate combustion.
- B. Liquid: Oxygen, Carbon Dioxide, Hydrogen  
Gases in liquid form are extremely cold and accidental contact with eyes or skin may cause severe frostbite.
- C. Nitrogen, Argon, Helium and Carbon Dioxide  
Nitrogen, Argon, Helium, and Carbon Dioxide are inert, colorless, odorless and tasteless gases. These four gases can cause asphyxiation and death in confined, poorly ventilated areas.
- D. Hydrogen is a colorless, odorless and tasteless gas. Hydrogen is a flammable gas. A mixture of hydrogen with oxygen or air in a confined area will explode if ignited by spark, flame or other source of ignition. Hydrogen flames are virtually invisible.
- E. Acetylene and Linde FG-2  
Acetylene is a colorless gas with a distinctive garlic-like odor. Linde FG-2 is a colorless gas with a sweet ether-like odor. Acetylene and Linde FG-2 (propylene) are flammable gases. A mixture of acetylene or Linde FG-2 with oxygen or air in a confined area will explode when brought in contact with a flame or other source of ignition.
- F. Ethylene Oxide is a colorless, flammable irritating liquid and gas. It liquefies at 7 p.s.i.g. at 70 degrees F. and is liquid in the cylinder or drum. Ethylene oxide is flammable. Ethylene oxide vapor will explode when exposed to common ignitors. Ethylene oxide is toxic. The liquid will cause severe eye and skin injury and the gas will cause eye irritation. Ethylene oxide vapors should not be inhaled. Over exposure by inhalation may result in temporary paralysis and pulmonary irritation.

- G. Specialty Gases are special purpose liquids and gases and gases and multi-component mixtures in any compatible combination. They include atmospheric and chemical gases and volatile liquids. Some specialty gases have flammable, toxic, corrosive, oxidizing, and other hazardous properties which can cause serious or fatal injury and property damage if proper safety precautions are not followed. Some toxic specialty gases can result in fatal injuries in very low concentrations. Other specialty gases can cause serious eye or skin injury upon bodily contact. Some specialty gases are flammable and can result in fire or explosions.
- H. Ammonia is a colorless, pungent gas, NH<sub>3</sub> composed of nitrogen and hydrogen. Effects of overexposure: Eyes - can cause severe irritation, redness, tearing, blurred vision. Skin vapors can cause irritation of nasal and respiratory passages. Swallowing - results in severe damage to mucous membranes.

### **STORAGE OF COMPRESSED GAS CYLINDERS**

- A. Cylinders stored inside of buildings shall be stored in well protected, well ventilated, dry location at least twenty (20) feet from highly combustible materials such as oil or excelsior. Area must provide for signage to identify full and empty cylinders.
- B. Cylinders shall be stored only in assigned areas and secured to prevent tipping.
- C. Assigned storage spaces shall be located where cylinders will not be knocked over or damaged by passing or falling objects or subject to tampering by unauthorized persons.
- D. Empty cylinders shall have their valves closed.
- E. Acetylene cylinders shall be stored valve end up.
- F. Valve protection caps (where the cylinder is designed to accept a cap) shall always be in place, hand tight, except when cylinders are in use or connected for use. When caps cannot be removed by hand, the cylinder must be placed out of service and returned to the vendor for repair.
- G. Fuel gas cylinder storage (LP gas) inside a building, except for those cylinders in actual use or attached ready for use, shall be limited to a total gas capacity of 2,000 cubic feet or 300 pounds of liquefied petroleum gas.
- H. Cylinders shall be kept away from radiators and other sources of heat.
- I. Full cylinders of oxygen and fuel gas should be used in rotation as received from the supplier.

## **SAFETY PRECAUTIONS**

- A. Oxygen, nitrogen, argon, helium, carbon dioxide, hydrogen, acetylene, Linde FG-2, ethylene oxide, sterilant mixtures and specialty gases, have properties that can cause serious accidents, injuries, and even death if proper precautions and safety practices are not followed. Therefore, be certain to use the applicable safety precautions described in this procedure during handling and use of these gases. Gas equipment manufacturers-operating instructions are to be followed exactly.
1. Read the label on all cylinders before use to identify the cylinder contents. If the label is not legible or is missing, do not assume that the cylinder contains a particular gas, but return the cylinder to the gas supplier. Observe all safety precautions set forth on the cylinder label.
  2. Secure all cylinders to suitable cylinder carts, benches, walls, posts or racks so that they cannot be knocked or pulled over accidentally.
  3. Cylinders containing liquid oxygen, nitrogen, argon, helium, or hydrogen must be kept in an upright position and secured in that position to prevent them from being knocked over. Cylinders must not be tipped over or dropped and must be moved with a cylinder hand truck.
- B. The proper personal protective equipment (PPE), particularly for liquid oxygen, liquid carbon dioxide and liquid hydrogen, shall be worn by employees who handle and use compressed gas cylinders. Persons preparing cylinders for use shall wear gloves constructed of impervious materials, rubber aprons, safety glasses with sideshields and if deemed necessary, a complete face shield.
- C. **Frostbite** - Liquid gases such as oxygen, hydrogen and carbon dioxide, may cause severe frostbite to the skin or eyes. Do not touch frosted pipes or valves. If accidental exposure to liquid gases occurs, the exposed person shall immediately consult a physician or occupational nurse. If a physician/nurse is not immediately available, warm the areas affected by frostbite with water that is near body temperature and then seek medical attention.
- D. Hoses, gauges and torches must be inspected each time of use for defects. Inspection should include hose condition for leaks and cracks. Gauges must be in working order without damage as well as a good working torch.



## **TRANSPORTATION AND HANDLING OF COMPRESSED GAS CYLINDERS**

### A. Handling - General

1. When transporting cylinders by a crane or derrick, a cradle, boat or suitable platform shall be used. Slings or electric magnets shall not be used for this purpose. Valve protection caps (where cylinder is designed to accept a cap) shall always be in place.
2. Cylinders should be moved by tilting and rolling them on their bottom edges. Dragging and sliding cylinders should be avoided. When cylinders are transported by vehicle, they must be secured in position. Cylinders shall not be dropped or struck or permitted to strike each other violently.
3. Valve protection caps shall not be used for lifting cylinders from one vertical position to another. Bars shall not be used under valves or valve protection caps to pry cylinders loose when frozen to the ground or otherwise fixed; the use of warm (not boiling) water is recommended. Valve protection caps are designed to protect cylinder valves from damage. Before raising cylinders provided with valve protection caps from a horizontal to a vertical position, the cap should be properly in place. The cap should be turned clockwise to insure that the cap is hand tight.
4. A suitable cylinder truck, chain or other steadying device shall be used to keep cylinders from being knocked over while in use.
5. Unless cylinders are secured on a special truck, regulators shall be removed and valve protection caps, when provided for, shall be put in place before cylinders are moved.
6. Cylinders not having fixed hand wheels shall have keys, handles or non adjustable wrenches on valve stems while these cylinders are in service. In multiple cylinder installations, only one key or handle is required for each manifold.
7. Cylinder valves shall be closed before moving cylinders.
8. Cylinder valves shall be closed when work is finished.
9. Valves of empty cylinders shall be closed.
10. Cylinders shall be kept far enough away from welding or cutting operation so that sparks, hot slag or flames will not reach the cylinder. If this not possible, a fire resistant shield shall be provided.

11. Cylinders shall not be placed in an area where they might come in contact with or become part of an electric circuit. Contacts with third rails, trolley wires, etc. shall also be avoided. Cylinders shall be kept away from radiators, piping systems, layout tables, etc. that may be used for grounding electric circuits such as the tapping of an electrode against a cylinder to strike an arc.
12. Cylinders shall never be used as rollers or supports, whether full or empty.
13. The numbers and markings stamped into cylinders shall not be tampered with or changed.
14. Empty cylinders should be marked "Empty" or "MT" segregated from full cylinders and promptly returned to the supplier with valve protection caps in place. All valves shall be closed.
15. No person, other than the gas supplier, shall attempt to mix gases in a cylinder. No one, except the owner of the cylinder or person(s) authorized the owner, shall refill a cylinder.
16. No one shall tamper with or remove cylinder or valve safety devices.

B. Use - Oxygen Cylinders

1. Cylinders shall not be dropped or otherwise roughly handled.
2. Unless connected to a manifold, oxygen from a cylinder shall not be used without first attaching an oxygen regulator to the cylinder valve. Before connecting the regulator to the cylinder valve, the valve shall be opened slightly for an instant and then closed. Note: This action is generally termed "cracking" and is intended to clear the valve of dust or dirt that otherwise might enter the regulator.
3. A hammer or wrench shall not be used to open cylinder valves. If valves cannot be opened by hand, the supplier shall be notified.
4. Cylinder valves shall not be tampered with nor should any attempt be made to repair them. If a problem or potential safety hazard is experienced, the supplier should be called or sent a report promptly indicating the character of the problem/hazard and the cylinder's serial number. The instructions given by the supplier as to the disposition of the cylinder shall be followed.

5. After a regulator is attached, an oxygen cylinder valve should be opened slightly at first so that the regulator cylinder pressure gage hand moves up slowly; then the valve can be opened all the way. If the high pressure is suddenly released, it is liable to damage the regulator pressure gages. Always stand to one side of the regulator (not in front of the glass covered gage faces) when opening the cylinder valve.
6. When the oxygen cylinder is in use, the valve should be opened fully in order to prevent leakage around the valve stem. Complete removal of the stem from a diaphragm type cylinder valve shall be avoided.

C. Use - Fuel. Gas Cylinders

1. Fuel gas cylinders shall be placed with valve end up whenever they are in use. Liquefied gases shall be stored and shipped with the valve end up.
2. Cylinders shall be handled carefully. Rough handling, knocks, or falls are liable to damage the cylinder, valve or safety devices and cause leakage.
3. Before connecting a regulator to cylinder valve, the valve shall be opened slightly and closed immediately. This action is generally termed 'cracking' and is intended to clear the valve of dust or dirt that otherwise might enter the regulator. The valve shall be opened while standing to one side of the outlet; never in front of the cylinder.. Never crack a fuel gas cylinder valve near other welding work or near sparks, flame or other possible sources of ignition.
4. Before a regulator is removed from a cylinder valve, the cylinder valve shall be closed and the gas released from the regulator.
5. Nothing shall be placed on top on an acetylene cylinder when in use which may damage the safety device or interfere with the quick closing of the valve.
6. If the valve on a fuel gas cylinder is opened and there is found to be a leak around the valve stem., the valve should be closed and the gland nut tightened. If this does not stop the leak, the use of the cylinder should be discontinued. The cylinder should be removed to the outdoors, properly tagged and the supplier advised of the problem. In case the fuel gas should leak from the cylinder valve, and cannot be shut off with the valve stem, the cylinder should be removed to the outdoors, properly tagged and the supplier notified. A regulator may be attached to a cylinder valve to temporarily stop a leak through the valve seat.

7. If a leak should develop at a fuse plug or other safety device, the cylinder should be removed to the outdoors well away from any source of ignition. The cylinder valve should be opened slightly and the fuel gas allowed to escape slowly.
8. A warning sign or tag shall be placed near cylinders having leaking safety devices the caution persons not to approach the area with an ignited cigarette or other source of ignition. The supplier shall be promptly notified and the tank returned according to the instructions given by the supplier.
9. Safety devices shall not be tampered with or removed..
10. Fuel gas shall never be used from cylinders through torches or other devices equipped with shut-off valves without reducing the pressure through a suitable regulator attached to the cylinder valve or manifold.
11. The cylinder valve shall always be opened slowly.
12. An acetylene cylinder valve shall not be opened more than 1 and 1/2 turns of the spindle and preferably no more than 3/4's of a turn.
13. Where a special T-wrench is required, the wrench shall be left in position on the stem of the valve while the cylinder is in use so that the fuel gas flow can be quickly turned off in case of emergency. In the case of manifolded or coupled cylinders, at least one wrench shall always be available for immediate use.

## **CYLINDER MARKINGS AND INSPECTION**

- A. Compressed gas cylinders shall be legibly marked for the purpose of identifying the gas content with either the chemical or the trade name of the gas. These markings shall be by means of stenciling, stamping or labeling and shall not be readily removable. Whenever practical, the markings shall be located on the shoulder of the cylinder.
- B. Compressed gas cylinders will be inspected twice per calendar year in accordance with the following guidelines. Any cylinders failing to meet these guidelines will be removed from service.
  1. **Dents** - Dents are deformations caused by the cylinder coming in contact with a blunt object in such a way that the thickness of metal is not normally impaired. Only cylinders that have major dents that do impair the metal wall will be removed form service.

2. **Cuts - gouges and digs** - These are deformations caused by contact with a sharp object in such a way as to cut into or upset the metal of the cylinder, decreasing the wall of thickness at that point. Cylinder that have cuts, gouges and digs that decrease the thickness of the metal wall will be removed from service.
3. **Corrosion and pitting** - Cylinder that have corrosion and pitting in the cylinder involving the loss of wall thickness caused by a corrosive media will be removed from service.
4. **Bulges** - Cylinders which have definite bulges will be removed from service.
5. **Neck** - The cylinder neck will be examined for serious cracks, folds and flows. Neck cracks are determined by testing with a soap solution. Cylinders found to have a serious neck crack will be removed from service.
6. **Foot-Ring and Head-Ring** - Cylinders will be removed from service when the head-ring and/or foot-ring becomes so distorted that they no longer 1) maintain the cylinder in a normal upright position or 2) when the head-ring becomes so distorted it no longer adequately protects the valve and the neck area of the cylinder.

- C. Cylinders valves, couplings, regulators, hoses and other apparatuses shall be kept free from oily or greasy substances.

**NOTE: When there is an asterisk (\*) placed in front of a guideline, then this policy is not required by the Compressed Gas Cylinders Standard or the Compressed Gas Association Guidelines**

**SECTION #46**

**COMPRESSED AIR SAFETY**

## **Compressed Air Policy**

### **General Information**

The intent and purpose of this policy is to work around Compressed Air without injuries involved with the miss use. The following policy will give guidance to allow safe operation of compressed air. Compressed air is normally found in all industrial setting and has many useful purposes such as machine operations or as energy in shops to run tools.

### **Policy**

Compressed air shall be used for its intended use and not used for blowing dust or other substances that has the potential for causing injuries.

Compressed air shall not be used to clean clothing only unless a safety tip is used for protection against air embolism at or below 30 psi.

Or in such a manner where it is a danger to the safety of others as such as horseplay.

Supervisors shall instruct all employees about the correct use of compressed air equipment and power tools along with the hazards of compressed air and equipment.

Machinery that uses compressed air shall have the capability for disconnecting the air supply, bleeding of any stored energy and devices for safe LO/TO.

Appropriate safety eyewear shall be worn by all personnel using compressed air along with any other PPE that might be required by the Supervisor or task

Compressed air shall be shut off when changing tools or when not in use.

Compressed air hoses used to run tools or equipment shall be hung from the walkways to prevent trip hazards.

Compressed air hoses couplings with quick release fittings shall be safety wired or pinned to prevent the unintentional uncoupling.

### **Hazards**

#### **Air blown into the skin.**

When high air pressure is direct toward the skin, it has the capability of entering by force through the protective skin barrier and entering into the blood stream where an “air embolus” can form. An air embolus is an air bubble that enters the blood stream and could be potentially fatal.

#### **Eye injuries from blowing particles.**

High compressed air pressure can blow dust, dirt and other particles with ease. Occasionally these partials enter the eyes and cause irritation to blindness.

High noise levels and damaged hearing

High-pressure compressed air has the capability to damage eardrums and also cause hearing loss due to the high noise levels that are associate with compressed air.

**SECTION #47**  
**GAS HAZARD POLICY**



# **PLIBRICO COMPANY, LLC**

## **GAS HAZARD PROGRAM**

### **Introduction**

Gas Hazard in the workplace can be deadly if not detected and dealt with in a safe manor by Supervision and employees alike. This Gas Hazard Program will ensure jobsite safety while working in a gas environment and will work in conjunction with various other policies of Plibrico such as Respiratory Protection, Confined Space, Hot Work and Emergency Evacuation.

However, jobsites with special processes that expose employees to hazardous gases beyond the Confined Space Entry realm shall be covered under the site specific plan at each facility.

### **Training**

Specific Gas Hazard Awareness Training shall be conducted at least annually for each regular customer, and initially at the start of each new project for different customers (site specific). The training shall be documented with each employee's name, date of training, type of gas hazard. A competent instructor shall provide this training along with all information about the gas, including the SDS to satisfy gas characteristics, health effects, and routes of entry into the body. The training shall also include all safety countermeasures, drills and required PPE as well as first aid procedures and emergency aid stations.

In Permit Required Confined Space areas where gas hazards are present, gas monitors shall be used. The monitor must be designed to detect the hazardous gas type. Training shall be available for each gas monitor operator to be proficient. The gas monitor must be maintained in accordance with the manufactures recommendation for service and calibration and have current testing and calibration. Also daily bump test shall be conducted on the gas monitor to ensure proper operations and alarms are functioning properly.

### **Objectives**

After an employee of Plibrico Company is trained in the following program, they should be able to:

1. Identify hazardous gas
2. Demonstrate knowledge of the hazardous gases.
3. Identify gas hazards within a confined space or special process hazards.
4. Know safety countermeasures such as warning alarms, escape routes.
5. First aid and first aid stations
6. Knowledge of gas monitors

**SECTION #48**  
**WELDING, CUTTING & HOT WORKS**

## **PURPOSE**

This procedure has been prepared as a guide for maintenance, and or equipment repair personnel (including persons who perform cutting and welding), fire watchers, their supervisors (including outside contractors), where cutting and welding is to be performed.

## **SCOPE**

This standard covers provisions to prevent loss of life and property from fire in the use of oxy-fuel gas and electric arc cutting and welding equipment.

## **TRAINING**

Supervisors and all authorized employees that perform welding or cutting shall be trained in this policy to prevent fires and to protect lives and property. The employee with the responsibility of firewatch also shall be trained to recognize fire hazards and the use of fire extinguishers. The training shall also cover emergency procedures and contact information for outside emergency services. Employee in charge of the oxygen or fuel-gas supply equipment, including generators, and oxygen or fuel-gas distribution piping systems shall be instructed and judged competent by their employers for this important work before being left in charge. Rules and instructions covering the operation and maintenance of oxygen or fuel-gas supply equipment including generators, and oxygen or fuel-gas distribution piping systems shall be readily available. Employees designated to operate arc welding equipment shall receive proper training and instructions to be qualified to operate all equipment required to safely perform the task.

All employees assigned to operate or maintain arc welding equipment shall be acquainted with the requirements of this policy and with CFR 1910.252 (a), (b), and (c).

Any defective equipment shall not be used and place out of service by tagging.

## **PROCEDURES**

1. Before any welding or cutting is begun at Plibrico Company
  - a. Establish approved areas for cutting and welding or establish procedures for approval of cutting and welding operations.
  - b. Designate an individual responsible to authorize cutting and welding operations in areas not specifically designed or approved for such processes. The individual shall be aware of the fire hazards involved and shall be familiar with the provisions of this guide.
  - c. Ensure that only approved apparatus, such as torches, manifolds, regulators or pressure reducing valves, and acetylene generators, be used.
  - d. Ensure that cutters or welders and their supervisors are suitably trained in the safe operation of their equipment, and emergency procedures in the event of a fire.
  - e. A Firewatch shall be provided as defined in the section on page 7 – 8, “Conditions that requires Firewatch”

2. Before cutting and/or welding, a "hot works" permit must be obtained from the Project Supervisor. The area shall be inspected by the supervisor responsible for the work and if necessary by Plant Safety personnel to ensure that:
  - a. Cutting and welding equipment is in satisfactory operating condition. Oxygen cylinders shall be stored in an upright secured position 20 feet from any flammable gases or petroleum products.
  - b. All combustible materials in the area have been moved to a safe distance from the work or the combustibles have been properly shielded from ignition sources.
  - c. The supervisor shall ensure that appropriate fire protection and extinguishing equipment are properly located on site as well as first aid supplies.
  - d. The supervisor shall make arrangements for a firewatch to remain on site at least one-half hour after the completion of cutting or welding operations to detect and extinguish possible smoldering fires; The supervisor shall ensure that a copy of the "hot works" permit is located on the job site.

### ***Hot Works Permit***

#### **Prior to issuing a hot works permit, the area will be inspected by the Project Supervisor.**

Before cutting or welding is permitted and at least once per day while the permit is in effect, the area shall be inspected by the Project Supervisor to ensure that it is a fire safe area. This individual shall designate precautions to be followed on the "hot works" permit. This individual shall sign the permit and notify all who is involved that the work is authorized, and shall verify the following:

1. Cutting and welding equipment to be used shall be in satisfactory operating condition.
2. Cutting and welding requires a qualified and experienced employees, no employee shall operate such equipment unless properly trained.
3. If object to be welded, cut or produced sparks cannot be readily be moved, all movable fire hazards shall be removed prior to beginning project. If fire hazards cannot be removed than guarding in the form of welding blankets or other fire proof material shall be used to or reduce the hazards of fire.
4. Where combustible materials such as paper clippings, wood shavings, or textile fibers are on the floor, the floor shall be swept clean for a radius of 35 ft (11 m). Combustible floors (except wood on concrete) shall be kept wet, covered with damp sand, or protected by fire-resistant shields. Where floors have been wet down, personnel operating arc welding or cutting equipment shall be protected from possible electrical shock.
5. All combustibles shall be relocated at least 35 ft (11 m) horizontally from the work site. Where relocation is impractical, combustibles shall be protected with flameproof covers or otherwise shielded with metal or fire-resistant guards or curtains. Edges of covers at the floor shall be tight to prevent sparks from going under them. This precaution is also important at overlaps where several covers are used to protect a large pile.

6. Openings or cracks in walls, floors, or ducts within 35 ft (11 m) of the site shall be tightly covered to prevent the passage of sparks to adjacent areas.
7. Conveyor systems that might carry sparks to distant combustibles shall be protected.
8. Where cutting or welding is done near walls, partitions, ceilings, or roofs of combustible construction, fire-resistant shields or guards shall be provided to prevent ignition. If welding is to be done on a metal wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction or radiation, preferably by relocating combustibles. Where combustibles are not relocated, a fire watch on the opposite side from the work shall be provided. Welding shall not be attempted on a metal partition, wall, ceiling, or roof having a combustible covering, nor on walls or partitions of combustible sandwich-type panel construction.
9. Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by conduction.
10. Fully charged and operable fire extinguishers, appropriate for the type of possible fire, shall be available at the work area. Contractors are responsible to furnish appropriate fire extinguishers during the project.
11. Where welding or cutting is done in close proximity to a sprinkler head, a wet rag shall be laid over the head and then removed at the conclusion of the welding or cutting operation. Special precautions shall be taken to avoid accidental operation of automatic fire detection or suppression systems (e.g., special extinguishing systems).
12. Nearby personnel shall be suitably protected against heat, sparks, slag, etc.
13. The Project Supervisor is responsible to isolate fire detection devices (smoke/heat detectors). Detectors cannot be covered with gloves, tape, plastic, etc. without prior approval from the host Company.
14. All personnel involved in the cutting/welding operations must be familiar with all emergency procedures.
15. If the requirements of this section cannot be followed then welding or cutting shall not be performed safely and shall not be attempted.
16. No welding or cutting shall be done in a Confined Space with gas cylinders or welding machines inside the space. All cutting torches and hoses shall be removed while not in use or turned off, if removable is not feasible. Ventilation shall be carefully monitored.

## **Ventilation**

Adequate ventilation (natural, mechanical, or respirator) must be provided for all welding, cutting, brazing, and related operations. Adequate ventilation depends upon the following factors.

1. Volume and configuration of space in which operations occur.
2. Number and type of operations generating contaminants.
3. Allowable levels of specific toxic or flammable contaminants being generated.
4. Natural airflow (rate and direction) and general atmospheric conditions where work is being done.

5. Location of the welder and other person's breathing zones in relation to the contaminants or sources.

Natural ventilation is acceptable for welding, cutting, and related processes where the necessary precautions have been taken to keep the welder's breathing zone away from the welding or brazing plume.

## Special Ventilation Concerns

Certain materials, sometimes contained in the consumables, base metals, coatings, or atmospheres of welding or cutting operations, have low or very low permissible exposure limits (American Conference of Governmental Industrial Hygienists, Threshold Limit Value 1.0 mg/m<sup>3</sup> or less). Among these materials are:

<input type="checkbox"/> Antimony	<input type="checkbox"/> Chromium	<input type="checkbox"/> Mercury
<input type="checkbox"/> Arsenic	<input type="checkbox"/> Cobalt	<input type="checkbox"/> Nickel
<input type="checkbox"/> Barium	<input type="checkbox"/> Copper	<input type="checkbox"/> Selenium
<input type="checkbox"/> Beryllium	<input type="checkbox"/> Beryllium	<input type="checkbox"/> Silver
<input type="checkbox"/> Cadmium	<input type="checkbox"/> Manganese	<input type="checkbox"/> Vanadium

The material data sheets must be on site available to identify any of the materials listed above that may be present.

Whenever these materials are encountered as designated constituents in welding, brazing, or cutting operations, special ventilation precautions shall be taken to assure the level of contaminants in the atmosphere is below permissible exposure limits or recommendations. If ventilation fails to achieve the desired affect, an approved respirator shall be used to further protect from any harmful fumes, dust or chemicals that may be emitted during cutting or welding process.

All combustible fumes, dust or metals must be safely evacuated from the work area using ventilation and good house keeping to avoid accumulation.

## FIRST AID

First aid shall be available during Hot Work. Please see section #14 for details.

# Appendix A Hot Work Permit

**BEFORE INITIATING HOT WORK, CAN THIS JOB BE AVOIDED?  
IS THERE A SAFER WAY?**

This Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding.

## PART 1 INSTRUCTIONS

1. Firesafety Supervisor:
  - a. Verify precautions listed at right (or do not proceed with the work).
  - b. Complete and retain PART 1

HOT WORK BEING DONE BY:

- Employee
- Contractor \_\_\_\_\_

Date	Job No.
------	---------

Location/Building & Floor

---

Nature of Job

---

Name of Person Doing Hot Work

---

I verify the above location has been examined, the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and permission is authorized for this work.

---

Signed: (Firesafety Supervisor)

---

Permit Expires:	Date	Time	AM PM
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**NOTE EMERGENCY NOTIFICATION ON BACK OF FORM.  
USE AS APPROPRIATE FOR YOUR FACILITY.**

## REQUIRED PRECAUTIONS CHECKLIST

- Available sprinklers, hose streams and extinguishers are in service/operable.
- Hot Work equipment in good repair.
- Requirements within 35 ft. (11m) of work**
- Flammable liquids, dust, lint and oily deposits removed.
- Explosive atmosphere in area eliminated.
- Floors swept clean.
- Combustible floors wet down, covered with damp sand or fire-resistive sheets.
- Remove other combustibles where possible. Otherwise protect with fire-resistive tarpaulins or metal shields.
- All wall and floor openings covered.
- Fire-resistive tarpaulins suspended beneath work.
- Work on walls or ceilings**
- Construction is noncombustible and without combustible covering or insulation.
- Combustibles on other side of walls moved away.
- Work on enclosed equipment**
- Enclosed equipment cleaned of all combustibles.
- Containers purged of flammable liquids/vapors.
- Fire watch/Hot Work area monitoring**
- Fire watch will be provided during and for 30 minutes after work, including any coffee or lunch breaks.
- Fire watch is supplied with suitable extinguishers, charged small hose.
- Fire watch is trained in use of this equipment and in sounding alarm.
- Fire watch may be required for adjoining areas, above, and below.
- Monitor Hot Work area for 4 hours after job is completed.

### Other Precautions Taken

- \_\_\_\_\_
- \_\_\_\_\_

**Appendix B**

**Cuffing, Welding and Brazing Activity Log**

DATE		TIME CONTACTED		CONTACTED BY	
LOCATION OF WORK		TIME WORK STARTED		TIME WORK ENDED	
DISPATCHER NOTIFICATIONS					
NOTIFICATION		TIME		NOTIFIED BY	
Dispatch Supervisor					
Design & Construction or Building Services					
AREA PATROLS					
TIME	OFFICER	TIME	OFFICER	TIME	OFFICER
00:00		08:00		16:00	
01:00		09:00		17:00	
02:00		10:00		18:00	
03:00		11:00		19:00	
04:00		12:00		20:00	
05:00		13:00		21:00	
06:00		14:00		22:00	
07:00		15:00		23:00	

Safety Coordinator Review:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Fire Watch:**

The fire watch is an individual posted in specific circumstances, as described above. The function of the fire watch is to observe the hot work and monitor conditions to ensure that a fire or explosion does not occur as a result of the work performed. The fire watch is authorized to stop any unsafe operation or activity. Specific duties and responsibilities include:

- Watch for fires, smoldering material or other signs of combustion.
- Be aware of the inherent hazards of the work site and of the hot work.
- Ensure that safe conditions are maintained during hot work operations and stop the hot work operations if unsafe conditions develop.
- Have fire-extinguishing equipment readily available and be trained in its use.



- Extinguish fires when the fires are obviously within the capacity of the equipment available. If the fire is beyond the capacity of the equipment, sound the alarm immediately.
- Be familiar with the facilities and procedures for sounding an alarm in the event of a fire.
- A fire watch shall be maintained for at least 1/2 hour after completion of hot work operations in order to detect and extinguish smoldering fires.
- More than one fire watch shall be required if combustible materials that could be ignited by the hot work operation cannot be directly observed by a single fire watch (e.g. in adjacent rooms where hot work is done on a common wall).

## **Conditions that require a Fire watch**

Fire watchers shall be required whenever welding or cutting is performed in locations where other than a minor fire might develop, or any of the following conditions exist:

Appreciable combustible material, in building construction or contents, closer than 35 feet (10.7 m) to the point of operation.

Appreciable combustibles are more than 35 feet (10.7 m) away but are easily ignited by sparks.

Wall or floor openings within a 35-foot (10.7 m) radius expose combustible material in adjacent areas including concealed spaces in walls or floors.

Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation.

Fire watchers shall have fire extinguishing equipment readily available and be trained in its use. They shall be familiar with facilities for sounding an alarm in the event of a fire. They shall watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the equipment available, or otherwise sound the alarm. A fire watch shall be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires.

**Authorization.** Before cutting or welding is permitted, the area shall be inspected by the individual responsible for authorizing cutting and welding operations. He shall designate precautions to be followed in granting authorization to proceed preferably in the form of a written permit.

**Floors.** Where combustible materials such as paper clippings, wood shavings, or textile fibers are on the floor, the floor shall be swept clean for a radius of 35 feet (10.7 m). Combustible floors shall be kept wet, covered with damp sand, or protected by fire-resistant shields. Where floors have been wet down, personnel operating arc welding or cutting equipment shall be protected from possible shock.

**Prohibited areas.** Cutting or welding shall not be permitted in the following situations:

In areas not authorized by management.

In sprinklered buildings while such protection is impaired.

In the presence of explosive atmospheres (mixtures of flammable gases, vapors, liquids, or dusts with air), or explosive atmospheres that may develop inside uncleaned or improperly prepared tanks or equipment which have previously contained such materials, or that may develop in areas with an accumulation of combustible dusts.

In areas near the storage of large quantities of exposed, readily ignitable materials such as bulk sulfur, baled paper, or cotton.

Relocation of combustibles. Where practicable, all combustibles shall be relocated at least 35 feet (10.7 m) from the work site. Where relocation is impracticable, combustibles shall be protected with flameproofed covers or otherwise shielded with metal or asbestos guards or curtains.

Ducts. Ducts and conveyor systems that might carry sparks to distant combustibles shall be suitably protected or shut down.

Combustible walls. Where cutting or welding is done near walls, partitions, ceiling or roof of combustible construction, fire-resistant shields or guards shall be provided to prevent ignition.

Noncombustible walls. If welding is to be done on a metal wall, partition, ceiling or roof, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction or radiation, preferably by relocating combustibles. Where combustibles are not relocated, a fire watch on the opposite side from the work shall be provided.

Combustible cover. Welding shall not be attempted on a metal partition, wall, ceiling or roof having a combustible covering nor on walls or partitions of combustible sandwich-type panel construction.

Pipes. Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings or roofs shall not be undertaken if the work is close enough to cause ignition by conduction.

Management. Management shall recognize its responsibility for the safe usage of cutting and welding equipment on its property and:

Based on fire potentials of plant facilities, establish areas for cutting and welding, and establish procedures for cutting and welding, in other areas.

Designate an individual responsible for authorizing cutting and welding operations in areas not specifically designed for such processes.

Insist that cutters or welders and their supervisors are suitably trained in the safe operation of their equipment and the safe use of the process.

## **SECTION # 49**

### **Hydrogen Sulfide (H<sub>2</sub>S) Policy**

# Plibrico Company LLC

## H2S Policy

### **Purpose**

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The purpose of this program is to establish minimum requirements for site specific H2S safety, which will enhance safety in the occupational setting where hydrogen sulfide is present or is recognized as being potentially present.

### **Scope**

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This program sets forth accepted practices for Hydrogen Sulfide (H2S). This program applies to all employees of Plibrico Company, LLC temporary employees, and any contractors working for Plibrico When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Plibrico employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

### **Definitions**

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- Contingency Plan - a site-specific written document that provides an organized plan for alerting and protecting the public within an area of exposure following the accidental release of all potentially hazardous atmospheric concentrations of hydrogen sulfide.
- Exposure Level - permissible exposure level of hydrogen sulfide is 10 PPM for an 8-hour, time weighted average.
- Gas Detector Instrument - An instrument/detector to measure levels of H2S. Instruments may be electronically or manually operated.
- Hydrogen Sulfide (H2S) - is an extremely deadly, toxic gas that in its pure state is colorless and is heavier than air. Additionally:
  - It is the second most toxic gas known to man, ranking behind hydrogen cyanide and ahead of carbon monoxide.
  - It has the odor of rotten eggs at low concentrations.
  - In higher concentrations rapidly paralyze the olfactory nerves (sense of smell).
  - Is soluble in water and is flammable and poses a definite threat of explosion.
- Parts Per Million (PPM) - parts of vapor or gas per million parts of contaminated air by volume.
- Personal H2S Monitor - An electronic instrument worn on the person that is set to alarm at 10 PPM of H2S.
- Possible Locations of H2S – While clients are required to notify Plibrico Company, LLC of known H2S locations the majority of time H2S can be located in drilling operations, recycled drilling mud, water from sour crude wells, blowouts, tank gauging, during routine field maintenance involving hydrocarbons, tank batteries and wells.
- Venting - the process of discharging a material to the atmosphere through a series piping and/or venting devices, to facilitate the proper and safe dispersion of toxic materials and to minimize personnel exposure.

## Key Responsibilities

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### Managers and Supervisors

- Shall ensure all employees who are to be assigned to work at locations where hydrogen sulfide is known to be present, or suspected to be present in any concentration, have been trained in hydrogen sulfide safety.
- To ensure employees have been medically approved to wear respirators and trained on the safe use of respirators, including a respirator fit test in accordance with Plibrico Respiratory Protection Program.
- To ensure employees have been trained and familiar with personal H2S monitors and gas detection instruments.
- To have been provided with the client's safety procedures.
- To ensure the necessary respiratory equipment to perform the work safely is available.
- That each employee has been provided with a copy of this program.

### Employees

- Employees are responsible to comply with this program.

## Procedure

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### Physical Effects of Hydrogen Sulfide

- H2S paralyzes the sense of smell. Do Not Rely On Smell To Detect H2s – Rely Strictly On Instruments Designed To Measure Concentrations Of H2s.
- Hydrogen sulfide is a very dangerous and deadly gas - it is colorless and heavier than air.
- It can accumulate in low places and In small concentrations it has a strong, pungent, somewhat distasteful odor similar to rotten eggs. In higher concentrations, it can deaden the sense of smell (olfactory nerve).
- Exposure to certain concentrations of H2S can cause serious injury or death.

### Toxic Effects of Hydrogen Sulfide

CONCENTRATION	PHYSICAL EFFECT
.01 PPM	Can smell odor.
10 PPM	Obvious and unpleasant odor. Beginning eye irritation. ANSI permissible exposure level for 8 hours (enforced by OSHA).
100 PPM	Immediately Dangerous to life or Health (IDLH) Kills smell in 3-15 minutes; may sting eyes and throat. May cause coughing and drowsiness. Possible delayed death within 48 hours.
200 PPM	Kills smell shortly, stings eyes and throat. Respiratory irritation. Death after 1-2 hours exposure.
500 PPM	Dizziness; breathing ceases in a few minutes. Need prompt rescue breathing (CPR). Self-rescue impossible because of loss of muscle control.
700 PPM	Unconscious quickly; death will result if not rescued promptly. 1000 PPM Unconscious at once, followed by death within minutes.

## **General**

Plibrico Company, LLC shall train the employee on their written confined space program per 29 CFR 1910.146. Customers sites with H2S hazards will be identified and located. This information shall be given to all Crew Members at the Tool Box Talk meeting and personnel shall conduct the repairs in accordance with the H2S policy and any other applicable policy to reduce injury and incidents.

Each person entering a H2S designated location on our customers sites, regardless of the concentration, shall wear a personal H2S monitor that is set to alarm at 10 PPM and shall carry a 5-minute escape pack with them at all times.

When work requires opening any equipment on location that has the potential of releasing concentrations of H2S at 100 PPM or higher, two or more H2S trained persons shall be present and follow these procedures prior to and during the opening of the equipment:

- Each person entering the H2S location shall don a personal H2S monitor prior to entry.
- A tailgate meeting will be held with everyone on location to discuss the work plan, the responsibilities of each person and the site specific contingency plan.
- Each person shall have either a self contained breathing apparatus (SCBA) or a supplied airline respirator equipped with a 5-minute escape pack, and shall be worn when opening the equipment to the surrounding atmosphere.
- At least one person (per two workers), equipped with a SCBA will act as a stand-by person and may not participate in the work being performed until the atmosphere has been tested and found to have no H2S present in quantities over 10 PPM. The stand-by person shall be stationed up wind, within 100 feet and in clear view of the workers.
- If an operator or other third party provides the stand-by person, it will be the responsibility of the Plibrico manager/supervisor in charge to verify that the person has been H2S, CPR, and First Aid trained, and that they have been provided the proper respiratory equipment.
- After the equipment has been locked and tagged out (Plibrico Company, LLC Lockout/Tagout Program), opened and the H2S concentration has been cleared to less than 10 PPM, the stand-by person will no longer be required. Work may then be performed without respiratory equipment, except for the required 5-minute escape pack.

## **Safe Work Procedures**

- Maintain compliance with permit requirements of Plibrico Company, LLC and any requirements by the client.
- Verify that proper safety equipment is available, functioning properly and is utilized.
- Check and remain aware of wind conditions and direction.
- Perform a thorough check of the downwind area prior to the start of any potentially hazardous work activity.
- Check for other personnel and ignition sources.
- Ventilate work areas by venting and purging lines and vessels prior to beginning any work activities.
- Keep all non-essential personnel away from work areas.
- Immediately vacate the area when any H2S monitor sounds and do not re-enter without proper respiratory protection.

## **Equipment**

The following equipment shall be provided and used as required by this program:

- Personal H<sub>2</sub>S monitor set to alarm at permissible exposure limit of 10 PPM for OSHA 1926 requirements and 20 PPM for OSHA 1910 requirements. Fixed monitors may be present as well at the same alarm setting.
- Portable H<sub>2</sub>S gas testing instrument, either electronic or manual pump operated, capable of testing the suspected concentrations of H<sub>2</sub>S in the system.
- Each testing instrument must be capable of testing the suspected concentrations of H<sub>2</sub>S by using the manufacturer's recommended calibrated tube or other means of measuring the concentration of gas.
- Testing instruments shall be calibrated periodically according to the manufacturer's recommendation, and at least annually.
- Calibration kits with regulator for calibrating the personal monitor.
- Calibration gas cylinder for testing the personal monitor.
- NIOSH-certified self-contained breathing apparatus (air pack) with a minimum of a 30-minute air supply or airline respirator with escape SCBA should be used.
- Full face, air supplied, positive pressure hose line respirator, with 5 minute escape pack attached.
- Respirator wearers requiring corrective eyewear will be fitted with spectacle kits according to the respirator manufacturer, at no expense to the employee.
- Respirators and their components, including all fittings of hoses, shall not be interchanged, which if done, would violate the approval rating of said respirator or related equipment.

## **Medical**

Each employee shall have completed a medical evaluation by a physician or licensed health care professional to determine the employee's ability to wear a respirator as required by the Plibrico Company, LLC Respiratory Protection Program.

Each employee will successfully complete the medical questionnaire and examination before being allowed to be fit tested with a respirator.

## **Training**

Employees required to work on H<sub>2</sub>S locations will be trained. Training shall consist of:

- Physical and chemical properties of H<sub>2</sub>S
- Sources of H<sub>2</sub>S
- Human physiology
- Signs and symptoms of H<sub>2</sub>S exposure, acute and chronic toxicity
- Symptomatology of H<sub>2</sub>S exposure
- Medical evaluation
- Work procedures
- Personal protective equipment required working around H<sub>2</sub>S
- Use of contingency plans and emergency response
- Burning, flaring, and venting of H<sub>2</sub>S
- State and federal regulatory requirement
- H<sub>2</sub>S release dispersion models

- Rescue techniques, first aid, and post exposure evaluation
- Use, care, and calibration of personal monitors and gas detection instruments
- Respirator inspections and record keeping

Each respirator wearer will complete Respiratory Protection training and a Respirator Fit Test, after being given a medical clearance and before entering any H2S location.

Employees and other personnel visiting H2S locations who will not be involved in the work shall be briefed on the following prior to entering:

- Site-specific sources of H2S
- Health hazards of H2S
- Routes of egress
- Emergency assembly areas
- Applicable alarm signals and
- How to respond in the event of an emergency.

## **Rescue**

Each employee, when working alone in a H2S designated area, shall plan and become familiar with self-escape procedures to include being aware of wind direction and obstacles to avoid when exiting the work area.

Employees working under the buddy system shall pre-plan an emergency rescue and/or evacuation procedure prior to commencing work, and arrange for periodic communications with his/her supervisor, and document the discussion on each employee's service report.

## **Respirator Inspections**

Respirators will be inspected by the employee before each use and at least monthly.

The inspection will include the respirator face piece, hose, harness, 5minute escape pack cylinder and all other components of the air supply systems used.

Monthly inspections will be documented as per HOUSTON CONTROLS, INC Respiratory Protection Program, and will be kept on file at the local office for review during safety audits.

## **Monitors and Gas Detector Calibration**

Each personal H2S monitor shall be calibrated at least monthly and the results recorded on the calibration log.

Those monitors that do not require calibrating shall be bump checked with calibration gas to test alarms, monthly or prior to use if not used routinely.



**SECTION #50**

**ASBESTOS POLICY**

## **ASBESTOS POLICY**

Plibrico Company understands and recognizes the complexity of asbestos removal / abatement and the health problems associated with asbestos, and shall not perform any removal or attempt to disturb any asbestos containing material (ACM) or any presumed asbestos containing material (PACM). All ACM or PACM shall be contracted out to a contractor that is licensed and certified through the appropriate federal, state, and local governmental agencies or be removed by our customers facility in the same appropriate manner.

This policy covers Subcontractor asbestos enforcement and Plibrico project bid inspection only.

The following policy is in no way to be construed to imply Plibrico or its employee's involvement in any ACM exposure or work practices. This policy is solely intended to inform Plibrico supervisors and employees of the specific scope of PACM/ACM requirements. Further, the policy specifically prohibits any ACM work by Plibrico, Plibrico supervisors or Plibrico employees. "

## **REQUIREMENTS AT ANY ASBESTOS LEVEL**

### **GENERAL**

- Exposure assessments and monitoring (f):
  - Annual Refresher Training Course
  - Initial exposure assessment by a "competent person" (f)(2). (See below for competent person requirements and duties.)
  - Negative exposure assessments can be obtained from the initial assessment, objective data, or historical data closely resembling the current work giving a high degree of certainty to permissible exposure limit (PEL) will be exceeded (f)(2)(iii).
  - Additional monitoring needed when work changes or other reason new or additional exposures above a PEL may occur.
  - Employees and their representatives can observe monitoring (f)(5).

## **SUBCONTRACTORS REQUIREMENTS**

- Multi-employer worksites (d):
  - Employers establishing regulated areas must tell other employers on the site the nature of the asbestos work, regulated area requirement, and control measure used (d)(1).
  - Breaches and hazards are the responsibility of the employer who created or controls the contamination (d)(2).
  - All employers must take applicable protective measures, e.g., relocation, even if they did not cause the exposure (d)(3).
  - Employers with workers next to the regulated area of another employer must check controls' effectiveness daily (d)(4).
  - General contractors must ensure that all subcontractors comply with the standard (d)(5).

## **CONTROLS**

- Engineering controls and work practices must include (g)(1):
  - HEPA Vacuums.
  - Wet Methods (except where infeasible).
  - Prompt clean-up and disposal.
- Prohibited work practices and engineering controls (g)(3):
  - High-speed abrasive disc saws.
  - Compressed air to remove asbestos (unless in enclosed ventilation systems).
  - Dry sweeping or shoveling.
  - Employee rotation to reduce exposure.
- When vacuuming is used for housekeeping on construction projects, HEPA vacuums must be used; and used and emptied to minimize asbestos dispersal (l)(1).
- Asbestos waste must be sealed in impermeable labeled bags or containers for disposal (l)(2).
- Resilient flooring maintenance (l)(3), and dust and debris clean-up (l)(4) procedures are specified.
  - RPMs must be kept low.
  - Pads selected for low abrasion.

## IDENTIFICATION OF MATERIALS

- Building/facility owner (which includes a lessee) must identify the presence, location and quantity of ACM and/or presumed asbestos -- containing materials (PACM; discussed before) at the work site before beginning work (k)(1)(i).
- Presume or inspect surfacing, thermal system insulation (TSI), or resilient flooring material at work site (k):
  - TSI and sprayed-on or troweled-on surfacing materials in buildings or substrates constructed before 1981 is also presumed to be PACM, flooring material installed before 1981 is also presumed to be ACM, although the term "PACM" is not used for it (k). Can rebut presumptions:
  - For PACM, an AHERA inspection, or testing of the material being worked on by an AHERA -- accredited inspector or a Certified Industrial Hygienist, is required; a nationally recognized testing program (National Voluntary Laboratory Accreditation Program [NVLAP] or equivalent) must be used for analysis (k)(4)(ii).
  - For resilient flooring material, an industrial hygienist must use recognized analytical techniques (g)(8)(i)(I).

## COMMUNICATION

- The building/facility owner must notify, in writing or personally, the presence, location, and quantity of ACM or PACM at the work sites to (k)(1)(ii):
  - Prospective employers whose employees will work in or next to areas with ACM or PACM.
  - Owner's employees who will work in or next to such areas.
  - All employers on multi-employer work sites whose employees will work in or next to such areas.
  - Tenants who will occupy such areas.
- Before work begins, the employer must inform the building/facility owner, its own employees, and other employers whose employees will work in or next to the area, of the presence, location, and quantity of ACM and/or PACM, and precautions to be used (k)(2)(ii). For work with a regulated area, the employer must also inform other employers of the nature of the work and regulated area requirements (d)(1).

## COMMUNICATION (cont.)

- By 10 days after completion of work, the employer must inform the building/facility owner, its employees, and other employers whose employees work or will work in the area, of the current location and quantity of PACM and/or ACM remaining, and any final monitoring results (k)(2)(B)(iii).
- Within 24 hours of discovery, the employer must inform the building/facility owner and other employers whose employees work in the area, of the presence, location, and quantity of newly discovered ACM and/or PACM (k)(3).
- The employer and building/facility owner must identify PACM as ACM in communications, and treat materials they know or should have know through the exercise of due diligence to be ACM, as ACM (k).
- Signs at entrance to mechanical rooms/areas with TSI or surfacing ACM or PACM (k)(5).
- Labels on products containing asbestos, including waste containers and, where feasible, installed products, unless asbestos fibers are bound so that no foreseeable work will release them above PEL or EL, or when less than 1% (k)(7).
- Employers must train employees in recognizing and avoiding unsafe condition, applicable regulations, the potential hazards, safe handling and use of harmful or toxic substances, and personal hygiene and personal protective measures required (29 CFR 1926.21(b)). Employers must train asbestos product installers (k)(8)(i). Any training done must be in a manner employee is able to understand (e.g., language) (k)(8)(vi).
- Record Retention
  - Exposure monitoring records, including those negative exposure assessment (NEA) based on current or historical data: 30 years (n)(2). Records based on objective data: while employer relies on data (n)(1).
  - Medical surveillance records: Employment plus 30 years (n)(3).
  - Training records: Employment plus one year (n)(4).
  - Data to rebut PACM: While employer relies on data (n)(5).
  - Notifications received and communicated about ACM and PACM, and their content, must be maintained by the building/facility owner and transferred to its successive owners (n)(6). Exposure measurements may be kept by either the employer or competent organization, e.g., trade or employee groups (n)(2)

## **COMPETENT PERSON**

- The employer must have a "competent person" able to identify asbestos and other hazards and unsanitary or dangerous conditions, and select control strategies, and with authority to take prompt corrective measures to eliminate hazards (o)(1).
- The competent person may be the employer, an employee, or a contractor of the employer. The competent person must inspect the jobsite, materials, and equipment frequently and regularly (o)(2).
- The competent person must have training specific to the class of asbestos project (o)(4).

## **COMPETENT PERSON PROJECT PROPOSAL INSPECTION (Plibrico)**

- The Plibrico must have a "competent person" able to identify asbestos and other hazards and unsanitary or dangerous conditions, and select control strategies, and with authority to take prompt corrective measures to eliminate hazards (o)(1).
- The competent person may be the employer, an employee, or a contractor of the employer. The competent person must inspect the jobsite, materials, and equipment frequently and regularly (o)(2).
- The competent person must have training specific to the class of asbestos project (o)(4).

## **PERSONAL PROTECTIVE EQUIPMENT FOR BID PROPOSAL INSPECTION**

All initial inspections that are conducted by Plibrico employees for bidding a project for our customers must be protected in the event ACM is found. PPE is required to protect from the health effects of asbestos.

- Respirator approved for ACM
- Protective clothes such as tyvex
- Safety glasses

**ASBESTOS LEVELS EXCEED PERMISSIBLE EXPOSURE LIMIT (PEL) OR EXCURSION LIMIT (EL)**

- All items required at any asbestos level.
- The PEL is lowered to 0.1 fibers/cc., the EL remains 1.0 fiber/cc.
- Regulated area (e)(1).
  - Signs at regulated areas, even if below PELs (K)(6).
- Periodic monitoring when expect to exceed a PEL (f)(3)(ii).
- Additional engineering controls and work practices to get to or below the PELs (g)(2):
  - Local exhaust ventilation with HEPA filters.
  - Enclosure or isolation.
  - Directed make-up air with HEPA filter exhaust.
  - Other feasible engineering and work practices controls.
- Respiratory protection (h), with minimum types used (h)(2) and Table 1, and respiratory protection program (h)(3) -- (4).
- Protective clothing provided when over a PEL or when required negative exposure assessment (NEA) not produced (i)(1). Inspect for rips or tears (i)(4). Laundering allowed under certain conditions (i)(2).
- Medical surveillance if workers exposed at or above PEL, do Class I, II and/or III work a total of at least 30 days per year, or wear negative pressure respirators (m).

## **CLASS IV ACTIVITIES**

Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

### **GENERAL**

- All items required at any asbestos level.
- Periodic monitoring when expect to exceed a PEL (f)(3)(ii).
- EPA awareness training course for maintenance and custodial workers (2 hours) (k)(8)(v).
- The competent person must currently be accredited in an AHERA operations and maintenance course (16 hours), or an equivalent; or the supervisor course (o)(4)(ii):.

### **CONTROLS**

- Controls include wet, methods, HEPA vacuums, prompt clean up of debris containing ACM or PACM (g)(10).
- Respiratory protection where Class IV work done in regulated areas where other work requires respirators: a PEL exceeded; or in an emergency (h)(1).
- Hygiene facilities and practices:
  - When in regulated area, same as for other work (j)(3).
  - When cleaning up TSI or surfacing debris or material, decontamination facilities (j)(3).



## TRAINING

CLASS I & II

AHERA

4 Day Accredited Worker

1 Supervisor with 5 Day Course

CLASS III

O&M

16 Hour Training

CLASS IV

AWARENESS TRAINING

2 Hours

## **HIGHLIGHTS**

### **1926.1011**

ACM	Asbestos Containing Material Defined as > 1% Asbestos
PACM	Presumed Asbestos Containing Material
PEL	Permissible Exposure Limit 0.1 Fiber/Cubic Centimeter as an Eight-Hour Time Weighted Average
EL	Excursion Limit No Employee can be exposed in excess of 1.0 fiber/cubic centimeter over a sampling period of 30 minutes.

### **Scope of Standard**

1. Demolition or salvage of structures where asbestos is present.
2. Removal of asbestos
3. Construction, alteration, repair, maintenance, on renovation of structures, nitrates, or portions thereof that contain asbestos

### **4 Types of Work**

Class I	Removal of thermal systems insulation (TSI) and surfacing ACM and PACM
Class II	Removal of floor tile, sheeting, roofing and mastic
Class III	Repair and maintenance operations where asbestos is likely to be disturbed
Class IV	Maintenance and Custodial Activities

### **Multi-Employer Worksite**

Employer of employee working adjacent must inspect enclosure or control method daily.

1. General Contractor must:
  - A. Exercise general authority over work covered by the standard.
  - B. Ascertain compliance of this standard relative to abatement

### **Building Owner's Duties**

1. Identify presence, location, and quantity of ACM or PACM at the work site.
2. Shall notify:
  - A. Prospective employer bidding work
  - B. Employee of owner
  - C. Employees or multi-employee worksites
  - D. Tenants who occupy areas containing such material

### **Rebuttal of PACM Designation**

1. Complete inspection according to AHERA.
2. Employer need not communicate when verified to be an ACM.

## **Regulated Areas**

For all Class I, II & III work.

1. Regulated Area
  - A. Airborne concentrations exceed or may exceed PEL
  - B. Must be demarcated
  - C. Limited access
  - D. Respirators must be worn where required
  - E. Prohibited activities:
    - Smoking
    - Drinking
    - Eating
    - Chewing Tobacco
    - Applying Makeup

## **Negative Exposure Assessment**

1. Used by employer to demonstrate that employee exposure will be below PEL
  - A. Using objective data
  - B. Historical data:
    - Last 12 Months
    - Closely resembles work conditions
    - Will not exceed PEL or EL
  - C. Results of Initial Exposure Assessment

## **Initial Exposure Assessment**

1. Competent person conduct exposure assessment.
  - A. Immediately before; or
  - B. At the initiation of the work
  - C. To ascertain expected exposures.
2. The assessment shall include previous monitoring results and operations must be considered.

## **Respirators**

1. Required
  - A. Class III with no negative exposure assessment
  - B. Respirator program
    - Written
    - Training
    - Fit Testing
    - Doctor's Authorization
  - C. Medical Surveillance
    - 30 Year Record Keeping



## Asbestos Exposure Assessment Inspection

1926.1101(f)(2)(i)

Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person" conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly.

Plibrico Office: \_\_\_\_\_

Competent Person Inspection conducted by: \_\_\_\_\_

Date Inspection Conducted: \_\_\_\_\_

Customer Business Name: \_\_\_\_\_

Job site and location: \_\_\_\_\_

Conditions found during the inspection: \_\_\_\_\_

Site cleared by research and visual inspection: \_\_\_\_\_

Site cleared by laboratory testing (attach copy of results): \_\_\_\_\_

Actions taken: \_\_\_\_\_

\_\_\_\_\_

Follow-up: \_\_\_\_\_

## Customer's Asbestos Exposure Assessment Inspection

The Company listed on the form below has demonstrated through inspection and testing that no asbestos has been discovered and is free of the presents of any material containing asbestos. The company agrees by signing this document that a proper inspection was conducted.

Company: \_\_\_\_\_

Competent Person Inspection conducted by: \_\_\_\_\_

Date Inspection Conducted: \_\_\_\_\_

Job site and location: \_\_\_\_\_

Conditions found during the inspection: \_\_\_\_\_

Site cleared by research and visual inspection: \_\_\_\_\_

Site cleared by laboratory testing (attach copy of results): \_\_\_\_\_

Actions taken: \_\_\_\_\_

\_\_\_\_\_

Follow-up: \_\_\_\_\_

\_\_\_\_\_

Signature of Competent Person: \_\_\_\_\_

**SECTION #51**

**AERIAL LIFT SAFETY POLICY**



## **PLIBRICO COMPANY, LLC**

### **Scope and Application**

To provide requirements for safe use and proper operation of aerial lifts and scissor lifts.

This applies to all locations or projects involving the use of scissors lifts, extensible boom platforms, aerial ladders, articulating boom platforms, vertical towers, or any combination thereof.

### **Implementation**

It is the responsibility of the management to administer this procedure. It is the responsibility of any employee or contractor involved to adhere fully to this policy.

### **General Requirements**

#### **1.0 Equipment Requirements:**

- A. Aerial lifts acquired for use after January 22, 1973, shall be designed and constructed in conformance with the applicable requirements of the American National Standards for "Vehicle Mounted Elevating and Rotating Work Platforms," ANSI A92.2-1969, including appendix. Procedures.
- B. Lifts must utilize standard guardrails unless specifically required by the manufacturer.

#### **2.0 Equipment Modifications:**

- A. Never field modify an aerial lift for uses other than those intended by the manufacturer.
- B. Any modifications for uses other than those intended by the manufacturer must have authorization from the manufacturer that is certified in writing.
- C. Alteration of the insulated portion of an aerial lift that may reduce the insulating value is not permitted.

#### **3.0 Documentation:**

- A. The manufacturer's operating instruction manual must be available on site.
- B. File the following documents in the Shop/Project Health and Safety File.
  - 1. Copy of the cover page of the Manufacturer's Operation Manual.
  - 2. Training documentation.
  - 3. List of authorized employees.
  - 4. Daily inspections.

#### **4.0 Operator Training:**

- A. Only trained and authorized personnel are allowed to operate aerial lifts.

**5.0** Maintenance and Inspection:

- A. Inspect the unit for unsafe conditions each day prior to use. Units that have been damaged or weakened from any cause must be taken out of service until repairs are completed.
- B. Test the lift controls every day, prior to operation, to ensure they are in safe working order.

**6.0** Fall Protection:

- A. Wear fall protection in the form of a full body harness and lanyard attached to the manufacturer's prescribed anchorage point.
- B. Fall protection is not required for scissors.

**7.0** Set Up:

- A. Requires that both lower and platform controls be plainly marked as to their function.
- B. Survey the route to be traveled immediately prior to the work trip to check for overhead obstructions, holes in pavement, slopes, ditches, or other potential hazards.
- C. Set the braking system before elevating the basket.
- D. Install wheel chocks before using an aerial lift on an incline, provided they can be safely installed.
- E. Electrically ground or barricade aerial lifts when working near energized lines or equipment and consider the lift to be energized equipment.

**8.0** Operations:

- A. Stand firmly on the floor of the basket when working from an aerial lift. Sitting or climbing on the edge of the basket and/or use of planks, ladders, or other devices for work position are prohibited.
- B. Never exceed the boom and basket load limits set by the manufacturer.
- C. Do not pass equipment between a pole or structure and an aerial lift while an employee working from the basket is within reaching distance of energized conductors or equipment that are not covered with insulating protective equipment.
- D. Do not operate lower controls unless permission has been obtained from the employee in the basket, except in case of emergency.
- E. Aerial lift truck must not be moved when the boom is not secured in traveling position and with workers in the basket.

- F. Aerial ladders must be secured in the traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for travel.
- G. Belting off to another structure or pole, while working from the lift is not permitted.

**9.0** Documentation Summary

- A. The Risk Management Center is to be used to document all information including the following:

Documents	Risk Management Center Location
Written Aerial Lift Safety Program	My Content™
Training Documentation including: <ul style="list-style-type: none"> <li>- Classroom training and training course completed</li> <li>- Sign-in sheets</li> <li>- Quizzes</li> <li>- Skills evaluations</li> <li>- Operator Certificates</li> </ul>	Training Track™ application
Pre-shift Inspection Checklists	My Content™
Safety Observations	Job Hazard Analysis/ Safety Observation Tool™
Near misses	Incident Track™
Accidents and claims	Incident Track™
Supplier and manufacturer Certificates of Insurance	COI Track™
Safety Data Sheets	SDS Track™

**SECTION #52**

**POWERED INDUSTRIAL TRUCKS**

## **OBJECTIVE**

*(Plibrico Company) has developed a Powered Industrial Truck (PIT) Program to minimize the risk of employee injury and property damage loss from the use of Powered Industrial Trucks. It is Plibrico Company's intent to communicate and monitor appropriate standards of conduct in the performance of routine forklift operations.*

## **APPLICABILITY / SCOPE**

It is the responsibility of the management and the supervisor of Plibrico Company to ensure that all employees that operate PIT's are certified.

A Powered Industrial Truck is defined as a fork truck, platform lift truck, motorized hand truck, and other specialized industrial truck powered by electric motors or internal combustion engines. This does not apply to compressed air or nonflammable compressed gas-operated industrial trucks, nor to farm vehicles, nor to vehicles intended primarily for earth moving or over-the-road hauling.

## **ACCOUNTABILITY**

The (Safety Mgr.) has been designated as Plibrico Company's Forklift Program Coordinator. The coordinator's responsibilities are:

- Must be a qualified PIT instructor to train operators
- Selection of the appropriate type of industrial truck related to the atmosphere conditions in which it will be used (refer to Appendix A).
- Ensuring that all PIT operators have been trained and are authorized.

### ***The Supervisor's responsibilities are:***

- Ensure that all PIT operators have been trained and authorized.
- Ensure that operators are following all operating procedures.
- Ensure that any PIT operator observed driving in an unsafe manner is removed until retraining is conducted

***The PIT Operators responsibilities are:***

- Follow all operating procedures.

***Operating Procedures***

**General Rules**

1. Lift trucks shall not be driven up to anyone standing in front of a bench or other fixed object.
2. All body parts (hands, arms, head, feet, legs, etc.) are prohibited outside the operator compartment of the truck, between the uprights of the mast or within the reach mechanism or other attachments of the truck.
3. Passengers are not allowed to ride on powered industrial trucks.
4. Operators shall not block access to fire or emergency exits, stairways, fire equipment or electrical panels.
5. Under all travel conditions; operate the truck at a speed that will permit it to be brought to a stop in a safe manner.
6. Stunt driving and horseplay shall be prohibited.
7. The operator must slow down for wet and slippery floors.
8. Running over loose objects on the floor is prohibited.
9. The operator is responsible for cleaning up all fluid leaks (oil, hydraulic fluid, etc.) from the floor.
10. Operators are required to report all lift truck accidents involving personnel, building structures and equipment to shift leaders and department managers.
11. The operator shall handle loads only within the capacity rating of the truck.
12. Lift trucks shall not be used for any purpose other than what they were designed.
13. No person shall be allowed to stand or pass under the elevated portion of any truck whether empty or loaded.
14. Lift trucks shall not be started or any of its functions or attachments operated from any position other than from the designated operator's position.

15. The operator shall look 360 degrees traveling with a lift truck, especially when backing up.
16. The operator shall observe all traffic regulations and under normal traffic conditions, keep to the right.
17. A safe distance of no less than three truck lengths shall be maintained when following another lift truck and additional truck length per adverse condition and the operator shall keep his/her truck under control at all times and additional truck lengths per adverse conditions.
18. The operator shall not pass another truck traveling in the same direction.
19. Operators shall slow down and sound the horn at cross aisles and other locations where vision is obstructed.
20. The operator must keep a clear view of the path of travel and observe for other traffic, personnel and safe clearances. If the load being carried obstructs forward view, travel with the load trailing (except when ascending a ramp or entering a trailer).
21. When the forks are empty, the operator shall travel with the forks at a negative pitch as low to the floor as practical. The operator is responsible for adjusting the height of the forks to a safe level when the operating terrain warrants.
22. When traveling with a load on the forks, the operator shall travel with the load as low to the floor as practical with the load tilted slightly for improved stability.
23. At no time shall a powered industrial lift truck be parked on inclines, ramps or dock plates.
24. A powered industrial truck is considered to be ATTENDED when the operator is less than 25 feet from the truck, which remains in his view. Before leaving the operator's position, the operator shall:
  - Bring truck to a complete Stop.
  - Place directional controls in neutral.
  - Apply the parking brake.
  
  - Lower the forks or attachments fully until resting completely flat on the floor. When lowering unloaded forks, the forks shall be tilted forward first and then lowered to the ground until the tips of the forks come in contact with the floor.
25. A powered industrial truck is considered to be UNATTENDED when the operator is more than 25 feet from the truck which remains in his view. Or whenever the operator leaves the truck and it is not in view regardless of distance from the truck. Before leaving the operator's position in the instance, the operator shall:
  - Follow the procedures in item above
  - Stop the engine or turn off the controls

26. If the lift truck is not put on a charge during off shifts or weekends, the operator shall disconnect the battery plug from the truck plug. NOTE: During normal production operation, the lift truck may remain plugged into the battery when left unattended.

To change an LP gas tank, the operator shall:

Put on leather work gloves and goggles.

Disconnect lift truck valve from the employ LP cylinder.

Replace with full cylinder.

NOTE: The pin on the lift truck must fit into the cut hole(s) provided on the gas cylinder.  
**THIS IS REQUIRED BY LAW.**

27. Strap in the cylinder and reconnect the truck valve securely to the cylinder in outlet.
28. Open cylinder valve and listen for leaks.
29. If leaking, close cylinder valve and slowly uncouple the fuel valve. Try to reconnect. If still leaking, try a different cylinder and notify shift leader or department management of faulty cylinder.
30. If no leaks are present, lift truck may be utilized.
31. Lift trucks shall not be operated with a leak in the fuel system until the leak has been corrected.
32. The operator shall use the following back up procedure and sequence:
- Pivot at the waist and inspect the area of operation in the rear of the fork truck. Watching for obstructions and pedestrians.
- Blow the horn to alert any pedestrians that may or may not be visible.
- Engage the directional lever to the reverse position.
- Concentrate on the removal of the forks from the load to avoid any load disturbance, as you back the fork truck out of the load.
- Stop the fork truck 18" to 24" away from the loads resting location and lower the forks to the proper travel height and angle.



33. During load placement, the operator shall:

Square the fork truck with the load resting location.

Stop the fork truck 18" to 24" away from the load resting location.

Raise the load to proper entry height.

Drive forward with the load and position the load over its resting location.

Lower the load to a height of 4" if possible.

Tilt the load forward to a level position.

Lower the load to its resting position.

Back up the unit using proper back up procedures and sequence.

34. During load retrieving, the operator shall:

Square the fork truck with the load resting location.

Stop the fork truck 18" to 24" away from the load resting location.

Raise the forks to the proper entry height.

Enter the load and maintain the clearance around the forks to avoid load disturbance.

Raise the load so it is completely suspended from its resting platform.

Tilt the load back.

Visually inspect the rear area of the fork truck to ensure no pedestrians are behind or around the unit.

Back up the unit using proper back up procedures and sequence.

Back up the fork truck 18" to 24" and stop.

Lower the load to the proper travel height.

## **TRAINING**

Under no circumstances shall an employee operate a powered industrial truck/forklift until he/she has successfully completed Plibrico Company 's forklift operation training program. This includes all new operators regardless of claimed previous experience.

Training must consist of a combination of formal instruction and practical training. Formal instruction may include lectures, conferences, classroom discussions, demonstrations, and written or oral tests.

### ***Initial Training***

Powered industrial truck operators shall receive initial training in the following topics:

#### ***Truck-related training topics:***

Operating instructions, warnings, and precautions for the types of truck the operator will authorized to operate.

Differences between the truck and the automobile.

Truck controls and instrumentation: where they are located, what they do, and how they work.

Engine or motor operation.

Steering and maneuvering.

Visibility (including restrictions due to loading).

Fork and attachment adaptation, operation, and use limitations.

Vehicle capacity.

Vehicle stability.

Daily PIT inspections by the operator or any vehicle maintenance that the operator will be required to perform. Appendix C

Refueling and/or charging and recharging the batteries.

Operating limitations.

Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

## ***Workplace –Related Topics:***

Surface conditions where the vehicle will be operated.

Composition of loads to be carried and load stability.

Load manipulation, stacking, and unstacking.

Pedestrian traffic in areas where the vehicle will be operated.

Narrow aisles and other restricted places where the vehicle will be operated.

Hazardous (classified) locations where the vehicle will be operated.

Ramps and other sloped surfaces that could affect the vehicle's stability.

Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.

Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

Truck / Trailer loading must be accomplished by first securing the rig by wheel chocks and supports. Dock plate with pins must be used as well as a through inspection of the condition of the truck / trailer floor for weakness or obstructions. No loading or unloading will take place if any of these conditions are found to be problematic.

## ***Refresher Training***

Refresher training, including an evaluation of the effectiveness of that training shall be conducted when needed to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely. Refresher training in relevant topics shall be provided to the operator when:

The operator has been observed to operate the vehicle in an unsafe manner.

The operator has been involved in an accident or near- miss incident.

The operator has received an evaluation that reveals that the operator is not operating the truck safely.

The operator is assigned to drive a different type of truck.

A condition in the workplace changes in a manner that could affect safe operation of the truck.

## ***Evaluation***

Once every 3 years an evaluation will be conducted of each powered industrial truck operator's performance.

## **Appendix A**

The D designated units are units similar to the G units except that they are diesel engine powered instead of gasoline engine powered.

The DS designated units are diesel powered units that are provided with additional safeguards to the exhaust, fuel and electrical systems. They may be used in some locations where a D unit may not be considered suitable.

The DY designated units are diesel powered units that have all the safeguards of the DS units and in addition do not have any electrical equipment including the ignition and are equipped with temperature limitation features.

The E designated units are electrically powered units that have minimum acceptable safeguards against inherent fire hazards.

The ES designated units are electrically powered units that, in addition to all of the requirements for the E units, are provided with additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures. They may be used in some locations where the use of an E unit may not be considered suitable.

The EE designated units are electrically powered units that have, in addition to all of the requirements for the E and ES units, the electric motors and all other electrical equipment completely enclosed. In certain locations the EE unit may be used where the use of an E and ES unit may not be considered suitable.

The EX designated units are electrically powered units that differ from the E, ES, or EE units in that the electrical fittings and equipment are so designed, constructed and assembled that the units may be used in certain atmospheres containing flammable vapors or dusts.

The G designated units are gasoline powered units having minimum acceptable safeguards against inherent fire hazards.

The GS designated units are gasoline powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of a G unit may not be considered suitable.

The LP designated unit is similar to the G unit except that liquefied petroleum gas is used for fuel instead of gasoline.

The LPS designated units are liquefied petroleum gas powered units that are provided with additional safeguards to the exhaust, fuel, and electrical systems. They may be used in some locations where the use of an LP unit may not be considered suitable.

TABLE N-1. -- SUMMARY TABLE ON USE OF INDUSTRIAL TRUCKS  
IN VARIOUS LOCATIONS

Classes	Unclassified	Class I locations			Class II locations			Class III locations	
Description of classes.	Locations not possessing atmospheres as described in other columns.	Locations in which flammable gases or vapors or are, or may be, present in the air in quantities sufficient to produce explosive or ignitable mixtures.			Locations which are hazardous because of the presence of combustible dust.			Locations where easily ignitable fibers flyings are present but not likely to be in suspension in quantities sufficient to produce ignitable mixtures.	
Groups In Classes	None	A	B	C	D	E	F	G	None
Examples of locations or atmospheres in classes and groups.	Piers and wharves inside and outside general storage, general industrial or commercial properties.	Acetylene	Hydrogen	Ethyl ether	Gasoline Naphtha Alcohols Acetone Lacquer solvent Benzene	Metal dust	Carbon black coal dust, coke dust	Grain dust, flour dust, starch dust, organic dust.	Bailed waste, cocoa fiber, cotton, excelsior, hemp, istle, jute, kapok, oakum, sisal, Spanish moss, synthetic fibers, tow.

		1	2	1	2	1	2
Divisions (nature of hazardous conditions)	None	Above conditions exists continuously, intermittently, or periodically under normal operating conditions.	Above condition may occur accidentally as due to a puncture of a storage drum	Explosive mixture may be present under normal operating conditions, or where failure of equipment may cause the condition to exist simultaneously with arcing or sparking of electrical equipment, or where dusts of an electrically conducting nature may be present.	Explosive mixture not normally present, but where deposits of dust may cause heat rise in electrical equipment, or where such deposits may be ignited by arcs or sparks from electrical equipment.	Locations in which easily ignitable fibers or materials producing combustible flyings are handled, manufactured, or used.	Locations in which easily ignitable fibers are stored or handled (except in the process of manufacture).
Authorized uses of trucks by types in groups of classes and divisions							

Groups in classes	None	A	B	C	D	A	B	C
Type of truck authorized:								
Diesel:								
Type D	D**....	....	....	....	....	....	....	....
Type DS	....	....	....	....	....	....	....	....
Type DY	....	....	....	....	....	....	....	....
Electric:								
Type E	E**....	....	....	....	....	....	....	....
Type ES	....	....	....	....	....	....	....	....
Type EE	....	....	....	....	....	....	....	....
Type EX	....	....	....	....	EX•	....	....	....
Gasoline:								
Type G	G**....	....	....	....	....	....	....	....
Types GS	....	....	....	....	....	....	....	....
LP – Gas:								
Type LP	LP**....	....	....	....	....	....	....	....
Type LPS	....	....	....	....	....	....	....	....
Paragraph Ref. In No. 505.	210.211	201 (a)		203 (a)			209 (a)	

Authorized uses of trucks by types in groups of classes and divisions

Groups in classes	D	E	F	G	E	F	G	None	None
Type of truck authorized:									
Diesel:									
Type D	....	....	....	....	....	....	....	....	
Type DS	DS•	....	....	....	....	....	DS•	....	DS
Type DY	DY•	....	....	....	....	....	DY•	DY•	DY
Electric:									
Type E	....	....	....	....	....	....	....	....	E
Type ES	....	ES•	....	....	....	....	ES•	....	ES
Type EE	EE•	....	....	....	....	....	EE•	EE•	EE
Type EX	EX•	....	EX•	EX•	....	....	EX•	EX•	EX
Gasoline:									
Type G	....	....	....	....	....	....	....	....	
Types GS	GS•	....	....	....	....	....	GS•	....	GS
LP – Gas:									
Type LP	....	....	....	....	....	....	....	....	
Type LPS	LPS•	....	....	....	....	....	LPS•	....	LPS



Paragraph	204	202	205	209	206	207	208
Ref. In	(a),	(a)	(a)	(a)	(a),	(a)	(a)
No. 505	(b)				(b).		

\*\* Trucks conforming to these types may also be used

-- see subdivision ( c ) ( 2 ) ( x ) and ( c ) ( 2 ) ( xii ) of this section

# Appendix B

SAMPLE PERFORMANCE TEST

## FOR FORKLIFT OPERATORS

EMPLOYEE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ a.m./p.m.

Pass      Fail

Shows familiarity with truck controls.

Gave proper signals when turning.

Slowed down at intersections.

Sounded horn at intersections.

Obedied signs.

Kept a clear view of direction of travel.

Turned corners correctly – was aware of rear end swing.

Yielded to pedestrians.

Drove under control and within proper traffic aisles.

Approached load properly.

Lifted load properly.

Maneuvered properly.

Traveled with load at proper height.

Lowered load smoothly/slowly.

Stops smoothly/completely.

Load balanced properly.

Forks under load all the way.

Carried parts/stock in approved containers.

Checked bridge plates / ramps.

Did place loads within marked area.

Did stack loads evenly and neatly.

Did drive backward when required.

Did check load weights.

Did place forks on the floor when parked, controls neutralized, brake on set, power off.

Followed proper instruction for maintenance – checked both a beginning and end.

Pass/Fail \_\_\_\_\_

Rating Evaluator \_\_\_\_\_

## OPERATOR'S DAILY REPORT

### Engine-Powered Lift Trucks

Truck No. \_\_\_\_\_ Make \_\_\_\_\_ Date \_\_\_\_\_ Shift \_\_\_\_\_

Hour Meter Reading: Start \_\_\_\_\_ End \_\_\_\_\_ Hours for Shift \_\_\_\_\_

CHECK EACH ITEM	SHIFT			Explain below if not OK or any other action taken
	Start	During	End	
1. Fuel level				
2. Oil level and pressure				
3. Water level and fan belt				
4. Brakes – service and parking				
5. Lights – head, tail and warning				
6. Horn				
7. Hour meter and gauges				
8. Steering				
9. Tires				
10. Hydraulic controls				
11. Other conditions				

Remarks and additional explanation or suggestions \_\_\_\_\_

Operator's Signature \_\_\_\_\_

**SECTION #53**  
**IN PLANT RAIL POLICY**

# In Plant Rule Safety

## General Safety Rules

- No work activity shall be conducted within 20' of a rail way unless proper permits are completed, and all employees training has been conducted and documented.
- Never position any part of your body in any pinch point as rail equipment can move at any time without notice.
- Never attempt to crawl under rail equipment or climb over moving rail equipment.
- Never cross in front of moving rail equipment.
- Pedestrians must cross only at designated areas.
- Vehicle crossings are not to be used as pedestrian crossings unless so indicated and there are no other pedestrian crossing in the area.
- If no designated pedestrian crossings exists, the following safety rules will be enforced:
  - Do not cross within 10' of the end of a parked rail car.
  - Do not cross between uncoupled cars
  - Stop, look, and listen prior to proceeding across the tracks.
  - Never step on any rails as they may be slippery

## Personal Protective Equipment

ANSI approved personal protective equipment required when working within 20' of a rail way will include:

- Hard hats
- Gloves
- Safety Glasses
- High Visibility Clothing
- Safety Toe Work Boots

## Training

Plibrico Training shall be appropriate to the complexity of the job will be provided by a competent person prior to the beginning of the work that is conducted within 20' of a rail way. There will be a knowledge assessment used to verify the effectiveness of the training and that employees have the appropriate knowledge to work in the rail areas safely. Retraining will be provided to any employee who demonstrates a lack of proficiency with the materials presented.

The training documentation will include at a minimum:

- Name of the competent person / trainer and contact information.
- Outline of the materials used
- Sign in sheet of all the employees completing the training
- Location and date of the training class

**SECTION #54**

**FLEET DRIVING POLICY**

# **FLEET DRIVING POLICY**

## **BACKGROUND**

Our fleet can be very difficult to manage due to a number of factors:

- Many employees who drive vehicles are hired for skills other than driving. In fact, some of the personality attributes that are sought directly conflict with attributes that are used by a safety conscious driver.
- The common attitude that, “anyone can drive a vehicle”.
- Many vehicles are used in scattered locations.

Recognizing these and other difficulties, we must find a way to significantly reduce our exposure to loss from vehicle accidents.

This program addresses the various elements of our fleet safety program.

For the purposes of this document Plibrico Company also includes Plibrico Sales & Service.

## **MANAGEMENT COMMITMENT**

The management of Plibrico Company has established this fleet safety program to emphasize the commitment of Plibrico Company to the safety of our “authorized drivers” and the general public.

By maintaining a safe and efficient fleet, accidents will be eliminated, thus reducing suffering to employees, customers, the general public, and costs to the company.

In support of this philosophy, the company must be careful to control the use of its vehicles. Consequently, several aspects of a prudent safety program have been developed.

It is the responsibility of every manager and authorized driver to initiate all elements of this program as outlined. It is the responsibility of each supervisor to ensure that all employees under their supervision who drive on company business adhere to the requirements of the program. It is the responsibility of all employees to operate vehicles in accordance with this policy.

## **GENERAL**

Plibrico’s Safety Manager or others as designated will maintain a listing of all “authorized drivers”. This will include:

- Those individuals assigned to drive company vehicles
- Those individuals who frequently drive personal vehicles on company business
- Those individuals who frequently rent vehicles for company business
- Only Plibrico employees are permitted to operate fleet vehicles
- Others as necessary

## **DRIVER QUALIFICATIONS**

Each manager has the responsibility of maintaining a Driver's Qualification File for the drivers. This should include employees as well as leased drivers.

The Driver File should include:

### **Application for Employment.**

Each applicant should complete the company employment application. Applicants must provide references for the prior three years, with documentation placed in the Driver's File.

### **Reference Checks. (optional)**

Prior to operating a company vehicle, an investigation should be made on each new driver's employment record for the previous three years. This reference check should be documented.

If the information received differs significantly from what is on the applications, obtain clarification from the applicant. If you are then satisfied, document the explanation in the file.

If the applicant's clarification is not satisfactory, the opportunity to operate vehicles on behalf of the company should not be offered.

### **Motor Vehicle Record Investigation and Inquiries.**

The prospective drivers MVRs should be requested as part of the employment process for any employee who drives a company vehicle as part of their job. This includes those driving personal vehicles on company business.

The vehicle operator must understand that continued driving privileges for company vehicles is subject to receipt of the MVR's that meet company standards of a satisfactory MVR.

Satisfactory MVRs are to be judged in accordance with the criteria found on the following pages.

The Motor Vehicle Report (MVR) received as a result of this inquiry should be made a permanent part of the Driver File.

### **Record of Violations**

As a part of the interview process, applicants should be asked to report violations of motor vehicle laws and ordinances, other than violations involving parking, for which the driver has been convicted or forfeited bond during the previous 12 months. This information should also be requested annually.



## **Annual Review of the Driver**

Each year, a review shall be made of each driver. This will include an MVR, any accidents, and any hours of service violations, vehicle inspection issues and any complaints from the public. This review should be signed by management and placed in the Driver Qualification File.

## **DRIVER SELECTION / QUALIFICATIONS (all drivers)**

Managers have the responsibility of determining the safety fitness of their driving employees.

## **Initial Motor Vehicle Record Investigation and Inquiries**

Prospective driver's MVRs shall be requested as a part of the employment process. The candidate must understand that the obtaining/retaining of continued driving privileges for the company is subject to receipt of an MVR that meet company standards.

Satisfactory MVRs for prospective authorized drivers are those with **no serious violations** for the past three years as defined below:

## **SERIOUS VIOLATIONS**

Driving under the influence of alcohol or drugs, and/or refusal to take a blood alcohol test.

- Any felony involving the use of an automobile
- Vehicular homicide
- Fleeing or attempting to elude the police; failure to stop and report an accident
- Reckless driving
- Racing
- Leaving the scene of an accident
- Suspended or revoked license for driving reasons
- Two violations, accidents, or a combination, within the current year

## **Individual's Duty to Report Violations and Other Occurrences**

The individual is under an affirmative, on-going duty to report to the individual's supervisor in the company all convictions for and/or involvement in any of the items listed as soon as possible. However, reporting must be made no later than two (2) business days of such conviction or occurrence. Failure to make timely reports will result in the loss of driving privileges and/or disciplinary action up to and including termination of employment.

## Annual Driver Review

MVRs will annually be obtained by fleet administration for all “authorized drivers”. Each MVR will be examined for the following: No serious violations, and looked at for the following:

### VIOLATIONS

- Speeding violations (15 mph or more above the speed limit)
- Improper or excessive lane changes
- Violation of state/federal law in connection with a fatal accident
- Following too closely
- Preventable accident (whether or MVR or Not)
- Running a red light or stop sign
- Improper left or right turn
- Speeding (less than 15mph above the speed limit)
- Failure to yield

If violations appear on an MVR or a preventable accident occurs or a combination thereof, the driver will be counseled accordingly:

1 within 1 year	Written warning
2 within 2 years	Remedial defensive driving course required
3 within 3 years	Repeat remedial defensive driving course – or – Loss of Driving Privileges at the discretion of management...

### DRIVER TRAINING

Because most employees who operate passenger cars are hired for skills other than driving, it is important that the company have a formal method of providing remedial training.

#### *Driver Training*

An authorized driver may be required to complete a defensive driver program as a result of the violations appearing on the MVR. Such training is available from several sources.

#### Training Sources

There are a number of these available commercially. You can contact local driving schools, or the National Safety Council. (at employees cost)

## **CDL REQUIREMENTS**

To further this goal, Plibrico Company has developed a Fleet Safety Policy. This Policy applies to all CDL driver's of company vehicles and consists of nine components: Job Requirements, Recruitment, Driver Qualifications, Drug/Alcohol Testing, Job Requirements, Training, Preventative Maintenance, Accident Investigation Procedures, and Company Vehicles for Personal Use. This policy applies to all CDL driver candidates for employment as well as all current CDL drivers.

Drug and alcohol testing requirements detailed in this policy apply to all drivers with CDL licenses.

## **CDL DRIVER RECRUITMENT**

Plibrico Company focuses its initial efforts on driver selection through a variety of resources, the first being the job application. The application will require a prospective employee to list past driving experience, employers, and types of vehicles driven, along with other required information. In addition, the prospective employee is required to notify Plibrico Company of any motor vehicle violations for at least the last two years. References will be required.

Driver selection will be made upon completion of a formal interview and background check to include contacting references, review of the MVR, a valid medical examiner's certificate, a valid CDL license, and a negative drug screen. Authorizations will be obtained to contact prior employers and personal references.

MVRs will be ordered (with driver's written consent) upon completion of a satisfactory interview. MVR's will also be checked periodically thereafter at a minimum of once per year. Management reserves the right to use its discretion in determining an unsatisfactory MVR (see violation section pg. 4&5)

## **CDL DRIVER QUALIFICATION FILE**

All drivers must have certain items in their driver qualification files. These files are subject to Department of Transportation audits and must be maintained in a secure location. Items included in this file should include the following:

- Copy of valid driver's license (CDL)
- Driver's application for employment (must be signed)
- Inquiry to previous employers (3 years)
- Inquiry to State Agencies (3 years)
- Annual review of driving record or MVR (with signed approval from employee)
- Annual driver's certification of violations (provided by driver)
- Driver's road test and certificate (may substitute CDL license in most States)
- Copy of current medical examiner's certificate (renewed every two years)

## DRUG/ALCOHOL TESTING

Initial, periodic random, post-accident, and reasonable suspicion drug and alcohol testing is mandatory for all CDL drivers. Testing will be conducted by a licensed medical facility designated by Plibrico Company. Any positive results will be grounds for termination. Driving under the influence of alcohol or any other illegal substances will be grounds for termination.

\* Criteria for positive drug screens will be determined by a certified testing lab per current Federal, State, and Local regulations.

### Driver Prohibitions

- Drivers may not drink any alcoholic beverages within 4 hours of completing any safety sensitive functions
- No driver required to take a post-accident alcohol test shall drink alcohol for 8 hours following an accident, or until he/she undergoes a post-accident test, whichever is first.
- Drivers may not report for duty or perform safety sensitive functions while having a Blood Alcohol Content (BAC) of 0.04 or greater.
- If a tested driver is found to have a BAC equal to or greater than 0.02, but less than 0.04, the driver shall not perform any safety sensitive functions within 24 hours of the test.
- No driver shall report for duty or remain on duty requiring the performance of safety sensitive functions when the driver uses any controlled substances, except when it is pursuant to the instructions of a licensed medical practitioner.

### Pre-Employment Testing

Drivers are not allowed to perform a safety sensitive function until the employer has received a negative controlled substance test result.

### Post-Accident Testing

Post-Accident testing is required for all CDL drivers under the requirements of the DOT regulation 382.303(a) (3). These requirements state that a driver must be tested following a motor vehicle accident given the following:

- Human Fatality
- Bodily Injury with immediate medical treatment away from the scene and a driver moving violation issued.
- Disabling damage to any motor vehicle requiring tow away and a driver moving violation issued.

### Random Testing

Random drug and alcohol testing is required for all CDL drivers. These tests will be unannounced and employee selected must proceed to the test site immediately. The selection of drivers tested will be set up through the use of a consortium run by a local medical clinic certified to conduct drug and alcohol testing under the DOT requirements. The 2002 rates, as determined by the Federal Department of Transportation, by which employees must be tested is 10% for alcohol and 50% for controlled substances. These rates are subject to change and should be updated periodically as federal and state laws dictate.

### Reasonable Suspicion Testing

Drivers must submit to alcohol and controlled substance testing when a properly trained supervisor has observed and documented the driver's behavior that indicates impairment due to alcohol or controlled substance abuse.

### Supervisor Training Requirements

All employees who oversee the operations of drivers must be trained on alcohol and substance abuse awareness. These supervisory employees must receive one hour of alcohol awareness training and one hour of substance abuse awareness training.

## **JOB REQUIREMENTS**

All prospective employees will be required to undergo a physical evaluation and if required, pass a Dept. of Transportation physical evaluation as well. Results of the physical evaluation will be compared to the necessary physical requirements listed in the "Bus Driver Job Analysis" to ensure that the prospective employee can perform at the required levels of physical exertion.

As part of the recruitment process, prospective employees must be able to complete a driver application form. They may also be required to complete a satisfactory road test. Active employees may participate in periodic road tests for training purposes. The road test will require prospective and active employees to safely and competently complete tasks associated in the following categories:

- Pre-trip / Post-trip Inspection
- General Vehicle Operation
- Backing and parking
- Turning
- Passing
- Railroad crossing
- Wheel Chair loading procedures

Results of the road test will be shared with the prospective and active employees at management's discretion.

\*\*\* Use of seat belts and other safety devices are mandatory. \*\*\*

## **TRAINING**

All drivers may be expected and required to actively participate in driver training sessions. The human resources manager will identify training needs as well as opportunities for program development. Programs will consist of classroom and on the road modules. Training will focus on but not limited to defensive driving techniques and behavior modification.

Plibrico Company will monitor drivers to identify potential unsafe driving habits that require additional training and/or disciplinary actions. Unsafe driving behaviors should be documented by supervisors. Ride along will be utilized to identify areas of improvement combined with statistical data focusing on accident types and frequency.

## **SAFETY BELT USAGE**

Use of safety belts save lives and reduces the severity of injuries. This organization recognizes that safety belts are an important and effective item of personal protective equipment and that people needlessly die or are injured due to their failure to use available safety belts. Reducing these costly injuries is important to all. Therefore, we are implementing the following safety belt usage policy:

“Available safety belts shall be used when operating or riding in a company vehicle, or when operating a personal or rental vehicle on company business.

This policy applies to all employees and occupants of vehicles driven by employees on company business.

Safety belt systems in all vehicles should be maintained so that they are clean, easily accessible, and in good working order.

**Employee Education:** Information on the organization’s commitment to safety belt usage shall be emphasized in employee orientation, driver training, employee handbooks, and safety rules.

## **CELL PHONE USAGE**

Using cellular telephones while driving a motor vehicle puts the driver and others on the road at risk. Talking on a cellular phone while operating a motor vehicle takes attention off driving.

Plibrico Company recommends all drivers who operate a motor vehicle on company business not drive while operating cell phones. Cellular telephone use is dangerous when you are behind the wheel of a car. When placing or receiving a cellular telephone call, pull over to a safe location. Some states prohibit the use of a cellular phone while driving without a hands free device.

Prior to operating a vehicle for Plibrico Company each driver will sign an acknowledgement that they have read, understand and will abide by these guidelines. (See cell phone guideline sheet)

## **PERSONAL USE OF COMPANY VEHICLES**

The company allows personal use of company vehicles with the following stipulations.

### **Restriction on Personal Use:**

Assigned company drivers are allowed personal use of the company vehicle only with the permission of the Office Manager. If a vehicle is to be taken out of territory or on a vacation, permission must be obtained from the Office Manager.

### **Restriction on Use by Family Members:**

Spouses, children, relatives or friends of an authorized company driver and other employees are not permitted to operate a company vehicle at any time.

## **PERSONAL VEHICLE USED FOR COMPANY BUSINESS**

Where use of personal vehicles for company business is specifically allowed by management, employees using such vehicles must provide a certificate of insurance indicating personal auto liability limits of at least \$300,000.

The company must be notified by the employee in the event of the insurance policy cancellation. Current copies of valid insurance certificates must be on file at all times at Plibrico Company Headquarters.

Plibrico Sales and Service salespeople must provide proof of vehicle insurance in compliance with their binding sales contract.

## **ACCIDENT REPORTING & INVESTIGATIONS**

It is important that all drivers understand the procedures to be followed in case of an accident. This is critical for claims purposes to facilitate recovery and for liability purposes to control the company's exposure from third party claims. Standardized accident reporting procedures have been developed for this purpose.

An accident reporting kit should be found in each company vehicle. This kit contains all the required reports and instructions on how to conduct the on-scene investigation. In addition, the telephone numbers and/or names of key company and insurance personnel is provided.

The Accident Kit could be supplemented by such equipment as: Pens and pencils, flashlight, throwaway camera and notepad, all placed in a re-sealable plastic bag.

The accident report should describe the accident in enough detail so that the accident can be reviewed from a "preventability" standpoint. See "A Guide to Preventing Accidents." (see page 11)

## **Accident File**

An accident file will be maintained that contains at least the following information on each accident.

1. Date of the accident
2. City or town in which or most near where the accident occurred and the state
3. Driver's name
4. Copies of all reports required by state, other governmental entities or insurers
5. Other Party name
6. Names, telephone number, address of witnesses
7. Description of the accident
8. Photographs of the accident scene
9. Sketches of the accident scene

## **Management Responsibility**

The Sales Office Manager is responsible for the receipt of the accident reports, follow-up on completion of all necessary report items, handling documentation to the file and assisting management in determining a "preventability" decision. Plibrico Company's Safety Manager must be copied on all such reports.

In addition, the Sales Office manager is responsible for monitoring the accident and claim file with the insurance companies, repair facilities and any other parties that might affect resolution of the accident.

## **Decision by Management**

After reviewing the results of an accident investigation, management must make a decision regarding preventability. Appropriate actions will then be assessed using the MVR policy.



## **INSPECTION BY MANAGERS**

Sales Office Managers are responsible for conducting an annual inspection on the company vehicles assigned to their employees. The enclosed form (Managers Automobile Vehicle Inspection Report) is to be completed and kept on file. Any vehicle defects must be repaired in accordance with the manufactures recommendation. The vehicle will be taken out of service if a serious problem is found until repairs are completed.

A systematic preventive maintenance system has been established for our vehicles. Drivers are responsible to record mileage so that the vehicles can be maintained at the proper interval.

A maintenance file should be set up on each vehicle, and the tile should be monitored quarterly. The file should contain identification of the vehicle including:

Company Number  
Make  
Serial Number  
Year  
Tire size

### **A. Records will indicate:**

- A systematic method to show the due dates for required maintenance.
- Records of the maintenance showing date and service provided.
- Records on repairs that are not scheduled (breakdowns, accidents)

### **B. Maintenance and Repairs**

Any unscheduled maintenance should also be documented in the files. These should indicate:

Identify the service facilities used  
Explain the service completed

### **C. Drivers Daily Inspection**

Each driver is required to conduct a daily post trip inspection of the vehicle for any defects that would affect the safe operation of the vehicle. This form should be turned in daily to dispatch so that repairs can be affected prior to using the vehicle again. These documents should be kept on hard for 90 days.

MANAGERS TRUCK SELF-INSPECTION REPORT

Operations of Company-owned trucks are responsible for maintaining the vehicle in good condition. Managers should submit this completed form to Plibrico’s President.

Make of Truck:	Model:	Year:	Truck No.:	Plate No.:	State:	Mileage:
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	OIL	TRANSMISSION
Mileage last service		
Date last service		

EQUIPMENT	WHAT TO LOOK FOR	DESCRIBE AND INDICATE ACTION REQUIRE
Brakes	Condition, service (or foot) and parking (or hand)	
Lights	Condition, headlights, rear lights, directional signals	
Tires	General condition. Any cuts, bruises, excess wear, unbalanced or alignment. Cause?	
Body	Extent and location of all exterior damage. Describe how caused.	
Interior	Cleanliness, damage, fire extinguisher	
Engine	Condition	
Steering	Condition, including alignment	
Glass	Condition-describe any damage and how caused	
Horn	Condition	
Heat/Air	Condition	
Windshield Wipers	Condition	
Rearview Mirror	Condition	

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

Signature of Operator: \_\_\_\_\_

Signature of Manager: \_\_\_\_\_

Date: \_\_\_\_\_

## Cellular Phone Safe Use Guidelines

Each authorized driver shall abide by these guidelines. Acknowledgement of understanding and commitment to following these guidelines should be obtained by employee signature.

1. **Obey state laws** that prohibit the use of wireless phones while driving or require hands free head sets.
2. **Get to know your wireless phone and its features such as speed dial and redial.** Carefully read your instruction manual and learn to take advantage of valuable features most phones offer, including automatic redial and memory. Also, memorize the phone keypad so you can use the speed dial function without taking your attention of the road.
3. **When available, use a hands free device.** A number of hands free wireless phone accessories are readily available today. Whether you choose an installed mounted device for your wireless phone or a speaker phone accessory, take advantage of these devices and keep your hands on the steering wheel and your eyes on the road. Some states prohibit the use of cellular phones without a hands free device. Know the law in which you are traveling.
4. **Position your wireless phone within easy reach.** Make sure you place your wireless phone within easy reach and where you can grab it without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voice mail answer it for you.
5. **Suspend conversations during hazardous driving conditions or situations.** Let the person you are speaking with know you are driving; if necessary; suspend the call in heavy traffic or hazardous weather conditions. Rain, sleet, snow and ice can be hazardous, but so is heavy traffic. As a driver, you should first pay attention to the road.
6. **Do not take notes or look up phone numbers while driving.** If you are reading an address book or business card, or writing a "to do" list while driving a car, you are not watching where you are going. It's common sense. Don't get caught in a dangerous situation reading or writing and not paying attention to the road or nearby vehicles.
7. **Dial sensibly and assess the traffic;** Place calls when you are not moving or before pulling into traffic. Plan your calls before you begin your trip so that you can call when stopped.
8. **Do not engage in stressful or emotional conversations that may be distracting.** Stressful or emotional conversations and driving do not mix - - they are distracting and even dangerous when you are behind the wheel of a car. Make people you are talking with aware you are driving and if necessary, suspend conversations, which have the potential to divert your attention from the road.
9. **Use your wireless phone to call for help.** Your wireless phone is one of the greatest tools you can own to protect yourself and your family in dangerous situations - - with your phone at your side, help is only three numbers away. Dial 9-1-1 or other local emergency number in case of fire, traffic accident, road hazard or medical emergency.
10. **Use your wireless phone to help others in emergencies.** Your wireless phone provides you a perfect opportunity to be a "Good Samaritan" in your community. If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number.
11. **Call roadside assistance or a special wireless non-emergency assistance number when necessary.** Certain situations you encounter may not be urgent enough to merit a call from emergency services. However, you still can use your wireless phone to lend a hand, such as a breakdown.

I have read, understand and will follow these guidelines while operation vehicles on company business.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **A GUIDE TO DETERMINING PREVENTABILITY**

The heart of any fleet safety program is the careful determination of the preventability of each accident. This must be done in light of all the facts pertinent to the accident's occurrence. Determining these facts is sometimes difficult in practice, but it can be made easier by training drivers to completely and accurately report the accidents. Complete accident investigation by management is equally necessary.

The first step in reviewing the accident is to determine if the driver involved adhered to the Defensive Driving Code. This is, did the driver "drive in such a way as to commit no errors, and so controlled the vehicle as to make due allowance for conditions of road, weather and traffic, and to assure that mistakes of other drivers did not involve him/her in an accident?"

The situations listed below cannot cover every accident, which may occur, but they are intended to provide guidance in determining the eligibility of drivers for safe driving awards.

"The definition of a preventable accident by the National Safety Council, and the American Transportation Association is, "one in which the driver did everything he/she could reasonable have done to avoid an accident."

### **Non-Preventable Accidents**

#### **A. Struck in Road by Other Vehicle**

This type of accident is non-preventable if:

1. Driver's vehicle was legally and properly parked;
2. Driver was proceeding in his own lane of traffic at a safe and lawful speed;
3. Driver was stopped in traffic due to existing conditions or was stopped in compliance with traffic sign or signal or the directions of a police officer or other person legitimately controlling traffic; or,
4. Driver was in proper lane waiting to make turn.

#### **B. Struck While Parked**

This type of accident is non-preventable if:

1. Driver was properly parked in a location where parking was permitted; or,
2. Vehicle was protected by emergency warning devices as required by DOT and state regulations, or if driver was in process of sending out or retrieving signals. These provisions shall apply to the use of warning flashers signals.

## **Preventable Accidents**

### **A. Accidents at Intersections**

This type of accident is preventable if:

1. Driver failed to control speed so that he could stop within available sight distance.
2. Driver failed to check cross-traffic and wait for it to clear before entering intersection.
3. Driver pulled out from side street in the face of oncoming traffic.
4. Driver collided with person, vehicle or object while making right or left turn.
5. Driver collided with vehicle making turn in front of him.

### **B. Striking Other Vehicle**

This type of accident is preventable if:

1. Driver failed to maintain safe following distance and have his vehicle under control.
2. Driver failed to keep track of traffic conditions and note slowdown.
3. Driver failed to ascertain whether vehicle ahead was moving slowly, stopped or slowing down for any reason.
4. Driver misjudged rate of overtaking.
5. Driver came too close before pulling out to pass.
6. Driver failed to wait for car ahead to move into the clear before starting up.
7. Driver failed to leave sufficient room for passing vehicle to get safely back in line.

### **C. Sideswipe and Head-On Collisions**

This type of accident is preventable if:

1. Driver was not entirely in the proper lane of travel.
2. Driver did not pull to the right and slow down and stop for vehicle encroaching lane of travel when such action could have been taken without additional danger.

### **D. Struck in Rear by Other Vehicle**

This type of accident is preventable if:

1. Driver was passing slower traffic near an intersection and had to make sudden stop
2. Driver made sudden stop to park, load or unload
3. Vehicle was improperly parked; or
4. Driver rolled back into vehicle behind while starting on grade
5. Driver had to stop abruptly due to his/her inattentiveness
6. Driver had to stop abruptly due to his/her speeding
7. Driver had to stop abruptly due to following too closely

### **E. Squeeze Plays and Shutouts**

This type of accident is preventable if:

1. Driver failed to yield right-of-way when necessary to avoid an accident

## F. Backing Accidents

This type of accident is preventable if:

1. Driver backed up when backing could have been avoided by better planning of his route.
2. Driver backed into traffic stream when such backing could have been avoided.
3. Driver failed to get out of cab and check proposed path of backward travel.
4. Driver depended solely on mirrors when it was practicable to look back.
5. Driver failed to get out of cab periodically and recheck conditions when backing a long distance.
6. Driver failed to sound horn while backing.
7. Driver failed to check behind vehicle parked at curb before attempting to leave parking space.
8. Driver relied solely on a guide to help back up.
9. Driver backed from blind side when it could have been made by a sight-side approach.

## G. Accidents Involving Rail-Operated Vehicles

This type of accident is preventable if:

1. Driver attempted to cross tracks directly ahead of train or streetcar;
2. Driver ran into side of train or streetcar; or
3. Driver stopped or parked on or too close to tracks.

## H. Accidents While Passing

This type of accident is preventable if:

1. Driver passed where view of road ahead was obstructed by hill, curve, vegetation, traffic, adverse weather condition, etc.
2. Driver attempted to pass in the face of closely approaching traffic.
3. Driver failed to warn driver of vehicle being passed.
4. Driver failed to signal change of lanes.
5. Driver pulled out in front of other traffic overtaking from rear.
6. Driver cut-in-short returning to right lane.

## I. Accidents While Being Passed

This type of accident is preventable if:

1. Driver failed to stay in lane and hold speed or reduce it to permit safe passing.

## J. Accidents While entering Traffic Stream

This type of accident is preventable if:

1. Driver failed to signal when pulling out from curb.
2. Driver failed to check traffic before pulling out from curb.
3. Driver failed to look back to check traffic if in position where mirrors did not show traffic conditions.
4. Driver attempted to pull out in a manner, which forced other vehicle(s) to change speed or direction.
5. Driver failed to make full stop before entering from side street, alley or driveway.
6. Driver failed to make full stop before crossing sidewalk.
7. Driver failed to yield right-of-way to approaching traffic.

#### K. Pedestrian Accidents

This type of accident is preventable if:

1. Driver did not reduce speed in area of heavy pedestrian traffic.
2. Driver was not prepared to stop.
3. Driver failed to yield right-of-way to pedestrian.
4. Driver did not reduce speed in area of heavy pedestrian traffic.
5. Driver was not prepared to stop.

#### L. Mechanical Defect Accidents

This type of accident is preventable if:

1. Defect was of a type which driver should have detected in making pre-trip or en route inspection of vehicle.
2. Defect was of a type which driver should have detected during the normal operation of the vehicle.
3. Defect was caused by driver's abusive handling of the vehicle.

#### M. All Types of Accidents

This type of accident is preventable if:

1. Driver was not operating at a speed consistent with the existing conditions of road, weather and traffic.
2. Driver failed to control speed to stop within assured clear distance.
3. Driver failed to observe existing condition or misjudged available clearance.
4. Driver failed to yield right-of-way to avoid accident.
5. Driver was in violation of company operating rules or special instructions, the regulations of any federal or state regulatory agency, or any applicable traffic laws or ordinances.

# Request for A Driving History Record, Driving Record or Motor Vehicle Record

## NOTICE TO EMPLOYEE/PROSPECTIVE EMPLOYEES

Plibrico Company uses certain information contained below too verify your ability to operate a company vehicle. The information requested below is necessary to complete this task. Please complete all information requested.

APPLICANT'S LEGAL NAME: \_\_\_\_\_  
Last Name First M.I.

CURRENT HOME ADDRESS: \_\_\_\_\_  
Street City/State Zip

DATE OF BIRTH: \_\_\_\_\_ SS#: \_\_\_\_\_

DRIVER'S LICENSE NUMBER: \_\_\_\_\_ STATE: \_\_\_\_\_

APPLICANT CONSENT: I understand and agree that Plibrico Company will verify all or part of the information I have given. I understand that his verification may include any inquiry into my motor vehicle driving records. I authorize the release of such information to my employer or his representative as may be necessary. I release and hold harmless from all liability any individual or entity requesting or supplying information with respect to my driving records. I understand that such information may be reviewed now and from time to time in the future to comply with the Plibrico Company Driving Policy and/or requirements of companies providing insurance to Plibrico Company.

APPLICANT SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_



**SECTION #55**

**SUB-CONTRACTORS  
SAFETY PLAN / REQUIREMENTS**

# **SAFETY POLICY FOR SUBCONTRACTORS**

## **OBJECTIVE**

All Plibrico Company subcontractors are required per the terms of the standard Plibrico Company subcontract agreement to comply with Plibrico Company safety requirements, any specified project safety requirements, and all federal, state and local safety laws and regulations applicable to the work covered in the Contract Documents.

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## **APPLICABILITY/ SCOPE**

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1. Subcontractor safety responsibilities during pre-construction will be to provide:

Safety related information to the Project Superintendent consisting of:

- Subcontractor's Company Safety Program.
- Hazard Specific Work Plan, if required.
- SDS Sheets and Hazcom Program.
- Designation of Subcontractor's Project Safety Coordinator.
- Designation of Subcontractor's personnel trained in First Aid/CPR.
- Submit Job Safety Control Plan for any fall exposures, excavation, scaffolding, controlled access zones or crane usage.

2. Subcontractor Safety responsibilities during construction phase activities will be:

Complying with:

- Applicable local, state and federal safety standards.
- Plibrico Company project safety requirements.
- Owner's project safety requirements, if any.

Actively participating in project safety program and attend all required safety meetings.

Maintaining a first aid kit on site.

Maintaining and replacing safety protection systems damaged or removed by their operations.

Submitting accident, injury and incident reports within 24 hours.

Installing contractually required general conditions for safety (i.e., guardrail, fence, fall protection systems, floor opening covers, etc.).

Conducting weekly employee safety toolbox meetings and providing copies of appropriate documentation to Plibrico Company

Conducting new employee orientation.

Maintaining on-site a complete set of MSDS's for each chemical brought on to the jobsite.

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**ACCOUNTABILITY**

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Each trade subcontractor will be responsible for the safety and security of employees and areas of work under their control. All subcontractors shall submit a copy of their company safety program to Plibrico Company prior to start up.

Failure to comply with the contract safety requirements will be considered as noncompliance with the contract and may result in remedial action including withholding of payment of any sums due to the subcontractor.

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**TRAINING**

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Each subcontractor will document and submit weekly toolbox talks pertinent to their operations.

Each project shall be considered a hart hat job and all supervisors, employees and visitors shall be required to wear an approved hard hat while on the project site.

Each subcontractor will train all of their employees to wear durable work shoes (under no conditions shall tennis shoes or sandals be allowed) and the appropriate personal protective equipment provided and it use.

Each subcontractor will train its employees in practices for good housekeeping. Waste, debris and garbage removed daily, how all materials, tools and equipment shall be stored in a safe and orderly fashion.

Each subcontractor will supply the proper equipment, take the necessary precautions to maintain the equipment according to current regulations and specifications, and accept responsibility to assure that all employees are trained in necessary safety equipment which is supplied and when required.

Each subcontractor will be responsible for supplying and maintaining and inspecting all fire extinguishers in their office, storage and refueling area. In the event a fire extinguisher is discharged or damaged, it shall be removed from service and replaced with a charged unit.

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**FORMS**

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# Designation of Competent Persons

OSHA Standard	Applies to Contractor (Yes/No)	Designated Competent Person Employee Name
<b>Subpart C Motor Vehicles and Equipment</b>		
1926.601 Motor Vehicles	_____	_____
<b>Subpart K Electrical</b>		
1926.400 Safety Related Work Practices	_____	_____
<b>Subpart L Scaffolding 1926.451</b>		
Erecting, Dismantling, Moving, Altering, Scaffold Daily Inspections	_____	_____
Qualified Person for Design of Suspension Scaffold	_____	_____
Static Lines	_____	_____
<b>Subpart M Fall Protection 1926.500</b>		
Training	_____	_____
Inspections	_____	_____
<b>Subpart N Cranes 1926.550</b>		
CCO Designation	_____	_____
Training	_____	_____
Inspection	_____	_____
<b>Subpart P Excavations</b>		
1926.651 Specific Excavation Requirements	_____	_____
1926.652 Requirements for Protective Systems	_____	_____
<b>Subpart Q Concrete and Masonry Construction</b>		
1926.701 General Requirements	_____	_____
1926.703 Cast In Place Concrete	_____	_____
1926.705 Lift-Slab Operations	_____	_____
<b>Subpart R Steel Erection</b>		
1926.752 Bolting, Riveting, Fitting-Up, Etc.	_____	_____

# Designation of Competent Persons

OSHA Standard	Applies to Contractor (Yes/No)	Designated Competent Person Employee Name
<b>Subpart S</b>	Tunnels,	Shafts, Caissons
1926.800 Tunnels and Shafts	_____	_____
1926.802 Compressed Air	_____	_____
<b>Subpart T Demolition</b>		
1926.850 Preparatory Operations	_____	_____
1926.852 Chutes	_____	_____
1926.859 Mechanical Demolition	_____	_____
<b>Subpart U Blasting and Use of Explosives</b>		
1926.900 General Provisions	_____	_____
1926.901 Blaster Qualifications	_____	_____
1926.911 Misfires	_____	_____
<b>Subpart V</b>	Power          Transmission	and          Distribution
1926.955 Overhead Lines	_____	_____
1926.957 Construction in Energized Substations	_____	_____
<b>Subpart X Stairways and Ladders</b>		
1926.1053 Ladders	_____	_____
1926.1060 Training Requirements	_____	_____
<b>Subpart Z Toxic and Hazardous Substances</b>		
1926.1101 Asbestos	_____	_____
1926.1102 through 1926.1148 Toxic and Hazardous Substances	_____	_____

## SECTION # 56

# OSHA / MSHA INSPECTION POLICY

## **Plibrico Company, LLC**

### **OSHA – MSHA REGULATORY INSPECTIONS**

#### **Applicability**

This program applies to all office and field operations.

#### **Purpose and Scope**

Representatives of regulatory agencies (OSHA – MSHA) may have statutory authority to evaluate our operations for compliance with health and safety regulations. Personnel are to cooperate with all such inspections. This procedure provides guidelines for responding to the inspector and for documenting inspection activities.

#### **Implementation**

Implementation of this procedure is the responsibility of the site Superintendent / Supervisor.

#### **Requirements**

##### **A. Obtaining Positive Identification**

Request formal identification (photo identification card) from any regulatory agency representative. Call the agency if there is any question regarding the identity of the individual (independently obtain the agency's number; don't use a number provided by the representative). Obtain a business card from the inspector for records.

##### **B. Warrants**

Do not require an inspector to obtain a warrant prior to conducting an inspection unless advised by legal counsel.

##### **C. Health and Safety Notification**

Contact **Safety Manager and the Office Manager** immediately upon confirming the identification of the representative.

##### **D. Opening Conference**

1. Request an opening conference if one is not initiated by the inspector.
2. Use the opening conference to determine why the inspector is conducting the inspection.
3. Take good notes during the conference.



#### E. Inspection Activities

1. Escort the inspector at all times, taking him/her directly to the area of interest. Assure they have proper personal protective gear for entering any areas requiring such equipment.
2. Make sure the inspector has appropriate qualifications and protective gear to enter high hazard areas.
3. Answer all questions honestly, but do not volunteer information.
4. Do not argue with or attempt to mislead the inspector.
5. Resolve violative conditions immediately, while the representative is on site, if possible and assure they note the corrective action.
6. Take good notes during the inspection and take pictures where the inspector takes pictures.
7. If additional visits or monitoring activities are planned, report to the Safety Manager and coordinate for in-house or outside consultative assistance to do side by side monitoring.
8. Inspectors generally have the right to interview employees if they do not interrupt operations.

#### F. Closing Conference

1. Request a closing conference if one is not initiated by the inspector.
2. Use the closing conference to determine what regulatory violations the representative found, if any.
3. Do not try to negotiate during the closing conference.
4. Take good notes during the conference.

#### G. Post-Inspection Activities

1. Immediately contact the Safety Manager and communicate the results of the inspection. The Safety Manager will provide additional instructions regarding the inspection.
2. Debrief any employees who were contacted by the representative; all discussions should be reduced to notes.
3. All follow-up activities associated with the inspection will be coordinated by the Safety Manager and appropriate legal counsel.

## **Documentation Summary**

Provide the following documents to the Safety Manager

- A. Inspector's business card
- B. All materials provided by the inspector
- C. All notes relating to the inspection, opening conference, closing conference, and debriefings
- D. All photos from the inspection, with explanatory notes

## REFERENCE POLICY INDEX

1. Plibrico Silica Exposure Control Program (Construction)
2. Cadmium Program
3. Lead Exposure Program
4. Hexavalent Chromium

### Revision History

Rev. number	Rev. date	Revision notes	Owner